

HIV and infant feeding



Guidelines for decision-makers



UNICEF



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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 published, 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: Guidelines for Decision-makers*. WHO/FRH/NUT/CHD/98.1, UNAIDS/98.3, UNICEF/PD/NUT/(J)98-1. 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, <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 purpose of this document is to 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 to highlight areas of special concern on which policy decisions need to be made locally.

These guidelines begin with a list of key steps and questions to guide decision-makers through the process of thinking about and deciding on relevant points, with references to specific sections of the document where applicable.

The section on the context describes the aims and content of the document, and sets out background on international policy, goals and guidelines that decision-makers should consider when developing specific country approaches to infant and young child feeding in the context of HIV. The goals include those adopted by the recent UN General Assembly Special Sessions for Children and on HIV/AIDS, and those that are part of the UN approach to prevention of HIV infection in pregnant women, mothers and their children; the Global Strategy on Infant and Young Child Feeding; and the HIV and Infant Feeding Framework for Priority Action. This section stresses the importance of primary prevention in women as an essential basis for action, and gives a human rights perspective on the issue.

The next section considers the need to balance the risk of HIV transmission through breastfeeding with the risk of malnutrition and death from not breastfeeding. It includes the current recommendations for HIV-positive women, and describes their and their babies' infant-feeding options.

The section on policy describes the process of developing or revising a national policy on infant and young child feeding in the context of HIV. It lists information to be taken into account in carrying out a situation assessment or formative research on which to base policy and guidelines, and also on establishing the cost of interventions.

The next section describes the continuing importance of the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions, how to strengthen its implementation in the context of HIV, and considerations that governments should take into account when contemplating the distribution and procurement of free or subsidized commercial infant formula.

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; this is crucial in countries with high rates of HIV prevalence. Critical areas for decision-makers described in this section include developing capacity for counselling and support for infant feeding, integrating counselling into antenatal care services, ensuring that Baby-friendly Hospital Initiative goals are met and sustained, and establishing mechanisms for coordinating infant and young child feeding activities.

Before an infant-feeding counselling service is instituted, HIV testing and counselling should be accessible to women, especially to pregnant women. Once they know their status, HIV-positive women should be offered integrated counselling by trained counsellors and be provided with a package of services. Community information and support should also be ensured. The section on supporting HIV-positive women in their infant-feeding decisions describes how decision-makers can plan for these services.

The final section provides decision-makers with 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.

Key steps and issues for decision-makers

Has a situation assessment and analysis on infant and young child feeding in the context of HIV been completed on which to base policy, strategy and guidelines?

No Carry out assessment and analysis (section 3.2 and Annex 1)

Yes Update the assessment as necessary over the course of the programme

Use information as a baseline for national policy (section 3.1) and for monitoring and evaluation (section 7)

On infant and young child feeding, is there a national policy that incorporates HIV and infant feeding?

No Develop policy (section 3.1), incorporating information from the situation assessment and analysis (section 3.2)

Yes Review policy for consistency with other relevant policies (section 3.1)

Generate support for the policy (section 3.1)

Have costs of implementing the policy been estimated and allocated?

No Obtain cost estimates, prepare a budget and mobilize resources as necessary (section 3.3)

Yes Update costs, implement procedures for monitoring allocation, and adjust allocation, as necessary

Has the International Code of Marketing of Breast-milk Substitutes been adopted (see section 4.1 on continued importance of the Code¹ in the context of HIV/AIDS)?

No Adopt the Code

Seek technical assistance from UNICEF, WHO or the International Baby Food Action Network (IBFAN), if necessary (section 4)

Yes Implement or monitor the national Code, as indicated (sections 4.1 and 4.2)

Are current HIV primary-prevention activities aimed at women of reproductive age, especially pregnant and breastfeeding women?

No Take necessary measures (see Box 1)

Yes Monitor implementation

Is there a programme directed at the population in general to promote and support optimal breastfeeding?

No Review current breastfeeding activities, and plan for action to accelerate them

Yes Monitor breastfeeding rates in the general population

Is there clear direction on integration of counselling on HIV and infant feeding and related issues into relevant services, including direction on staffing?

No Prepare and disseminate integration guidelines based on policy (sections 5.6 and 6.2)

Yes Assess implementation of guidelines

Are necessary training and materials available for health workers and counsellors?

No Assign responsibilities and plan implementation (sections 5.3 and 6.3)

Yes Assess training and develop a system to support health workers and counsellors (sections 6.4 and 7)

Are all mothers, whatever their HIV status, counselled on infant feeding?

No Find out why not and take corrective action

Yes Support health workers and monitor quality of counselling (sections 6.4 and 7)

Has a minimum package of care and support for HIV-positive women, their infants and families been established and communicated to relevant parties?

No Determine what would be suitable and feasible (section 6.6), and establish the package of care and support

Yes Periodically review the suitability of the package and monitor its implementation and impact

Is there a plan of action for communication with communities and for development of their capacity in relation to infant and young child feeding, and are activities being implemented?

No Assign responsibilities for development and implementation (sections 6.7 and 6.8)

Yes Monitor implementation and impact

Are programmes being regularly monitored?

No Establish a monitoring plan or review it, and revise or reassign responsibilities as necessary (section 7)

Yes Ensure dissemination and feedback of information collected (section 7)

¹ Unless otherwise indicated, wherever this document mentions International Code of Marketing of Breast-milk Substitutes (referred to in this document also as the “International Code” or the “Code”), it also refers to subsequent relevant World Health Assembly (WHA) resolutions.

1. Context

Breastfeeding is normally the best way to feed an infant. A woman infected with human immunodeficiency virus (HIV), however, can transmit the virus to her child during pregnancy, labour or delivery, or through breastfeeding. It is a public health responsibility to prevent HIV infection in infants and young children – especially in countries with high rates of HIV infection among pregnant women, and it is also a public health responsibility to support optimal breastfeeding to prevent mortality and illness due to diarrhoea and respiratory infections. Acquired immunodeficiency syndrome (AIDS) has increased the mortality of children under five years of age in high-prevalence areas, both through direct infection and because of the reduced levels of care that a family living with HIV can provide. Although only part of this increase in mortality is the result of HIV infection through breastfeeding, countries need urgently to develop and implement sound public health policies on infant and young child feeding, including the effects of HIV.

This section describes the aims and content of the rest of this document, and sets out background on international policy, goals and guidelines that decision-makers should consider when developing specific country approaches to infant and young child feeding in the context of HIV.

1.1 Aim and content of these Guidelines

Countries are at different stages of the HIV/AIDS pandemic and of their response to it, and have varying levels of resources at their disposal. These guidelines do not recommend specific policies. Their aim is, rather, to provide guidance on issues that need to be considered, to give background information and to highlight areas of special concern on which policy decisions are needed. The overall objective of any actions resulting from the guidelines should be to increase child survival by promoting appropriate feeding practices for infants and young children, while at the same time minimizing HIV transmission through breastfeeding. The guidelines have been developed within the scope of the Global Strategy on Infant and

Young Child Feeding (see 1.4) and the HIV and Infant Feeding Framework for Priority Action (see 1.5), and are based on relevant literature and experience from the field.

Further planning and management details and technical information are contained in two other documents: *HIV and Infant Feeding: A review of HIV transmission through breastfeeding*,¹ and *HIV and Infant Feeding: A guide for health-care managers and supervisors*.²

This document:

- summarizes knowledge of HIV transmission through breastfeeding
- identifies and discusses issues for decision-makers to address in developing or revising a comprehensive policy on infant and young child feeding
- explains in relation to HIV the continued relevance of the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions
- outlines the actions to be taken to:
 - protect, promote and support appropriate infant and young child feeding practices for all women in relation to HIV
 - support HIV-positive women in their feeding decisions
- highlights key issues in monitoring and evaluation, as well as in research
- lists useful reference materials and resources (see Annex 1).

¹ WHO/UNICEF/UNFPA/UNAIDS. *HIV and Infant Feeding: A review of HIV transmission through breastfeeding*. Geneva, revised 2003.

² WHO/UNICEF/UNFPA/UNAIDS. *HIV and Infant Feeding: A Guide for health care managers and supervisors*. Geneva, revised, 2003.

1.2 International goals and strategies related to prevention of HIV infection in infants and young children

The United Nations General Assembly Special Session for Children set a goal of reduction in the mortality rate of infants and under-fives by at least one-third by 2010. The Declaration of Commitment from the UN General Assembly Special Session on HIV/AIDS also set a goal to: “By 2005, reduce the proportion of infants infected with HIV by 20 per cent, and by 50 per cent by 2010”. To achieve these goals, prevention of HIV infection in pregnant women, mothers and their children, including infection by transmission to young children during breastfeeding, should be part of a comprehensive approach both to HIV prevention and care for women and children and to maternal and child reproductive health services. Measures to improve infant and young child feeding will also be needed.

The UN strategy for the prevention of HIV transmission in pregnant women, mothers and their children indicates the need to consider action in the following areas, which form a four-prong comprehensive approach: 1) prevention of HIV infection in general, especially in young women and pregnant women (see Box 1 on primary prevention); 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. This approach highlights the critical role of the mother as the caregiver for her young children, as child survival is closely linked to the mother’s survival and well-being.

Programmes for prevention of HIV infection in infants and young children, including infection through breastfeeding, directed primarily at area 3), may encompass a variety of components, but generally include: the incorporation of HIV testing and counselling¹ into routine antenatal care (ANC); ensuring that ANC includes detection and treatment of sexually transmitted infections (STIs) and counselling on safer sex; the provision of prophylactic antiretroviral drugs to HIV-positive pregnant women and, in some regimens, to their babies; safer obstetric practices; counselling and support for informed deci-

¹ This guide uses, throughout, the terminology adopted at a WHO-convened meeting: “HIV testing and counselling”, which incorporates the concepts of voluntary HIV testing and counselling, and voluntary and confidential HIV testing and counselling.

sions on feeding, including *inter alia* the adoption of replacement feeding by HIV-positive women when it is acceptable, feasible, affordable, sustainable and safe for them and their babies; promotion of exclusive breastfeeding in HIV-negative women and women of unknown HIV status; and follow-up care and support to HIV-positive women, their infants and families.

BOX 1

Primary prevention of HIV infection in women

- Educate the general public on avoiding HIV infection.
- Promote 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.
- Develop policies and programmes to reduce the vulnerability of girls and women to HIV infection, especially their social and economic vulnerability, through improving their status in society.
- Target the adolescent population for education on safer and responsible sexual behaviour.
- Ensure that couples have access to condoms.
- Provide information to men and women about HIV infection in infants and young children, the need to avoid infection, and the advisability of practising safer sex during pregnancy and after giving birth. Communication strategies and related activities need to address cultural and social factors that condone risky male sexual behaviour during the woman’s pregnancy and the early months after childbirth.
- Provide timely diagnosis of STI and care for STI patients, including treatment of sexual partners, since STIs increase the risk of HIV transmission.
- Make HIV testing and counselling widely available.
- Ensure that medical and surgical procedures are performed with properly sterilized instruments, and ensure safe blood-transfusion services.
- Work with vulnerable populations, such as injecting drug users.
- Provide suitable counselling for HIV-negative women.

1.3 UN policy development on prevention of HIV infection through breastfeeding

On behalf of the Inter-Agency Task Team on prevention of HIV transmission to pregnant women, mothers and their children, WHO convened in October 2000 a Technical Consultation on new data on the prevention of mother-to-child transmission (MTCT) (see Box 2 below, on this term) and related policy implications (Annex 2). Its objective was to review recent scientific data and update recommendations on the safety and efficacy of anti-retroviral (ARV) prophylaxis and infant feeding. The results amplified the recommendations contained in the 1997 WHO, UNICEF and UNAIDS Joint Policy Statement on HIV and Infant Feeding. That statement reiterated the substantial benefits that breastfeeding provides in the general population and at the same time promoted informed choice of infant-feeding methods by HIV-positive women (see Box 3 on human rights considerations underlying this policy). (For current feeding recommendations, see section 2.3.)

BOX 2

The term 'mother-to-child transmission' (MTCT)

For the sake of clarity, the term MTCT has been used in some places in this document. Other terms have been proposed but not generally adopted. MTCT means that the immediate source of the child's infection lies with the mother – whether infection occurs in the uterus, in the birth-canal during delivery, or through breastfeeding, usually by the mother.

Use of this term is not meant to attach blame or stigma to the woman who gives birth to an HIV-infected child. It does not suggest deliberate transmission by the mother, who is often unaware of her own infection status or uninformed about the transmission risk to infants. Nor should its use obscure the fact that, more often than not, HIV is introduced into a family by the woman's sexual partner.

The terminology of UN goals (see section 1.2) is *prevention of HIV transmission in pregnant women, mothers and their children*, which reflects the four-pronged comprehensive approach endorsed by the UN system, including primary prevention. Prong 3 is generally considered synonymous with prevention of mother-to-child transmission.

1.4 Global Strategy on Infant and Young Child Feeding

Since the Technical Consultation in October 2000, the World Health Assembly (WHA) has adopted a Global Strategy for Infant and Young Child Feeding (IYCF) (Annex 3) and UNICEF's Executive Board has endorsed it. The Global Strategy lays down that the optimal feeding pattern for survival in the general population is exclusive breastfeeding for the first six months of life, with adequate and safe complementary feeding from age six months and continued breastfeeding for up to two years and beyond,¹ and related maternal nutrition and support. In addition, the Global Strategy takes account of children in exceptionally difficult circumstances, including those born to HIV-positive women.

1.5 HIV and Infant Feeding Framework for Priority Action

As part of the Global Strategy for IYCF, the HIV and Infant Feeding Framework for Priority Action² (Annex 4) was developed. The Framework proposes for consideration by governments the following priority actions related to infant and young child feeding:

- Develop or revise (as the case may be) a comprehensive national policy on infant and young child feeding which includes 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
- 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.

¹ This recommendation applies everywhere to HIV-negative women and women unaware of their status, including places with high HIV prevalence and low acceptance or availability of interventions to prevent HIV transmission to infants.

² The Framework has been endorsed by WHO, UNICEF, UNAIDS, UNFPA, World Bank, WFP, UNHCR, FAO and IAEA.

BOX 3

The Human Rights Perspective

The 1997 WHO, UNICEF and UNAIDS Joint Policy Statement on HIV and Infant Feeding is firmly based on the need to protect, respect and fulfil human rights. Policies should therefore:

Comply with international human rights instruments. All women and men, irrespective of their HIV status, have the right to determine the course of their reproductive lives and health, and to have access to information and services that allow them to protect their own and their families' health. Decisions that concern the welfare of children should be in keeping with their best interests.

Protect, respect and fulfil children's rights. The UN Convention on the Rights of the Child (1989) requires signatories to take all appropriate measures to combat disease and malnutrition in children, to reduce child mortality, and to ensure their healthy growth and development. Children have a right to the highest attainable standard of health, and mothers have a right to information about the benefits of breastfeeding.

Protect, respect and fulfil women's rights. Mothers have the right to decide how they will feed their children. They should be given the fullest possible information on which to base their decision and support for the course of action they choose. A mother's choice, however, may well have implications for her family as a whole, and at her own discretion she may encourage other members (for example, the child's father) to share responsibility for decision-making.

Make HIV testing and counselling available for women. Women have the right to know about HIV/AIDS in general and their own HIV status in particular. Care should be taken to ensure that no policy contributes to the stigmatization of women as sources of HIV infection of their infants, or increases their vulnerability to discrimination and violence. From this point of view, every effort should be made to promote for HIV-positive women an "enabling environment" that reduces their vulnerability and enables them to carry out decisions and live positively with HIV infection. Whatever the context, women also have the right not to know their HIV status.

Ensure information for women. Women also have the right to information about, and the means of, protection from HIV and other STIs.

These principles are derived from international human rights instruments, including the Universal Declaration of Human Rights (1948), the Convention on the Elimination of All Forms of Discrimination Against Women (1979), and the Convention on the Rights of the Child (1989), as well as from international consensus agreements, including the Cairo Declaration (1994), and the Beijing Platform for Action (1995).

2. HIV transmission through breastfeeding: risks and options

The Global Strategy on Infant and Young Child Feeding describes optimal infant-feeding practices for the general population and also recognizes that there are exceptionally difficult circumstances that call for specific approaches to infant feeding, such as the birth of infants to HIV-positive mothers. This section sets out information on the risks of HIV transmission through breastfeeding, the risks of not breastfeeding, UN recommendations on HIV and infant feeding, and feeding options for HIV-positive women. On the basis of this information, decision-makers should:

- *be fully aware of risks and benefits of all infant-feeding options for HIV-positive women*
- *take steps to ensure that health-care providers and counsellors are aware of, and able to implement, recommendations on infant and young child feeding, including HIV and infant feeding, at various levels*
- *work with staff to support all women, and to select and propose appropriate infant-feeding options to be discussed with HIV-positive women.*

2.1 Risk of HIV infection in infants and young children

Increasing numbers of children have HIV infection, especially in the countries hardest hit by the pandemic. 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.

By far, the main source of HIV infection in young children is MTCT. The virus may be transmitted during pregnancy, labour and delivery, or by breastfeeding. HIV/AIDS, however transmitted, has been estimated to account for about 8% of deaths in children under five years of age 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%.¹

Rates of mother-to-child transmission range from 14–25% in developed countries and from 13–42% in developing countries, where breastfeeding is more

common. It is estimated that 5–20% of infants born to HIV-positive women acquire infection through breastfeeding² (see table), which explains the different overall transmission rates in these settings. Data from different studies indicate that breastfeeding for up to two years may be responsible for one-third to one-half of HIV infections in infants and young children in African countries.³

Estimated risk and timing of mother-to-child transmission of HIV in the absence of interventions⁴

| Timing | Transmission rate ⁵ |
|---|--------------------------------|
| 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% |

HIV transmission may occur for as long as a child is breastfed. 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.

¹ Walker N, Schwärtdlander B, Bryce J. Meeting international goals in child survival and HIV/AIDS. *Lancet* 2002; 360:284–9.

² Few studies give information on the mode of breastfeeding (exclusive or mixed). In most cases, mixed feeding may be assumed.

³ 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.

⁴ Source: 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.

⁵ Rates vary because of differences in population characteristics such as maternal and CD4+ cell counts and RNA viral load, and also duration of breastfeeding.

BOX 4

Is the child infected?

Conventional HIV tests detect antibodies, not the virus itself. Babies are born with antibodies in their blood, transferred passively via the placenta from their mothers. During the first months of life, maternal antibodies to HIV cannot be distinguished from those that the infant may have produced. Therefore, with antibody tests (also known as serological) tests, one cannot tell at birth whether the infant of an HIV-infected mother is also infected.

In about one-half of infants, maternal antibodies will have disappeared by nine months of age, although they can persist until 15–18 months. A positive test before the age of 15–18 months could be due to infection of the child or persistence of maternal antibodies. A positive test at 15–18 months or later means that the infant is infected. Children who test negative at that age or afterwards, and have not been recently breastfed, can be confidently considered as uninfected.

A negative antibody test after 15–18 months of age in a child who is breastfeeding does not rule out HIV infection, for the child is at continued risk, and the test will need to be repeated later. A negative HIV antibody test in a child older than 15–18 months is reliable only if it is done at least six months after breastfeeding has stopped.

Virological tests (e.g., PCR, heat dissociated p24 Ag) can be used to diagnose infection at an early age. These, however, are not widely available in most non-research settings and are relatively expensive.

Given the limitations of testing methods, it is necessary, in regard to infant feeding, to act on the assumption that the infant of an HIV-infected mother is not infected at birth (which will be true for between 70 to 85 per cent of infants, even without any preventive measures). In cases where the mother has received anti-retroviral drug prophylaxis during pregnancy or labour, this assumption can be made with even more confidence (over 90 per cent born uninfected).

Besides duration of breastfeeding, evidence of an increased risk of transmission has been shown for maternal factors (disease progression [as measured by low CD4+ count or high RNA viral load in plasma, or severe clinical symptoms], breast health [e.g. mastitis], local immune factors in breast milk, presence of systemic infections) and infant factors (morbidity [e.g. oral thrush], mode of breastfeeding). Studies suggest that exclusive breastfeeding during the first few months of life may be associated with a lower risk of HIV transmission than mixed feeding. Research is in progress to clarify this issue.

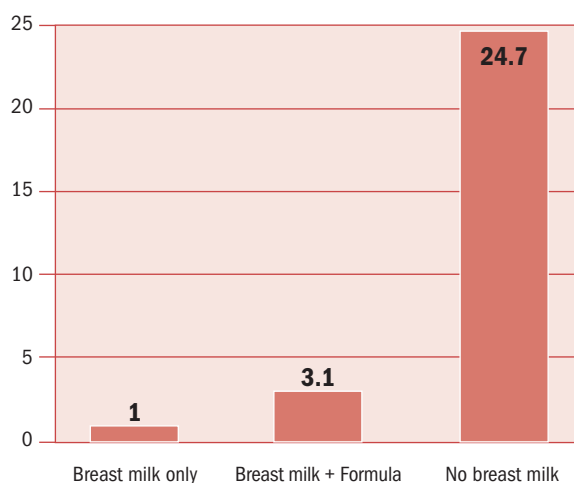
2.2 Risks of not breastfeeding

The risks associated with not breastfeeding vary with the environment, and with the individual circumstances of the mother and her family.

Meta-analysis has shown that lack of breastfeeding compared with any breastfeeding exposes children to increased risk of malnutrition, diarrhoea and pneumonia, especially in the first year of life. Even in developed countries an infant is at increased risk of diarrhoea. Early and exclusive breastfeeding is especially critical for new-borns (see graph). In poor countries, not breastfeeding during the first two months of life is associated with a sixfold increase in mortality from infectious diseases, a risk that drops to less than threefold by six months, and continues to decrease with time.

Every year, up to 55% of infant deaths from diarrhoeal disease and acute respiratory infections may result from inappropriate feeding practices.

Relative risk for diarrhoea mortality (0–1 month) by type of feeding¹



¹ Victora C, Smith PG, Vaughn JP, et al. Evidence for protection by breast-feeding against infant deaths from infectious diseases in Brazil. *Lancet* 1987; Aug;(1)319–21.

2.3 Recommendations for infants born to HIV-positive women

Recommendations on preventing transmission of HIV through breastfeeding depend on a woman being tested for HIV, requesting and being given the result, and accepting the implications of that result. (See section 6.1 for more information on HIV testing and counselling, and Box 4 for information on testing of young children.) If a woman is HIV-negative or does not know her status, the general recommendations on infant and young child feeding apply (see section 1.4). Awaiting the result of an HIV test should not be a reason to delay initiation of breastfeeding.

Given the need to minimize the risk of HIV transmission to infants while at the same time not increasing their risk of other causes of morbidity and mortality, UN (WHO/UNICEF/UNAIDS) recommendations state that “when replacement feeding is acceptable, feasible, affordable, sustainable and safe (see Box 5 for definitions), 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 feasible.¹ The recommendations further state that “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 two years of the child’s life to ensure adequate replacement feeding”.

Until further evidence is available on this subject, anti-retroviral (ARV) use is not recommended as a public health intervention to reduce *postnatal* transmission. Where mothers are using combinations of ARVs for treatment (e.g., highly active antiretroviral treatment [HAART]), the infant-feeding recommendations in this document still apply.

At the time of writing these guidelines there are many planned or ongoing studies to assess the impact of ARV use during breastfeeding, but there is so far no evidence on its impact on the health of infants and mothers. Questions remaining to be answered include:

- Can ARVs reduce the risk of postnatal HIV transmission through breastfeeding?
- Should these drugs be given to the mother or the infant or both?

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

- What might be the long-term and short-term consequences for the health of the baby of ARV use by either mother or baby?
- What is the long-term health impact for the mother of ARV use for prevention of postnatal transmission only?

2.4 Infant-feeding choices for HIV-positive women

Counselling of HIV-positive mothers should include information about the risks and benefits of various infant-feeding options (listed below) and guidance in selecting the most suitable option in their circumstances. On the basis of local assessments and formative research,² some of the options in this document may be excluded as not locally suitable. Local options, however, should never be narrowed to one blanket recommendation for all HIV-positive women, since specific circumstances will vary even within seemingly homogeneous settings, and women have the right to make an individual choice.

Whatever a mother chooses, she should be supported in her decision. The exact support that might be provided will depend on the policy, capacity and socio-economic conditions of the country, but would always include information, counselling and monitoring of the growth and health of her child (see sections 6.5 and 6.6). Postnatal support for women, regardless of their infant-feeding choice, is often inadequate.

In most countries, policy must cover a range of socio-economic conditions; its aim must be to promote, protect and support breastfeeding for most mothers and infants; at the same time it must provide for women who are HIV-positive to receive suitable information on alternative feeding options, enabling them to decide what, in the circumstances, is best for them and their babies, and to receive support to carry out their choice. The information must be free from commercial pressures and counsellor bias, and the support should include helping a woman to reduce the social risks of acting on her choice.

Infant-feeding options are described briefly below, and the details of each option and their implications for

² 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”.

BOX 5

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.

decision-makers are given in Annex 5. Women 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 providing such support.

The infant feeding options are the following:

- **Commercial infant formula:** specially formulated milk made specifically for infants and sold in shops or provided through programmes designed to prevent HIV transmission to infants
- **Home-modified animal milk:** fresh or processed animal milk that is modified by adding water, sugar and micronutrient supplements
- **Exclusive breastfeeding:** giving only breast milk and prescribed medicine but no water, other liquids, or food to the infants for the first months of life
- **Wet-nursing:** having another woman breastfeed an infant; in this case, ensuring that the woman is HIV-negative
- **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:** centres where donor milk is pasteurized and made available for infants

3. Policy on infant and young child feeding

One of the priorities for all governments in the Global Strategy on Infant and Young Child Feeding (IYCF) is the development, implementation, monitoring and evaluation of a comprehensive IYCF policy. This is also one of the priority actions spelled out in the HIV and Infant Feeding Framework for Priority Action. This section describes the need to develop (or revise) a national policy on infant and young child feeding, describes some steps in the process, outlines how to carry out an assessment – to aid in formulation of both policy and guidelines – and gives an indication of costs to be considered in relation to HIV. On the basis of the information obtained, decision-makers should:

- designate responsibility or take responsibility themselves for the policy-development process
- plan for and ensure that situation assessments are carried out, as needed
- allocate or mobilize required resources.

3.1 Development or revision of national policy on infant and young child feeding

For the general population, breastfeeding is highly valuable (see Box 6: Value of Breastfeeding). The operational objectives of the Global Strategy include ensuring that exclusive breastfeeding is protected, promoted and supported for six months, with continued breastfeeding up to two years and beyond; promotion of timely, adequate, safe and appropriate complementary feeding; provision of guidance on feeding infants and young children in exceptionally difficult circumstances, including those born to HIV-infected women; and support for the mother.

Policy process

To adopt this comprehensive approach, governments need to lead a process that:

- reviews international evidence and guidance on infant and young child feeding
- reflects upon country and local circumstances

- develops guidance that is practical, realistic and appropriate for the country.

This process should lead to a comprehensive policy that encompasses the latest knowledge on breastfeeding, complementary feeding, and HIV and infant feeding, and takes account of local operational research and experience (See Annex 6 for an example). Clear statements should result on infant and young child feeding for the general population and locally feasible infant-feeding options for HIV-positive women, counselling practices, and how the policy and resulting guidelines will be introduced.

Experience from countries that have developed policies has shown that a single comprehensive national policy, rather than one policy for breastfeeding and feeding of children in general, and a separate policy on HIV and infant feeding or other specific infant feeding issues, helps reduce confusion among managers, health workers, and the general public. It provides also for balanced support to all women, irrespective of HIV status; may facilitate integration of prevention of HIV transmission to infants with other maternal and child health (MCH) activities; and may help to reduce stigma and discrimination.

Building consensus among stakeholders

A successful policy depends on national coordination to achieve a common understanding of the issues concerned and reach agreement on a common goal. People with interests, roles and functions in implementing policy should take part or be represented in its formulation, and also in its dissemination to ensure awareness and support; also, its practical implications will need to be assessed. This process will make it easier to allocate responsibilities for specific components and tasks to be performed.

Experience in some countries indicates that a national meeting of stakeholders to discuss the Global Strategy for IYCF in relation to HIV, and how the country will implement the Strategy, is a useful step in developing a policy. Such a meeting could, for example:

BOX 6

The value of breastfeeding

Breastfeeding is normally the best way to feed infants; its benefits go far beyond sound nutrition, and children should not needlessly be deprived of it.

Nutrition: Breast milk provides, in an easily digested form, all the nutrients an infant needs for the first six months of life. Breast-milk nutrients that other feeds may not provide include:

- high-quality protein
- long-chain polyunsaturated fatty acids, considered essential for the infant's developing brain and eyes
- micronutrients, including iron, in a form in which they are efficiently absorbed
- other factors necessary for optimal growth and protection against infection.

Immunity: From the moment of birth, breast milk actively protects infants against infection. It contains numerous anti-infective factors, including immunoglobulins and white blood cells, as well as growth factors that stimulate the development of the infant's gut. Studies show consistently that, even with optimal hygiene, the rate of diarrhoeal disease of artificially fed infants is several times that of breastfed infants; they also have higher rates of respiratory, ear and other infections. 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 fully breastfed infants. Even in developed countries non-breastfed children have higher rates of diarrhoea. The risk of some chronic diseases in later life, such as adult-onset diabetes, is also increased by lack of breastfeeding.

For the first six months of life, breast milk alone provides all the fluids and nutrients that a child needs. Exclusive breastfeeding (i.e., no other food or drinks given, not even water) for the first six months offers maximum protection to infants against pneumonia, diarrhoea and other common infections of childhood.

Up to 2 years of age or more, breast milk continues to provide high-quality nutrients and helps protect against infection. From 6 to 12 months, breast milk usually provides 60–80% of all energy, protein and other nutritional requirements – e.g., vitamins and other micronutrients, and from 12 to 23 months, breastfeeding can provide up to 35–40% of these requirements.

Family planning/child spacing: Breastfeeding delays the return of a woman's fertility. A woman who does not breastfeed is at increased risk of becoming pregnant again as early as six weeks after the birth of the child. All women, especially women who do not breastfeed, should have access to contraceptives within six weeks of delivery, if they so desire, to ensure the recommended interval between births. (A woman who exclusively, or nearly exclusively, breastfeeds during the first six months, and who remains amenorrhoeic [her menses, or periods, have not returned], has less than a 2% risk of becoming pregnant.)

Psychosocial development: Breastfeeding promotes the emotional relationship, or bonding, between mother and child.

- provide information and reach a common understanding of the concepts and principles of the Global Strategy in relation to HIV, indicating especially that elements of the Strategy, such as the Code and the Baby-friendly Hospital Initiative (BFHI), can support the HIV-positive mother, and that HIV and infant feeding cannot be dealt with separately from breastfeeding and infant feeding in general.
- clarify the state of knowledge about breastfeeding and other aspects of infant feeding in general, and about what is needed to ensure that infants are exclusively breastfed for six months, that adequate and safe complementary foods are introduced, and that breastfeeding is continued up to and beyond the age of two years
- clarify the state of knowledge about infant feeding and the transmission of HIV
- remind participants of laws and policies relevant to HIV and infant and young child feeding
- discuss the need and explore options for the coordination of activities related to HIV and infant feeding at the national level

- obtain commitment from stakeholders to initiate or strengthen activities, including policy development and training.

Participants in such a meeting should include concerned officials from the ministry of health and other associated ministries (Labour, Agriculture, Commerce/Trade, Education), UN agencies, nongovernmental organizations (NGOs), international donor agencies, universities, research organizations, professional associations, people living with HIV/AIDS (PLWHAs), and others concerned with the following areas:

- protection, promotion and support for breastfeeding
- complementary and replacement feeding
- nutrition
- the Code
- BFHI
- child health and Integrated Management of Childhood Illness (IMCI)
- prevention of MTCT/HIV infection in infants and young children
- reproductive health/family planning
- HIV/AIDS
- communication, social promotion, public relations
- undergraduate and postgraduate education of health workers.

Consistency with other policies

Countries have numbers of policies and laws that regulate their health and other sectors and that may relate to infant and young child feeding and HIV/AIDS; they include those on national AIDS control, prevention of MTCT/HIV infection in infants and young children, health in general (including IMCI), reproductive health, family planning, women, youth, nutrition, and labour. When a national policy on infant and young child feeding is being drafted or revised, these policies should be reviewed, taken into account and, where necessary, revised for consistency.

3.2 Situation assessment

Decision-makers and their staff will need to assess local practices regarding infant feeding, including HIV and

infant feeding, in order to formulate policies, develop implementation guidelines, and determine topics to be raised during counselling and key elements of support. Such assessment will also help clarify how to achieve exclusive breastfeeding in the sociocultural environment, ensure correct complementary feeding practices, and decide upon the feeding options to be discussed with HIV-positive mothers. Assessment can use a range of methods, including informal reviews of data, but formative research¹ studies are often recommended. In general, countries must consider several sets of circumstances – e.g. urban formal housing, urban informal settlements, and rural traditional and periurban communities. To develop sound policies information is needed on feeding practices and family resources, demand for services, and availability of certain service components.

Feeding practices and family resources

- Child feeding practices with reference to: rate of breastfeeding initiation and rate of exclusive breastfeeding at four and six months, duration of breastfeeding, availability and cost (in relation to family incomes) of replacement feeds and micronutrient supplementation, cultural practices
- The types of feeding already used for children who must be put on replacement feeds from an early age (orphans, for example)
- The types of milk available locally, quality (including whether any of the types of milk are diluted), prices and seasonality
- Experience with infant-feeding options in projects to prevent HIV infection in infants and young children
- Rates of diarrhoea and pneumonia
- Ability of caregivers to follow recommended infant-feeding options
- Proportion of the population with access to safe water,² sanitation and fuel; types of hand-washing practices; and the feasibility of preparing replacement feeds safely
- Average family income and minimum wage (urban, rural)

¹ WHO is developing a guide for this purpose: *What are the options? Using Formative Research to Adapt Global Recommendations on HIV and Infant Feeding to the Local Context*. (in press, 2003)

² Safe drinking water, as defined by recent WHO guidelines, does not represent any significant risk to health over a lifetime of consumption.

- Local interpretation and application of the terms *affordable, feasible, acceptable, sustainable and safe*, for determining the infant-feeding options that should be included in counselling
- Assessment of the extent to which people infected with HIV are stigmatized, and the possible social and cultural barriers to HIV testing and counselling, replacement feeding, and exclusive breastfeeding
- Attitudes of health workers and communities towards different types of feeding practices/replacement foods.

Demand for services

- Estimation of the numbers of mothers and infants that an IYCF policy would likely affect, including the number of HIV-positive pregnant women or mothers, on the basis of HIV prevalence, population and fertility
- Assessment of attendance for antenatal care, family planning and related services that provide opportunities to offer HIV testing and counselling to prospective parents
- Estimation of the number of all women likely to need support for exclusive breastfeeding, and continued breastfeeding afterwards
- Estimation of the number of HIV-positive women likely to need support for exclusive breastfeeding during the first few months, and a transition to replacement feeding afterwards
- Estimation of the amount of breast-milk substitutes or other types of support needed by HIV-positive mothers, based on local HIV prevalence, fertility rates, access to HIV testing and counselling, expected acceptability of testing, and expected acceptance of commercial infant formula if it were to be provided free or at a subsidized price through the health system
- Need for increased sick-child services

Availability of service components

- HIV testing and counselling in facilities providing antenatal care, reproductive health services, adolescent-friendly services, and others
- The BFHI and baby-friendly health facilities
- Adequate levels of skills and knowledge of health workers for support and counselling (pre-service, in-service and on-the-job training opportunities and courses currently available for different kinds of worker)

- Follow-up after health workers have been trained in counselling and support for infant feeding
- Adequate counselling offered on breastfeeding and HIV and infant feeding
- Support materials for the counsellor or mother, such as decision algorithms, promotional material and take-home materials for mothers and family members
- Referral system and coordination of MCH services, including nutrition, at national and community level
- Local logistics systems able to regularly supply/distribute commercial infant formula, micro-nutrients or other supplies without interruption
- Support structures in the community, e.g. support groups, peer counsellors

Interested parties and key players and their possible roles in implementing policy

- Individuals and groups would include many of those listed under policy development (Section 3.1).
- Manufacturers and distributors of products for infant feeding should not determine policy but may have a responsibility in its effective application by being informed of the policy, ensuring that their products meet Codex Alimentarius standards, and that their activities comply with the Code and subsequent resolutions.

3.3 Costs

Prevention of HIV infection in infants and young children, whether by breastfeeding or other means, requires that a range of services be strengthened or put in place. The costs of interventions to prevent HIV infection through breastfeeding cannot easily be separated from those of interventions needed in any case to protect, promote and support breastfeeding in the general population, and to prevent infection during pregnancy, labour and delivery, such as HIV testing and counselling and ARV prophylaxis. Box 7 lists specific items that should be budgeted for to meet needs in relation to HIV and infant feeding. Costs per client may fall in the course of the programme as services become integrated. Also, the high initial cost of introducing communication activities and modifying infrastructures will not need to be repeated.

Countries have little information on the cost of setting up HIV and infant feeding activities. Estimates

BOX 7

What are the costs involved?

Organization of services:

Integration of new activities with routine maternal and child health care, such as IMCI
Allocation of staff time for counselling and supporting all mothers with regard to infant feeding
Provision of suitable space for counselling on infant feeding
Provision of nutrition support and regular follow-up with growth monitoring for children of HIV-positive women for two or more years
Provision of food and other support for HIV-positive women identified through the services
Increased access to family planning services, especially for non-breastfeeding women
Increased need for health care for non-breastfed children (diarrhoea and other infections)
Meetings to disseminate information
Community participation/organization activities
Follow-up and supervision of health workers trained in counselling for infant and young child feeding in the context of HIV

Training of staff and other groups:

To counsel all mothers on exclusive breastfeeding and complementary feeding, and the provision of breastfeeding support, including management of lactation
To counsel HIV-positive mothers on infant-feeding options and give follow-up support
To support women at community level
Development of community capacity
Training materials and job aids

Provision of supplies:

Breast-milk substitutes for infants of some HIV-positive women who choose not to breastfeed
Contraceptives, including condoms for protection against STIs/HIV
Micronutrient supplements
Other nutritional support products
Oral rehydration solution and antibiotics

Additional costs to country:

Import of supplies
Distribution and management of supplies
Monitoring and evaluation, including monitoring compliance with the Code
Formative research
Communication (campaigns, public relations)

Additional costs to families:

Unsubsidized replacement feeding up to two years of age
Fuel and water for preparing feeds hygienically
Time lost from other productive labour
Increased cost of health care

Savings:

Care costs saved by averting HIV infection in children
Care costs saved by preventing HIV infection in women and their partners through HIV testing and counselling
Care costs saved by improving infant and young child feeding practices

of the price of commercial infant formula are very country-specific (see Annex 7), but in a recent international tender for a large quantity, the projected cost was between US\$1.90 and 2.90 per 500 g tin, plus distribution costs. In some countries, the cost of infant formula has represented about one-half of the budget of interventions. For prevention of HIV infection in infants and young children in general, estimates of per client costs for some inputs, derived from programme experience and modelling (see Annex 1), have shown the following ranges:

- Health system improvements \$2.67– 4.05
- Pre-test counselling for HIV \$0.67–5.22
- HIV testing and post-test counselling \$5.34–12.19¹

On the basis of such information, and of local estimates of the cost of items in Box 7, decision-makers will need to cost alternative policy options and consider them in the light of available or projected funds and of equity in regard to vulnerable populations.

¹ In some countries, clients pay part of the cost of HIV testing and counselling.

4. Appropriate marketing and distribution of breast-milk substitutes

This section describes the Code and its relevance to infant and young child feeding in general, and to issues raised by HIV; and the steps decision-makers need to take to ensure compliance with the Code when free or subsidized commercial infant formula is an option offered to HIV-positive women.

Decision-makers should:

- *examine the status of the Code in their countries/ areas and take necessary steps to implement it or strengthen compliance with it*
- *decide whether and under what conditions free or subsidized infant formula will be offered*
- *if commercial infant formula will be offered, establish policies on procurement, distribution and monitoring.*

4.1 Continued importance of the Code

The fact that HIV can be transmitted through breast milk should not undermine efforts to support breastfeeding for most infants, as their health and survival are greatly improved by breastfeeding.

The aim of the Code is to contribute to the provision of safe and adequate nutrition for infants by the protection and promotion of breastfeeding, and by ensuring the proper and informed use of breast-milk substitutes, when these are necessary; it promotes also acceptable marketing and distribution practices. Subsequent WHA Resolutions (WHA33.32, WHA34.22, WHA35.26, WHA37.30, WHA39.28, WHA41.11, WHA43.3, WHA45.34, WHA46.7, WHA47.5, WHA49.15, WHA54.2 and WHA55.25) have clarified the scope of the Code, resolved ambiguities, and taken account of new scientific findings. The Code and the WHA resolutions:

- recommend that governments regulate the distribution of free or subsidized supplies of breast-milk substitutes to prevent ‘spillover’ to babies who would benefit from breastfeeding and whose mothers are HIV-negative or unaware of their status;

- protect children fed with breast-milk substitutes by ensuring that product labels carry necessary warnings and instructions for safe preparation and use;
- ensure that the product is chosen on the basis of independent medical advice.

The Code applies also to, and fully covers the needs of, HIV-infected mothers.

With the rising prevalence of HIV infection and the knowledge that it can be transmitted through breast milk, governments may consider accepting free or low-cost supplies of breast-milk substitutes for distribution to HIV-positive mothers. WHA resolution 47.5, 2.(2), however, urges Member States to ensure that there are no donations of free or subsidized supplies of breast-milk substitutes and other products covered by the Code in any part of the health-care system. Instead of accepting donations, national authorities may wish to consider negotiating prices with manufacturers and offer breast-milk substitutes at a subsidized price, or free of charge, for use by infants of mothers living with HIV. It is recommended that this be done in a manner that:

- is sustainable
- does not create dependency on donated or low-cost supplies
- does not undermine breastfeeding for the majority of infants
- does not in effect promote breast-milk substitutes to the general public or the health care system
- assures sufficient quantities for as long as individual infants need them.

4.2 Strengthening implementation of the Code

The Code and WHA resolutions are minimum requirements where countries have not adopted their own measures. According to UNICEF, by December

2002, 25 governments had adopted all the Code's provisions into law, and a further 52 had partially adopted them. Where the Code has not been fully implemented it is urgent to adopt and adhere to it.

Decision-makers should:

- review the status of the Code in their countries, and take the necessary action to implement it. If measures giving effect to the Code have not been put in place, they can request technical assistance from WHO, UNICEF or IBFAN for the drafting and implementation of such regulations, including monitoring and enforcement of provisions and sanctions.
- ensure that health-care workers are aware of their responsibilities under the Code, understand its continuing relevance in the context of HIV, and apply it in their work.

4.3 Monitoring compliance with the Code

Even where the Code has been fully legislated for and implemented, compliance needs to be monitored to prevent violations and to guide adequate implementation. Recommendations exist on monitoring compliance with the Code in countries and on organizing a training course (see Annex 1). Decision-makers should ensure that a system for monitoring is in place.

Information on Code violations and 'spillover' provides evidence of the need for action to implement and enforce the Code. The *Guide for Estimating the Prevalence of Code Violations*, developed by the UK-based Interagency Group of Breastfeeding Monitoring, incorporates questions on 'spillover'. IBFAN, using a standardized protocol, organizes regional and national training courses for monitors (see Annex 1).

Manufacturers and distributors of products that fall within the scope of the Code should be reminded of their responsibilities under the Code in each country and continue to take necessary action to ensure that their conduct at every level conforms to its principles and aim.

Where the government decides to supply free or subsidized formula to HIV-positive mothers, procurement should be encouraged in a transparent manner through standard procedures (tendering), avoiding a privileged relationship that would promote the image and products of one particular company. Tendering:

- enables the government to dictate requirements on labelling and packaging, such as illustrations with a cup instead of a bottle.

- allows the government to obtain the right formula at the lowest price
- guarantees a long-term and sustainable supply of formula, since it leads to a legally binding contract for its supply.

Tendering, however, does not guarantee observance of the Code. For further information on the Code, see Annex 8.

4.4 Necessary considerations for distribution and procurement of free or subsidized commercial infant formula

Governments may decide to provide infant formula to the infants of HIV-positive women under specific conditions:¹

- Infant formula should be provided free or at a subsidized cost only to those HIV-positive women and their infants for whom replacement feeding is acceptable, feasible, sustainable and safe. The government concerned should ensure that it can afford to supply formula with no interruption, even in the remotest areas, for as long as the child needs it. Offers of free or low-cost formula from manufacturers or distributors should not be accepted. Governments should procure formula through normal channels.
- Governments should ensure implementation of the Code (with particular emphasis on the procurement and distribution of formula and on the Code's requirements for the product and packaging).
- Staff responsible for distributing formula should have guidelines specifying the HIV-positive women who will receive it, under what conditions, how frequently and for how long, where it will be distributed, etc.
- Before commercial infant formula is made available in health facilities, counsellors trained in relation to breastfeeding, complementary feeding and HIV and infant feeding should be identified. They need to be skilled in providing non-biased counselling, guidance and support to all mothers. Counselling for HIV-positive women who opt for formula should include demonstrations on how safely to store, prepare and feed it, including cup-feeding. Demonstrations should be made only to women who have chosen to formula feed.

¹ The conditions are based mainly on experiences in Africa with distribution of free formula in projects to prevent HIV transmission to infants and young children.

- Before governments make infant formula available at health facilities, they should prepare plans to explain to the public the problems raised by HIV and infant feeding and the consequent reasons for making commercial infant formula available. The purpose would be that mothers who are advised to obtain and use free formula and to avoid breastfeeding are not stigmatized for failing to breastfeed. Fear of stigmatization may induce some mothers to practise mixed feeding.
- Information on the health and nutritional status (especially growth) of infants fed with breast-milk substitutes should be collected and analysed to permit the monitoring of health outcomes (see section 7).
- Once begun, formula should continue to be supplied to infants for at least the first six months of life. 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, while they also receive complementary feeding. 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.

Countries that consider providing free or subsidized infant formula for HIV-positive women who choose not to breastfeed should also consider providing nutritional or related support to HIV-positive mothers who make other choices. Providing or subsidizing an option to all HIV-positive women is equitable, and creates an environment where the health system is not seen to be promoting one option over another. Moreover, it may prevent mothers from choosing replacement feeding because of the free formula, not because it can be implemented safely.

Programme planners and procurement agencies have to ensure that all aspects of supply management are considered in the planning phase of programming, and that supplies are carefully monitored to ensure that infants who need them have them always, but that there is no ‘spillover’ to others.

The following are possible ways to achieve adherence to these requirements:

- Centralizing the procurement of supplies, to enable:
 - products to be carefully selected, preferably sourced by using generic nutritional specifica-

tions (such as in the Codex Alimentarius) to ensure favourable negotiation of prices, and to facilitate control and monitoring of distribution

- suppliers to be identified who can provide large quantities of a high-quality product on a continuous basis
- Informative labelling with easily understood warnings and pictograms, in the common languages and symbols of consumers
- Careful storage to avoid loss and deterioration
- Careful adherence to local laws
- Distribution to local distribution points in sufficient quantities for the estimated numbers of HIV-positive women who are expected to opt for commercial infant formula
- Giving breast-milk substitutes through an accountable system of medical prescriptions or coupons – for example, dispensed through pharmacies in the same way as medicines, and ensuring that products are made available in such a manner that breastfeeding mothers do not see breast-milk substitutes displayed
- Ensuring that the provision of breast-milk substitutes is linked to follow-up visits by mother and infant
- Using the health-care management information system to track consumption data and expenditure patterns to ensure long-term sustainability of the programme
- Establishing or improving logistics systems for the procurement and delivery of breast-milk substitutes, including training in forecasting needs and in choosing, and using for monitoring purposes, indicators of logistics management.
- Strengthening counselling and support for breastfeeding and complementary feeding in the general population as a means of preventing ‘spillover’ – this would include educating the public on HIV transmission by breastfeeding and safer breastfeeding practices.

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

5. Protecting, promoting and supporting appropriate infant and young child feeding practices in the context of HIV

This section describes points regarding protecting, promoting and supporting appropriate infant and young child feeding practices for the general population, as a precondition for providing services for HIV-positive women and their infants. Decision-makers should:

- *plan how to prioritize infant and young child feeding*
- *develop guidelines for implementing national policies*
- *build capacity for infant feeding counselling and support*
- *decide how to integrate infant and young child feeding counselling and support, especially for early and exclusive breastfeeding, into ANC services*
- *ensure BFHI goals are met and sustained*
- *establish coordination mechanisms in relation to infant and young child feeding issues*

5.1 Infant and young child feeding issues in national planning

Adequate 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 UN 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 this right. Women, in turn, have the right to proper nutrition, to decide how to feed their children, and to full information and enabling conditions to carry out their decision (see Box 3). A woman may be unable to carry out her choice unless a serious effort is made to empower her to do so.

In relation to HIV, most infants and young children, especially in resource-poor settings, will still be breastfed. The life-saving impact of exclusive breastfeeding means that infant and young child feeding should receive even higher priority in national planning, for reasons including the prevention of 'spillover' of formula feeding to the general population, and the prevention of stigmatization of women

who exclusively breastfeed or exclusively formula-feed when it is not a community norm. Government policy and programme development and budgeting should take these issues into account.

5.2 Guidelines for infant and young child feeding

A national comprehensive policy on infant and young child feeding is usually not readily readable or accessible to the general public. Mechanisms should be devised, therefore, to inform the population at large and, in particular, pregnant women, their partners, health workers and HIV/AIDS and infant-feeding counsellors, of the content of the policy. Translating policy into guidelines is one essential step in communicating the necessary information.

Guidelines incorporating HIV will need to be developed on all aspects of infant and young child feeding. They should be targeted at different types and levels of personnel, such as obstetricians, paediatricians, nutritionists, maternity nurses and counsellors, as well as community groups, lay counsellors and other volunteers engaged in support to mothers and their infants, as well as medical and nursing students in pre-service training. They should re-emphasize the need to protect, promote and support early and exclusive breastfeeding, recognizing HIV/AIDS as an exceptionally difficult circumstance, and should also cover other exceptionally difficult circumstances, such as low-birth-weight babies and complex emergencies. They should specify who will be responsible for providing health education, for counselling and supporting women on optimal infant feeding, and for counselling and supporting HIV-positive women on infant-feeding choices, and they should indicate the type of skilled support for infant feeding that all women should receive.

On the basis of these guidelines, job aids and other educational materials will need to be produced to assist health workers in implementing the guidelines, jointly with training (see section 5.3).

5.3 Capacity development for counselling and support

A comprehensive plan for capacity development is needed. Mothers need support during the antenatal period as well as at various points in their infant's life, and from different types of health worker. The plan of action should be based on the outcome of an assessment of training needs of the health workers, in the light of current knowledge on all aspects of infant and young child feeding and the skills needed. This assessment can be made by reviewing information on staff and training programmes, but a rapid survey or visits to some representative health facilities or communities may be needed. The immediate emphasis will be on in-service training, but pre-service training will need to be strengthened in the long run.

In respect of capacity development, decision-makers should consider:

Attributes and type of staff available and required:

- Who is counselling pregnant women, what should the minimum attributes be for counsellors, and what new staffing arrangements might be required to put infant feeding counselling in place? Will counselling be the special responsibility of breastfeeding or infant-feeding counsellors, or HIV counsellors, or will all staff caring for pregnant women, mothers and infants be expected to take on this duty as part of their general responsibilities?
- What staff are available who have already been trained in HIV rapid testing and counselling; promoting good nutrition and care for pregnant and lactating women; HIV prevention; family planning; STI management; IMCI; and infant feeding, including the Code, BFHI, breastfeeding counselling, lactation management, complementary feeding, and counselling on HIV and infant feeding?
- How many more staff with counselling skills in breastfeeding and HIV and infant feeding will be needed? How will they be trained? By whom? How will they be followed up and supervised after training?
- What extra knowledge and skills will general health workers need to refer families correctly, and to give ongoing support? Who will train them, supervise them and follow up to make sure they retain and practise their knowledge and skills?

Curricula changes:

- What modifications or additions will be needed to the curricula for in-service training and pre-service education of health workers, nutritionists and allied professionals to enable them to provide suitable information and advice on infant and young child feeding?

Resources:

- What resources should be allocated for capacity development?

Job aids and educational materials:

- What job aids for counselling and educational and take-home materials for mothers and other family members are available or will need to be adapted or developed for particular groups?

Involvement of local groups:

- Will volunteers, lay counsellors and support groups be involved? There is growing experience with their successful participation in counselling and support for infant feeding in health facilities and communities. Their possible contribution to counselling should be further explored as it could significantly increase a country's counselling capacity and also help in reducing stigma. The question of remuneration to lay counsellors, in whatever form, will need to be addressed.
- How can communities develop capacity for promotion, acceptance and support of recommended infant and young child feeding practices? Examples of community-based support networks in this respect are mother-to-mother support groups, to which hospitals and clinics can refer mothers on discharge. Such support networks should be welcome within the health-care system, and also take an active part in the planning and provision of services. Local NGOs often play a useful role at this level of activity.

5.4 Antenatal care

ANC services need to be strengthened, as necessary, to provide a basic package of quality care according to standard guidelines. In most cases, the additional interventions necessary to integrate activities aimed at preventing HIV infection in pregnant women,

mothers and their infants and young children can then be taken. (Also see sections 5.6 and 6.2 related to integration.) These interventions include providing information and counselling about prevention of HIV infection (including safer sex), HIV testing and counselling, referring women for infant-feeding counselling or providing counselling, and follow-up care and support. HIV-negative women and women who do not know their status need guidance and support to breastfeed exclusively for six months, followed by continued breastfeeding up to two years and beyond, with adequate complementary feeding. They also need to be counselled on the importance of safer sex, especially during breastfeeding, since babies are at particular risk if a mother is infected while breastfeeding.

Where few women receive ANC, a priority will be to increase attendance, through such measures as community education, longer opening hours, and so on. In some countries, it may be the women most vulnerable to HIV infection who attend late or not at all, and special efforts will need to be directed at them.

Many staff with experience in prevention of HIV infection in infants and young children believe it critical to find ways of involving women's partners in ANC in the interests of their broader involvement in HIV prevention, care and support.

5.5 Baby-friendly Hospital Initiative

BFHI can be used to prevent 'spillover' of messages on HIV and infant feeding to mothers who are HIV-negative or unaware of their status. Baby-friendly hospitals, if well functioning, may be in a good position to integrate in their normal functions preventive activities in respect of HIV infection in infants and young children. Use of alternative or replacement feeds for acceptable medical reasons (e.g., being HIV-positive) is consistent with the global criteria for BFHI. Although baby-friendly hospitals should not accept free or low-cost supplies of breast-milk substitutes, the government may supply them or the hospital may purchase them for use during the hospital stay.

Integrating prevention of HIV through breastfeeding into BFHI practices where BFHI is functioning well provides the following opportunities:

- Technical expertise and a network on infant feeding issues capable of implementing HIV and infant-feeding activities
- A system of "prescribing" infant formula

- A large community of trained infant-feeding counsellors
- Automatic integration of HIV and infant-feeding issues in the wider aspects of infant and young child feeding
- A supervision system

Decision-makers should:

- assess the status of BFHI in the country
- integrate HIV and infant feeding into BFHI
- ensure that baby-friendly institutions are reassessed as needed to strengthen services and maintain quality
- allocate resources for training health workers and assessors.

Materials may be obtained for these purposes (see Annex 1).

Extending support to breastfeeding beyond hospitals

Step 10 of the BFHI is about continuing support outside the maternity unit, usually in the community. Many hospitals find this step difficult to implement, but it is necessary in order to help mothers to breastfeed exclusively up to six months, followed by continued breastfeeding up to two years and beyond with adequate complementary feeding. If a community component has been developed, it will be worth the effort to involve the community in the support of HIV-positive mothers also, without breaking confidentiality. Promoting breastfeeding-supportive health centres and communities may help to gain more advocates and ensure support for appropriate infant and young child feeding.

5.6 Coordination with other programmes and initiatives related to infant feeding

Infant and young child feeding programmes are often related to other programmes operating in the same districts and health facilities (see also sections 5.4 and 6.2. on integration). Moreover, in many countries, IMCI is being adapted to include care of children infected or affected by HIV/AIDS. This work includes:

- adapting the case-management guidelines for health workers to include follow-up of infants born to HIV-positive women, and to support

HIV-positive women in their infant-feeding choice

- strengthening the health system to ensure the availability of essential drugs, such as co-trimoxazole to prevent *Pneumocystis carinii* pneumonia
- expanding the household and community component to deliver essential messages on prevention of HIV transmission to infants and of primary HIV infection in adults.

Such adaptation provides a unique opportunity to integrate preventive interventions into routine child-health services, to promote exclusive breastfeeding and continued breastfeeding thereafter for HIV-negative women and women of unknown HIV status, and to

pay special attention to the needs of HIV-positive women.

Decision-makers should put in place mechanisms to coordinate activities of these and related programmes in the field, such as training, distribution of supplies and supervision, to ensure consistency, to optimize use of resources, and to integrate and expand quality counselling as rapidly as possible. Coordination with NGOs is also often productive.

Programme entry points, or targets of opportunity, should be used to ensure support for healthier behaviour. Every contact with the mother of a young child should include age-specific messages to support proper feeding, birth spacing and HIV prevention.

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

When a national comprehensive policy on infant and young child feeding, including breastfeeding, complementary feeding and feeding by HIV-positive mothers, is in place, decision-makers will need to ensure that each HIV-positive mother receives adequate support to enable her to carry out her infant-feeding decision safely and effectively. This section outlines the steps needed to ensure that services reach as many women as possible, especially the vulnerable, and to provide support.

Decision-makers should:

- *decide where and how HIV testing and counselling services can be made available or expanded to pregnant women and their partners*
- *decide how and at what points infant feeding counselling will be integrated into MCH services*
- *decide who will need orientation/capacity-building and how it will take place*
- *decide what package of services will be available to HIV-positive women and how they can access it*
- *determine how best to support health workers and counsellors*
- *ensure that a communication strategy is developed and implemented*
- *plan for community capacity-development and involvement*

6.1 HIV testing and counselling

Comprehensive programmes to prevent HIV transmission to infants and young children cannot be fully implemented unless women know their HIV status. HIV testing and counselling services committed to informed consent and protection of confidentiality need to be widely available and promoted. Services can then be made available to women who can benefit from counselling on HIV and infant feeding, as well as from other interventions and services available for care, treatment and support. To reduce the risk of HIV infection through breastfeeding once a

woman is pregnant, HIV testing and counselling should be integrated into ANC and MCH services. It also needs to be widely available in other settings, such as NGO services, for non-pregnant women and their partners, and for female adolescents.

Testing a woman without her full consent is unacceptable and unethical and a violation of human rights.¹ Moreover, fear of disclosure and discrimination is likely to deter women from seeking professional care. At the same time, promoting shared confidentiality, which means encouraging a woman to designate another person whom she can trust, such as her partner, another family member, a friend or health worker, is critical for support for prevention of HIV infection in infants and young children in general, and for choice of infant feeding in particular. Annex 1 documents provide information on other issues raised by HIV testing and counselling services.

HIV pre-test counselling should include general information on the risks of HIV transmission to infants, but should not include detailed information on infant-feeding options. Such information might undermine the confidence of HIV-negative women in breastfeeding, and should therefore only be given to HIV-positive women in post-test counselling.

Post-test counselling should strengthen public health recommendations on early and exclusive breastfeeding for HIV-negative women. For HIV-positive women, the idea of infant-feeding options can be introduced at this session, with referral or setting a time for more discussion.

HIV-positive mothers in some places may have access to more sophisticated tests to determine the severity of their HIV 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, since disease progression as measured by these tests is known to increase the risk of transmission of HIV through breast milk.

¹ There may be very rare, exceptional cases where there is ethical and professional justification for testing without informed consent, such as where clinical management would be affected and a parent is unavailable.

6.2 Integrating counselling and support for infant feeding with maternal and child health services

Infant-feeding counselling and support for all mothers, including those who are HIV-positive, can be integrated into MCH care at many points: in health education; in treatment of STIs; in family planning services; in antenatal care; during delivery and post-partum care; in ongoing health and nutrition care for children; and, in some cases, during visits to sick children or mothers. Though full integration with other services may ease the counselling burden, workload is still likely to be increased but without sufficient staff, and staffing shortages may therefore be a limiting factor. (See also sections 5.4 and 5.6 regarding linkages with other services.)

Family planning is an instance of a clear need for integration of counselling and support with other services, since in any case HIV-positive women and their partners need information and services. A policy recommendation that HIV-positive mothers be counselled about avoiding breastfeeding can have major implications for birth spacing and unwanted pregnancies. HIV-positive mothers who do not breastfeed are deprived of the natural contraceptive protection offered by exclusive breastfeeding. If they do not use an effective form of family planning, an unplanned or unwanted pregnancy may adversely affect their own and their children's health.

Decision-makers should not divert resources from other MCH programmes. They should take the opportunity, rather, to integrate new tasks (HIV testing and counselling, and infant-feeding counselling and support to carry out their decisions for HIV-positive mothers) with existing MCH programmes and strategies. They should then adapt the MCH programmes and strategies to the strengthening of basic maternity care, of support to breastfeeding and complementary feeding, of child care and family planning services, and of support services for HIV-positive individuals.

6.3 Orientation and capacity development

As already discussed (section 5.3), capacity development for counselling HIV-positive mothers on infant-feeding choices should begin with a good foundation in breastfeeding counselling and complementary feeding. The WHO/UNICEF/UNAIDS training course in HIV and infant-feeding counselling is designed to help counsellors acquire the information and skills that will equip them to reduce the risks of HIV transmission associated with various infant-feeding alternatives, and

to carry out such alternatives safely, as well as the counselling process. Counsellors should have already undergone training in breastfeeding counselling before taking the course.

To accelerate the formation of counsellors, some countries have combined two counselling courses, on breastfeeding and on HIV and infant feeding. This takes about six full days of training, which countries report as being sufficient, although there has been little evaluation. (See Annex 9 for a possible timetable for a combined course.) There are reservations about current training on HIV and infant feeding, which is often a small part of a general course on the prevention of HIV infection in infants and young children. The courses do not cover the required material, it is said, and are therefore inadequate for the formation of infant-feeding counsellors; they do not require prior knowledge of breastfeeding counselling, and they do not include skills training. They can, however, provide a basis for ongoing training and supervision, provided that supervisory systems exist.

To support the counsellors, it may be worthwhile to orient managers and staff with functions related to HIV and infant feeding, such as health-facility pharmacists who dispense formula, to the main issues concerning the topic. Such orientation could be designed, for instance, to prevent open identification of HIV-positive women, and also ensure consistency among health staff in dealing with issues, such as confidentiality, raised by infant feeding in general and specifically by HIV.

In the long run, decision-makers should ensure that health-training institutions include basic information on breastfeeding and HIV and infant feeding and the associated skills in pre-service training courses.

6.4 Follow-up, supervision and support of health workers and counsellors

All health workers need support in practising new skills, including counselling skills, in order to retain the quality of those skills and improve performance. Decision-makers need to ensure that health workers receive regular supportive supervision, including:

- observation of counselling sessions, including use of job aids, or informal exit discussions with counselled women
- feedback (also a form of on-the-job training)
- refresher courses or updates of health workers' knowledge and skills.

In addition, to prevent burn-out,¹ decision-makers should consider:

- rotation of staff to other child-health/HIV-prevention responsibilities for short periods of time
- regular meetings with other counsellors to discuss how to deal with particular issues, while maintaining strict confidentiality

6.5 Monitoring of feeding practices, and health and nutritional status

A further step in the counselling process is to follow up and provide continuous support to the mother in carrying out her infant-feeding decision, to identify and solve possible problems, and to monitor (that is, regularly measure and assess) the health of the mother and the health and growth of the baby. This step is essential to ensure that the mother can execute her chosen feeding option safely and effectively and that the baby is healthy and grows well. It is a step that is often neglected, however. Since infant and young child feeding practices change during the first 24 months of a child's life, especially at six months, and a mother's decision on a feeding option may also change for several reasons, including social risks, support to the mother should continue to be intensive during this period. If it is determined at some point that the infant is HIV-infected and is still being breastfed, then the baby may benefit from continued breastfeeding and complementary feeding, in accordance with the recommendations for the general population.

All children need their growth to be monitored up to at least two years of age to ensure that their nutrition is adequate. While this is a standard recommendation, in many places routine growth promotion and monitoring is not well established. In the case of children of HIV-positive mothers, monitoring is even more important than for other children. They need prophylaxis against opportunistic infections and treatment if they are ill, which should follow local IMCI guidelines. Infants who are not breastfed should receive special attention from the health and welfare system, since they constitute a risk group.

There is evidence that breast conditions, including mastitis, breast abscess and nipple fissure, increase the risk of HIV transmission through breastfeeding. All women, especially HIV-positive women, who breast-

feed should be assisted to ensure that they use a good breastfeeding technique to prevent these conditions, which should be treated promptly if they occur.

6.6 Nutritional and other support to HIV-positive women

Counselling, including ongoing infant-feeding counselling, should be considered part of a continuum of care and support services for HIV-positive women to ensure that they and their families have access to comprehensive health care, including follow-up and social support. (For details on what such care might entail, see documents in Annex 1.)

One study has raised concern by reporting a higher risk of dying in the first two years after delivery among HIV-infected women who breastfeed their babies than among those formula feeding. Another study found that this was not the case. The available evidence does not indicate that HIV-infected women are more likely to die if they breastfeed than if they do not, but WHO has noted that further research in this area is needed. The findings emphasize, however, that HIV-infected women may die at any time, including the breastfeeding period. The critical importance of the mother's survival for the infant's well-being is obvious.

Owing to this concern and for other reasons, including their own right to health, women should have access to information, follow-up health care and support, including family planning services and nutritional support. Routine antenatal care should include supplementation with iron and folic acid, and post-natal care should include vitamin A supplementation within six weeks after delivery. Other forms of nutritional support include dietary counselling for people living with HIV/AIDS and food supplements high in protein, energy and micronutrient content.

Nutrition interventions for women, such as iron-folate supplementation and adequate nutrition during pregnancy and lactation, are especially indicated for the HIV-positive mother. Nutrition counselling and support is a key component of care for all PLWHAs. This counselling and support should include regular assessment of body weight, haemoglobin status and feeding habits; prompt treatment of all conditions that affect appetite and ability to eat; and counselling on ways to prevent food-borne infections and to improve dietary intake, in the light of local foods, customs and HIV disease status (A course on nutrition and HIV exists which may help in this – see Annex 1.) As mentioned previously, countries that provide free or sub-

¹ Burn-out is a state of physical or emotional exhaustion affecting caregivers and social workers working in often very difficult conditions; it has been observed in HIV counsellors and infant-feeding counsellors.

sidized infant formula for replacement feeding should also consider providing nutrition support for HIV-positive women who choose other options.

Other support to HIV-positive women should include access to interventions to prevent HIV in infants, including ARV prophylaxis, access to sexual and reproductive health services, early detection and treatment of opportunistic infections, and, where possible and necessary, ARVs for management of their own disease. Churches and civil society groups often have programmes with which government health services can link for HIV-related prevention, care and support services, and follow-up.

6.7 Behaviour change communication and information dissemination

Communication is a key element in a comprehensive policy on infant feeding. Communication is essential to promote broad public awareness based on accurate information, and to ensure that policies are known, acted upon, and effective. The acceptability of HIV testing and counselling and of alternative feeding practices may be very low because of fear of stigmatization and rejection by the family and community.

The general public has many wrong ideas about HIV and infant feeding, sometimes because the media may inadvertently spread incorrect and incomplete information. An educated public will be able to make well-informed decisions. Communication programmes can serve various purposes. They can promote exclusive breastfeeding as a social norm and ensure that breastfeeding along with complementary feeding is recommended thereafter. They can help reduce any ‘spillover’ effect caused by the distribution of free or subsidized breast-milk substitutes to HIV-positive mothers. They can urge men to protect women, including breastfeeding mothers, from becoming HIV-infected, to actively support infant-feeding regimens that help to minimize infections in infants and young children, and to counter stigma and discrimination.

Decision-makers will need to:

- ensure that the policy on infant and young child feeding covers communication issues, and that any communication strategy is consistent with it
- allocate resources for planning and implementing a communication strategy
- determine who should be responsible for preparing or reviewing the communication strategy, in consultation and coordination with any

related communication strategy in the country, as on infant feeding, HIV/AIDS, nutrition, IMCI and reproductive health/family planning

- ensure that information on replacement feeding complies with Article 4.2 of the Code
- play a leading role themselves in action aimed at removing stigma and discrimination
- ensure that advocacy for HIV testing and counselling is done by health professionals at all levels of the system and that communications are designed to stimulate public involvement and raise awareness of the benefits of HIV testing and counselling.

6.8 Development of community capacity

Community engagement is critical to the support of breastfeeding and to dealing with stigma related to infant feeding in particular and to prevention of HIV infection in infants and young children in general. Efforts should be directed at producing a mobilized community.¹ Participation of male partners, other family members and the community is key to supporting the infant-feeding choices of mothers, and to addressing in certain respects the prevention of MTCT.

Decision-makers should consider:

- what mechanisms already exist to engage the community in similar areas, such as HIV/AIDS prevention in general, or reducing stigma
- what efforts are under way to develop community capacity to support infant and young child feeding – e.g., by engaging and educating community leaders
- what will be needed to expand and strengthen these efforts to cover the particular issue of supporting HIV-positive women in their infant-feeding choices
- what will be needed to actively engage men.

To then take action in this area, decision-makers can build on efforts they have found to be already under way, make it easier for health workers to mobilize communities, and draw on experience in community action linked to immunization and IMCI, as well as to non-health activities such as those of churches and civil society.

¹ According to the UNAIDS definition, a mobilized community is “one whose members are aware in a detailed and realistic way of their individual and collective vulnerability to HIV/AIDS and who are motivated to do something about their vulnerability.”

7. Monitoring, formative research and evaluation

Monitoring¹ and evaluation² should be a part of all programme planning. They promote efficiency and commitment to time frames; they draw early attention to problems and suggest means of overcoming them. Formative research also is important for refining policies and guidelines. This section describes considerations relating to the monitoring and evaluation of projects and programmes that include counselling on HIV and infant feeding. Decision-makers should:

- consider at an early stage what kinds of research, monitoring and evaluation activities will be carried out
- allocate adequate resources for this purpose.

7.1 Monitoring and evaluation

Decision-makers should work with staff to determine:

- measurable objectives and targets for the programme in general, for infant and young child feeding, and in particular for HIV and infant feeding
- what indicators to use, including where or at what level the pertinent data will be collected
- how frequently monitoring and evaluation will be done
- who will be responsible
- mechanisms for reporting and follow-up.

The baseline studies, situation analysis or formative research on which a comprehensive policy or programme is based provide information against which to measure change and progress.

Essential items to be monitored include the following:

- Status of policy and guidelines on infant and young child feeding, incorporating HIV considerations
- The quality of infant-feeding counselling and support for HIV-positive women at first antenatal or first postnatal visit
- Reported infant-feeding choice and practice at delivery and first follow-up visit
- HIV status and growth over 24 months in children of HIV- positive mothers, by feeding option
- Health effects of replacement feeding on other children and family members of women who use it
- Distribution of breast-milk substitutes and micronutrient supplements, if provided through the health system
- Correlation of amounts of commodities provided through the health system with the amounts dispensed to individual HIV-positive women
- Use of breast-milk substitutes and micronutrient supplements, if supplied by the health system
- Rates of exclusive breastfeeding or mixed feeding at different points in time
- Age of introduction of complementary food in the general population.

Special studies may be needed to collect data that relate to 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.
- The impact of various infant-feeding practices, in relation to HIV, on child health
- Feeding patterns of infants who die
- General manifestations and apparent impact of stigma on adherence to infant-feeding options

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.

The data necessary for monitoring and evaluation of HIV and infant feeding activities should be collected through the health information system in the country to the extent possible. Interested parties and key players such as NGOs may have a useful contribution to make.

Efforts may be carried out together with monitoring and evaluation of activities to prevent HIV infection in infants and young children. Many countries have set up systems of data collection based on indicators suggested and refined in various UN and other agency consultations. Several monitoring tools have been developed to date for HIV testing and counselling and prevention of HIV infection in infants, some of which include indicators relevant to infant feeding (see Annex 1).

7.2 Formative research

Decision-makers should encourage carrying out formative studies that:

- assess local feeding options and practices (including their affordability, feasibility, acceptability, sustainability and safety). Specifically, data should be collected on programmatic experiences in achieving either exclusive breastfeeding or exclusive replacement feeding during the first six months of life, early cessation of breastfeeding and transition to exclusive replacement feeding, and adoption of other recommended options of infant feeding, other than infant formula, such as the use of modified animal milk, heat treatment of expressed breast milk, wet-nursing and milk-banks
- guide national policies on HIV and infant feeding by determining which, and under what conditions, different feeding options might be offered. Formative studies could also be carried out locally to fine-tune counselling in particular

regions or culturally distinct areas of the country.

- can be undertaken through key informant interviews and focus-group discussions with mothers, communities, health workers and people living with HIV/AIDS.

WHO is currently supporting development of a guide for formative research on HIV and infant feeding.

7.3 Sharing of information

Decision-makers should ensure that:

- whatever information is collected in the course of the programme is shared with all those to whom it would be useful, including the communities concerned.
- researchers outside the programme are encouraged to share their early and final results
- there is rapid turn-around of information at local sites so that local clinics and facilities can monitor what is happening each month.
- meetings are held as appropriate to disseminate results from local monitoring, assessment and evaluation activities.

Outcomes of these local endeavours, as well as findings from new research, recommendations of international technical guidelines and related guidance, should be used in revising national guidelines periodically in response to new knowledge.

The information in this document is based on current knowledge on HIV and infant feeding. More research is under way and the findings will help to refine guidance. Work in this area, however, will also need 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: A Guide for health-care managers and supervisors*. Revised 2003. WHO, Geneva. Available from WHO, Geneva.

This guide is intended to assist mid-level health care managers and supervisors to plan, implement and strengthen services related to HIV and infant feeding.

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

incorporation 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.

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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

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.

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

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.

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 IAEA. 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

evidence 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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Infant-feeding options for HIV-positive women

REPLACEMENT FEEDING FROM BIRTH TO SIX MONTHS

Support for adequate replacement feeding is needed during the first six months of life, but also throughout the period for which breast milk is recommended, and during which a child is at greatest risk of malnutrition: that is, up to two years of life. From birth to six months of age, the diet should consist only of replacement milk in some form – that is, nothing else.

Replacement feeding by a woman who is HIV-positive should never result in mixed feeding – that is, breastfeeding at the same time as giving other forms of milk or food to a child under the age of six months – because the benefit of avoiding transmission through breastfeeding will be lost.

Options for replacement feeding up to six months are commercial infant formula, and home-modified animal milk.

■ 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 also available
- deficient in immune cells in breast milk, which 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 of formula. (After the first six months, an infant needs about 16 kg up to one year, if infant formula is continued in addition to complementary feeding.)

Experience to date with commercial infant formula

- Where governments have provided free formula together with programmes to prevent HIV infection in infants and young children, acceptance and adherence has varied. In some places acceptance appears to be high, but actual feeding practices at home have not been documented.
- Offering free infant formula to HIV-positive women has raised issues relating to counselling bias and equity: there are indications that counselling by health workers is biased towards formula feeding where free infant formula is offered. Mostly there is no equivalent nutritional or economic support available for HIV-positive women who choose other options.
- The impact on infant and subsequent child health in programmes proposing commercial infant formula as a feeding option has not usually been measured.
- Some programmes that initially offered formula for six months have revised guidelines to provide it for up to one year, on the basis of experience.
- Commercial formula is usually fed to a child with a bottle, despite recommending cup-feeding as an alternate safer way of feeding.

■ Home-modified animal milk

Fresh animal milk

- Infants can be fed on milk from cows, goats, buffaloes or sheep, as long as it is properly modified. In composition each of these forms of milk differs from the others and from human milk.
- 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 a micro-

nutrient syrup or powder (see Annex 10). 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.
- Availability is often highly variable with the season.
- Fresh milk sold through informal channels may already be diluted with unknown amounts of sometimes unsafe water.

Powdered full-cream milk and evaporated milk

- These products can be modified in the same way as fresh milk of animals.
- Micronutrients and sugar are similarly required.

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

Experience to date with home-modified animal milk

- Home-modified animal milk has been promoted where animal milk is widely available.
- There is no information on effects on health.
- There is little information on the types of micronutrient supplements being promoted with this option or their availability, or whether they are consistently given.
- Documentation of the use of modified animal milk suggests that it is rarely modified or supplemented adequately or accurately.

Details for mixing are given in other publications (see Annex 1).

■ Unsuitable replacement foods

An infant fed with the following foods as replacement feeding would suffer from micronutrient and energy deficiencies and subsequent health problems.

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, animal milk and any added water should be boiled, regardless of the source.
- When animal milk is used as a replacement milk after six months, additional micronutrients are also recommended, since often the available complementary foods do not provide all the micronutrients needed.

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

- 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 advisable option

■ Considerations for decision-makers on replacement feeding

- Incorrect preparation or unsafe storage of replacement feeds may result in increased diarrhoea and malnutrition in infants and young children
- If commercial infant formula is being provided free or at subsidized prices, decision-makers should:
 - implement the provisions of the International Code (see section 4.1)
 - adopt the Code and ensure adherence to it
 - make sure that health workers have ready access to national or local guidelines for dispensing and demonstration of formula preparation
 - be clear on sustainability and other issues (see section 4.4), including infant feeding once free formula is no longer provided
- Where home-modified animal milk is a local option, health services should ensure adequate procurement and distribution of micronutrients (Annex 10) and sugar, or see that they are available locally, and that they are used
- The provision of free infant formula alone does not guarantee exclusive formula feeding. Stigma associated with not breastfeeding may result in mixed feeding if health workers or counsellors do not support mothers, and if no action has been taken to

develop communication with the public or community capacity for support

- Health workers need to be sufficiently skilled in HIV and infant feeding counselling to avoid bias in counselling, and should have time and skills to follow up the mother and baby and reduce the social risks of the mother's choice
- Health-care providers and counsellors need training and time to teach HIV-positive mothers how to prepare replacement feeds and then to provide regular follow-up
- Women who practise replacement feeding should have easy access to family planning services, if desired
- Contamination of powdered infant formula with *Enterobacter sakazakii* has been reported in some industrialized countries, and a sub-committee of Codex Alimentarius is considering the implications.

BREASTFEEDING FROM BIRTH TO SIX MONTHS

■ Exclusive breastfeeding

- When replacement feeding is not acceptable, feasible, affordable, sustainable and safe, exclusive breastfeeding is recommended during the first months of life and should then be discontinued as soon as these conditions are in place, taking into account local circumstances, the individual woman's situation, the age and readiness of the child, and the risks of replacement feeding.
- Exclusive breastfeeding provides all the nutritional needs of a baby during the first six months of life.
- The amount of milk that a mother produces is determined by her breastfeeding practice (e.g., how often she breastfeeds), and not by the size of her breasts or by her nutritional status.
- Globally, about 35% of infants are exclusively breastfed for the first months of life, but rates of exclusive breastfeeding can increase dramatically with promotion, protection and support for breastfeeding, including individual counselling and communication strategies.
- Rates of breast health problems, e.g., engorgement, mastitis and nipple trauma, which are risk factors for HIV transmission through breastfeeding, can be significantly reduced with skilled counselling and support for breastfeeding and good breastfeeding practices.

- Growth monitoring and promotion can demonstrate adequate growth and allay mothers' concerns about whether they have enough milk to feed their babies.

■ Dangers of mixed feeding

- Exclusive breastfeeding is better for the infant and mother than mixed feeding. Mixed feeding should always be avoided because:
 - it carries the risks both of HIV transmission and of morbidity and mortality from diarrhoea and other illnesses
 - there is some evidence that it may carry a higher risk of HIV transmission than exclusive breastfeeding
- Mixed feeding may be difficult to avoid during transition from exclusive breastfeeding to replacement feeding.
- HIV-positive women who cannot safely stop breastfeeding even at, or soon after, six months will need support to make breastfeeding and complementary feeding as safe as possible, including information on maintaining breast health and seeking early care for breast problems.

■ 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, given 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 to guide national policies and guidelines, and no blanket recommendation should be specified for all mothers. However, since exclusive breastfeeding is not generally recommended for infants beyond six months, early cessation of breastfeeding is appropriate at or before this time.
- Early 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 more likely to transmit the infection.

■ Transition from exclusive breastfeeding to replacement feeding

- Preliminary experience indicates that mothers can stop breastfeeding in a period of 2–3 days to 2–3 weeks with counselling and support.
- Early cessation carries risk to mothers and infants: mastitis and breast abscesses in the mother; distress, restlessness, loss of appetite and diarrhoea in the infant; and family and community objections.
- The younger the infant, the more difficult is early cessation, especially before the age of six months. The impact of this practice on HIV transmission and infant survival is not yet known.
- Safe transition depends on the availability of a nutritionally adequate diet as an alternative to breastfeeding.

For some infants, the risk of malnutrition and other morbidity may still be greater from excluding breast milk than the risk of HIV transmission through continued breastfeeding, even after six months.

■ Considerations for decision-makers on breastfeeding:

- Breastfeeding HIV-positive mothers need specific guidance and support at two periods: during the first months, to exclusively breastfeed as safely as possible; and when they cease breastfeeding, to avoid harmful nutritional and psychological consequences, to maintain breast health and to avoid an unwanted pregnancy. (See Box 6, on the value of breastfeeding, for information on its child-spacing effects).
- Health workers and counsellors must have training and time to provide such guidance and support.

BREAST-MILK FEEDING

Wet-nursing

- Wet-nursing is traditional in some cultures
- It carries a risk of HIV transmission to the infant if the wet-nurse is HIV-infected
- Monitoring the HIV status of a wet-nurse may be difficult
- A prospective wet-nurse should be HIV-tested and counselled voluntarily; should maintain breast health; and if sexually active, should practise safer sex

- The infant and wet-nurse will need to be in continuous contact to facilitate good breastfeeding practices
- There is a theoretical but undocumented risk to the wet-nurse if the infant is already HIV-infected.

Experience to date with wet-nursing

- There is no documented experience of wet-nursing in this context.

■ Expressing and heat-treating breast milk

- Breast milk can be expressed manually or with a breast pump
- Pasteurization or bringing breast milk to the boil kills HIV, but also damages protective cells and may alter enzymes and affect some vitamins
- High motivation is needed to feed infants in this way over the long term
- Expressed heat-treated breast milk is recommended as a help in the transition from breastfeeding to replacement feeding, and for low-birth-weight infants at greater risk of artificial feeding
- Hygienic practices are essential in handling expressed breast milk to avoid diarrhoeal disease

Experience to date with expressing and heat-treating breast milk

- Many women when separated from their babies for short periods use expressed breast milk that is not heat-treated, but there is little documentation of HIV-positive women using this option during transition or exclusively over several months
- 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

■ Breast-milk banks

- Breast-milk banks may be very useful for sick and low-birth-weight babies

Experience to date with breast-milk banks

- Experience with milk banks in Latin America, especially in Brazil and South Africa, has been positive, although limited in relation to HIV infection.

■ Considerations for decision-makers on breast-milk feeding options

- Health-care providers and counsellors should have time and skills to give mothers adequate information, demonstrate techniques when necessary, and follow up mothers and their infants
- Wet-nursing
 - HIV testing and counselling should be easily available to women who may be willing to be wet-nurses
 - In areas of high HIV prevalence, women should be advised of the dangers of casual wet-nursing without testing
- Breast-milk banks
 - Before this option is considered, breast-milk banks should already be functioning according to recognized standards, including heat-treatment of donated milk and screening of donors for HIV
 - Where breast-milk banks exist, adequate resources must be provided to handle possible extra, HIV-related, demand for milk.

FEEDING FROM SIX MONTHS TO TWO YEARS

- All children need suitable complementary food from the age of six months
- Non-breastfed infants and young children from six months of age should ideally continue to receive a suitable breast-milk substitute as well as complementary foods made from properly prepared and nutrient-rich family foods.

- The general principles of complementary feeding are the same for a child receiving a milk source, such as commercial infant formula or animal milk, as for a child being breast-fed.
- When milk is part of the diet, complementary foods are needed 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 additional nutritious snacks offered once or twice a day.
- 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's milk or yoghurt should be included as a source of protein and calcium; other animal products such as eggs, 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 are needed, especially iron, according to WHO or national guidelines

■ Considerations for decision-makers on replacement and complementary feeding from six months of age

- If no suitable breast-milk substitute is available after breastfeeding has stopped, and foods available for complementary feeding are not adequate, the child is at severe risk of malnutrition.
- Health-care providers and counsellors need training and time to help mothers choose suitable replacement and complementary foods, and to practise responsive feeding
- Health services should ensure adequate procurement and distribution of micronutrients, or ensure that these are available locally.

ANNEX 6

National policy on infant and young child feeding

This Annex contains the outline with selected excerpts from the Republic of Botswana National Policy on Infant and Young Child Feeding, produced by the Ministry of Health in October 2002. This text is reproduced with the permission of the relevant authorities. The full document may be requested from the Ministry of Health, Gaborone, Botswana.

Foreward

Background and rationale

- 1.8 It is within the above background that the policy on infant and young child feeding is recommended. The policy shall,
 - 1.8.1 Put in place comprehensive measures that shall take cognisance of all the infant and young child feeding issues, existing policies, programmes and efforts and contribute towards reduction of malnutrition, illnesses and infant and young child mortality, by revitalising efforts to protect, support and promote optimum infant and young child feeding.
 - 1.8.2 Be a framework for reviews and updates for new knowledge according to prevailing challenges, opportunities and new International Conventions and Recommendations.
 - 1.8.3 Help streamline the special support needed for different target groups of children – those in HIV situations, in difficult circumstances and the general population, to ensure no child is left out.
 - 1.8.4 Guide resource investments by articulating areas of greater concerns and defining roles of the different stakeholders leading to better delivery and cost effectiveness.
 - 1.8.5 Improve health outcomes in children that shall have lasting effects including better performance in schools and at work; and

reduced hospital costs to the society due to reduced risk of diseases.

- 1.8.6 The proposed policy has a very high success factor because Botswana has a well established health infrastructure and systems.

Policy goals and objectives

- Goal

The Botswana National Infant and Young Child Feeding Policy, undertakes to protect, respect and fulfil children's rights, through protection, promotion and support of optimal infant and young child feeding; and contribute to the reduction of malnutrition, child morbidity and mortality, and to ensure their healthy development.

- Scope

- Policy Principles

- Objectives

Policy statement

This policy shall be known as the “Botswana National Policy on Infant and Young Child Feeding, 2002” and re-affirms its commitment to the World Health Assembly Resolutions, including WHA. 54.2, of 2001, recommending exclusive breastfeeding for six months as a public health measure, the WHA Res. 55.25, 2002, re-committing governments to protection, promotion and support of optimal infant and young child feeding; and the WHO/UNICEF/UNAIDS policy guidelines on HIV and infant feeding (1998); and it incorporates the Botswana situation, reflecting Government's commitments.

- Optimal Infant and young child feeding for the General Population
- Optimal infant and young child feeding in relation to decisions about HIV/AIDS
- Optimal infant and young child feeding for children in difficult circumstances

Strategies for implementation

The specific strategies under various sectors shall ensure that:

- The Legal, Gender Policy and Cultural considerations are made by all concerned through reforming of national regulations, customs, socio-cultural and economic values to ensure improved women and children's conditions and position in society as these affect care and nutrition of the family and especially of the infant and the young child.
- Advocacy and Social Mobilisation, is strengthened for infant and young child feeding, and related issues, so that these are addressed within the mandates or work of different ministries, NGO's, community based organisations, political and traditional leadership groups, the different media houses, learning institutions, and the relevant private sector.
- Information, Education and Communication strategy shall be developed or strengthened and shall aim at delivering appropriate technically correct and up to date information on optimal infant and young child feeding.
- There is Capacity Development strategy, whether – Organisational, Managerial, and Technical, that shall enhance effectiveness and efficacy at the national, district and community level for implementation of this policy and other related policies and programmes.
- Counselling and Support Services shall be developed and greatly enhanced within existing

programmes and new approaches, to address the stigma surrounding HIV and AIDS that affects the mothers' decisions for optimal infant and young child feeding.

- Effective programme Monitoring and Evaluation shall be an integral part of any Infant and young child feeding interventions in order to provide the necessary data that can inform planning and programming.
- Coordination is streamlined and greatly enhanced to ensure effective involvement of all key stakeholders, makes maximum use of resources, provides guidance, sets standards of achievement, is sensitive to gender equality and equity and effectively links to other existing policies and programmes.

Implementation and coordination

- Implementation and coordination
- Policy, monitoring, evaluation and review
- Resource implications

National response

Annex One: Terms of Reference and Membership of the Proposed Food and Nutrition Council

Annex Two: Definition of Terms

Annex Three: Policy Development Task Force

ANNEX 7

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.

ANNEX 8

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, non-governmen-

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>

tal 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 World 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

ANNEX 9

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 10

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 |

For further information, please contact:

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