SECTION 1: Introduction to current HIV and infant feeding policy

HIV, the human immunodeficiency virus, and AIDS, the acquired immunodeficiency syndrome caused by HIV, affects mainly sexually active adults. However, babies and children can also be infected through their mother and (indirectly) her sexual partner. HIV can be vertically transmitted to a baby before, during or after delivery, including through breastfeeding. Due to the risks to infant and young child survival posed by artificial feeding, this creates a dilemma for policy-makers and health workers in making recommendations about how HIV-exposed babies should be fed.

The World Alliance for Breastfeeding Action (WABA) works with United Nations agencies, breastfeeding organisations and other interest groups, including people living with HIV & AIDS, women’s and sexual and reproductive health groups, to improve maternal and child health and well-being. WABA’s aim is to clarify how, in a situation of competing infant feeding risks, each individual child’s chance to survive and thrive can be maximised.

Target Group
WABA has produced this Kit as a resource to clarify the confusion which has arisen during the last decade due to changing HIV and infant feeding guidance. The Kit is intended for policy-makers, breastfeeding advocates, national breastfeeding committees, public health advocates, women’s health activists and others working in the community. These groups often have difficulty accessing accurate information and may struggle with misinformation and misunderstanding, particularly in light of the most recent changes, which reverse some important aspects of previous guidance. We hope the Kit will enable them to work in their communities with confidence.

Changes in the HIV and Infant Feeding Guidelines
The Kit also summarises up-to-date scientific evidence as at the end of 2012. Research emerging between WHO’s 2006 and 2010 guidance documents showed conclusively that maternal/infant ARV regimens during pregnancy and breastfeeding greatly reduce vertical transmission of HIV; and that exclusive and continued breastfeeding significantly improves overall HIV-free survival.1 Even when ARVs are not available WHO

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current recommends that mothers should be counselled to exclusively breastfeed in the first six months of life and continue breastfeeding thereafter unless environmental and social circumstances are safe for and supportive of replacement feeding.2 Most studies fail to find any evidence that breastfeeding causes significant harm to the health of the mother. These findings provide the basis for the current recommendation that national and sub-national health authorities should decide on the strategy that will most likely prolong the lives and improve the health of HIV-positive mothers while simultaneously providing their infants with the most likely chance of HIV-free survival. This means that most HIV-positive mothers should receive lifelong ARV therapy/prophylaxis and that a recommendation should be made that they either breastfeed until their babies reach 12 months of age (or until an adequate alternative diet can be provided), or avoid all breastfeeding.

Support for Dissemination and Implementation
Training for providers and good communication at all levels is important to ensure that health workers in richer and poorer districts within countries give clear and consistent recommendations based on current evidence. We call on the international community to fund and support dissemination of the new WHO HIV and Infant Feeding Guidelines and assist decision-makers at national, regional and district level to implement them.

What this HIV Kit Contains
This HIV Kit provides an overview of infant feeding in the context of HIV.

The content is based on evidence available at the time of writing (late 2012). HIV is an area of active research and new information becomes available all the time. Sources are listed from which you can access the latest information.

There are six sections, with information, issues to think about and to discuss, actions to take, and contacts for further resources.

Section 1: Introduction.
This Section provides an overview of the importance of breastfeeding and reviews current HIV and infant feeding guidelines for prevention of vertical transmission of HIV. It explores the need for support in disseminating and implementing an effective programme to maximise the health and survival of HIV-positive women and their children.

Section 2: The global HIV pandemic and how it affects women and children
This Section explores the AIDS pandemic’s unique impact on women and babies, their vulnerability to HIV, how they become infected, how HIV-infection is determined, and how HIV affects women in the societies and communities in which they live.

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Section 3: Interventions to maximise mother and child health and survival
This Section reviews risk factors for postnatal transmission of HIV (through breastfeeding) and outlines the up-to-date research underpinning current interventions to improve the health of HIV-positive mothers and maximise HIV-free child survival:

- Appropriate and effective maternal/infant antiretroviral regimens lead to:
  - Improved health and longer survival of HIV-positive mothers.
  - An extremely low risk of postnatal transmission.
- Exclusive and continued breastfeeding to 6 and 12 months respectively reduces postnatal transmission and maximises infant HIV-free survival.
- Replacement feeding, while eliminating postnatal transmission of HIV, increases overall rates of malnutrition and infant mortality.

Section 4: Counselling HIV-positive mothers about how to feed their babies using current HIV and infant feeding recommendations.
This Section outlines:

- Current recommendations for breastfeeding with ARV interventions.
- The role of counselling to assist and support exclusive and continued breastfeeding.
- Current criteria for deciding if replacement feeding is appropriate:
  - Reduction of spillover of replacement feeding into the wider community.
  - Control of marketing of breastmilk substitutes.

Section 5: Chronology and evolution of HIV & IF policy
This section summarises the stages of development of HIV and infant feeding policies from 1985 to 2012.

Section 6: Glossary, definitions and further resources
This Section contains definitions of terms and acronyms used in the kit, as well as a list of further resources on HIV and breastfeeding, eg policy documents, reports, review articles and training materials.

The Importance of Breastfeeding to Infant and Young Child Health and Survival
Breastfeeding is optimal in almost all settings, but the HIV/AIDS epidemic and its potential for vertical transmission, has challenged the established notion of full breastfeeding for all. In 2003, WHO determined that the vast majority of infants can and should be breastfed. As a global public health recommendation, infants should...
be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years or beyond.

**Recommendations on Infant and Young Child Feeding for the General Population**

Virtually all mothers can breastfeed provided they have accurate information and support within their families, communities and from the health care system. Exclusive breastfeeding from birth is possible except for a few medical conditions. Unrestricted exclusive breastfeeding results in ample milk production. Mothers need access to skilled practical help from trained health workers, lay and peer counsellors, and certified lactation consultants, (IBCLCs) who can help to build mothers’ confidence, improve feeding techniques, and prevent or resolve breastfeeding problems.

Recommendations on breastfeeding for the general population in all countries suggest:

- Start breastfeeding within one hour of birth.
- Breastfeed exclusively for the first six months of life.
- Give nutritionally adequate and safe, age-appropriate complementary foods after six months, while continuing to breastfeed for up to two years of age or beyond.

**Current WHO HIV and Infant Feeding Recommendations**

In late 2009 a WHO Guideline Development Group reviewed new evidence emerging since the previous 2006 HIV and infant feeding guidelines were developed. As set out in Section 3, new research showed that antiretroviral (ARV) drugs given to the HIV-positive mother and her baby can substantially reduce HIV transmission through breastfeeding, and that replacement feeding by HIV-positive mothers resulted in increased overall infant mortality. These transformational findings resulted in the release of new recommendations outlining interventions to improve the health of HIV-positive women and give infants the greatest chance of HIV-free survival, as follows:

- 2010 different options on the use of antiretroviral drugs (ARVs) for treating pregnant women and/or providing prophylaxis to prevent HIV infection in infants.  
- 2010 revised recommendations on HIV and infant feeding.  
- 2012 further updated and simplified guidance on ARVs to merge treatment and prophylaxis options for HIV-positive women and their infants.

Recent developments suggest that substantial clinical and programmatic advantages can come from adopting a single, universal ARV regimen both to treat HIV-infected pregnant women and to prevent prenatal, intra-partum and postpartum transmission of HIV.

- To reduce the risk of HIV transmission during the breastfeeding period ARVs should be provided to the mother and child. For the first time, there is enough evidence for WHO to recommend ARVs while breastfeeding.
- Earlier ARVs should be provided for a larger group of HIV-positive pregnant women to benefit both the health of the mother and prevent HIV transmission to her child during pregnancy.


HIV-positive mothers should receive lifelong ARV therapy to reduce transmission through breastfeeding and provide their infants with the most likely chance of survival.

New evidence has emerged to support ARV treatment as HIV prevention, ie that provision of ART to HIV-infected individuals with higher CD4 cell counts, who are not eligible for treatment, significantly reduces sexual transmission to a serodiscordant (uninfected) partner; 6, 7 this evidence has led to new WHO recommendations on couples counselling and treatment for serodiscordant couples regardless of CD4 count. 8

Where ARVs are available, HIV-positive mothers are recommended to breastfeed until their babies are 12 months of age. Breastfeeding should be exclusive for the first six months of life, and should be continued until 12 months with appropriate complementary foods.

When ARVs are not (immediately) available, breastfeeding still provides infants with a greater chance of survival. Pending universal access to ARV interventions, national authorities should not be deterred from recommending that HIV-infected mothers breastfeed as the most appropriate infant feeding practice in their setting.

Breastfeeding should only stop once a nutritionally adequate and safe diet without breast milk can be provided and weaning should be gradual.

Infants and young children who are already HIV-infected should be breastfed in accordance with recommendations for the general population, ie exclusively for the first 6 months with continued breastfeeding for up to 2 years or beyond.

National or sub-national health authorities should decide whether health services will principally counsel and support HIV-positive mothers to either:

- Breastfeed and receive antiretroviral interventions (ARVs) or
- Avoid all breastfeeding as the strategy that will most likely give infants the greatest chance of HIV-free survival. This decision should be based on:
  - international recommendations and consideration of the socio-economic and cultural contexts of the populations served by maternal, newborn and child health services;
  - availability and quality of health services;
  - local epidemiology including HIV prevalence among pregnant women;
  - main causes of maternal and child under nutrition;
  - main causes of infant and child mortality.

Non-breastfed infants should be provided with safe and adequate replacement feeds, or heat-treated, expressed breastmilk, to enable normal growth and development. Replacement feeding should only be undertaken when explicit conditions regarding safety and sustainability are met. A simplified version of the “AFASS” concept (whether replacement feeding was acceptable, feasible, affordable, sustainable and safe) was developed to make it easier for health workers to recommend if replacement feeding would be appropriate.

Mothers should be informed about the practice which is recommended, but if they ask, they should also be informed about other alternatives that they might wish to adopt.

WHO has begun a comprehensive revision of all ARV guidelines, including guidance on ARVs for pregnant women, planned for release in early 2013. 6

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Breastfeeding: Taking the Public Health Approach to Infant Feeding

From 1997 until 2009, recommendations and training were underpinned by the guiding principle that HIV-infected mothers should be supported and assisted by an infant feeding counselor to make an informed decision about how best to feed their babies. Previous emphasis on HIV-transmission rates rather than on health outcomes meant that replacement feeding was often strongly communicated as the first choice of infant feeding method and that breastfeeding should be discontinued as soon as replacement feeding was AFAS. In 2006 exclusive breastfeeding was moved to the first option, and rapid cessation at six months was no longer recommended until a nutritionally adequate and safe diet without breastmilk could be provided.

National/Sub-national Recommendations Replace Maternal Infant Feeding Choice

The major change in the new guidance is that national health services should now make decisions about recommendations to improve HIV-free survival of infants, while also protecting the health of HIV-positive mothers – either for breastfeeding with ARV interventions or avoidance of breastfeeding altogether.

The decision about the optimal feeding method for an HIV-exposed infant is shifted away from a promotion of options from which a mother should choose, and replaced by a public health approach. The rationale is the consideration that if there is a medical consensus in favour of a particular option, patients prefer a recommendation rather than simply a neutral presentation of options, as was previously recommended. Thus, mothers known to be HIV-infected would want to be offered interventions:

- that can be strongly recommended,
- are based on high quality evidence and
- do not represent a conflict with the individual patient’s interests, either the infant’s or the mother’s.

A more directive approach to counselling about infant feeding – in which practitioners make a clear recommendation for or against breastfeeding, rather than simply presenting different options without expressing an opinion – is fully consistent with an individual rights framework. There is no single approach to counselling and consent that is appropriate in all situations. Rather, with all medical interventions, there is a continuum of options that is available, with the choice among options dependent on various contextual factors.

Introduction to current HIV and infant feeding policy

Most importantly, there is an acknowledgement that the effectiveness of ARVs to reduce HIV transmission through breastfeeding is transformational. In conjunction with the known benefits of breastfeeding to reduce mortality from other causes, it justifies an approach that strongly recommends a single option as the standard of care. Information about options should be made available, but services should principally promote and support one approach.

Breastfeeding with Maternal ARV Provides New Opportunities

The recent 2009/2010 WHO recommendations are the first to support the use of ARVs by mothers or their children while breastfeeding. 11, 12 The new guidance has the potential to:

- Reduce postnatal transmission of HIV to extremely low rates (see Section 3) and achieve the highest rates of HIV-free survival.
- Protect the health of HIV-positive mothers and prolong their lives.
- Facilitate consistent breastfeeding messages and support for all mothers for at least the first 12 months of life while providing additional ARV interventions for HIV-infected mothers and their infants.

Characteristics of Intervention

- Balance of risk and benefits of different options not clear (equipoise).
- Effective interventions supported by high quality evidence and cost benefit analysis.
- Danger to others if intervention not adhered to.

‘Counselling’ Approach

- Non-directive counselling (e.g., genetic testing; medical research).
- Disclosure of all options combined with professional recommendation (e.g., most major medical treatment).
- Disclosure of single option as standard with notification of right to refuse (e.g., HIV testing).
- Disclosure of single option as standard; right to refuse may be recognised, but patients are not notified of this right (e.g., tuberculosis treatment).
- Non-consensual intervention (e.g., psychotropic medications to stabilise dangerous patients).

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Allow a return to the promotion of infant feeding practices for all mothers, whether HIV-infected or not, that are closer to customary breastfeeding feeding patterns:

- Protecting HIV-positive women from the stigma attached to formula-feeding. 13
- Resolving previous difficulties and confusion experienced by health workers about feeding choice.
- Reversing spillover of replacement feeding to uninfected mothers. 13, 14

Contribute significantly towards achieving development goals by reducing infant morbidity, mortality, malnutrition and illness, benefiting the entire population.

Leadership and Investment

Effecting the changes set out in the WHO 200 and updated 2012 guidelines will require acknowledgement that good healthcare requires investment, and that resources are committed by governments and other relevant agencies to protect, promote and support breastfeeding. 15, 16, 17

In its recently published updated Framework for Priority Action, 18 WHO proposes and clearly outlines how to achieve five priority actions for national governments:

- Develop or revise (as appropriate) a comprehensive evidence-based national infant and young child feeding policy which includes HIV and infant feeding.
- Promote and support appropriate infant and young child feeding practices, taking advantage of the opportunity of implementing the revised guidelines on HIV and infant feeding.
- Provide adequate support to HIV-positive women to enable them to successfully carry out the recommended infant feeding practice, including ensuring access to antiretroviral treatment or prophylaxis.
- Develop and implement a communication strategy to promote appropriate feeding practices aimed at decision-makers, health workers, civil society, community workers, mothers and their families.
- Implement and enforce the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions (the Code).
Introduction to current HIV and infant feeding policy

Investment Needs in the 22 Priority Countries

*Option A: Twice daily AZT for the mother and infant prophylaxis with either AZT or nevirapine for six weeks after birth if the infant is not breastfeeding. If the infant is breastfeeding daily nevirapine infant prophylaxis should be continued for one week after the end of the breastfeeding period.

*Option B: A three-drug prophylactic regimen for the mother taken during the pregnancy and through the breastfeeding period as well as infant prophylaxis for six weeks after birth, whether or not the infant is breastfeeding.

Source: UNAIDS 2011, Countdown to Zero; eliminating HIV infection in children and saving mothers’ lives.
Cost Estimates

WHO has undertaken to work with countries to rapidly implement the updated ART, PMTCT and Infant feeding recommendations and in particular to secure access to ARVs for all HIV-infected mothers.9 Other agencies and foundations have pledged financial support.9 Overall, the cost of the interventions to eliminate new HIV infections among children and keep their mothers alive in the 22 countries of highest HIV-prevalence where 90% of HIV-positive pregnant women who need services live, is estimated to be approximately US$ 1 billion per year between 2011 and 2015.20 Significant reductions in the price of first-line antiretroviral medicines mean that low-income countries can provide a year of antiretroviral therapy at a median cost of US$ 137 per person.21 US$500m is already invested annually for PMTCT, so that the shortfall is <US$300m, or US$2.5billion for the period 2011-2015.20 This includes costs for:

- HIV testing and counselling,
- CD4 counts for pregnant women testing HIV-positive,
- antiretroviral prophylaxis,
- antiretroviral treatment and co-trimoxazole for eligible women and children,
- family planning for women living with HIV,
- community mobilization and
- capacity building.

Modelling indicates that any feeding strategy that includes free provision of infant formula to HIV-infected mothers, even for a limited period of six months, is between two and six times more costly than a strategy that provides ARVs as lifelong treatment to eligible mothers and as prophylaxis to reduce postnatal transmission.2

Supporting Re-training of Counsellors and Healthworkers12

The revised national and sub-national policy statements and guidelines should:

- Clearly address which infant feeding alternative will be recommended and supported as a national recommendation, and disseminate the policy that both government-employed and NGO counselors will follow in a coordinated manner.
- Create and define revised counselling algorithms to eliminate counselling on individual choice.
- Provide concrete planning steps for introduction and implementation of these policies and guidelines, eg the roll-out of ARVs.
- Be well-coordinated to avoid confusion, mixed messaging and ensure coverage at scale.
- Inform the population at large and in particular pregnant women, health workers and HIV and nutrition counsellors about the content of the policy.
- Adequately and harmoniously address issues of infant feeding in the context of HIV in both PMTCT programmes and general IYCF programmes.
- Train and re-train health workers and counsellors according to updated evidence presented in the WHO 2010 HIV and infant feeding guidelines.
- Support supervision of health workers throughout the processes of change.


Key Points Section 1: Introduction

- The aim of revised global infant feeding recommendations is HIV-free survival of infants and improved health and survival of mothers.

- ARV drugs given to the mother and baby can substantially reduce HIV transmission through breastfeeding, and exclusive and continued breastfeeding provides the majority of infants with the greatest chance of HIV-free survival.

- HIV-positive mothers should receive lifelong ARV therapy/prophylaxis and are recommended to breastfeed until their babies reach at least 12 months of age.

- National or sub-national health authorities should decide whether health services will principally counsel and support HIV-positive mothers to either breastfeed with ARVs or avoid all breastfeeding as the strategy most likely to give infants the greatest chance of HIV-free survival.

- HIV-positive mothers should receive Infant feeding recommendations rather than simply a neutral presentation of options.

- Dissemination and implementation of current recommendations, and re-training of healthworkers will require funding and co-ordinated strategies as part of a broad programme in and outside the context of HIV.

Section 2 explores the AIDS pandemic’s unique impact on women and babies, how they become infected, their vulnerability to HIV, and the role of society in assisting mothers and HIV-exposed babies.

References and further reading are listed in Section 6.
The World Alliance for Breastfeeding Action (WABA) is a global network of individuals and organisations concerned with the protection, promotion and support of breastfeeding worldwide. WABA action is based on the Innocenti Declaration, the Ten Links for Nurturing the Future and the Global Strategy for Infant & Young Child Feeding. WABA is in consultative status with UNICEF and an NGO in Special Consultative Status with the Economic and Social Council of the United Nations (ECOSOC).