IBFAN
International Baby
Food Action Network
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IBFAN Asia
Position Statement on
HIV and Infant Feeding

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Introduction

IBFAN Asia developed a *"Position Statement on HIV and Infant Feeding"* in the year 2001 based on the scientific evidence 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 organizations working on maternal and child health and prevention of HIV infection.

Meanwhile, IBFAN Asia and BPNI also developed *A consensus call to national child health programs* in April 2008 titled *"Drop mixed-feeding"* to emphasize the need to avoid mixed feeding, thereby reducing chances of parent to child transmission of HIV.[7]

Since the last position statement a lot of new research data on this subject has emerged. This has prompted IBFAN Asia to revise the document incorporating current research findings, protocols, and guidelines.

Breastfeeding and its role in child survival and development

Breastfeeding is the optimal way to feed an infant. It greatly improves the quality of life of mother, baby and family by providing unique nutritional, immunological, economical, ecological, psychological and child spacing benefits. Breastfeeding also enhances maternal health in many ways.

Infant mortality continues to be unacceptably high in most countries in the region and artificial feeding contributes to a majority of the deaths in this age group. The proportion of underweight children in the under-3 age group is very high, which has been recognized to have a major association with child mortality. 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.

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[6].

The UNICEF (2006) "Progress for Children a Report Card on Nutrition " identifies nutrition as the foundation of survival and development. It also emphasizes that improving nutrition is crucial towards meeting the millennium development goals[8].

The Lancet series on child survival[9] has emphatically demonstrated that exclusive breastfeeding is the single most effective intervention to prevent childhood deaths. These observations have been substantiated by the Lancet neonatal survival series[10].

A recent WHO study of infant feeding patterns and risk of death and hospitalization in the first half of infancy, confirms that risk of death is 10 times higher in non-breastfed infants and 2.5 times higher in partially-breastfed infants[11].

A study from Ghana (2006) indicates that promotion of early initiation of breastfeeding has the potential to make a major contribution towards child survival; 22% of neonatal deaths could be saved if breastfeeding was started within the first hour after birth and 16% of all infants were breastfed from day one[12].

A global ecological risk assessment of deaths and years of life lost due to sub optimal breastfeeding among children in the developing world revealed that attributable fractions for deaths due to diarrhoeal diseases and lower respiratory tract infections are 55% and 53% respectively for the first six months of infancy, 20% and 18% for the second six months, and 20% for all-cause deaths in the second year of life. The authors concluded that globally, as many as 1.45 million lives (117 million years of life) are lost due to sub optimal breastfeeding in developing countries[13].

The World Health Organization conducted a systematic meta-analysis, published in May 2007, to assess the association between breastfeeding and blood pressure, diabetes and related indicators, serum cholesterol, overweight and obesity, and intellectual performance. Subjects who were breastfed experienced lower mean blood pressure and total cholesterol, as well as higher performance in intelligence tests. Prevalence of overweight/obesity and type-2 diabetes was lower among breastfed subjects. All effects were statistically significant but for some outcomes their magnitude was relatively modest[14].

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 recently published Lancet series on maternal and child undernutrition[15]. The series concludes that:

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

The relative risk for prevalence of diarrhea is 1.26 and 3.04, and for pneumonia is 1.79 and 2.49 for predominant (breastfeeding plus water) and partial breastfeeding as compared to exclusive breastfeeding.

HIV transmission and breastfeeding

Parents to child transmission of HIV may occur during pregnancy, delivery or postnatally. *I*n 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[16]. One reason for the lack of precision here is that there is no reliable method of determining whether an infant is infected or not until about 6 weeks of age, so the precise timing, and thus the route of infection, cannot be determined.

Labour and delivery is the single time point of greatest risk with as much infection occurring within 24 hours as occurs post-natally within 24 months of breastfeeding. Most ARV prophylaxis regimens aim to reduce HIV transmission during this time.

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 still not become infected with HIV, even if breastfed and without any intervention in place to prevent transmission[17].

The fact that the HIV virus can pass through breastfeeding, and that breastfeeding has life saving implications, is 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. The risk of transmission of HIV is maximum if the baby receives 'mixed feeding' i.e. both breastfeeding and animal milk. Preventable conditions such as breast inflammation resulting in increased breast permeability and elevated viral levels in milk are also important risk factors for HIV transmission during breastfeeding; these often occur as a consequence of breast engorgement during the early postpartum period, or inadequate breast drainage as a result of mixed feeding[18,19]. Cracked or bleeding nipples, mastitis or breast abscess are known to increase the risk of HIV transmission through breastfeeding. According to available data, 11-13% of HIV+ women experience one or more breast pathologies during breastfeeding[20,21,22]. The conditions are usually more common during the first weeks of lactation and they are preventable.

New evidence on breastfeeding and HIV transmission

Present evidence indicates the critical role of exclusive breastfeeding in reducing transmission of virus via breastfeeding. Mixed feeding has the highest risk of such transmission - three times more in one of the studies[18].

A study from Zimbabwe concluded that early exclusive breastfeeding reduces the risk of postnatal HIV-1 transmission and increases HIV-free survival[23]. A World Bank report on repositioning nutrition as central to development emphasizes that malnutrition is linked to the growing HIV/AIDS pandemic; malnutrition makes adults more susceptible to the virus, inadequate infant feeding aggravates its' transmission from mother to child and malnutrition makes antiretroviral drugs less effective[24].

An intervention cohort study from South Africa assessed the HIV-1 transmission risks and survival associated with exclusive breastfeeding and other types of infant feeding in HIV positive women. Risk of acquisition of infection at six months of age via exclusive breastfeeding was 4.04%. In infants who received other milk or formula along with breastfeeding, the risk of HIV transmission could almost double; giving breast milk along with some solids increases the risk of transmission by 11 times[25].

Another emerging concern is the intrinsic contamination of powdered infant formulas with pathogenic organisms like *E sakazakii and Salmonella species*. These organisms may cause fatal infections in the neonate. [26,27]. So, in the quest of preventing transmission of the HIV via breastmilk, the child may be exposed to another potential source of fatal infections, i.e. powdered formula.

An interesting study from South Africa, examined infant feeding intentions of HIV-infected and uninfected women and the appropriateness of their choices according to their home resources; and to determine their adherence to their intentions in the first postnatal week. Results showed that most HIV-infected women did not have the resources for safe replacement feeding, and appropriately chose to exclusively breastfeed. Adherence to feeding intention among HIV-infected women was higher in those who chose to exclusively breastfeed than to replacement feed[28].

The needs of a women who is HIV positive, irrespective of her decision to practice exclusively breastfeeding or exclusively replacement feeding, are similar in terms of her requirement for support of skilled health workers/counsellors, post natal home visits by the health worker, resources to ensure affordability, monitoring of her immune status, safe feeding method, education about contraception, ART, and primary prevention etc.[7]

What are the international guidelines?

In the past, the UN agencies have recommended that HIV-infected women should avoid breastfeeding when replacement feeding is acceptable, feasible, affordable, sustainable, and safe (AFASS). *Replacement feeding* is the process of feeding a child, who is not receiving any breastmilk, with a diet that provides all the nutrients the child needs. If the AFASS criteria are not met, replacement feeding presents a greater risk to the infant's health than breastfeeding because breastmilk provides protection against infections other than HIV. In the developing world, the benefits of exclusive breastfeeding often outweigh the risk of not breastfeeding. For HIV-infected women living in poor households, it is important to consider carefully the risks related with not breastfeeding. Moreover, improperly prepared breastmilk substitutes may expose the infant to pathogens. The problem of HIV infection through breastfeeding in the developing world is of particular concern because the survival and development of children here, to a large extent depends on successful early and exclusive breastfeeding.

In the year 2006, the WHO called an international HIV and Infant Feeding Technical Consultation which led to a "Consensus statement, 2006" emphasizing the need for consistent messages on infant feeding along with frequent, high quality counseling. The consensus statement says "Exclusive breastfeeding is recommended for HIV-infected women for the first 6 months of life **unless** replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants before that time." The WHO Consultation recommended further, "At six months, if replacement feeding is still not acceptable, feasible, affordable, sustainable and safe, continuation of breastfeeding with additional complementary foods is recommended, while the mother and baby continue to be regularly assessed. All breastfeeding should stop once a nutritionally adequate and safe diet without breast milk can be provided."[29]

Recommendations

In view of scientifically proved role of exclusive breastfeeding as an evidence based intervention to improve child survival, prevention of life threatening diseases later on in life and its' role in preventing transmission of HIV via breast milk to the child vis a vis mixed feeding; International Baby Food Action Network Asia (IBFAN Asia) and Breastfeeding Promotion Network of India (BPNI) make following recommendations:

Programs and Policies

1. Ensuring exclusive breastfeeding for ALL babies is even more important now, and should be the aim of child health care programs, and programs on prevention of HIV in infants. This would reduce the number of HIV positive infants in the community.
2. The general principle of protecting, promoting and supporting breastfeeding should be followed irrespective of the HIV situation in a state/nation.
3. Priority should be given to policies and programs, which aim to prevent women of reproductive age, particularly adolescents and their partners from becoming infected with HIV in the first place.
4. Voluntary and confidential counseling and HIV testing should be made available for women of childbearing age and their partners. Investments should be made in health workers acquiring skills about HIV and testing HIV infection. This opportunity must be utilized for appropriately promoting exclusive breastfeeding during the first six months.
5. In order to maximize child survival, pregnant and HIV positive women should receive clear recommendations about the safest way to feed their babies, taking in to account their individual circumstances.
6. For those women who are aware that they are HIV-positive, information should include the benefits of breastfeeding, especially ''exclusive breastfeeding'' and risks of artificial feeding. The fact that 'mixed- feeding' carries a many-fold increased risk of transmission should be emphasized. Information should be given in a supportive environment, minimizing any possible discrimination and stigmatization. The mother may choose to avoid breastfeeding if replacement feeding is

acceptable, feasible, affordable, sustainable, and safe (AFASS). If the AFASS criteria are not met, the mother should be informed that replacement feeding might present a greater risk to the infant's health.

Role and training of health professionals /counselors

7. To ensure successful adherence to the practice of exclusive feeding (breastfeeding or replacement feeding) by HIV positive mothers, 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 be able to manage these conditions if they arise. Substantial urgent investments must be made in this area.

   Since the pre-service and in-service curriculum of doctors and nurses, as well as those appointed counselors 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 counseling.

   Women should also be informed about alternative methods of providing breastmilk to their infants, including: (a) The flash heating and the Pretoria pasteurization of expressed breastmilk (placing it in a jar in a pan of boiling hot water) (b) wet nursing, by a lactating woman tested to be HIV-negative, and (c) 6 months of exclusive breastfeeding followed by a rapid transition to alternative feeding modes, though a study from Zambia does not find any benefit in abruptly stopping the breastfeeding in comparison with continued breastfeeding in resource poor settings[30].

   Cup feeding is considered safer than bottle-feeding, and counselors should stress this where milk and other liquid feeds are given.

8. Counseling about the option of replacement feeding should be provided only to individual women who have tested positive for HIV or present with clear symptoms of AIDS, and for whom artificial feeding would be acceptable, feasible, affordable, sustainable and safe.

Commercial promotion of substitutes

9. 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 45.34,1992; WHA 47.5,1994; WHA 55.25,2002 and WHA 58.32). 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

10. Independent research is urgently needed to fill gaps in existing knowledge about transmission of HIV from mother to infant. Priority should go to prospective research on the extent to which HIV transmission occurs when exclusive breastfeeding from birth up to about six months is practiced, as well as the extent of parent to child transmission beyond this age when mothers choose to continue breastfeeding while providing adequate complementary feeding. 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.
11. 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) is the 1998 Right Livelihood Award Recipient. It consists of more than 200 public interest groups working around the world to save lives of infants and young children by working together to bring lasting changes in infant feeding practices at all levels. IBFAN aims to promote the health and well being of infants and young children and their mothers through protection, promotion and support of optimal infant and young child feeding practices. IBFAN works for the universal and full implementation of 'International Code of Marketing of Breastmilk Substitutes' and subsequent relevant World Health Assembly (WHA) resolutions.

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