



The purpose of this *HIV and Infant Feeding Framework for Priority Action* is to recommend to governments key actions, related to infant and young child feeding, that cover the special circumstances associated with HIV/AIDS. The aim of these actions is 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 the Framework include national policy-makers, programme managers, regional advisory bodies, UN staff, professional bodies, non-governmental organizations and other interested stakeholders, including the community.

This Framework has been developed as a collaborative effort between all the UN agencies whose logos appear on the cover.

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HIV AND INFANT FEEDING



FRAMEWORK FOR PRIORITY ACTION



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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, immedi-

ate 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.

References

Butz WP, Habicht J-P, Da Vanzo J. Environmental factors in the relations between breastfeeding and infant mortality: The role of sanitation and water in Malaysia. *Am J Epidemiol* 1984; 119(4):516-25.

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.

Dunn DT, Newell ML, Ades AE, et al. Risk of human immunodeficiency virus type 1 transmission through breastfeeding. *Lancet* 1992; 340:585-8.

Leroy V, Newell ML, Dabis F, et al. International multicentre pooled analysis of late postnatal mother-to-child transmission of HIV-1 infection. *Lancet* 1998; 352:597-600.

Miotti PG, Taha TE, Kumwenda NI, et al. HIV transmission through breastfeeding: a study in Malawi. *JAMA* 1999; 282:744-9.

Nduati R, Richardson BA, John G, et al. Effect of breastfeeding on mortality among HIV-1 infected women: a randomised trial. *Lancet* 2001; 357:1651-5.

Pelletier DL, Frongillo Jr EA, Habicht J-P. Epidemiologic evidence for a potentiating effect of malnutrition on child mortality. *Am J Public Health* 1993; 83:1130-33.

Read JS, Newell ML, Dabis F, et al. Breastfeeding and late postnatal transmission of HIV-1: an individual patient data meta-analysis. Abstract TuOrB1177, 14th International AIDS Conference, Barcelona, Spain, July 2002.

UNAIDS. Technical update: mother-to-child transmission of HIV. 2000.

UNAIDS/WHO. AIDS epidemic update. 2002.

VanDerslice J, Popkin B, Briscoe J. Drinking-water quality, sanitation, and breastfeeding: Their interactive effects on infant health. *Bull WHO* 1994; 72(4):589-601.

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

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



WHO Collaborative Study Team on the Role of Breastfeeding on the Prevention of Infant Mortality. Effect of breastfeeding on infant and child mortality due to infectious diseases in less developed countries: A pooled analysis. *Lancet* 2000; 355:451-5.

WHO Statement. Effect of breastfeeding on mortality among HIV-infected women. 2001.

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.

Working Group on Mother-to-Child Transmission of HIV. Rates of mother-to-child transmission of HIV-1 in Africa, America and Europe: results from 13 perinatal studies. *Journal of Acquired Immune Deficiency Syndromes* 1995; 8:506-510.

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, Schwartlander 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 various 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 preg-

nancy, 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 risk 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 breastfeeding¹ has in lowering mortality. The conclusions are also some-

¹ 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.

what 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 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, afford-*

able, 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 feasible². 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 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.

² This would normally imply the same conditions as for replacement feeding from birth, that is, acceptable, feasible, affordable, sustainable and safe.



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 ac-

tions 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



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.



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.

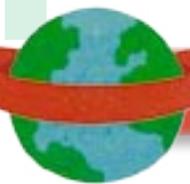
HIV and infant feeding is a complex issue, and there are still significant knowledge gaps, including whether antiretroviral prophylaxis for an infant during breastfeeding, or antiretroviral treatment for a breastfeeding mother, are safe and effective in reducing HIV transmission. Identification and implementation 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 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 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 feeding 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, and 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,