

IBFAN Asia Position Statement on

HIV and Infant Feeding

2015



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International Baby Food Action Network (IBFAN), Asia

Introduction

IBFAN Asia developed a “Position Statement on HIV and Infant Feeding” in the year 2001 and revised it in 2008 and 2012 based on the scientific evidences available at that time including guidelines of WHO and other key international documents (1-6), envisaging that it would be useful for policy makers, programme managers, NGOs and international organisations working on maternal and child health and prevention of HIV infection. In 2008 IBFAN Asia and BPNI also developed a consensus call to national child health programs titled “Drop mixed-feeding” to emphasize the need to avoid mixed feeding, thereby reducing chances of mother to child transmission of HIV (7). BPNI/IBFAN Asia also published HIV and Infant Feeding - An information

booklet for policy and programme managers in India in 2013 (8).

In the last few years, a significant amount of new research evidence and programmatic experience on infant feeding in HIV positive women has emerged, leading to a major shift in policies and programmes on infant feeding. Infant feeding recommendations to HIV positive mothers now aims for greatest likelihood of HIV free survival of their children rather than prevention of HIV transmission.

This has prompted IBFAN Asia to revise its earlier statement document incorporating new research findings, protocols, and guidelines available up to September 2015.

Infant And Young Child Feeding Practices And Child Survival

The first two years of life provide a critical window of opportunity for ensuring children's appropriate growth and development through optimal feeding. The Bellagio Child Survival Study Group provide sufficient grounds to believe that estimated under-five deaths can be prevented by 13% with universalization of breastfeeding and additional 6% by appropriate complementary feeding (9).

According to the Global Strategy for Infant and Young Child Feeding adopted by the World Health Assembly in 2002, two thirds of all deaths under the age of five occur during the first year of life and are related to inappropriate feeding practices (5). Under-nutrition is rampant among infants and this can be prevented to a significant extent by optimal breastfeeding and timely appropriate and adequate complementary feeding. There are also ample evidences to suggest that inappropriate feeding practices predispose infants to cardiovascular diseases and obesity in adulthood. Exclusive breastfeeding protects infants from rapid weight gain in the postnatal period, which is closely related to development of insulin resistance and later overweight and obesity (10). Breastfeeding also leads to higher IQ and earning capacity later in life as proved in a recent research showing increasing IQ, educational attainment and monthly income with increasing breastfeeding duration apart from helping to prevent

non-communicable diseases (11, 12). The World Health Organization in a systematic review reported that subjects who were breastfed experienced lower mean blood pressure and total cholesterol, as well as higher performance in intelligence tests and prevalence of overweight/obesity and type-2 diabetes was lower among breastfed subjects (12). A study have reported that exclusively breastfed infants are likely to have lower cholesterol by one year of age and continue to have 'good lipid profile' in to adulthood (13).

A WHO study of infant feeding patterns and risk of death and hospitalization in the first half of infancy confirms that risk of deaths is 10 times higher in non-breastfed infants and 2.5 times higher in partially-breastfed infants (14). Diarrhea and pneumonia are more common and severe in children who are artificially fed and are responsible for many of these deaths. Diarrheal illness is more common in artificially fed infants even in situations with adequate hygiene. Other acute infections, including otitis media, Haemophilus influenza meningitis and urinary tract infection are less common and less severe in breastfed infants (15). Relevance of early initiation of breastfeeding to prevent neonatal mortality is well established and approximately 22% of all neonatal deaths could be prevented if in all women, breastfeeding is initiated within one hour of birth (16).

Exclusively Breastfed infants are less likely to develop iron deficiency anemia and term exclusively breastfed infants do not require iron supplementation before 6 months of age (17).

The preventive effect of exclusive breastfeeding on major childhood morbidities like diarrhea and pneumonia and also on mortality due to these diseases has been amply highlighted in the Lancet series on maternal and child under nutrition (18). The series concluded that:

1. The relative risk for all cause mortality for predominant (breastfeeding plus water) as compared to exclusive breastfeeding was 1.48 while for partial breastfeeding it was 2.85.
2. The relative risk of diarrhea mortality were 2.28 and 4.62 while pneumonia mortality were 1.75 and 2.49 for predominant (breastfeeding plus water) and

partial breastfeeding as compared to exclusive breastfeeding.

A systematic review and meta-analysis has concluded that the relative risk for all-cause mortality for predominant (breastfeeding plus water) as compared to exclusively breastfed infants 0-5 months of age was 1.5, for partial breastfeeding it was 4.8 and for no breastfeeding it was 14.4. Children 6-11 and 12-23 months of age who were not breastfed had 1.8- and 2.0-fold higher risk of mortality, respectively when compared to those who were breastfed. Risk of infection-related mortality in 0-5 months was higher in predominantly (RR 1.7), partially (RR 4.56) and non-breastfed (RR 8.66) infants compared to exclusively breastfed infants. The risk was two fold higher in non-breastfed children when compared to breastfed children aged 6-23 months (19).

HIV Transmission and Breastfeeding

Transmission of HIV from mother to the baby may occur during pregnancy, delivery or through breastfeeding. In the absence of any interventions to prevent or reduce transmission, about 5-10% of HIV-infected women pass the virus to their infants during pregnancy; between 10-20% during labour and delivery; and another 10-20% post-natally through breastfeeding over a period of 24 months (20). If we imagine 100 HIV+ve women, taking midpoint of ranges of transmission, one would expect 7 of their infants to be infected with HIV during pregnancy, another 15 during labour and delivery, and another 15 over a period of 2 years of breastfeeding; 63 infants would not get HIV infection, even if breastfed for 2 years and without any intervention in place to prevent transmission (21).

There are number of factors which affect transmission of HIV from mother to baby:

1. Immune status of the mother: Low CD4 T-lymphocyte counts have been associated with a greater risk of postnatal HIV transmission. A study from Zimbabwe has revealed that HIV Infection among children increased if the mother's CD4 count was ≤ 200 cells/ μ L (22). In the BHITS meta-analysis of data from nine intervention trials in sub-Saharan Africa the risk of late postnatal acquisition of infection increased eightfold when CD4 cell counts were below 200 per ml, and 3.7 fold where

CD 4 cell counts were between 200 and 500 per ml (23).

2. **RNA viral load in plasma and breastmilk:** Increased maternal RNA viral load in plasma and breastmilk are strongly associated with increased risk of transmission through breastfeeding. (24)
3. **ART / ARV prophylaxis to HIV+ women and their babies:** There is now enough evidence that the risk of acquiring HIV infection through breastmilk is significantly reduced by concurrent ARV interventions (ART to all pregnant women / ARV prophylaxis to mother if ART is not indicated and ARV prophylaxis to the infant) (25,26). ART/ARV intervention will improve CD4 count of the mother and decreases RNA viral load in the plasma and breastmilk and thus HIV transmission.
4. **Type of infant feeding:** The change of transmission of HIV is maximum if the baby receives mixed feeding i.e. breastfeeding and infant formula/ animal milk feeding both. According to the studies, the risk of transmission is double in mixed feeding in comparison to exclusive breastfeeding (27). Immune factors present in breastmilk like sTLR2 play critical role in preventing infection in exclusively breastfed infants (28).
5. **Breast conditions:** Cracked or bleeding nipples, mastitis or breast abscess is known to increase the risk of HIV transmission through breastfeeding. A

study from Kenya has identified maternal nipple lesions and mastitis as risk factors for postnatal mother-child transmission of HIV (29).

6. **Recent infection with HIV:** A woman who has been infected with HIV during pregnancy or while breastfeeding is more likely to transmit the virus to her infant. Viral load in maternal blood is high in first few weeks after new infection until the body begins to manufacture antibodies that suppress the virus.
7. **Infection with Sexually Transmitted Diseases (STDs):** Maternal STD infection during pregnancy may increase the risk of HIV transmission to the unborn baby.
8. **Antenatal obstetrical interventions:** Chorionic villus aspiration, amniocentesis, amnioinfusion etc. increase risk of HIV transmission.

Infant Feeding Choices for HIV Positive Women

The fact that the HIV virus can pass through breastfeeding, and that breastfeeding has life saving implications, has been the dilemma faced by all, including health personnel and women who are HIV positive, on what to choose to feed their babies: exclusive breastfeeding or replacement feeding.

In the past, mothers with HIV infection were counselled not to breastfeed to prevent HIV infection but it did not reduce child mortality, babies were dying of diarrhea, pneumonia, and other infections. In developing countries, where the majority of mothers with HIV infection live, complete avoidance of breastfeeds are often not feasible, resulting in mixed feeds and consequent increase in risk of HIV transmission. For HIV infected mother living in a poor household, it is important to consider carefully, the risks related with not breastfeeding. Promotion of replacement formula feeding to prevent HIV infection in such situations might increase infant malnutrition, morbidity and mortality. Not breastfeeding is associated with an increased risk of serious infections especially during the first 3 months of life (30). Thus mortality among HIV exposed infants on replacement feeds has been high and has negated the decrease in risk of HIV transmission in such babies (31,32). Higher early infancy hospitalization was seen in replacement-fed infants

9. **Intervention during delivery:** ARM, episiotomy, instrumentation, and version increase HIV transmission.
10. **Duration of breastfeeding:** The longer the duration of breastfeeding, the longer the infant is exposed to the risk of HIV infection, especially where breastfeeding is mixed with other foods/drinks.
11. **Nutritional status of HIV+ women:** A good nutritional status of mother is important as it boosts the mother's immune system and lessens progression of HIV.
12. **Infant's oral health:** Breach in the mucosal linings of the oral cavity increases the risk of HIV transmission. Vigorous suction of the mouth after birth, cheilitis, stomatitis and oral thrush are some of the conditions carrying higher risk of transmission.

born to HIV infected mothers in Pune, India and other countries (33, 34). Risk was higher even in educated and well to do families (34). Balancing the risk of infants acquiring HIV infection through breastmilk with the risk of death from causes other than HIV, particularly malnutrition and diarrhea is the key principle for choosing feeding option now (35). More over, the last decade has seen accumulation of a significant amount



of research evidence and programmatic experience on antiretroviral (ARV) prophylaxis to prevent mother to child transmission of HIV infection. Risk of acquiring HIV infection through breastmilk is significantly reduced by concurrent ARV interventions (ART to the mother /ARV prophylaxis to mother and /or ARV prophylaxis to infant) (25,34). A recent Cochrane review has reported antiretroviral prophylaxis, whether used by the HIV-infected mother or the HIV-exposed infant while breastfeeding is efficacious in preventing mother-to-child transmission of HIV (36).

Although safe infant feeding practices are crucial to prevent mother to child transmission of HIV, countries are not optimally investing in policies and programmes on infant feeding and HIV. Assessment of policies and

programmes using the World Breastfeeding Trends Initiative (WBTi) has identified various gaps in national policies and programmes on existence of appropriate guidelines, availability of counselling services and health care for the mother and infant, training of the health care staff etc (37). Such a situation affects mother's capacity to practice optimal IYCF practices, thus giving way to practice of mixed feeding, and pre-lacteal feeding. Providing regular and consistent services facilitate compliance with WHO breastfeeding recommendations and best practices in resource limited settings (38). Various research studies have shown that IYCF counselling through the PMTCT programme helps HIV-positive mothers to undertake safer infant feeding (39,40).

What are the International Guidelines?

With the emergence of new research evidence, WHO in 2010 recommended that antiretroviral drugs should be provided to the mother or the infant throughout breastfeeding to reduce the risk of postnatal transmission. Life long ART was recommended for women eligible for treatment (CD4 counts or presence of WHO clinical stage 3 or 4 disease) and ARV prophylaxis for those not eligible for treatment(6). For those not eligible for treatment, two prophylaxis regimens were recommended:

“Option A”: AZT for the mother during pregnancy, single dose NVP(sd-NVP) plus AZT and 3TC for the mother at delivery and continued for a week postpartum;

“Option B”: Triple ARV drugs for the mother during pregnancy and throughout breastfeeding.

Both prophylaxis options included four to six weeks of peripartum NVP or AZT for the infant regardless of whether the mother was breastfeeding.

WHO advised countries to choose a national approach for their ARV option for PMTCT based on operational consideration. WHO also recommended that countries while deciding feeding option should avoid harm to infant feeding practices in the general population by counselling and support to mothers known to be HIV-infected and health messages to the general population should be carefully delivered so as not to undermine optimal breastfeeding practices among the general population. Mothers who are known to be HIV

uninfected or whose HIV status is unknown should be counselled to exclusively breastfeed their infants for the first six months of life and then introduce complementary foods while continuing breastfeeding for 24 months or beyond. Mothers whose status is unknown should be offered HIV testing. Mothers who are HIV uninfected should be counseled about ways to prevent HIV infection and about the services that are available, such as family planning, to help them to remain uninfected.

“Option B +”: In 2011, Malawi implemented a new approach of lifelong ART for all pregnant and breastfeeding women with HIV regardless of CD4 count or clinical stage. WHO in 2012 supported this approach of providing an optimized, fixed dose combination first-line ARV regimen of TDF+3TC (or FTC)+ EFV to all pregnant and breastfeeding women with HIV (41).

WHO recommendation 2013

World Health Organization has published a consolidated guideline on the use of antiretroviral drugs for treating and preventing HIV infection in June 2013 (42). These 2013 guidelines recommend ART for all pregnant and breastfeeding women with HIV during the period of risk of mother to-child HIV transmission and continuing lifelong ART either for all women or for the women meeting eligibility criteria for their own health. Option A was no longer recommended. (See Table 1)

Table-1: WHO recommended options for ART for PMTCT (Adapted from reference 42)

National PMTCT programme option	Pregnant and breastfeeding women with HIV		HIV-exposed infant	
	Regardless of WHO clinical stage or CD4 cell count		Breastfeeding	Replacement feeding
Use lifelong ART for all pregnant and breastfeeding women (“Option B+”)	Initiate ART and maintain after delivery and cessation of breastfeeding		6 weeks of infant prophylaxis with once-daily NVP	4–6 weeks of infant prophylaxis with once-daily NVP (or twice-daily AZT)
Use lifelong ART only for pregnant and breastfeeding women eligible for treatment (“Option B”)	Eligible for treatment ^a	Not eligible for treatment		
		Initiate ART and maintain after delivery and cessation of breastfeeding ^b	Initiate ART and stop after delivery and cessation of breastfeeding ^c	

a CD4 count ≥ 500 cells/mm³ or clinical stage 3 or 4 disease at the time of ART initiation or in accordance with national guidelines.

b Patients who develop clinical or laboratory criteria indicating failure during pregnancy or the breastfeeding period should be assessed for second-line therapy.

c In the case of breastfeeding stop ART one week after breastfeeding ends. In the case of replacement feeding stop ART after delivery.

This option has advantage of simplicity, harmonized with those for mothers without HIV, which would simplify public health messaging and improve infant feeding practices in the entire community. These recommendations will also decrease stigma and increase acceptability by mothers and communities.

Since January 2014, India has implemented approach of lifelong ART to all pregnant and breastfeeding women

with HIV regardless of their CD4 count or clinical stage also known as “Option B+”. In this approach all pregnant women are put on 3 drug ART(Tenofovir, Efavirinez and Zidovudine) soon after confirmation of pregnancy and continued throughout life. Infants receive 6 weeks of Nevirapine (43). There is a need for other countries to follow such an approach.

Recommendations

In view of latest evidence and guidelines supporting use of ART/ARV intervention along with exclusive breastfeeding for 6 months as most effective strategy for HIV free survival of children, International Baby Food Action Network Asia (IBFAN Asia) makes following recommendations:

- Breastfeeding with concurrent ARV intervention offers the greatest chance of HIV-free survival for babies born to HIV positive mothers. Risk of acquiring HIV infection through breastmilk is significantly reduced by concurrent ARV interventions (ART to all pregnant and breastfeeding mothers for life along with ARV prophylaxis their infant). Countries should adopt this approach as their national policy.
- Countries should develop a national policy on infant and young child feeding that should include infant feeding and HIV along with an operational guideline to implement the programme.
- The general principle of protecting, promoting and supporting breastfeeding should be followed irrespective of the HIV situation in a nation/State.
- Priority should be given to policies and

programmes, which aim to prevent women of reproductive age, particularly adolescents and their parents from becoming infected with HIV in the first place.

- Voluntary and confidential counselling and HIV testing should be made available for women of childbearing age and their partners. This opportunity must be utilized for promoting exclusive breastfeeding during the first six months irrespective of HIV status.
- Infant feeding practices of HIV infected women should support the greatest likelihood of HIV free survival of their children & should not harm the health of the mother. Exclusive replacement feeding is not a viable strategy for majority of HIV exposed infants due to increased chances of non-HIV related morbidity and mortality negating the benefits of reduced HIV transmission. Thus, it cannot be recommended & promoted as the optimal infant feeding strategy for HIV-infected mothers.
- All HIV positive women should be informed about advantages of breastfeeding. Information about other options should be given to individual

mother/family only when mother/family wants to know about this even after knowing the advantages of exclusive breastfeeding.

- **Role and training of health professionals/counsellors**

Infant feeding is influenced by community practices and family preferences. Therefore, attitudinal changes are required to empower mother to be able to sustain exclusive breastfeeding for 6 months. To ensure successful adherence to the practice of exclusive feeding (Breastfeeding or replacement feeding) by HIV positive mothers, counselling based training of health workers in breastfeeding/ lactation management as well as replacement feeding is necessary. The training must be up-to-date and skill oriented to help prevent breast pathologies like breast engorgement and cracked nipples as well to manage these conditions if they arise. Since the pre-service and in-service curriculum of doctors and nurse, as well as those appointed counsellors is found to be weak, national level programme budgets should be identified by the AIDS control organizations to ensure training for HIV and infant feeding counselling.

- **Commercial promotion of breastmilk substitutes:** Emphasis must be placed on complete adherence to the International Code of Marketing of Breastmilk Substitutes (1981) and the relevant World Health Assembly resolutions (WHA 58.32, 2005, WHA 63.23, 2010). Countries should ensure a strict compliance of the international code/national legislation.

This includes a complete ban on any form of promotion in the health care system including sponsorship of lunch or other inducements, ban on donations or low cost supplies of commercial infant

formula or infant foods within any part of the health care system. This protection assumes greater importance in light of the HIV situation. Allowing more babies to be mixed fed because of promotion of infant formula would be against any country's interests in child health. The commercial infant food industry has no role other than the one they had before the HIV-epidemic started: manufacturing and making available through normal marketing channels, safe products that meet an existing demand, as well as providing scientifically accurate information about these products to health workers on request. Any practice aimed at artificially increasing that demand, including offering inducements to the health professionals, lobbying and other interference in national, regional and international infant feeding policy making is ethically abhorrent and should continue to be counteracted by all organizations concerned with maternal and infant health.

Research in the field of HIV and infant feeding

- Independent research is urgently needed to fill gaps in existing knowledge about transmission of HIV from mother to infant. Research should also address other health outcomes in infants of HIV-infected mothers provided with different feeding regimes and how to improve nutritional status of HIV infected mothers and children.
- Research teams doing studies on such issues should include expertise not only in virology and research design, but also in breastfeeding management. Those who have no commercial interest in the outcome should finance research on infant feeding in a transparent and independent manner. Financing of both research and program activity should not create conflicts of interest.

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The International Baby Food Action Network (IBFAN) was founded in 1979. IBFAN is the 1998 Right Livelihood Award Recipient. It is a network of 273 groups in 168 countries. Member groups include consumer organisations, health workers associations, parents' groups and diversity of organizations in the social justice movement. It has also individual members. Each group is autonomous and raises its own funds, with the assistance of IBFAN's Regional and Programme Coordinating Offices, in accordance with the Seven Principles of IBFAN. IBFAN Asia, based on the seven guiding principles of IBFAN, seeks to protect infant health and enhance infant and young child development through programmes designed to increase national commitments and public pressure to do so, for protection, promotion and support of optimal breastfeeding and infant and young child feeding. IBFAN Asia is one of the regional coordinating office (RCO) of IBFAN's global network which consists of 25 countries with 3 sub regions, South Asia, East Asia and Southeast Asia; each sub region being coordinated by the sub regional representative and overall coordination is done at the regional coordinating office in Delhi by Breastfeeding Promotion Network of India (BPNI).