

HIV and infant feeding



A guide for health-care managers
and supervisors



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Abbreviations

| | |
|--------|--|
| AIDS | Acquired immunodeficiency syndrome |
| ANC | Antenatal care |
| ARV | Anti-retroviral |
| BFHI | Baby-friendly Hospital Initiative |
| HIV | Human immunodeficiency virus |
| IBFAN | International Baby Food Action Network |
| IYCF | Infant and young child feeding |
| IMCI | Integrated management of childhood illness |
| MCH | Maternal and child health |
| MTCT | Mother-to-child transmission of HIV |
| NGO | Nongovernmental organization |
| PLWHAs | People living with HIV/AIDS |
| STI | Sexually transmitted infection |
| WHA | World Health Assembly |

Explanation of terms

Acquired immunodeficiency syndrome (AIDS): the active pathological condition that follows the earlier, non-symptomatic state of being HIV-positive.

Artificial feeding: feeding with breast-milk substitutes.

Bottle-feeding: feeding from a bottle, whatever its content, which may be expressed breast milk, water, infant formula, or another food or liquid.

Breast-milk substitute: any food being marketed or otherwise represented as a partial or total replacement for breast milk, whether or not suitable for that purpose.

Cessation of breastfeeding: completely stopping breastfeeding, including suckling.

Commercial infant formula: a breast-milk substitute formulated industrially in accordance with applicable Codex Alimentarius standards to satisfy the nutritional requirements of infants during the first months of life up to the introduction of complementary foods.

Complementary feeding: the child receives both breast milk or a breast-milk substitute and solid (or semi-solid) food.

Complementary food: any food, whether manufactured or locally prepared, used as a complement to breast milk or to a breast-milk substitute.

Cup-feeding: being fed from or drinking from an open cup, irrespective of its content.

Exclusive breastfeeding: an infant receives only breast milk and no other liquids or solids, not even water, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.

Human immunodeficiency virus (HIV): the virus that causes AIDS. In this document, the term HIV means HIV-1. Mother-to-child transmission of HIV-2 is rare.

HIV-negative: refers to people who have taken an HIV test and who know that they tested negative, or to young children who have tested negative and whose parents or guardians know the result.

HIV-positive: refers to people who have taken an HIV test and who know that they tested positive, or to young children who have tested positive and whose parents or guardians know the result.

HIV status unknown: refers to people who either have not taken an HIV test or do not know the result of a test they have taken.

HIV-infected: refers to people who are infected with HIV, whether or not they are aware of it.

HIV testing and counselling: testing for HIV status, preceded and followed by counselling. Testing should be voluntary and confidential, with fully informed consent. The expression encompasses the following terms: *counselling and voluntary testing*, *voluntary counselling and testing*, and *voluntary and confidential counselling and testing*. Counselling is a process, not a one-off event: for the HIV-positive client it should include life planning, and, if the client is pregnant or has recently given birth, it should include infant-feeding considerations.

Home-modified animal milk: a breast-milk substitute prepared at home from fresh or processed animal milk, suitably diluted with water and with the addition of sugar and micronutrients.

Infant: a person from birth to 12 months of age.

Infant feeding counselling: counselling on breastfeeding, on complementary feeding, and, for HIV-positive women, on HIV and infant feeding.

Mixed feeding: feeding both breast milk and other foods or liquids.

Mother-to-child transmission: transmission of HIV to a child from an HIV-infected woman during pregnancy, delivery or breastfeeding. The term is used in this document because the immediate source of the child's HIV infection is the mother. Use of the term *mother-to-child transmission* implies no blame,

whether or not a woman is aware of her own infection status. A woman can contract HIV infection from unprotected sex with an infected partner, from receiving contaminated blood, from non-sterile instruments (as in the case of injecting drug users), or from contaminated medical procedures.

Programme: an organized set of activities designed to prevent transmission of HIV from mothers to their infants or young children.

Replacement feeding: feeding infants who are receiving no breast milk with a diet that provides the nutrients infants need until the age at which they

can be fully fed on family foods. During the first six months of life, replacement feeding should be with a suitable breast-milk substitute. After six months the suitable breast-milk substitute should be complemented with other foods.

‘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.

Preface

The guidelines presented here are a revision of guidelines originally issued, under the same title,¹ in 1998. They have been revised to take account of new scientific and epidemiological information. The main changes are to:

- incorporate recommendations from a WHO Technical Consultation on prevention of mother-to-child transmission of HIV, held in October 2000²
- take account of the Global Strategy for Infant and Young Child Feeding³ jointly developed by WHO and UNICEF
- list the actions recommended in the HIV and Infant Feeding Framework for Priority Action⁴
- incorporate programmatic experience since 1998
- give more guidance for countries considering providing free or subsidized infant formula
- reduce the volume of information on prevention of HIV infection in infants and young children in general
- include new research findings.

¹ WHO/UNICEF/UNAIDS. *HIV and Infant Feeding: A Guide for Health-care managers and Supervisors*. WHO/FRH/NUT/CHD/98.2, UNAIDS/98.4, UNICEF/PD/NUT/(J)98-2. Geneva, June 1998.

² WHO. 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.

³ WHO. Global strategy for infant and young child feeding. WHA55/2002/REC/1, Annex 2. Geneva, 2003, <http://www.who.int/child-adolescent-health>.

⁴ WHO, UNICEF, UNFPA, UNAIDS, World Bank, UNHCR, WFP, FAO and IAEA. HIV and Infant Feeding: Framework for Priority Action. Geneva, 2003.

Executive Summary

The purposes of this document are to provide guidance to health-care managers and supervisors on issues regarding infant and young child feeding in the context of HIV, and to highlight areas of special concern when organizing services.

These guidelines begin with a list of key steps to guide health-care managers and supervisors through the process of thinking about and deciding how to organize services.

The background to the problem and the organization of the guide are outlined first. The next section describes the need to balance the risk of HIV transmission through breastfeeding against the risk of malnutrition and death from not breastfeeding; it describes also current approaches to the prevention of HIV transmission to pregnant women, mothers and their children.

Exclusive breastfeeding for the first six months of life and nutritionally adequate and safe complementary feeding thereafter with continued breastfeeding up to two years of age or beyond need to be protected, promoted and supported in the general population, and this work is even more critical in countries with high HIV-prevalence rates. The section on protecting, promoting and supporting these practices gives background on the Global Strategy for Infant and Young

Child Feeding, the HIV and Infant Feeding Framework for Priority Action, and the International Code of Marketing of Breast-milk Substitutes. It goes on to describe how managers can organize services to ensure that all women are supported on infant feeding.

The next section provides information on supporting HIV-positive women in their infant-feeding decisions. This requires that women are aware of and accept their status, which means that HIV testing and counselling services must be available, especially to pregnant women. Once they know their status, HIV-positive women should be offered integrated counselling by trained counsellors and be provided with services. The section also gives current recommendations for HIV-positive women and describes infant-feeding options for them and their babies. Community support should also be ensured. It lists information necessary for planning services, describes the counselling, follow-up and support that will be needed, and tells how to establish the cost of interventions.

The final section gives background on the information that should be monitored in order to ensure good-quality efforts in relation to HIV and infant feeding, describes the formative research that should be carried out, and sets out some ideas on sharing information.

Checklist of key steps for health-care managers and supervisors

1. Review policies and guidelines on infant and young child feeding, HIV/AIDS and related areas. Where a comprehensive policy exists take necessary action to implement it. Where there is none or it is outdated, or where policies overlap, make local revisions.
2. Take steps to implement the Baby-friendly Hospital Initiative (BFHI) and related activities, including breastfeeding counselling for all women, and link them with activities aimed at prevention of HIV transmission to infants and young children.
3. Take steps to develop the knowledge and skills of families and communities to protect, promote and support mothers, including HIV-positive mothers, with infant and young child feeding. This could include communication activities and mother support groups.
4. Review existing local situation analyses and assessments, or coordinate an assessment of the local situation in and outside health facilities, including local acceptability, feasibility, affordability, sustainability and safety of infant-feeding options for HIV-positive women.
5. Familiarize oneself and supervised staff with the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly (WHA) resolutions¹ and responsibilities under it.
6. Use information gathered and experience gained in implementing the Code and BFHI to strengthen services, including continued care and support for infant feeding to HIV-positive mothers, plan training needs and determine the supplies and other equipment needed.
7. Determine who will counsel on infant feeding and perform related activities – e.g., securing community engagement for infant feeding, and who will train them.
8. Ensure quality of training in infant-feeding counselling, and continuing supervision to maintain skills.
9. Plan and take steps to implement communication and other community activities, on the basis of formative research, situation assessment, etc.
10. Develop mechanisms for procurement and distribution of supplies and for monitoring their use.
11. Prepare a budget for all activities, and plan for additional resources, as required.
12. Plan and carry out routine monitoring, and evaluation activities.

¹ Unless otherwise indicated, wherever International Code of Marketing of Breast-milk Substitutes is mentioned (referred to in this guide as the “International Code” or the “Code”), it also includes subsequent relevant WHA resolutions.

Background

This section provides a general introduction to human immunodeficiency virus (HIV) and infant feeding. It emphasizes that organizing services in this area raises broad issues of infant and young child feeding for the general population as well as HIV/AIDS (acquired immunodeficiency syndrome). It also indicates the audience for this guide, and how it is organized.

Overview

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 for 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 par-

- ticular, 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
- 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 (Annex 4). 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

Target audience and context

This Guide is intended to assist health-care managers and supervisors to plan, implement and strengthen appropriate services. The Guide is generic, given that different countries are at different stages of the HIV/AIDS pandemic and have varying resources available for dealing with it. It focuses on issues of HIV and infant feeding. Readers will need to refer to other documents for more detailed information about strengthening some of the other services mentioned; these include developing and managing activities aimed at preventing HIV transmission to infants and young children in general, and support for breastfeeding and complementary feeding. Tools and training materials are also available for other levels of health workers (see Annex 1).

Health-care managers and supervisors¹ will need to review and adapt the guidelines so that they are con-

sistent with national policies and suit local circumstances. They will also need to ensure that activities take full account of human rights (described in Box 1), and are consistent with international standards, such as Codex Alimentarius and the Code.

Organization of the Guide

The Guide is organized in four sections: **Section 1** provides an overview of HIV transmission in infants and young children, with the emphasis on assessing the different infant-feeding options; **Section 2** discusses protecting, supporting and promoting appropriate infant and young child feeding practices in the context of HIV; **Section 3** describes feeding options for HIV-positive women and practical steps for implementing services; and **Section 4** describes monitoring and evaluation.

BOX 1

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 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 (1989).

¹ The term “managers” elsewhere in this document is inclusive of “health-care managers and supervisors”.

1. Overview: Infant and young child feeding in the context of HIV

Adopted in 2002, the Global Strategy for 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 15–25% of infants of HIV-infected women will be infected during pregnancy or during delivery, and an additional 5–20% may become infected during breastfeeding¹ (see table).

Estimated risk and timing of mother-to-child transmission of HIV in the absence of interventions²

| Timing | Transmission rate ³ |
|---|--------------------------------|
| During pregnancy | 5–10% |
| During labour and delivery | 10–15% |
| During breastfeeding | 5–20% |
| Overall without breastfeeding | 15–25% |
| Overall with breastfeeding to 6 months | 20–35% |
| Overall with breastfeeding to 18 to 24 months | 30–45% |

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.

¹ Few studies give information on the mode of breastfeeding (exclusive or mixed). In most cases, mixed feeding may be assumed.

² 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.

³ Rates vary because of differences in population characteristics such as maternal and CD4+ cell counts and RNA viral load, and also duration of breastfeeding.

-
- 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 sixfold increase in mortality from infectious diseases. This risk drops to less than threefold by six months, and continues to decrease with time.

1.4 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.

2. Protecting, promoting and supporting appropriate feeding practices for infants and young children in the context of HIV

This section gives background on international policy and guidelines, in particular the Global Strategy for Infant and Young Child Feeding, that set the context for country approaches to infant and young child feeding, including where HIV is prevalent. On the basis of this information managers should:

- *be fully aware of the Global Strategy and its implications, as well as other relevant guidance.*
- *put in place measures to implement the Global Strategy and ensure that health services are consistent with the provisions of the Code and BFHI.*
- *ensure that all women receiving antenatal and post-natal care are given adequate counselling and continued support on infant and young child feeding.*
- *take steps to provide at least a minimum package and standard of services in antenatal care.*

2.1 Feeding recommendations for HIV-negative mothers and for mothers unaware of their HIV status

Necessary attention to HIV and infant feeding should not divert attention from protection, promotion and support for breastfeeding. Over-emphasis by well-meaning health officials on HIV transmission through breastfeeding, and misinformation in the media, can negatively affect infant and young child feeding practices in the general population.

As a global public health recommendation that is part of the Global Strategy for Infant and Young Child Feeding, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Afterwards, they should receive nutritionally adequate and safe complementary foods, while breastfeeding continues for up to two years of age or beyond. This recommendation applies to children of women who have been tested and know that they are HIV-negative, and of women who do not know their HIV status and have not had a clinical diagnosis of AIDS.¹

2.2 Global Strategy for Infant and Young Child Feeding

The Global Strategy for Infant and Young Child Feeding was adopted by the World Health Assembly and endorsed by the UNICEF Executive Board in 2002 (see Annex 3). Its aim is to improve the nutritional status, growth and development, and health, and thus the survival, of infants and young children through breastfeeding and complementary feeding and other related maternal-nutrition interventions. It recognizes the occurrence of exceptionally difficult circumstances, including HIV infection of the mother, which require special attention.

2.3 Infant and young child feeding in the context of HIV

To turn the Global Strategy into practice in the context of HIV, the HIV and Infant Feeding Framework for Priority Action² was developed (see Annex 5). The Framework recommends to governments the following key action areas related to infant and young child feeding in the special circumstances of HIV/AIDS, which should serve as the basis for designing a country plan of approach:

- Develop or revise (as the case may be) a comprehensive national policy on infant and young child feeding, including HIV and infant feeding
- Implement and enforce the International Code of Marketing of Breast-milk Substitutes and subsequent relevant WHA resolutions
- Intensify efforts to protect, promote and support appropriate infant and young child feeding practices in general, while recognizing HIV as one of a number of exceptionally difficult circumstances

¹ This recommendation applies in all settings for HIV-negative women and women who do not know their status, including in areas with high HIV prevalence and low acceptance or availability of interventions to prevent HIV transmission to infants.

² WHO, UNICEF, UNAIDS, UNFPA, World Bank, UNHCR, WFP, FAO and IAEA have endorsed the Framework.

- Provide adequate support to HIV-positive women to enable them to select the best feeding option for themselves and their babies, and to successfully carry out their infant-feeding decisions
- Support research on HIV and infant feeding – including operations research, learning, monitoring and evaluation at all levels – and disseminate findings

In the first area of action, many countries have already developed comprehensive policies, or have policies specifically on child nutrition, breastfeeding, complementary feeding, and HIV and infant feeding. There are also, in some cases, guidelines on implementing the policies. The further step that may remain to be taken is the full implementation of the policy. Where such policies exist, managers should ensure that they have copies of them, that they are aware of their implications for themselves and their programmes, facilities and staff; and that the policy elements are communicated to staff whom they supervise.

Policies and guidelines may require local interpretation or adaptation. In such cases, managers and supervisors should consult with the health workers and counsellors concerned, and, where indicated, NGOs and communities, to make sure the policies and guidelines are clear and applicable to local circumstances. Rapid surveys and other methods of formative research¹ will often be necessary to test proposed policies and guidelines and to help guide their implementation, monitoring and evaluation at the local level. WHO is developing a protocol for this purpose.²

2.4 Appropriate marketing and distribution of breast-milk substitutes

The Code was adopted in 1981 by the World Health Assembly to promote 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. Subsequent WHA resolutions have clarified its scope. In the context of HIV, the Code and resolutions:

¹ Formative research is defined by the World Bank as “planning research, specifically a combination of rapid, interactive information-gathering methods with mothers and other key people, through which important scientific information and key cultural and personal concerns are examined and negotiated to arrive at feasible, acceptable and effective strategies and practices that lead to improved health and nutrition”.

² *What are the options? Using Formative Research to Adapt Global Recommendations on HIV and Infant Feeding to the Local Context* (in press, 2003).

- encourage governments to regulate the distribution of free or subsidized supplies of breast-milk substitutes to prevent 'spillover';
- protect children fed on replacement foods by ensuring that product labels carry necessary warnings and instructions for safe preparation and use;
- ensure that a given product is chosen on the basis of independent medical advice.

The Code is relevant to, and fully covers the needs of, mothers who are HIV-positive. Even where the Code has not been implemented, its provisions still apply.

Managers should:

- be familiar with the Code and know about their responsibilities under it
- understand the Code’s continuing relevance in the context of HIV
- apply the Code in their work
- make sure that the Code is not being inadvertently ignored either through effects of their programmes, or within their facilities
- make sure that workers under their supervision are familiar with the Code, understand its implications for their own work (see Box 2), and abide by it.
- encourage workers to be role models for mothers, by feeding their own infants and young children according to the recommended approaches.

2.5 Protecting, promoting and supporting appropriate infant and young child feeding practices

Health-care managers and supervisors are encouraged to integrate promotion of infant and young child feeding, including addressing HIV and infant feeding issues, into mother and child health (MCH) services and community programmes. Some of the ways in which this can be done include:

- **Ensuring baby-friendly practices in maternity facilities**

According to the BFHI, every facility providing maternity services and care for newborn infants should apply the ‘Ten Steps to Successful Breastfeeding’ (Box 3) to ensure that women are supported to breastfeed optimally.

BOX 2

The International Code: responsibilities of managers and health workers

1. Health workers should not allow themselves or health facilities to be used for advertising or promotion to the general public of breast-milk substitutes and other products covered by the Code, such as bottles and teats.
2. Mothers should not be given samples (small amounts) of a breast-milk substitute. If HIV-positive mothers are given breast-milk substitutes, they should be given sufficient supplies for as long as their infants need it, usually at least up to 12 months.
3. The health service should in no way promote breast-milk substitutes. This means that there should be, for example, no calendars, pictures or other items that show the brand name of formula, or bottles or teats. Cans of formula should be kept out of sight of breastfeeding mothers.
4. Infant-feeding company personnel should not advise mothers, or show them how to use breast-milk substitutes. Health workers should not advise or show mothers in the general population how to use breast-milk substitutes. If a mother needs to use a breast-milk substitute for a medical reason, health workers should discuss and demonstrate use of the milk only with this individual mother, out of the view of other mothers in the general population.
5. Health workers should not accept gifts or free samples from manufacturers of infant food.
6. Managers should ensure that health workers know about their responsibilities in implementing the Code.
7. Health workers should promote, protect and support breastfeeding.
8. Health workers should avoid conflict of interest when considering scholarships or conference sponsorships from infant-food companies.

The BFHI recognizes the special needs of HIV-positive women. For example, Step 6, “Give newborn infants no food or drink other than breast milk, unless medically indicated”, means that being HIV-positive is an accepted medical indication for a

woman not breastfeeding her infant. Step 10, “Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital or clinic”, is designed to generate community support for good breastfeeding practices and also for reducing stigma. In implementing Step 10, confidentiality for HIV-positive mothers should be ensured.

It is planned to include additional information on these issues in updates being prepared of the WHO and UNICEF BFHI training manuals, assessment forms and study guides.

- **Training and supporting counsellors on all aspects of infant and young child feeding**

Trained counsellors should be able to provide counselling on:

- breastfeeding
- complementary feeding
- HIV and infant feeding (see section 3.2).

Counselling should be available in health facilities and communities, and through IMCI and reproductive health programmes.

Managers should ensure that health workers and other staff and volunteers who counsel on infant and young child feeding receive training in such counselling, and supportive supervision to retain and enhance their skills (see section 3.3).

- **Strengthening antenatal care and related services**

ANC services should be strengthened so that they can:

- provide information about infant feeding in general, including, in particular, the benefits of breastfeeding and the risks of artificial feeding
- provide information to pregnant women and their partners about HIV transmission in general, transmission of HIV infection to infants and young children, and about how risk is increased if a mother becomes infected with HIV at the end of pregnancy or during breastfeeding
- provide information about the risks of unprotected sex and counselling about safer sex and preventing infection, including promotion of faithfulness or reducing the number of partners, and offer means of protection, e.g. condoms
- counsel women about improving their own nutrition, which may reduce the risk of transmit-

BOX 3

The Baby-friendly Hospital Initiative (BFHI)

The special needs of HIV-positive women can be fully accommodated without compromising baby-friendly hospital status. Baby-friendly hospitals are hospitals that have changed their practices to support breastfeeding, according to the ten steps below:

1. Have a written breastfeeding policy and have it 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 half an hour of birth.
5. Show mothers how to breastfeed and how to maintain lactation even if they are separated from their infants.
6. Give newborn infants no food or drink other than breast milk, unless medically indicated.
7. Practice rooming-in – allowing mothers and infants to stay together – 24 hours a day.
8. Encourage breastfeeding on demand.
9. Give no artificial teats or pacifiers to breastfeeding infants.
10. Foster the establishment of breastfeeding support groups and refer mothers to them on discharge from hospital or clinic.

The ten steps can also benefit and support mothers who are not breastfeeding – for example, by encouraging rooming-in and bedding-in (where the infant and the mother share a bed) to promote mother-infant closeness.

- HIV-positive mothers need to receive the same supportive and nurturing environment as all mothers.
- HIV-positive mothers who choose to use replacement feeds for medical indications should be supported in the same way as other mothers to initiate feeding and to initiate skin-to-skin contact.
- Baby-friendly hospitals can conduct HIV testing and counselling as well as counselling on HIV and infant feeding, and they can provide a framework for implementation of interventions to prevent HIV transmission from mothers to their infants. HIV-negative women need individualized HIV counselling, as breastfeeding transmission rates are high in newly-infected women, and many women sero-convert in the post-partum period.

ting HIV to their infants, and to use nutritious foods, and provide appropriate micronutrients, where possible

- provide HIV testing and counselling services for women and their partners, or refer them to a nearby facility
- routinely screen and treat all pregnant women for STIs
- provide initial psychosocial support to HIV-positive women and their families, and organize referral to long-term support services
- support all breastfeeding mothers, including prevention, diagnosis and early treatment of breast problems.

— discuss a range of contraceptive options to enable a timely post-partum decision without stress, especially in the case of non-breastfeeding mothers. Emphasis should be placed on the dual protection against STIs and pregnancies afforded by condoms.

- involve partners in ANC, as appropriate.

Managers should review the package of ANC being offered to all women and its implementation in practice, and make efforts to strengthen any aspects necessary. Infrastructure needs, such as space for counselling or for demonstrations, will also need attention.

3. Supporting HIV-positive women in their infant-feeding decisions

All mothers need support to feed their infants and young children optimally as set out in the Global Strategy for Infant and Young Child Feeding. Within the context of the HIV and Infant Feeding Framework for Priority Action, HIV-positive women often require additional counselling and follow-up to guide them to the infant-feeding decision that is best for them and their babies, and to help them carry it out safely and effectively. This additional guidance can be provided only when women are aware of their HIV status and its implications. This section outlines the steps needed to provide support to as many HIV-positive women as possible, especially the most vulnerable.

Managers should:

- *organize where and how HIV testing and counselling services can be made available or expanded to pregnant and lactating women and their partners*
- *ensure that infant-feeding counsellors know the locally appropriate infant-feeding options, and are able to counsel and support mothers adequately*
- *decide how and at what points infant-feeding counselling will be integrated into MCH services*
- *identify the health workers and counsellors who will need orientation/capacity-building and how it will take place*
- *clarify what package of support will be available to HIV-positive women and how they can access it*
- *determine how best to support health workers and counsellors after their orientation and capacity-building*
- *ensure the development and implementation of a communication strategy to protect, promote and support good infant-feeding practices at community level*
- *plan for development of community capacity for reducing social risks and stigma.*

3.1 HIV testing and counselling

Managers of services incorporating prevention of HIV transmission through breastfeeding should ensure that HIV testing and counselling services are available to pregnant and lactating women. Women must know their HIV status to enable them to make informed decisions about infant feeding. Where testing and counselling services may already be available from other facilities, women should be told how to access them, and their access should be facilitated. Where possible, counselling of couples should be encouraged.

Annex 1 documents contain more detailed information about HIV testing and counselling and how to organize services.

HIV-positive mothers may have access to sophisticated tests to determine the severity of their infection, such as CD4+ counts or viral-load tests. Where a woman can have such tests, they may help to guide her infant-feeding decision. Low CD4+ counts and high RNA viral load in plasma are known to be associated with an increased risk of HIV transmission through breastfeeding, but specific cut-off points for risks have not been established.

3.2 Infant-feeding recommendations and options for HIV-positive women

Infant-feeding recommendations for HIV-positive women

Given the need to reduce HIV transmission to infants while at the same time not increasing their risk of morbidity and mortality from other causes, UN guidelines state “when replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding by HIV-infected mothers is recommended. Otherwise, exclusive breastfeeding is recommended during the first months of life” and should then be discontinued as soon as the above conditions are met (see Box 4 for definitions of these conditions). To help HIV-positive mothers make the best choice, they should receive counselling that includes information, based on local assessment, about the risks and

BOX 4

Definitions of acceptable, feasible, affordable, sustainable and safe

These terms should be adapted in the light of local conditions and formative research. The following may serve as a starting point:

Acceptable: The mother perceives no barrier to replacement feeding. Barriers may have cultural or social reasons, or be due to fear of stigma or discrimination. According to this concept the mother is under no social or cultural pressure not to use replacement feeding; and she is supported by family and community in opting for replacement feeding, or she will be able to cope with pressure from family and friends to breastfeed, and she can deal with possible stigma attached to being seen with replacement food.

Feasible: The mother (or family) has adequate time, knowledge, skills and other resources to prepare the replacement food and feed the infant up to 12 times in 24 hours. According to this concept the mother can understand and follow the instructions for preparing infant formula, and with support from the family can prepare enough replacement feeds correctly every day, and at night, despite disruptions to preparation of family food or other work.

Affordable: The mother and family, with community or health-system support if necessary, can pay the cost of purchasing/producing, preparing and using replacement feeding, including all ingredients, fuel, clean water, soap and equipment, without compromising the health and nutrition of the family. This concept also includes access to medical care if necessary for diarrhoea and the cost of such care

Sustainable: Availability of a continuous and uninterrupted supply and dependable system of distribution for all ingredients and products needed for safe replacement feeding, for as long as the infant needs it, up to one year of age or longer. According to this concept there is little risk that formula will ever be unavailable or inaccessible, and another person is available to feed the child in the mother's absence, and can prepare and give replacement feeds.

Safe: Replacement foods are correctly and hygienically prepared and stored, and fed in nutritionally adequate quantities, with clean hands and using clean utensils, preferably by cup. This concept means that the mother or caregiver:

- has access to a reliable supply of safe water (from a piped or protected-well source)
- prepares replacement feeds that are nutritionally sound and free of pathogens
- is able to wash hands and utensils thoroughly with soap, and to regularly boil the utensils to sterilize them
- can boil water for preparing each of the baby's feeds
- can store unprepared feeds in clean, covered containers and protect them from rodents, insects and other animals.

benefits of various infant-feeding options, and guidance in selecting the most suitable option for them and their babies. The information must be free from commercial pressure. The recommendations state that, whatever a mother decides, she should be supported in her choice. There should also be follow-up care and support for women, including family planning and nutritional support. The specific support to be given will vary with local conditions, and is discussed in section 3.3.

At the time of writing these guidelines there are many planned or ongoing studies to assess the impact of ARV use during breastfeeding, but no evidence is yet available on its impact on the health of infants or

mothers. Where mothers are using combinations of ARV drugs for treatment, the infant-feeding recommendations in this document still apply.

Questions remaining to be answered include:

- Can the use of ARVs reduce the risk of postnatal HIV transmission?
- Should these drugs be given to the mother or the infant or both?
- What may be the long-term and short-term consequences for the health of the baby of ARV use by either the mother or the baby?
- What is the long-term impact on the mother's health

of ARV use for prevention of postnatal transmission only?

Issues related to infant-feeding options

The following are the main issues that need to be considered about infant-feeding options for HIV-positive mothers:

- **Nutritional requirements** – breast milk has all the nutritional requirements of a child for the first six months of life. Replacement feeding must provide the infant's nutritional requirements as completely as possible, although no substitute exactly replicates the superior nutrient and immunological content of breast milk (see Annex 6)
- **Bacterial infection** – breast-milk substitutes lack the breast-milk properties that protect against infections and reduce their severity. During preparation, bacteria may contaminate breast-milk substitutes and heat-treated expressed breast milk, so it is essential that feeds be hygienically prepared and given (see Annex 7).
- **Cost implications** – much of a family income can go on buying enough of a breast-milk substitute to feed an infant (see Annex 8), and on the costs of fuel, water and soap, as well as on health care because of expected higher morbidity.
- **Family planning/child spacing** – exclusive breastfeeding delays the return of fertility, thus having a contraceptive effect. Women who do not breastfeed lose this contraceptive effect, and can become pregnant within six weeks of delivery if they do not use contraception. Another pregnancy soon after delivery can put an additional burden on an HIV-positive woman, and harm her health.
- **Psychological stimulation** – not breastfeeding can have a harmful effect on mother- infant bonding, resulting in lack of, or reduced, care and stimulation for the infant.
- **Social and cultural factors** – women who choose to either exclusively replacement feed or exclusively breastfeed may be stigmatized if these practices are not common locally. Measures are thus required to provide psychosocial support to HIV-positive mothers, whichever their choice (see section 3.3).
- **Breast problems** – there is need for prevention, early recognition and treatment of such breast problems as mastitis and nipple lesions; their probable link with increased HIV transmission to the infant needs to be explained.

Feeding options for HIV-positive mothers

Infant-feeding options are described briefly below; Annex 9 gives the details for each option and the implications for managers. Mothers may use the feeding options at different points in their babies' development, and will need special support at each of the transition phases. Planning should take account of the staffing and cost implications of this support.

Infant-feeding options:

- **Commercial infant formula:** specially formulated powdered milk made specifically for infants and sold in shops/stores or provided by programmes to prevent HIV transmission to infants
- **Home-modified animal milk:** fresh or processed animal milk that is modified by the addition of water, sugar and micronutrient supplements
- **Exclusive breastfeeding:** giving only breast milk and no other liquids or solids, not even water, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines, to the baby for the first months of life
- **Wet-nursing:** having another woman breastfeed a baby, in this case a tested HIV-negative woman
- **Expressing and heat-treating breast milk:** removing the milk from the breasts manually or with a pump, then heating it to kill HIV
- **Breast-milk banks:** places where donor milk is pasteurized and made available for infants

3.3 Organizing health services to support HIV-positive women in infant feeding

Organizing services to prevent HIV transmission through breastfeeding requires a range of activities that are discussed below.

■ Assessing the situation

Managers should assess the situation in health facilities and communities, on the basis of information and data from reports and surveys, by talking to staff, and encouraging staff to meet with community leaders and members, as well as with outreach workers. District, village or neighbourhood health or development committees can play a useful part in the assessment. Including communication specialists (or social scientists, community development officers, educators) in the assessment from the start will en-

sure that the required communication, sociocultural and community-related information is available. From such assessment, managers should be in a position to determine:

- current levels of knowledge, understanding and practice of infant feeding and the feasibility of the various options for HIV-positive women among different groups of mothers and community members – e.g., cultural beliefs about giving water to infants in the first six months of life.
- the perceived benefits and costs of the different infant-feeding options for HIV-positive women and for women who are not infected or are unaware of their status. What are the features of the social and cultural environments, including the key social groups, and the norms, that influence the choices that women make and implement, and their adherence to their choices? What do women perceive that other family members and their community expect them to do?
- credible sources of information on health, nutrition, and infant and young child feeding and HIV, and sources of skill building and of support to different groups of mothers, as well as to key social groups that influence mothers.
- the availability of general resources required for alternative feeding options, including fuel source, storage of supplies, water safety, and replacement milk (formula or other animal milk) even when free or subsidized milk is supplied by a programme.

Managers also need to obtain information about the population to be served, its practices, and the possibility of expanding services, as described in Annex 10.

Much of the information needed may be available only at national level. Local information may be from informal sources if HIV-positive women in an area have had little experience with replacement feeding or counselling for HIV-positive women. For the content of the counselling, formative studies using qualitative methods are advisable.

All of this information will help managers, health workers and counsellors determine what replacement foods might be acceptable, feasible, affordable, sustainable and safe for at least some women, and what complementary feeding practices should be promoted.

■ **Counselling on infant feeding**

The counselling considerations in the sections below should be interpreted within a framework in which maternal–child and reproductive health services are integrated with activities to prevent HIV infection in infants and young children.

Types of counsellors

A wide variety of health workers and peer or lay counsellors, both in health facilities and in the community, have successfully practised infant-feeding counselling. The exact type and mix of counsellors will depend on various factors, such as the staff and work-load of the health facilities, the number and type of staff already trained or who can be quickly trained, and the acceptability of peer or lay counsellors. In the case of lay counsellors, it depends also on the norms regarding voluntarism and incentives, and the ability of the health system to observe them.

Among non-professional counsellors, managers might consider help from organizations with expertise in breastfeeding and infant nutrition, as well as those with experience in family planning, since their staff are likely to have already a foundation in counselling skills.

Managers should use available information to decide who is best suited to counsel, given existing constraints and possibilities for training. The most suitable infant-feeding counsellors are those who have been trained specifically for this task.

Training of counsellors

Training in HIV and infant-feeding counselling is needed not only for health staff of facilities that have initiated activities for the prevention of HIV infection in infants and young children, but for all who work with pregnant women and infants in high HIV-prevalence settings. Ways should be found to link training in counselling for HIV and infant feeding with the more general training in prevention of mother-to-child transmission.

WHO/UNICEF training courses exist on breastfeeding counselling, lactation management, HIV and infant feeding, and BFHI (see Annex 1), and many health workers have already been trained in one or more of these. UNICEF and IBFAN often arrange courses on the Code. All are designed for in-service training of health workers (such as MCH nurses) for various lengths of time. Further training materials and tools are under development.

The course on breastfeeding counselling lasts 40 hours, and is a prerequisite for the counselling course on HIV and infant feeding (three days). Since some of the material overlaps, some countries have combined the two courses and reduced the time to a total of five or six days, in an effort to rapidly train counsellors (see Annex 11 for a proposed timetable). Neither the HIV and infant feeding counselling course nor the combined courses have been formally evaluated. Initial reports indicate, however, that where training courses are very condensed, some of the objectives may be dealt with in less depth than desirable, and practical sessions are reduced. In several cases, countries had to retrain counsellors in a full course after an initial shorter training. Whatever training on HIV and infant feeding is provided, managers should ensure that it includes skills training in counselling women and preparing replacement feeds. *Experience to date shows that, where superficial training has been provided on HIV and infant feeding, health workers and counsellors are unable to provide adequate support to HIV-positive mothers to carry out their feeding choice.*

Training a large number of workers has proven time-consuming and lengthy. Countries should be able to apply lessons learned from other programmes, such as IMCI, on streamlining methods and integration, without compromising the quality of the training.

In the long run, managers should work with health training institutions to ensure that pre-service training courses include basic information and skills on breastfeeding and HIV and infant feeding. Alternative approaches to capacity building to decrease the burden of training should be considered, including a combination of in-service, pre-service and on-the-job training, as well as coaching and supervision.

Integration of counselling

Infant feeding counselling on the benefits of breastfeeding and the need for suitable complementary feeding from six months should already be a routine part of MCH services. Managers should ensure that this service is fully integrated into the system. Integration should help to:

- provide better support to all women
- preserve confidentiality
- reduce stigma through not singling out HIV-positive women
- help health workers recognize the value of counselling

- facilitate technically correct and consistent messages across all materials
- in some cases, reduce workload by not having a separate, vertical system.

Timing of counselling

Counselling and support on HIV and infant feeding should take place at various points:

- after an HIV-positive test result but before delivery, to choose an infant-feeding option (one or more sessions)
- within the first 10 days after delivery, to determine whether the mother is able to successfully carry out her selected option
- at routine postnatal clinics, and at every well-child-care and sick-child attendance, in the same way as for women who are not HIV-positive and their children
- whenever the mother plans to change her feeding practice.

Content and process of counselling

Managers need to arrange for health workers to be able to confidently provide adequate counselling about infant feeding. Counselling should include discussing with the HIV-positive mother:

- the benefits, risks and challenges of exclusive breastfeeding and other local infant-feeding options
- whether, for her, replacement feeding will be acceptable, feasible, affordable, sustainable and safe
- the implications, including possible stigma, of replacement feeding or exclusive breastfeeding to her and her child
- the management of breastfeeding problems.

After this discussion, counsellors need to guide the HIV-positive woman to the decision that best suits her circumstances and the age of her infant. It may be useful to discuss with her the items listed in Annex 13. Usually, the counsellor would not go through all possible local options with a woman if some of them are clearly not feasible or acceptable for her. Coercion or counsellor bias towards a particular feeding choice should be avoided.

In some programmes, counselling begins by asking a mother whether she has already thought about how to feed her child and, if so, what her choice is. The

counselling session and discussions can then be focused on making sure that the choice is the best one for her and her baby. If there is any doubt, the counsellor can then repeat the process with one or more locally suitable alternatives. Obstacles to full adherence to the choice can be anticipated and means to overcome them identified.

In some countries or programmes low-income HIV-positive mothers who decide to practise replacement feeding are provided with free or subsidized commercial infant formula if they are unable to buy it themselves. Counselling will then need to cover issues likely to arise (see section on support for replacement feeding).

Counselling will also need to cover related issues for HIV-positive women, such as post-partum contraceptive options for family planning, and use of condoms for dual protection.

Making the decision

Ideally, other family members should be encouraged to decide together about infant feeding because of the financial implications and because the mother will need her partner's and family's support whether she decides not to breastfeed, or to exclusively breastfeed. The final decision about the infant-feeding method, however, is the mother's, particularly if she is not living with the father of the child or wishes to keep her HIV status confidential.

Commercial pressures should not influence a woman's decision on her infant-feeding option, or her choice of breast-milk substitute if she opts not to breastfeed. Once she has decided on the feeding method that she feels is best for her and for her infant, she needs support for her decision and advice about the safest way to feed the baby.

If a trained counsellor feels that the mother's decision is not in her and her baby's best interest, she should discuss her concerns with the mother. If the mother decides to go ahead with her decision, however, the counsellor should still support her with ongoing advice to make the choice as safe as possible.

Breastfeeding counselling for mothers who are HIV-negative or unaware of their HIV status

Managers should ensure that health workers continue to protect, promote and support breastfeeding by women who are HIV-negative and those of unknown status. All women of unknown status should be offered HIV testing and counselling so that they can make an informed decision about infant feeding.

Counselling for HIV-negative mothers and those whose status is unknown and their partners should include the relevant information in Annex 13.

■ Follow-up and support for infant-feeding decisions

Support for replacement feeding

Managers should ensure that:

- HIV-positive women who choose not to breastfeed are not discriminated against, and that they receive help to deal with possible stigma, especially in communities where breastfeeding is the norm. To prevent discrimination, staff may need special training, and certain procedures may have to be adopted or strengthened
- health workers are clear about what local alternatives are nutritionally adequate, and present the range to the mother
- HIV-positive mothers (and preferably all mothers) are assisted, in private, to protect their right to confidentiality
- HIV-positive mothers receive help to prevent breast engorgement if they decide not to breastfeed from birth or to cease breastfeeding early. Drugs are sometimes used for cessation, but they are not recommended because of their possible side-effects, and because other methods, such as leaving the breasts unstimulated and well supported (but not tightly bound), are generally adequate. If the breasts become full, just enough milk should be expressed to relieve the fullness and to keep the breasts healthy while the milk naturally dries up
- health workers teach HIV-positive mothers how to prepare adequate amounts of replacement feeds as safely as possible to minimize the risk of diarrhoea and malnutrition, and to give feeds with a cup. Instructions should be clear, demonstrating how to clean utensils, prepare feeds and cup-feed (see Annex 7), and then observing the mother prepare and give at least one feed to ensure that she has understood the instructions. Suitable cups could be provided if necessary
- where possible, other family members are also shown how to prepare and give replacement feeds, especially if the mother is too unwell to feed the infant herself

- health workers explain that, because of the risk of exposure to HIV, once replacement feeding has begun, no breastfeeds at all should be given (see information on transition from exclusive breastfeeding to replacement feeding in Annex 9)
- health workers can provide support for modified breastfeeding or infant feeding with breast milk from other sources
- mothers who use replacement feeding know the danger signs of dehydration and can demonstrate the preparation of oral rehydration solution
- attention is given to satisfying infants' need to suck.

Support for breastfeeding

Mothers who decide to breastfeed should be supported in their choice. Managers should ensure that:

- health workers do not discriminate against HIV-positive mothers who decide to breastfeed or blame them for placing their infants at risk of HIV
- mothers get support for exclusive breastfeeding and that the option of early cessation of breastfeeding as soon as it is acceptable, feasible, affordable, sustainable and safe is thoroughly discussed and planned for in advance
- HIV-positive mothers are advised how to minimize the risks of HIV transmission through breastfeeding, including seeking treatment promptly for breastfeeding difficulties or infant mouth problems. Health workers need to be trained to prevent and manage breast conditions, especially cracked and bleeding nipples, by helping women to position and attach the infant correctly at the breast, and to treat infant mouth problems such as thrush or ulcers immediately
- mothers are systematically referred to a breastfeeding counsellor or a breastfeeding support group
- there is support for counselling on family planning/child spacing.

■ **Preventing 'spillover' to uninfected women and women unaware of their HIV status**

HIV-negative women and those who do not know their HIV status may decide not to breastfeed because of misinformation or fears about HIV. This would deprive their infants of the benefits of breastfeeding and put them at risk of other infections and malnutrition.

Health care practices to prevent 'spillover'

All health workers have a responsibility to protect, promote and support breastfeeding. Possible ways in which managers can help to prevent this 'spillover' effect are to ensure that:

- all health-education programmes continue to emphasize the benefits of breastfeeding and the dangers of artificial feeding, and that breastfeeding should be the norm in the general population
- all health workers know about their responsibilities under the Code and apply them in their work
- the BFHI is strengthened and that health facilities implement good practice to support breastfeeding consistent with the 'Ten steps to successful breastfeeding'. Step 10, on community support, is particularly relevant
- all staff who counsel mothers on replacement feeding are also trained in breastfeeding counselling and basic lactation management, and that all mothers have access to breastfeeding counselling, irrespective of HIV status
- instructions on replacement feeding are given only to HIV-positive mothers (and those with other medical indications) and their family members. Only health workers should demonstrate feeding with breast-milk substitutes, and not to breastfeeding mothers. Group instructions should be avoided, except in the special case of a group of HIV-positive mothers who have already decided to use replacement feeding. Mothers should be taught to use cups to feed their infants, and no bottles should be given out
- any commercial infant formula that is used in the health facility for infants of HIV-positive mothers is not displayed to other mothers or pregnant women
- measures to protect confidentiality are implemented
- exclusive breastfeeding rates are carefully monitored in order to detect 'spillover' effects and take remedial action.

Management of distribution of breast-milk substitutes to prevent 'spillover'

In some places HIV-positive mothers who, after counselling, have decided to use replacement feeding may be provided with free or subsidized formula. This decision should have been taken after an assessment (see

section 3.1) or formative research on the suitability of replacement feeding by HIV-positive mothers. The guidelines for distribution should be spelled out in national policy, including such conditions as the following:

- Formula should be available only to women with a medical indication not to breastfeed (such as HIV), and for whom it is acceptable, feasible, sustainable and safe (see Box 4). The government providing the supply should ensure that it is affordable, and also that the system can ensure that supplies will be sustainable.
- A reliable system ensuring continuous supply to the mother and infant should be established, or it should be specified how the existing system would securely handle the formula.
- Offers of free or low-cost formula from manufacturers or distributors should not be accepted. The government should procure formula through normal procurement channels used for drugs and other supplies.
- Compliance with the Code (both in procurement of formula and the product/packaging itself) should be ensured (see Annexes 1 and 4).
- Guidelines for the staff who will distribute formula should be in place, specifying the women who will receive it, under what conditions, how frequently and for how long, where it will be distributed, what support will be given, and so on. If none are available nationally, local guidelines should be compiled and implemented.
- Adequately trained counsellors on HIV and infant feeding should be available in facilities where breast-milk substitutes are supplied.
- A system of health-outcome monitoring and evaluation for infants should be in place.
- Once begun, formula should continue to be supplied to infants for at least the first six months of age. After six months, infants can remain on formula or be given animal milk up to at least one year, and preferably up to two years. Special follow-on formulas¹ are not needed. Replacement milk should be made available to mothers who initiate breastfeeding and choose to stop it at any time in the first year of life.

¹ A food intended for use as a liquid part of the diet for the infant from the sixth month on, and for young children.

■ **Maternal health and family planning/child spacing**

Managers should determine what extra care can be provided to HIV-positive mothers within MCH services, and how they can obtain it without disclosing their HIV status, if they do not wish to disclose it. Annex 14 lists a recommended care and support package.

Managers need to ensure that:

- all women of reproductive age, including HIV-positive women, especially those who do not breastfeed, have access to family-planning counselling and a choice of effective and suitable contraceptive methods, if they choose
- health facilities can provide sufficient supplies of contraceptives, and that family planning clinics are prepared to deal with increased demand resulting from the loss of child-spacing benefits of breastfeeding
- sufficient supplies of condoms are available for preventing sexually transmitted infections
- services provide follow-up care for HIV-positive women, including information about good nutrition and treatment for general health problems and for prevention and treatment of opportunistic infections. Where long-term ARV treatment is available, HIV-positive women should be referred for it
- health workers can refer HIV-positive women to other support services – social, psychological and practical needs are as important as medical care
- if the infant is wet-nursed, both the mother and the wet-nurse attend the clinic or are seen at home.

■ **Monitoring feeding practices and infant and child health**

Infants given replacement feeds are more likely than those who are breastfed to become ill or malnourished, and to grow less well, and they may lack the close contact with their mothers that is necessary for full psychological development. Infants who are HIV-infected, irrespective of feeding method, may exhibit some of the same problems. A breast-fed infant who is found at some point to be HIV-infected may benefit from continued breastfeeding as well as complementary feeding, according to the recommendations for the general population.

Managers need to ensure that health workers:

- adequately monitor the health and general development of infants of HIV-positive women
- check feeding techniques and, where applicable, preparation of feeds within ten days post-partum and subsequently at regular intervals, usually to coincide with the immunization, growth-monitoring or well-child clinic schedule
- can recognize whether an infant is gaining weight and growing well
- discuss with mothers and families the need to hold, talk to, and play with their infants, especially if they are on replacement feeds, to ensure adequate psychological stimulation
- can counsel women whose infants are ill or not growing well, and can tell why an infant is not gaining weight – in particular, checking that the mother is preparing and giving replacement feeds correctly and in sufficient quantities
- can provide practical assistance to resolve feeding problems – such as providing mothers with breast-milk substitutes or micronutrient supplements or helping them to obtain these, reinforcing earlier teaching about preparation and feeding, or helping to prevent or manage breast problems
- teach mothers how to treat diarrhoea to prevent dehydration and recognize danger signs
- are familiar with IMCI guidelines for managing the child of an HIV-positive mother, and know when, and to where, to refer a sick child
- pay adequate attention to the health and nutrition of other children in the family, who may be affected by household expenditure on breast-milk substitutes or by the mother's health
- provide, if recommended for the country, co-trimoxazole prophylaxis according to national guidelines.

■ **Follow-up, supervision and support of health workers/counsellors**

All health-care workers need support in practising new skills, including counselling skills. Managers should ensure that health workers and all types of counsellors receive regular supportive supervision, including observation of counselling sessions or of informal exit-discussions with counselled women. Supervisors can

then provide feedback and, where necessary, refresh the health workers' skills.

Burn-out is the term used for physical or emotional exhaustion that affects caregivers and social workers whose working conditions are often very difficult; it has been observed in HIV counsellors and infant feeding counsellors. Besides supportive supervision, rotation of staff or regular meetings with other counsellors to discuss how to deal with particular issues may be helpful in preventing burn-out.

Other ways in which managers can help counsellors are to ensure that responsibilities for pre-test and post-test counselling, infant-feeding counselling and related work are clearly allocated and included in job descriptions, and that staff are given sufficient time to carry out the necessary tasks.

■ **Community support and information**

A community engagement plan has two parts: facilitating HIV and infant feeding information and practices; and supporting community ownership, and sustaining infant feeding and HIV interventions within existing networks and structures, and within the broader context of prevention of HIV infection in infants and young children. A community engagement plan should be developed early in the process of implementing HIV and infant feeding activities.

Communication strategy on appropriate infant and young child feeding practices

The best way to ensure that mothers have adequate information and support for infant and young child feeding choices is to ensure that communities are fully informed about and comprehend well the issues involved. High levels of awareness and open discussion in communities make the task of health workers and lay counsellors easier. Much experience has been gained on how to increase uptake of various interventions related to the prevention of HIV infection in infants and young children. Most of this experience points to the value of engaging partners and family members in helping women make the best feeding choice and supporting them in carrying it out.

Effective communication uses participatory, interactive methods and multiple channels or sectors. In this way, key messages are reinforced for the mother and community members in their daily lives. Discussion and other participatory sessions can take place in health facilities, workplaces or community settings. The specific setting will determine who will be respon-

sible for the activities, and health-care managers should decide on the roles of community-based workers, nurses and other clinic staff, HIV and infant-feeding counsellors, and peer educators. The choice of materials and methods will depend on the type and topic of the session, the participants, and the best way to engage their interest and participation. The approaches should be carefully planned.

Depending on the group to be reached, information for discussion might include breastfeeding in the general population, the risk of HIV transmission through breastfeeding, promotion of safer sex and condom use to prevent transmission between sexual partners, where to find HIV testing and counselling, antenatal care, family planning and STI services, and psychosocial support for people living with HIV/AIDS.

Approaches to communities should also highlight the perceived benefits to the woman of the healthiest infant-feeding practices for her situation, and the use of interventions and messages to reduce the perceived (or real) costs of those practices. To avoid stigmatizing women, information about HIV and infant feeding should be given to them and their partners at the same time. Interactive approaches will also ensure that the resources necessary to carry out the infant-feeding options are available.

Managers should:

- be familiar with any national communication plans for HIV/AIDS, prevention of HIV infection in infants and young children, breastfeeding, and similar issues. If there are no such plans, managers should work with other people concerned to develop a national strategy.
- work with communication specialists (or social scientists, community development officers, educators) to adapt national and local communication strategies according to the infant-feeding and HIV situation assessment discussed in section 3.3.
- plan how the strategy can be implemented.

Activities to address infant feeding and HIV in the community should take place against the following backdrop:

- **A sustained campaign to promote exclusive breastfeeding**, ensuring that the message is reinforced by health and community-based workers, the media, leaders, and any nutrition-related intervention programmes or ongoing campaigns.

- **A sustained campaign to promote expansion and community acceptance of HIV testing and counselling services.** This acceptance will increase the number of women who are aware of their status and can make their infant-feeding choice from a position of fully informed consent. To avoid stigmatizing women, promotion of HIV testing and counselling should be to both the women and their partners.
- **A sustained multisectoral HIV-prevention effort** with approaches designed to reach those at special risk, especially young girls.
- **Working with key partners to build community capacity** to care for and support HIV-positive women and their families, reduce vulnerability, and limit HIV transmission. These partners could include religious leaders, community-based organizations, people living with HIV/AIDS, women's groups, and local radio stations or listener groups.
- **Other communication activities** related to prevention of HIV infection in infants and young children in general.

Community capacity-building for promotion, acceptance and support

For adequate community engagement, community capacity development must complement the communication approaches outlined above. The aim of this approach, according to UNAIDS, is to produce a community “whose members are aware in a detailed and realistic way of their individual and collective vulnerability to HIV/AIDS and are motivated (and competent) to do something about their vulnerability.” As part of this strategy, managers should consider:

- participatory mapping of household and community vulnerability to HIV, and to nutritional and diarrhoeal problems, as well as community-based resources for preventing HIV infection and supporting IYCF and healthy development
- support of participatory problem-solving and planning sessions within community committees and community-based organizations – for example, many affected areas have HIV/AIDS committees
- promotion and support for IYCF support groups and systems
- training on infant-feeding issues of community-level health workers, including those outside the

BOX 5

Activities to be costed

Community education and engagement

- training local community members
- training health workers in participatory approaches to education and information, and facilitation of discussion, and their subsequent employment
- reproduction, production or purchase of community support materials
- planning and implementing communication strategies aimed at community support for breastfeeding and for HIV-positive women

Antenatal care

- training and employment of antenatal clinic staff
- strengthening referral systems
- reallocation of space/adaptation of premises
- ARV prophylaxis
- information materials
- procurement and distribution of condoms
- STI screening and treatment
- micronutrient supplements, other nutritional support
- support for monitoring of BFHI and Code
- counselling for safer sex

HIV testing and counselling

- training and employment of counsellors, and training of volunteer and lay counsellors
- training and employment of laboratory staff
- upgrading laboratory equipment and procedures
- procurement and distribution of HIV test kits
- reallocation of space/adaptation of premises
- production of information materials
- introduction of confidentiality procedures

Infant feeding counselling

- training and employment of infant-feeding counsellors
- production of information materials and demonstration materials and job aids
- reallocation of space/adaptation of premises

Support for infant feeding decisions

- provision of micronutrient supplements
- provision of breast-milk substitutes and cups
- food for breastfeeding mothers
- training and employment of health workers to provide support for women's feeding choices
- adaptation of premises

Follow-up care

- training and employment of health workers in monitoring, follow-up care and family-planning counselling
- procurement of additional contraceptives
- procurement of additional oral rehydration salts and other essential drugs for treating sick children
- setting up community and peer support groups including training, monitoring and evaluation

Other

- monitoring and evaluation
- advocacy

government and NGO system, such as traditional healers, birth attendants and lay counsellors

- engaging communities in reaching men
- soliciting community feedback for improving the quality of the health service response, and client-provider interaction
- jointly with community leaders and members, development of meaningful indicators to measure vulnerability and stigma and progress in reducing vulnerability and stigma
- jointly with community leaders and members, development of local by-laws to address vulnerability and reduce stigma

— stimulating communities to give special recognition to caregivers and caring organizations.

■ Budgeting for interventions

Managers should prepare a budget by estimating the cost of what needs to be done, on the basis of coverage of services and the extent to which these are new areas of activity. The budget should be divided into initial set-up costs and running costs once services are established, and should take account also of savings that might be achieved from preventing HIV transmission to infants through breastfeeding.

Box 5 gives examples of some of the likely activities that will need to be costed for each of the areas dis-

cussed, but it may not be comprehensive for all situations. Some of the items, such as HIV test kits, are not exclusive to infant-feeding activities. Attention should be given especially to the staff time necessary for counselling on infant feeding.

Budgets will be based on the existing and projected demand for services, including current unmet needs. To calculate the workload and staff needs, managers will need to have information on, for example:

- number of women booking for antenatal care
- HIV prevalence among women attending

- number of times a woman attends for antenatal care
- number of times infant-feeding counselling will be provided, and estimated time for each session

Managers should assess whether the costs can be covered with existing resources or by reallocation of resources, or whether additional resources are required.

4. Monitoring and evaluation

Monitoring¹ and evaluation² should be a routine part of all programme planning. These activities encourage efficiency and commitment to time frames, as well as drawing early attention to problems and suggesting what can be done to overcome them. Formative research is also a useful means of adapting guidelines to the local situation. This section describes issues to be considered in monitoring and evaluating projects and programmes that include HIV and infant feeding counselling, and in operations research. Managers will need to consider at an early stage what kinds of monitoring and evaluation activities will be carried out, and allocate adequate resources for them.

4.1 Monitoring and evaluation

At national level, several key decisions will need to be made regarding monitoring and evaluation of programmes concerned with HIV and infant and young child feeding; they include:

- measurable objectives for the programme
- on the basis of the objectives, what indicators to use, including where or at what level the pertinent data will be collected
- how frequently monitoring will be done
- when to evaluate
- who will be responsible
- mechanisms for reporting and follow-up.

Managers should be aware of national requirements on monitoring and evaluation, and decide how they can be complied with. Where these do not exist, they will need to make local decisions regarding the information needed and its collection.

The baseline studies and situation analysis or formative research on which a comprehensive policy or pro-

gramme is based provide information against which to measure change and progress.

Essential items to be monitored:

- status of policy and guidelines on infant and young child feeding, including HIV
- infant feeding counselling for HIV-positive women at first antenatal or first postnatal visit
- reported choice of infant feeding at delivery and first follow-up visit
- HIV status and growth in children of HIV-positive mothers, by feeding option
- health effects on other children and family members of women who use replacement feeding
- distribution and use of breast-milk substitutes and micronutrient supplements, if provided through the health system
- rates of breastfeeding, mixed feeding and age at which complementary food is introduced in the general population and in specific groups

Special studies may be needed to obtain data pertinent to measure some of these indicators. Other items for assessment could include:

- comparison of the quality and impact of counselling and support by different levels of health-care professionals, paraprofessionals, peer counsellors and community volunteers, who have had different training experiences
- the quality and impact of counselling and support over time
- general manifestations and apparent impact of stigma on adherence to recommended infant-feeding options.

Monitoring and evaluation of activities related to HIV and infant feeding should be carried out wherever possible in conjunction with monitoring and evaluation of activities to prevent HIV infection in infants and young children in general. Several monitoring tools have been developed for HIV testing and coun-

¹ Monitoring in this document means the regular review of available information.

² Evaluation in this document refers to the whole process of examination or measurement, and the ultimate judgement of value of programmes or activities.

selling, and for prevention of HIV infection in infants and young children; some such tools include indicators relevant to infant feeding (see Annex 1).

4.2 Formative studies

Formative studies should be carried out at least once, at the beginning of the programme, to assess local feeding options and practices (with regard to their affordability, feasibility, acceptability, sustainability and safety). These would normally be organized at the national level, but should also be carried out locally where possible. They can be undertaken through key informant interviews and focus-group discussions with mothers, communities, health workers and people living with HIV/AIDS.

4.3 Sharing of information

The purpose of programme monitoring and evaluation is to improve programmes and to find where resources need to be reallocated. Thus, programme managers should ensure that the data are analysed and used to guide programmes. This effort will be more successful if managers ensure that:

- whatever information is collected during the course of the programme is shared with all those to whom it would be useful
- information is monitored at each health facility, so that trends and problems may be detected early
- meetings are held as appropriate for dissemination of results from local monitoring, assessment and evaluation
- data quality is checked regularly
- other data on trends in HIV/AIDS are presented along with data on HIV and infant-feeding programmes
- the persons collecting and reporting the data make use of the data and see results.

The information in this document is based on current knowledge in relation to HIV and infant feeding. More research is under way and the findings will help to refine guidance. However, work in this area also needs to profit from users' experience, and it can do so only when they collect, document and share relevant information from implementation.

ANNEX 1

Useful resources and reference materials

HIV and infant-feeding guidelines/tools

Piwoz E, Huffman L, Lusk D, et al. *Issues, Risks and Challenges of Early Breastfeeding Cessation to Reduce Postnatal Transmission of HIV in Africa*. US Agency for International Development and Academy for Educational Development, Washington DC. August 2001. Available from SARA Project, sara@aed.org.

This paper examines a practice for “modified breastfeeding” for HIV-positive mothers that involves exclusive breastfeeding followed by an early transition to exclusive replacement feeding. The authors review the potential benefits and risks of this practice in Africa, and offer guidelines for making the transition easier and safer for mothers.

UNAIDS. HIV and Infant Feeding: A policy statement developed collaboratively by UNAIDS, UNICEF and WHO, 1997. Available on UNAIDS web site: <http://www.unaids.org/publications/documents/mtct/infantpole.html>.

This statement provides policy-makers with key elements for the formulation of policies on HIV and infant feeding: supporting breastfeeding; improving access to HIV counselling and testing; ensuring informed choice; and preventing commercial pressures for artificial feeding.

UNICEF/UNAIDS. Vertical transmission of HIV: Rapid assessment guide. New York, March 1998. Available on UNAIDS web site, <http://www.unaids.org/publications/documents/mtct/sitanag.pdf>.

The purpose of this tool, which was designed with UNICEF country offices in mind, is to gather basic information in MTCT programme-relevant areas to enable the most necessary, feasible and effective programme actions to be identified. It includes a section on infant feeding.

WHO. Effect of breastfeeding on mortality among HIV-infected women. WHO Statement, 7 June 2001. Available on UNAIDS web site, <http://www.unaids.org/publications/documents/mtct/Nduati%20WHO%20Statement.doc>.

This statement was issued in response to a study that reported a higher mortality in HIV-infected mothers who breastfed their infants compared with those who fed their infants with formula. It explains the background to the study, describes another study where

the findings were different, and draws conclusions for interventions for prevention of MTCT.

WHO. HIV and infant feeding counselling course. Geneva, 2000, WHO/FCH/CAH/00.2-6. Available on WHO web site, <http://www.who.int/child-adolescent-health>.

This course was developed in response to the need to train health workers to counsel women about infant feeding in the context of HIV. The materials are designed to enable trainers with limited experience of teaching the subject to conduct up-to-date and effective courses.

WHO. *New Data on the Prevention of Mother-to-Child Transmission of HIV and their Policy Implications: Technical Consultation*, UNFPA/UNICEF/WHO/UNAIDS Inter-Agency Team on Mother-to-Child Transmission of HIV, Geneva, 11–13 October 2000, Conclusions and Recommendations. 2001. WHO, Geneva. WHO/RH/01.28. Available on UNAIDS web site, <http://www.unaids.org>.

This document reports on a meeting held to review new data on the safety and efficacy of different anti-retroviral regimens for prevention of MTCT, and on infant feeding in light of HIV. See Annex 2 for excerpts.

WHO. *Prevention of HIV in Infants and Young Children: Review of evidence and WHO's activities*. WHO/HIV/2002.08. Available from WHO, Geneva.

This brochure describes the scope of the problem of HIV infection in infants and young children, the UN's comprehensive approach to it, and WHO's related activities.

WHO, UNICEF, UNFPA, UNAIDS, World Bank, UNHCR, WFP, FAO, IAEA. 2003. *HIV and Infant Feeding: Framework for Priority Action*. Geneva, 2003. Available on WHO web site, <http://www.who.int/child-adolescent-health>.

See Annex 4 for full text.

WHO (AFRO) and UNICEF. *Guidelines for assessment of training and follow-up after training in breastfeeding counselling and HIV and infant feeding counselling*. Revised draft, 2003. Available from WHO-AFRO (mason@whoafr.org).

This tool was drafted to assist countries that are implementing the WHO/UNICEF HIV and infant feed-

ing counselling course. It is designed to measure the outcomes of the course and to follow-up health workers, so that projects can adapt their training protocol if necessary.

WHO, UNICEF, UNFPA and UNAIDS. *HIV and Infant Feeding: Guidelines for Decision-makers*. Revised 2003. WHO, Geneva. Available from WHO, Geneva.

These guidelines provide guidance to decision-makers on issues that need to be considered in relation to infant and young child feeding in the context of HIV, and highlight areas of special concern on which policy decisions need to be made locally.

WHO, UNICEF, UNFPA and UNAIDS. *HIV and Infant Feeding: A review of HIV transmission through breastfeeding*. Revised 2003. WHO, Geneva. Available from WHO, Geneva.

In this document, the scientific evidence relating to the transmission of HIV-1 infection during breastfeeding is presented, with a short description of the benefits of breastfeeding for the mother and infant in general.

UNICEF ESARO. *Counselling and infant feeding practices of mothers in programmes to prevent mother-to-child transmission of HIV: An evaluation tool with guidelines for adaptation to local conditions*. Final draft. Nairobi, 2002. Available from UNICEF, adewagt@unicef.org.

This tool is intended to evaluate counselling strategies in MTCT programmes with respect to infant feeding practices and the support offered to mothers to practice their feeding choice. It may be used as a baseline measurement of practice where programmes have not yet started or to track changes in practices over time. The document provides a questionnaire, accompanying database, manual of operations and guidelines for data entry and analysis. Countries and sites that choose to use the same approach may be able to compare results. This tool is not designed as a comprehensive survey tool of nutrition and morbidity events in the general population, nor is it intended for formative development of infant or replacement feeding guidelines.

General information and resources on infant and young child feeding

IBFAN ICDC. *Standard IBFAN Monitoring (SIM), manual and forms*. IBFAN, 2003. Available from ICDC, PO Box 19, 10700 Penang, Malaysia, fax 60 4 890-7291, ibfanpg@tm.net.my.

The manual and forms are tools used in monitoring compliance with the International Code of Marketing of Breast-milk Substitutes. The manual is a guide to the five accompanying forms, which are designed

to report promotional practices in health care facilities, in the media and in shops.

Interagency Group on Breastfeeding Monitoring. Monitoring compliance with the International Code of Marketing of Breast-milk Substitutes: Guide for Estimating the Prevalence of Code Violations. 2002. Available on IGBM web site, <http://www.savethechildren.org.uk/development/links/index.htm>.

This document contains the information necessary to carry out a cross-sectional study on the level of Code violations in a specific country. It is particularly useful for a baseline indication of violations.

Pan American Health Organization. Guiding principles for complementary feeding of the breastfed child. Washington DC, 2002. Available from PAHO at <http://www.paho.org>.

This publication is intended to guide policy and programmatic action on complementary feeding at global, national and community levels. It sets out scientifically based guidelines which can be adapted to local feeding practices and conditions.

Savage-King F. *Helping Mothers to Breastfeed*. African Medical and Research Foundation, Nairobi. 1992 (revised edition). Available from AMREF, Wilson Airport, PO Box 30125, Nairobi, Kenya.

This book summarizes up-to-date information about breastfeeding. It has been widely used in Africa since its first printing.

Sokol E. *The Code Handbook: A guide to implementing the International Code of Marketing of Breast-milk Substitutes*. Stichting, ICDC, Penang, 1997 (under revision). Available from ICDC, PO Box 19, 10700 Penang, Malaysia, fax 60 4 890-7291, ibfanpg@tm.net.my.

This book is intended for drafters of legislation based on the Code and subsequent relevant WHA resolutions.

UNICEF, WHO. *The Baby-friendly Hospital Initiative. Parts I-VIII*. New York, UNICEF, 1992. Available from UNICEF, New York.

This document presents guidelines for implementing the BFHI. It describes a four-stage methodology, based on lessons learned from early work in this field.

UNICEF/WHO/UNESCO/UNFPA/UNDP/UNAIDS/World Bank. *Facts for Life*, Third Edition, 2002. Available from UNICEF, New York.

This book aims to provide parents and other caregivers with the information they need to save and improve children's lives. It contains facts on how to prevent child deaths and diseases, and to protect women during pregnancy and childbirth.

WHO. *Breastfeeding: The technical basis and recommendations for action*. Geneva, 1993. WHO/NUT/MCH/93.1. Available from WHO, Geneva.

This volume is designed to provide policy-makers and programme planners with up-to-date technical information, and recommendations for strategic planning to protect, promote and support breastfeeding.

WHO. *Breastfeeding counselling: A training course*. Geneva, 1993. Available on WHO web site: <http://www.who.int/child-adolescent-health>.

The course is designed for health workers who care for mothers and young children in maternity facilities, hospitals and health centres and communities. The aim of the course is to enable health workers to develop the clinical and interpersonal skills needed to support optimal breastfeeding practices, and where necessary to help mothers to overcome difficulties.

WHO. *Global Strategy on Infant and Young Child Feeding*. Geneva, 2003. Available on WHO web site: <http://www.who.int/child-adolescent-health>.

For full text of document, see Annex 3.

WHO. *Indicators for assessing breastfeeding practices*. Reprinted report of an Informal Meeting. Geneva, 1991. (WHO/CDD/SER/91.14, WHO/NUT/96.1). Available from WHO, Geneva.

This report summarizes the discussion and consensus reached among participants at a meeting convened on breastfeeding indicators derived from household survey data. It gives precise definitions of the indicators, and describes the rationale for their selection.

WHO. *The International Code of Marketing of Breast-milk Substitutes: A common review and evaluation framework*. Geneva, 1996 (Document WHO/NUT/96.2). Available from WHO, Department of Nutrition for Health and Development, Geneva, publications@who.int.

This framework is designed to help competent authorities and other concerned parties in countries to review and evaluate relevant national action in giving effect to the principles and aim of the Code. The framework offers a standardized method of information and data collection for monitoring progress over time.

WHO Department of Child and Adolescent Health and Development. *Relactation: A review of experience and recommendations for practice*. WHO/CHS/CAH/98.14. Geneva, 1998. Available on WHO web site, <http://www.who.int/child-adolescent-health>.

This review provides practical guidelines to enable mothers to relactate. It presents, among other topics, the physiological basis, the factors that affect the success of relactation, and recommendations for care of the mother or foster mother.

WHO Department of Child and Adolescent Health and Development. *Mastitis: Causes and management*. WHO/FCH/CAH/00.13. Geneva, 2000. Available on WHO web site, <http://www.who.int/child-adolescent-health>.

This review aims to bring together available information on lactational mastitis and related conditions as well as their causes, to guide practical management, including the maintenance of breastfeeding.

WHO, Wellstart International. *The Baby-friendly Hospital Initiative. Monitoring and reassessment: Tools to sustain progress*. Geneva, World Health Organization, 1999. Available from Department of Nutrition for Health and Development, WHO, Geneva.

These tools are designed to foster involvement of hospital management and staff in problem identification and planning for sustaining or improving the implementation of the Ten Steps. There are four tools, and data collection and related forms and information are included.

WHO, LINKAGES. *Infant and Young Child Feeding: National tool for assessing practices, policies and programmes*. Geneva, World Health Organization, 2003. Available from Department of Child and Adolescent Health, WHO, Geneva.

This tool is designed to assist countries in summarizing current data with regard to infant and young child feeding practices, in assessing the strengths and weaknesses of their policies and programmes to promote, protect and support optimal feeding practices, and in determining where improvements may be needed to meet the aims and objectives of the Global Strategy on Infant and Young Child Feeding. The tool can be used by a local team to undertake a self-assessment.

HIV testing and counselling

UNAIDS. *Tools for evaluating HIV voluntary counselling and testing*. March 2000. Available on UNAIDS web site, <http://www.unaids.org>.

This document provides guidance on monitoring and evaluation of the various aspects of planning and implementing HIV testing and counselling, including the quality and content of counselling. It provides tools for the evaluation of testing and counselling as part of a national programme, as well as testing and counselling services in specific settings.

WHO, HIV/AIDS and Sexually Transmitted Infections Initiative. *Voluntary counselling and testing for HIV infection in antenatal care: Practical considerations for implementation*. Geneva, January 2000. Available on UNAIDS web site, http://www.unaids.org/publications/documents/mtct/VCT_Practical.doc.

This document is a comprehensive guide for health-care managers on how to plan and implement the in-

corporation of testing and counselling into antenatal care. It would also be useful for planners and policy-makers on what exactly is involved in this aspect of MTCT prevention activities. The document covers the major aspects in a simple, step-by-step way.

Monitoring and evaluation

WHO. *Breastfeeding and Replacement Feeding Practices in the Context of Mother-to-Child Transmission of HIV: An Assessment Tool for Research*. 2001. WHO, Geneva. WHO/CAH/01.21/WHO/RHR/01.12. Available on WHO web site, <http://www.who.int>.

This tool provides guidance for researchers who seek to establish the nature of the association and levels of risk of transmission between patterns of infant feeding and MTCT. The document includes introductory sections on MTCT, definitions and suggestions for the timing of applying the questionnaire and recommendations for presentation of data.

WHO/UNICEF/UNFPA/UNAIDS/USAID/HRSA 2003. *National guide to monitoring and evaluation of programmes for the prevention of HIV in infants and young children*. 2003. WHO, Geneva. Available from WHO, Geneva.

This manual provides guidance on monitoring and evaluation of programmes for the prevention of HIV in infants. It presents a list of core and additional indicators (some of which may already be collected elsewhere) and guidance on their definition; rationale for their use and what they measure; how to measure them; and strengths and limitations. Some of the indicators relate to infant feeding.

Costs

Marseille E and Kahn J. *Antiretroviral drug and substitute feeding interventions to prevent mother-to-child transmission of HIV: Field test draft version*. 1999. Health Strategies International, prepared for UNAIDS. Available on UNAIDS web site, http://www.unaids.org/publications/documents/mtct/MTCT_CET4.xls and http://www.unaids.org/publications/documents/mtct/CET_Manual2.doc.

The purpose of this tool is to allow decision-makers to compare the cost-effectiveness of a range of MTCT prevention strategies in a particular setting, according to local circumstances. It consists of a manual and Excel worksheets. The manual outlines the purpose of the cost-effectiveness tool, its basic organization and its analytical methods.

Schmid G, Sweat M, O'Reilly K and de Zoysa I. *A comparison of economic analysis of nevirapine for prevention of mother-to-child transmission of HIV*. Abstract TuPeE5165, 14th International AIDS Conference, Barcelona, Spain, July 2002.

This paper compares three economic analyses of use of nevirapine for prevention of mother-to-child transmission, and presents cost per case averted.

UNICEF/UNAIDS/WHO-HTP/MSF. *Sources and prices of selected drugs and diagnostics for people living with HIV/AIDS*. June, 2003 (updated annually). Available on UNICEF and WHO web sites, http://www.unicef.org/supply/index_8362.html, <http://www.who.int/medicines/organization/par/ipc/sources-prices.pdf>

This document provides marketing information that can be used to help procurement agencies make informed decisions on the source of drugs and serve as the basis for negotiating affordable prices.

Nutrition related to HIV/AIDS

Piwoz E and Preble E. *HIV/AIDS and nutrition: A review of the literature and recommendations for nutritional care and support in sub-Saharan Africa*. Support for Analysis and Research in Africa (SARA) Project and Bureau for Africa, Office of Sustainable Development, US Agency for International Development, Washington DC, November 2000. Available from SARA Project, sara@aed.org.

The objectives of this paper are to: review what is known about the clinical and social dimensions of HIV and nutrition relationships, as relevant to the African context; synthesize current understanding of the role of macronutrients and micronutrients in HIV infection, as relevant in African settings; describe the impact of HIV on nutritional status and the impact of nutritional status on HIV progression and transmission, including MTCT; highlight important research and programme experience from Africa; and identify research gaps and make recommendations for programmes addressing HIV and nutrition.

WHO and FAO. *Living well with HIV/AIDS: A manual on nutritional care and support for people living with HIV/AIDS*. Rome, 2002. Available from WHO, Geneva.

This manual recognizes the relationship between infection and nutrition and offers simple and practical dietary suggestions for people living with HIV/AIDS.

Food and Nutrition Technical Assistance (FANTA) Project. *HIV/AIDS: A Guide for Nutrition Care and Support*. Academy for Educational Development. Washington DC, September 2001. Available from FANTA Project, AED, 1825 Connecticut Ave. NW, Washington DC, 20009-5721, fanta@aed.org, <http://www.fantaproject.org>.

This guide provides information for affected households and communities on how to live a healthy life from the time of infection with HIV through the progression of the disease. It is intended to help development programme managers make recommendations on food management and nutritional issues for households with members who are HIV-infected or living with AIDS.

Logistics

WHO Expert Committee on Specifications for Pharmaceutical Preparations : thirty-seventh report (in press). Annex 9: Guide to good storage practices for pharmaceuticals. Geneva, WHO, 2001. Available on WHO web site, http://www.who.int/whqlibdoc.who.int/trs/WHO_TRS_908.pdf.

The objective of this guide is to describe the special measures considered suitable for the storage and transportation of pharmaceuticals. It is applicable to manufacturers, importers, contractors, wholesalers, and community and hospital pharmacies.

Useful addresses and web sites

US Centers for Disease Control and Prevention (CDC)
1600 Clifton Road
Atlanta, GA 30333, USA
<http://www.cdc.gov>

International Baby Food Action Network (IBFAN)
European Office:
GIFA
PO Box 157
1211 Geneva 19
Switzerland
<http://www.ibfan.org/english/gateenglish.html> (Consult web site for Regional Offices)

ICDC
PO Box 19
10700 Penang, Malaysia

Support for Analysis and Research in Africa (SARA) Project
Academy for Educational Development
1825 Connecticut Avenue, NW
Washington DC 20009, USA
sara@aed.org

UNAIDS
20, avenue Appia
CH-1211 Geneva 27
Switzerland
Tel: (+4122) 791 3666
Fax: (+4122) 791 4187
unaids@unaids.org, <http://www.unaids.org>

UNICEF
UNICEF House
3 United Nations Plaza
New York, New York 10017
U.S.A.
Tel. 1 212 326.7000
Fax 1 212 887.7465
info@unicef.org, <http://www.unicef.org>

UNFPA
220 East 42nd Street
New York, NY 10017, USA
Tel. 1 212 297-5256
<http://www.unfpa.org>

World Alliance for Breastfeeding Action (WABA)
PO Box 1200
10850 Penang, Malaysia
Tel. 604 658-4816
Fax. 604 657-2655
secr@waba.po.my
<http://www.waba.org.my>

WHO
Av Appia 20
CH-1211 Geneva 27
Switzerland
Tel. 41 22 791-2111
Fax. 41 22 791-3111
<http://www.who.int>

Food and Nutrition Technical Assistance Project (FANTA)
Academy for Educational Development
1825 Connecticut Avenue., NW
Washington, DC 20009-5721
Tel.: (202) 884-8000
Fax: (202) 884-8432
fanta@aed.org
<http://www.fantaproject.org>

ANNEX 2

Conclusions and recommendations regarding infant feeding¹

A TECHNICAL CONSULTATION ON PREVENTION OF MOTHER-TO-CHILD TRANSMISSION OF HIV

Risks of breastfeeding and replacement feeding

The benefits of breastfeeding are greatest in the first six months of life (optimal nutrition, reduced morbidity and mortality due to infections other than HIV, and delayed return of fertility).

Exclusive breastfeeding during the first 4–6 months of life carries greater benefits than mixed feeding with respect to morbidity and mortality from infectious diseases other than HIV.

Although breastfeeding no longer provides all nutritional requirements after six months, breastfeeding continues to offer protection against serious infections and to provide significant nutrition to the infant (half or more of nutritional requirements in the second six months of life, and up to one third in the second year).

Replacement feeding carries an increased risk of morbidity and mortality associated with malnutrition and associated with infectious disease other than HIV. This is especially high in the first 6 months of life and decreases thereafter. The risk and feasibility of replacement feeding are affected by the local environment and the individual woman's situation.

Breastfeeding is associated with a significant additional risk of HIV transmission from mother to child as compared to non-breastfeeding. This risk depends on clinical factors and may vary according to pattern and duration of breastfeeding. In untreated women who continue breastfeeding after the first year, the absolute risk of transmission through breastfeeding is 10–20%.

The risk of MTCT of HIV through breastfeeding appears to be greatest during the first months of infant life but persists as long as breastfeeding continues. Half of the breastfeeding-related infections may occur after 6 months with continued breastfeeding into the second year of life.

There is evidence from one study that exclusive breastfeeding in the first 3 months of life may carry a lower risk of HIV transmission than mixed feeding.

Recommendations

- When replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding by HIV-infected mothers is recommended.
- Otherwise, exclusive breastfeeding is recommended during the first months of life.
- To minimize HIV transmission risk, breastfeeding should be discontinued as soon as feasible, taking into account local circumstances, the individual woman's situation and the risks of replacement feeding (including infections other than HIV and malnutrition).
- When HIV-infected mothers choose not to breastfeed from birth or stop breastfeeding later, they should be provided with specific guidance and support for at least the first 2 years of the child's life to ensure adequate replacement feeding. Programmes should strive to improve conditions that will make replacement feeding safer for HIV-infected mothers and families.

Cessation of breastfeeding

There are concerns about the possible increased risk of HIV transmission with mixed feeding during the transition period between exclusive breastfeeding and complete cessation of breastfeeding. Indirect evidence on the risk of HIV transmission through mixed feeding, suggests that keeping the period of transition as short as possible may reduce the risk.

Shortening this transition period however may have negative nutritional consequences for the infant, psychological consequences for the infant and the mother, and expose the mother to the risk of breast pathology which may increase the risk of HIV transmission if cessation of breastfeeding is not abrupt.

¹ Consultation on behalf of UNFPA/UNICEF/WHO/UNAIDS Inter-Agency Team on Mother-to-Child Transmission of HIV, Conclusions and Recommendations. 2001. WHO/RH/01.28.

The best duration for this transition is not known and may vary according to the age of the infant and/or the environment.

Recommendation

HIV-infected mothers who breastfeed should be provided with specific guidance and support when they cease breastfeeding to avoid harmful nutritional and psychological consequences and to maintain breast health.

Infant feeding counselling

Infant feeding counselling has been shown to be more effective than simple advice for promoting exclusive breastfeeding in a general setting. Good counselling may also assist HIV-infected women to select and adhere to safer infant feeding options, such as exclusive breastfeeding or complete avoidance of breastfeeding, which may be uncommon in their environment. Effective counselling may reduce some of the breast health problems which may increase the risk of transmission.

Many women find that receiving information on a range of infant feeding options is not sufficient to enable them to choose and they seek specific guidance. Skilled counselling can provide this guidance to help HIV-infected women make a choice that is appropriate for their situation to which they are more likely to adhere. The options discussed during counselling need to be selected according to local feasibility and acceptability.

The level of understanding of infant feeding in the context of MTCT in the general population is very limited, thus complicating efforts to counsel women effectively.

The number of people trained in infant feeding counselling is few relative to the need and expected demand for this information and support.

Recommendations

- All HIV-infected mothers should receive counselling, which includes provision of general information about the risks and benefits of various infant feeding options, and specific guidance in selecting the option most likely to be suitable for their situation. Whatever a mother decides, she should be supported in her choice.

- Assessments should be conducted locally to identify the range of feeding options that are acceptable, feasible, affordable, sustainable and safe in a particular context.
- Information and education on mother-to-child transmission of HIV should be urgently directed to the general public, affected communities and families.
- Adequate numbers of people who can counsel HIV-infected women on infant feeding should be trained, deployed, supervised and supported. Such support should include updated training as new information and recommendations emerge.

Breast health

There is some evidence that breast conditions including mastitis, breast abscess, and nipple fissure may increase the risk of HIV transmission through breastfeeding, but the extent of this association is not well quantified.

Recommendation

HIV-infected women who breastfeed should be assisted to ensure that they use a good breastfeeding technique to prevent these conditions, which should be treated promptly if they occur.

Maternal health

In one trial, the risk of dying in the first 2 years after delivery was greater among HIV-infected women who were randomized to breastfeeding than among those who were randomized to formula feeding. This result has yet to be confirmed by other research.

Women who do not breastfeed or stop breastfeeding early are at greater risk of becoming pregnant.

Recommendation

HIV-infected women should have access to information, follow-up clinical care and support, including family planning services and nutritional support. Family planning services are particularly important for HIV-infected women who are not breastfeeding.

Global Strategy for Infant and Young Child Feeding¹

Defining the challenge

1. Malnutrition has been responsible, directly or indirectly, for 60% of the 10.9 million deaths annually among children under five. Well over two-thirds of these deaths, which are often associated with inappropriate feeding practices, occur during the first year of life. No more than 35% of infants worldwide are exclusively breastfed during the first four months of life; complementary feeding frequently begins too early or too late, and foods are often nutritionally inadequate and unsafe. Malnourished children who survive are more frequently sick and suffer the life-long consequences of impaired development. Rising incidences of overweight and obesity in children are also a matter of serious concern. Because poor feeding practices are a major threat to social and economic development, they are among the most serious obstacles to attaining and maintaining health that face this age group.
2. The health and nutritional status of mothers and children are intimately linked. Improved infant and young child feeding begins with ensuring the health and nutritional status of women, in their own right, throughout all stages of life and continues with women as providers for their children and families. Mothers and infants form a biological and social unit; they also share problems of malnutrition and ill-health. Whatever is done to solve these problems concerns both mothers and children together.
3. The global strategy for infant and young child feeding is based on respect, protection, facilitation and fulfilment of accepted human rights principles. Nutrition is a crucial, universally recognized component of the child's right to the enjoyment of the highest attainable standard of health as stated in the Convention on the Rights of the Child. Children have the right to adequate nutrition and access to safe and nutritious food, and both are essential for fulfilling their right to the highest attainable standard of health. Women, in turn, have the right to proper nutrition, to decide how to feed their children, and to full information and appropriate conditions that will enable them to carry out their decisions. These rights are not yet realized in many environments.
4. Rapid social and economic change only intensifies the difficulties that families face in properly feeding and caring for their children. Expanding urbanization results in more families that depend on informal or intermittent employment with uncertain incomes and few or no maternity benefits. Both self-employed and nominally employed rural women face heavy workloads, usually with no maternity protection. Meanwhile, traditional family and community support structures are being eroded, resources devoted to supporting health- and, especially, nutrition-related, services are dwindling, accurate information on optimal feeding practices is lacking, and the number of food-insecure rural and urban households is on the rise.
5. The HIV pandemic and the risk of mother-to-child transmission of HIV through breastfeeding pose unique challenges to the promotion of breastfeeding, even among unaffected families. Complex emergencies, which are often characterized by population displacement, food insecurity and armed conflict, are increasing in number and intensity, further compromising the care and feeding of infants and young children the world over. Refugees and internally displaced persons alone currently number more than 40 million, including 5.5 million under-five children.

Determining the aim and objectives

6. The *aim* of this strategy is to improve – through optimal feeding – the nutritional status, growth and development, health, and thus the survival of infants and young children.

¹ WHO. Global Strategy for Infant and Young Child Feeding. Geneva, 2003.

7. The strategy's specific *objectives* are:
 - to raise awareness of the main problems affecting infant and young child feeding, identify approaches to their solution, and provide a framework of essential interventions;
 - to increase the commitment of governments, international organizations and other concerned parties¹ for optimal feeding practices for infants and young children;
 - to create an environment that will enable mothers, families and other caregivers in all circumstances to make – and implement – informed choices about optimal feeding practices for infants and young children.
8. The strategy is intended as a guide for action; it is based on accumulated evidence of the significance of the early months and years of life for child growth and development and it identifies interventions with a proven positive impact during this period. Moreover to remain dynamic, successful strategy implementation will rely on keeping pace with developments, while new clinical and population-based research is stimulated and behavioural concerns are investigated.
9. No single intervention or group can succeed in meeting the challenge; implementing the strategy thus calls for increased political will, public investment, awareness among health workers, involvement of families and communities, and collaboration between governments, international organizations and other concerned parties that will ultimately ensure that all necessary action is taken.

Promoting appropriate feeding for infants and young children

10. *Breastfeeding* is an unequalled way of providing ideal food for the healthy growth and development of infants; it is also an integral part of the reproductive process with important implications for the health of mothers. As a global public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve

optimal growth, development and health.² Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond. Exclusive breastfeeding from birth is possible except for a few medical conditions, and unrestricted exclusive breastfeeding results in ample milk production.

11. Even though it is a natural act, breastfeeding is also a learned behaviour. Virtually all mothers can breastfeed provided they have accurate information, and support within their families and communities and from the health care system. They should also have access to skilled practical help from, for example, trained health workers, lay and peer counsellors, and certified lactation consultants, who can help to build mothers' confidence, improve feeding technique, and prevent or resolve breastfeeding problems.
12. Women in paid employment can be helped to continue breastfeeding by being provided with minimum enabling conditions, for example paid maternity leave, part-time work arrangements, on-site crèches, facilities for expressing and storing breast milk, and breastfeeding breaks (see paragraph 28).
13. Infants are particularly vulnerable during the transition period when *complementary feeding* begins. Ensuring that their nutritional needs are met thus requires that complementary foods be:
 - *timely* – meaning that they are introduced when the need for energy and nutrients exceeds what can be provided through exclusive and frequent breastfeeding;
 - *adequate* – meaning that they provide sufficient energy, protein and micronutrients to meet a growing child's nutritional needs;
 - *safe* – meaning that they are hygienically stored and prepared, and fed with clean hands using clean utensils and not bottles and teats;
 - *properly fed* – meaning that they are given consistent with a child's signals of appetite and satiety, and that meal frequency and feeding method – actively encouraging the child, even

¹ For the purposes of this strategy, other concerned parties include professional bodies, training institutions, industrial and commercial enterprises and their associations, nongovernmental organizations whether or not formally registered, religious and charitable organizations and citizens' associations such as community-based breastfeeding support networks and consumer groups.

² As formulated in the conclusions and recommendations of the expert consultation (Geneva, 28–30 March 2001) that completed the systematic review of the optimal duration of exclusive breastfeeding (see document A54/INF.DOC./4). See also resolution WHA54.2.

during illness, to consume sufficient food using fingers, spoon or self-feeding – are suitable for age.

14. Appropriate complementary feeding depends on accurate *information* and skilled support from the family, community and health care system. Inadequate knowledge about appropriate foods and feeding practices is often a greater determinant of malnutrition than the lack of food. Moreover, diversified approaches are required to ensure access to foods that will adequately meet energy and nutrient needs of growing children, for example use of home- and community-based technologies to enhance nutrient density, bio-availability and the micronutrient content of local foods.
15. Providing sound and culture-specific nutrition counselling to mothers of young children and recommending the widest possible use of indigenous foodstuffs will help ensure that *local foods* are prepared and fed safely in the home. The agriculture sector has a particularly important role to play in ensuring that suitable foods for use in complementary feeding are produced, readily available and affordable.
16. In addition, *low-cost complementary foods*, prepared with locally available ingredients using suitable small-scale production technologies in community settings, can help to meet the nutritional needs of older infants and young children. *Industrially processed complementary foods* also provide an option for some mothers who have the means to buy them and the knowledge and facilities to prepare and feed them safely. Processed-food products for infants and young children should, when sold or otherwise distributed, meet applicable standards recommended by the Codex Alimentarius Commission and also the Codex Code of Hygienic Practice for Foods for Infants and Children.
17. *Food fortification* and universal or targeted *nutrient supplementation* may also help to ensure that older infants and young children receive adequate amounts of micronutrients.

Exercising other feeding options

18. The vast majority of mothers can and should breastfeed, just as the vast majority of infants can and should be breastfed. Only under exceptional circumstances can a mother's milk be considered unsuitable for her infant. For those few health situations where infants cannot, or should not, be

breastfed, the choice of the best alternative – expressed breast milk from an infant's own mother, breast milk from a healthy wet-nurse or a human-milk bank, or a breast-milk substitute fed with a cup, which is a safer method than a feeding bottle and teat – depends on individual circumstances.

19. For infants who do not receive breast milk, feeding with a suitable breast-milk substitute – for example an infant formula prepared in accordance with applicable Codex Alimentarius standards, or a home-prepared formula with micronutrient supplements – should be demonstrated only by health workers, or other community workers if necessary, and only to the mothers and other family members who need to use it; and the information given should include adequate instructions for appropriate preparation and the health hazards of inappropriate preparation and use. Infants who are not breastfed, for whatever reason, should receive special attention from the health and social welfare system since they constitute a risk group.

Feeding in exceptionally difficult circumstances

20. Families in *difficult situations* require special attention and practical support to be able to feed their children adequately. In such cases the likelihood of not breastfeeding increases, as do the dangers of artificial feeding and inappropriate complementary feeding. Wherever possible, mothers and babies should remain together and be provided the support they need to exercise the most appropriate feeding option under the circumstances.
21. Infants and young children who are *malnourished* are most often found in environments where improving the quality and quantity of food intake is particularly problematic. To prevent a recurrence and to overcome the effects of chronic malnutrition, these children need extra attention both during the early rehabilitation phase and over the longer term. Nutritionally adequate and safe complementary foods may be particularly difficult to obtain and dietary supplements may be required for these children. Continued frequent breastfeeding and, when necessary, relactation are important preventive steps since malnutrition often has its origin in inadequate or disrupted breastfeeding.

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22. The proportion of infants with *low birth weight* varies from 6% to more than 28% depending on the setting. Most are born at or near term and can breastfeed within the first hour after birth. Breast milk is particularly important for preterm infants and the small proportion of term infants with very low birth weight; they are at increased risk of infection, long-term ill-health and death.
23. Infants and children are among the most vulnerable victims of natural or human-induced *emergencies*. Interrupted breastfeeding and inappropriate complementary feeding heighten the risk of malnutrition, illness and mortality. Uncontrolled distribution of breast-milk substitutes, for example in refugee settings, can lead to early and unnecessary cessation of breastfeeding. For the vast majority of infants emphasis should be on protecting, promoting and supporting breastfeeding and ensuring timely, safe and appropriate complementary feeding. There will always be a small number of infants who have to be fed on breast-milk substitutes. Suitable substitutes, procured, distributed and fed safely as part of the regular inventory of foods and medicines, should be provided.
24. An estimated 1.6 million children are born to *HIV-infected women* each year, mainly in low-income countries. The absolute risk of HIV transmission through breastfeeding for more than one year – globally between 10% and 20% – needs to be balanced against the increased risk of morbidity and mortality when infants are not breastfed. All HIV-infected mothers should receive counselling, which includes provision of general information about meeting their own nutritional requirements and about the risks and benefits of various feeding options, and specific guidance in selecting the option most likely to be suitable for their situation. Adequate *replacement feeding* is needed for infants born to HIV-positive mothers who choose not to breastfeed. It requires a suitable breast-milk substitute, for example an infant formula prepared in accordance with applicable Codex Alimentarius standards, or a home-prepared formula with micronutrient supplements. Heat-treated breast milk, or breast milk provided by an HIV-negative donor mother, may be an option in some cases. To reduce the risk of interfering with the promotion of breastfeeding for the great majority, providing a breast-milk substitute for these infants should be consistent with the principles and aim of the International Code of Marketing of Breast-milk Substitutes (see paragraph 19). For mothers who test negative for HIV, or who are untested, exclusive breastfeeding remains the recommended feeding option (see paragraph 10).
25. Children living in *special circumstances* also require extra attention – for example, orphans and children in foster care, and children born to adolescent mothers, mothers suffering from physical or mental disabilities, drug- or alcohol-dependence, or mothers who are imprisoned or part of disadvantaged or otherwise marginalized populations.
- ### Improving feeding practices
26. Mothers, fathers and other caregivers should have access to objective, consistent and complete *information* about appropriate feeding practices, free from commercial influence. In particular, they need to know about the recommended period of exclusive and continued breastfeeding; the timing of the introduction of complementary foods; what types of food to give, how much and how often; and how to feed these foods safely.
27. Mothers should have access to *skilled support* to help them initiate and sustain appropriate feeding practices, and to prevent difficulties and overcome them when they occur. Knowledgeable health workers are well placed to provide this support, which should be a routine part not only of regular prenatal, delivery and postnatal care but also of services provided for the well baby and sick child. Community-based networks offering mother-to-mother support, and trained breastfeeding counsellors working within, or closely with, the health care system, also have an important role to play in this regard. Where fathers are concerned, research shows that breast-feeding is enhanced by the support and companionship they provide as family providers and caregivers.
28. Mothers should also be able to continue breastfeeding and caring for their children after they return to *paid employment*. This can be accomplished by implementing maternity protection legislation and related measures consistent with ILO Maternity Protection Convention, 2000 No. 183 and Maternity Protection Recommendation, 2000 No. 191. Maternity leave, day-care facilities and paid breastfeeding breaks should be available for all women employed outside the home.
29. Continuing clinical and population-based *research* and investigation of behavioural concerns are es-

sential ingredients for improving feeding practices. Crucial areas include completion and application of the new international growth reference, prevention and control of micronutrient malnutrition, programmatic approaches and community-based interventions for improving breastfeeding and complementary feeding practices, improving maternal nutritional status and pregnancy outcome, and interventions for preventing mother-to-child transmission of HIV in relation to infant feeding.

Achieving the strategy's objectives

30. A first step to achieving the objectives of this strategy is to reaffirm the relevance – indeed the urgency – of the four operational targets of the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding:¹

- appointing a national breastfeeding coordinator with appropriate authority, and establishing a multisectoral national breastfeeding committee composed of representatives from relevant government departments, nongovernmental organizations, and health professional associations;
- ensuring that every facility providing maternity services fully practices all the “Ten steps to successful breastfeeding” set out in the WHO/UNICEF statement on breastfeeding and maternity services;²
- giving effect to the principles and aim of the International Code of Marketing of Breast-milk Substitutes and subsequent relevant Health Assembly resolutions in their entirety;
- enacting imaginative legislation protecting the breastfeeding rights of working women and establishing means for its enforcement.

31. Many governments have taken important steps towards realizing these targets and much has been achieved as a result, notably through the Baby-friendly Hospital Initiative and the legislation and

other measures that have been adopted with regard to the marketing of breast-milk substitutes. Achievements are far from uniform, however, and there are signs of weakened commitment, for example in the face of the HIV/AIDS pandemic and the number and gravity of complex emergencies affecting infants and young children. Moreover, the Innocenti Declaration focuses uniquely on breastfeeding. Thus, additional targets are needed to reflect a comprehensive approach to meeting care and feeding requirements during the first three years of life through a wide range of inter-related actions.

32. In the light of accumulated scientific evidence, and policy and programme experience, the time is right for governments, with the support of international organizations and other concerned parties:

- to reconsider how best to ensure the appropriate feeding of infants and young children and to renew their collective commitment to meeting this challenge;
- to constitute effective broad-based bodies to lead the implementation of this strategy as a coordinated multisectoral national response by all concerned parties to the multiple challenges of infant and young child feeding;³ and
- to establish a system to monitor regularly feeding practices, assess trends using sex-disaggregated data and evaluate the impact of interventions.

33. With these considerations in mind, the global strategy includes as a priority for all governments the achievement of the following additional operational targets:⁴

- to develop, implement, monitor and evaluate a comprehensive policy on infant and young child feeding, in the context of national policies and programmes for nutrition, child and reproductive health, and poverty reduction;
- to ensure that the health and other relevant sectors protect, promote and support exclusive breastfeeding for six months and contin-

¹ Meeting in Florence, Italy, in July 1990, government policy-makers from more than 30 countries adopted the Innocenti Declaration. The Forty-fourth World Health Assembly, in 1991, welcomed the Declaration as “a basis for international health policy and action” and requested the Director-General to monitor achievement of its targets (resolution WHA44.33).

² *Protecting, promoting and supporting breastfeeding: the special role of maternity services*. A joint WHO/UNICEF statement. Geneva, WHO, 1989.

³ Consistent with the first target of the Innocenti Declaration, more than 100 countries have already appointed a national breastfeeding coordinator and established a multisectoral national committee. These arrangements could form the basis for the creation of the new body called for here.

⁴ Governments should set a realistic date for achievement of all the global strategy's targets and define measurable indicators to assess their progress in this regard.

ued breastfeeding up to two years of age or beyond, while providing women access to the support they require – in the family, community and workplace – to achieve this goal;

- to promote timely, adequate, safe and appropriate complementary feeding with continued breastfeeding;
- to provide guidance on feeding infants and young children in exceptionally difficult circumstances, and on the related support required by mothers, families and other caregivers;
- to 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.

Implementing high-priority action

34. A comprehensive national policy, based on a thorough needs assessment, should foster an environment that protects, promotes and supports appropriate infant and young child feeding practices. An effective feeding policy consistent with efforts to promote overall household food security requires the following critical interventions:

For protection

- adopting and monitoring application of a policy of maternity entitlements, consistent with the ILO Maternity Protection Convention and Recommendation, in order to facilitate breastfeeding by women in paid employment, including those whom the standards describe as engaging in atypical forms of dependent work, for example part-time, domestic and intermittent employment;
- ensuring that processed complementary foods are marketed for use at an appropriate age, and that they are safe, culturally acceptable, affordable and nutritionally adequate, in accordance with relevant Codex Alimentarius standards;
- implementing and monitoring existing measures to give effect to the International Code of Marketing of Breast-milk Substitutes and to subsequent relevant Health Assembly reso-

lutions, and, where appropriate, strengthening them or adopting new measures;

For promotion

- ensuring that all who are responsible for communicating with the general public, including educational and media authorities, provide accurate and complete information about appropriate infant and young child feeding practices, taking into account prevailing social, cultural and environmental circumstances;

For support through the health care system

- providing skilled counselling and help for infant and young child feeding, for instance at well-baby clinics, during immunization sessions, and in in- and out-patient services for sick children, nutrition services, and reproductive health and maternity services;
- ensuring that hospital routines and procedures 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;
- increasing access to antenatal care and education about breastfeeding, to delivery practices which support breastfeeding and to follow-up care which helps to ensure continued breastfeeding;
- promoting good nutrition for pregnant and lactating women;
- monitoring the growth and development of infants and young children as a routine nutrition intervention, with particular attention to low-birth-weight and sick infants and those born to HIV-positive mothers, and ensuring that mothers and families receive appropriate counselling;
- providing guidance on appropriate complementary feeding with emphasis on the use of suitable locally available foods which are prepared and fed safely;
- promoting adequate intake of essential nutrients through access to suitable – including fortified – local foods and, when necessary, micronutrient supplements;

- enabling mothers to remain with their hospitalized children to ensure continued breastfeeding and adequate complementary feeding and, where feasible, allow breastfed children to stay with their hospitalized mothers;
- ensuring effective therapeutic feeding of sick and malnourished children, including the provision of skilled breastfeeding support when required;
- training health workers who care for mothers, children and families with regard to:
 - counselling and assistance skills needed for breastfeeding, complementary feeding, HIV and infant feeding and, when necessary, feeding with a breast-milk substitute,
 - feeding during illness,
 - health workers' responsibilities under the International Code of Marketing of Breast-milk Substitutes;
- revising and reforming pre-service curricula for all health workers, nutritionists and allied professionals to provide appropriate information and advice on infant and young child feeding for use by families and those involved in the field of infant and young child nutrition;

For support in the community

- promoting development of community-based support networks to help ensure appropriate infant and young child feeding, for example mother-to-mother support groups and peer or lay counsellors, to which hospitals and clinics can refer mothers on discharge;
- ensuring that community-based support networks not only are welcome within the health care system but also participate actively in the planning and provision of services;

For support for feeding infants and young children in exceptionally difficult circumstances

- ensuring that health workers have accurate and up-to-date information about infant feeding policies and practices, and that they have the specific knowledge and skills required to support caregivers and children in all aspects of infant and young child feeding in exceptionally difficult circumstances;

- creating conditions that will facilitate exclusive breastfeeding, by provision, for example, of appropriate maternity care, extra food rations and drinking-water for pregnant and lactating women, and staff who have breastfeeding counselling skills;
- ensuring that suitable – preferably locally available – complementary foods are selected and fed, consistent with the age and nutritional needs of older infants and young children;
- searching actively for malnourished infants and young children so that their condition can be identified and treated, they can be appropriately fed, and their caregivers can be supported;
- giving guidance for identifying infants who have to be fed on breast-milk substitutes, ensuring that a suitable substitute is provided and fed safely for as long as needed by the infants concerned, and preventing any “spillover effect” of artificial feeding into the general population;
- ensuring that health workers with knowledge and experience in all aspects of breastfeeding and replacement feeding are available to counsel HIV-positive women;
- adapting the Baby-friendly Hospital Initiative 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;
- ensuring that whenever breast-milk substitutes are required for social or medical reasons, for example for orphans or in the case of HIV-positive mothers, they are provided for as long as the infants concerned need them.

Obligations and responsibilities

35. Governments, international organizations and other concerned parties share responsibility for ensuring the fulfilment of the right of children to the highest attainable standard of health and the right of women to full and unbiased information, and adequate health care and nutrition. Each partner should acknowledge and embrace its responsibilities for improving the feeding of infants and young children and for mobilizing required resources. All partners should work together to achieve fully this strategy's aim and objectives,

including by forming fully transparent innovative alliances and partnerships consistent with accepted principles for avoiding conflict of interest.

Governments

36. The primary obligation of governments is to formulate, implement, monitor and evaluate a comprehensive *national policy* on infant and young child feeding. In addition to political commitment at the highest level, a successful policy depends on effective national coordination to ensure full collaboration of all concerned government agencies, international organizations and other concerned parties. This implies continual collection and evaluation of relevant information on feeding policies and practices. Regional and local governments also have an important role to play in implementing this strategy.
37. A detailed *action plan* should accompany the comprehensive policy, including defined goals and objectives, a timeline for their achievement, allocation of responsibilities for the plan's implementation and measurable indicators for its monitoring and evaluation. For this purpose, governments should seek, when appropriate, the cooperation of appropriate international organizations and other agencies, including global and regional lending institutions. The plan should be compatible with, and form an integral part of, all other activities designed to contribute to optimal infant and young child nutrition.
38. Adequate *resources* – human, financial and organizational – will have to be identified and allocated to ensure the plan's timely successful implementation. Constructive dialogue and active collaboration with appropriate groups working for the protection, promotion and support of appropriate feeding practices will be particularly important in this connection. Support for epidemiological and operational research is also a crucial component.

Other concerned parties

39. Identifying specific responsibilities within society – crucial complementary and mutually reinforcing roles – for protecting, promoting and supporting appropriate feeding practices is something of a new departure. Groups that have an important role in advocating the rights of women and children and in creating a supportive environment on their behalf can work singly, together and with governments and international organizations to

improve the situation by helping to remove both cultural and practical barriers to appropriate infant and young child feeding practices.

Health professional bodies

40. Health professional bodies, which include medical faculties, schools of public health, public and private institutions for training health workers (including midwives, nurses, nutritionists and dietitians), and professional associations, should have the following main responsibilities towards their students or membership:
 - ensuring that basic education and training for all health workers cover lactation physiology, exclusive and continued breastfeeding, complementary feeding, feeding in difficult circumstances, meeting the nutritional needs of infants who have to be fed on breast-milk substitutes, and the International Code of Marketing of Breast-milk Substitutes and the legislation and other measures adopted to give effect to it and to subsequent relevant Health Assembly resolutions;
 - training in how to provide skilled support for exclusive and continued breastfeeding, and appropriate complementary feeding in all neonatal, paediatric, reproductive health, nutritional and community health services;
 - promoting achievement and maintenance of “baby-friendly” status by maternity hospitals, wards and clinics, consistent with the “Ten steps to successful breastfeeding”¹ and the principle of not accepting free or low-cost supplies of breast-milk substitutes, feeding bottles and teats;
 - observing, in their entirety, their responsibilities under the International Code of Marketing of Breast-milk Substitutes and subsequent relevant Health Assembly resolutions, and national measures adopted to give effect to both;
 - encouraging the establishment and recognition of community support groups and referring mothers to them.

¹ *Protecting, promoting and supporting breastfeeding: the special role of maternity services*. A joint WHO/UNICEF statement. Geneva, WHO, 1989.

Nongovernmental organizations including community-based support groups

41. The aims and objectives of a wide variety of nongovernmental organizations operating locally, nationally and internationally include promoting the adequate food and nutrition needs of young children and families. For example, charitable and religious organizations, consumer associations, mother-to-mother support groups, family clubs, and child-care cooperatives all have multiple opportunities to contribute to the implementation of this strategy through, for example:
- providing their members accurate, up-to-date information about infant and young child feeding;
 - integrating skilled support for infant and young child feeding in community-based interventions and ensuring effective linkages with the health care system;
 - contributing to the creation of mother- and child-friendly communities and workplaces that routinely support appropriate infant and young child feeding;
 - working for full implementation of the principles and aim of the International Code of Marketing of Breast-milk Substitutes and subsequent relevant Health Assembly resolutions.
42. Parents and other caregivers are most directly responsible for feeding children. Ever keen to ensure that they have accurate information to make appropriate feeding choices, parents nevertheless are limited by their immediate environment. Since they may have only infrequent contact with the health care system during a child's first two years of life, it is not unusual for caregivers to be more influenced by community attitudes than by the advice of health workers.
43. Additional sources of information and support are found in a variety of formal and informal groups, including breastfeeding-support and child-care networks, clubs and religious associations. Community-based support, including that provided by other mothers, lay and peer breastfeeding counsellors and certified lactation consultants, can effectively enable women to feed their children appropriately. Most communities have self-help traditions that could readily serve as a base for building or expanding suitable support systems to help families in this regard.

Commercial enterprises

44. Manufacturers and distributors of industrially processed foods intended for infants and young children also have a constructive role to play in achieving the aim of this strategy. They should ensure that processed food products for infants and children, when sold, meet applicable Codex Alimentarius standards and the Codex Code of Hygienic Practice for Foods for Infants and Children. In addition, all manufacturers and distributors of products within the scope of the International Code of Marketing of Breast-milk Substitutes, including feeding bottles and teats, are responsible for monitoring their marketing practices according to the principles and aim of the Code. They should ensure that their conduct at every level conforms to the Code, subsequent relevant Health Assembly resolutions, and national measures that have been adopted to give effect to both.

The social partners

45. *Employers* should ensure that maternity entitlements of all women in paid employment are met, including breastfeeding breaks or other workplace arrangements – for example facilities for expressing and storing breast milk for later feeding by a caregiver – in order to facilitate breast-milk feeding once paid maternity leave is over. *Trade unions* have a direct role in negotiating adequate maternity entitlements and security of employment for women of reproductive age (see paragraphs 28 and 34).

Other groups

46. Many other components of society have potentially influential roles in promoting good feeding practices. These elements include:
- **education authorities**, which help to shape the attitudes of children and adolescents about infant and young child feeding – accurate information should be provided through schools and other educational channels to promote greater awareness and positive perceptions;
 - **mass media**, which influence popular attitudes towards parenting, child care and products within the scope of the International Code of Marketing of Breast-milk Substitutes – their information on the subject and, just as important, the way they portray parenting, childcare and products should be accurate, up to date, objective, and consistent with the Code's principles and aim;

- **child-care facilities**, which permit working mothers to care for their infants and young children, should support and facilitate continued breastfeeding and breast-milk feeding.

International organizations

47. International organizations, including global and regional lending institutions, should place infant and young child feeding high on the global public health agenda in recognition of its central significance for realizing the rights of children and women; they should serve as advocates for increased human, financial and institutional resources for the universal implementation of this strategy; and, to the extent possible, they should provide additional resources for this purpose.
48. Specific contributions of international organizations to facilitate the work of governments include the following:

Developing norms and standards

- developing evidence-based guidelines to facilitate achievement of the strategy's operational targets;
- supporting epidemiological and operational research;
- promoting the consistent use of common global indicators for monitoring and evaluating child-feeding trends;
- developing new indicators, for example concerning adequate complementary feeding;
- improving the quality and availability of sex-disaggregated global, regional and national data;

Supporting national capacity-building

- sensitizing and training health policy-makers and health service administrators;
- improving health worker skills in support of optimal infant and young child feeding;
- revising related pre-service curricula for doctors, nurses, midwives, nutritionists, dietitians, auxiliary health workers and other groups as necessary;
- planning and monitoring the Baby-friendly Hospital Initiative and expanding it beyond the maternity-care setting;
- helping to ensure sufficient resources for this purpose, especially in highly indebted countries;

Supporting policy development and promotion

- supporting social-mobilization activities, for example using the mass media to promote appropriate infant feeding practices and educating media representatives;
- advocating ratification of ILO Maternity Protection Convention 2000 No. 183 and application of Recommendation 2000 No. 191, including for women in atypical forms of dependent work;
- urging implementation of the International Code of Marketing of Breast-milk Substitutes and subsequent relevant Health Assembly resolutions, and providing related technical support on request;
- ensuring that all Codex Alimentarius standards and related texts dealing with foods for infants and young children give full consideration to WHO policy concerning appropriate marketing and distribution, recommended age of use, and safe preparation and feeding, including as reflected in the International Code of Marketing of Breast-milk Substitutes and subsequent relevant Health Assembly resolutions;
- ensuring that the International Code of Marketing of Breast-milk Substitutes and subsequent relevant Health Assembly resolutions are given full consideration in trade policies and negotiations;
- supporting research on marketing practices and the International Code.

Conclusion

49. This strategy describes essential interventions to protect, promote and support appropriate infant and young child feeding. It focuses on the importance of investing in this crucial area to ensure that children develop to their full potential, free from the adverse consequences of compromised nutritional status and preventable illnesses. It concentrates on the roles of critical partners – governments, international organizations and other concerned parties – and assigns specific responsibilities for each to ensure that the sum of their collective action will contribute to the full attainment of the strategy's aim and objectives. It builds on existing approaches, extended where necessary, and provides a framework for linking synergistically the contributions of multiple pro-

gramme areas, including nutrition, child health and development, and maternal and reproductive health. The strategy now needs to be translated into action.

50. There is convincing evidence from around the world that governments, with the support of the international community and other concerned parties, are taking seriously their commitments to protect and promote the health and nutritional well-being of infants, young children, and pregnant and lactating women.¹ One of the enduring tangible results of the International Conference on Nutrition, namely the World Declaration on Nutrition, offers a challenging vision of a world transformed. Meanwhile, its Plan of Action for Nutrition charts a credible course for achieving this transformation.²
51. In the decade since its adoption, 159 Member States (83%) have demonstrated their determi-

nation to act by preparing or strengthening their national nutrition policies and plans. More than half (59%) have included specific strategies to improve infant and young child feeding practices. This encouraging result needs to be consolidated, and expanded to include *all* Member States, even as it is reviewed and updated to ensure that it takes full account of the present comprehensive agenda. Clearly, however, much more is required if the aim and objectives of this strategy – and present and future feeding challenges – are to be met.

52. This global strategy provides governments and society's other main agents with both a valuable opportunity and a practical instrument for re-dedicating themselves, individually and collectively, to protecting, promoting and supporting safe and adequate feeding for infants and young children everywhere.

¹ Document A55/14.

² World Declaration and Plan of Action for Nutrition. International Conference on Nutrition, Rome, FAO and WHO, 1992.

ANNEX 4

International Code of Marketing of Breast-milk Substitutes¹

Preamble

The Member States of the World Health Organization:

AFFIRMING the right of every child and every lactating woman to be adequately nourished as a means of attaining and maintaining health;

RECOGNIZING that infant malnutrition is part of the wider problems of lack of education, poverty and social injustice;

RECOGNIZING that the health of infants and young children cannot be isolated from the health and nutrition of women, their socioeconomic status and their roles as mothers;

CONSCIOUS that breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; that it forms a unique, biological and emotional basis for the health of both mother and child; that the anti-infective properties of breast milk help to protect infants against disease; and that there is an important relationship between breastfeeding and child-spacing;

RECOGNIZING that the encouragement and protection of breastfeeding is an important part of the health, nutrition and other social measures required to promote healthy growth and development of infants and young children; and that breastfeeding is an important aspect of primary health care;

CONSIDERING that when mothers do not breast-feed, or only do so partially, there is a legitimate market for infant formula and for suitable ingredients from which to prepare it; that all these products should accordingly be made accessible to those who need them, through commercial or non-commercial distribution systems; and that they should not be marketed or distributed in ways that interfere with the protection and promotion of breastfeeding;

RECOGNIZING further that inappropriate infant feeding practices lead to infant malnutrition, morbidity and mortality in all countries, and that improper practices in the marketing of breast-milk substitutes and related products, can contribute to these major public health problems;

CONVINCED that it is important for infants to receive appropriate complementary foods, usually when the infant reaches four to six months of age, and that every effort should be made to use locally available foods; and convinced, nevertheless, that such complementary foods should not be used as breast-milk substitutes;

APPRECIATING that there are a number of social and economic factors affecting breastfeeding, and that, accordingly, governments should develop social support systems to protect, facilitate and encourage it, and that they should create an environment that fosters breastfeeding, provides appropriate family and community support, and protects mothers from factors that inhibit breastfeeding;

AFFIRMING that health care systems, and the health professionals and other health workers serving in them, have an essential role to play in guiding infant feeding practices, encouraging and facilitating breastfeeding, and providing objective and consistent advice to mothers and families about the superior value of breastfeeding, or, where needed, on the proper use of infant formula, whether manufactured industrially or home-prepared;

AFFIRMING further that educational systems and other social services should be involved in the protection and promotion of breastfeeding, and in the appropriate use of complementary foods;

AWARE that families, communities, women's organizations and other nongovernmental organizations have a special role to play in the protection and promotion of breastfeeding and in ensuring the support needed by pregnant women and mothers of infants and young children, whether breastfeeding or not;

AFFIRMING the need for governments, organizations of the United Nations system, nongovernmental

¹ Readers should also consult the following subsequent relevant WHA resolutions: WHA33.32, WHA34.22, WHA35.26, WHA37.30, WHA39.28, WHA41.11, WHA43.3, WHA45.34, WHA46.7, WHA47.5, WHA 49.15, WHA54.2 and WHA55.25, <http://www.who.int/governance/en>

organizations, experts in various related disciplines, consumer groups and industry to cooperate in activities aimed at the improvement of maternal, infant and young child health and nutrition;

RECOGNIZING that governments should undertake a variety of health, nutrition and other social measures to promote healthy growth and development of infants and young children, and that this Code concerns only one aspect of these measures;

CONSIDERING that manufacturers and distributors of breast-milk substitutes have an important and constructive role to play in relation to breast feeding, and in the promotion of the aim of this Code and its proper implementation;

AFFIRMING that governments are called upon to take action appropriate to their social and legislative framework and their overall development objectives to give effect to the principles and aim of this Code, including the enactment of legislation, regulations or other suitable measures;

BELIEVING that, in the light of the foregoing considerations, and in view of the vulnerability of infants in the early months of life and the risks involved in inappropriate feeding practices, including the unnecessary and improper use of breast-milk substitutes, the marketing of breastmilk substitutes requires special treatment, which makes usual marketing practices unsuitable for these products;

THEREFORE: The Member States hereby agree the following articles which are recommended as a basis for action.

ARTICLE 1: Aim of the Code

The aim of this 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.

ARTICLE 2: Scope of the Code

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, 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.

ARTICLE 3: Definitions

For the purposes of this Code:

Breast-milk substitute means any food being marketed or otherwise represented as a partial or total replacement for breast milk, whether or not suitable for that purpose.

Complementary food means any food, whether manufactured or locally prepared, suitable as a complement to breast milk or to infant formula, when either becomes insufficient to satisfy the nutritional requirements of the infant. Such food is also commonly called 'weaning food' or 'breast-milk supplement'.

Container means any form of packaging of products for sale as a normal retail unit, including wrappers.

Distributor means a person, corporation or any other entity in the public or private sector engaged in the business (whether directly or indirectly) of marketing at the wholesale or retail level a product within the scope of this Code. A 'primary distributor' is a manufacturer's sales agent, representative, national distributor or broker.

Health care system means governmental, nongovernmental or private institutions or organizations engaged, directly or indirectly, in health care for mothers, infants and pregnant women; and nurseries or child-care institutions. It also includes health workers in private practice. For the purposes of this Code, the health care system does not include pharmacies or other established sales outlets.

Health worker means a person working in a component of such a health care system, whether professional or non-professional, including voluntary, unpaid workers.

Infant formula means a breast-milk substitute formulated industrially in accordance with applicable Codex Alimentarius standards, to satisfy the normal nutritional requirements of infants up to between four and six months of age, and adapted to their physiological characteristics. Infant formula may also be prepared at home, in which case it is described as 'home-prepared'.

Label means any tag, brand, mark, pictorial or other descriptive matter, written, printed, stencilled, marked, embossed or impressed on, or attached to, a container (see above) of any products within the scope of this Code.

Manufacturer means a corporation or other entity in the public or private sector engaged in the business or function (whether directly or through an agent or through an entity controlled by or under contract with it) of manufacturing a product within the scope of this Code.

Marketing means product promotion, distribution, selling, advertising, product public relations, and information services.

Marketing personnel means any persons whose functions involve the marketing of a product or products coming within the scope of this Code.

Samples means single or small quantities of a product provided without cost.

Supplies means quantities of a product provided for use over an extended period, free or at a low price, for social purposes, including those provided to families in need.

ARTICLE 4: Information and education

4.1 Governments, should have the responsibility to ensure that objective and consistent information, is provided on infant and young child feeding for use by families and those involved in the field of infant and young child nutrition. This responsibility should cover either the planning, provision, design and dissemination of information or their control.

4.2 Informational and educational materials, whether written, audio or visual, dealing with the feeding of infants and intended to reach pregnant women and mothers of infants and young children, should include clear information on all the following points: (a) the benefits and superiority of breastfeeding; (b) maternal nutrition, and the preparation for and maintenance of breastfeeding; (c) the negative effect on breastfeeding of introducing partial bottle-feeding; (d) the difficulty of reversing the decision not to breastfeed; and, (e) where needed, the proper use of infant formula, whether manufactured industrially or home-prepared. When such materials contain information about the use of infant formula, they should include the social and financial implications of its use; the health hazards of inappropriate foods or feeding methods; and, in particular, the health hazards of unnecessary or improper use of infant formula and other breast-milk substitutes. Such materials should not use any pictures or text which may idealize the use of breast-milk substitutes.

4.3 Donations of informational or educational equipment or materials by manufacturers or distributors

should be made only at the request and with the written approval, of the appropriate government authority or within guidelines given by governments for this purpose. Such equipment or materials may bear the donating company's name or logo, but should not refer to a proprietary product that is within the scope of this Code, and should be distributed only through the health care system.

ARTICLE 5: The general public and mothers

5.1 There should be no advertising or other form of promotion to the general public of products within the scope of this Code.

5.2 Manufacturers and distributors should not provide, directly or indirectly, to pregnant women, mothers or members of their families, samples of products within the scope of this Code.

5.3 In conformity with paragraphs 1 and 2 of this Article, there should be no point-of-sale advertising, giving of samples, or any other promotion device to induce sales directly to the consumer at the retail level, such as special displays, discount coupons, premiums, special sales, loss-leaders and tie-in sales, for products within the scope of this Code. This provision should not restrict the establishment of pricing policies and practices intended to provide products at lower prices on a long-term basis.

5.4 Manufacturers and distributors should not distribute to pregnant women or mothers of infants and young children any gifts of articles or utensils which may promote the use of breast-milk substitutes or bottle feeding.

5.5 Marketing personnel, in their business capacity, should not seek direct or indirect contact, of any kind with pregnant women or with mothers of infants and young children.

ARTICLE 6: Health care systems

6.1 The health authorities in Member States should take appropriate measures to encourage and protect breastfeeding and promote the principles of this Code, and should give appropriate information and advice to health workers in regard to their responsibilities, including the information specified in Article 4.2.

6.2 No facility of a health care system should be used for the purpose of promoting infant formula or other products within the scope of this Code. This Code does not, however, preclude the dissemination of information to health professionals as provided in Article 7.2.

6.3 Facilities of health care systems should not be used for the display of products, within the scope of this Code, for placards or posters, concerning such products, or for the distribution of material, provided by a manufacturer or distributor other than that specified in Article 4.3.

6.4 The use by the health care system of ‘professional service representatives’, ‘mothercraft nurses’ or similar personnel, provided or paid for by manufacturers or distributors, should not be permitted.

6.5 Feeding with infant formula, whether manufactured or home-prepared, should be demonstrated only by health workers, or other community workers if necessary; and only to the mothers or family members who need to use it; and the information given should include a clear explanation of the hazards of improper use.

6.6 Donations or low-price sales to institutions or organizations of supplies of infant formula or other products within the scope of this Code, whether for use in the institution or for distribution outside them, may be made. Such supplies should only be used or distributed for infants who have to be fed on breast-milk substitutes. If these supplies are distributed for use outside the institutions, this should be done only by the institutions or organizations concerned. Such donations or low-priced sales should not be used by manufacturers or distributors as a sales inducement.

6.7 Where donated supplies of infant formula or other products within the scope of this Code are distributed outside an institution, the institution or organization should take steps to ensure that supplies can be continued as long as the infants concerned need them. Donors, as well as institutions or organizations concerned, should bear in mind this responsibility.

6.8 Equipment and materials, in addition to those referred to in Article 4.3, donated to a health care system may bear a company’s name or logo, but should not refer to any proprietary product within the scope of this Code.

ARTICLE 7: Health workers

7.1 Health workers should encourage and protect breastfeeding; and those who are concerned in particular with maternal and infant nutrition should make themselves familiar with their responsibilities under this Code, including the information specified in Article 4.2.

7.2 Information provided by manufacturers and distributors to health professionals regarding products

within the scope of this Code should be restricted to scientific and factual matters, and such information should not imply or create a belief that bottle feeding is equivalent or superior to breastfeeding. It should also include the information specified in Article 4.2.

7.3 No financial or material inducements to promote products within the scope of this Code should be offered by manufacturers or distributors to health workers or members of their families, nor should these be accepted by health workers or members of their families.

7.4 Samples of infant formula or other products within the scope of this Code, or of equipment or utensils for their preparation or use, should not be provided to health workers except when necessary for the purpose of professional evaluation or research at the institutional level. Health workers should not give samples of infant formula to pregnant women, mothers of infants and young children, or members of their families.

7.5 Manufacturers and distributors of products within the scope of this Code should disclose to the institution to which a recipient health worker is affiliated any contribution made to him or on his behalf for fellowships, study tours, research grants, attendance at professional conferences, or the like. Similar disclosures should be made by the recipient.

ARTICLE 8: Persons employed by manufacturers and distributors

8.1 In systems of sales incentives for sales personnel, the volume of sales of products within the scope of this Code should not be included in the calculation of bonuses, nor should quotas be set specifically for sales of these products. This should not be understood to prevent the payment of bonuses based on the overall sales by a company of other products marketed by it.

8.2 Personnel employed in marketing products within the scope of this Code should not, as part of their job responsibilities, perform education functions in relation to pregnant women or mothers of infants and young children. This should not be understood as preventing such personnel from being used for other functions by the health care system at the request and with the written approval of the appropriate authority of the government concerned.

ARTICLE 9: Labelling

9.1 Labels should be designed to provide the necessary information about the appropriate use of the product, and so as not to discourage breastfeeding.

9.2 Manufacturers and distributors of infant formula should ensure that each container has a clear, conspicuous, and easily readable and understandable message printed on it, or on a label which cannot readily become separated from it, in an appropriate language, which includes all the following points: a) the words ‘Important Notice’ or their equivalent; b) a statement of the superiority of breastfeeding; c) a statement that the product should be used only on the advice of a health worker as to the need for its use and the proper method of use; d) instructions for appropriate preparation, and a warning against the health hazards of inappropriate preparation. Neither the container nor the label should have pictures of infants, nor should they have other pictures or text which may idealize the use of infant formula. They may, however, have graphics for easy identification of the product as a breast-milk substitute and for illustrating methods of preparation. The terms ‘humanized’, ‘maternalized’ or similar terms should not be used. Inserts giving additional information about the product and its proper use, subject to the above conditions, may be included in the package or retail unit. When labels give instructions for modifying a product into infant formula, the above should apply.

9.3 Food products within the scope of this Code marketed for infant feeding which do not meet all the requirements of an infant formula but which can be modified to do so, should carry on the label a warning that the unmodified product should not be the sole source of nourishment of an infant. Since sweetened condensed milk is not suitable for infant feeding, nor for use as a main ingredient of infant formula, its label should not contain purported instructions on how to modify it for that purpose.

9.4 The label of food products within the scope of this Code should also state all the following points: a) the ingredients used; b) the composition/ analysis of the product; c) the storage conditions required; and d) the batch number and the date before which the product is to be consumed, taking into account the climatic and storage conditions of the country concerned.

ARTICLE 10: Quality

10.1 The quality of products is an essential element for the protection of the health of infants and therefore should be of a high recognized standard.

10.2 Food products within the scope of this Code should, when sold or otherwise distributed, meet applicable standards recommended by the Codex Alimentarius Commission, and also the Codex Code

of Hygienic Practice for Foods for Infants and Children.

ARTICLE 11: Implementation and monitoring

11.1 Governments should take action to give effect to the principles and aim of this Code, as appropriate to their social and legislative framework, including the adoption of national legislation, regulations or other suitable measures. For this purpose, governments should seek, when necessary, the cooperation of WHO, UNICEF and other agencies of the United Nations system. National policies and measures, including laws and regulations, which are adopted to give effect to the principles and aim of this Code should be publicly stated, and should apply on the same basis to all those involved in the manufacture and marketing of products within the scope of this Code.

11.2 Monitoring the application of this Code lies with governments acting individually and collectively through the World Health Organization as provided in paragraphs 6 and 7 of this Article. The manufacturers and distributors of products within the scope of this Code, and appropriate nongovernmental organizations, professional groups, and consumer organizations should collaborate with governments to this end.

11.3 Independently of any other measures taken for implementation of this Code, manufacturers and distributors of products within the scope of this Code should regard themselves as responsible for monitoring their marketing practices, according to the principles and aim of this Code, and for taking steps to ensure that their conduct at every level conforms to them.

11.4 Non-governmental organizations, professional groups, institutions and individuals concerned should have the responsibility of drawing the attention of manufacturers or distributors to activities which are incompatible with the principles and aim of this Code, so that appropriate action can be taken. The appropriate governmental authority should also be informed.

11.5 Manufacturers and primary distributors of products within the scope of this Code should apprise each member of their marketing personnel of the Code and of their responsibilities under it.

11.6 In accordance with Article 62 of the Constitution of the World Health Organization, Member States shall communicate annually to the Director-General information on action taken to give effect to the principles and aim of this Code.

11.7 The Director-General shall report in even years to the World Health Assembly on the status of implementation of the Code; and shall, on request, provide technical support to Member States preparing national legislation or regulations, or taking other appropriate measures in implementation and furtherance of the principles and aim of this Code.

WHA Resolution 39.28

The Thirty-ninth World Health Assembly,

Recalling resolutions WHA27.43, WHA31.47, WHA33.32, WHA34.22, WHA35.26 and WHA37.30 which dealt with infant and young child feeding;

Having considered the progress and evaluation report by the Director-General on infant and young child nutrition;(1)

Recognizing that the implementation of the International Code of Marketing of Breast-milk Substitutes is an important contribution to healthy infant and young child feeding *in all countries*;

Aware that today, five years after the adoption of the International Code, many Member States have made substantial efforts to implement it, but that many products unsuitable for infant feeding are nonetheless being promoted and used for this purpose; and that sustained and concerted efforts will therefore continue to be necessary to achieve full implementation of and compliance with the International Code as well as the cessation of the marketing of unsuitable products and the improper promotion of breast-milk substitutes;

Noting with great satisfaction the guidelines concerning the main health and socioeconomic circumstances in which infants have to be fed on breast-milk substitutes (2), in the context of Article 6, paragraph 6, of the International Code;

Noting further the statement in the guidelines, paragraph 47: “Since the *large majority of infants* born in maternity wards and hospitals are full term, they *require no nourishment other than colostrum during their first 24–48 hours of life* – the amount of time often spent by a mother and her infant in such an institutional setting. Only small quantities of breast-milk substitutes are ordinarily required to meet the needs of a minority of infants in these facilities, and they should only be available in ways that do not interfere with the protection and promotion of breastfeeding for the majority”;

1. ENDORSES the report of the Director-General (1);

2. URGES Member States:

(1) to implement the Code if they have not yet done so;

(2) to ensure that the practices and procedures of their health care systems are consistent with the principles and aim of the International Code;

(3) to make the fullest use of *all concerned parties* – health professional bodies, nongovernmental organizations, consumer organizations, manufacturers and distributors – generally, in protecting and promoting breastfeeding and, specifically, *in implementing the Code and monitoring its implementation and compliance with its provisions*;

(4) to seek the cooperation of manufacturers and distributors of products within the scope of Article 2 of the Code, in providing all information considered necessary for monitoring the implementation of the Code;

(5) to provide the Director-General with complete and detailed information on the implementation of the Code;

(6) to ensure that the small amounts of breast-milk substitutes needed for the *minority of infants* who require them in maternity wards are made available through the normal procurement channels and *not through free or subsidized supplies*;

3. REQUESTS the Director-General:

(1) to propose a simplified and standardized form for use by Member States to facilitate the monitoring and evaluation by them of their implementation of the Code and reporting thereon to WHO, as well as the preparation by WHO of a consolidated report covering each of the articles of the Code;

(2) to specifically direct the attention of Member States and other interested parties to the following:

(a) *any food or drink given before complementary feeding is nutritionally required* may interfere with the initiation or maintenance of breastfeeding and therefore *should neither be promoted nor encouraged for use by infants during this period*;

(b) the practice being introduced in some countries of providing infants with specially formulated milks (*so-called “follow-up milks”*) is not necessary.

16 May 1986

References:

1. Document WHA39/1986/REC/1, or Document A39/8
2. Document WHA39/1986/REC/1, or Document A39/8 Add.1

WHA Resolution 47.5

Infant and young child nutrition

The Forty-seventh World Health Assembly,

Having considered the report by the Director-General on infant and young child nutrition;

Recalling resolutions WHA33.32, WHA34.22, WHA35.26, WHA37.30, WHA39.28, WHA41.11, WHA43.3, WHA45.34 and WHA46.7 concerning infant and young child nutrition, appropriate feeding practices and related questions;

Reaffirming its support for all these resolutions and reiterating the recommendations to Member States contained therein;

Bearing in mind the superiority of breast-milk as the biological norm for nourishing infants, and that a deviation from this norm is associated with increased risks to the health of infants and mothers;

1. THANKS the Director-General for his report;

2. URGES Member States to take the following measures:

(1) to promote sound infant and young child nutrition, in keeping with their commitment to the World Declaration for Nutrition,⁽¹⁾ through coherent effective intersectoral action, including:

(a) increasing awareness among health personnel, nongovernmental organizations, communities and the general public of the importance of breast-feeding and its superiority to any other infant feeding method;

(b) supporting mothers in their choice to breast-feed by removing obstacles and preventing interference that they may face in health services, the workplace, or the community;

(c) ensuring that all health personnel concerned are trained in appropriate infant and young child feeding practices, including the application of the principles laid down in the joint WHO/UNICEF statement on breast-feeding and the role of maternity services;⁽²⁾

(d) fostering appropriate complementary feeding practices from the age of about six months, emphasizing continued breast-feeding and frequent feeding with safe and adequate amounts of local foods;

(2) to ensure that there are no donations of free or subsidized supplies of breast-milk substitutes and other products covered by the International Code of Marketing of Breast-milk Substitutes in any part of the health care system;

(3) to exercise extreme caution when planning, implementing or supporting *emergency relief operations*, by protecting, promoting and supporting breast-feeding for infants, and ensuring that donated supplies of breast-milk substitutes or other products covered by the scope of the International Code be given *only* if all the following conditions apply:

(a) infants have to be fed on breast-milk substitutes, as outlined in the guidelines concerning the main health and socioeconomic circumstances in which infants have to be fed on breast-milk substitutes;⁽³⁾

(b) the supply is continued for as long as the infants concerned need it;

(c) the supply is not used as a sales inducement;

(4) to inform the labour sector, and employers' and workers' organizations, about the multiple benefits of breast-feeding for infants and mothers, and the implications for maternity protection in the workplace;

3. REQUESTS the Director-General:

(1) to use his good offices for cooperation with all parties concerned in giving effect to this and related resolutions of the World Health Assembly in their entirety;

(2) to complete development of a comprehensive global approach and programme of action to strengthen national capacities for improving infant and young child feeding practices; including the development of methods and criteria for national assessment of breast-feeding trends and practices;

(3) to support Member States, at their request, in monitoring infant and young child feeding practices and trends in health facilities and households, in keeping with new standard breast-feeding indicators;

(4) to urge Member States to initiate the Baby-friendly Hospital Initiative and to support them, at their request, in implementing this Initiative, particularly in their efforts to improve educational curricula and in-service training for all health and administrative personnel concerned;

(5) to increase and strengthen support to Member States, at their request, in giving effect to the principles and aim of the International Code and all relevant resolutions, and to advise Member States on a framework which they may use in monitoring their application, as appropriate to national circumstances;

(6) to develop, in consultation with other concerned parties and as part of WHO's normative function, guiding principles for the use in emergency situations of breast-milk substitutes or other products covered

by the International Code which the competent authorities in Member States may use, in the light of national circumstances, to ensure the optimal infant-feeding conditions;

(7) to complete, in cooperation with selected research institutions, collection of revised reference data and the preparation of guidelines for their use and interpretation, for assessing the growth of breast-fed infants;

(8) to seek additional technical and financial resources for intensifying WHO's support to Member States in infant feeding and in the implementation of the International Code and subsequent relevant resolutions.

9 May 1994

References:

1. *World Declaration and Plan of Action for Nutrition*. FAO/WHO, International Conference on Nutrition, Rome, December 1992.
2. *Protecting, promoting and supporting breast-feeding: the special role of maternity services*. A joint WHO/UNICEF statement. Geneva, World Health Organization, 1989.
3. Document WHA39/1986/REC/1, Annex 6, part 2.

WHA Resolution 54.2

Infant and young child nutrition

The Fifty-fourth World Health Assembly,

Recalling resolutions WHA33.32, WHA34.22, WHA35.26, WHA37.30, WHA39.28, WHA41.11, WHA43.3, WHA45.34, WHA46.7, WHA47.5 and WHA49.15 on infant and young child nutrition, appropriate feeding practices and related questions;

Deeply concerned to improve infant and young child nutrition and to alleviate all forms of malnutrition in the world, because more than one-third of under-five children are still malnourished – whether stunted, wasted, or deficient in iodine, vitamin A, iron or other micronutrients – and because malnutrition still contributes to nearly half of the 10.5 million deaths each year among preschool children worldwide;

Deeply alarmed that malnutrition of infants and young children remains one of the most severe global public health problems, at once a major cause and consequence of poverty, deprivation, food insecurity and social inequality, and that malnutrition is a cause not only of increased vulnerability to infection and other diseases, including growth retardation, but also of intellectual, mental, social and developmental handicap, and of increased risk of disease throughout childhood, adolescence and adult life;

Recognizing the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger, and that every effort should be made with a view to achieving progressively the full realization of this right;

Acknowledging the need for all sectors of society – including governments, civil society, health professional associations, nongovernmental organizations, commercial enterprises and international bodies – to contribute to improved nutrition for infants and young children by using every possible means at their disposal, especially by fostering optimal feeding practices, incorporating a comprehensive multisectoral, holistic and strategic approach;

Noting the guidance of the Convention on the Rights of the Child, in particular Article 24, which recognizes, *inter alia*, the need for access to and availability of both support and information concerning the use of basic knowledge of child health and nutrition, and the advantages of breastfeeding for all segments of society, in particular parents and children;

Conscious that despite the fact that the International Code of Marketing of Breast-milk Substitutes and subsequent, relevant World Health Assembly resolutions state that there should be no advertising or other forms of promotion of products within its scope, new modern communication methods, including electronic means, are currently increasingly being used to promote such products; and conscious of the need for the Codex Alimentarius Commission to take the International Code and subsequent relevant World Health Assembly resolutions into consideration in dealing with health claims in the development of food standards and guidelines;

Mindful that 2001 marks the twentieth anniversary of the adoption of the International Code of Marketing of Breast-milk Substitutes, and that the adoption of the present resolution provides an opportunity to reinforce the International Code's fundamental role in protecting, promoting and supporting breast-feeding;

Recognizing that there is a sound scientific basis for policy decisions to reinforce activities of Member States and those of WHO; for proposing new and innovative approaches to monitoring growth and improving nutrition; for promoting improved breast-feeding and complementary feeding practices, and sound culture-specific counselling; for improving the nutritional status of women of reproductive age, especially during and after pregnancy; for alleviating all

forms of malnutrition; and for providing guidance on feeding practices for infants of mothers who are HIV-positive;

Noting the need for effective systems for assessing the magnitude and geographical distribution of all forms of malnutrition, together with their consequences and contributing factors, and of foodborne diseases; and for monitoring food security;

Welcoming the efforts made by WHO, in close collaboration with UNICEF and other international partners, to develop a comprehensive global strategy for infant and young child feeding, and to use the ACC Sub-Committee on Nutrition as an interagency forum for coordination and exchange of information in this connection;

1. THANKS the Director-General for the progress report on the development of a new global strategy for infant and young child feeding;

2. URGES Member States:

(1) to recognize the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger, and that every effort should be made with a view to achieving progressively the full realization of this right and to call on all sectors of society to cooperate in efforts to improve the nutrition of infants and young children;

(2) to take necessary measures as States Parties effectively to implement the Convention on the Rights of the Child, in order to ensure every child's right to the highest attainable standard of health and health care;

(3) to set up or strengthen interinstitutional and intersectoral discussion forums with all stakeholders in order to reach national consensus on strategies and policies including reinforcing, in collaboration with ILO, policies that support breastfeeding by working women, in order substantially to improve infant and young child feeding and to develop participatory mechanisms for establishing and implementing specific nutrition programmes and projects aimed at new initiatives and innovative approaches;

(4) to strengthen activities and develop new approaches to protect, promote and support exclusive breastfeeding for six months as a global public health recommendation, taking into account the findings of the WHO expert consultation on optimal duration of exclusive breastfeeding, (*note 1*) and to provide safe and appropriate complementary foods, with continued breastfeeding for up to two years of age or be-

yond, emphasizing channels of social dissemination of these concepts in order to lead communities to adhere to these practices;

(5) to support the Baby-friendly Hospital Initiative and to create mechanisms, including regulations, legislation or other measures, designed, directly and indirectly, to support periodic reassessment of hospitals, and to ensure maintenance of standards and the Initiative's long-term sustainability and credibility;

(6) to improve complementary foods and feeding practices by ensuring sound and culture-specific nutrition counselling to mothers of young children, recommending the widest possible use of indigenous nutrient-rich foodstuffs; and to give priority to the development and dissemination of guidelines on nutrition of children under two years of age, to the training of health workers and community leaders on this subject, and to the integration of these messages into strategies for health and nutrition information, education and communication;

(7) to strengthen monitoring of growth and improvement of nutrition, focusing on community-based strategies, and to strive to ensure that all malnourished children, whether in a community or hospital setting, are correctly diagnosed and treated;

(8) to develop, implement or strengthen sustainable measures including, where appropriate, legislative measures, aimed at reducing all forms of malnutrition in young children and women of reproductive age, especially iron, vitamin A and iodine deficiencies, through a combination of strategies that include supplementation, food fortification and diet diversification, through recommended feeding practices that are culture-specific and based on local foods, as well as through other community-based approaches;

(9) to strengthen national mechanisms to ensure global compliance with the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions, with regard to labelling as well as all forms of advertising, and commercial promotion in all types of media, to encourage the Codex Alimentarius Commission to take the International Code and relevant subsequent World Health Assembly resolutions into consideration in developing its standards and guidelines; and to inform the general public on progress in implementing the Code and subsequent relevant World Health Assembly resolutions;

(10) to recognize and assess the available scientific evidence on the balance of risk of HIV transmission through breastfeeding compared with the risk of not

breastfeeding, and the need for independent research in this connection; to strive to ensure adequate nutrition of infants of HIV-positive mothers; to increase accessibility to voluntary and confidential counselling and testing so as to facilitate the provision of information and informed decision-making; and to recognize that when replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding by HIV-positive women is recommended; otherwise, exclusive breastfeeding is recommended during the first months of life; and that those who choose other options should be encouraged to use them free from commercial influences;

(11) to take all necessary measures to protect all women from the risk of HIV infection, especially during pregnancy and lactation;

(12) to strengthen their information systems, together with their epidemiological surveillance systems, in order to assess the magnitude and geographical distribution of malnutrition, in all its forms, and foodborne disease;

3. REQUESTS the Director-General:

(1) to give greater emphasis to infant and young child nutrition, in view of WHO's leadership in public health, consistent with and guided by the Convention on the Rights of the Child and other relevant human rights instruments, in partnership with ILO, FAO, UNICEF, UNFPA and other competent organizations both within and outside the United Nations system;

(2) to foster, with all relevant sectors of society, a constructive and transparent dialogue in order to monitor progress towards implementation of the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions, in an independent manner and free from commercial influence, and to provide support to Member States in their efforts to monitor implementation of the Code;

(3) to provide support to Member States in the identification, implementation and evaluation of innovative approaches to improving infant and young child feeding, emphasizing exclusive breastfeeding for six months as a global public health recommendation, taking into account the findings of the WHO expert consultation on optimal duration of exclusive breastfeeding (*note 1*), the provision of safe and appropriate complementary foods, with continued breastfeeding up to two years of age or beyond, and community-based and cross-sector activities;

(4) to continue the step-by-step country- and region-based approach to developing the new global strategy on infant and young child feeding, and to involve the international health and development community, in particular UNICEF, and other stakeholders as appropriate;

(5) to encourage and support further independent research on HIV transmission through breastfeeding and other measures to improve the nutritional status of mothers and children already affected by HIV/AIDS;

(6) to submit the global strategy for consideration to the Executive Board at its 109th session in January 2002 and to the Fifty-fifth World Health Assembly (May 2002).

Note 1: As formulated in the conclusions and recommendations of the expert consultation (Geneva, 28 to 30 March 2001) that completed the systematic review of the optimal duration of exclusive breastfeeding (see document A54/INF.DOC./4).

WHA Resolution 55.25

Infant and young child nutrition

The Fifty-fifth World Health Assembly,

Having considered the draft global strategy for infant and young-child feeding;

Deeply concerned about the vast numbers of infants and young children who are still inappropriately fed and whose nutritional status, growth and development, health and very survival are thereby compromised;

Conscious that every year as much as 55% of infant deaths from diarrhoeal disease and acute respiratory infections may be the result of inappropriate feeding practices, that less than 35% of infants worldwide are exclusively breastfed for even the first four months of life, and that complementary feeding practices are frequently ill-timed, inappropriate and unsafe;

Alarmed at the degree to which inappropriate infant and young-child feeding practices contribute to the global burden of disease, including malnutrition and its consequences such as blindness and mortality due to vitamin A deficiency, impaired psychomotor development due to iron deficiency and anaemia, irreversible brain damage as a consequence of iodine deficiency, the massive impact on morbidity and mortality of protein-energy malnutrition, and the later-life consequences of childhood obesity;

Recognizing that infant and young-child mortality can be reduced through improved nutritional status of women of reproductive age, especially during preg-

nancy, and by exclusive breastfeeding for the first six months of life, and with nutritionally adequate and safe complementary feeding through introduction of safe and adequate amounts of indigenous foodstuffs and local foods while breastfeeding continues up to the age of two years and beyond;

Mindful of the challenges posed by the ever-increasing number of people affected by major emergencies, the HIV/AIDS pandemic, and the complexities of modern lifestyles coupled with continued promulgation of inconsistent messages about infant and young-child feeding;

Aware that inappropriate feeding practices and their consequences are major obstacles to sustainable socioeconomic development and poverty reduction;

Reaffirming that mothers and babies form an inseparable biological and social unit, and that the health and nutrition of one cannot be divorced from the health and nutrition of the other;

Recalling the World Health Assembly's endorsement (resolution WHA33.32), in their entirety, of the statement and recommendations made by the joint WHO/UNICEF Meeting on Infant and Young Child Feeding held in 1979; its adoption of the International Code of Marketing of Breast-milk Substitutes (resolution WHA34.22), in which it stressed that adoption of and adherence to the Code were a minimum requirement; its welcoming of the Innocenti Declaration on the Protection, Promotion and Support of Breastfeeding as a basis for international health policy and action (resolution WHA44.33); its urging encouragement and support for all public and private health facilities providing maternity services so that they become "baby-friendly" (resolution WHA45.34); its urging ratification and implementation of the Convention on the Rights of the Child as a vehicle for family health development (resolution WHA46.27); and its endorsement, in their entirety, of the World Declaration and Plan of Action for Nutrition adopted by the International Conference on Nutrition (resolution WHA46.7);

Recalling also resolutions WHA35.26, WHA37.30, WHA39.28, WHA41.11, WHA43.3, WHA45.34, WHA46.7, WHA47.5, WHA49.15 and WHA54.2 on infant and young-child nutrition, appropriate feeding practices and related questions;

Recognizing the need for comprehensive national policies on infant and young-child feeding, including guidelines on ensuring appropriate feeding of infants and young children in exceptionally difficult circumstances;

Convinced that it is time for governments to renew their commitment to protecting and promoting the optimal feeding of infants and young children,

1. ENDORSES the global strategy for infant and young-child feeding;

2. URGES Member States, as a matter of urgency:

(1) to adopt and implement the global strategy, taking into account national circumstances, while respecting positive local traditions and values, as part of their overall nutrition and child-health policies and programmes, in order to ensure optimal feeding for all infants and young children, and to reduce the risks associated with obesity and other forms of malnutrition;

(2) to strengthen existing, or establish new, structures for implementing the global strategy through the health and other concerned sectors, for monitoring and evaluating its effectiveness, and for guiding resource investment and management to improve infant and young-child feeding;

(3) to define for this purpose, consistent with national circumstances:

(a) national goals and objectives,

(b) a realistic timeline for their achievement,

(c) measurable process and output indicators that will permit accurate monitoring and evaluation of action taken and a rapid response to identified needs;

(4) to ensure that the introduction of micronutrient interventions and the marketing of nutritional supplements do not replace, or undermine support for the sustainable practice of, exclusive breastfeeding and optimal complementary feeding;

(5) to mobilize social and economic resources within society and to engage them actively in implementing the global strategy and in achieving its aims and objectives in the spirit of resolution WHA49.15;

3. CALLS UPON other international organizations and bodies, in particular ILO, FAO, UNICEF, UNHCR, UNFPA and UNAIDS, to give high priority, within their respective mandates and programmes and consistent with guidelines on conflict of interest, to provision of support to governments in implementing this global strategy, and invites donors to provide adequate funding for the necessary measures;

4. REQUESTS the Codex Alimentarius Commission to continue to give full consideration, within the framework of its operational mandate, to action it might take

to improve the quality standards of processed foods for infants and young children and to promote their safe and proper use at an appropriate age, including through adequate labelling, consistent with the policy of WHO, in particular the International Code of Marketing of Breast-milk Substitutes, resolution WHA54.2, and other relevant resolutions of the Health Assembly;

5. REQUESTS the Director-General:

(1) to provide support to Member States, on request, in implementing this strategy, and in monitoring and evaluating its impact;

(2) to continue, in the light of the scale and frequency of major emergencies worldwide, to generate specific information and develop training materials aimed at ensuring that the feeding requirements of infants and young children in exceptionally difficult circumstances are met;

(3) to strengthen international cooperation with other organizations of the United Nations system and bilateral development agencies in promoting appropriate infant and young-child feeding;

(4) to promote continued cooperation with and among all parties concerned with implementing the global strategy.

Ninth plenary meeting, 18 May 2002

HIV and Infant Feeding: Framework for Priority Action¹

Infant feeding in the context of HIV/AIDS

Risk of HIV infection in infants and young children

There are increasing numbers of children infected with the Human Immunodeficiency Virus (HIV), especially in the countries most affected by the epidemic. In 2002, an estimated 3.2 million children under 15 years of age were living with HIV/AIDS, a total of 800 000 were newly infected and 610 000 died (UNAIDS/WHO, 2002).

The overwhelming source of HIV infection in young children is mother-to-child transmission. The virus may be transmitted during pregnancy, labour and delivery, or by breastfeeding (UNAIDS, 2000). In a recent paper (Walker, Schwärlander and Bryce, 2002), HIV/AIDS was estimated to account for 7.7% of all deaths in children under five in sub-Saharan Africa. In areas where the prevalence of HIV in pregnant women exceeded 35%, the contribution of HIV/AIDS to childhood mortality was as high as 42%.

Rates of mother-to-child transmission range from 14–25% in developed and from 13–42% in other countries (Working Group on Mother-to-Child Transmission of HIV, 1995). It is estimated that 5–20% of infants born to HIV-positive women acquire infection through breastfeeding, which explains the different overall transmission rates in these settings. Comparing data from different studies, breastfeeding may be responsible for one-third to one-half of HIV infections in infants and young children in Africa (De Cock et al., 2000).

HIV transmission may continue for as long as a child is breastfed (Miotti et al., 1999; Leroy et al., 1998; Read et al., 2002). Among women recently infected with HIV, the risk of transmission through breastfeeding is nearly twice as high as for women infected before or during pregnancy, because of high viral load shortly after initial infection (Dunn et al., 1992).

Health risks for non-breastfed infants

The risks associated with not breastfeeding vary according to the environment, for example with the availability of suitable replacement feeds and safe water. It also varies with the individual circumstances of the mother and her family, including her education and economic status (VanDerslice, Popkin and Briscoe, 1994; Butz, Habicht and DaVanzo, 1984; WHO, 2000).

Lack of breastfeeding compared to any breastfeeding has been shown by meta-analysis to expose children to increased risk of malnutrition and life-threatening infectious diseases other than HIV, especially in the first year of life (WHO, 2000), and exclusive breastfeeding appears to offer greater protection against disease than any breastfeeding (Victora et al., 1987). This is especially the case in developing countries where 54% of all under-five deaths are associated with malnutrition (Pelletier et al., 1993). Not breastfeeding during the first two months of life is also associated, in poor countries, with a six-fold increase in mortality due to infectious diseases. This increased vulnerability drops to two-and-a-half-fold at six months, and continues to decrease with time (WHO, 2000).

The findings of the meta-analysis most likely underestimate the benefits that exclusive breastfeeding² has in lowering mortality. The conclusions are also somewhat limited in their application given that HIV infection was not taken into account. Studies from Africa, where mortality rates and breastfeeding patterns are different, were also excluded since there were insufficient numbers of infants who were not breastfed.

Health risks for mothers

Mothers who do not breastfeed, or who stop breastfeeding early, are more likely to become pregnant again

¹ WHO, UNICEF, UNFPA, UNAIDS, World Bank, UNHCR, WFP, FAO and IAIEA. HIV and Infant Feeding: Framework for Priority Action. Geneva, 2003.

² Exclusive breastfeeding means breastfeeding while giving no other food or drink, not even water, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.

rapidly, and this has implications for their health and that of their infants.

A recent study (Nduati et al., 2001) raised the specific issue of whether breastfeeding affects the health of HIV-positive mothers. WHO reviewed the evidence and concluded that “*the new results do not warrant any change in current policies on breastfeeding, nor on infant feeding by HIV-infected women.*” However, they “*emphasize the need for proper support to mothers who are infected with HIV and provide a further reason for women to know their HIV infection status*” (WHO Statement, 2001).

Current recommendations

According to current UN recommendations (WHO, 2001), infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Thereafter, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues up to 24 months or beyond. However, given the need to reduce the risk of HIV transmission to infants while minimizing the risk of other causes of morbidity and mortality, the guidelines also state that “*when replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding by HIV-infected mothers is recommended. Otherwise, exclusive breastfeeding is recommended during the first months of life*” and should then be discontinued as soon as it is feasible.¹ To help HIV-positive mothers make the best choice, they should receive counselling that includes information about both the risks and benefits of various infant feeding options based on local assessments, and guidance in selecting the most suitable option for their situation. They should also have access to follow-up care and support, including family planning and nutritional support.

For an individual mother, balancing risks and benefits is a complex, but necessary, task. In addition to HIV-positive mothers being provided with counselling on infant feeding options, there should be an effort to ensure positive perceptions of and attitudes towards breastfeeding within the general population. In addition, the unnecessary use of breast-milk substitutes by mothers who do not know their HIV serostatus or who are HIV-negative should be avoided. All such mothers should be encouraged and supported

¹ This would normally imply the same conditions as for replacement feeding from birth, that is, acceptable, feasible, affordable, sustainable and safe.

to breastfeed exclusively for six months, and continue breastfeeding with complementary feeding until 24 months as this practice is best for their overall health and that of their children. Through this combined approach, it should be possible to achieve the ultimate goal of increasing overall child survival, while reducing HIV infection in infants and young children.

International policy context for the Framework

In May 2002, during the United Nations General Assembly Special Session (UNGASS) for Children, governments pledged to reduce infant and under-five mortality by at least one-third during the decade 2001-2010, and by two-thirds by 2015. Governments also declared they would take action consistent with the June 2001 UNGASS on HIV/AIDS, to reduce the proportion of the infant population infected with HIV by 20% by 2005, and by 50% by 2010. To achieve these goals, the UN strategic approach for preventing the transmission of HIV to women and their children includes four areas:

- 1) prevention of HIV infection in general, especially in young women, and in pregnant women;
- 2) prevention of unintended pregnancies among HIV-infected women;
- 3) prevention of HIV transmission from HIV-infected mothers to their infants; and
- 4) provision of care, treatment and support to HIV-infected women, their infants and family.

Prevention of HIV transmission through breastfeeding is covered by areas 3 and 4. It should be considered against a backdrop of promoting appropriate feeding for all infants and young children. The Global Strategy for Infant and Young Child Feeding was adopted by the World Health Assembly in May 2002 (WHO, 2002) and by the UNICEF Board in September 2002. The operational objectives of this strategy include: ensuring that exclusive breastfeeding is protected, promoted and supported for six months, with continued breastfeeding up to two years and beyond; promoting timely, adequate, safe and appropriate complementary feeding; and providing guidance on feeding infants and young children in exceptionally difficult circumstances, e.g. for infants of HIV-infected women, in emergency situations and for low birth-weight babies.

The current Framework has been developed in accordance with the goals and strategies of this integrated policy context. These in turn are based on evi-

dence reflected in various technical consultations and documents, particularly an inter-agency technical consultation held in October 2000 (WHO, 2001). In addition, there is a growing body of practical experience from national programmes and projects across a wide range of countries that serves to guide the priority actions described below.

HIV and infant feeding is a complex issue, and there are still significant knowledge gaps, including whether antiretroviral prophylaxis for an infant during breastfeeding, or antiretroviral treatment for a breastfeeding mother, are safe and effective in reducing HIV transmission. Identification and implementation of good practices requires a comprehensive approach in the context of a broad strategy, such as that described above. In addition it will require an enabling environment where appropriate infant and young child feeding is the norm and efforts to address broader issues of food security for HIV-affected families are also in place. Where breastfeeding in the general population is protected, promoted and supported, HIV-positive mothers will still need special attention, so that they are empowered to select and sustain the best feeding option.

The Framework's purpose and target audience

The purpose of this Framework is to recommend to governments key priority actions, related to infant and young child feeding, that cover the special circumstances associated with HIV/AIDS. The aim should be to create and sustain an environment that encourages appropriate feeding practices for all infants, while scaling-up interventions to reduce HIV transmission.

The beneficiaries of this framework include national policy-makers, programme managers, regional advisory bodies, public health authorities, UN staff, professional bodies, non-governmental organizations and other interested stakeholders, including the community. It has been developed in response to both evolving knowledge and requests for clarification from these key sectors.

Priority areas for governments

In relation to the special circumstances created by HIV/AIDS, five priority areas for national governments are proposed in the context of the Global Strategy for Infant and Young Child Feeding:

1. Develop or revise (as appropriate) a comprehensive national infant and young child feed-

ing policy, which includes HIV and infant feeding.

Actions required:

- Draft or revise policy to reflect current knowledge of appropriate infant and young child feeding practices in general, as well as specifically in relation to HIV. The policy should be based on national qualitative studies on the local appropriateness of different feeding options.
- Build consensus among stakeholders on the infant and young child feeding policy as it relates to HIV.
- Review other relevant policies, such as those on national HIV/AIDS programmes, nutrition, integrated management of childhood illness, safe motherhood, prevention of mother-to-child transmission of HIV/AIDS, and feeding in emergencies, and ensure consistency with the overall infant and young child feeding policy.
- Work across sectors to strengthen household food and nutrition security, so that infant and young child feeding practices are not jeopardized by food shortage or malnutrition in mothers.
- Inform other sectors about the policy, such as the labour ministry, which hold responsibility for maternity entitlements for pregnant and lactating women.
- Develop means for implementing the policy.

2. Implement and enforce the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions.

Actions required:

- Implement existing measures adopted to give effect to the Code, and, where appropriate, strengthen and adopt new measures.
- Monitor Code compliance.
- Ensure that the response to the HIV pandemic does not include the introduction of non Code-compliant donations of breast-milk substitutes or the promotion of breast-milk substitutes.
- In countries that have decided to provide replacement feeding for the infants of HIV-positive mothers who have been counselled, and for whom it is acceptable, feasible, sustainable and safe (either from birth or at early cessation), establish appropriate procurement and distribution systems for breast-milk substitutes, in accordance with the provisions of the

Code and relevant World Health Assembly resolutions.

3. Intensify efforts to protect, promote and support appropriate infant and young child feeding practices in general, while recognizing HIV as one of a number of exceptionally difficult circumstances.

Actions required:

- Increase the priority and attention given to infant and young child feeding issues in national planning, both inside and outside the health sector.
- Develop and implement guidelines on infant and young child feeding, including feeding in exceptionally difficult circumstances, for example, for low birth weight babies, in emergency situations and for infants of HIV-infected women.
- Facilitate coordination on infant and young child feeding issues in implementing national HIV/AIDS programmes, integrated management of childhood illness, safe motherhood, and others.
- Build capacity of health care decision-makers, managers, workers and, as appropriate, peer counsellors, lay counsellors and support groups for promoting primary prevention of HIV, good nutrition for pregnant and lactating women, breastfeeding and complementary feeding, and for dealing with HIV and infant feeding.
- Revitalize and scale-up coverage of the Baby-friendly Hospital Initiative (BFHI) and extend it beyond hospitals, including through the establishment of breastfeeding support groups, and making provisions for expansion of activities to prevent HIV transmission to infants and young children to go hand-in-hand with promotion of the Initiative's principles.
- Ensure consistent application of recommendations on HIV and infant feeding in emergency situations, recognizing that the environmental risks associated with replacement feeding may be increased in these circumstances.
- Consult with communities and develop community capacity for acceptance, promotion and support of appropriate infant and young child feeding practices.
- Support improved maternity care for all pregnant women.
- Provide guidance for other sectors on legislation and related national measures.

4. Provide adequate support to HIV-positive women to enable them to select the best feeding option for themselves and their babies, to successfully carry out their infant feeding decisions.

Actions required:

- Expand access to, and demand for, quality antenatal care for women who currently do not use such services.
- Expand access to, and demand for, HIV testing and counselling, before and during pregnancy and lactation, to enable women and their partners to know their HIV status, know how to prevent HIV/sexually transmitted infections and be supported in decisions related to their own behaviours and their children's health.
- Implement other measures aimed at prevention of HIV infection in infants and young children, including provision of antiretroviral drugs during pregnancy, labour and delivery and/or to the infant and safer delivery practices.
- Support the orientation of health-care managers and capacity-building and pre-service training of counsellors (including lay counsellors) and health workers on breastfeeding counselling, as well as primary prevention of HIV and infant feeding counselling, including the need for respect and support for mothers' feeding choices.
- Improve follow-up, supervision and support of health workers to sustain their skills and the quality of counselling, and to prevent 'burn-out'.
- Integrate adequate HIV and infant feeding counselling and support into maternal and child health services, and simplify counselling to increase its comprehensibility and enhance the feasibility of increasing coverage levels.
- Carry out relevant formative research, and develop and implement a comprehensive communication strategy on appropriate infant and young child feeding practices within the context of HIV.
- Develop community capacity to help HIV-positive mothers carry out decisions on infant feeding, including the involvement of trained support groups, lay counsellors and other volunteers, and encourage the involvement of family members, especially fathers.
- Promote interventions to reduce stigmatization and increase acceptance of HIV-positive women and of alternative feeding choices.

5. **Support research on HIV and infant feeding, including operations research, learning, monitoring and evaluation at all levels, and disseminate findings.**

Actions required:

- Carry out qualitative studies to assess local feeding options (including their acceptability, feasibility, affordability, sustainability and safety), on which policies, guidelines and capacity-building should be based.
- Carry out assessments and evaluations of programmes related to HIV and infant feeding, on infant feeding practices and mother's and children's health outcomes.
- Disseminate results of research, technical guidelines and related recommendations, and revise national programmes and guidelines in response to new knowledge and programme experiences and outcomes.

Role of UN agencies

Within the scope of this framework, the UN agencies endorsing this framework will:

- Advocate the priority courses of action described above with global and regional advisory bodies and national governments. Through their global, regional and country offices and UN Theme Groups on HIV/AIDS, UN agencies will disseminate this Framework and encourage responses that are in accordance with the guidance of this Framework.
- Convene technical consultations, and provide governments and other stakeholders with technical guidance, information on best practices, guidelines and tools related to HIV and infant feeding.
- Assist countries in mobilizing resources to carry out priority actions.
- Support capacity development related to HIV and infant feeding for policy-makers, managers, health workers and counsellors.

Additional challenges

The overall challenge is to improve feeding for all infants and young children, regardless of their mother's HIV status. Making a difference is often very difficult in an environment where poverty, food insecurity, mother and child malnutrition, and high disease rates prevail.

The optimal means of feeding an infant when the mother is HIV-positive is a complicated issue. The evidence base for policy-making on this issue is still evolving and answers to some key questions will not emerge for months or years. In this context, one of the greatest challenges in the area of HIV and infant feeding is to communicate clearly the evidence and field experience to decision-makers, health workers and counsellors, as they continue to emerge, while ensuring consensus among technical experts and implementers on the ways forward.

Simultaneously, governments and agencies are being asked to respond to the need to move quickly on priority actions, despite limited resources. The difficulties in implementing actions within the context of health (and social) systems that require significant strengthening should not be underestimated.

Conclusion

Promoting improved infant and young child feeding practices among all women, irrespective of HIV status, brings substantial benefits to individuals, families and societies. Implementing the priority actions described in this Framework will contribute to achieving the declared governmental goals of reducing child mortality and HIV transmission, while enhancing support for breastfeeding among the general population and promoting the attainment of other child health-related goals.

Although future research will provide more detailed information on relative risks and ways to further reduce HIV transmission through breastfeeding, immediate action is required. There is adequate knowledge of general risks and appropriate programme responses to support HIV-positive mothers and their children in relation to infant feeding and for the acceleration of actions needed for a scaled-up response using this Framework.

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ANNEX 6

Benefits of breastfeeding

Nutritional benefits

- Breast milk is the best food for infants. It provides an infant's complete nutritional needs usually up to the age of six months, up to half of nutritional requirements between 6 and 12 months, and up to one third between 12 and 24 months. The unique nutritional properties of breast milk include the right amounts of protein, iron and other micronutrients, and long-chain polyunsaturated fatty acids, essential to the development of the brain.
- Colostrum, the milk produced in the first few days of life, normally contains a high concentration of vitamin A, which is essential for the proper functioning of the infant's eyes, skin, mucous membranes and immune system.
- Breast milk contains enough water even for very dry and hot areas.
- Breast milk is easily digested and its composition changes to meet the developing needs of the growing infant. It contains enzymes necessary for the complete digestion of fat.

Protection against infections and other illness

- Breast milk, especially colostrum, has anti-infective properties, which help to protect the infant against infections.
- Infants who are breastfed have fewer illnesses than those fed with breast-milk substitutes, in all countries and socio-economic settings.
- Breastfeeding helps to protect infants against diarrhoeal diseases, acute respiratory infections and otitis media, and reduces the risk of infant death from infections and malnutrition in developing countries. A study in a situation of poor hygiene

found that the risk of death from diarrhoea in artificially fed infants was 14 times that of breastfed infants. Breastfeeding during illnesses such as diarrhoea promotes recovery.

- Breastfeeding reduces the risk of neonatal necrotizing enterocolitis and septicaemia in newborn infants.
- Breastfeeding also reduces the risk of meningitis, urinary tract infections, eczema, respiratory wheeze, diabetes, chronic intestinal disease, and sudden infant death syndrome.

Contribution to maternal health

- Exclusive breastfeeding on demand, including at night, delays the return of fertility and hence helps in birth-spacing, especially where women lack access to other forms of contraception. Longer birth-intervals benefit the health of mothers and their children.
- Breastfeeding promotes bonding between the mother and her infant.
- Breastfeeding helps the uterus to contract after delivery and reduces bleeding.
- Breastfeeding protects women's health because it reduces the risk of ovarian, breast and other reproductive cancers later in life.

Economic benefits

- Breastfeeding is the most economical method of infant feeding, saving money and time and reducing the costs of health care for sick infants. Providing breast-milk substitutes for an infant may cost more than half of the per capita GNP in some countries.

ANNEX 7

Preparing and giving foods to infants and young children

Hygienic preparation

Preparing breast-milk substitutes (or complementary feeds) to minimize the risks of contamination and bacterial infection requires that health workers:

- teach mothers and families to understand the importance of washing their hands with soap and water before preparing feeds
- teach mothers and families to wash the feeding and mixing utensils thoroughly, and, if possible, boil them to sterilize them before preparing the feed and feeding the infant
- ask mothers to demonstrate preparation of a feed and watch them to ensure that they can do it hygienically.

Health-care managers and supervisors need to ensure that health workers are able to teach mothers and families to follow these basic instructions:

- Wash their hands with soap and water before preparing and cooking food or feeding a child
- Boil water for preparing the child's food and any necessary drinks
- Cook food thoroughly until it bubbles
- Avoid storing cooked food or, if this is not feasible, store in a refrigerator or a cool place and reheat thoroughly before giving to the infant
- Avoid contact between raw and cooked foods
- Wash fruits and vegetables with water that has been boiled. Peel them if possible or cook thoroughly before giving them to infants
- Do not feed an infant with a bottle; use an open cup
- Give unfinished formula or other milks to an older child, rather than keep it for the next feed
- Wash the cup or bowl for the infant's food thoroughly with soap and water, and, if possible, boil it. Bacteria breed in food that sticks to feeding vessels and utensils

- Store food and water in clean covered containers in a refrigerator or cool place and protect from rodents, insects and other animals. Do not leave any cooked food at room temperature for more than two hours
- Keep food-preparation surfaces clean with water and soap or detergent.

Correct mixing

Health-care managers and supervisors need to ensure that health workers can help families to measure water and other ingredients accurately. Health workers need to be able to demonstrate to mothers and families how to mix breast-milk substitutes accurately, and to ask them to show with their own measures how they will prepare feeds to ensure that they can do this correctly.

Feeding method

Health workers should be trained to show mothers and families how to cup-feed and to explain that it is preferable to feed infants this way than by bottle-feeding because:

- cups are safer as they are easier to clean with soap and water than bottles
- cups are less likely than bottles to be carried around for a long time, giving bacteria the opportunity to multiply
- cup-feeding requires the mother or other caregiver to hold and have more contact with the infant, providing more psychological stimulation than bottle-feeding
- cup-feeding is better than feeding with a cup and spoon, because spoon-feeding takes longer and the mother may stop before the infant has had enough.

Feeding bottles are not usually necessary, and the use of feeding bottles and artificial teats should be actively discouraged because:

-
- bottle-feeding increases the risk of diarrhoea (because of lack of hygiene), dental disease (because of the pooling of fluids containing sugar around the teeth), and otitis media (because of the creation of negative pressure in the inner ear)
 - bottle-feeding increases the risk that the infant will receive inadequate stimulation and attention during feeds

- bottles and teats need to be thoroughly cleaned with a brush and then boiled to sterilize them, and this takes time and fuel.

If a particular mother or other caregiver decides after counselling to use a bottle, for whatever reason, she should nevertheless be instructed on how to keep it clean to reduce the risk of illness in the baby.

How to feed an infant with a cup

- Hold the infant sitting upright or semi-upright on your lap.
- Hold the cup of milk to the infant's lips.
- Tip the cup so that the milk just reaches the infant's lips. The cup rests lightly on the infant's lower lip, and the edges of the cup touch the outer part of the infant's upper lip.
- The infant becomes alert and opens the mouth and eyes. A low-birth-weight infant will start to take the milk into the mouth with the tongue. A full-term or older infant sucks the milk, spilling some of it.
- Do not pour the milk into the infant's mouth. Just hold the cup to the infant's lips and let the infant take it.
- An infant who has had enough will close its mouth and take no more. If the infant has not taken the calculated amount, it may take more next time, or the mother needs to feed more often. (An infant who has not taken the calculated amount may take more next time, or the mother needs to feed more often.)
- Measure the infant's intake over 24 hours, not just at each feed, to calculate whether it is getting the right amount of milk.

ANNEX 8

Cost of infant formula in different countries

Cost of infant formula, April 2003, based on figures reported by UNICEF field offices and counterpart NGOs

| Country | Formula cost (cheapest commercial infant formula) | Cost of 12 months formula (40kg/year) | GNI/capita (from SOWC 2003) | Total costs % of GNI/capita (without fuel,water, health care) | Cost as % of minimum urban wage (where known) |
|-------------|---|---------------------------------------|-----------------------------|---|---|
| Argentina | \$4.05/800g | 203 | 6960 | 3 | 8.5 |
| China | \$2.0/400g | 200 | 890 | 22 | |
| Ecuador | \$3.06/450g | 272 | 1240 | 22 | |
| India | \$2.92/kg | 117 | 460 | 25 | |
| Nicaragua | \$3.6/400g | 360 | 420 | 86 | 86 |
| Nigeria | \$3.5/450g | 311 | 290 | 107 | 112 |
| Pakistan | \$2.62/400g | 262 | 420 | 62 | |
| Philippines | \$5.43/kg | 217 | 1040 | 21 | |
| Thailand | \$2.2/350g | 251 | 1970 | 13 | 17 |
| Vietnam | \$1.8/400g | 180 | 410 | 44 | 39 |
| Zimbabwe | \$1.25/400g | 125 | 480 | 26 | |

GNI/capita from State of the World's Children 2003, costs of infant formula reflect 2002/2003 exchange rates.

Infant-feeding options for HIV-positive women

REPLACEMENT FEEDING FROM BIRTH TO SIX MONTHS

■ Commercial infant formula

Commercial infant formula is:

- regulated to meet nutritional specifications for infant feeding for the first months of life (as in Codex Alimentarius)
- often fortified with micronutrients, including iron
- usually based on modified cow's milk, but other types are available
- deficient in those breast-milk immune cells that protect against infectious disease
- usually available as a powder to be reconstituted with boiled water.

Feeding an infant for six months with commercial infant formula requires 20 kg. (After the first six months, an infant would require about 16 kg up to one year, if infant formula were continued in addition to complementary feeding.)

Experience to date with commercial infant formula

- The impact on infant and subsequent child health of programmes that discuss commercial infant formula as a feeding option has not usually been measured.
- There is some programme evidence that the provision of infant formula (subsidized or free) has not prevented HIV-positive mothers mix-feeding their infants.
- Powdered formula is often prepared incorrectly or not prepared consistently (e.g., the amount of water for dilution varies, or boiled water is not used) in some settings.
- Formula is usually fed with a bottle, despite advice to use cup-feeding as an alternative, safer way.

■ Home-modified animal milk¹

- Animal milk is not fit for infants of less than six months of age unless it is properly modified.

- The composition of animal milk is uniquely suited for the growth and development of baby animals, not human infants. Essential modifications for consumption by infants of less than six months include increasing the fluid content with boiled water (to reduce osmotic concentration); increasing the energy content with sugar; improving protein digestibility by boiling the milk after preparation (even for infants up to one year); and providing an adequate micronutrient syrup or powder (see Annex 12). Consequences of not following this advice include diarrhoea, malnutrition, and severe anaemia.
- It is difficult to achieve nutritional adequacy with home-modified animal milk, even with added micronutrients, when it is given during the entire first six months of life.
- The modification required is the same from birth to six months of age.
- Animal milk comes in two types: fresh animal milk, and full-cream dried milk powder or evaporated milk.

Fresh animal milk

- The availability of fresh animal milk is often highly variable with the season.
- Fresh milk sold through informal channels is often already diluted by unknown amounts of water.
- As animal-milk protein is less easily digested than that of breast milk, animal milk should be boiled, even for infants up to one year.

Fresh cow's milk:

- has more protein and a greater concentration of sodium, phosphorous and other salts than breast milk.
- should be mixed with water and sugar in the following proportions and then boiled to make up 150 ml of home-prepared formula: 100 ml of boiled cow's milk with 50 ml of boiled water and 10 g (2 teaspoons) of sugar.

¹ Full details of preparing home-modified animal milk are given in the references in Annex 1.

Fresh goat's or camel's milk:

- needs to be modified in the same way as cow's milk.

Fresh sheep or buffalo milk:

- has more fat and energy than cow's milk.
- needs more dilution than cow's milk, in the following proportions: 50 ml of milk with 50 ml of water and 5 g (1 teaspoon) of sugar, with added micronutrients.

Full-cream dried milk powder and evaporated milk

- To reconstitute this product to the nutritional equivalent of fresh milk, a volume of boiled water is added to a measure of powdered or evaporated milk, as instructed on the container or packet.
- Once reconstituted, 50 per cent more water needs to be added, as well as 10 g (2 teaspoons) of sugar for each 150 ml of the feed.
- Micronutrients should be added as necessary, or given directly to the infant.

Feeding an infant for the first six months of life with home-modified animal milk requires an average of 92 litres of fresh or prepared powdered animal milk (500 ml per day). (After the first six months and up to one year, an infant would require about the same amount or a little more each day, 500–600 ml, in addition to complementary foods).

Experience with home-modified animal milk

- Home-modified animal milk has been promoted where animal milk is widely available
- There is no information on health effects
- There is no information on the types of micronutrient supplements being promoted with this option, whether they are consistently given, or whether they are nutritionally adequate, appropriate or locally available
- There is concern about safety aspects of preparation, storage and feeding
- Animal milk is often modified incorrectly or inconsistently (e.g., the amount of water for dilution or the amount of sugar added varies)

Replacement feeding after early cessation

Options before six months include:

- commercial infant formula
- modified animal's milk with micronutrient supplements.

Other breast-milk feeding options (see below) may also be used.

Unsuitable replacement foods

An infant fed on the following foods for replacement feeding would suffer from micronutrient and energy deficiencies.

Unmodified animal milk

- Unmodified animal milk should not be used before at least six months of age, when the child will be eating and drinking other foods and liquids.
- Up to 12 months, the animal milk and any added water should be boiled, regardless of the source.

Skimmed and sweetened condensed milk, fruit juices, sugar-water and dilute cereal gruel

- These should never be used as replacement feeding.
- If a mother says these are the only replacement feeds available to her, then replacement feeding is not an appropriate option.

Replacement feeding: Implications and responsibilities for managers

- Managers should:
 - be familiar with the provisions of the Code (see section 2.3), and ensure that health workers under their supervision know of their responsibilities under the Code
 - ensure that they, and health workers under their supervision, are aware of, and implement, the guidelines for distributing commercial infant formula (see section 3.3)
 - arrange adequate training for health workers.
 - ensure consistency and sustainability of supplies to health facilities and distribution points
 - see that health workers provide continued support to the mother on using formula safely
 - ensure that a health-impact monitoring system is in place (see section 4)
 - ensure consistency and sustainability of supplies (infant formula and/or micronutrient supplements) to health facilities or distribution points.
 - provide equitable support for women who do not choose commercial infant formula.
- Where home-modified animal milk is a local option, managers should ensure that staff advise mothers on adequate micronutrient supplements, and that these are provided through the health system or known to be easily available locally.

- Health-care providers and counsellors need training, time and support to teach mothers how to prepare replacement feeds and to provide regular follow-up.
- Stigma associated with not breastfeeding may result in mixed feeding if mothers are not supported by health workers or counsellors, and the community.
- Incorrect preparation or storage of replacement feeds may result in increased diarrhoea and malnutrition in infants and young children.

BREASTFEEDING FROM BIRTH TO SIX MONTHS

■ Exclusive breastfeeding:

- is recommended during the first months of life when HIV-positive women cannot provide replacement feeding in an acceptable, feasible, affordable, sustainable and safe way, and should then be discontinued as soon as these conditions are in place.
- should be accompanied by support for breastfeeding mothers, to maintain breast health and minimize the risk of cracked/bleeding nipples, mastitis and breast abscess – all risk factors for HIV transmission.

■ Dangers of mixed feeding

- Mixed feeding brings with it both the risk of HIV transmission through breastfeeding and risks of diarrhoea and other illnesses from giving other foods to a young baby.
- **Note:** mixed feeding may be unavoidable during transition from exclusive breastfeeding to replacement feeding. There is no programmatic evidence of women being able to make the transition without mixed feeding in the early months unless mother and child are physically separated.

■ Early cessation of breastfeeding

- HIV-positive mothers who choose to breastfeed should discontinue it as soon as replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their babies, in the light of local circumstances, the individual woman's situation, and the risks of replacement feeding for the infant's age.
- No evidence indicates a specific time for cessation within the first few months, and no blanket recommendation should be made for all mothers. However, since exclusive breastfeeding is not generally recommended for infants beyond six months, early

cessation of breastfeeding is advisable at or before this time. Mixed feeding should be avoided as much as possible and its risks minimized during transition from exclusive breastfeeding to replacement feeding.

- Cessation is also advisable if an HIV-positive mother develops symptoms of AIDS, or, where laboratory tests are available, her CD4+ or viral load count indicates that she is at increased risk of transmitting the infection.
- HIV-positive women could consider early cessation as an option if they find it difficult for social or cultural reasons to avoid breastfeeding completely during the first few months, but can later provide adequate replacement feeds, and can prepare and give them hygienically.
- HIV-positive women who cannot safely stop breastfeeding will need support to make breastfeeding and complementary feeding as safe as possible for as long as it continues – the support should include information on maintaining breast health and seeking early care for problems.

■ Transition from exclusive breastfeeding to replacement feeding

- Transition takes from two to three days to two to three weeks.
- It may bring difficulties, including, to the mother, mastitis and breast abscesses and other maternal problems; to the infant, distress, restlessness, appetite loss and diarrhoea; and objections from the family and community
- Transition is more difficult before six months of age, for reasons of safety and readiness of the infant
- Its impact on HIV transmission and survival is not yet known.
- Risks of transition may be minimized if mothers express and heat-treat their breast milk, and use it for a transition period while the baby becomes accustomed to the taste of other milks and to cup-feeding.
- Some women may not be able to change from breastfeeding to replacement feeding (safe transition) even at, or soon after, six months, because replacement feeding is still not acceptable, feasible, affordable, sustainable or safe; they may then continue breastfeeding.
- Continued breastfeeding needs to be kept as safe as possible in respect of HIV transmission for as long as it is continued; this is done by preventing breast

problems and by the immediate treatment of any that occur, and by helping women learn how to express and heat-treat breast milk.

Experience to date with exclusive breastfeeding

- Globally, about 35% of infants are exclusively breastfed for the first four months of life. Rates of exclusive breastfeeding, however, can increase dramatically through multi-channel communication campaigns and individual support and counselling.
- In settings with good counselling, exclusive breastfeeding rates in HIV-positive mothers have been high.

■ Breastfeeding: Implications and responsibilities for managers

- Infant-feeding counsellors should be able to help women prevent and treat breast problems in order to breastfeed as safely as possible.
- HIV-infected mothers who breastfeed need specific guidance and support from health-care providers when they cease breastfeeding, in order to avoid harmful nutritional and psychological consequences, to maintain breast health, and to avoid an unwanted pregnancy.
- To promote and support exclusive breastfeeding, communication and capacity development activities directed at changing community behaviour need to be carried out (e.g. the formation of mother-to-mother support groups and media campaigns targeted at men and other influential people in the family and community at large).

BREAST-MILK FEEDING

■ Wet-nursing

Wet-nursing is traditional in particular situations in some cultures – for example, during severe illness or after the death of a mother, when another family member may nurse a baby.

Wet-nursing could be considered when the prospective wet-nurse:

- has been offered HIV testing and counselling, voluntarily takes a test and is found to be HIV-negative (and is willing to repeat the test, as needed)
- is provided with adequate information and is able to practise safer sex to ensure that she remains

HIV-negative while she is breastfeeding the infant

- can breastfeed the infant as frequently and for as long as needed, which would normally include exclusive breastfeeding for the first six months of life, with the implication that the baby and wet-nurse would have to be together 24 hours a day
- has access to breastfeeding support to prevent and treat breast problems, such as cracked nipples and mastitis.

Experience to date with wet-nursing

- There is no documented experience in relation to HIV.
- Monitoring the HIV status of a wet-nurse may be difficult.

■ Expressing and heat-treating breast milk

- Breast milk may be expressed manually or with a breast pump.
- The milk can be pasteurized, or brought to the boil and cooled to kill HIV.
- Heat-treating reduces levels of anti-infective immune factors, but heat-treated breast milk is still superior to other milk.
- Hygienic practices are needed in handling expressed milk to prevent diarrhoeal disease.

Experience to date with expressing and heat-treating breast milk

- Hospitals often use this technique successfully for sick and low-birth-weight infants, regardless of HIV status, who are at greater risk from artificial feeding and who may otherwise require special types of formula.
- Mothers need high motivation to continue the technique over the long term, especially since pasteurized breast milk cannot be stored for long periods.
- There is little documented experience of its use for this purpose or for exclusive feeding over several months, and no evidence whether adequate milk supply can be sustained in the absence of suckling stimulus.
- It is sometimes promoted for use during the transition from exclusive breastfeeding to replacement feeding.
- In formative research with HIV-positive breastfeeding women conducted in several settings, some

women have expressed interest in, or willingness to consider, this option, especially for infants older than six months when there is no other source of milk.

- It may be stigmatizing.

■ Breast-milk banks

- Breast-milk banks may be very useful for sick and low-birth-weight babies.
- They have been used successfully in Latin America, especially in Brazil, and in South Africa.
- They could be considered where a milk bank is already functioning according to recognized standards, if donors are screened for HIV or if donated milk is heat-treated.

■ Breast-milk feeding options: Implications and responsibilities for managers

- Mothers need considerable support from health-care providers or other counsellors to put any of these breast-milk feeding options into practice, and to handle and store milk safely.
- Wet-nursing:
 - Both mother and wet-nurse need full information about the risks of wet-nursing and support from health-care providers.
 - Women should be advised of the dangers of casual, spontaneous wet-nursing without HIV testing and counselling in areas of high HIV-prevalence.
- Where there are breast-milk banks, adequate resources must be provided and standard practices must be strictly observed.

REPLACEMENT FEEDING AND COMPLEMENTARY FEEDING FROM SIX MONTHS TO TWO YEARS

- A non-breastfed infant or young child from six months of age should ideally continue to receive a suitable breast-milk substitute and also complementary foods made from appropriately prepared and nutrient-enriched family foods.
- When any milk is still part of the diet, complementary foods should be given 2–3 times a day at 6–8 months of age, and 3–4 times a day from 9 up to 24 months of age, with nutritious snacks offered once or twice a day in addition.

- The general principles of complementary feeding are the same for a child receiving a milk source such as commercial formula or animal milk as for a child being breast-fed.
- Although not ideal, where no suitable breast-milk substitute is available after six months, replacement feeding should be with properly prepared and further enriched family foods given more frequently.
- Other milk products such as boiled animal milk or yoghurt should be included as a source of protein and calcium; and other animal products such as meat, liver and fish should be given as a source of iron and zinc, and fruit and vegetables to provide vitamins, especially vitamins A and C.
- Micronutrient supplements should be given according to WHO or national guidelines, especially iron, and should be available through the health services.

■ Replacement and complementary feeding after six months of age: Implications and responsibilities for managers

- Health services should ensure adequate procurement and distribution of micronutrients, or see that they are available locally.
- Health-care providers and counsellors need training and time to help mothers with replacement feeding after six months, including how to prepare an adequate diet from local foods and how to make sure that the infant eats enough.
- Managers need to ensure that health workers know what is required to prepare and give replacement feeds (and complementary feeds after six months), know how to select local recommended foods, and can teach mothers and families how to do this. Particular attention needs to be paid to hygiene, correct mixing and feeding method. Details are given in Annex 7.

Information needed for situation assessments

Communities

- **How many women and children are affected by HIV, and whether this varies between areas or population sub-groups.** This information will help to plan for how many women and children will need HIV testing and counselling services, infant-feeding counselling, and follow-up care and support
- **The extent to which people with HIV are stigmatized** and whether either exclusive breastfeeding or not breastfeeding will signal to others that a woman has HIV. This information will help to determine whether it will be feasible for HIV-positive mothers not to breastfeed or to stop early, how much support may be available to them and their families, and to plan community outreach activities
- **About infant-feeding practices.** Ask about how women currently feed their infants, including those who are HIV-positive, and about feeding of orphans or children whose mothers are ill; the prevalence of exclusive breastfeeding; the duration of breastfeeding; how women feed their infants if they do not breastfeed, including any tradition of wet-nursing within the family or use of breast-milk banks. This information will help determine common and culturally acceptable feeding practices, and the extent to which it may be necessary to increase promotion and support to breastfeeding, especially exclusive breastfeeding, for HIV-negative women and those of unknown status
- **What kinds of milk are given to infants, what commercial infant formula is available on the market, what kinds of animal milk are available to families** and whether they can be modified to make them suitable for infants. Check whether they are available all year, and whether replacement feeding is likely to be sustainable. Assess the nutritional quality of the milk. Work out the cost of the milk, fuel and utensils needed, including the cost of providing enough to meet an infant's needs up to six months, and with complementary foods from six months up to 12 months. Also find out if micronutrient supplements can be provided through health systems for the infants of women who are using home-prepared formula, or what the cost and availability are on the local market. This will help managers decide what might be the most suitable and affordable replacement foods to be included in counselling options
- **What complementary foods are given to infants.** Also find out which of these are high in nutrient density and can be given daily to infants
- **About the health and growth of infants fed without breast milk,** the main causes of infant illness and death, and the prevalence of malnutrition in infants and young children. Find out whether communities have access to safe water and fuel. Talk to health workers about the capacity and resources of families for replacement feeding. This will help with decisions about which options might be feasible, affordable and sustainable, and whether families will be able to prepare and give feeds in a way that minimizes the risk to their infants of infections other than HIV
- **Local understanding of “acceptable, feasible, affordable, sustainable and safe”,** and how it might be expressed in practical terms in counselling mothers.
- **How decisions on infant-feeding practices are made and by whom.** Who will the mother consult, what is the role of the partner, mother and mother-in-law, and what decisions can the mother make alone?
- **About cultural beliefs and taboos** about infant feeding and the different feeding options – e.g., on expressing and heat-treating breast-milk.
- **About institutions/organizations** engaged in mother-and-child or reproductive health services or infant-feeding activities.

Health services and resources

- **Whether health facilities could provide comprehensive services to prevent HIV infections** in infants and young children, including: ARVs to prevent transmission to infants; follow-up care and support for HIV-positive women, including ARV treatment of HIV-positive women where possible and necessary; and suitable breast-milk substitutes for those for whom they are acceptable, feasible, sustainable and safe, but who are unable to buy them
- **About national policies on HIV prevention** including policies on prevention of HIV infection in pregnant women, mothers, infants and young children, HIV testing and counselling, AIDS care, and breastfeeding and infant feeding. This information will determine what services can be provided and how they should be implemented
- **What educational activities** related to HIV, prevention of HIV infection in infants and young children, and breastfeeding and complementary feeding are being conducted in communities and in health facilities, and in medical and nursing schools?
- **What job aids, counselling materials or client educational materials are being used**, and check that the technical content is correct and consistent with the updated guidelines and local context
- **The capacity of antenatal and post-partum care services**, the proportion of women who attend and how many times, and what would be needed to enable more women to attend
- **Available health facilities, their numbers and location**, and how it will be possible to rapidly establish services, including infant-feeding counselling and support, in all or most of them. These facilities include antenatal and family planning clinics, baby-friendly hospitals or other MCH services. Find out who uses these facilities and also how many mothers have no contact with the formal health services
- **What HIV testing and counselling services are available**, where they are provided, whether they are voluntary and confidential, and who uses them
- **The availability and reliability of the supply of HIV test-kits**, and the capacity and quality of laboratory support services
- **How many staff have been trained** in breastfeeding counselling, lactation management, complementary feeding, and HIV and infant-feeding counselling, and in their responsibilities under the Code. Find out where these staff are posted, and whether they are available
- **What training materials are available** and if they need to be updated and adapted to the local situation.
- **The presence and status of the BFHI**, including recent assessments/re-assessments
- **Organizations to which HIV-positive women and their families could be referred** for follow-up support – for example, breastfeeding support groups, AIDS support and self-help groups, community-based home-care programmes organized by communities, churches and NGOs, and social services. A two-way referral system between the health system and community-based organizations should be encouraged.

ANNEX 11

Timetable of course in combined breastfeeding counselling and HIV and infant feeding counselling

Note: This timetable assumes that participants will be sent some theoretical material in advance, that they will have read it, and that their preparedness for the course in this sense can be assessed. In this way, course time for the topics can be condensed. This material includes: women's nutrition, health and fertility, expressing breast milk, breast conditions, "not enough milk" and crying; food hygiene and feeding techniques. The course could also be given in one-day sessions spread over six weeks, or in some other similar way.

| | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|-------------|--|--|--|--|---|---|
| 8.00-9.00 | Welcome remarks Introductions Administrative arrangements | Preparation for Clinical Practice 1: Listening and learning, observing a breastfeed | "Not enough milk" and Crying exercises | Counselling for HIV testing and for infant feeding decisions | Review of counselling skills | Preparation of milk feeds - Measuring amounts |
| 9.00-10.00 | Introduction to the course Local breastfeeding and PMTCT situation | Clinical Practice 1 | Clinical Practice 2 | Clinical Practice 3 | Clinical Practice 4 | Cont. |
| 10.00-10.30 | Official opening | Break | | | | |
| 10.30-11.00 | Break | Cont. | Cont. | Cont. | Cont. | Preparation of milk feeds - Practical |
| 11.00-12.00 | Why breastfeeding is important | Cont./ Discussion of Clinical Practice 1 | Cont./Discussion of Clinical Practice 2 | Cont./ Discussion of Clinical Practice 3 | Cont./Discussion of Clinical Practice 4 | Cont. |
| 12.00-13.00 | Code of Marketing Making breastmilk substitutes available | Positioning a baby at the breast | Taking a breastfeeding/ infant feeding history with group work | Integrated care for the HIV-positive woman and her baby | Making infant feeding choices | Cont. |
| 13.00-14.00 | LUNCH | | | | | |
| 14.00-15.00 | Assessing and observing a breastfeed | Building confidence and giving support | Low birth weight and sick babies | Breast milk options | Community support for optimal infant feeding | Teaching replacement feeding Cost of replacement feeding |
| 15.00-16.00 | Listening and learning exercises | Building confidence exercises - Group | LBW and sick babies - Exercises | Replacement feeding for the first 6 months | Preparation for practical exercises | Follow-up care for children of HIV positive mothers |
| 16.00-16.30 | Break | | | | | |
| 16.30-17.30 | Listening and learning exercises | Expressing breastmilk/ breast conditions | Overview of HIV and Infant Feeding | Complementary and replacement feeding from 6 to 24 months | Cont. | End of course evaluation |
| 17.30-18.30 | Evaluation of Day 1 Trainers' meeting | Evaluation of Day 2 Trainers' meeting | Evaluation of Day 3 Trainers' meeting Video | Evaluation of Day 4 Trainers' meeting | Evaluation of Day 5 Trainers' meeting | Closing ceremony Trainers' meeting |

ANNEX 12

Micronutrients for home-modified animal milk

The following is the composition of a micronutrient supplement needed daily to fortify a diet of 100 kcal of the infant milk mix (100 ml of milk + 10 g sugar + 50 ml water):

Minerals:

| | |
|-----------|--------|
| manganese | 7.5 µg |
| iron | 1.5 mg |
| copper | 100 µg |
| zinc | 205 µg |
| iodine | 5.6 µg |

Vitamins:

| | |
|------------------|--------|
| Vitamin A | 300 IU |
| Vitamin D | 50 IU |
| Vitamin E | 1 IU |
| Vitamin C | 10 mg |
| Vitamin B1 | 50 µg |
| Vitamin B2 | 80 µg |
| Niacin | 300 µg |
| Vitamin B6 | 40 µg |
| Folic acid | 5 µg |
| Pantothenic acid | 400 µg |
| Vitamin B12 | 0.2 µg |
| Vitamin K | 5 µg |
| Biotin | 2 µg |

Content and process of infant-feeding counselling

1. Steps in the counselling process

Step 1: The counsellor assesses the woman's situation, finds out how she plans to feed her baby and explains the risk of mother-to-child transmission.

Key skills: Using simple language
Listening and learning

Step 2: The counsellor gives an overview of feeding methods and explains the advantages and disadvantages of the woman's proposed feeding method.

Key skills: Using simple language
Asking open questions

Step 3: The counsellor explains advantages and disadvantages of other methods that are locally acceptable and available.

Key skills: Using simple language
Asking open questions

Step 4: The counsellor helps the woman to choose the most feasible option according to her circumstances.

Key skills: Listening and learning
Providing suggestions instead of giving commands
Accepting what a mother thinks and feels

Step 5: The woman discusses her choice with her family, if she wishes.

Step 6: The counsellor teaches the woman in detail how to use the chosen feeding method and gives her a take-home card to help her remember the instructions.

Key skills: Building confidence and giving support

Step 7: The counsellor provides follow-up counselling sessions until the baby is 24 months old.

Key skills: Building confidence and giving support

2. Content of counselling, related to circumstances

| MOST FEASIBLE OPTION | | | |
|--------------------------------|---|--|--|
| | Breastfeeding/ wet-nursing | Unclear | Replacement feeding or expressed/ heated-treated breast milk |
| Drinking-water supply | River, stream, pond, or well | Public standpipe | Piped water at home or ability to purchase clean water |
| Latrine | None or pit latrine | VIP latrine | Waterborne latrine |
| Income | Less than US\$ 15 available for formula each month | US\$ 15 available for formula most months | US\$ 15 available for formula every month (unless using expressed breast milk) |
| Food Storage | No refrigerator available or irregular electricity supply | Access to refrigerator with regular electricity supply, but not at home | Refrigerator at home with regular electricity supply |
| Preparation and fuel | Inability to boil water and utensils for every feed | Ability to boil water for every feed but with effort | Ability to boil water for every feed |
| Ability to prepare night feeds | Preparation of replacement feeds at night difficult | Preparation of replacement feeds at night possible but with effort | Preparation of replacement feeds at night possible |
| Family and community support | Breastfeeding expected, and family unaware of HIV status | Replacement feeding acceptable, but family unaware of HIV status; or breastfeeding expected, but family aware of HIV status and willing to help with feeding. | Family aware of HIV status and willing to help with feeding. |

Adapted from Rollins, N.C. and R. Bland, Africa Centre for Health and Population Studies, South Africa.

3. Content of counselling for HIV-negative women and women unaware of their status

- The benefits of breastfeeding, and particularly of exclusive breastfeeding for the first six months, and continued breastfeeding afterwards for at least two years
- The advantages of rooming-in
- The benefits of feeding on demand
- How to ensure enough milk, correct positioning and attachment, and where to obtain help for breastfeeding problems
- The negative effect on breastfeeding of introducing water and partial artificial feeding, bottles and pacifiers
- The difficulty of reversing a decision not to breast-feed
- The particular reasons for avoiding HIV infection while breastfeeding – to protect the infant and the woman and her partner from HIV, including information on safer sex, use of condoms, and negotiation tactics
- The benefits of HIV testing and counselling, and re-testing if indicated
- The risks of artificial feeding
- The cost of artificial feeding
- The risks of untreated breast problems
- An offer of counselling for the partner, separately or together, in addition to the current session, especially pertaining to safer sex, condom use and adherence to feeding choice.

Care and support package for HIV-positive women

- Sexuality counselling and support
- Family planning counselling and methods, if desired
- Maternal health services: antenatal care, labour and delivery, post-partum care
- Prevention of MTCT strategies, including ARVs for prevention of mother-to-child transmission
- Prevention, screening and treatment of reproductive-tract infections and STIs
- Management of other sexual and reproductive health problems, including gynaecological problems and sexual violence
- Screening and treatment for tuberculosis
- Prevention and treatment of malaria
- Substance-use prevention and harm reduction
- Mental health interventions
- Monitoring of health status
- Nutrition counselling and support, including micronutrient supplementation and nutrient-enriched foods for themselves and, as appropriate, family members
- Symptom-management and terminal care
- Psychosocial support
- ARV treatment for women and their families, where needed
- Prophylaxis and treatment of opportunistic infections
- Condoms, if desired

For further information, please contact:

Department of Child and Adolescent Health and Development (cah@who.int) or

Department of HIV/AIDS (hiv-aids@who.int) or

Department of Nutrition and Health for Development (nutrition@who.int)

20 Avenue Appia, 1211 Geneva 27, Switzerland

website: <http://www.who.int>

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