



HIU and Infant Feeding

Global Status of Policy and Programmes based on
World Breastfeeding Trends Initiative
assessment findings from 57 countries

World Breastfeeding
Trends Initiative
(WBTi)

HIV and Infant Feeding

Global Status of Policy and Programmes based on
World Breastfeeding Trends Initiative assessment findings from
57 countries

2015



© Breastfeeding Promotion Network of India (BPNI)/IBFAN Asia 2015

Report writing and production

Written by

Rebecca Norton, *Programme Officer, IBFAN-GIFA*
JP Dadhich, *National Coordinator, BPNI*

Reviewers

Lida Lhotska, *Consultant, IBFAN-GIFA*
Pamela Morrison, *IBCLC, England*

Edited by

Arun Gupta, *Regional Coordinator, IBFAN Asia*

Design by

Amit Dahiya, BPNI

ISBN No: 978-81-88950-50-8

All rights are reserved by the Breastfeeding Promotion Network of India (BPNI)/International Baby Food Action Network (IBFAN) Asia. The use of the report *HIV and Infant Feeding*, for education or information purpose, reproduction and translation, is encouraged. Any part of this publication may be freely reproduced, as long as the meaning of the text is not altered and appropriate acknowledgment and credit is given to this publication.

This is not a commercial publication.

BPNI's Ethical Policy: BPNI follows clear ethical and funding policies that do not lead to any conflicts of interest. BPNI does not accept funds or sponsorship of any kind from the companies producing infant milk substitutes, feeding bottles, related equipment, or infant foods (cereal foods) or from those who have been ever found to violate the IMS Act or the International Code of Marketing of Breastmilk Substitutes.

ACKNOWLEDGMENTS

We would like to thank all the IBFAN regional coordinators, national groups and individuals for providing extra information and material for this report, in addition to the World Breastfeeding Trends Initiative national, regional and global reports. We are thankful to the writers of this report, Rebecca Norton, Programme Officer, IBFAN-GIFA and JP Dadhich, National Coordinator, BPNI. IBFAN Asia would also like to thank Pamela Morrison, International Board Certified Lactation Consultant (IBCLC) and former consultant on HIV and infant feeding for the World Alliance for Breastfeeding Action WABA and Lida Lhotska, Consultant for IBFAN-GIFA for reviewing this report. Our gratitude also extends to Nigel Rollins, from the Department of Maternal, Newborn, Child and Adolescent Health of the World

Health Organisation, to Noël Zagré, Regional Director of Nutrition, UNICEF West and Central Africa, and to Barbara Nalubanga, Regional Coordinator for IBFAN Africa for sharing relevant information and material.

We would also like to acknowledge the contributions of Vibharika Chandola, Dr Gelasius Mukasa, Samalie Bananuka, Dr Saul Onyango and Marina Rea in the case studies.

We are thankful to Beena Bhatt for assisting in data procurement for the report and Amit Dahiya for excellent designing of the report.

Dr Arun Gupta
Regional Coordinator, IBFAN Asia

ACRONYMS

AFASS

Acceptable, Feasible, Affordable,
Sustainable, and Safe

AIDS

Acquired Immunodeficiency Syndrome

ANC

Antenatal Care

ART

Antiretroviral treatment

ARV

Antiretroviral drug

BFHI

Baby-Friendly Hospital Initiative

BPNI

Breastfeeding Promotion Network of India

GSYCF

Global strategy on infant and young child
feeding

HIV

Human Immunodeficiency Virus

IBFAN

International Baby Food Action Network

IYCF

Infant and young child feeding

PAHO

Pan American Health Organisation

PMTCT

Prevention of Mother to Child Transmission

PPTCT

Prevention of Parent to Child Transmission

VCTC

Voluntary and Confidential Testing and
Counseling

WABA

World Alliance for Breastfeeding Action

WHA

World Health Assembly

WHO

World Health Organisation

WBTi

World Breastfeeding Trends Initiative

UNAIDS

Joint United Nations Program on HIV/AIDS

UNICEF

United Nations Children's Fund

UNFPA

United Nations Population Fund

KEY DEFINITIONS

Exclusive Breastfeeding

Exclusive breastfeeding is where an infant receives only breastmilk and no other liquids or solids, not even water, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.

HIV-AIDS

The human immunodeficiency virus (HIV) is a retrovirus that infects cells of the immune system, destroying or impairing their function. As the infection progresses, the immune system becomes weaker, and the person becomes more susceptible to infections. The most advanced stage of HIV infection is Acquired Immunodeficiency Syndrome (AIDS). It can take 10-15 years for an HIV-infected person to develop AIDS; antiretroviral drugs can slow down the process, often to the point that the infected individual can live a normal life-span. HIV is transmitted through unprotected sexual intercourse (anal or vaginal), transfusion of contaminated blood, sharing of contaminated needles, and between a mother and her infant during pregnancy, childbirth and breastfeeding.

HIV-free Survival

The absence of a combined outcome of either (1) HIV infection or (2) death before HIV infection due to other causes. This concept has emerged as a consensus outcome to evaluate strategies.

Mixed Feeding

Mixed feeding is breastfeeding combined

with feeding other fluids, solid foods and/or non-human milk, such as infant formula or animal milks.

Mother-to-Child Transmission (MTCT)

Mother To Child Transmission of HIV, also known as vertical transmission, paediatric transmission, post-natal transmission or parent-to-child transmission (PTCT) or HIV-transmission to infants. MTCT is the term most often used for HIV transmission during pregnancy, birth or breastfeeding, because the immediate source of the child's HIV infection is the mother. Some people advocate for use of the terms parent-to-child transmission, or vertical transmission to avoid the blame for infection seeming to be the responsibility of the mother alone, when she is likely to have been infected through unprotected sex with an infected partner; often the child's father. Consensus on the use of one or other of these terms has not been reached. In WABA's HIV Kit terminology such as paediatric HIV and perinatal HIV transmission is also used in preference to MTCT.

Replacement Feeding

The process of feeding a child who is not receiving any breastmilk with a diet that provides all the nutrients the child needs until the child is fully fed on family foods.

Spillover

A term used to describe the unnecessary spread of artificial feeding among mothers who either know that they are HIV-negative or do not know their HIV status they do not breastfeed, or they breastfeed for a short time only, or they mix-feed, because of unfounded fears about HIV, or misinformation, or the ready availability of breastmilk substitutes.

CONTENTS

7

Foreword

10

Preface

11

Executive Summary

16

Introduction- Background and Aim of the Report

21

Part 1: State of the HIV epidemic and PMTCT worldwide- latest data

25

Part 2: Transmission of HIV during pregnancy, labour and breastfeeding. Risk factors for parent-to-child transmission - Facts

31

Part 3: Evolution of International Guidelines on HIV and Infant Feeding

37

Part 4: Current International and Regional Guidelines on HIV and Infant Feeding

45

Part 5: Analysis of policies and programmes on HIV and Infant feeding based on World Breastfeeding Trends Initiative (WBTi)

66

Conclusions and Way Forward

69

Annexures

FOREWORD

Thirty years ago breastfeeding was the gold standard to be promoted, protected and supported for all babies. Where mother's milk was concerned, more was better. Based on a huge volume of research, global recommendations were clear that in the early months of life optimal infant nutritional, immunological and emotional health could be achieved with exclusive breastfeeding. Even after the baby could receive other foods and liquids, continued breastfeeding for up to two years or beyond rather than early weaning was shown to drastically reduce the severity and duration of infections.

But in 1985 the promotion of breastfeeding was dealt a body-blow by the discovery that the lethal Human Immunodeficiency Virus (HIV), for which there was no treatment or cure, could be transmitted in breastmilk. Whether acquired between sexual partners, from dirty needles or transmitted from mother to baby during pregnancy, birth, or breastfeeding, acquisition of the virus led to the gradual destruction of the immune system and to the collection of diseases called the Acquired Immunodeficiency Syndrome (AIDS).

On the grounds that breastfeeding avoidance would eliminate the only then modifiable route of transmission of the virus, the Centers for Disease Control and other Western health watchdogs immediately prohibited breastfeeding by HIV-positive mothers. But in developing countries, where breastfeeding was a

cornerstone of child survival, the situation was less clear-cut.

Nevertheless, within a dozen years, international health agencies had embarked on a comprehensive initiative to provide HIV-positive mothers in low-income countries with free breastmilk substitutes. A new human rights framework underpinned promotion of maternal infant feeding choice in countries where breastfeeding was universally practised on the basis that only the mother knew her HIV status and could decide whether she should abandon breastfeeding. An extremely comprehensive and well-prepared training course gave health workers the tools they needed to help mothers make and carry out such a choice.

As a participant at the 1999 field testing of the HIV and Infant Feeding Counselling Course, in Harare, Zimbabwe, I realized that what was being taught sounded the death-knell for breastfeeding promotion as we had known it. Prevention of Mother-to-Child Transmission Pilot projects suggesting that infant formula was safe and that breastfeeding was not, would be rolled out all over the world. Those countries that most needed breastfeeding to combat high infant and under-5 mortality were often the same ones with high numbers of HIV-positive mothers. Suddenly the wisdom of encouraging all mothers to breastfeed was seriously undermined because who knew how many were already infected? The possibility of HIV-infection through breastmilk would come as a heaven-sent opportunity for industry to promote breastmilk substitutes to save lives.

And so it happened. For a decade, replacement feeding for HIV-exposed babies was promoted unchecked. AIDS was the new growth industry. IBFAN recorded violations of the International Code of

Marketing of Breastmilk Substitutes designed to seduce even more mothers away from breastfeeding. I met industry reps who exaggerated the risk. Every doctor and every paediatrician I spoke to about breastfeeding would eventually sigh and say “Ah yes, but what about HIV?”

At first no mechanisms were put in place to measure the competing risks of death due to HIV-infection through breastfeeding compared with the risk of morbidity and mortality due to not breastfeeding at all. It was known even before the first PMTCT pilot projects were set up that exclusive breastfeeding compared to mixed feeding reduced the risk of postpartum transmission but the lactation community’s voice was but a whisper in the clamour to, “Act now as a matter of urgency because we cannot afford to wait until the research is in.”

All research on breastfeeding in the context of HIV had, of necessity, to be conducted in developing countries because they were the only ones which still permitted breastfeeding. It was not until 2006 that the first official reports began to be published showing that, for most countries, the increased number of infections and malnutrition associated with replacement feeding led to greater morbidity and mortality than breastfeeding with HIV.

A very large number of studies were also conducted in resource-poor regions to see what regimens and treatment durations of antiretroviral medications (ARVs) could be employed to reduce the risk of HIV-transmission before, during or after birth. Questions were raised about the ethical implications of withdrawal of maternal treatment once the baby could no longer benefit and about the differences in treatment for mothers in developed vs developing countries. Finally it was found

that continuous antiretroviral treatment (ART) could not only protect the health and survival of the mother, but also reduce horizontal transmission to sexual partners and vertical transmission to infants by all routes, ie during pregnancy, birth and breastfeeding.

Lastly, research from Botswana, Zambia and several other African countries and described as “transformational”, showed conclusively that effective maternal antiretroviral therapy could reduce maternal viral load to undetectable levels, and when full ART could be combined with exclusive breastfeeding, the risk of breastmilk transmission of the virus could be reduced to almost zero.

In a 2009 about-turn, global guidelines were redrafted to once more protect, promote and support breastfeeding. But rapidly changing guidance has caused confusion amongst nursing staff and after a decade of acceptance of infant formula, many well-intentioned healthworkers remain afraid to encourage breastfeeding; it could be that a decade of HIV and infant feeding counselling, originally designed to protect babies from HIV in breastmilk, has worked too well.

The IBFAN Asia World Breastfeeding Trends Initiative Report on HIV and Infant Feeding is a timely work of complexity and talent. The Report not only provides the necessary background information showing where we stand today, but it also points us to the direction we need to take in the future. By identifying the strengths and gaps in the knowledge and practice of 57 countries around the world, the WBTi Report identifies where there are effective policies, which countries train their nursing staff so that mothers receive the help they need, those who provide antiretroviral therapy

and those who do not. We can see which countries have succeeded in protecting breastfeeding in the face of a severe threat, and exactly how they do so. We can also see which countries have been seduced into believing that breastmilk substitutes are somehow safer, or have not kept up to date with current research. We can guess at those countries which have given way to political influences to keep their HIV-positive mothers bottle-feeding.

Close monitoring is critical to global success in the fight against paediatric AIDS. The possibility of an AIDS-free generation is within our grasp, but it will take recognition of the importance of the task and a firm resolve to take the necessary actions to make it happen; testing of all pregnant women in the first trimester; effective antiretroviral therapy for all mothers diagnosed as HIV-positive, continued for life, and

antiretroviral prophylaxis for their infants in the peripartum period. Maximizing infant HIV-free survival, meaning the absence of either HIV infection or death at a particular time-point, will require firm recommendations about the safest feeding method and effective training of healthcare staff to facilitate exclusive breastfeeding for the first six months and continued breastfeeding for up to two years or beyond.

The WBTi Report provides the basis for us to know which countries are on track, and which countries need more help or better information. It is an invaluable tool for those who have the political will to improve child survival and the elimination of mother-to-child transmission of HIV.

Pamela Morrison

International Board Certified Lactation Consultant, Rustington, England

PREFACE

The 57- country report on policy and programmes related to HIV and infant feeding is based on the International Baby Food Action Network (IBFAN)'s flagship programme World Breastfeeding Trends Initiative (WBTi), which tracks implementation of the Global Strategy for Infant and Young Child Feeding worldwide. Other than tracking, WBTi measures inputs into policy and programmes at the country level and generates action to bridge the gaps thus found. This report is the result of such ongoing work.

The Global strategy recognised the risk of mother-to-child transmission of HIV through breastfeeding as a unique challenge to the promotion of breastfeeding, even among unaffected families; and identified a need for a clear policy framework on HIV and infant feeding that should also address skill training of health care providers to deal with infant feeding options.

Strong evidence has emerged over the years that use of anti-retroviral drugs by the mother and infant significantly reduces chances of transmission of HIV through the breastmilk; this has led to change in guidance globally paving the way for renewed efforts for providing support to the HIV positive mothers to practice safe breastfeeding.

Based on findings from WBTi assessments in 57 countries, this report identifies significant gaps in the policies and programmes on HIV and infant feeding

such as lack of national policy, poor implementation of the International Code, inadequate training of health care providers, lack of testing facilities, inadequate counselling services, and weak monitoring and evaluation of programmes.

However, the report does provide a glimpse of hope in many countries which are showing signs of progress when we look the trends. They have made this progress in the past few years jumping from one to another WBTi colour /score, which demonstrates their intent to take action for change. It is very important to take note of the fact that out of 24 countries in BLUE colour 13 are from countries in Africa.

I believe, this report will lead to action at the country level to develop plans of action to bridge the gaps in policies and programmes for safer infant feeding practices by HIV positive women. This report would be of help, hopefully, to strengthen global, regional and national actions towards this goal.

Dr Arun Gupta

Regional Coordinator, IBFAN Asia
Central Coordinator, BPNI

EXECUTIVE SUMMARY

In 2002, the Global Strategy on infant and young child feeding (GSIYCF) adopted at the World Health Assembly, had clearly stated that achievements in the field of infant and young child feeding (IYCF) were far from uniform, with signs of weakened commitment, for example in the face of the HIV/AIDS pandemic and the number and gravity of complex emergencies affecting infants and young children. Ever since the discovery that breastfeeding could transmit the Human Immunodeficiency Virus (HIV) from the mother to the baby, HIV and infant feeding has been a complex area of work, with research and guidelines in constant evolution, and health workers and programs on the ground repeatedly challenged to keep pace to best support mothers, babies and their families. Breastfeeding, increasingly recognized for its unequalled benefits to child survival and development, in the short and long-term, has been threatened by the HIV/AIDS epidemic in the hardest possible manner.

In 2015, based on the results from the IBFAN Asia World Breastfeeding Trends Initiative reports from 57 countries of Asia, Africa, Latin America, Arab World and Oceania, revealing an overall very low score for the WBTi indicator on HIV and infant feeding, IBFAN Asia commissioned a special focused report on the “Global status of policies and programmes in infant feeding and HIV, based on WBTi assessment findings”. WBTi is a participatory tool, developed and led by the International Baby Food Action Network, to measure inputs and generate

national action in the field of infant and young child feeding. The aim of the WBTi is to analyse policies and programmes at country level, in order to document gaps, build consensus and recommendations, and stimulate governments to take action to bridge the gaps.

The aim of this special report is to summarize key findings in the area of HIV and infant feeding policies and programmes from different regions across the world based on findings from WBTi assessments, as well as highlight the evolution of key policies and guidelines over time, identify challenges faced by policy makers, health workers and HIV positive mothers, and suggest a way forward with some key conclusions and recommendations. This report draws on the World Breastfeeding Trends Initiative (WBTi) findings in the total of 57 countries assessed before October 2015, and is further strengthened by other relevant reports, research and information.

This report is divided into 5 sections: Part-1 focuses on the status of the global HIV/AIDS epidemic, Part-2 provides key information on transmission of HIV during pregnancy, labour and breastfeeding as well as risk factors for parent-to-child transmission, Part-3 outlines the evolution of international guidelines over time in the field of HIV and infant feeding, Part-4 summarizes current international 2010 guidelines, and Part-5 analyses findings from WBTi assessments in 57 countries for the HIV and infant feeding indicator.

As highlighted in the UNAIDS 2014 Gap report, without treatment, about one third of children living with HIV die by their first birthday and half die by their second birthday. Initiating antiretroviral therapy before the twelfth week of life reduces HIV-related mortality in children living with HIV

by 75%. Yet, the number of children receiving antiretroviral therapy is appallingly low and 3 children out of 4 are still not receiving treatment.

The overall risk of Mother-to-Child-Transmission of the HIV virus over the antenatal, early and late postpartum period is 15-45% in the absence of interventions. In the absence of interventions during the breastfeeding period, the risk of transmission of the HIV virus from the mother to the child through breastfeeding is 15-20%, with a breastfeeding period of 18-24 months. In recent years, significant programmatic experience and research on the use of ARVs have accumulated. In developed countries rates of vertical transmission of HIV have been reduced to ~1% by the combined strategies of: routine prenatal testing; maternal/infant ARV prophylaxis or treatment; caesarean section and avoidance of breastfeeding. Research over the years has however also confirmed that optimal breastfeeding practices increase HIV-free survival in settings -often also those with high HIV prevalence- where mortality from infectious diseases such as diarrhea, pneumonia and malnutrition is high.

Whereas in the past the focus was on each HIV-infected woman being able to make an “informed choice” to breastfeed or replacement feed (give formula) following voluntary confidential testing and counseling for HIV, current 2010 international recommendations on HIV and Infant feeding have since taken a public health approach. Thus in order to prevent HIV transmission to the child during the breastfeeding period with the overall aim of ensuring HIV-free survival, countries are now having to choose between recommending, at national level, breastfeeding and ARVs, or, complete

avoidance of breastfeeding.

The WBTi indicator on infant feeding and HIV provides an overall score, for each country assessed, based on answers to a subset of 9 questions on the following topics: 1) national updated comprehensive policy on HIV and infant feeding, 2) policy giving effect to the International Code and national legislation, 3) health staff and community workers training, 4) HIV voluntary, confidential testing and counseling, 5) infant feeding counseling, 6) support to mothers, 7) provision of ARVs to breastfeeding mothers with follow-up and support, 8) efforts to counter misinformation, 9) ongoing monitoring.

Overall, analysis of WBTi evaluations in the 57 countries showed that the HIV and Infant feeding indicator is still being poorly implemented globally and much progress still needs to be made. The overall score for this indicator was 5.71 out of 10 in the 57 countries which undertook WBTi assessments before October 2015. Most countries (75%) reporting having an updated policy in line with international recommendations or at least to some degree. However, there were particular gaps revealed for sub-question on the International Code, sub-question on countering misinformation, and sub-question on ongoing monitoring. With regard to health staff and community workers' training, infant feeding counseling, and support to mothers, assessments also revealed that the situation is far from ideal with important challenges.

There were marked regional differences in the overall scores obtained, with Sub-Saharan Africa obtaining the highest scores during assessments for this indicator. With more than 70% cases of people living with HIV worldwide living in Sub-Saharan Africa,

there have been considerable efforts aimed towards developing policies and guidelines, and implementing comprehensive programmes, in line and up-to-date with current international recommendations, even though this has proved challenging.

Some regions score poorly for this indicator, including the Middle East where incidence of HIV is on the increase, and Latin America and the Caribbean (with some exceptions), where it would appear that the public health recommendations for delivery by cesarian section and not to breastfeed, in line with PAHO guidelines, apply to most countries, albeit the fact that there are important pockets of poverty and lack of safe water and sanitation in the region, with obvious consequences for the risks of artificial feeding. In this region, it is unclear if mothers wishing to breastfeed, in contradiction with most national recommendations, receive any counselling or support to carry through their decision.

Many assessments and additional reports/research revealed non-negligible difficulties for countries to follow the rapid changes in international policies and guidelines. Indeed, before modifications are made to existing national policies and guidelines, and before staff are trained to implement the new recommendations and the latter are actually implemented on the ground, many years can pass. Translation into key UN languages of international UN guidelines has also, seemingly, hindered national progress.

Overall, WBTi assessments were carried out over a period of time, between 2008 and 2015. Some countries underwent a number of assessments, while others have only been assessed once since 2008. Consequently, it was not easy to make in depth conclusions with regard to assessment results, as

assessments were carried out at different times in the history of HIV and infant feeding research and guidelines. Unfortunately, not all countries were assessed since the WHO 2010 guidelines were developed.

A recent IBFAN Africa review on the status of national policies in a selected number of countries in Sub-Saharan Africa, analyzed national implementation of the 2010 WHO recommendations on infant feeding and HIV. This study revealed that certain aspects of 2010 guidelines were not properly implemented in the region, in particular: the gradual cessation of breastfeeding at 12 months and the possibility of using heat-treated breastmilk. Overall, however, the analyses revealed that most aspects of the new 2010 recommendations had been taken on board in revised policies in Africa.

Have things changed much since 2009? Less children are infected today than 10 years ago and many more women are accessing ante-natal care and ARVs during pregnancy, due to improved PMTCT service coverage. Nevertheless, only 4 out of 10 women in low- and middle-income countries received HIV testing and counseling in 2013; and 3 out of 10 did not receive effective ARV medicines to prevent transmission of HIV to their children. Of those who are tested and counseled, many are lost to follow-up treatment and care, and an appallingly low number of children – a mere 24% – are receiving ARV therapy. Without treatment, about one third of children living with HIV die by their first birthday and half die by their second birthday.

The situation remains unacceptable and overall, much remains to be done to ensure mothers and babies are protected and supported within a comprehensive continuum of services that include

prevention, care, treatment, support and follow-up, to prevent vertical transmission of HIV and ensure healthy outcomes for both mothers and their babies, whilst protecting, promoting and supporting optimal breastfeeding practices for the general population.

The importance of updated and comprehensive national policies, hand in hand with budgeted plans of action, can only be re-iterated. The financial tool developed by IBFAN Asia, the World Breastfeeding Costing Initiative WBCi assists countries to plan and prioritize actions, and to budget them accordingly.

Given the WBTi assessment findings, extra special attention also needs to be given by governments:

- to **counter misinformation on HIV and infant feeding, in order to avoid confusion and mixed messages**, and to continue to protect, promote and support WHO infant and young child feeding recommendations of 6 months exclusive breastfeeding and continued breastfeeding until 2 years or beyond, for the general population;
- to **work towards full national implementation and respect of the International Code and relevant subsequent World Health Assembly resolutions**, in order to ensure that distribution or use of products used for replacement feeding for HIV mothers who do not breastfeed, as per national recommendations in many wealthier industrialized countries, do not lead to “spillover” of artificial feeding to infants of other mothers, and in order to protect breastfeeding/IYCF in general against commercial pressures. Spillover refers to the unnecessary use of artificial feeding by mothers who are HIV-negative or those whose status is

unknown, or by HIV-positive mothers who have been misinformed of an exaggerated risk of transmission of HIV through breastfeeding. Such use can be a result of fears of HIV, misinformation, or poorly managed distribution of breastmilk substitutes.

- to **ensure on-going monitoring to determine the effects of interventions** to prevent HIV transmission through breastfeeding on infant feeding practices and overall health outcomes for mothers and infants, including those who are HIV negative or of unknown status. Ensuring adequate monitoring systems are in place with efficient data collection, analysis and feedback, is essential to guide and fine-tune existing national policies and programmes, and ensure appropriate adaptation of policies and guidelines at the international level.

As new research keeps emerging, and UN guidelines keep evolving, countries face continued challenges in adapting guidelines at the local level and ensuring quality implementation and coverage of a continuum of services to prevent vertical transmission and avoid confusion around the issue of HIV and infant feeding. It is hoped that WHO will continue to disseminate clear rapid advice, quickly translated into key UN languages, and provide key support to countries, to enable them to continue to step up efforts to eliminate vertical HIV transmission and ensure healthy outcomes for mothers and babies.

In 2015, WHO organized another technical consultation, in order to review the evidence and make relevant recommendations to the HIV and infant feeding guidelines once again. This meeting, may lead to key changes in the recommendations. Once again, this

highlights the need to remain abreast of new developments to policies and guidelines, and to keep this complex and ever-evolving field of HIV and Infant Feeding high on the

agenda, so that mothers and babies are offered all the protection, counseling treatment and care that they deserve.

“Ironically, the HIV epidemic may be the best thing that ever happened to breastfeeding... our efforts to ameliorate its effect on children provided an ethical opportunity to observe what happens when large number of infants living in conditions of poverty are not breastfed. If these observations lead to stronger breastfeeding policy and programming that in turn reduce the 1.4 million child deaths occurring each year due to suboptimal breastfeeding, we will have created one of the epidemic's very few silver linings.”¹

1. Statement by Jean Humphrey, from the Risks of Not Breastfeeding 2010, quoted in the 2012 WABA kit on HIV and Infant feeding, section 3.

INTRODUCTION- BACKGROUND AND AIM OF THE REPORT

Advocacy in the field of infant feeding and HIV has been a major area of work for IBFAN ever since research emerged in the eighties showing that the Human Immunodeficiency Virus (HIV) could be transmitted through breastmilk to the baby. These findings posed a serious threat to efforts to protect, promote and support exclusive and continued breastfeeding worldwide. Research and UN guidelines on HIV and infant feeding have kept evolving, rendering this field a challenging one for all involved, from the policy-making to the programme implementation level, and most-importantly, for the mothers and babies involved.

The WHO and UNICEF global strategy on infant and young child feeding², adopted at the World Health Assembly in 2002, provides a framework for action to scale up breastfeeding and infant and young child feeding interventions. The importance of making optimal infant and young child

feeding practices universal is acknowledged by everyone today. The 2003 Lancet Series on Child Survival Series³ estimated that 13% of under-five deaths could be prevented by breastfeeding and an additional 6% by appropriate complementary feeding. Breastfeeding is estimated to be the single most effective intervention to reduce under-5 mortality worldwide.

Compared with the use of breast-milk substitutes, breastfeeding has been consistently shown to reduce infant morbidity and mortality associated with infectious diseases in both resource-rich and resource-poor settings, particularly in the first months of life. As summarized in 2003 by the Lancet : “Infants aged 0-5 months who are not breastfed have seven-fold and five-fold increased risks of death from diarrhea and pneumonia respectively, compared with infants who are exclusively breastfed. At the same age, non-exclusive rather than exclusive breastfeeding results in a more than two-fold increased risk of dying from diarrhea and pneumonia.” Most deaths of HIV-infected children are due to supervening infections, most commonly diarrhea and pneumonia. 10 years later, the 2013 Lancet series on Maternal and Child Nutrition⁴, reaffirmed the importance of breastfeeding, stating that suboptimum breastfeeding practices resulted in 800,000 child deaths annually.

All in all, breastfeeding is one of the best values among investments in child survival, nutrition and development, and evidence of its wide-ranging benefits is compelling. However, since 1990, there has been

2. WHO and UNICEF Global Strategy on Infant and Young Child Feeding, 2002

3. Jones G, Steketee RW, Black RE et al-. How many deaths can we prevent this year. Lancet 2003 Child Survival Series; 362: 65-71.

4. Black R, Victora C, Walker S, Bhutta Z, Christian P, de Onis M, Ezzati M, Grantham-McGregor S, Katz J, Martorell R, Uauy R, and the Maternal and Child Nutrition Study Group. Maternal and child undernutrition and overweight in low-income and middle-income countries, Lancet 2013 Maternal and Child Nutrition Series.

Breastfeeding is the norm for feeding infants and young children worldwide, and the World Health Organization (WHO) recommends early initiation of breastfeeding (within an hour from birth), exclusive breastfeeding during the first 6 months of life, followed by continued breastfeeding until 2 years or beyond, alongside the introduction of appropriate and safe complementary foods.

negligible progress to raise the global rates of early, exclusive and continued breastfeeding^{5,6}

When the Global Strategy for Infant & Young Child Feeding (GSIYCF) was adopted in 2002, it was clearly acknowledged that *“the HIV pandemic and the risk of mother-to-child transmission of HIV through breastfeeding pose unique challenges to the promotion of breastfeeding, even among unaffected families.”* As pointed out as well in the GSIYCF, *“Achievements are far from uniform, however, and there are signs of weakened commitment, for example in the face of the HIV/AIDS pandemic and the number and gravity of complex emergencies affecting infants and young children”*. The GSIYCF thus highlighted the importance of correct policy and programme work in the area of infant and young child feeding and HIV, for achieving targets.

The 2011 UNICEF⁷ programming guide on IYCF, further identified factors for success of breastfeeding and IYCF interventions: *“(…) the large-scale implementation of comprehensive, multi-level programmes to protect, promote and support breastfeeding,*

with strong government leadership and broad partnerships. A comprehensive approach to IYCF involves large-scale action at national level, health system and community levels, including various cross-cutting strategies such as communication and context specific actions on infant feeding in the context of emergencies and HIV. National-level actions include advocacy to generate increased commitment to IYCF and the development of policies, legislation, strategies and plans to implement the main operational targets of the WHO-UNICEF Global Strategy for Infant and Young Child Feeding (GSIYCF).”

However, more than 10 years later, progress in the achievements of the GSIYCF targets remains insufficient, in particular in the area of infant and young child feeding in emergencies, and infant feeding and HIV- as highlighted by the IBFAN World Breastfeeding Trends Initiative (WBTi) which tracks the national-level implementation of the Global Strategy for IYCF in an ever increasing number of countries globally.

The WBTi tracks progress in 10 Policy and Programme areas (indicators 1-10), and for five optimal feeding practices (indicators 11-15) as shown in the table 1.

Each indicator has a maximum score of 10, and each indicator has a sub set of questions that are scored individually and add up to a score of ten. Policy and programme indicators are therefore scored out of 100. Practice indicators are scored out of 50. WBTi helps to track and rank countries scoring each indicator on a scale of 10 using a colour code red, yellow, blue and green in ascending order of performance to reflect achievement or the lack of progress on each indicator.

By October 2015, WBTi had been introduced

BOX 1: World Breastfeeding Trends Initiative (WBTi)⁸

IBFAN Asia developed the World Breastfeeding Trends Initiative (WBTi) in order to measure inputs and generate national action in the field of IYCF. WBTi is inspired by the WHO tool⁹ developed for assessing national policies, programmes and practices to measure progress in the implementation of the GSIYCF. The aim of the WBTi is to analyse the situation, document gaps, build consensus and recommendations, and stimulate governments to take some action to bridge the gaps. WBTi is an action-oriented and participatory tool to assess IYCF policies and programmes at country level. The process is led by IBFAN groups.

WBTi was first launched in 2005 in South Asia and its success led to the introduction in other regions from 2008 onwards. WBTi has since been introduced in Asia, Africa, Latin America, Europe, Oceania and Arab World with IBFAN leading the process nationally and bringing together concerned parties including governments, professional bodies, international organizations and civil society to accomplish this collective work and build consensus.

WBTi is also a powerful, internet-based information tool with simple visual techniques like graphics and mapping designed to easily understand as well as attract and maintain interest throughout the three phases of the process.

The WBTi has been recognized by the World Health Organization as a useful monitoring tool and it features in the WHO Global database on the Implementation of Nutrition Action (GINA), an interactive platform for sharing information on nutrition policies and actions.¹⁰ In a study of 22 countries in Africa, Asia, the Middle East and Latin America, the relationship between implementation of the WHO/UNICEF Global Strategy for Infant and Young Child Feeding, as measured by the World Breastfeeding Trends Initiative (WBTi), and trends in exclusive breastfeeding and breastfeeding duration over the past 20 years, has been demonstrated and quantified.

Colour rating of one indicator of IYCF policies and programmes

IBFAN Asia Guidelines for WBTi	
Scores	Colour-rating
0-3.5	Red
4-6.5	Yellow
7-9	Blue
>9	Green

Table 1: The World Breastfeeding Trends Initiative WBTi

Part-I deals with policy and programmes (indicator 1-10)	Part II deals with infant feeding practices (indicator 11-15)
1. National Policy, Programme and Coordination	11. Early Initiation of Breastfeeding
2. Baby Friendly Hospital Initiative (Ten steps to successful breastfeeding)	12. Exclusive breastfeeding for the first six months
3. Implementation of the International Code of Marketing of Breastmilk Substitutes	13. Median duration of breastfeeding
4. Maternity Protection	14. Bottle feeding
5. Health and Nutrition Care Systems (in support of breastfeeding & IYCF)	15. Complementary feeding - Introduction of solid, semisolid or soft food
6. Mother Support and Community Outreach	
7. Information Support	
8. Infant Feeding and HIV	
9. Infant Feeding during Emergencies	
10. Mechanisms of Monitoring and Evaluation System	

5. UNICEF 2013. Breastfeeding on the worldwide agenda. Findings from a landscape analysis on political commitment for programmes to protect promote and support breastfeeding

6. ACTA PAEDIATRICA Special issue on breastfeeding, Dec 2015 <http://onlinelibrary.wiley.com/doi/10.1111/apa.2015.104.issue-S467/issuetoc>

7. UNICEF 2011: Programming Guide: Infant and Young Child Feeding.

8. www.worldbreastfeedingtrends.org

9. WHO Planning guide for national implementation of the Global Strategy for Infant and Young Child Feeding 2007

10. <http://www.who.int/nutrition/gina/en/>

11. Protection, Promotion, and Support and Global Trends in Breastfeeding” by Chessa K. Lutter and Ardythe L. Morrow. *Advances in Nutrition* 2012.

in about 106 countries (see Fig. 1), and its participatory assessment conducted and finalized in 57 countries worldwide. WBTi assessment process at country level includes forming a core group with a coordinator, collection of information for the individual indicator (including the sub set of questions) by the core group, building a consensus among the core group to develop the draft report, sharing of the draft report with a wider group at national level to develop consensus and a national report. This report is shared with the IBFAN Asia regional coordinating office in the Breastfeeding Promotion Network of India where the document is analysed using a pre-developed checklist. If required, clarification is sought from the country coordinator. Finally the report is uploaded on the WBTi portal.

In the 51-country WBTi report published by IBFAN Asia in 2012 “Are our babies falling

through the gaps?” The state of policies and programme implementation of the Global Strategy for Infant and Young Child Feeding in 51 countries” revealed that none of the 51 countries had succeeded in fully implementing the Global Strategy for Infant and Young Child Feeding, and the overall score for HIV and infant feeding was low: 5.42/10 (see Fig 2).

The lowest score obtained was for infant feeding in emergencies (total score of 2.6/10). This is a troubling finding given the frequent overlap between the regions where emergencies often occur and areas where there are high rates of HIV (for example Sub-Saharan Africa). The traditional emergency response in the past had also been to make donations of infant formula rather than address infant and young child feeding challenges by putting in place systems to protect, encourage and support breastfeeding as a general rule and where

Fig. 1: WBTi in 106 Countries

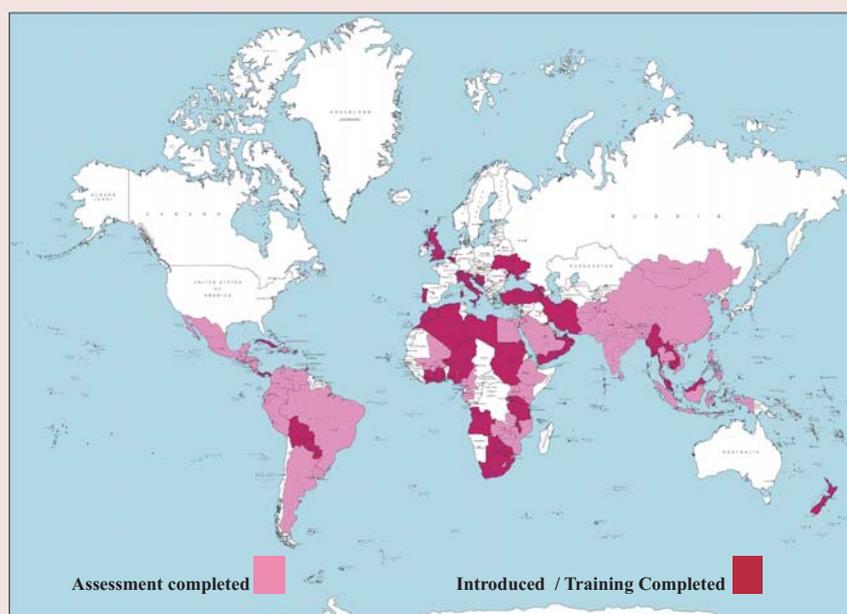
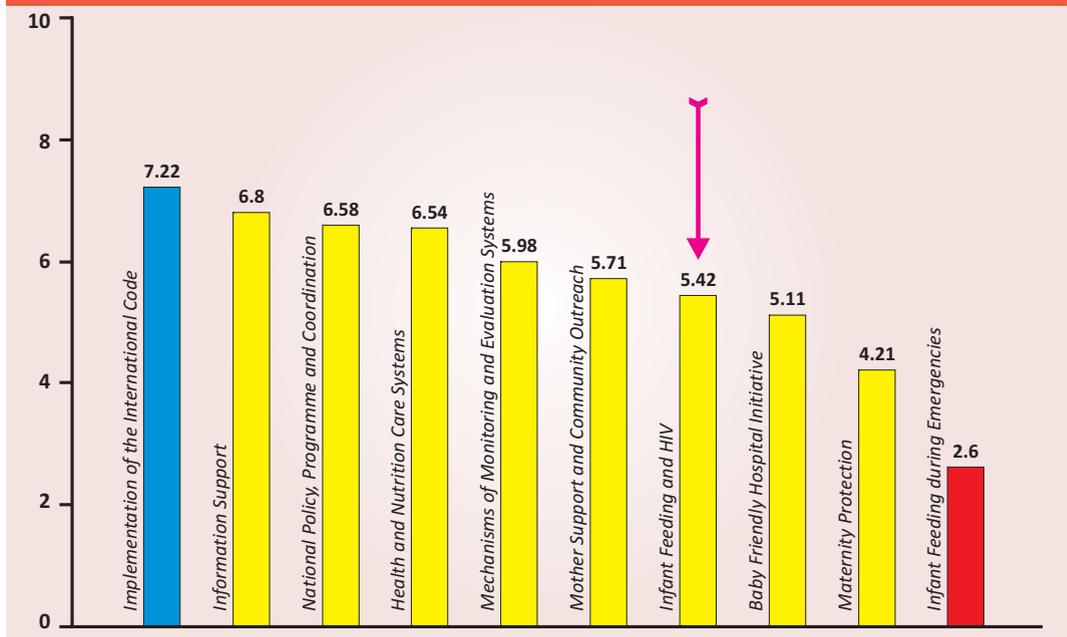


Fig. 2: Average scores for indicators 1-10 from the 2012 WBTi global report



necessary ensure artificial feeding which is as safe as possible. In the field of HIV and infant feeding, many past programmes also included free formula and ARVs to mothers in resource-poor settings. Even though international recommendations in both the fields of infant feeding in emergencies, and infant feeding and HIV, have evolved, use of infant formula in emergencies as well as resource-poor settings still remains problematic and challenging today.

The 2013 WBTi IBFAN Asia report specific to the South Asia region further highlighted the fact that HIV and infant feeding was one of the indicators for which countries scored the lowest. Given the results of these global and regional WBTi reports, IBFAN Asia commissioned a special focused **Report on the Global status of policies and programmes in infant feeding and HIV, based on WBTi assessment findings**. The aim of this special report is to summarize

key findings in this important policy and programme area from different regions across the world, highlighting the evolution of key policies and guidelines, and identifying challenges faced by policy makers, health workers and HIV positive mothers, and the way forward with some key conclusions and recommendations. The report draws on the WBTi findings in the total of 57 countries assessed to date (October 2015), and is further strengthened by other relevant reports, research¹³ and information.

This report is intended for policy and decision makers, health and nutrition workers, civil society, governments, donors and any other interested parties advocating and working towards improved implementation of the GSIYCF worldwide, with the aim of making the case for accelerating progress in implementation of international policy and programme guidelines on HIV and infant feeding.

12. IBFAN Asia Report "Are our babies falling through the gap? The state of policies and programme implementation of the Global Strategy for Infant and Young Feeding in 51 countries", 2012

13. Only some key recent research papers are included in this report, which does not aim to be exhaustive.

PART 1



State of the HIV Epidemic and PMTCT Worldwide- Latest Data

with HIV is continuing to decline in most parts of the world. There were an estimated 2.1 million new HIV infections in 2013—a decline of 38% from 2001, when there were 3.4 million new infections. In the past three years alone, new HIV infections fell by 13%.

One step closer to eliminating new HIV infections among children: Progress in stopping new HIV infections among children has been dramatic. In 2013, an estimated 240,000 children were newly infected with HIV. This is 58% lower than in 2002, the year with the highest number, when 580,000 children became newly infected with HIV.

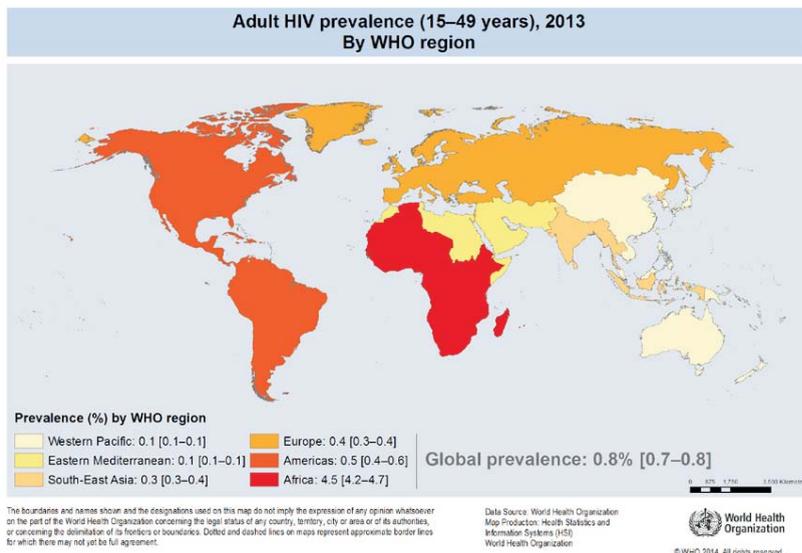
Providing access to antiretroviral medicines for pregnant women living with HIV has averted more than 900,000 new HIV infections among children since 2009. Getting one step closer towards eliminating new HIV infections among children, for the first time the total number of children newly infected dropped below 200,000 in the 21 priority countries under *the Global Plan towards the elimination of new HIV infections among children and keeping their mothers alive*¹⁶. Malawi has had the largest decline in the rate of children acquiring HIV infection—by 67%. New HIV infections among children declined by 50% or more in eight other countries: Botswana, Ethiopia, Ghana, Malawi, Mozambique, Namibia, South Africa and Zimbabwe.

More people living with HIV know their status and are receiving HIV treatment: Almost half of all people living with HIV (48%) now know their status. Some 86% of people living with HIV who know their status in sub-Saharan Africa are receiving

Global situation and trends: According to WHO¹⁴, since the beginning of the epidemic, almost 78 million people have been infected with HIV and about 39 million people have died of HIV. Globally, an estimated 35.0 million people were living with HIV at the end of 2013. Sub-Saharan Africa remains most severely affected, with nearly 1 in every 20 adults living with HIV and accounting for nearly 71% of the people living with HIV worldwide.

The UNAIDS 2014 Gap Report revealed some of the following key highlights¹⁵:

New HIV infections are declining: The number of people who are newly infected



14. <http://www.who.int/gho/hiv/en/>

15. UNAIDS 2014. GAP report http://www.unaids.org/sites/default/files/media_asset/UNAIDS_Gap_report_en.pdf Please note that many of this text was simply lifted from the GAP report. IBFAN Asia would like to acknowledge and thank UNAIDS.

16. <http://www.unaids.org/en/resources/campaigns/globalplan>

antiretroviral therapy, and nearly 76% of them have achieved viral suppression.

AIDS-related deaths are declining: Fewer people are dying of AIDS-related illnesses. In 2013 there were an estimated 1.5 million AIDS-related deaths. AIDS-related deaths have fallen by 35% since 2005, when the highest number of deaths was recorded. In the past three years alone, AIDS-related deaths have fallen by 19%, which represents the largest decline in the past 10 years.

In sub-Saharan Africa, the number of AIDS-related deaths fell by 39% between 2005 and 2013. The region still accounted for 74% of all the people dying from AIDS-related causes in 2013. In the Caribbean, it declined by 54% and in Latin America by 31%. More modest declines of 27% occurred during the same period in Asia and the Pacific. In Oceania, AIDS-related deaths declined by 19% and in western and central Europe and North America, where mortality was already very low, by a further 2%. In contrast, the Middle East and North Africa experienced a significant increase in mortality from AIDS (66%), and Eastern Europe and Central Asia a more moderate increase of 5%.

The number of AIDS-related deaths decreased significantly between 2009 and 2013 in several countries, including South Africa (51%), the Dominican Republic (37%), Ukraine (32%), Kenya (32%), Ethiopia (37%) and Cambodia (45%).

Globally, 15 countries account for nearly 75% of all people living with HIV.

Ensuring that people living with HIV in these countries have access to HIV treatment services is especially critical. People living with HIV by country in 2013 are: 18% South Africa, 9% Nigeria, 4% Mozambique, 4% Uganda, 4% Zimbabwe,

4% United Republic of Tanzania, 4% United States, 3% Zambia, 3% Malawi, 2% China, 2% Ethiopia, 2% Russian Federation, 2% Brazil, 27% Remaining countries.

An estimated 3.2 million children younger than 15 years old are living with HIV and an estimated 4 million young people 15-24 years old are living with HIV, 29% of whom are adolescents aged 15-19 years.

An estimated 16 million women aged 15 years and older are living with HIV; 80% live in Sub-Saharan Africa. The primary contributor to the scale of the epidemic in this region is heterosexual transmission so that and there is an increased vulnerability to and risk of HIV infection among adolescent girls and young women.

HIV is the leading cause of death among women of reproductive age. In 2013, 54% of pregnant women in low- and middle-income countries did not receive an HIV test, a key step to accessing HIV prevention, treatment and care.

Despite global efforts, only 44% of pregnant women in low- and middle-income countries received HIV testing and counseling in 2013, with even fewer receiving testing services with their male partners. Yet, access to treatment begins with access to counseling and testing. Progress in stopping new infections among children and ensuring that mothers are alive and healthy requires reaching the full cross-section of pregnant women with essential health services.

Limited access to antiretroviral medicines: To improve the health outcomes of women and children, improvements in accessing HIV treatment as well as adherence to therapy is needed. As

of 2013, all pregnant women living with HIV are eligible for treatment. Although solid progress has been made in providing services to prevent vertical transmission, **three out of ten pregnant women living with HIV in 2013 still did not receive effective ARV medicines to prevent the transmission of HIV to their children.**

Three of five people living with HIV are still not accessing antiretroviral therapy: Twenty-two million, or three of five people living with HIV are still not accessing antiretroviral therapy. The proportions of people who do not have access to treatment are 58% in South Africa, 64% in India and 80% in Nigeria. HIV treatment coverage is only 36% in India and 20% in Nigeria. Of all AIDS-related deaths in the Sub-Saharan Africa region, 19% occur in Nigeria, and 51% of AIDS-related deaths in Asia happen in India.

The number of children receiving antiretroviral therapy is appallingly low- a mere 24%. Three of four children living with HIV or 76% are not receiving HIV treatment.

In Sub-Saharan Africa, among pregnant women living with HIV, an estimated 32% were not receiving lifelong antiretroviral therapy or prophylaxis during the breastfeeding period to reduce HIV transmission. Yet this is a remarkable improvement from more than 80% who were not covered during the

breastfeeding period in 2009. However, in the context of the prevention of mother-to-child transmission, this is a discouraging finding, given that 1/3 of women are not receiving lifelong ARV or prophylaxis, and thus, are not protected and supported with caring, feeding, and offering additional prophylaxis/ treatment for their child.

Failure to prioritize children: Without treatment, about one third of children living with HIV die by their first birthday and half die by their second birthday. Initiating ARV therapy before the twelfth week of life reduces HIV-related mortality in children with HIV by 75%.

Limited access to HIV testing for HIV-exposed infants: infants should be tested using a specialized virological test. Yet, in 2013, only 42% of infants born to mothers living with HIV in low- and middle-income countries received this test within two months as recommended by WHO. While this is appreciable progress considering the recommendations were released in 2010, 58% of children were still missed. In addition, many children do not receive their conclusive HIV test at the end of breastfeeding when the risk of vertical transmission ends-a lost opportunity to link those who may have seroconverted into care. Programmes are now strengthening their efforts to ensure that HIV - exposed children receive a final diagnosis once breastfeeding ends.



PART 2

Transmission of HIV during Pregnancy, Labour and Breastfeeding. Risk Factors for Parent-to-Child Transmission - Facts¹⁷

Parent to child transmission of HIV may occur during pregnancy, delivery or postnatally. In the absence of any interventions to prevent or reduce transmission, it is estimated that 5-10% of HIV-infected women pass the virus to their infants during pregnancy; between 10-15% during labour and delivery; and 5-20% during breastfeeding. WHO uses the figure 35% as the average transmission risk in the absence of any interventions and with

continued breastfeeding¹⁸. Therefore, the risk of mother to child transmission of HIV during pregnancy, birth and breastfeeding ranges from 15% (if no breastfeeding at all) to 45%, with the risk of transmission attributable to breastfeeding for 6 months being 5 to 10%, and breastfeeding for 18-24 months being 15-20% (see Table 2). If an HIV-positive mother breastfeeds her infant while taking ARVs herself or giving ARVs to her infant each day, the risk of transmission over 6 months of breastfeeding is reduced to about 2%. If she breastfeeds for 12 months while taking ARVs or giving them to the infant, then the risk is about 4%. Without these ARV interventions, about 14-17% of breastfed infants of HIV positive mothers would become HIV infected by 18 months of age.¹⁹

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,

Table 2: Estimated risk and timing of MTCT in the absence of interventions^{20,21}

Route of transmission	Transmission rate
During pregnancy	5-10 %
During labour & delivery	10-15 %
During breastfeeding	5-20 %
Overall without Breastfeeding	15-25 %
Overall with Breastfeeding 6 months	20-35 %
Overall with Breastfeeding 18-24 months	30-45 %

17. Adapted from following main sources of information:

- IBFAN Asia 2015 Position Statement on HIV and Infant feeding,
- 2012 WABA Kit "Understanding International Policy on HIV and Breastfeeding: a comprehensive resource", section 3, "Interventions to maximize mother and child health and survival". The WABA kit also summarizes research and scientific knowledge up to end 2012 and section 3 should be read together with this report, for a complete overview of updated research until end 2012.

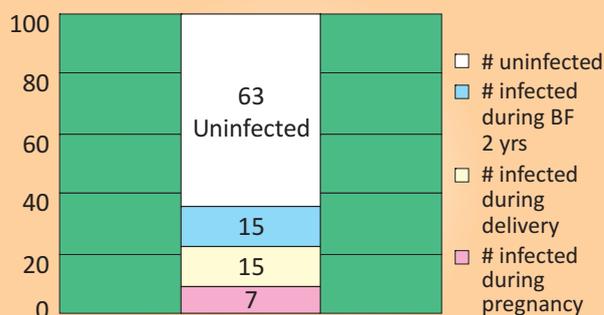
18. <http://www.who.int/hiv/pub/mtct/PMTCTfactsheet/en/> accessed online autumn 2015

19. WHO (2012) guidelines on HIV and infant feeding. An updated framework for priority action. Available at: http://www.who.int/nutrition/publications/hiv_aids/9241590777/en/.

20. World Health Organization 2004, HIV transmission through breastfeeding: a review of available evidence http://www.unfpa.org/webdav/site/global/shared/documents/publications/2004/hiv_transmission.pdf

21. Adapted from De Cock KM, Fowler MG, Mercier E et al. Prevention of mother-to-child transmission in resource-poor countries: translation of research into policy and practice. JAMA 2000; 238: 1175-1182.

Fig. 3: MTCT in 100 HIV+ Mothers by Timing of Transmission



Ellen Piwoz, UNICEF/WABA HIV Colloquium, Tanzania, Sept 2002

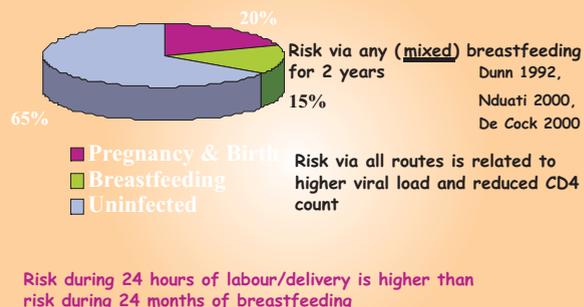
another 15 during labour and delivery, and another 15 over a period of 2 years of breastfeeding; 63 infants would not get HIV infection, even if breastfed for 2 years and without any intervention in place to prevent transmission. (See Fig. 3)

Fig. 4 showing the risks of MTCT prior to ARV therapy²²

There are number of factors which affect transmission of HIV from HIV positive women to their baby:

- **Immune status of the mother:** In the past this was believed to be one of the most useful predictors of HIV transmission risk at all times. Low CD4²³ T-lymphocyte counts have been associated with a greater risk of postnatal HIV transmission.²⁴
- **RNA viral load in plasma and breastmilk:** Plasma HIV viral load (VL) has been suggested as the principle determinant of mother-to-child HIV transmission (MTCT).²⁵ Increased

Fig. 4: Risks of MTCT of HIV Prior to Antiretroviral Therapy (ART/HAART), by all Routes were...



maternal RNA viral load in plasma and breast milk have been found strongly associated with increased risk of transmission through breastfeeding.²⁶

- **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 the mother for her own health, and ARV to the infant). Following operational research in Malawi, WHO published new consolidated guidelines in 2013 on the use of antiretroviral drugs for treating and preventing HIV infection. The new recommendations included providing antiretroviral therapy - irrespective of their CD4 count - to all pregnant and breastfeeding women with HIV, and to all HIV-positive partners where one partner in the relationship is uninfected, and to all children with HIV under 5 years of age,

22. Pie-chart Courtesy of Pamela Morrison, IBCLC

23. CD4: A glycoprotein predominantly found on the surface of helper T cells. In humans, it is a receptor for HIV, enabling the virus to gain entry into its host.

24. Coovadia HM, Rollins NC, Bland RM, Little K, Coutsooudis A, Bennish ML, Newell ML. Mother-to-child transmission of HIV-1 infection during exclusive breastfeeding in the first 6 months of life: an intervention cohort study. *Lancet*. 2007 Mar 31;369(9567):1107-16.

25. Myer L, Phillips TK, Hsiao NY, Zerbe A, Petro G, Bekker LG, McIntyre JA, Abrams EJ. Plasma viraemia in HIV-positive pregnant women entering antenatal care in South Africa. *J Int AIDS Soc*. 2015 Jul 6;18:20045.

26. Anigilajé EA, Dabit OJ, Oluṭola A, Ageda B, Aderibigbe SA. HIV-free survival according to the early infant-feeding practices; a retrospective study in an anti-retroviral therapy programme in Makurdi, Nigeria. *BMC Infect Dis*. 2015 Mar18;15:132.

In September 2015 WHO recommended that ART should be initiated among all adults with HIV regardless of WHO clinical stage and at any CD4 cell counts. Pregnant women should receive ART from diagnosis, which should be continued for life. The benefits include improved health outcomes, lower mortality and the potential for reduction of horizontal transmission of HIV. ART/ARV intervention improves the CD4 count of the mother and decreases RNA viral load in the plasma and breastmilk. It may take 13 weeks from the commencement of maternal ART for sufficient viral suppression to occur that the mother shows an undetectable viral load and so that the risk of vertical transmission is reduced to virtually nil.²⁷

- **Type of Infant Feeding:** The chance of transmission of HIV is maximum if the baby receives mixed feeding i.e. breastfeeding and infant formula whereas exclusive breastfeeding for the first six months of life has been shown to greatly reduce postpartum transmission even in untreated mothers and babies.²⁸
- **Breast Conditions:** Cracked or bleeding nipples, mastitis or breast abscess is known to increase the risk of HIV transmission through breastfeeding.²⁹
- **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.³⁰
- **Infection with Sexually Transmitted Diseases (STDs):** Maternal STD infection during pregnancy may increase the risk of HIV transmission to the unborn baby²⁹.
- **Obstetrical antenatal interventions:** Chorion villus aspiration, amniocentesis, amnioinfusion etc increase risk of HIV transmission. However, complete virological suppression with antiretroviral therapy may alleviate the risk of mother-to-child transmission during amniocentesis.³¹
- **Intervention during delivery:** artificial rupture of the membranes (ARM), episiotomy, instrumentation, and version (turning the breech baby to the head down position), increase HIV transmission.³²
- **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.³³
- **Infant's oral health:** Breach in the

27. Chibwesa CJ, Giganti MJ, Putta N, Chintu N, Mulindwa J, Dorton BJ, Chi BH, Stringer JS, Stringer EM. Optimal Time on HAART for Prevention of Mother-to-Child Transmission of HIV. *J Acquir Immune Defic Syndr*. 2011 Oct 1;58(2):224-8. doi: 10.1097/QAI.0b013e318229147e. <http://www.ncbi.nlm.nih.gov/pubmed/21709566>

28. Ngwende S, Gombe NT, Midzi S, Tshimanga M, Shambira G, Chadambuka A. Factors associated with HIV infection among children born to mothers on the prevention of mother to child transmission programme at Chitungwiza Hospital, Zimbabwe, 2008. *BMC Public Health*. 2013 Dec 14;13:1181. doi: 10.1186/1471-2458-13-1181.

29. Gumbo FZ, Duri K, Kandawasvika GQ, Kurewa NE, Mapingure MP, Murjoma MW, Rusakaniko S, Chirenje MZ, Stray-Pedersen B. Risk factors of HIV vertical transmission in a cohort of women under a PMTCT program at three peri-urban clinics in a resource-poor setting. *J Perinatol*. 2010 Nov; 30(11):717-23.

30. Dinh TH, Delaney KP, Goga A, Jackson D, Lombard C, Woldesenbet S, Mogashoa M, Pillay Y, Shaffer N. Impact of Maternal HIV Seroconversion during Pregnancy on Early Mother to Child Transmission of HIV (MTCT) Measured at 4-8 Weeks Postpartum in South Africa 2011-2012: A National Population-Based Evaluation. *PLoS One*. 2015 May 5;10(5):e0125525.

31. Andany N, Letchumanan M, Bondy L, Murphy K, Loutfy MR. Amniocentesis in the HIV-infected pregnant woman: Is there still cause for concern in the era of combination antiretroviral therapy? *Can J Infect Dis Med Microbiol*. 2013 Fall;24(3):e91-5.

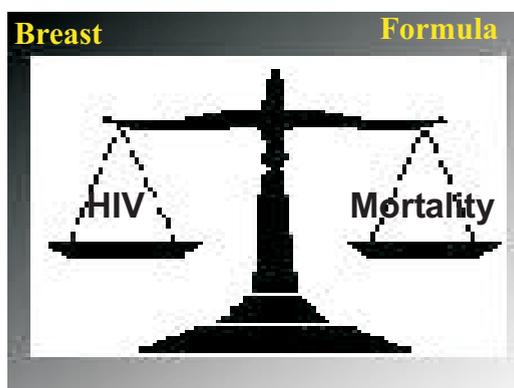
32. European Collaborative Study. Risk factors for mother-to-child transmission of HIV-1. *Lancet*. 1992 Apr 25;339(8800):1007-12.

33. Mehta S, Manji KP, Young AM, Brown ER, Chasela C, Taha TE, Read JS, Goldenberg RL, Fawzi WW. Nutritional indicators of adverse pregnancy outcomes and mother-to-child transmission of HIV among HIV-infected women. *Am J Clin Nutr*. 2008 Jun;87(6):1639-49.

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.³⁴

HIV transmission and Breastfeeding: Infant Feeding Choices for HIV Positive Women. What do we know?

The fact that the HIV virus can pass through breastfeeding, a practice which has major life saving implications, has presented a cruel dilemma.



Since this discovery, in most developed countries, mothers with HIV infection have been advised not to breastfeed to prevent HIV infection. Wealthier countries have granted HIV positive women testing, counseling and comprehensive prevention and treatment, including the best drug therapies available. In developed countries rates of vertical transmission of HIV have been reduced to less than 1% by the combined strategies of: routine prenatal testing; maternal/infant ARV prophylaxis or treatment and careful maternal adherence;

caesarean section (although it should be noted that given the lack of clear evidence of benefit in industrialized countries, HIV-infected women with a viral load below a certain threshold are now able to choose vaginal delivery) and avoidance of breastfeeding.

Interventions promoted in resource-poor settings have required adaptation to local conditions, taking into account issues such as the fact that HIV-testing is not always available or acceptable, ARV prophylaxis is not always accessible, Caesarean section is unlikely to be readily available in many developing country settings where HIV prevalence is high, and avoidance of breastfeeding reduces HIV-free survival. For HIV infected mothers living in poor households, the risks related to not breastfeeding need to be carefully considered, as promotion of replacement formula feeding to prevent HIV infection in such situations risks increasing infant malnutrition, morbidity and mortality. Past programme experiences with providing free formula to HIV positive mothers in various developing country settings, have in fact proved the high risks of such a strategy to infant survival³⁵.

Evidence of the protective effect of exclusive and continued breastfeeding has accumulated, for both HIV-infected (see Box-2) and non HIV-infected infants. More recently published research³⁶ reaffirms the importance of prioritizing interventions to support HIV-infected mothers to exclusively

34. Ogundele MO, Coulter JB. HIV transmission through breastfeeding: problems and prevention. *Ann Trop Paediatr.* 2003 Jun;23(2):91-106.

35. Coutsoudis A, Coovadia HM & Wilfert CM. HIV, infant feeding and more perils for poor people : new WHO guidelines encourage review of formula milk policies. *Bulletin of the World Health Organisation*, March 2008, 86 (3).

36. Courmil A, De Vincenzi I, Gaillard P, Cames C, Fao P, Luchters S, Rollins N, Newell M-L, Bork K & Read J for the Kesho Bora Study Group. Relationship between mortality and feeding modality among children born to HIV-infected mothers in a research setting: The Kesho Bora Study. *Aids* 2013: 000-000

37. Sint T T, Lovich R, Hammond W, Kim M, Melillo S, Lu Lydia, Ching P, Marcy J, Rollins N, Koumans E, Heap A, Brewinski-Isaac M, and the Child Survival Working Group of the Interagency Task Team on the Prevention and Treatment of HIV infection in Pregnant Women, Mothers and Children, Challenges in infant and young child nutrition in the context of HIV. *Aids* 2013 Nov; 27(02): S169-S177.

BOX 2: Health Outcomes for Replacement Feeding Versus Breastfeeding

(Adapted from the WABA infant feeding and HIV Kit 2012, section 3, page 7-8)-*IBFAN Asia would like to acknowledge and thanks WABA*

- No overall advantage in terms of HIV-free survival compared to continued breastfeeding in studies conducted under close supervision and follow-up in urban settings in Kenya and Côte d'Ivoire.
- Reduced HIV-free survival in randomized trials in Kenya, Botswana and Zambia.
- Increased infant morbidity and mortality in programmatic settings in India, Malawi, South Africa, Uganda and Botswana.
- Increased morbidity due to spillover of formula-feeding to the general population in Botswana where 97% of homes had piped water but one-third of all infants under 6 months were not breastfeeding, during a serious diarrhea outbreak in 2006.
- Increased opportunistic infections and a shortened life-span for HIV-infected infants in Botswana, Uganda and Malawi.
- Increased rates of malnutrition, serious infections, including pneumonia and diarrhea, growth faltering and death for uninfected infants who avoided postnatal transmission.
- Increased morbidity and mortality after weaning with early cessation of breastfeeding. Though stopping breastfeeding after 4-6 months reduces the length of time that the infant is exposed to HIV in breastmilk, there is increased mortality after weaning compared to continuing breastfeeding for the normal span of time.

Thus, for most of the developing world, the risks of increased morbidity, mortality and malnutrition due to replacement feeding exceed the risks of HIV transmission due to breastfeeding, especially when breastfeeding is exclusive in the first 6 months of life and when appropriate ARVs are provided.

With increasing recognition that replacement feeding is neither affordable, feasible, acceptable nor, most importantly, either safe or sustainable in most developing countries, **alternative research has focused on ways to make breastfeeding safer so as to maintain its important general health benefits.** The first studies showing that exclusive breastfeeding was protective against HIV transmission compared to mixed feeding were published in 1999 and 2001, with a further study confirming these results in 2005. For HIV-positive mothers exclusive breastfeeding compared to mixed or replacement feeding in both research and programme settings was associated with:

- A 3-4 fold decreased risk of HIV transmission in the first 6 months of life in 3 large cohort studies
- Reduced infant morbidity

Some of the components of breastmilk shown or suggested to protect against HIV include: immunoglobulin-secreting B cells, specific identified protective factors (including secretory IgA, IgG, IgM, chondroitin sulphate, etc), anti-HIV IgG and IgA antibodies, HIV-1 IgM, a glycosamine in human milk that inhibits binding of HIV to CD4, HIV-neutralizing mAbs, inhibition of oral transmission of cell-free and cell-associated HIV, human milk oligosaccharides (HMOs), growth factors - such as epidermal growth factor - which may enhance maturation of the gut epithelial barrier by strengthening integrity and hindering the passage of the virus.

breastfeed to promote HIV free survival of HIV exposed children. Various research studies have also shown that IYCF counseling through Prevention of Mother-to-Child Transmission (PMTCT) programmes helps HIV positive mothers to undertake safer infant feeding practices, and that it is possible to improve exclusive breastfeeding rates among mothers with HIV.³⁷

Moreover 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 for her own health, ARV prophylaxis to the infant). 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 now the key principle for governments to adopt national or sub-national policies regarding the recommended feeding option, to ensure HIV-free survival. More detailed information about the various changes that occurred over time in the UN guidelines on HIV and infant feeding, and current international guidelines, is provided in Part-3.



PART 3

Evolution of International Guidelines on HIV and Infant Feeding³⁷

As stated in 2007³⁹ by Lida Lhotska, IBFAN-GIFA coordinator, *“The HIV/AIDS pandemic and the fact that HIV can be transmitted via breastfeeding have brought about one of the most painful dilemmas of the last two decades in the field of public health. Suddenly, breastfeeding, so well known and appreciated for saving lives and improving overall health prospects of babies and their mothers everywhere in the world, came to be regarded as a culprit. Because it could transmit a virus for which there was no cure, it seemed that all its myriad benefits were temporarily forgotten”*.

This dilemma was reflected both at program and policy level. With evolving knowledge and research about HIV transmission from mothers to babies, the technical agencies in the UN system, mainly WHO and UNICEF, went through a number of policy development processes resulting in a series of subsequent policy statements and recommendations.

The first UN consensus statement on HIV and breastfeeding dates back to 1992, noting the impressive nutritional

immunological, psychological and child-spacing qualities of breastfeeding, and also noting the need to weigh the baby's risk of HIV infection through breastfeeding against its risk of dying of other causes if denied breastfeeding. HIV positive women were advised to breastfeed in settings where infectious diseases were the primary cause of death during the first year of life; in settings where this was not the case mothers were to be advised not to breastfeed. The 1992 approach was inadequate, with an implicit, though unintended, double standard, suggesting that in poor countries, mothers should continue to breastfeed. Population-wide recommendations gave way to policies and strategies that enabled health workers to counsel mothers.⁴⁰

The 1997 WHO, UNICEF and UNAIDS Joint Policy Statement on HIV and Infant Feeding was firmly based on the need to protect, respect and fulfil human rights and suggested that policies should comply with international human rights instruments. This policy gave the right to the mother to make “informed choices” about infant feeding methods. As stated in this policy, “it is the mothers who are in the best position to decide whether to breastfeed, particularly when they alone may know their HIV status and wish to exercise their right to keep that information confidential”. This policy stated that one third of infants were infected through breastfeeding, and it stressed the need for alternatives to breastfeeding to be made available and affordable. As a result,

38. Main Source of information:

- IBFAN Asia 2015 Position Statement on HIV and Infant feeding,
- 2012 WABA Kit “Understanding International Policy on HIV and Breastfeeding: a comprehensive resource”
- Supporting mothers to make informed choices, Lhotska L, *Medicus Mundi Schweiz Bulletin* N. 105, 2007
- GOLD Online Lactation Conference presentation, Back to the Future on HIV and breastfeeding: the findings that transformed policy by Pamela Morrison, 2013
- WHO Guidelines and consensus statements on HIV and infant feeding

39. Supporting mothers to make informed choices, Lhotska L, *Medicus Mundi Schweiz Bulletin* N. 105, 2007

40. Lida Lhotska. Infant feeding in the age of aids: a decade-long evolution of policy and practice. *UN SCN News*, 17, chapter 4. Available at: <http://www.unsystem.org/scn/archives/scnnews17/ch04.htm>

UNICEF set up feasibility pilot studies in a number of sites in 11 developing countries in 1998, with provision of free formula and ARVs to 30,000 HIV-infected mothers⁴¹. The 1997 statement was followed in 1998 by **guidelines for policy makers and health care managers**, highlighting the need to respect and fulfill women's rights based on two important human rights conventions - the Convention on the Rights of the Child and the Convention on Elimination of All Forms of Discrimination against Women. Results from clinical trials had also revealed that a short course of ARVs could reduce transmission substantially.⁴²

In 2000, the recommendations were further refined to take into account additional research data. WHO and UNICEF published a 3-part document to define what actions could be taken in countries or at local level to address HIV and infant feeding. New recommendations stated that “when replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding by HIV-infected mothers is recommended. Otherwise, exclusive breastfeeding is recommended during the first months of life and should then be discontinued as soon as feasible”.

Acceptable, feasible, affordable, sustainable and safe replacement feeding became known as AFASS (see Box-3). The UN made it clear that if one of these five conditions was not met then replacement feeding was likely to carry a great risk for the baby. Provision of skilled counseling was deemed key to enabling mothers to make informed choices on how to feed their babies.

BOX 3: AFASS Criteria for Replacement Feeding

Acceptable. The mother perceives no barrier to replacement feeding, whether due to cultural or social causes or to fear of stigmatization or discrimination. If replacement feeding is acceptable to the mother, she is either under no social or cultural pressure to breastfeed and is supported by family and community in opting for replacement feeding, or will be able to cope with pressure to breastfeed and deal with any stigma attached to replacement feeding.

Feasible. The mother (and family) has the time, knowledge, skills and other resources needed to prepare the replacement food and feed the infant up to 12 times every 24 hours. The mother can understand and follow the instructions for preparing infant formula, and with family support where available she can prepare sufficient replacement food every day and night, despite any disruptions it might cause in preparation of other family food or other work.

Affordable. The mother (and family), with community or health-system support if necessary, can pay the cost of purchasing/producing, preparing and using replacement food, including all ingredients, fuel, clean water, soap and equipment, without compromising the health and nutrition of the family. The concept of affordability also extends to access to medical care for diarrhoea if necessary and the cost of such care.

Sustainable. A continuous and uninterrupted supply and dependable system of distribution for all ingredients and products needed for safe replacement feeding should be available for as long as the infant needs it, up to one year of age or longer. If replacement feeding is sustainable, there should be little risk that formula will ever be unavailable or inaccessible, and another person will always be available to prepare the food and feed the child in the mother's absence.

Safe. Replacement foods should be correctly and hygienically prepared and stored, and fed in nutritionally adequate quantities with clean hands and utensils, preferably using a cup. Safety means that the mother or caregiver is able to: access a reliable supply of safe water (from a piped or protected-well source); prepare replacement food that is nutritionally sound and free of pathogens; wash hands and utensils thoroughly with soap and regularly sterilize the utensils; boil water to prepare each of the baby's feedings; and store unprepared food in clean, covered containers protected from rodents, insects and other animals.

41. Statement by Pamela Morrison, Gold Lactation Presentation, 2013

42. WHO, UNICEF, UNAIDS (1998) HIV and Infant Feeding: guidelines for decision makers. WHO/FRH/NUT/CHD/98.1ed. Geneva: WHO.

Counseling should be free from commercial pressures and mothers should be supported to carry out their decision once made. An **HIV and infant feeding counseling course** was also developed and published by WHO and UNICEF in 2000.⁴³

Following on from this, in 2003 WHO published “**HIV transmission through breastfeeding: a review of available evidence (updated later in 2007)**”. This publication provided the evidence base and rationale for two additional documents in the revised HIV and infant feeding series: **HIV and Infant Feeding - Guidelines for policy makers; HIV and Infant Feeding - A Guide for health care managers and supervisors; WHO 2004**. These guidelines explained the infant feeding options available: breastfeeding by the mother; by a wet-nurse (known to be not HIV positive); modified breastmilk (e.g. donated pasteurized breastmilk); complete replacement feeding (i.e. no breastmilk at all) with either commercial or homemade infant formula.

The **UN HIV and Infant feeding Framework for policy action**, developed by eight UN agencies plus the World Bank, was adopted in 2004 at the highest decision-making body in public health the World Health Assembly. This Framework highlighted 5 priority areas for governments: Develop or revise a comprehensive national IYCF policy which includes HIV and infant feeding; Implement and enforce the International Code of Marketing of Breastmilk Substitutes and WHA resolutions; Intensify efforts to protect, promote and support appropriate IYCF practices in general, while recognizing HIV as one of the exceptionally difficult

circumstances; Provide adequate support to HIV positive women to enable them to select the best feeding option for themselves and their babies, and to successfully carry out their infant feeding decisions; Support research on HIV and infant feeding, including operations research, learning, monitoring and evaluation at all levels, and disseminate findings.

Evidence of the dangers of formula feeding in non-research settings were documented during the late 2005 and early 2006 heavy rains and floods in Botswana, a stable, middle-income country, where replacement feeding was recommended for all HIV positive women who received free infant formula. (Box-4)

The subsequent 2006 WHO technical consultation led to a more precautionary approach and the following refined and clarified 2007 recommendations: For HIV positive women: exclusive breastfeeding for 6 months was recommended, unless replacement feeding was considered acceptable, feasible, affordable, sustainable and safe. A number of studies had indeed shed light on the fact that the “safe” component of AFASS could not be assumed and needed to be empirically demonstrated. Lots of research had also emerged about the difficulties experienced by HIV and Infant feeding counseling- seen as a major problem in many PMTCT sites. Exclusive breastfeeding until 6 months and continued breastfeeding for 2 years and beyond was recommended for HIV negative women or women with an unknown HIV status.

The new 2007 UN recommendations for HIV positive mothers required skilled

43. WHO. HIV and infant feeding counselling: a training course. http://www.who.int/maternal_child_adolescent/documents/fch_cah_00_2/en/

BOX 4: Botswana- 2005/6 Floods - highlighting the dangers of formula feeding

Between November 2005 and February 2006 there were unusually heavy rains and flooding which led to an increase in infant diarrhoea incidence and mortality. The United States Centers for Disease Control and Prevention was brought in to investigate the outbreak. It found widespread contamination of the public water supply in four northern districts of the country. The most significant risk factor for diarrhoea was not breastfeeding. Most of the deaths were among HIV-exposed infants whose mothers were receiving free formula milk through the PMTCT programme. Among hospitalized infants, 51% had poor growth before the illness. This situation highlighted the dangers of considering artificial feeding “safe”.

Although Botswana had been considered “safe” at national level for replacement feeding, the floods and resulting epidemic had put infants and young children on replacement feeding at high risk of disease and death. Research also confirmed these findings, showing that any gains from the reduction of HIV transmission through free formula distribution were lost because of increased mortality from infections such as diarrhea and pneumonia. Research also showed that infants exclusively breastfed by their HIV positive mothers have a lower risk of HIV transmission than those who are mixed fed, and the type of mixed feeding matters, with infants exposed to a mix of breastfeeding with infant formula feeding having double the risk of HIV transmission compared to those breastfed exclusively, and the addition of solid foods to breastfeeding raising the risk eleven fold.

unbiased counseling by well-trained health workers, sensitive to the individual's situation. HIV testing and counseling also needed to be voluntary and confidential. Mothers had the choice of exclusive breastfeeding until 6 months or complete replacement feeding. More evidence had emerged showing that exclusive breastfeeding carried a lower risk of HIV transmission than mixed breastfeeding. Infant feeding counseling of HIV-positive women thus demanded of health personnel to have all the relevant and unbiased information and solid counseling skills so that the mothers could receive all the necessary support when facing this dilemma and taking decisions whether to choose to breast feed or replacement feed their babies.

For HIV-infected women who chose to exclusively breastfeed, early cessation of breastfeeding (before six months) was no longer recommended, unless their situation changed and replacement feeding became AFASS. Abrupt or rapid cessation even at six months was no longer recommended either

because of possible negative effects on the mother and infant, including mastitis and breast pain. The optimal duration for the cessation process was not known, but for most women and babies a period of about two to three days up to two to three weeks appeared to be adequate, based on expert opinion and programmatic experience.

In 2009 a multidisciplinary panel of experts and civil society representatives met once again to review the evidence, consider the balance of evidence for benefits and harms of the recommendations and their implications and finalize the recommendations. High quality evidence had indeed emerged that ARV drug interventions, either to the mother or to the infant, significantly reduced the risk of HIV transmission through breastfeeding and that in most high HIV prevalence countries, the risk of infant mortality from not breastfeeding, or from stopping breastfeeding early, were greater than the risk of HIV infection (see Part 2). It is important to note that the protective

effect of breastfeeding against HIV transmission had in fact already been shown back in 1999/2001 by Coutsooudis and her research team, in South Africa. However results of this research were largely ignored at the time, and it was only much later that further research emerged from Zimbabwe to confirm these key findings⁴⁴.

In 2009 WHO thus issued 2 sets of Rapid Advice:

- 1) WHO 2009 Rapid Advice on Use of Antiretroviral drugs for treating pregnant women and preventing HIV infection in infants. Recommendations for a public health approach (this was later revised in 2010 again).
- 2) WHO 2009 Rapid Advice on HIV and Infant feeding. Based on this new body of evidence, and systematic reviews considering the effect of interventions on infant HIV free-survival, **new WHO Guidelines on HIV and infant feeding were issued in 2010**, in collaboration with UNAIDS, UNICEF and UNFPA (see Annex 3 and Part 4 for an overview of the guidelines).

In 2013, World Health Organization published a consolidated guideline on the use of antiretroviral drugs for treating and preventing HIV infection. These 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.⁴⁵

In 2015, WHO convened another technical consultation, to examine the accumulated body of evidence since 2010, and make the necessary adjustments to the guidelines. Updates on HIV and infant feeding are thus expected in 2016. This report has not attempted to summarize recent research - best left to the experienced WHO scientists and collaborators. However, it is important to point out that research highlights the necessity of implementing all components of PMTCT programmes to a high quality to reduce rates of vertical transmission⁴⁶. In South Africa, this included: rapid implementation of international policy changes at field level, through training and guideline dissemination, good coordination among all technical partners; making use of data and indicators on all aspects of PMTCT programme; phasing out of free formula milk and promotion of exclusive breastfeeding at public health facilities; and expanding laboratory services and increased proportion of testing of early HIV transmission in HIV exposed infants. Estimated HIV transmission rates decreased from 9.6 to 2.8%.

Strong voices urge for a dual strategy: an all-out push to prevent vertical transmission, complemented by a public health approach to pediatric care and treatment for those children for whom PMTCT foreseeably fails⁴⁷.

44. Iloff PJ, Piwoz EG, Tavengwa NV, Zunguza CD, Marinda ET, Nathoo KJ, Moulton LH, Ward BJ, the ZVITAMBO study group and Humphrey JH. Early exclusive breastfeeding reduces the risk of postnatal HIV-1 transmission and increases HIV-free survival. *AIDS* 2005, 19:699-708

45. World Health Organization. June 2013. Consolidated Guidelines on the use of antiretroviral drugs for treating and preventing HIV infection .Recommendations for a public health approach.

46. Barron P, Pillay Y, Doherty T, Sherman G, Jackson D, Bharkwaj S, Robinson P & Goga A. Eliminating mother-to-child transmission HIV in South Africa. *Bulletin of the World Health Organisation* 2013; 91: 70-74.

47. Kellerman SE, Ahmed S, Feeley-Summer T, Jay J, Kim MH, Koumans E, Lu L, Phelps R, Sugandhi N, Schouten E, Tolle M, Tsiouris F & The Child Survival Working Group of the Interagency Task Team on the Prevention and Treatment of HIV infection in Pregnant Women, Mothers and Children. Beyond PMTCT: Keeping HIV exposed and positive children healthy and alive. *Aids* 2013 November; 27 (02):S225-233.



PART 4

Current International and Regional Guidelines on HIV and Infant Feeding

As summarized in the WHO fact sheet on the WHO 2010 Guidelines on HIV and infant feeding:

- In many countries, both health services and individual mothers have not been able to adequately support and provide safe replacement feeding. HIV-positive mothers have faced the dilemma of either giving their babies all the benefits of breastfeeding but exposing them to the risk of HIV infection, or avoiding all breastfeeding and increasing the risk of death from diarrhoea and malnutrition.
- At the time of the 2006 PMTCT guidelines, there were insufficient data supporting the use of ARVs to prevent HIV transmission from mother to baby during breastfeeding.

Since then, several clinical trials have shown the efficacy and acceptability of prophylaxis either to the mother or to the infant during breastfeeding.

The effectiveness of ARVs to reduce transmission through breastfeeding has therefore resulted in **two major changes from previous guidelines**:

- 1) National health authorities should decide whether health services will principally counsel and support HIV-positive mothers to either: breastfeed and receive ARV interventions, or avoid all breastfeeding, as the strategy that will

most likely give infants the greatest chance of HIV-free survival.

- 2) In settings where national authorities recommend HIV-positive mothers to breastfeed and provide ARVs to prevent transmission, mothers should exclusively breastfeed their infants for the first 6 months of life, introducing appropriate complementary foods thereafter, and should continue breastfeeding for the first 12 months of life. (Note: breastfeeding should only stop once a nutritionally adequate and safe diet without breastfeeding can be provided - see page 40)

Benefits and challenges of the 2010 Guidelines include⁴⁸:

- The great potential to improve the mother's own health and to reduce mother-to-child HIV transmission risk to 5% or lower, in a breastfeeding population, from a background transmission risk of 35% (in the absence of any interventions and with continued breastfeeding). The risk of transmission over 6 months of breastfeeding is reduced to about 2% if an HIV positive mother breastfeeds her infant while taking ARVs herself or giving ARVs to her infant each day.
- The potential for all countries to virtually eliminate paediatric HIV. Combined with improved infant feeding practices, the guidelines can help to reduce both child mortality and new HIV infections.
- More consistent policies and support for optimal infant feeding practices among both HIV-positive and HIV-negative mothers in the general population.
- Given the importance of breastfeeding as a child survival intervention, the availability of ARV interventions could make a major contribution to reducing

48. 2010 Guidelines: "Antiretroviral drugs for treating pregnant women and preventing HIV infections in infants [Http://www.who.int/hiv/pub/mtct/PMTCTfactsheet/en/](http://www.who.int/hiv/pub/mtct/PMTCTfactsheet/en/)

child mortality in the entire community.

Major challenges were identified in scaling-up national PMTCT services and implementing the new guidelines: weak health infrastructure, limited human resources, limited management capacity, and limited funding and support for PMTCT. Given the confusion in the past around HIV and infant feeding, comprehensive communications strategies were considered necessary to give health workers confidence to recommend breastfeeding and ARVs and for HIV-positive mothers to want to breastfeed. Research from South Africa has since confirmed the urgent need for multifaceted communication strategies, taking into account inputs from the community, to clearly articulate the reasons for infant feeding policy changes.⁴⁹

Since 2010, WHO has also issued further guidance on ARVs, in particular the 2013 Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection⁵⁰, and in 2015, guidelines on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV⁵¹. These guidelines stress the fact that efficacy of ARVs to prevent postnatal transmission depends largely on whether women with HIV take ARVs consistently throughout breastfeeding; if treatment is interrupted for any reason, virologic failure and drug resistance may result and lead to increased transmission, morbidity and mortality. Thus, it is essential to support mothers with HIV to remain on ART,

emphasizing yet again the importance of a continuum of care and building the case for investing in improved health systems. For mothers without access to ARVs, optimal infant feeding remains critical to minimize the risk of vertical transmission.

The 2010 guidelines are consistent with the former guidelines in many respects but with two significant differences⁵² (see Annex 2a for more information on recommendations, and differences between the 2010 and 2007 related previous guidance):

- **To start with, the 2010 guidelines state that national health authorities should promote a single infant feeding practice for HIV-infected mothers as the standard of care.** While information about other practices should be made available to HIV infected mothers, health services would principally recommend one infant feeding approach, either breastfeeding with antiretroviral drugs (ARVs) or replacement feeding, for all HIV-infected mothers. In comparison, the 2007 guidelines suggested that health workers should individually counsel all mothers known to be HIV-infected, who would then decide the most appropriate infant feeding strategy for their circumstances. Therefore, national authorities, or even sub-national authorities where appropriate, now have to decide whether health services will principally counsel and support mothers known to be HIV-infected to either breastfeed and receive ARV interventions (for themselves or for

49. Ijumba P, Doherty T, Jackson D, Tomlinson M, Sanders D & Persson L-A. Free formula milk in the prevention of mother-to-child transmission programme : voice of a peri-urban community in South Africa on policy change. Health Policy and Planning 2013; 28:761-768.

50. WHO (2013). Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. <http://www.who.int/hiv/pub/guidelines/arv2013/download/en/>.

51. WHO (2015). Guidelines on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV http://apps.who.int/iris/bitstream/10665/186275/1/9789241509565_eng.pdf

52. WHO Online questions and answers on the 2010 Guidelines on HIV and infant feeding http://www.who.int/maternal_child_adolescent/topics/child/nutrition/hivif_qa/en/

their infants), or, avoid all breastfeeding, as the strategy that will most likely give infants the greatest chance of remaining HIV uninfected or alive.”

- **Secondly, new data on the effectiveness of ARV interventions have led the WHO to recommend continued breastfeeding by HIV infected mothers until the infant is 12 months of age as the best strategy to ensure the infant's chances of survival while reducing the risk of HIV transmission.** In comparison, the 2007 guidelines, formulated in the absence of ARV interventions, suggested that exclusive breastfeeding should be practiced until the infant reached 6 months of age unless specific conditions for replacement feeding (referred to as AFASS) were in place. After 6 months, it was recommended to stop breastfeeding, although not abruptly (see Part 3).

The 2010 guidelines recommend that in settings where national authorities promote breastfeeding and ARVs, mothers known to be HIV infected and whose infants are HIV uninfected or of unknown HIV status, should exclusively breastfeed their infants for the first 6 months of life, introducing appropriate complementary foods thereafter, and continue breastfeeding for the first 12 months of life. Continuing breastfeeding with ARV protection to 12 months is likely to improve HIV free survival of the infant; even after 6 months, there are still risks of serious diarrhea, pneumonia, malnutrition and death associated with stopping breastfeeding early.

WHO 2010 guidelines clearly state that

breastfeeding should only stop once a nutritionally adequate and safe diet without breastmilk can be provided. Otherwise, they should continue breastfeeding beyond 12 months, while remaining on ARVs. The guidelines recommend that mothers should stop breastfeeding gradually, within one month, and not suddenly or abruptly.

Although researchers agreed that breastfeeding should continue until 12 months, the optimal duration of breastfeeding beyond 12 months is uncertain and some question the need for limitation⁵³. New research findings and updated rapid advice and guidance from WHO will hopefully assist in reaching a consensus on this important issue.

HIV infected children should continue to be breastfed for up to 2 years or beyond, as breastfeeding increases their chances of survival.

According to the new 2010 guidelines, every effort should be made to ensure that ARVs reach all facilities and not just those in urban or more affluent parts of a country or region. The alternatives to breastfeeding with ARVs are either that mothers avoid all breastfeeding, or breastfeed without ARV prophylaxis. Mothers attending remote clinics are less likely to have good access to safe water and sanitation. In these settings, formula feeding would be unsafe and impractical. For this reason, even without ARVs, breastfeeding may still lead to the best outcome in terms of HIV-free survival for HIV-exposed infants. This is consistent with recommendations issued by UNHCR in

53. Sint T T, Lovich R, Hammond W, Kim M, Melillo S, Lu Lydia, CHing P, Marcy J, Rollins N, Koumans E, Heap A, Brewinski-Isaacs M, and the Child Survival Working Group of the Interagency Task Team on the Prevention and Treatment of HIV infection in Pregnant Women, Mothers and Children, Challenges in infant and young child nutrition in the context of HIV, Aids 2013 Nov; 27(02): S169-S177.

2009⁵⁴, on HIV and infant feeding in emergencies.

In 2012, the WHO, in collaboration with all key UN bodies, issued a **updated Framework for Priority Action on HIV and infant feeding** (see Annex 2c for full text), to provide guidance to governments on key priority actions, related to infant and young child feeding, that cover the special circumstances associated with Human Immunodeficiency Virus (HIV). The main aim of the guidance was to create and sustain an environment that encourages appropriate feeding practices for all infants and young children, while scaling-up interventions to reduce HIV transmission. (Box -5)

BOX 5: WHO Updated Framework for Priority Action 2012 (full text in Annex 2c)

- 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 Breastmilk Substitutes and subsequent relevant World Health Assembly resolutions (the Code).

WHO 2010 guidelines: Challenges of a public health versus a human rights approach

To the question, **do the 2010 recommendations remove the mother's right to decide regarding the way in which she feeds her infant?**, the answer provided by WHO is clear: “no, a clear recommendation by a national authority, either for breastfeeding while providing ARVs or avoidance of all breastfeeding, is fully consistent with respecting individual human rights”. The guidelines do not force a mother to accept the national recommendation and mothers can still choose to ignore the services offered by health authorities. According to WHO, the guidelines do not therefore not represent a conflict with the individual patient's interests, either the infant's or the mother's. **Information about options should be made available but services can promote and support one approach. If women choose not to accept the national recommendation, they should still receive counseling and support to optimally practice their choice.** However this does not mean that health authorities must provide free replacement feeds.”⁵⁵

The logic of the argument above however still begs a couple of questions: Can one claim that the public health directives do not remove the mother's right to decide how to feed her infant? If a public policy does not promote breastfeeding as an option, how can one assume mothers have the means of making an informed decision and that they are protected from reprimand or reprisal from national child protection services if they decision does not follow the health directives? ”

54. Guidance on infant feeding and HIV in the context of refugees and displaced populations. June 2009, version 1.1. UNHCR. <http://www.unhcr.org/4acb0c111b.pdf>

55. Quoted from WHO online Questions and Answers on HIV and Infant feeding. Question 18.

Post-2010 Adaptation of Guidelines on HIV and Infant Feeding in industrialized countries and Latin America

Ever since the discovery that HIV is transmitted via breastfeeding, industrialized countries have recommended no breastfeeding for women who tested HIV positive. As summarized in April 2015 by the organization Avert-Averting HIV and AIDS⁵⁶- “in most of Western and Central Europe the number of HIV infections that results from mother-to-child transmission have been significantly reduced as most countries routinely test all pregnant women for HIV. If a woman tests positive she will be recommended to begin taking antiretroviral drugs straight away in line with the 2013 WHO treatment guidelines. This will significantly reduce the chance of HIV transmission from mother to child. HIV-positive women are also encouraged to avoid breastfeeding as this too can transmit HIV; baby formula feed is recommended instead. As a result of these PMTCT initiatives, in 2011, only 1 percent of new infections were a result of mother-to-child transmission—a relatively small percentage compared to many other parts of the world.”

Although recommendations in industrialized countries have been updated since the adoption of the revised 2010 WHO international guidelines on HIV and infant feeding, and the revised WHO 2013 guidelines on ARVs for HIV-infected women, recommendations on how to feed babies of HIV-infected women have remained mostly unchanged i.e. there should be no breastfeeding.

Since 2010, there is however one noticeable difference in revised

recommendations in industrialized countries: the inclusion of a new “clause” allowing for mothers wishing to breastfeed, to do so, or at least, for their case to be considered- admitting that this represents a real ethical dilemma, but no longer justifies the entering into force of child protection services.

For example, the **WHO Europe Clinical protocol 2012**⁵⁷ states the following:

“Avoidance of breastfeeding completely eliminates the risk of post-partum HIV MTCT. This is recommended provided the AFASS criteria (acceptable, feasible, affordable, safe and sustainable) are met. Exceptions are determined by resources and local circumstance and not by geography. Despite the desire by many mothers to breastfeed and many social and cultural pressures, exclusive infant-formula feeding has been accepted by the majority of HIV positive mothers in AFASS settings in the European Region and others. Indeed, choosing to expose a baby to HIV through breastfeeding has been considered a child protection issue in some countries.

The Region in general supports infant formula feeding of HIV exposed infants. Still considering breastfeeding as a possible option in some settings of Eastern Europe, the Regional Office for Europe set a target to virtually eliminate MTCT in the Region, considering MTCT rate <2% in non-breastfeeding and <5% in breastfeeding populations in its European HIV/AIDS Plan 2012-2015⁵⁷, endorsed at the WHO Regional Committee in September 2011.

HIV-infected mothers should be helped to make the best choice

56. www.avert.org

57. Prevention of HIV transmission from HIV-infected mothers to their infants. Optimizing clinical management and effective interventions towards eliminating new paediatric HIV infections. Clinical Protocol for the WHO European Region (2012 revision).

according to their circumstances and to carry out their decision. They should thus receive counselling that includes information about the risks and benefits of various infant feeding options, based on local conditions, and guidance in selecting the most suitable option for their situation. Whichever infant feeding option is chosen, mothers should be supported in carrying it out safely and appropriately. While commercial infant formula will be acceptable, feasible, affordable, sustainable and safe for many HIV-positive women in the European Region, some women will choose other options according to their personal circumstances.”

The Joint Position Statement by the British HIV Association and the Children's HIV Association⁵⁸

has considered these new implications for the United Kingdom (UK). Although formula feeding is still recommended in the UK for HIV positive mothers, it has been recognized that a large proportion of HIV positive mothers in the UK are born in Sub-Saharan Africa; mothers who desire to breastfeeding are now entitled to receive support, and will no longer be referred to child protection services.

The American Academy of Pediatrics (AAP), in its 2013 policy statement on “Infant feeding and transmission of Human Immunodeficiency Virus in the United States⁶⁰”, also clearly states that “The American Academy of Pediatrics recommends that HIV-infected mothers not breastfeed their infants, regardless of

maternal viral load and antiretroviral therapy.” When reading the detailed text however, it is stated in the background that:

“An HIV-infected woman receiving effective antiretroviral therapy with repeatedly undetectable HIV viral loads in rare circumstances may choose to breastfeed despite intensive counseling. This rare circumstance (an HIV-infected mother on effective treatment and fully suppressed who chooses to breastfeed) generally does not constitute grounds for an automatic referral to Child Protective Services agencies. Although this approach is not recommended, a pediatric HIV expert should be consulted on how to minimize transmission risk, including exclusive breastfeeding. Communication with the mother's HIV specialist is important to ensure careful monitoring of maternal viral load, adherence to maternal therapy, and prompt administration of antimicrobial agents in instances of clinical mastitis. (...) Breastfeeding by an infected mother with detectable viral load or receiving no antiretroviral therapy despite intensive counseling represents a difficult ethical problem that requires consultation with a team of experts to engage the mother in a culturally effective manner that seeks to address both her health as well as her child's.”

Recommendations from the Pan American Health Organisation (PAHO) (see Annex 3) are similar to those found in Europe: All pregnant and breastfeeding women with HIV should initiate triple ARVs (ART) which should be maintained at least

58. <http://www.euro.who.int/en/health-topics/communicable-diseases/hiv/aids/publications/2011/european-action-plan-for-hiv-aids-2012-2015>

59. British HIV Association and Children's HIV Association position statement on infant feeding in the UK 2011. <http://www.ncbi.nlm.nih.gov/pubmed/21418503>

60. <http://pediatrics.aappublications.org/content/131/2/391>

for the duration of mother-to-child transmission risk. HIV testing of the male partner should be encouraged. Most countries in the LAC region actually provide free replacement feeding for exposed infants. If replacement feeding is not acceptable, feasible, affordable, sustainable,

and safe, exclusive breastfeeding for 6 months is, however, recommended, with continued maternal ARV use. The combination of breastfeeding and replacement feeding should be avoided, as this option carries the highest risk of transmission.





PART 5

Analysis of Policies and Programmes on HIV and Infant feeding based on World Breastfeeding Trends Initiative (WBTi)

This report has included the latest assessment reports from 57 countries, as some countries have done more than one assessment. The HIV and infant feeding indicator in WBTi requires countries to answer a subset of 9 questions listed below. The questionnaire on Infant feeding and HIV has been modified in the year 2014 to make it more objective (see Annex 1a & 1b for full detail of the WBTi indicator 8 on HIV and infant feeding). Changes included an emphasis on having a policy on Infant feeding and HIV which is in line with the *international guidelines*; aligning the programme with newer initiatives like HIV Testing and Counselling (HTC)/ Provider Initiated HIV Testing and Counselling (PIHTC). A new question on providing ARV support to HIV positive breastfeeding mothers has been added. Also, there are some minor changes in the new questionnaire in the sub-questions 8.1 to 8.6, which does not affect the core intent of the individual sub-question. The sub-question 8.9 from the old questionnaire (BFHI related question) has been dropped in the new version, sub-question 8.7 in the old version (countering misinformation) has become 8.8 in the new version, sub-question 8.7 in the new version is a new

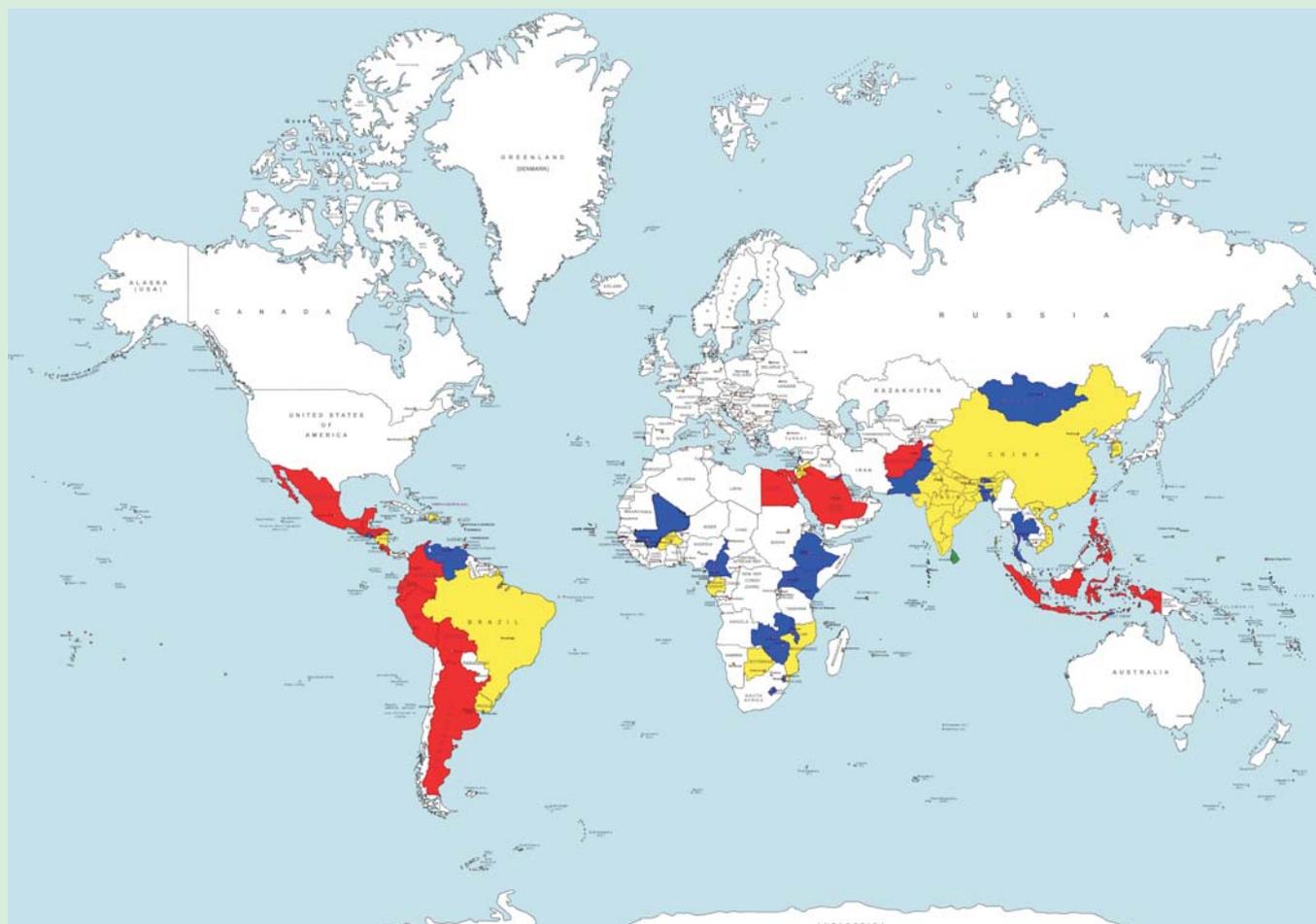
question which is about the provision for ARV drugs, and sub-question 8.8 (on going monitoring) in the old version has become 8.9 in the new version. While 53 countries included in this report have used the old version, four countries Bangladesh, India, Maldives and Mali have done the assessment with the revised questionnaire. Since, the majority of countries included in this report have used the old version of the questionnaire, sub-questions text from the old version and equivalent text from the new version has been used while analyzing the data.

By October 2015, WBTi had been introduced in about 106 countries, and assessment of policies and programmes on infant and young child feeding were conducted and finalised in 57 countries worldwide. Overall, the WBTi total average score obtained for the infant feeding and HIV indicator in October 2015 was 5.71 for 57 countries, which is not much different from 2012, when the average score was 5.42 for 51 countries. (See Fig. 5).

Fig. 5: Average WBTi scores for indicators 1-10, from 57 countries, October 2015



Fig. 6: Map showing 57 countries per colour code for the Infant feeding and HIV indicator:



The Global analysis of all the WBTi findings on HIV and Infant feeding from the 57 countries having completed WBTi evaluations by October 2015 is shown in the Fig. 6 & 7, with the map showing colour-coding of different countries for this indicator. Table 3 shows score for each subset question in 57 countries (see Page no. 64-65)

This Global and Regional analyses reveal the following:

- Although the total average score for infant feeding and HIV for all 57 countries remains far too low (total average 5.71), most of the 6 countries which finalized assessments between 2012 and 2015, had more encouraging scores for this indicator: Burkina-Faso (WBTi 2013) 6/10, Gabon (WBTi 2013) 5.5/10, Mali (WBTi 2014) 7.5, Honduras (WBTi 2014) 3.5/10, Ethiopia (WBTi 2013) 8/10, Timor Leste (WBTi 2014.) 7/10.
- There are marked differences in the overall score obtained by the 57 countries for the WBTi assessment on the HIV and infant feeding indicator.
- Of note, with the exception of Botswana (total score 5/10), most Sub-Saharan African countries in which WBTi assessment has been undertaken, have scores of 6 or above, with most even scoring 8 or above (although it must be noted that even when high scores are obtained, gaps however remain- see further section on gaps). This is reassuring given that the highest burden of HIV is in Sub-Saharan Africa. For francophone West-Africa, where the

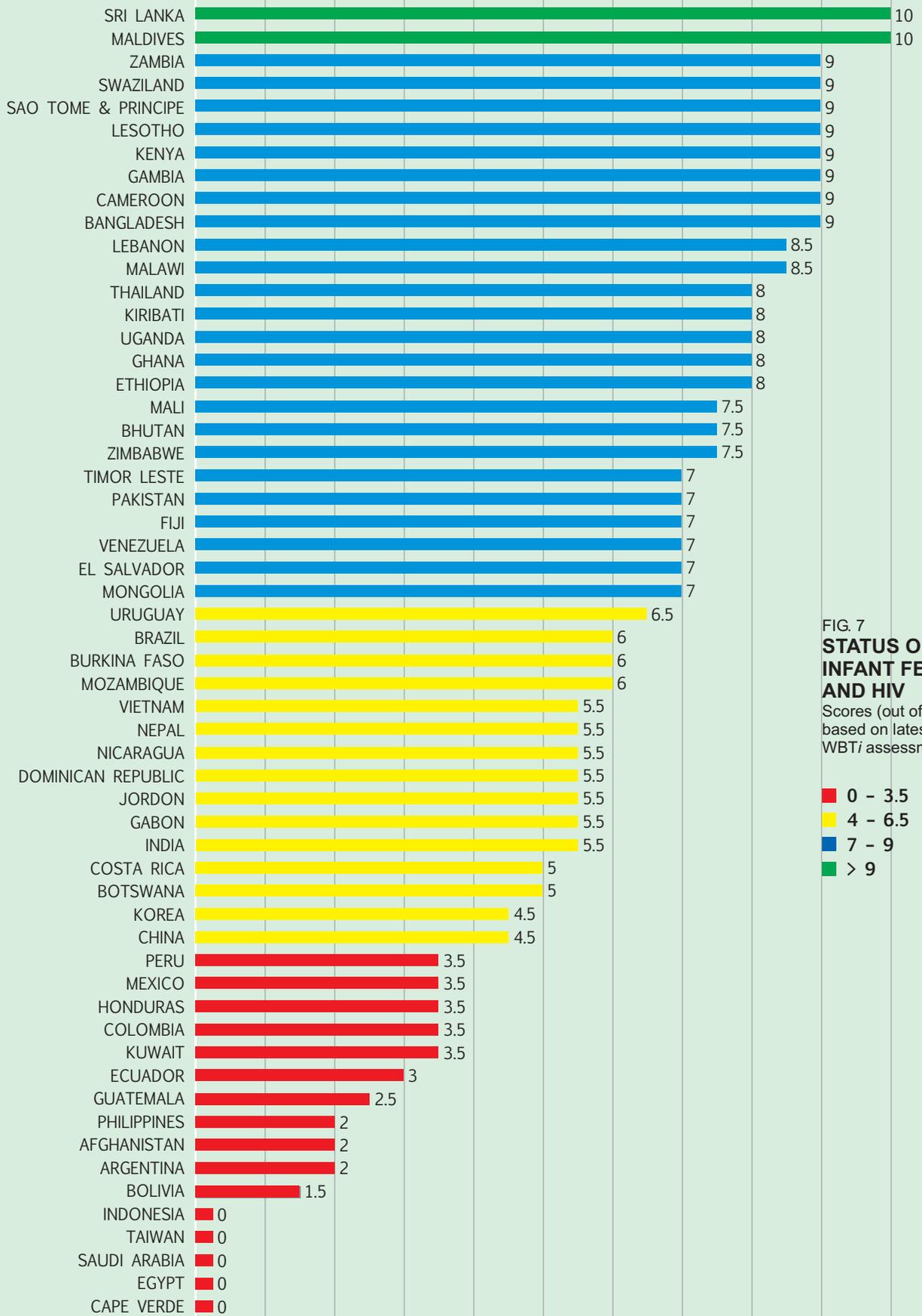


FIG. 7
STATUS OF
INFANT FEEDING
AND HIV
 Scores (out of 10)
 based on latest
 WBTi assessment

- 0 - 3.5
- 4 - 6.5
- 7 - 9
- > 9

incidence and prevalence of HIV is much lower, scores are slightly higher than average (6/10 for Burkina Faso, 5.5/10 for Gabon, 7/10 for Mali). Cape Verde is the only country on the African continent with a total score of zero on the HIV and infant feeding indicator.

- In Oceania, Kiribati and Fiji, being the only two countries assessed to date, have acceptable scores that place them in the blue zone (scores between 7-9/10).
- The Middle East, with the exception of Lebanon with a score of 8.5/10, scores overall poorly, with Egypt and Saudi Arabia scoring 0.
- Latin America and the Caribbean region has a poor total average score of 4.4/10 for the HIV/Infant feeding indicator, with many countries (8 countries) in the Red scoring 0-3.5/10. Nine out of the fifteen total countries in the region i.e. 60%, scored 5/10 or less. Only 2 countries are in the Blue category: Venezuela and El Salvador, each scoring 7 /10. 5 countries are in the Yellow category, scoring between 4 and 7. Of note Brazil, scoring 5/10 in its first assessment, improved slightly in its 2014 re-assessment.
- South Asia (Box-6) and South East Asia have varying scores (see Fig.8 for more detail on the evolution of scores over time in South Asia, and Fig.7). Of note, the Philippines scored 2/10 for HIV and infant feeding. Indonesia also scored 0/10 in the 2008 WBTi assessment. Indonesia has however just been reassessed in 2015 demonstrating some overall progress with the HIV and infant feeding indicator (development of policy/guidelines on IYCF which includes infant feeding and HIV, training of health care providers on infant

feeding and HIV, availability of HIV testing and counselling and harmonisation of HIV-infant feeding guidelines with the international guidelines)⁶¹. East Asia (China, Korea and Taiwan), score quite poorly (yellow), with the exception of Mongolia (blue).

- Unfortunately, in Europe and North America, there have not been any WBTi reports issued to date.⁶²
- Two countries, the Maldives and Sri Lanka, deserve a special mention, given that they scored 10/10 on the infant feeding and HIV indicator. In the 2013 UNICEF report “Improving child nutrition: the achievable imperative for global progress” the case of Sri Lanka was described to illustrate a national success story of reduction of under-5 mortality by expanding breastfeeding. Sri Lanka boasts some of the highest rates of early initiation and exclusive breastfeeding in the region, and has invested greatly in this area of work over the years, with a high level of political commitment and protective legislation.

Trends over time in countries having carried out more than one WBTi assessment- Example of South Asia

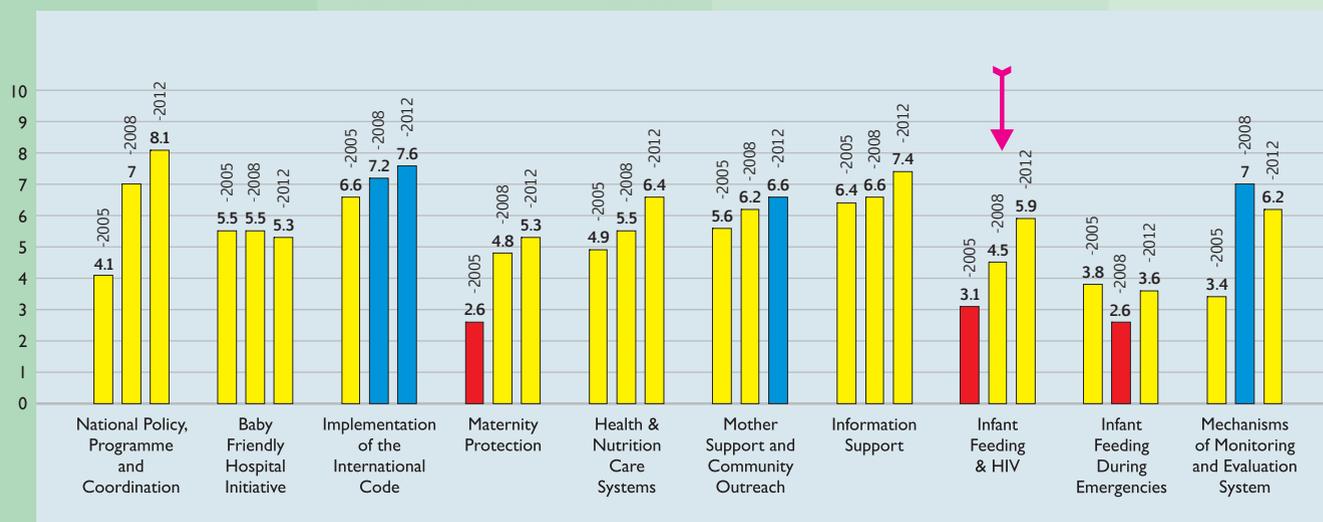
The 2013 WBTi report for the South Asia region for 5 countries (2005-2012) highlighted the fact that HIV and infant feeding was one of the indicators for which countries scored among the lowest, alongside Infant feeding in emergencies. This report also showed, however, that some improvements were observed between 2005 and 2012 (see Fig. 8). In three countries which carried out re-assessments in 2015, further improvements were noted.

It is however important to note that the international recommendations completely

61. Personal communication from IBFAN Asia. The final WBTi assessment report for Indonesia is unfortunately still being finalized and has not yet been cleared for publication.

62. A number of European countries are in the process of finalising their first assessments by the end of 2015 and in early 2016.

Fig. 8: Average Scores for indicators 1-10 for 5 South Asia Countries 2005-2012
(Indicator 8: HIV and infant feeding indicator)



BOX 6: Example of evolution of WBTi infant feeding and HIV scores in South Asia

In the 2013 WBTi report “Are we doing enough for our babies? Trends analysis for infant and young child feeding policies, programmes and practices in South Asia”, countries where WBTi assessments and re-assessments were carried out revealed that for infant feeding and HIV, scores obtained were generally low during initial assessments (Red or Yellow), but with improvements in scores obtained during re-assessments (observations from the 2013 regional report are quoted for each country when relevant):

- **Afghanistan:** Red 0/10 in 2005, 3.5/10 in 2008, 2/10 in 2012: “progress on this indicator has been slow; in 2005 the country scored zero and immediate action was initiated by starting the training of health staff and community workers on HIV and infant feeding to support mothers in making their infant feeding decisions. Special efforts to counter misinformation on HIV and infant feeding were also made. However, there is still much to be done.”
- **Bangladesh:** Yellow in 2005 (4.5/10) and 2008 (4.5/10), Blue in 2012 (7/10) and 2015 (9/10): The infant feeding and HIV indicators have shown marked improvement and their score has moved up from 4.5/10 in 2005 to 9/10 in 2015, and from yellow to blue in colour rating. However, the WBTi 2015 report still revealed some gaps and recommended strengthening infant feeding and HIV training, and ensuring sufficient infant feeding counselling & follow up, as well as monitoring of ARV compliance.
- **Bhutan:** Red in 2005 (2/10), Blue in 2008 (7.5/10) and 2012 (7.5/10): “The indicator on infant feeding and HIV showed good progress and moved up from red to blue colour rating after the first assessment in 2005.”
- **India:** Red in 2005 (3/10), 2008 (2/10), 2012 (3/10): “Not much action has happened over the years on this indicator”. In 2015, during re-assessment, the score obtained showed an improvement with 5.5/10 (Yellow): “India has created guidelines and done some capacity building for health personnel for IYCF counselling in the

context of HIV/AIDS. However, this advance is yet to take the shape of a clear policy and ensure quality in implementation.” “There is inadequate training of health staff and community workers on feeding options in the context of HIV/AIDS and therefore mothers are not properly supported in their decisions.”

- **Sri Lanka:** Green in 2012 (10), Yellow in 2005 (6) and 2008 (5): “Sri Lanka has marked improvement in the indicator on infant feeding and HIV, moving from yellow in 2005 to green color rating in 2012, which goes to show that they have a comprehensive policy on infant and young child feeding that includes infant feeding and HIV. In the latest 2012 it was stated that: “Estimated HIV prevalence rate is less than 0.1 percent in Sri Lanka. The Government provides HIV-positive pregnant women with a “PMTCT package” that includes ARVs, safe delivery, and safe feeding interventions, including free infant formula for those choosing this feeding option. Health providers are trained on infant feeding options of HIV-positive women through the PMTCT module in the integrated IYCF course, Breastfeeding Counselling Course, BFHI course and Essential Newborn Care Course.”
- **Maldives:** Yellow in 2005 (6) and 2008 (5.5). The re-assessment carried out in 2015 showed a tremendous improvement in the infant feeding and HIV indicator as Maldives scored 10/10. Nevertheless, 2015 WBTi recommendations included “training more health workers on the PMTCT guidelines.”
- **Nepal:** Red in 2005 (3.5) and Yellow in 2008 (4)
- **Pakistan:** Yellow in 2005 (4) and Blue in 2008 (7): “Pakistan improved its score on the indicator on HIV and infant feeding, up from 4 in 2005 to 7 in 2008, and moved up from yellow to blue color rating. This goes to show that it has included infant feeding and HIV in its IYCF policy to some degree.”

All the all, the South-East Asia region has made significant progress on the indicator infant feeding and HIV with an average score rising from 3.1 in 2005 (Red) to 5.9 in 2012 (Yellow).

changed after 2009, moving from a concept of individual “informed choice” to a public health approach at national level. What is more, each country adapted national recommendations to international guidance, at different speeds. All in all, differences in timing of WBTi assessments, linked with the changes in international recommendations and the variations in the speed of adaptation at national level, therefore make comparisons between countries difficult.

The key question the WBTi HIV and infant feeding indicator attempts to answer is: Are policies and programmes in place to ensure that HIV - positive mothers are supported to carry out the national recommended Infant feeding practice? Depending on the year of assessment, and the speed of adaption of national guidance to updated international guidance, countries may not have assessed

themselves against the most updated international guidance. This will of course have influenced their scores.

More in-depth analysis of HIV and Infant feeding WBTi assessment results

A more detailed analysis of the HIV and infant feeding WBTi indicator per sub-question reveals various gaps. Note: The 3 key sub-questions presenting the most gaps in implementation have been grouped together towards the end of this analysis.

Countries have a comprehensive policy on infant and young child feeding that includes infant feeding and HIV

As shown in Fig. 9, this sub-question achieved the highest total average score for all 57 countries. More than half of all the countries that carried out one or more WBTi evaluations reported having a comprehensive updated policy on infant feeding and HIV guidelines (31/57 i.e. about

Fig. 9: Average score for each sub-indicator in the HIV and Infant Feeding question, for all 57 countries

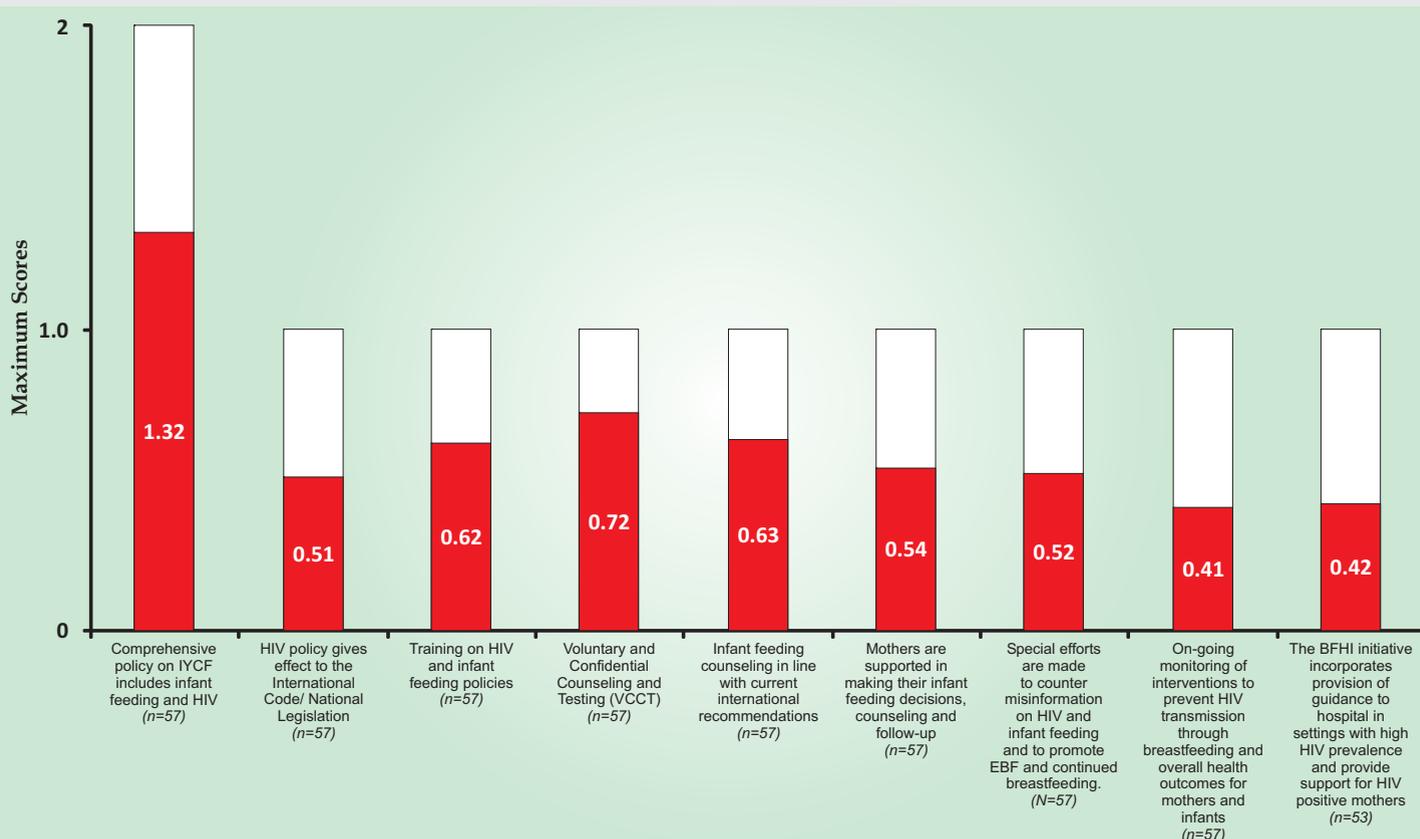
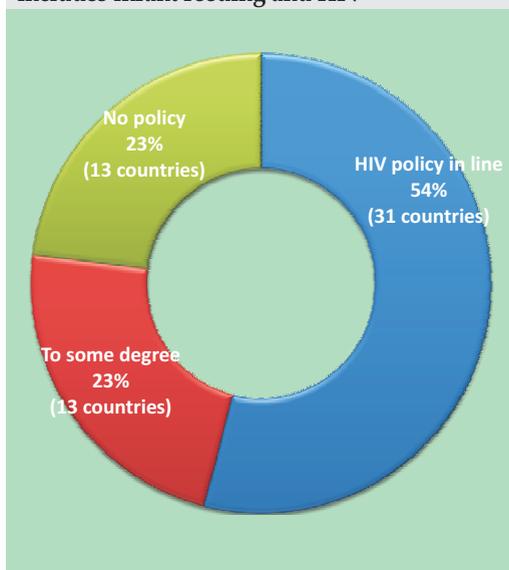


Fig. 10: Comprehensive IYCF policy that includes infant feeding and HIV



54%) at the time of assessment, and 23% countries have such a policy “to some degree”. (Fig. 10)

However, it must be noted that many countries have only carried out one WBTi assessment and 16 out of 57 of these were carried out prior to 2010, i.e. before release of the 2010 WHO revised guidelines on HIV and infant feeding. Information recently sought from countries for the purpose of this report revealed that some of these countries have since developed and/or updated their policies: see Case-Study on India (see Box7).

BOX 7: Case-study on HIV and Infant feeding programmes and policies in India

In 1992 India's first National AIDS Control Programme was launched, and NACO, the National Aids Control Organisation, was created to implement this Programme. Prevention of Parent to Child Transmission (PPTCT) is one of the component of HIV programmes in India which was launched by NACO in 2001-02, which provided HIV testing services to all pregnant women enrolled for antenatal care along with provision of ARV prophylaxis with single dose of Nevirapine at the time of delivery. Interventions to address transmission through breastfeeding were rapidly scaled up in 2007-2012, with development of the WHO guidelines on HIV and infant feeding. A Technical Resource Group supports NACO with experts, civil society and government functionaries as members.

As shown in WBTi assessments carried out in India in 2005, 2008 and 2012, the scores obtained on the HIV and infant feeding indicator were nevertheless generally low (less than 3 for each assessment) and revealed little progress between 2005 and 2012, in the HIV and infant feeding policies and programmes. IBFAN Asia, concerned about the weak implementation in guidelines and overall slow progress, issued two statements: a) “Drop mixed feeding” 2007 IBFAN Asia position statement, b) The IBFAN Asia 2012 Position statement on HIV and Infant feeding: see Annexes 4 (updated 2015 version) and 5. In 2013 IBFAN Asia/BPNI also developed and issued “HIV and infant feeding, an information booklet for policy and programme managers in India”. This booklet was aimed

at providing updated information up to September 2013 on infant feeding options and HIV, in the framework of the WHO revised 2010 guidelines on HIV and infant feeding.

In 2015, infant feeding policies for HIV exposed infants in India are included in the two updated national guidelines:

Prevention of Parent to Child Transmission (PPTCT) of HIV using a multi-drug antiretroviral regime in India (December 2013). These guidelines deal with all the aspects related to PPTCT, including infant feeding. In the Indian context, exclusive breastfeeding is the recommended infant feeding option in the first 6 months. Mixed feeding within the first 6 months is strongly discouraged. Only in situations where breastfeeding cannot be practiced or when individual mothers made their informed decision to not breastfeed and AFASS criteria for exclusive replacement feeding are fulfilled, is replacement feeding considered. According to these national guidelines, mothers should receive ART during the whole duration of breastfeeding, and exclusive breastfeeding should continue for 6 months at least, after which complementary feeding should be introduced gradually, irrespective of whether the infant is diagnosed HIV negative or positive. For breastfed infants diagnosed HIV negative, breastfeeding should be continued until 12 months of age, ensuring the mother continues being on ART. For breastfed infants diagnosed HIV positive, paediatric ART should be started and breastfeeding should be continued ideally until the baby is 2 years old.

Breastfeeding should only stop once a nutritionally adequate and safe diet without breastmilk can be provided. Breastfeeding should not be stopped abruptly.

Nutrition guidelines for HIV exposed and infected children (0-14 years) (2011): These guidelines have been adapted from recommendations of WHO and expert national consultations and have been developed for guiding different health care personnel, such as medical practitioners, nurses, counsellors, community workers and volunteers, engaged in providing care and support to mothers and children infected with HIV/AIDS. According to these guidelines, all HIV positive pregnant women should have PPTCT interventions provided from early stages of pregnancy, as long as possible. The interventions include either maternal or infant ARV prophylaxis for the duration of breastfeeding and which should be continued for life.

The most recent **WBTi 2015 India assessment** revealed that although India has created guidelines in line with the updated WHO 2010 guidelines, and has done some capacity building, the implementation fails both in quality and quantity. There is inadequate skilled counselling provided to mothers, with the result that mixed feeding is

not avoided. Inadequate training of health staff and community workers on feeding options in the context of HIV/AIDS results in poor support being given to mothers in practicing optimal infant feeding. The availability of ARV drugs for prophylaxis also remains a critical bottleneck, and monitoring systems are weak. There is inadequate follow-up of babies born to positive mothers for their health outcomes.

Given the above, the recommendations issued from the WBTi 2015 India, showing a slightly improved score for India (5.5/10) since the last assessment in 2012, include the following: NACO and the Ministry of Health and Family Welfare, Government of India should draft a clear policy on training of health workers on infant feeding options and how to support a mother in a given option to achieve good outcomes. This should be operationalized through the health system with a specific plan and budget allocation. NACO should ensure availability of ARV prophylaxis drugs without interruption.

Adapted from case-study compiled by: Vibharika Chandola, Programme Officer (Trainings), Breastfeeding Promotion Network of India and Dr. JP Dadhich, National Coordinator, Breastfeeding Promotion Network of India

In Sub-Saharan Africa according to the WBTi assessments, all countries have a comprehensive updated policy in line with international Guidelines on infant and young child feeding that includes infant feeding and HIV, with the exception of Mozambique, which scored 0 on the policy question in its latest assessment (2013). Although generally countries in which IBFAN Africa is active were shown to have intensified efforts to adapt and implement the WHO 2010 guidelines, including building skills among the service providers for their implementation, the adaptation process has not been uniform across all countries.

In 2015, IBFAN Africa therefore carried out “A rapid assessment of national Infant and Young Child Feeding (IYCF) Policy Guidelines”, in order to determine the extent to which they national policies aligned with

the global 2010 Guidelines. Countries for review were selected from the Anglophone and Lusophone parts of the region, namely: Ethiopia, the Gambia, Ghana, Kenya, Lesotho, Malawi, South Africa, Tanzania, Uganda, and Zimbabwe. The WHO 2010 seven recommendations on HIV and infant feeding (see Annex 2b) provided the framework for review of the national implementation guidelines on infant and young child feeding from the selected countries. Each national policy was thus analyzed against the seven major areas of the WHO updated 2010 recommendations namely 1) ensuring mothers receive the care they need, 2) which breastfeeding practices and for how long, 3) when mothers decide to stop breastfeeding, 4) what to feed infants when mothers stop breastfeeding, 5) conditions needed to safely formula feed, 6) heat-treated, expressed breastmilk, 7) what to do when the infant is HIV infected.

Findings from the latest WBTi assessments carried out in each country were also highlighted in the report, showing scores obtained for each sub-question on the HIV and infant feeding WBTi indicator.

The IBFAN Africa report concluded that overall, countries adopted the WHO 2010 guidelines on HIV and infant feeding, albeit to varying extents. The analysis, however, revealed missing or incomplete information on the subject of a) when mothers decide to stop breastfeeding and the importance of stopping breastfeeding gradually, within one month, rather than abruptly, b) the use of heat-treated and expressed breastmilk by HIV positive mothers, c) what to give the baby when the mother stops breastfeeding.

Uganda scored at 9 out of 10 in the latest WBTi assessment conducted in 2012. The 2015 IBFAN Africa report also showed that the current national infant feeding/HIV policy guidelines for Uganda were in line with the WHO 2010 guidance. However, as illustrated by the Uganda case-study in Box-8, Uganda faced considerable challenges over time in policy development and implementation.

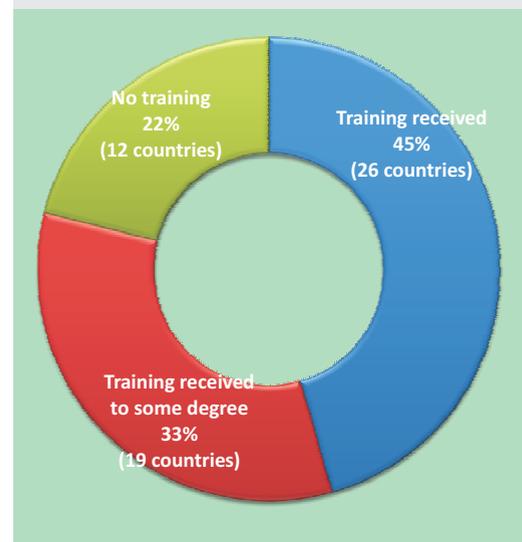
One issue that has come up in French and Spanish speaking countries is translation. The changes in policies and guidelines at international level were not always followed by fast translation of key documents into all UN languages. This of course made it difficult for countries to follow-through in a timely-fashion with updated national policies and guidelines.

Health staff and community workers receive training on HIV and infant feeding policies, the risks associated with various feeding options for infants of HIV-positive mothers and how to provide counselling and support

Results of the WBTi assessments reveal that this training is often inadequate. Twelve countries scored 0, and 19 scored 0.5 out of a maximum score of 1, thus showing that 31 countries i.e. 55% were assessed as not having proper training of health staff and community workers on implementation of HIV and infant feeding policies, the risks associated with various feeding options for HIV positive mothers and how to provide counselling and support. (Fig. 11)

In Uganda (see case-study), attaining the adequate number of health workers with the appropriate knowledge and skills given the rapid turnover and the limited resources for training coupled with the rapid changes in policy was for example raised as a key challenge.

Fig. 11: Training of Health Staff and Community Workers



BOX 8: Case-study: Evolution and changes in Infant Feeding/HIV policies and guidelines in Uganda

Uganda is among the African countries with a high burden of HIV and is still grappling with challenges around HIV and infant feeding. In 1992, Uganda had a task force that supported the scale up of BFHI in the country through breastfeeding counselling and BFHI parallel trainings but resources dwindled. When research findings came out indicating that HIV could be transmitted from mother to child through breastfeeding, this further affected the operations of the BFHI task force and finally paralyzed its activities. There were conflicting messages related to the promotion and support of breastfeeding and guidance was inadequate.

In 1999/2000, the pilot phase of the UNICEF PMTCT programme was initiated, followed by a scale-up in 2001. Around the same time WHO introduced the course on HIV and Infant Feeding. During this period, there were no specific national guidelines related to Infant Feeding in general and in the context of HIV in particular. However, the issues addressing IF/HIV were captured in the 2001 PMTCT “Policy guidelines on Feeding Infants and Young Children in the context of HIV”. PMTCT at this time was used as a springboard to revitalize overall IYCF in the country. This effort brought all relevant partners on board and an integrated 1 week training curriculum was developed that included the WHO courses on BFC, BFHI and Infant Feeding/HIV. Other interventions included provision of generic infant formula to HIV positive women, as the key policy at the time was to support HIV positive women to practice exclusive breastfeeding only for about 3 months.

In 2009, comprehensive national guidelines on IYCF were developed. These were aligned to the HIV and Infant Feeding WHO 2007 update and also included the Regulations on Marketing of Breastmilk Substitutes. Furthermore, counselling materials, such as a set of counselling cards, were produced to accompany the guidelines. These materials included 5 specific brochures to address some key areas (Fresh cow's milk, Breastfeeding, Infant Formula, Expressed Breast milk, and Maternal nutrition), a Question and Answer booklet, and an Infant Feeding/HIV flow chart. The duration of health workers training was reduced from 1 week to 3 days in order to reach more health workers within a shorter period and more focus was paid the use of the counselling materials.

In 2012, the Policy guidelines were updated through a consultative process with all relevant sectors and partners, taking into consideration the 2010 WHO guidance. The team adapted the WHO guidance in the following areas:

breastfeeding should be promoted as a single infant feeding strategy for all HIV infected mothers while they received ARV interventions; mothers should receive the care they need; information about which breastfeeding practice and for how long; and what to feed infants in situations when mothers stop breastfeeding and when the infant is HIV infected. The recommendations were however silent about situations when infant formula may be used.

Some of the Challenges faced over time in Uganda:

- *Implementing ambiguous and rapid changes in policy statements* e.g. “Support mothers to exclusively breastfeed for about 3 months” turned out to be ambiguous and was rapidly followed by “Support mothers to breastfeed for not more than 6 months”. This was then followed by guidance to “exclusively breastfeed for 6 months and continue breastfeed for 12 months with use of ARVs”;
- *Providing Replacement Feeding (RF) as part of the national PMTCT program:* this posed severe logistical challenges and was also associated with stigma since it was evident that the recipient was HIV positive;
- *Translating direct scientific evidence into programmes* e.g. heat-treating of breastmilk, which though scientifically correct, was never attempted because it was believed to be not culturally acceptable;
- *Attaining the adequate number of health workers that have the appropriate knowledge and skills* given the rapid turnover and the limited resources for training, and coupled with the rapid changes in policy;
- *HIV infected mothers getting inconsistent messages due to rapid policy changes and high turnover of skilled people to provide services.* This resulted in poor adoption and/or adherence to the recommended feeding practices;
- *Weak family and community structures to support optimal infant and young child feeding practices coupled with the socio-cultural beliefs that affected such support.* In addition, inadequate support from the male partners and non disclosure hindered practicing safe infant feeding;
- *Limited coverage for HIV Counselling and Testing (HCT) and ARVs* affecting access and utilization of such services. Where there was good access, there were inadequacy of supplies and stock-outs of test kits and ARVs.

Adapted from case-study compiled by: Dr. Gelasius Mukasa Executive Director, IBFAN Uganda; Ms Samalie Bananuka, National Coordinator, Nutrition and HIV; Dr. Saul Onyango, HIV Specialist; Barbara Nalubanga, Regional Coordinator, IBFAN Africa

Voluntary and Confidential Counselling and Testing (VCCT) is available and offered routinely to couples who are considering pregnancy and to pregnant women and their partners

As shown in Fig. 12, countries generally score relatively well for this sub-indicator. 88% of countries assessed reported having HIV testing and counselling services available and offered routinely (56% or 31 countries out of 57) or to some degree (32% countries or 18 out of 57). Only 7 countries reported no services available: all of these countries have very low or nil total scores for the overall infant feeding and HIV indicator.

Infant feeding counselling in line with current international recommendations and locally appropriate is provided to HIV positive mothers

The WBTi assessments in 57 countries revealed that in a large number of countries, counselling for HIV positive mothers is neither carried out in line with current international recommendations nor appropriate to local circumstances. A little more than half the countries (54% or 31 countries out of 57) score either 0 or 0.5 for this sub-indicator, depicting that the action is either inadequate or absent. In 46% (26 countries out of 57) of countries scored, appropriate counselling is available to the mothers. (Fig. 13)

Back in 2005, a WABA symposium on HIV and infant feeding, had already identified counseling to be the main problem faced (see Box-9). The recent case-study on Brazil also illustrates the fact that infant feeding counseling for HIV positive mothers is not in line with international recommendations, given that mothers are not counseled or supported if they wish to breastfeed rather than replacement feed. (See Box-10)

Fig. 12: HIV testing and counselling services

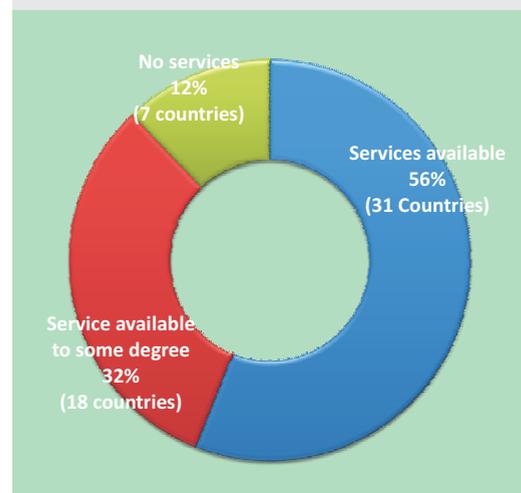
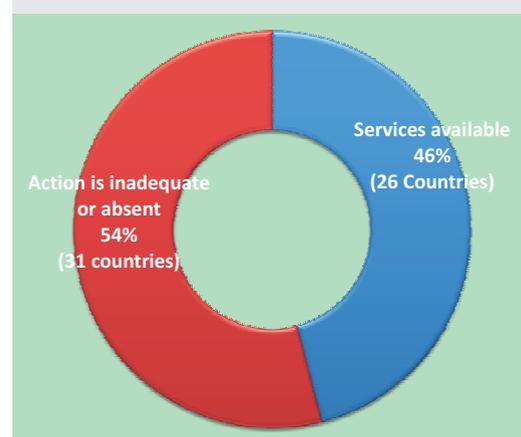


Fig. 13: Infant feeding counselling provided in line with current international recommendations



BOX 19: Challenges of Facilitating Maternal Infant Feeding decision-making

The task of helping HIV-positive mothers to weigh the pros and cons of various feeding options through clear policies and adequate and skilled counseling created considerable challenges for both policy-makers and for health-care workers. From 1998 to 2010 the responsibility for assisting HIV-positive women to make an infant-feeding decision rested with nurses and lay counsellors. 34 Participants at the La Leche League International/WABA Symposium on HIV and Breastfeeding held in July 2005 voted “counselling” as the major problem to be addressed. Those counselling mothers experienced unforeseen problems:

- Understaffing, high staff turnover, lack of time and burnout.
- Uncertainty over national HIV and infant feeding guidelines, lack of printed materials and changing recommendations.
- Misunderstanding of various feeding methods, due to incorrect information, ambiguous training or incomplete evidence from which to deduce the safety of locally recommended infant feeding options.
- Mixed messages related to implementing 'AFASS' counseling, resulting in poor counseling, especially relating to assessments of home circumstances and inappropriate decision-making by HIV-positive mothers.
- Counselor bias, particularly in favour of replacement feeding.
- Conflicts about how to support client autonomy without compromising the health of infants.
- Loss to follow-up of clients tested and accepted into PMTCT programmes.
- Low uptake of maternal/infant ARV prophylaxis.
- Low client adherence to chosen feeding method, resulting in high rates of mixed feeding.

Source of information: WABA 2012 Kit on HIV and Infant Feeding, Section 3

BOX 10: Brazil Case-Study- Infant feeding counselling for HIV + mothers not in line with international recommendations

In Brazil, the expected number of pregnant women with HIV is approximately 12,000 cases per year, i.e. 2% of pregnant women are HIV positive. Antenatal care coverage is around 90%, and includes obligatory free HIV testing.

National Recommendations for women diagnosed HIV positive include:

- Information against breastfeeding during antenatal care (“breastmilk transmits the virus”)
- **ARVs** antiretroviral drugs during the pregnancy and labor
- Elective **Cesarean section** for women who have high or unknown viral load
- **Replacement feeding with infant formula** since the first day and use of antiretrovirals for the newborn.
- Compulsory interruption of breastmilk production in lactating mothers, mechanically (bandaging the breasts) or with drugs.

Free generic infant formula, purchased by the health care system, in compliance with national Code legislation, is provided: Mothers of newborns are entitled to receive free infant formula milk from birth until at least 6 months of the infant's age. In some states, infant formula is provided until 12 months of age or more. The infant formula provided is generic and acquired by public bidding to try to get the lowest price. This is in compliance with the International Code legislation in Brazil.

In special situations, free pasteurized human milk from human milk banks (HMB) accredited by the Ministry of Health can be used (only if the newborn is preterm or low birth weight, because the HMB do not have enough donations to provide for term babies).

The 2010 WHO guidelines are not implemented in Brazil. There is no counselling available to HIV-positive mothers about other feeding options, except for infant formula. There is a lack of information regarding conditions required for replacement feeding (AFASS criteria). Information is also lacking regarding how to prepare a bottle of milk in the safest possible manner. Provision of infant formula to mothers/ caregivers, for as long as the infant needs it, also faces challenges, with irregular stocks at distribution units, linked to lack of funds.

If the mother wishes to breastfeed, it is discouraged, and sometimes even forbidden, using techniques such as bandaging the breasts or medication to stop the production of milk (cabergoline).

There is unfortunately no/poor dialogue between those responsible for the HIV/AIDS program and those responsible for protection, promotion and support of Breastfeeding/IYCF. Therefore, there is a contradiction between the widespread public health promotion of breastfeeding as the gold standard for infant feeding in the uninfected general population, and the “rigid” national recommendation for replacement feeding if women are diagnosed HIV positive. There are isolated reports of mixed breastfeeding, yet this carries the highest risk of parent-to-child HIV transmission.

Case-study prepared by Marina Rea, IBFAN Brazil

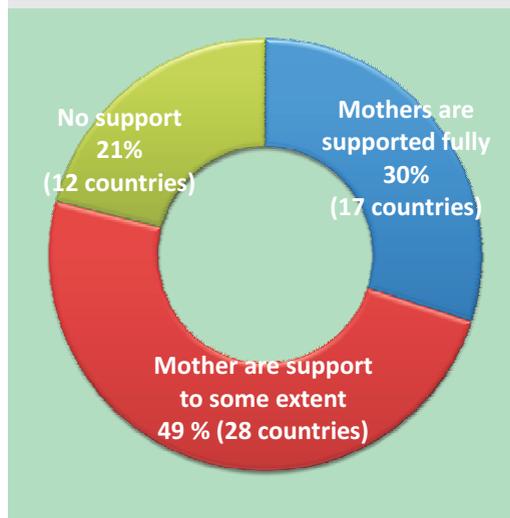
Sources

- Moreno CCGS, Rea MF, Filipe E. Mães HIV positivo: o dilema da não amamentação. Rev.Bras.de Saúde Materno Infantil, vol (6):199-208, 2006 <http://www.scielo.br/pdf/rbsmi/v6n2/30917>
- Rea Marina Ferreira, Santos RG & Moreno CCGS. Quality of infant feeding counselling for HIV+ mothers in Brazil: challenges and achievements. Acta Paediatrica, Vol 96, Issue 1, pages 94-99, January 2007

Supporting mothers in carrying out the recommended national infant feeding practices with further counseling and follow-up to make implementation of these practices feasible

About 30% of the 57 countries assessed reported supporting mothers with further counseling and follow-up. However, about half of all the countries assessed (28/57) only scored 0.5/1 for this indicator, thus indicating that support with further counseling and follow-up was only available for mothers to a certain degree, and for 21% of the countries assessed, there was none available at all. (Fig. 14)

Fig. 14: Supporting mothers in carrying out the recommended national infant feeding practices



The April 2014 UNICEF ESARO report “Rapid assessment on uptake of 2010 WHO guidelines on IYCF and HIV among health workers and caregivers, An assessment of 5 countries in sub-Saharan Africa”, also revealed that training and skills of health and community workers were insufficient. This report was commissioned to develop an in-depth understanding of the adoption of the 2010 WHO Guidelines on HIV and infant feeding across 5 countries namely Zimbabwe, Malawi, Uganda, Cameroon and Liberia. The assessment was carried out at 3

levels: a desk review of policy documents, interviews with key informant, and focus group discussions with health care workers, HIV positive pregnant and breastfeeding mothers, and with caregivers from health care facilities in one urban and one rural area in each respective country.

Findings reveal that progress towards adoption and update of the 2010 guidelines in the 5 countries was uneven, while all 5 countries had in place a robust system for the provision of ARVs and ARV prophylaxis for HIV positive mothers. However, with the exception of Zimbabwe where comprehensive PMTCT training was held in 87% of health facilities, in the remaining 4 countries relatively few health workers and community resource persons had been trained on the WHO recommendations, and the proportion of mothers who received quality counseling and training was low, coupled with weak follow-up mechanisms.

Health workers in the participating countries were conversant with the importance of the new 2010 guidelines on infant feeding and HIV. For example in Uganda, they perceived them to be more “user-friendly” as compared to previous guidelines. However, the extent to which knowledge has been translated into action is uncertain as many health workers reported gaps such as time constraints for effective counseling, loss of mothers and infants to follow-up, staffing shortages and influence of health workers’ cultural beliefs on counseling. Focus groups with mothers revealed that mothers received mixed messages from health workers, were influenced by mothers-in-law, succumbing to pre-lacteal and mixed feeding and that stigma continues to be an important determinant behind a mother's decision. Finally, mothers were finding it difficult to continue with exclusive breastfeeding when

they find out that their infant is HIV negative.

A number of **common challenges were identified in all countries**: delays in implementation of the guidelines, human resource constraints at health facilities, weak capacity building of health workers, inadequate time for quality counseling on HIV and infant feeding, lack of updated counseling job aids and IEC materials and lack of well-coordinated monitoring and evaluation systems. These **findings are consistent with the findings from the IBFAN WBTi assessments**, which showed that among mothers and caregivers, key challenges and constraints included lack of financial resources, grandmother and community influence, cultural and religious beliefs, stigma and lack of spousal support in infant feeding and HIV practices.

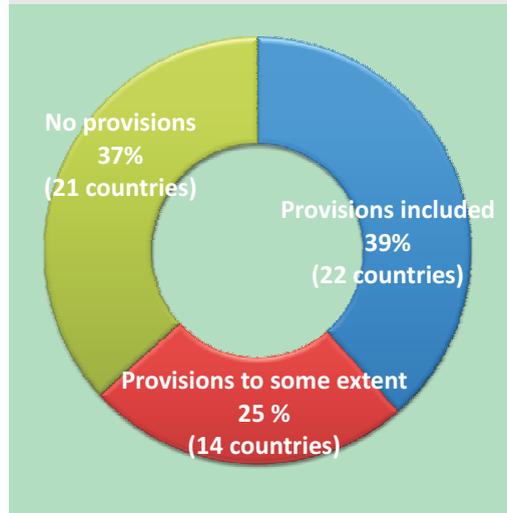
Most glaring Gaps - A quick overview and analysis of results provided by the 57 countries to the sub-set of questions on infant feeding and HIV reveals that there are serious gaps for 3 specific sub-questions:

The infant feeding and HIV policy gives effect to the International Code / National Legislation

21 out of 57, i.e. almost 37% of countries assessed, reported having no provisions regarding the Code in their policies on HIV and Infant feeding (bearing in mind that 75% of countries did report having a policy that is adequate or partly adequate). 24% of countries which were assessed, reported having only given effect to the Code to some degree. (Fig. 15)

Yet, the Code is one of the 5 key actions listed in the 2012 UN revised framework for action on HIV and infant feeding:
“Implement and enforce the International Code of Marketing of Breastmilk Substitutes

Fig. 15: Infant Feeding & HIV Policy giving effect to International Code/National Legislation



and subsequent relevant World Health Assembly resolutions (the Code).”

The latest IBFAN state of the Code by country report (2014) reveals that 80% of the 198 countries have taken some action to implement the *International Code of Marketing of Breastmilk Substitutes* and subsequent relevant World Health Assembly resolutions together known as the Code. In light of infant feeding and HIV, the Code and subsequent relevant Resolutions are of particular relevance since they aim to regulate marketing of breastmilk substitutes, including the distribution of free of subsidised supplies, so as to prevent spillover, as well as protect artificially fed children (see Box 11 and 12).

Special efforts are made to counter misinformation on HIV and infant feeding and to promote, protect and support 6 months of exclusive breastfeeding and continued breastfeeding in the general population

Only 22 (39%) of countries reported making special efforts to counter misinformation on HIV and infant feeding and to promote protect and support 6 months of exclusive

BOX 11: International Code and HIV- Code more relevant than ever!

Distribution of products used for replacement feeding for HIV-positive mothers must not lead to “spillover” of artificial feeding to infants of other mothers. The International Code and subsequent relevant WHA resolutions help by:

- banning the advertising and giving of samples;
- controlling the distribution of free or subsidized supplies;
- protecting artificially fed infants by ensuring that product labels carry necessary warnings and instructions for safe preparation and use;
- ensuring that infant feeding decisions are made based on independent medical advice and are free from commercial influence;
- stipulating that donations should continue for as long as the infants concerned need them.

The Code and subsequent resolutions do NOT prevent governments from making breastmilk substitutes for replacement feeding available to HIV-positive mothers, free or at a subsidized price, when the government has purchased them. The Code DOES aim to prevent manufacturers and distributors from donating supplies of breastmilk substitutes or providing them at a reduced price, to any part of the health care system because:

- When free supplies are provided by manufacturers to health facilities, it becomes too tempting to use them. Mothers who do not need breastmilk substitutes may end up using them. They may unnecessarily give up breastfeeding.
- If health facilities have to buy breastmilk substitutes the way they buy drugs and other food, they are more likely to ensure that the food is given out in a carefully controlled way, and not wasted or misused.
- Also, donations make health facilities dependant on them. If the donations cease there may be no alternative source of milk available and no provision in the health service budget to buy it.
- Donations are a very successful form of promotion. They encourage families to buy the same product they received from the health centre when they return home. The Code does not allow any form of promotion.

Source : Adapted from Protecting infant health. A health worker's guide to the International Code of Marketing of Breastmilk Substitutes, 11th Edition, IBFAN-ICDC ; Code Essentials 2: Guidelines for Policy Makers on Implementing the International Code of Marketing of Breastmilk Substitutes and subsequent relevant WHA resolutions, IBFAN-ICDC, 2009.

BOX 12

How to prevent “spillover” of replacement feeding, according to the IBFAN publication “Protecting Infant Health: A Health Workers' Guide to the International Code of Marketing of Breastmilk Substitutes”, 11th edition, January 2010 (Note: this IBFAN guidance was developed just before the release of the updated 2010 WHO guidelines on HIV and infant feeding, recommending a public health approach at national level, rather than an “informed decision”; nevertheless, these recommendations still apply, for countries who have chosen to recommend replacement feeding at national level for all HIV positive mothers):

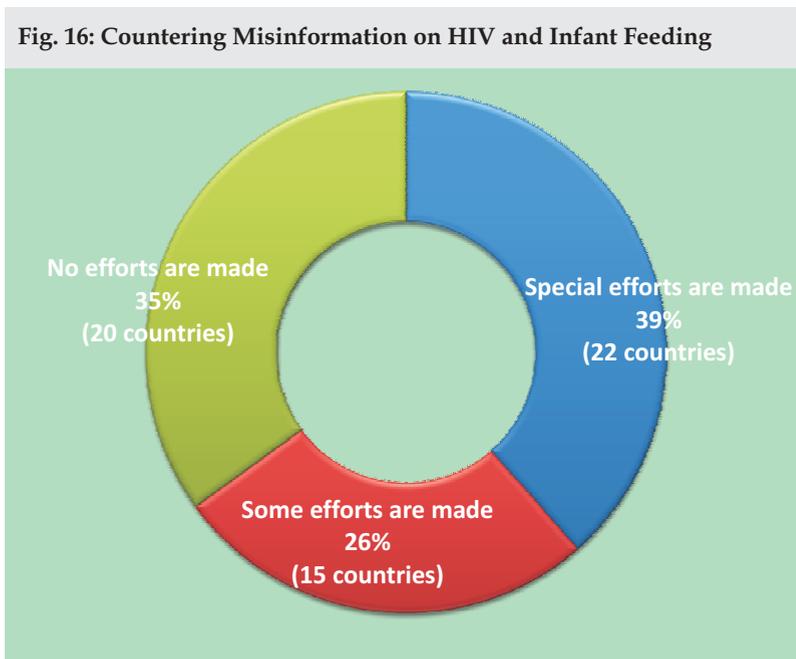
- Health education programs should continue to emphasize the benefits of breastfeeding and the dangers of artificial feeding, and that breastfeeding should be the norm in the general population
- The BFHI should be strengthened and health facilities should implement good practice to support breastfeeding consistent with the 10 steps to successful breastfeeding
- Health workers who counsel mothers on replacement feeding should also be trained in breastfeeding counseling and basic lactation management
- Instructions on replacement feeding should be given only to HIV-positive mothers (and those with other medical indications) and their family members
- Only health workers should demonstrate feeding with breastmilk substitutes. Group instructions should be avoided.
- Mothers should be taught to use cups to feed infants, and no bottles should be given out.
- Any commercial infant formula that is used in health facilities for infants of HIV-positive mothers should not be displayed to other mothers or pregnant women.

breastfeeding and continued breastfeeding in the general population. However, 35% of countries (20 countries out of 57 assessed) reported having no provisions in place for this, and 26% of countries have only some provisions in place. (Fig. 16)

Yet key principle 7 in the WHO Guidelines on HIV and infant feeding 2010 states that counseling and support to mothers known to be HIV-infected, and health messaging to the general population, should be carefully delivered so as not to undermine optimal breastfeeding practices among the general population. Distribution of products used for replacement feeding for HIV positive mothers who have decided not to breastfeed, as recommended or not by national public health recommendations on HIV and infant feeding, must not lead to “spillover” of artificial feeding to infants of other mothers. The South African

experience illustrates the problems associated with provision of free infant formula and spillover (see Box-13).

Spillover refers to the unnecessary use of artificial feeding by mothers who are HIV-negative or those whose status is unknown, or by HIV-positive mothers who have been misinformed of an exaggerated risk of transmission of HIV through breastfeeding. Such use can be a result of fears of HIV, misinformation, or poorly managed distribution of breastmilk substitutes. If uninfected mothers and those of unknown HIV-status were encouraged to replacement feed, the “spillover effect” would result in a decrease in breastfeeding rates, and an increase in illness and death among children who are not at risk, or at very low risk of HIV infection.



BOX 13: South Africa Case Study Illustrating the problems association with provision of free infant formula and Spillover

Sources of information: Doherty T., Sanders D., Goga A. & Jackson D. Implications of the new WHO guidelines on HIV and infant feeding for child survival in South Africa, WHO Bulletin 2010 <http://www.who.int/bulletin/volumes/89/1/10-079798/en/>; IBFAN Africa Rapid Assessment of National Policy Guidelines on HIV and Infant Feeding 2015; South Africa- North West wastes millions on baby milk that is then dumped, Mail and Guardian, Africa News and Analysis, posted April 4th 2014.

Mid 2011 the North West department of health spent 7 million rand (50% of its HIV budget) to purchase 20 000 cases of baby milk formula, for distribution to all HIV positive mothers in the department. The formula was kept in storage for 3 years, with no distribution whatsoever to HIV positive mothers. In January 2014, 2 million rand were spent to destroy 136 100 kg of out of date formula.

What happened?: Fiscal dumping? Incompetence? National changes in policy? When the new WHO 2010 guidelines were issued, this led to a rethinking of national policy. Up until then, mothers were counseled to make an informed choice to either breastfeed or formula feed. Commercial infant formula was provided free of charge by health authorities, for at least 6 months, to all HIV positive mothers. The continued provision of free formula was judged an incentive that clouded mothers' feeding decisions. Research from South Africa had already shown that women opted for formula feeding despite not meeting WHO AFASS (acceptable, feasible, affordable, sustainable and safe) conditions. Moreover, formula feeding was also shown to carry a greater risk of HIV transmission or death than breastfeeding. Thus, avoidance of breastfeeding incurred no survival gain for these infants.

In 2010, following the issue of the new WHO guidelines, key experts in South Africa strongly advised a change in national policy towards breastfeeding and ARVs as the recommended public health choice for HIV positive mothers. This led to phasing out of provision of free formula across the country, with new guidelines finally issued in 2013. In the new policy, based on the revised 2010 WHO guidelines, the national public health recommendation for HIV positive mothers now favors exclusive breastfeeding and ARV prophylaxis. Formula feeding is no longer encouraged, and if a mother chooses to do so, she has to purchase it herself, thus eliminating any perverse incentives from within the health services.

Lessons learned: In the context of weak counselling and unclear messages, availability of free formula provides an incentive to choose this option, even when it is not appropriate, since free formula might be viewed as a cash transfer to poor households. The provision of free commercial infant formula



Source picture: Mail and Guardian, 4th April 2014, Formula for disaster: North West's wasted millions in baby milk <http://mg.co.za/article/2014-04-03-outcry-over-north-west-spill-milk>

through the public health system may also reinforce the common practice of mixed feeding in the general population, i.e. among HIV-negative women. It has also been shown that any feeding strategy that includes free provision of infant formula to HIV-infected mothers, even for a limited period of 6 months, is at minimum between two and six times more costly than a strategy that provides ARVs as prophylaxis to reduce postnatal transmission.

The thrust of the 2010 WHO guidelines for HIV and infant feeding is that countries should choose one infant-feeding strategy that health services can advise for HIV-positive mothers. In South Africa, exclusive breastfeeding with ARV interventions is an appropriate option since, with its socio-demographic pattern and urban/rural inequities, the majority of the population would not meet the new WHO AFASS criteria for formula feeding. The past policy of presenting HIV-positive women with two "equivalent" options is likely to have contributed to the confusion among both mothers and health workers. Moving to one fully-supported policy of exclusive breastfeeding reduces confusion and leads to the greatest child survival benefit for the total child population, the majority of whom are not exposed to HIV.

On-going monitoring is in place to determine the effects of interventions to prevent HIV transmission through breastfeeding on infant feeding practices and overall health outcomes for mothers and infants, including those who are HIV negative or of unknown status

24 out of 57 countries, about 42% of all countries assessed scored zero, i.e. they have no on-going monitoring system in place to determine the effects of interventions to prevent HIV through breastfeeding on infant feeding practices and overall health outcomes for mothers and infants, including those who are HIV negative or of unknown status. 19 countries (33%) scored 0.5/1 and therefore have ongoing monitoring to some degree, while only 14 countries (25%) have ongoing monitoring in place. This is of course a serious gap, given that monitoring enables assessment of effectiveness and readjustment of policies and guidelines over time. (Fig. 17)

All pregnant women should be entitled to voluntary and confidential counseling and testing services, as a key component of ante-natal care. Pregnant women diagnosed HIV-positive should then be followed-up with appropriate prophylaxis and treatment for themselves and their baby, as well as support and follow-up, to ensure the best possible health and survival outcomes for themselves and their babies. Yet, the UNAIDS 2014 Gap report, revealed that despite global efforts, only 44% of pregnant women received HIV testing and counselling in 2013, in low- and middle-income countries. In Sub-Saharan Africa, 32% of pregnant women living with HIV were still not receiving lifelong ARV therapy or prophylaxis during the breastfeeding period to prevent HIV transmission to their children. (see Part I)

Without treatment, about one third of children living with HIV die by their first birthday and half die by their second birthday.

Fig. 17: On-going monitoring in place to determine the effects on intervention to present HIV transmission through breastfeeding

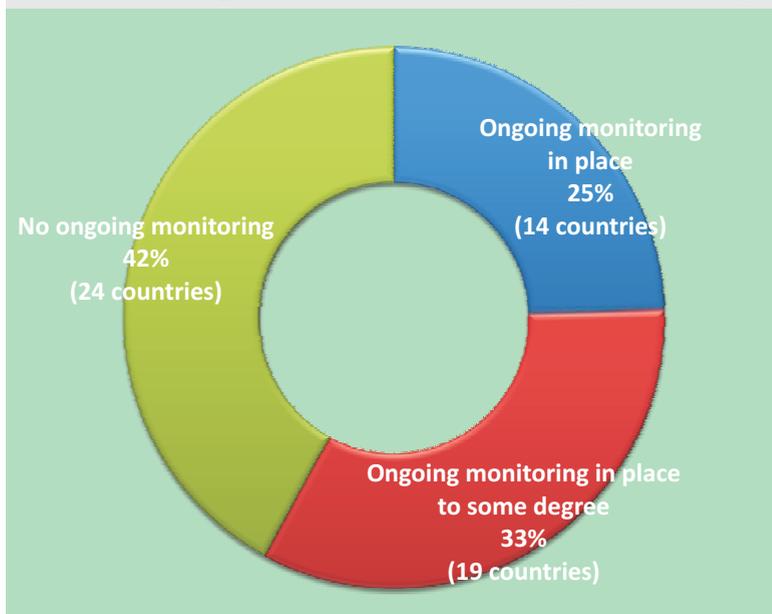


Table 3 with sub-question scores for the Indicator Infant Feeding and HIV
(for indicator 8.1 - maximum score is 2, for rest of the indicators, maximum score is 1)

Countries	Year	Comprehensive policy on IYCF includes infant feeding and HIV	HIV policy gives effect to the International Code/ National Legislation	Training on HIV and infant feeding policies	Voluntary and Confidential Counseling and Testing (VCCT)	Infant feeding counseling in line with current international recommendations
Afghanistan	2012	0	0	0	0.5	0
Argentina	2009	0	0	0	0.5	0
Bangladesh	2015	2	1	1	1	1
Bhutan	2012	1	0	1	1	1
Bolivia	2014	0	0	0	0.5	0.5
Botswana	2011	1	0.5	1	1	0.5
Brazil	2014	1	0.5	1	1	0
Burkina Faso	2013	2	0.5	0.5	1	0.5
Cameroon	2013	2	1	1	1	1
Cape Verde	2009	0	0	0	0	0
China	2013	2	0.5	0.5	0.5	0.5
Colombia	2010	0	0	0.5	1	0.5
Costa Rica	2012	2	0	0.5	1	0.5
Dominican Republic	2012	2	1	0	0.5	0
Ecuador	2009	1	0.5	0.5	0.5	0.5
Egypt	2011	0	0	0	0	0
El Salvador	2012	2	0.5	1	1	0.5
Ethiopia	2013	2	0	1	1	1
Fiji	2012	0	0	1	1	1
Gabon	2013	2	0	1	0.5	0.5
Gambia	2009	2	1	1	0.5	1
Ghana	2010	2	1	0.5	1	1
Guatemala	2011	1	0.5	0	0	0.5
Honduras	2014	1	0	0.5	0.5	1
India	2015	0	1	0.5	1	1
Indonesia	2008	0	0	0	0	0
Jordan	2012	1	0.5	0.5	1	0.5
Kenya	2012	2	1	1	1	1
Kiribati	2012	2	1	1	0.5	0.5
Korea	2013	1	0.5	0.5	0.5	0.5
Kuwait	2011	0	0	0.5	1	1
Lebanon	2011	2	1	1	1	1
Lesotho	2012	1	1	1	1	1
Malawi	2009	2	1	1	0.5	1
Maldives	2015	2	1	1	1	1
Mali	2015	2	1	0.5	0.5	1
Mexico	2008	1	0	0	1	0.5
Mongolia	2013	2	0.5	1	1	1
Mozambique	2013	0	0	1	1	1
Nepal	2013	2	1	0.5	0.5	0.5
Nicaragua	2010	2	0.5	0.5	1	0
Pakistan	2009	1	0.5	1	0.5	1
Peru	2009	2	0	0	0.5	0.5
Philippines	2009	1	0.5	0.5	0	0
Sao Tome & Principe	2012	2	1	1	1	1
Saudi Arabia	2012	0	0	0	0	0
Sri Lanka	2009	2	1	1	1	1
Swaziland	2011	2	1	1	1	1
Taiwan	2008	0	0	0	0	0
Thailand	2011	2	1	1	1	1
Timor Leste	2014	2	0	1	0.5	0.5
Uganda	2008	2	1	0.5	1	1
Uruguay	2008	2	1	0.5	1	0.5
Venezuela	2012	2	0.5	0.5	1	1
Vietnam	2008	2	0	0.5	0.5	0.5
Zambia	2008	2	1	1	1	1
Zimbabwe	2012	1	1	1	1	0.5

Table 3 continued.....

Countries	Year	Mothers are supported in making their infant feeding decisions, counseling and follow-up	Special efforts are made to counter misinformation on HIV and infant feeding and to promote EBF and continued breastfeeding.	On-going monitoring of interventions to prevent HIV transmission through breastfeeding and overall health outcomes for mothers and infants	The BFHI Initiative incorporates provision of guidance to hospital in settings with high HIV prevalence and provide support for HIV positive mothers
Afghanistan	2012	0.5	0.5	0	0.5
Argentina	2009	0	1	0.5	0
Bangladesh	2015	1	1	1	0* (2012)
Bhutan	2012	1	1	1	0.5
Bolivia	2014	0.5	0	0	0
Botswana	2011	0.5	0	0	0.5
Brazil	2014	0.5	0.5	1	0.5
Burkina Faso	2013	0.5	0.5	0.5	0
Cameroon	2013	1	1	1	0
Cape Verde	2009	0	0	0	0
China	2013	0.5	0	0	0
Colombia	2010	0	0.5	0	1
Costa Rica	2012	0	0	0	1
Dominican Republic	2012	0	1	0	1
Ecuador	2009	0	0	0	0
Egypt	2011	0	0	0	0
El Salvador	2012	0.5	0	1	0.5
Ethiopia	2013	1	1	1	0
Fiji	2012	1	1	1	1
Gabon	2013	0.5	0.5	0.5	0
Gambia	2009	1	1	0.5	1
Ghana	2010	1	1	0	0.5
Guatemala	2011	0	0.5	0	0
Honduras	2014	0.5	0	0	0
India	2015	0.5	0.5	0.5	0* (2012)
Indonesia	2008	0	0	0	0
Jordan	2012	0.5	0.5	0.5	0.5
Kenya	2012	0.5	0.5	1	1
Kiribati	2012	0.5	0.5	1	1
Korea	2013	0.5	0	0.5	0.5
Kuwait	2011	1	0	0	0
Lebanon	2011	1	1	0.5	0
Lesotho	2012	1	1	0.5	0.5
Malawi	2009	0.5	1	0.5	1
Maldives	2015	1	1	1	0* (2008)
Mali	2015	0.5	0.5	0.5	
Mexico	2008	0.5	0	0	0.5
Mongolia	2013	0.5	0	0.5	0.5
Mozambique	2013	1	1	0	1
Nepal	2013	0.5	0.5	0	0
Nicaragua	2010	0.5	0.5	0.5	0
Pakistan	2009	1	1	1	0
Peru	2009	0.5	0	0	0
Philippines	2009	0	0	0	0
Sao Tome & Principe	2012	1	1	1	0
Saudi Arabia	2012	0	0	0	0
Sri Lanka	2009	1	1	1	1
Swaziland	2011	1	1	0	1
Taiwan	2008	0	0	0	0
Thailand	2011	1	0	0	1
Timor Leste	2014	0.5	1	0.5	1
Uganda	2008	0.5	1	0.5	0.5
Uruguay	2008	0.5	0	1	0
Venezuela	2012	0.5	0.5	0.5	0.5
Vietnam	2008	0.5	0.5	0.5	0.5
Zambia	2008	0.5	1	0.5	1
Zimbabwe	2012	0.5	1	0.5	1

CONCLUSIONS AND WAY FORWARD

- ✦ Overall, analysis of WBTi evaluations in 57 countries of Asia, Africa, Latin America, Arab World and Oceania show that the HIV and infant feeding policies and programmes have been poorly implemented globally and much progress still needs to be made. The overall score for this indicator was 5.71/10 in the 57 countries, which undertook WBTi assessments.
- ✦ Most countries (75%) report having an updated policy in line with international recommendations or at least to some degree. However, with regard to health staff and community workers' training, infant feeding counseling, and support to mothers, assessments also revealed that the situation is far from ideal with important challenges. Glaring gaps were revealed for sub-question 2 on the International Code, sub-question on countering misinformation, and sub-question on ongoing monitoring.
- ✦ There were marked regional differences in the overall scores obtained, with Sub-Saharan Africa obtaining, on average, the highest scores during assessments for this indicator. With more than 70% cases of people living with HIV worldwide are in Sub-Saharan Africa, there have been considerable efforts aimed toward developing policies and guidelines, and implementing comprehensive programmes, in line and up-to-date with current international recommendations, even though this has proved challenging.
- ✦ Some regions score poorly including the Middle East where incidence of HIV is on the increase, and Latin America (with some exceptions), where it would appear that the public health recommendation not to breastfeed, in line with PAHO guidelines, applied in most countries, albeit the fact that there are important pockets of poverty and lack of safe water and sanitation in the region, with obvious consequences on the risks of artificial feeding. In this region, it is unclear if mothers wishing to breastfeed, in contradiction with the national public health recommendations, receive any counseling or support whatsoever to carry through their decision. In Asia, there has been some progress on addressing the issue of HIV and infant feeding, as shown by WBTi re-assessments over time.
- ✦ Many WBTi assessments and additional reports/ research revealed significant difficulties for countries to follow the rapid changes in international guidelines. Indeed, before modifications are made to existing national policies and guidelines, and before staff are trained to implement the new recommendations and the latter are actually implemented on the ground, many years can pass. Translation of international UN guidelines into key UN languages has also, seemingly, hindered national progress.
- ✦ Overall, WBTi assessments were carried out over a period of time, between 2008 and 2015. Some countries underwent a number of assessments, while others have only been assessed once since 2008. Consequently, it was not easy to make in depth conclusions with regard

to assessments results, as in fact assessments were carried out at different times in the history of HIV and infant feeding research and guidelines.

- ✦ A recent IBFAN Africa review on the status of national policies in a number of countries in Sub-Saharan Africa, analyzed national implementation of the 2010 WHO recommendations on infant feeding and HIV. This study did reveal that certain aspects of 2010 guidelines were not properly implemented in the region, in particular: the gradual cessation of breastfeeding at 12 months and the possibility of using heat-treated breastmilk. Overall, however, the analyses revealed that most aspects of the new 2010 recommendations had been taken on board in revised policies in Africa. Actual field guidelines are following but with different speeds as this takes time (changes to counseling cards, training of health workers, etc), with some countries making faster progress than others.
- ✦ Many of these findings also echo previous research findings^{63,64}, highlighting the misconceptions and confusion about what to advise mothers with HIV brought about by the rapid change in global recommendations, as well as by often slow adoption of new global guidelines at national level, and the challenges in retraining healthcare providers and addressing norms among mothers.
- ✦ Findings of present report echoes conclusions of a 2009 report, the

“Missing the Target report: Failing women, failing children: HIV, Vertical Transmission and Women’s Health”⁶⁵, which identified similar gaps between previous international infant feeding guidelines and their integration into national policies, and their implementation on the ground. The following barriers to the continuum of services required to successfully prevent vertical transmission had been identified: emphasis on provision of ARV prophylaxis to prevent transmission to newborns and not on other essential prevention and treatment services for women and girls; a significant and dangerous inconsistency between national policies and actual practice and the UN global infant feeding guidelines; health services not designed to meet the needs of women; inadequate integration between vertical transmission programs, ARV/HIV treatment services, maternal and child health, sexual and reproductive health services; stigma, discrimination, violence and the threat of violence powerful realities in the lives of many women.

- ✦ Have things changed much since 2009? Less children are infected today than 10 years ago and many more women are accessing ante-natal care and ARVs during pregnancy, due to improved PMTCT service coverage. Nevertheless, only 4 out of 10 women in low- and middle-income countries received HIV testing and counseling in 2013; and 3 out of 10 did not receive effective ARV

63. Sint T T, Lovich R, Hammond W, Kim M, Melillo S, Lu Lydia, Ching P, Marcy J, Rollins N, Koumans E, Heap A, Brewinski-Isaacs M, and the Child Survival Working Group of the Interagency Task Team on the Prevention and Treatment of HIV infection in Pregnant Women, Mothers and Children, Challenges in infant and young child nutrition in the context of HIV, Aids 2013 Nov; 27(02): S169-S177.

64. Ghanotakis E, Miller L & Spensley A. Country adaptation of the 2010 World Health Organisation recommendations for the prevention of mother-to-child transmission of HIV. Bulletin of the World Health Organisation 2012; 90:921-931

65. International Treatment Preparedness Coalition. Missing the Target 7. Failing women, failing children: HIV, Vertical Transmission and Women’s Health, May 2009

medicines to prevent transmission of HIV to their children. Of those who are tested and counseled, many are lost to follow-up treatment and care, and an appallingly low number of children - a mere 24%- are receiving ARV therapy. Without treatment, about one third of children living with HIV die by their first birthday and half die by their second birthday.

- ✦ The situation remains unacceptable and overall, much remains to be done to ensure mothers and babies are protected and supported within a comprehensive continuum of services that include prevention, care, treatment, support and follow-up, to prevent vertical transmission of HIV and ensure healthy outcomes for both mothers and their babies, whilst protecting, promoting and supporting optimal breastfeeding practices for the general population.
 - ✦ The importance of updated and comprehensive national policies, hand in hand with budgeted plans of action, can only be re-iterated. Given WBTi assessment findings, extra special attention also needs to be given by governments:
 - to counter misinformation on HIV and infant feeding, in order to avoid confusion and mixed messages, and to continue to protect, promote and support WHO infant and young child feeding recommendations of 6 months exclusive breastfeeding and continued breastfeeding until 2 years or beyond, for the general population;
 - to work towards full national implementation and respect of the International Code and relevant subsequent World Health Assembly resolutions, in order to ensure that
- any distribution or use of products used for replacement feeding for HIV mothers who do not breastfeed, as per national recommendations (most wealthier industrialized countries) does not lead to “spillover” of artificial feeding to infants of other mothers, and in order to protect breastfeeding/ IYCF in general against commercial pressures;
- to ensure on-going monitoring to determine the effects of interventions to prevent HIV transmission through breastfeeding on infant feeding practices and overall health outcomes for mothers and infants, including those who are HIV negative or of unknown status. Ensuring adequate monitoring systems are in place with efficient data collection, analysis and feedback, is essential to guide and fine-tune existing national policies and programmes, and ensure appropriate adaptation of policies and guidelines at the international level.
 - ✦ As new research keeps emerging, and UN guidelines keep evolving, countries face continued challenges in adapting guidelines at the local level and ensuring quality implementation and coverage of a continuum of services to prevent vertical transmission and avoid confusion around the issue of HIV and infant feeding. It is hoped that WHO will continue to disseminate clear rapid advice, quickly translated into key UN languages, and provide key support to countries, to enable them to continue to step up efforts to eliminate vertical HIV transmission and ensure healthy outcomes for mothers and babies.

ANNEXURES

ANNEXURE-1a

WBTi Indicator 8: Infant Feeding and HIV revised 2014

Key question: Are policies and programmes in place to ensure that HIV - positive mothers are supported to carry out the national recommended Infant feeding practice?

CRITERIA	GUIDELINES FOR SCORING RESULTS ✓ CHECK THAT APPLY		
	Yes	To some degree	No
8.1 The country has a comprehensive updated policy in line with international Guidelines on infant and young child feeding that includes infant feeding and HIV	2	1	0
8.2 The infant feeding and HIV policy gives effect to the International Code/ National Legislation	1	0.5	0
8.3 Health staff and community workers receive training on HIV and infant feeding policies, the risks associated with various feeding options for infants of HIV-positive mothers and how to provide counselling and support.	1	0.5	0
8.4 HIV Testing and Counselling (HTC)/ Provide Initiated HIV Testing and Counselling (PIHTC)/ Voluntary and Confidential Counselling and Testing (VCCT) is available and offered routinely to couples who are considering pregnancy and to pregnant women and their partners.	1	0.5	0
8.5 Infant feeding counselling in line with current international recommendations and appropriate to local circumstances is provided to HIV positive mothers.	1	0.5	0
8.6 Mothers are supported in carrying out the recommended national infant feeding practices with further counselling and follow-up to make implementation of these practices feasible.	1	0.5	0
8.7 HIV positive breastfeeding mothers, who are supported through provision of ARVs in line with the national recommendations, are followed up and supported to ensure their adherence to ARVs uptake.	1	0.5	0
8.8 Special efforts are made to counter misinformation on HIV and infant feeding and to promote, protect and support 6 months of exclusive breastfeeding and continued breastfeeding in the general population.	1	0.5	0
8.9 On-going monitoring is in place to determine the effects of interventions to prevent HIV transmission through breastfeeding on infant feeding practices and overall health outcomes for mothers and infants, including those who are HIV negative or of unknown status.	1	0.5	0
TOTAL SCORE	---/10		

ANNEXURE-1b

WBTi Indicator 8: Infant Feeding and HIV questionnaire used in assessments carried out until 2013 (before revision)

Key question: Are policies and programmes in place to ensure that HIV - positive mothers are informed about the risks and benefits of different infant feeding options and supported in carrying out their infant feeding decisions?

CRITERIA	GUIDELINES FOR SCORING RESULTS ✓ CHECK THAT APPLY		
	Yes	To some degree	No
8.1 The country has a comprehensive policy on infant and young child feeding that includes infant feeding and HIV	2	1	0
8.2 The infant feeding and HIV policy gives effect to the International Code/ National Legislation	1	0.5	0
8.3 Health staff and community workers receive training on HIV and infant feeding policies, the risks associated with various feeding options for infants of HIV-positive mothers and how to provide counseling and support.	1	0.5	0
8.4 Voluntary and Confidential Counseling and Testing (VCCT) is available and offered routinely to couples who are considering pregnancy and to pregnant women and their partners.	1	0.5	0
8.5 Infant feeding counseling in line with current international recommendations and locally appropriate is provided to HIV positive mothers.	1	0.5	0
8.6 Mothers are supported in making their infant feeding decisions with further counseling and follow-up to make implementation of these decisions as safe as possible.	1	0.5	0
8.7 Special efforts are made to counter misinformation on HIV and infant feeding and to promote, protect and support 6 months of exclusive breastfeeding and continued breastfeeding in the general population.	1	0.5	0
8.8 On-going monitoring is in place to determine the effects of interventions to prevent HIV transmission through breastfeeding on infant feeding practices and overall health outcomes for mothers and infants, including those who are HIV negative or of unknown status.	1	0.5	0
8.9 The Baby-friendly Hospital Initiative incorporates provision of guidance to hospital administrators and staff in settings with high HIV prevalence on how to assess the needs and provide support for HIV positive mothers.	1	0.5	0
TOTAL SCORE	---/10		

ANNEXURE-2a

WHO 2010 Principles on HIV and Infant feeding

http://apps.who.int/iris/bitstream/10665/44345/1/9789241599535_eng.pdf

2010 Principles	Related Previous Guidance ¹
<p>Balancing HIV prevention with protection from other causes of child mortality Infant feeding practices recommended to mothers known to be HIV-infected should support the greatest likelihood of HIV-free survival of their children and not harm the health of mothers. To achieve this, prioritization of prevention of HIV transmission needs to be balanced with meeting the nutritional requirements and protection of infants against non-HIV morbidity and mortality.</p>	<p>The most appropriate infant feeding option for an HIV-infected mother depends on her individual circumstances, including her health status and the local situation, but should take consideration of the health services available and the counselling and support she is likely to receive.</p>
<p>Integrating HIV interventions into maternal and child health services National authorities should aim to integrate HIV testing, care and treatment interventions for all women into maternal and child health services. Such interventions should include access to CD4 count testing and appropriate antiretroviral therapy or prophylaxis for the woman's health and to prevent mother-to-child transmission of HIV.</p>	<p>National programmes should provide all HIV-exposed infants and their mothers with a full package of child survival and reproductive health interventions^{2,3} with effective linkages to HIV prevention, treatment and care services.</p>
<p>Setting national or sub-national recommendations for infant feeding in the context of HIV National or sub-national health authorities should decide whether health services will principally counsel and support mothers known to be HIV-infected to either:</p> <ul style="list-style-type: none"> • breastfeed and receive ARV interventions, or, • avoid all breastfeeding, as the strategy that will most likely give infants the greatest chance of HIV-free survival. <p>This decision should be based on international recommendations and consideration of the:</p> <ul style="list-style-type: none"> – socio-economic and cultural contexts of the populations served by maternal and child health services; – availability and quality of health services; – local epidemiology including HIV prevalence among pregnant women; and, – main causes of maternal and child under-nutrition and infant and child mortality. 	<p>All HIV-infected mothers should receive counselling which includes provision of general information about the risks and benefits of various infant feeding options, and specific guidance in selecting the option most likely to be suitable for their situation. Whatever a mother decides, she should be supported in her choice.</p>

2010 Principles	Related Previous Guidance
<p>When antiretroviral drugs are not (immediately) available, breastfeeding may still provide infants born to HIV-infected mothers with a greater chance of HIV-free survival</p> <p>Every effort should be made to accelerate access to ARVs for both maternal health and also prevention of HIV transmission to infants.</p> <p>While ARV interventions are being scaled up, national authorities should not be deterred from recommending that HIV-infected mothers breastfeed as the most appropriate infant feeding practice in their setting.</p> <p><i>Even when ARVs are not available, 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.</i></p> <p>In circumstances where ARVs are unlikely to be available, such as acute emergencies, breastfeeding of HIV-exposed infants is also recommended to increase survival.</p>	<p>See above</p>
<p>Informing mothers known to be HIV-infected about infant feeding alternatives</p> <p>Pregnant women and mothers known to be HIV-infected should be informed of the infant feeding practice recommended by the national or sub-national authority to improve HIV-free survival of HIV-exposed infants and the health of HIV-infected mothers, and informed that there are alternatives that mothers might wish to adopt.</p>	<p>See above</p>
<p>Providing services to specifically support mothers to appropriately feed their infants</p> <p>Skilled counselling and support in appropriate infant feeding practices and ARV interventions to promote HIV-free survival of infants should be available to all pregnant women and mothers.</p>	<p>HIV-infected women who breastfeed should be:</p> <ol style="list-style-type: none"> assisted to ensure that they use a good breastfeeding technique to prevent breast problems, which should be treated promptly if they occur; provided with specific guidance and support when they cease breastfeeding to avoid harmful nutritional and psychological consequences and to maintain breast health.
<p>Avoiding harm to infant feeding practices in the general population</p> <p>Counselling and support to mothers known to be HIV-infected, and health messaging to the general population, should be carefully delivered so as not to undermine optimal breastfeeding practices among the general population.</p>	<p>Information and education on mother-to-child transmission of HIV should be urgently directed to the general public, affected communities and families.</p> <p>Governments <u>should ensure implementation of the Code</u>¹ (with particular emphasis on the procurement and distribution of formula and on the Code's requirements for the product and packaging).</p>

2010 Principles	Related Previous Guidance
<p>Advising mothers who are HIV uninfected or whose HIV status is unknown</p> <p><i>Mothers who are known to be HIV uninfected or whose HIV status is unknown</i> 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.</p> <p><i>Mothers whose status is unknown</i> should be offered HIV testing.</p> <p><i>Mothers who are HIV uninfected</i> should be counselled about ways to prevent HIV infection and about the services that are available such as family planning to help them to remain uninfected.</p>	<p>Health services should make special efforts to support primary prevention for women who test negative in antenatal and delivery settings, with particular attention to the breastfeeding period.</p>
<p>Investing in improvements in infant feeding practices in the context of HIV</p> <p>Governments, other stakeholders and donors should greatly increase their commitment and resources for implementation of the Global strategy for infant and young child feeding, the United Nations HIV and infant feeding framework for priority action and the Global scale-up of the prevention of mother-to-child transmission of HIV in order to effectively prevent postnatal HIV infections, improve HIV-free survival and achieve relevant United Nations General Assembly Special Session goals.</p>	<p>Governments, other stakeholders and donors should greatly increase their commitment and resources for implementation of the Global Strategy for Infant and Young Child Feeding and the UN HIV and Infant Feeding Framework for Priority Action in order to effectively prevent postnatal HIV infections, improve HIV-free survival and achieve relevant UNGASS goals.</p>

ANNEXURE-2b

WHO 2010 Recommendations on HIV and Infant Feeding

http://apps.who.int/iris/bitstream/10665/44345/1/9789241599535_eng.pdf

2010 Recommendations	Related Previous Guidance ¹
<p>1. Ensuring mothers receive the care they need</p> <p><i>Mothers known to be HIV-infected should be provided with lifelong antiretroviral therapy or antiretroviral prophylaxis interventions to reduce HIV transmission through breastfeeding according to WHO recommendations.</i></p>	<p>No previous recommendation on the use of antiretroviral drugs to prevent transmission through breast-feeding. Update previously stated: “Women who need antiretrovirals for their own health should receive them.”</p>
<p>In settings where national authorities have decided that the maternal and child health services will principally promote and support breastfeeding and antiretroviral interventions as the strategy that will most likely give infants born to mothers known to be HIV-infected the greatest chance of HIV-free survival.</p>	
<p>2. Which breastfeeding practices and for how long</p> <p><i>Mothers known to be HIV-infected (and whose infants are HIV uninfected or of unknown HIV status) should exclusively breastfeed their infants for the first 6 months of life, introducing appropriate complementary foods thereafter, and continue breastfeeding for the first 12 months of life.</i></p> <p>Breastfeeding should then only stop once a nutritionally adequate and safe diet without breast milk can be provided.</p>	<p>Exclusive breastfeeding is recommended for HIV-infected mothers for the first six months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe for them and their infants before that time.</p> <p>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.</p> <p>For HIV-infected women who choose to exclusively breastfeed, early cessation of breastfeeding (before six months) is no longer recommended, unless their situation changes and replacement feeding becomes acceptable, feasible, affordable, sustainable and safe.</p>
<p>3. When mothers decide to stop breastfeeding</p> <p><i>Mothers known to be HIV-infected who decide to stop breastfeeding at any time should stop gradually within one month. Mothers or infants who have been receiving ARV prophylaxis should continue prophylaxis for one week after breastfeeding is fully stopped.</i></p> <p>Stopping breastfeeding abruptly is not advisable.</p>	<p>The optimal duration for the cessation process is not known, but for most women and babies a period of about two to three days up to two to three weeks would appear to be adequate, based on expert opinion and programmatic experience.</p> <p>Abrupt or rapid cessation even at six months is not generally recommended because of possible negative effects on the mother and infant.</p> <p>No previous recommendation existed on ARV prophylaxis to prevent transmission through breastfeeding.</p>

2010 Recommendations	Related Previous Guidance
<p>4. What to feed infants when mothers stop breastfeeding</p> <p><i>When mothers known to be HIV-infected decide to stop breastfeeding at any time, infants should be provided with safe and adequate replacement feeds to enable normal growth and development.</i></p> <p>Alternatives to breastfeeding include:</p> <ul style="list-style-type: none"> • <i>For infants less than six months of age:</i> <ul style="list-style-type: none"> – Commercial infant formula milk as long as home conditions outlined in Recommendation #5 below are fulfilled, – Expressed, heat-treated breast milk (see Recommendation #6 below), <p>Home-modified animal milk is not recommended as a replacement food in the first six months of life.</p> <ul style="list-style-type: none"> • <i>For children over six months of age:</i> <ul style="list-style-type: none"> – Commercial infant formula milk as long as home conditions outlined in Recommendation #5 are fulfilled, – Animal milk (boiled for infants under 12 months), as part of a diet providing adequate micronutrient intake. Meals, including milk-only feeds, other foods and combination of milk feeds and other foods, should be provided four or five times per day. <p>All children need complementary foods from six months of age.</p>	<p>Home-modified animal milk is no longer recommended as a replacement feeding option to be used for all of the first six months of life.</p> <p>Feeding recommendations for non-breastfed infants (whether or not HIV-exposed) are given in Guiding principles for feeding non-breastfed infants 6–24 months.¹</p>
<p>5. Conditions needed to safely formula feed</p> <p><i>Mothers known to be HIV-infected should only give commercial infant formula milk as a replacement feed to their HIV-uninfected infants or infants who are of unknown HIV status, when specific conditions are met:</i></p> <ol style="list-style-type: none"> a. safe water and sanitation are assured at the household level and in the community, and, b. the mother, or other caregiver can reliably provide sufficient infant formula milk to support normal growth and development of the infant; and, c. the mother or caregiver can prepare it cleanly and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition; and 	<p>When replacement feeding is acceptable, feasible, affordable, sustainable and safe, avoidance of all breastfeeding by HIV-infected mothers is recommended.</p> <p>A table of definitions of AFASS was also given in <i>HIV and infant feeding: Guidelines for decision-makers</i>² and <i>HIV and infant feeding: A guide for health-care managers and supervisors</i>,³ noting that they should be adapted in light of local conditions and formative research.</p>

2010 Recommendations	Related Previous Guidance
<p>d. the mother or caregiver can, in the first six months, exclusively give infant formula milk; and</p> <p>e. the family is supportive of this practice; and</p> <p>f. the mother or caregiver can access health care that offers comprehensive child health services.</p> <p><i>These descriptions are intended to give simpler and more explicit meaning to the concepts represented by AFASS (acceptable, feasible, affordable, sustainable and safe).</i></p>	
<p>6. Heat-treated, expressed breast milk</p> <p><i>Mothers known to be HIV-infected may consider expressing and heat-treating breast milk as an interim feeding strategy:</i></p> <ul style="list-style-type: none"> • In special circumstances such as when the infant is born with low birth weight or is otherwise ill in the neonatal period and unable to breastfeed; or • When the mother is unwell and temporarily unable to breastfeed or has a temporary breast health problem such as mastitis; or • To assist mothers to stop breastfeeding; or • If antiretroviral drugs are temporarily not available. 	<p>From 2000, heat-treatment of expressed breast milk was one of the main options to be explained in counselling sessions with HIV-infected women. After 2006, heat-treated breast milk was no longer considered a main feeding option. Clarification of Key Points in the HIV and infant feeding Update states: “Heat-treatment of expressed breast milk may be feasible for some women, especially after the baby is a few months old and during the transition from exclusive breastfeeding to replacement feeding.”</p>
<p>7. When the infant is HIV-infected</p> <p><i>If infants and young children are known to be HIV-infected, mothers are strongly encouraged to exclusively breastfeed for the first six months of life and continue breastfeeding as per the recommendations for the general population, that is up to two years or beyond.</i></p>	<p>Breastfeeding mothers of infants and young children who are known to be HIV-infected should be strongly encouraged to continue breastfeeding as per the recommendations for the general population, that is up to two years or beyond.</p>

ANNEXURE-2c

Updated WHO Framework for Priority Action on HIV and Infant Feeding 2012

http://www.unicef.org/nutrition/files/HIV_Inf_feeding_Framework_2012.pdf



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)

In relation to the special circumstances created by HIV/AIDS, five priority actions for national governments are proposed in the context of the *Global Strategy for Infant and Young Child Feeding*:

■ **Develop or revise (as appropriate) a comprehensive evidence-based national infant and young child feeding policy which includes HIV and infant feeding**

Actions required:

- Assess the current causes of morbidity and mortality in children under five in the context of HIV.
- Inform and build consensus among all relevant stakeholders on the infant and young child feeding policy as it relates to HIV.
- After a careful assessment of the situation within the country (as outlined above), decide whether health services will principally counsel and support mothers known to be HIV-positive to either: breastfeed while receiving ARV interventions OR avoid all breastfeeding as the strategy that will give infants the greatest chance of HIV-free survival; include in the policy a clear statement of the decision.
- Draft or update policy to reflect current evidence and experience on appropriate infant and young child feeding practices in general, as well as specifically in relation to HIV.
- Review other relevant policies, such as those on national HIV/AIDS programmes, nutrition, integrated management of childhood illness, safe motherhood, PMTCT, and feeding in emergencies, and ensure consistency with the overall infant and young child feeding policy.
- Develop concrete plans for implementing the policy, scaling up and sustaining it, including assessing the costs and resources, especially human resources, required to do so.
- Monitor policy implementation.
- Establish mechanisms for learning from experience and revising policy and resulting guidance as needed.



■ **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**

Actions required:

- Advocate for the prioritization of infant and young child feeding issues in national planning, both inside and outside the health sector.
- Develop or update and implement guidelines on infant and young child feeding, including feeding for infants of HIV-positive women.
- Facilitate coordination on infant and young child feeding issues in implementing national HIV/AIDS programmes, especially as regards ARVs for pregnant and lactating women, as well as for integrated management of childhood illness, safe motherhood, and other approaches.
- Build capacity of health care decision-makers, managers, workers and, as appropriate, peer counsellors, lay counsellors and support groups for promoting breastfeeding and complementary feeding, good nutrition for pregnant and lactating women, primary prevention of HIV, use of ARVs for preventing HIV through breastfeeding, and for dealing with HIV and infant feeding.
- Assess and/or reassess health facilities for designation as Baby friendly and extend the Baby-friendly Hospital Initiative concept 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 to increase knowledge and develop community capacity for acceptance, promotion and support of appropriate infant and young child feeding practices.
- Provide guidance for other sectors on legislation and related national measures.

■ **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**

Actions required:

- Expand access to, and demand for, quality antenatal care for women who currently do not use such services.
- Expand access to, and demand for, HIV testing and counselling, before and during pregnancy and lactation, to enable women and their partners to know their HIV status, know how to prevent HIV and sexually transmitted infections and be supported in decisions related to their own behaviours and their children's health, and where required, access maternal nutritional support.
- Provide access to CD4 count testing and antiretroviral treatment or prophylaxis to HIV-positive women and their HIV-exposed infants according to international guidelines to ensure mothers' health and PMTCT.
- Revise pre-service and in-service training and related materials to reflect updated national policy and international recommendations.
- Support the orientation of health-care managers and capacity-building and pre-service training of counsellors (including lay counsellors) and health workers on infant and young child feeding in the context of HIV, including being able to understand and support the national recommendation while supporting mothers who make other decisions.
- 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.
- Develop community capacity to help HIV-positive mothers carry out recommended infant feeding practices, including the involvement of trained support groups, lay counsellors and other volunteers, and encourage the involvement of family members, especially fathers.



■ **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**

Actions required:

- Carry out relevant formative research, emphasizing finding approaches to modify unhelpful perspectives of health workers, community members and others on infant feeding.
- Use findings from formative research to develop a communication strategy, tools and messages
- Promote interventions to reduce stigmatization and increase acceptance of HIV-positive women and of recommended feeding practices.
- Engage opinion leaders in communities and civil society to reinforce strategic efforts.
- Develop and distribute infant feeding messages and support materials that address local beliefs and norms for mothers and communities.
- Monitor implementation of the communication strategy and its impact, and update the strategy as needed.

■ **Implement and enforce the International Code of Marketing of Breast-milk Substitutes and subsequent relevant World Health Assembly resolutions (the Code)**

Actions required:

- Implement existing measures to give effect to the Code, and, where appropriate, strengthen and adopt new measures.
- Monitor Code compliance.
- Define the relevance of the Code in the context of HIV, and ensure the prevalence of HIV is not used as a pretext to misinform and undermine the Code and breastfeeding.
- 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 breast-milk substitutes for the infants of HIV-positive mothers (either from birth or when they stop breastfeeding), establish appropriate criteria for who should receive it, for how long, and for adequate procurement and distribution systems, in accordance with the provisions of the Code in order to protect breastfeeding and avoid spill over of breast-milk substitutes to the general population.
- Ensure that the conduct of manufacturers and distributors at every level conforms to the Code.
- Ensure that financial support and other incentives for programmes and health professionals working in infant and young child health do not create conflicts of interest.

ANNEXURE-3

Pan American Health Organization PAHO guidelines

Clinical Guideline for the Elimination of Mother-to-Child Transmission of HIV and Congenital Syphilis in Latin America and the Caribbean (2011)

Extract pages 53-54 on Feeding the neonate born to a mother with HIV:

- Replace maternal breastfeeding when the AFASS conditions are met
- Discourage mixed breastfeeding
- When a replacement of maternal breastfeeding for milk formula is recommended, provide the medication to suppress lactation
- In the exceptional cases in which maternal breastfeeding cannot be replaced by feeding with adapted formula, the recommendation is to provide exclusive maternal breastfeeding, limiting it to the first 6 months, and extending the mother's ARVT as long as she breastfeeds her child, even if her own health does not warrant such therapy.

Field Guide for Implementation of the Strategy and Plan of Action for Elimination of Mother-to-Child Transmission of HIV and Congenital Syphilis in the Americas; 2014

Extract pages on Infant Feeding :

Based on a modeling tool developed by UNAIDS, the HIV mother-to-child transmission rate in Latin America and the Caribbean for 2011 was estimated at 14.2% (95% CI: 5.8% 18.5%), down from 18.6% (5%22.9%) in 2010. If the breastfeeding component of transmission were excluded, the regional transmission rate would drop to 9.2%. (page 3)

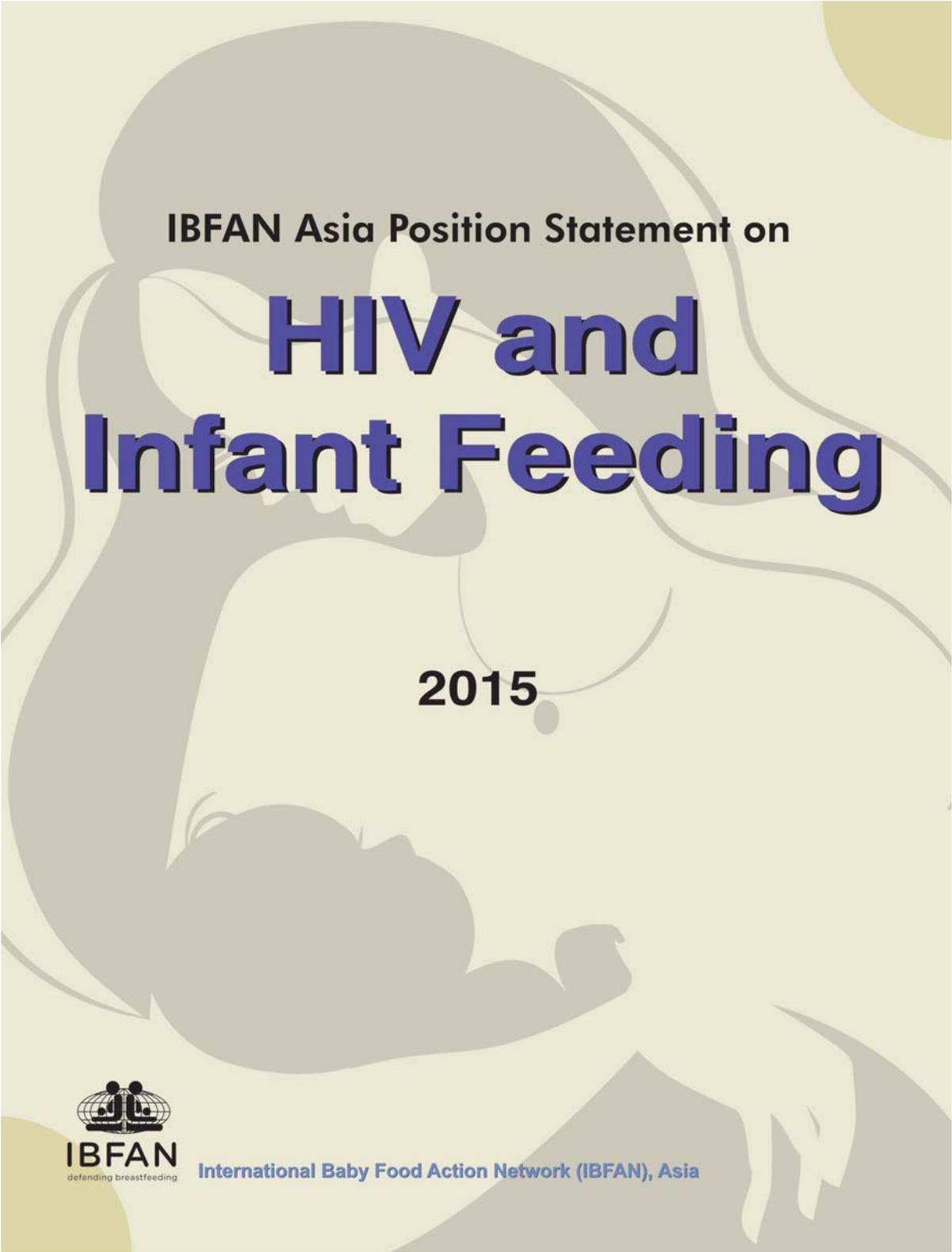
WHO recommends that all pregnant and breastfeeding women with HIV should initiate triple ARVs (ART) which should be maintained at least for the duration of mother-to-child transmission risk. HIV testing of the male partner should be encouraged.(page 25)

Most countries in the LAC region provide replacement feeding for exposed infants. If replacement feeding is not acceptable, feasible, affordable, sustainable, and safe, exclusive breastfeeding for 6 months is recommended, with continued maternal ARV use (14). The combination of breastfeeding and replacement feeding should be avoided, as this option carries the highest risk of transmission. (page 28)

ANNEXURE-4

IBFAN Asia 2015 Position Statement on HIV and Infant feeding

<http://ibfan.org/ips/IBFAN-Asia-Position-Statement-on-HIV-and-Infant-Feeding-2015.pdf>



IBFAN Asia Position Statement on
HIV and
Infant Feeding

2015



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 women 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.

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.

Infant Feeding Choices for HIV Positive Women

4

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

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.

6

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.

References

1. Position statement on HIV and Infant feeding. BPNI New Delhi, February 2012.
2. HIV and Infant Feeding Framework for Priority Action, WHO, 2003. Available at www.who.int/nutrition/publications/hivaids/9241590777/en/index.html
3. HIV and Infant Feeding: Guidelines for Decision-Makers, WHO, 2003. Available at www.who.int/nutrition/publications/hivaids/9241591226/en/index.html
4. HIV and Infant Feeding: A guide for health care managers and supervisors, WHO, 2003. Available at www.who.int/maternal_child_adolescent/documents/9241591234/en/index.html
5. WHO/UNICEF Global Strategy for Infant and Young Child Feeding, World Health Organization (WHO), 2002. Available at: www.who.int/nutrition/publications/infantfeeding/9241562218/en/index.html
6. WHO: Rapid advice: infant feeding in the context of HIV, November 2009. Available at: <http://www.who.int/hiv/pub/paediatric/advice/en/>
7. A consensus call to national child health programs "Drop mixed-feeding". BPNI/IBFAN Asia Information Sheet No. 26 (April 2008)
8. HIV and Infant feeding: An information booklet for policy and programme managers in India. BPNI/IBFAN-Asia 2013.
9. Jones G, Steketee RW, Black RE, Bhutta ZA, Morris SS. How many child deaths can we prevent this year. *Lancet* 2003; 362 (9377): 65-71.
10. Oddy WH, Mori TA, Huang RC, Marsh JA, Pennell CE, Chivers PT, et al. Early infant feeding and adiposity risk: from infancy to adulthood. *Ann Nutr Metab*. 2014; 64(3-4):262-70.
11. Victora CG, Horta BL, Loret de Mola C, Quevedo L, Pinheiro RT, Gigante DP, et al. Association between breastfeeding and intelligence, education attainment, and income at 30 years of age: a prospective birth cohort study from Brazil. *Lancet Glob Health*. 2015;3(4):e199-205
12. Horta BL, Victora CG (WHO), 2013. Long-term effects of breastfeeding a systematic review. Available at: <http://apps.who.int/iris/bitstream/>

- 10665/79198/1/9789241505307_eng.pdf Accessed on September 24, 2013.
13. Chhonker D, Faridi MM, Narang M, Sharma SB. Does type of feeding in infancy influence lipid profile in later life? *Indian J Pediatr*. 2015 Apr;82(4):345-8.
 14. Bahl R, Frost C, Kirkwood BR et al. Infant feeding patterns and risks of death and hospitalization in the first half of infancy: multicentre cohort study. *Bull WHO* 2005; 83:418-426.
 15. Lauer JA, Betran AP, Barros AJ, deOnis M. Deaths and years of life lost due to suboptimal breastfeeding among children in the developing world: a global ecological risk assessment. *Public Health Nutrition* 2006; 9(6): 673-85.
 16. Edmond KM, Zandoh C, Quigley MA, Amenga-Etego S, Owusu-Agyei S, Kirkwood BR. Delayed Breastfeeding Initiation Increases Risk of Neonatal Mortality. *Pediatrics* 2006; 117:380-386.
 17. Raj S, Faridi M, Rusia U, Singh O. A prospective study of iron status in exclusively breastfed term infants up to 6 months of age. *Int Breastfeed J*. 2008 Mar 1;3:3.
 18. Black RE, Victora CG, Walker SP, Bhutta ZA, Christian P, de Onis M, Ezzati M, Grantham-McGregor S, Katz J, Martorell R, Uauy R; Maternal and Child Nutrition Study Group. Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet*. 2013 Aug 3;382(9890):427-51.
 19. Sankar MJ, Sinha B, Chowdhury R, Bhandari N, Taneja S, Martines J, Bahl R. Optimal breastfeeding practices and infant and child mortality: a systematic review and meta-analysis. *Acta Paediatr Suppl*. 2015 Dec;104(467):3-13.
 20. De Cock KM, Fowler MG, Mercier E, De Vincenzi I, Saba J, Hoff E, Alnwick DJ, Rogers M, Shaffer N. Prevention of mother-to-child HIV transmission in resource-poor countries; translation research into policy and practice. *JAMA* 2000;283:1175-1182.
 21. Shaffer N, McConnell M, Bolu O et al. Prevention of mother-to-child HIV transmission internationally. *Emerg Infect Dis* 2004;10:2027-28.
 22. Ngwende S, Gombé NT, Midzi S, Tshimanga M, Shambira G, Chadambuka A. Factors associated with HIV infection among children born to mothers on the prevention of mother to child transmission programme at Chitungwiza Hospital, Zimbabwe, 2008. *BMC Public Health*. 2013 Dec 14;13:1181.
 23. The Breastfeeding and HIV International Transmission Study Group (BHITS) (2004). Late postnatal transmission of HIV in breastfed children: an individual patient data meta-analysis. *Journal of Infectious Diseases*, 189(12):2154-2166.
 24. Leroy V, Montcho C, Manigart O et al. Maternal plasma viral load, zidovudine and mother-to-child transmission of HIV-1 in Africa: DITRAME ANRS 049 a trial. *AIDS* 2001;15(4):517-522
 25. Kumwenda NI, Hoover DR, Mofenson LM et al. Extended Antiretroviral Prophylaxis to Reduce Breast-milk HIV-1 transmission. *N Engl J Med* 2008; 359:119-129.
 26. WHO: Antiretroviral drugs for treating pregnant women and preventing HIV infection in infants-2010 version. Available at: <http://www.who.int/hiv/pub/mctc/pmtct/en/>
 27. Coovadia HM, Rollins NC, Bland RM et al. Mother-to-child transmission of HIV-1 infection during exclusive breastfeeding in the first 6 months of life: an intervention cohort study. *Lancet* 2007; 369(9567):1107-1116.
 28. Henrick BM, Nag K, Yao XD, et al. Milk Matters: soluble Toll-like receptor 2 (sTLR2) in breastmilk significantly inhibits HIV-1 infection and inflammation. *PLoS One* 2012;7(7):e40138 .
 29. Embree JE, Njenga S, Datta P, Nagelkerke NJ, Ndiya-Achola JO, Mohammed Z, Ramdahn S, Bwayo JJ, Plummer FA. Risk factors for postnatal mother-child transmission of HIV-1. *AIDS*. 2000 Nov 10;14(16):2535-41.
 30. Bork KA, Courmil A, Read JS, Newell ML, et al. Morbidity in relation to feeding mode in African HIV-exposed, uninfected infants during the first 6 months of life: the Kesho Bora study. *AM J Clin Nutr* 2014 Dec; 100(6): 1559-68
 31. Coutoudis A, Pillay K, Spooner E et al. Morbidity in children born to women infected with human immunodeficiency virus in South Africa: Does mode of feeding matter? *Acta Paediatr* 2003; 92:890-895.
 32. Thior I, Lockman S, Smeaton LM et al. Breastfeeding plus infant zidovudine prophylaxis for 6 months vs. formula feeding plus infant zidovudine for 1 month to reduce mother-to-child transmission in Botswana: A randomized trial: the MASHI study. *JAMA* 2006; 296:794-805.
 33. Suryavanshi N, Jonnalagadda S, Erande A et al. Infant feeding practices of HIV-positive mothers in India. *J Nutr* 2003;133:1326-31
 34. Doherty T, Sanders D, Goga A, Jakson D. Implications of the new WHO guidelines on HIV and infant feeding for child survival in South Africa. *Bulletin of World Health Organization* 2011; 89:62-67.
 35. Asbjornsdottir KH, Slyker JA, Maleche-Obimbo E, Wamalwa D, Otieno P, et al . Breastfeeding is associated with decreased risk of hospitalization among HIV-exposed, Uninfected Kenyan Infants. *J Hum Lact*. 2015 Sep pii:0890334415607854.
 36. Siegfried N, van der Merwe L, Brocklehurst P, Sint TT. Antiretrovirals for reducing the risk of mother-to-child transmission of HIV infection. *Cochrane Database of Systematic Reviews* 2011, Issue 7. Art. No.: CD003510. DOI:10.1002/14651858.CD003510.pub3
 37. IBFAN Asia (2012). Are our babies falling through the gaps? the state of policies and programme implementation of the global strategy for infant and young child feeding in 51 countries. <http://worldbreastfeedingconference.org/images/51-country-report.pdf>
 38. Tuthill EL, Chan J, Butler LM. Challenges faced by health-care providers offering infant-feeding counseling to HIV-positive women in sub-Saharan Africa: a review of current research. *AIDS Care* 2015;27(1):17-24;doi:10.1080/09540121.2014.951310
 39. Mohammed A, Shehu AU, Aliyu AA et al. Infant feeding options, practices and determinants of feeding practices among HIV seropositive mothers in Abuja, Nigeria. *Niger Med J* 2010 51; 14-17.
 40. Okanda JO, Borkowl CB, Girdle S, et al. Exclusive breastfeeding among women taking HAART for PMTCT of HIV-1 in the Kisumu Breastfeeding Study. *BMC Pediatrics* 2014, 14:280.
 41. United States Centers for Disease Control and Prevention. Impact of an innovative approach to prevent mother-to-child transmission of HIV Malawi, July 2011 September 2012. *MMWR Morbidity and Mortality Weekly Report*, 2013, 62:148151.
 42. World Health Organization (2013). Consolidated Guidelines on the use of antiretroviral drugs for treating and preventing HIV infection. Recommendations for a public health approach.
 43. National AIDS Control Organisation (NACO). Prevention of Parent to Child Transmission (PPTCT) of HIV using Multi Drug Anti-retroviral Regimen in India Updated Guidelines for December, 2013

Written by

Prof. Praveen Kumar, Department of Paediatrics, Lady Harding Medical College, Delhi (India) and Dr. J.P. Dadhich, Breastfeeding Promotion Network of India (BPNI)/IBFAN Asia

Edited by

Dr. Shoba Suri, BPNI (India) and Ms. Vibharika Chandola, BPNI (India)

Reviewed by

Prof. MMA Faridi, Head of Department (Paediatrics), University College of Medical Sciences & Guru Tegh Bahadur Hospital, Delhi (India) and Mr. Mohamed Saeed, Unicef Health and Nutrition Specialist (Former), Addu City, (Republic of Maldives)

IBFAN Asia Working Group on Infant Feeding and HIV

Coordinator: Dr. JP Dadhich (India), **Co-Coordinator:** Dr Shoba Suri (India),

Members: Dr AKM Iqbal Kabir (Bangladesh), Dr Prakash Sunder Shrestha (Nepal), Dr Arun Gupta (India), Dr Homayoun Ludin (Afghanistan), Dr MMA Faridi (India), Dr Soyolgerel Gochoo (Mongolia), Dr SK Roy (Bangladesh), Dr Mohammed Saeed (Maldives), Dr Praveen Kumar (India), Dr Quan Le Nga (Vietnam), Dr Sunita Katyayan (India), Dr Vokyung Song (South Korea), Ms. Velvet Escario Roxas (Philippines)

Designed by

Amit Dahiya



IBFAN
defending breastfeeding

International Baby Food Action Network (IBFAN), Asia

BP-33, Pitampura, Delhi 110 034 (INDIA)

Tel: +91-11-27343608, 42683059

Tel/Fax: +91-11-27343606

Email: info@ibfanasia.org, Website: www.ibfanasia.org

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).

IBFAN Asia/December 2015

ANNEXURE-5

IBFAN Asia 2008 consensus call to national child health programs “Drop Mixed Feeding”

<http://www.bpni.org/Article/Drop-Mixed-Feeding.pdf>



A consensus call to national child health programs “Drop mixed-feeding”

This document was presented to the participants of the South Asia Breastfeeding Partners' Forum 4 at New Delhi (10-12 December 2007) during the group discussion. Inputs provided by participants from south Asian countries are incorporated in the document.

Recent research shows that it is important to support HIV-positive women to avoid “mixed feeding” (breastfeeding plus other foods) to their infants, during the first six months¹. This calls for HIV programmes of the countries to bring a policy reform and develop a programme response for ensuring exclusive breastfeeding for ALL WOMEN including HIV positive women who choose to breastfeed. National AIDS Control Agencies should have a better look at the programme component of “infant feeding options” and provide much needed support to HIV positive mothers for whatever is the method of feeding: *exclusive breastfeeding or replacement feeding*. Policy and programme should not lead them to ‘mixed feeding’.

New research findings

The intervention cohort study from South Africa¹ calls upon to drop mixed feeding. Findings of the study published in the *Lancet* (2007), assess the HIV-1 transmission risks and survival associated with exclusive breastfeeding and other types of infant feeding in HIV positive women. The study estimated that risk of late acquisition of infection at six months of age via exclusive breastfeeding was 4.04%. Breastfed infants, who additionally received some solids, had 11 times higher risk of infection and if other milk or formula is given along with breastfeeding the risk could almost double. The authors reported that mortality by 3 months of age among ‘replacement fed’ babies^{*} was more than double than those

exclusive breastfed. This may be due to the fact that solid foods contain complex proteins, which can damage the lining of gastro-intestinal tract and cause the virus to pass through. Exclusive breastfeeding also reduces the chances of breast infections and inflammation as compared to “mixed feeding”. Exclusive breastfeeding also protects the integrity of



intestinal mucosa making an effective barrier to HIV. Even sub-clinical mastitis is associated with an increased risk of HIV transmission.² These findings are significant addition to existing data on risks associated with artificial feeding. Earlier studies had found the transmission risks between 5-20% covering entire breastfeeding period and all type of breastfeeding.³

New policy recommendations emerge

The study¹ having looked into the risk of HIV transmission and survival associated with exclusive breastfeeding and other types of infant feeding, now clarifies further on infant feeding policies, and how and in what way a health worker should counsel and support HIV positive women on infant feeding options both in high and low prevalence settings. The study further establishes that the association between mixed breastfeeding and increased HIV transmission risk, together with evidence that exclusive breastfeeding can be successfully

^{*}Replacement Feeding means: “feeding infants who are receiving no breast milk with a diet that provides the nutrients infants need until the age at which they can be fully fed on family foods”



supported in HIV-infected women. In view of newer WHO recommendations⁴, it warrants revision of the current national guidelines on HIV and infant feeding.

Counseling and support in the new policy

What is infant feeding counselling and support?

In the above-mentioned study, after delivery, all mothers irrespective of their HIV status, were visited by the infant feeding counselors at their home 4 times during first 2 weeks and every two weeks after that. They were supported by the specialist clinics based nurses to maintain exclusive breastfeeding, or replacement feeding whichever was the choice of a woman. These counselors were fully trained using WHO's skill based training course for breastfeeding counselling and HIV and Infant Feeding counselling.

In a commentary in the same issue of the Lancet, King and Holmes⁵ state that exclusive breastfeeding is uncommon in most communities and is easily undermined not only by the marketing efforts of infant formula manufacturers but a wide range of traditional and modern cultural beliefs, and poor health-care practices particularly in the health facilities. It is very common to offer other foods and drinks to infants in the first days and weeks of life because of several reasons including anxiety about milk supply or pressures to work outside the home. In the above mentioned study, 82% mother breastfed exclusively for at least 6 weeks, and 67% for at least 3 months. They received skilled support from well-trained, lay infant-feeding counsellors. Research in varied settings has found this approach to be effective. Counsellors need training, management, support, and supervision and health-care services need strengthening to provide this intervention. Health workers should be adequately informed and able to give mothers appropriate help currently they are not. Furthermore, there is a need for community education to reach all family members especially men and older women, who influence infant-feeding decisions. This help and support prevents breast inflammation such as sore nipple/cracked nipples/mastitis.

The authors⁵ further stated that these activities also provide opportunities to protect breastfeeding women from becoming infected with HIV particularly when most of times they don't know their HIV status. The increased resources now available to prevent HIV infection in children should be invested in ways that also improve maternal and child health in general. But, in actual practice and budgeting, very little is earmarked for promotion of breastfeeding. Investment in promoting,

protecting, and supporting exclusive breastfeeding for 6 months has the greatest potential to improve HIV-free child survival in settings with both high and low HIV prevalence.

A recent article published in the American Journal of Public Health⁶ concludes that the promotion of exclusive breastfeeding has the potential to reduce postnatal HIV transmission among women who do not know their HIV status and child survival and HIV prevention programs should support this practice.

Why should we bother about mixed feeding?

South Asia, home to about 1.4 billion people, has the highest number of under-five deaths and under-five children who are underweight. Out of total of 146 million under-five underweight children 70 million are in South Asia (UNICEF 2006), they are unlikely to achieve their full growth and potential development. The number of young children reflects the country progress on MDG 1 (eradication of extreme poverty and hunger). Early breastfeeding within one hour and exclusive breastfeeding for the first six months is thus the key to tackle infant nutrition and also survival of infants and young children. These two make key interventions to achieve the MDG-4 (reduction in child mortality). According to the UNICEF report released in September 2007, worldwide there is reduction in child mortality, through the SAARC nations lag behind. In South Asia, more than 1,400,000 babies are estimated to die during first month of life, and another 2,200,000 during 2 to 12 months. In India alone, about 1,100,000 babies die during first month of life, and about 500,000 during 2 to 12 months of age.⁷

The scientific evidence points out clearly that exclusive breastfeeding can be supported in the HIV positive women who will further decrease the mixed feeding and risk of transmission of HIV. Though there is a need to test pregnant women in the first place so they can be offered the options available to them according to their HIV status. These findings are very relevant in many countries where the population is dominantly of mixed feeders. If we can drop "mixed feeding" rates in our populations, the transmission rates will go down and HIV free child survival will enhance. International Baby Food Action Network (IBFAN) Asia conducted an assessment of policy and programme on infant and young child feeding counselling and support, as well as HIV programmes and infant feeding in the countries of south Asia, and it shows that a lot is needed to bridge the gaps.⁸



Recommendations

1. Harmonize infant feeding policies at national level with the latest WHO recommendations⁴

All National Government agencies dealing with HIV prevention in the region should accept and incorporate consensus statement by WHO HIV and Infant Feeding Technical Consultation, held on behalf of the Inter-agency Task Team (IATT) on Prevention of HIV Infections in Pregnant women, Mothers and their infants, Geneva, Oct'06, in their policies and planning. 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."

2. National AIDS Control agencies and Ministries of Health and Family Welfare in south Asian countries should revise their HIV policy to include *Safe Exclusive breastfeeding* (which means, exclusive breastfeeding 0-6 months, with intensive infant feeding counselling and support, ART, and counseling regarding when to stop breastfeeding, starting at six months) as one of the infant feeding options.

3. Providing explicit programme support for skilled counselling on infant feeding

Based on the recent research findings, we call upon the Ministry of Health in each south Asian country to provide explicit programme support of skilled counselling on infant feeding to its policy of exclusive breastfeeding for the first 6 months for all babies. Following actions are required to achieve this objective:

- IYCF is a low cost, low technology, effective, doable intervention and should be integrated in the National HIV control program on a priority basis.
- Earmarking a budgetary support and funds for ensuring proper "Infant feeding options and support".
- Ensure family level skilled counselling through home visits at least 4 times during first 2 weeks, and then every 2 weeks till six months, by skilled family counselors (3 days

training) to maintain the exclusive breastfeeding status for the first six months. National child health and nutrition programs should use their frontline workers for this purpose. For mothers who chose breastfeeding, prevention of breastfeeding problems like sore nipples needs lactation management and support. For HIV-positive mothers who chose replacement feeding, it requires sustainable supply of formula, education on safe feeding methods, supervision and support to avoid "mixed feeding", as well as stigma attached to replacement feeding etc. (see more details in Table 1)

- Family level counseling should be supported by specialist infant and young child feeding counsellors at 5 to 10,000 population, or at least a block of 30 villages for referral support and long term sustainability to help mothers who have any breast pathology like mastitis and sore nipples.
- Similarly in all hospitals above district level, public or private, a specialist Infant and young child-feeding counsellor should be made available. This needs at least 7-day training and nurses would make a useful resource for providing such ongoing support. Doctors who have received similar special training should support them.

References

1. Coovadia HM, Rollins NC, Bland RM et al. Mother-to-child transmission of HIV-1 infection during exclusive breastfeeding in the first 6 months of life: an intervention cohort study. *Lancet* 2007; 369:1107-1116.
2. Willumsen JF, Filteau SM, Coutoudis A, Newell ML, Rollins NC, Coovadia HM, Tomkins AM. Breastmilk RNA viral load in HIV-infected South African women: effects of subclinical mastitis and infant feeding. *AIDS* 2003; 17(3):407-14.
3. De Cock KM, Fowler MG, Mercier E, De Vincenzi I, Saba J, Hoff E et al. Prevention of mother-to-child HIV transmission in resource-poor countries; translation research into policy and practice. *JAMA* 2000;283:1175-1182.
4. World Health Organization. The Inter-Agency Task Team. WHO HIV and Infant Feeding Technical Consultation Consensus Statement. Geneva: World Health Organization, 2006; <http://www.who.int/reproductive-health/stis/mctc/infantfeedingconsensusstatement.pdf>; accessed on April 25 2008.
5. Holmes WR, Savage F. Exclusive breastfeeding and HIV. *Lancet* 2007; 369:1065-66.
6. Piwoz EG, Humphrey JH, Tavengwa NV, Iliff PJ, Marinda ET, Zunguza CD et al. The Impact of Safer Breastfeeding Practices on Postnatal HIV-1 Transmission in Zimbabwe. *Am J Public Health* 2007; 97:1249-1254.
7. IBFAN South Asia Report Card on Child Survival and development 2007. http://ibfanasia.org/Reports/South_Asia_Report.pdf, accessed on April 25, 2008.
8. World Breastfeeding Trends Initiative (WBTi). <http://www.worldbreastfeedingtrends.org/>, accessed on November 2, 2007.



Table 1: What support is needed for the HIV positive mothers for practicing infant feeding options if they have made any of these two choices?

Needs	Chooses Exclusive breastfeeding	Chooses Replacement feeding
Support of skilled health workers/counsellors	Required Skilled counselling and support to practice exclusive breastfeeding and prevention as well as treatment of sore nipples, mastitis, prevention and treatment of breast over-fullness and engorgement etc	Required to teach replacement feeding including hygiene, dilution etc
Home visits	YES 2 visits in a week for first two weeks, preferably daily for first few days, and then every 2 weeks till about 6 months	YES Needs at least 3 visits in a week, preferably daily for first few days, to check for mixed feeding, and to ensure proper and safe replacement feeding.
Resources to ensure Affordability	Nutrition support to mothers (equal to what had to be spent on formula in case of replacement feeding)	Money to buy animal milk or powdered infant formula OR state ensures, resources to treat sick babies, responsive health care system, PLUS Nutrition support to mothers
Monitoring immune status of the mother	Provide appropriate health care to the mother and maintain CD4 count above >200/cmm	Provide appropriate health care to the mother and maintain CD4 count above >200/cmm
Safety	Needs education of family or parents to maintain exclusivity and prevent breast problems	Needs education of family or parents to prevent diarrhea and other killing illnesses
Education about contraception	Lactation Amenorrhea Method helps	To prevent next pregnancy, some contraception is required
ART	YES	YES
Policy support	YES	YES
Health watch and response	<ul style="list-style-type: none"> For oral thrush, for mastitis, and other breast pathology, does not need a health facility, specialist counsellor can do the job. Growth monitoring 	<ul style="list-style-type: none"> For sickness in the baby, diarrhea, pneumonia etc, need treatment in health facility Growth monitoring
Skilled IYCF counsellor	YES	YES
Primary prevention safe sex practices	YES	YES

Written and Edited by:

Dr. Arun Gupta, National coordinator, BPNI and regional coordinator IBFAN Asia; prepared the initial draft of the article and prepared the table given on the last page. He also contributed in the final editing of the article.

Dr. JP Dadhich, Project coordinator-Research, Documentation and HIV, BPNI; enhanced the contents and edited it further to give the final shape. He also coordinated the review process.

Designed by:

Amit Dahiya

Reviewers:

1. Dr. K Kesavulu, Civil Surgeon Pediatrician, Government District Hospital, Hindupur, Andhrapradesh, India.
2. Dr. Satish Saluja, Senior Consultant, Department of Neonatology, Sir Gangaram Hospital, New Delhi, India.
3. Dr Vijay Aruldas, General Secretary, The Christian Medical Association of India (CMAI).
4. Dr. MMA Faridi, Principal, Dean, CMS, Professor of Pediatrics, Era's Lucknow Medical College, Sarfraiganj, Hardoi Road, Lucknow, Uttar Pradesh, India.
5. Dr NB Mathur, Professor of Pediatrics, Maulana Azad Medical College, New Delhi, India.
6. Dr. AP Mehta, Consultant, Department of Pediatrics, Sunderlal Jain Hospital, New Delhi, India.

Acknowledgement

We are sincerely thankful to Dr. Peggy Henderson and Dr. Constanza Vallenias, Department of Child and Adolescent Health and Development, WHO, Geneva, Switzerland for having commented on the drafts.



Breastfeeding Promotion Network of India (BPNI) /

International Baby Food Action Network (IBFAN-Asia)

BP-33, Pitampura, Delhi 110 034, India, Tel: +91-11-27343608, 42683059, Tel/Fax: +91-11-27343606

Email: bpni@bpni.org, info@ibfanasia.org. Website: www.bpni.org, www.ibfanasia.org

BPNI Information Sheet No. 26 (April 2008)

ANNEXURE-6

WABA kit on HIV and Infant Feeding

www.hivbreastfeeding.org

Understanding International Policy on HIV and Breastfeeding: a comprehensive resource



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.
- **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.
- **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 and current criteria for deciding if replacement feeding is appropriate.
- **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 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).

World Alliance for Breastfeeding Action (WABA): PO Box 1200, 10850 Penang, Malaysia
T: 60-4-658 4816 • F 60-4-657 2655 • E: waba@waba.org.my • W: www.waba.org.my

KEY RESOURCES

1. IBFAN Africa. Infant feeding in the context of HIV/AIDS: Role of decision makers, 2012
2. IBFAN Africa. Mothers and Caregivers: HIV and Feeding my baby (question and answer booklet), 2012.
3. IBFAN Africa Report *“A rapid assessment of national infant and young child feeding (IYCF) policy guidelines on HIV and infant feeding”* 2015
4. IBFAN Asia Consensus call to national child health programs *“Stop Mixed Feeding”* 2008
5. IBFAN Asia Report *“The state of breastfeeding in 33 countries”*, 2010
6. IBFAN Asia *“Position statement on HIV and Infant feeding”*, 2012, updated 2015
7. IBFAN Asia Report *“Are our babies falling through the gap? The state of policies and programme implementation of the Global Strategy for Infant and Young Feeding in 51 countries”*, 2012
8. IBFAN Asia Report *“Are we doing enough for our babies? Trends analysis for infant and young child feeding policies, programmes and practices in South Asia”*, 2013
9. IBFAN India *“HIV and Infant feeding, an information booklet for policy and programme managers in India”*, 2013
10. UNAIDS GAP Report, 2014
11. UNICEF EASARO, *“Rapid assessment on uptake of 2010 WHO guidelines on IYCF and HIV among health workers and caregivers, An assessment of 5 countries in Sub-Saharan Africa”*, 2014
12. UNHCR *Guidance on infant feeding and HIV in the context of refugee and displaced populations*, 2009
13. WABA kit on Infant feeding and HIV, 2012
14. WHO/UNICEF *Global Strategy on Infant and young child feeding*, 2002
15. WHO *Guidelines on HIV and infant feeding*, 2010
16. WHO *Online Questions and Answers on HIV and Infant Feeding*, 2010
17. WHO *Updated framework for action on HIV and infant feeding*, 2010 (2012 published)
18. WHO *Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection*, 2013.
19. WHO *Guidelines on when to start antiretroviral therapy and on pre-exposure prophylaxis for HIV*, 2015



SUPPORTED BY



**International Baby Food Action Network (IBFAN) Asia
Breastfeeding Promotion Network of India (BPNI)**

BP-33 Pitampura, Delhi 110034. INDIA
Phone: +91-11-42683059 27343606 Fax: +91-11-27343606
Email: bpni@bpni.org, info@ibfanasia.org
Website: www.bpni.org, www.ibfanasia.org/