HIV AND INFANT FEEDING IN EMERGENCIES: OPERATIONAL GUIDANCE

The duration of breastfeeding and support from health services to improve feeding practices among mothers living with HIV

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Abbreviations and acronyms

AIDS	acquired immunodeficiency syndrome
ANC	antenatal care
ART	antiretroviral therapy
ARV	antiretroviral drug
AZT	zidovudine
BMS	breast-milk substitute(s)
ENN	Emergency Nutrition Network
HIV	human immunodeficiency virus
IFE	infant and young child feeding in emergencies
IYCF	infant and young child feeding
MTCT	mother-to-child transmission of HIV
NGO	nongovernmental organization
NVP	nevirapine
OG-IFE	*Infant and young child feeding in emergencies. Operational guidance for emergency relief staff and programme managers*, version 3, 2017 *(6)*
PITC	provider-initiated HIV testing and counselling
PLW	pregnant and lactating women
PMTCT	prevention of mother-to-child transmission of HIV
RUIF	ready-to-use infant formula
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNFPA	United Nations Population Fund
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WHO	World Health Organization

Definitions and key terms

Antiretroviral (drug) (ARV): the medicine used to treat HIV infection.

Antiretroviral therapy (ART): the use of a combination of three or more ARV drugs for treating HIV infection. ART involves lifelong treatment.

ARV drugs for HIV prevention: ARV drugs for the prevention of HIV transmission, including ARV drugs given to the mother or infant for preventing mother-to-child transmission of HIV; ARV drugs to reduce the transmission of HIV among serodiscordant couples; and ARV drugs to prevent people from acquiring HIV when they are exposed (post-exposure and pre-exposure prophylaxis).

Concentrated HIV epidemic: HIV has spread rapidly in one or more defined subpopulations but is not well established in the general population. Numerical proxy: HIV prevalence is consistently over 5% in at least one defined subpopulation but is less than 1% among pregnant women in urban areas.

Exclusive breastfeeding: the infant receives only breast milk without any other liquids or solids, not even water, except for oral rehydration solution or drops or syrups of vitamins, minerals or medicines.

Generalized HIV epidemic: HIV is firmly established in the general population. Numerical proxy: HIV prevalence is consistently over 1% among pregnant women. Most generalized HIV epidemics are mixed in nature, where certain (key) subpopulations are disproportionately affected.

HIV: the human immunodeficiency virus. There are two types of HIV: **HIV-1 and HIV-2**. The vast majority of people living with HIV infections globally have HIV-1.

HIV-exposed infant or child: an infant or child born to a mother living with HIV until the infant or child is reliably excluded from being HIV infected.

HIV-free survival: an infant or young child born to a mother living with HIV who remains both HIV uninfected (confirmed negative HIV status) and also alive over a defined follow-up period. HIV-free survival is commonly reported at 18 months or 24 months of age.

Low/high HIV prevalence: low HIV prevalence refers to settings with less than 5% prevalence in the population surveyed; high HIV prevalence refers to settings with 5% prevalence or more.

Mixed feeding: an infant younger than 6 months of age is given other liquids and/or foods together with breast milk. This could be water, other types of milk or any type of solid food.

Postnatal transmission: transmission of HIV to an infant or child after birth. Most postnatal transmission is through the breast milk of a woman living with HIV, but this also includes accidental infection, such as through an infected needle or through child abuse.

Prevention of mother-to-child transmission of HIV (PMTCT): refers to the use of ARV drugs to prevent the transmission of HIV from the mother during pregnancy and breastfeeding. Previous World Health Organization guidelines have used the terms "options A, B and B+" to refer to different approaches to PMTCT.

Replacement feeding: feeding an infant who is not receiving any breast milk with a diet that provides all the nutrients children need until they can be fully fed on family foods. During the first 6 months, this should be with a suitable breast-milk substitute: commercial infant formula milk. After 6 months, it should preferably be with a suitable breast-milk substitute and complementary foods made from appropriately prepared and nutrient-enriched family foods given three to five times per day.

Vertical transmission: transmission of HIV that occurs from a mother living with HIV to her infant. This may occur in utero, in the peripartum period or postnatally through breastfeeding.

Viral suppression: a viral load below the threshold for detection using viral assays.

Executive summary

Many millions of people around the world are affected by emergencies, the majority of whom are women and children. Among them are many who are known to be living with HIV and others who may not know their HIV status.

The purpose of this document is to provide operational guidance on HIV and infant feeding in emergencies. It is intended to be used to complement emergency and sectoral guidelines on health, nutrition and HIV, including specifically infant feeding, prevention of mother-to-child transmission of HIV and paediatric antiretroviral treatment. The envisaged target audience consists of decision-makers, policy-makers, national and subnational government managers and planners, managers of refugee camps and similar settlements for displaced persons, and managers and planners in United Nations agencies, nongovernmental organizations and other groups responding to humanitarian situations, as well as donors.

This operational guidance is based on a consultation convened by the World Health Organization, the United Nations Children's Fund and the Emergency Nutrition Network in Geneva in September 2016, which brought together a cross-section of senior-level participants from United Nations agencies, government, nongovernmental organizations, academia, and other agencies working in nutrition and HIV in emergencies. A background paper for the meeting presented experiences from the field.

This document sets out basic principles related to HIV and infant feeding in emergency settings, and the actions that government and other stakeholders can take to prepare for emergencies. The key principles are:

1. Health and nutrition sectors in government and partner agencies must work together on interventions related to HIV and infant feeding in emergencies.
2. The aim of interventions on HIV and infant feeding in emergencies is to prioritize the HIV-free survival of children, by balancing HIV prevention with protection from other risk factors for child mortality.
3. To minimize an emergency's negative impact on infant and young child feeding practices and ensure nutrition needs are met, preparedness is critical and interventions should begin immediately in the first phase of an emergency response.
4. Interventions should focus on supporting caregivers living with HIV and channelling resources to meet the nutritional needs of the infants and young children in their charge, and to provide or re-establish supplies of antiretroviral drugs to avoid disruption of treatment. Mothers living with HIV and their infants should have their health and nutrition needs prioritized.
5. To minimize the risks of mortality and morbidity related to inappropriate feeding practices, the aim of the emergency response should be to create and sustain an environment that encourages and supports breastfeeding, according to international recommendations for children aged up to 2 years or beyond. For infants and young children who have no possibility of breastfeeding, replacement feeding needs to be provided in line with international guidance.
6. In an emergency setting, infants who are not breastfed need early identification, and then targeted support and follow-up to minimize risks and maximize their nutrition and health.
7. Where replacement feeding is indicated, supplies of breast-milk substitute should be based on an individual needs assessment, purchased, and targeted to those in need, with commitment to continued supplies and supportive nutrition, water, sanitation and hygiene, and health care. Where individual-level access is compromised, the designated authority for coordination of infant and young child feeding in emergencies

should be consulted for advice on adapted options. Donations of breast-milk substitute should not be sought or accepted in emergencies.

8. Regardless of the infant feeding recommendations for women living with HIV that are promoted during the emergency response, maternal decisions regarding infant feeding should be respected.
9. Preparedness and response need to build on existing systems and national capacity related to HIV and infant feeding.

The actions proposed in this guidance should be taken at different stages of an emergency: information gathering before an emergency, to be used in preparedness planning; assessments as soon as possible after an emergency's onset; and then actions to maintain HIV and infant feeding and related services and mitigate disruptions. Specific actions are set out according to three scenarios: (i) national policy is breastfeeding plus antiretroviral drugs; (ii) national policy is replacement feeding; and (iii) HIV and infant feeding policy is unclear or not up to date.

Coordination between relevant sectors within government and between and within partners is crucial in each phase of an emergency; one authority should ensure interventions for HIV and infant feeding are coordinated across the response.

Countries are encouraged to hold key stakeholder discussions to inform decision-making on the use and introduction of this operational guidance into national programmes before an actual emergency situation.

1. Background and rationale

An estimated 125 million people around the world are currently affected by emergencies, including conflicts, disease outbreaks and natural disasters *(1)*. A disproportionate number of the most vulnerable are women and children. There is an urgent need to respond to the challenges faced in emergency settings.

At the same time, HIV infection continues to be a global problem. The Joint United Nations Programme on HIV/AIDS (UNAIDS) *Prevention gap report* 2016 shows that while significant progress is being made in reducing the number of new HIV infections among children, the decline in new HIV infections among adults has stalled and the number is rising in some regions *(2)*. People living with HIV who are affected by humanitarian crises face disruptions in HIV treatment, heightened exposure to HIV vulnerability and risks, and limited access to quality health care and nutritious food.

Breastfeeding is one of the most essential foundations of child health, development and survival, and it protects maternal health and a family's economy. Breastfeeding is life saving in settings where diarrhoea, pneumonia and undernutrition are common causes of mortality among infants and young children. Along with antiretroviral drugs (ARVs), breastfeeding is part of the strategy for HIV-free survival of children exposed to HIV. In a world where the number of people affected by emergencies is growing and HIV is still prevalent, there is a need for operational guidance on how to implement HIV and infant feeding recommendations in this context.

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) recently published the *Guideline: updates on HIV and infant feeding (3)*, where the relevance of these recommendations in emergencies was recognized. The guideline underscores the wide range of challenging settings where the updated recommendations are applicable, including acute, protracted and recurrent emergency contexts. Owing to the complexity of data collection in such settings, there is a lack of evidence on how best to support and guide infant and young child feeding (IYCF) practices in the context of HIV in emergencies. Yet, consideration of the balance of risks of feeding options and the impact on child survival is paramount.

WHO's Department of Nutrition for Health and Development, in collaboration with the Department of Maternal, Newborn, Child and Adolescent Health, UNICEF and the Emergency Nutrition Network (ENN), convened a consultation from 14 to 16 September 2016 in Geneva, Switzerland. This meeting was in response to requests for clarification on how to implement the most recent guideline on HIV and infant feeding in different settings and types of emergency situations. The participants reviewed operational experiences with HIV and infant feeding in the context of emergencies, and proposed issues and content for this operational guide. (See **Annex 1** for a description of the consultation.)

1.1 Background paper on infant feeding in emergencies and HIV

A background paper, *Infant feeding and HIV in emergencies: a snapshot of evidence, policy and practice*, was prepared for the consultation by WHO, UNICEF and ENN, to identify and review relevant literature, policy and guidance on HIV and infant feeding in emergencies, in order to inform the scope and content of this operational guidance. The paper captured several experiences of challenges, lessons learnt, and application of the 2010 WHO, UNAIDS, United Nations Population Fund (UNFPA) and UNICEF *Guidelines on HIV and infant feeding (4)* in a variety of settings. (See **Annex 2** for a summary.)

The review concluded that there is little published evidence or policy guidance on HIV and infant feeding in emergencies. What does exist lacks depth and does not address programmatic integration. Infant feeding issues are poorly represented in national policy, and thus HIV-related policy guidance and preparedness is lacking. However, the importance of integration between health, HIV and nutrition is increasingly recognized at country

level. The management of acute malnutrition in health facilities, as well as antenatal care (ANC), were considered important entry points for integrated care. The review found examples of poor integration between services affecting feeding practices and infant care.

In the situations covered in the review, national emergency preparedness is weak for infant feeding in emergencies generally and particularly in the context of HIV. Strong national policy and guidance for IYCF and HIV are not sufficient to manage the needs of an emergency situation. There were examples of negative consequences of poor emergency preparedness in terms of timely response and IYCF support.

The review found little documented evidence of specific programming for HIV and infant feeding in emergencies, and concluded that HIV-exposed infants are probably being managed the same as other infants, in terms of feeding. A lack of funding for behaviour-change communication to support breastfeeding compromises programming. The needs of infants who are not breastfed are poorly prepared for and met. Issues around complementary feeding were not identified in the experiences shared.

The review cited examples of successful preparedness actions regarding ARVs, e.g. pre-positioning of stocks and successful delivery of supplies to conflict-affected areas. In extreme situations, interrupted supplies of ARVs occur in tandem with poor access to many other essential health and nutrition services.

Communication in emergencies is an essential component of the response and may be approached in many ways. Case-studies identified the need for consistent, accurate and tailored communication to the population affected and to service providers. The review includes examples of communication issues at policy, planning and service-delivery levels, and between international nongovernmental organizations (NGOs) and local organizations and civil society.

1.2 Purpose of this document

The purpose of this document is to provide operational guidance on HIV and infant feeding in emergencies. It is intended to be used to complement emergency and sectoral guidelines on health, nutrition and HIV, including specifically IYCF, prevention of mother-to-child transmission of HIV (PMTCT) and paediatric antiretroviral therapy (ART). It aims to support pregnant and lactating women living with HIV in feeding their HIV-exposed infants (0–11 months) and young children (12–23 months).

1.3 Target audience for guidance

The envisaged target audience for this operational guidance on HIV and infant feeding in emergencies consists of decision-makers, policy-makers, national and subnational government managers and planners, managers of refugee camps and similar settlements for displaced people, and managers and planners in United Nations agencies, NGOs and other organizations responding to humanitarian situations, as well as donors. The question and answer section (**section 3.4**) is also intended for front-line workers.

1.4 Planned dissemination and follow-up

Countries are encouraged to hold key stakeholder discussions to inform decision-making on the use and introduction of this operational guidance into national programmes before an emergency occurs. The Inter-Agency Standing Committee Taskforce on HIV in Humanitarian Situations, United Nations agencies, the relevant United Nations clusters (see **section 5.2**) and their associated technical and operational partners should be targeted, both to be made aware of the content of the document, and to assist in further dissemination, including through endorsement.

Follow-up to review whether this operational guidance is being put into practice will take place 1 year after it is issued. The possibility of identifying an existing entity/agency to act as a global technical advisory body to undertake follow-up will be explored.

A review of this guidance and possible updating will take place in the light of any new recommendations.

2. The context of emergencies

2.1 Definition and characterization of emergency situations

An emergency is defined as a humanitarian crisis in a country, region or society demanding decisions and follow-up in terms of extraordinary measures that exceed the ability of the affected community or society to cope using its own resources, and therefore requiring urgent action to save lives and prevent additional mortality and morbidity. An emergency may be caused by natural disasters; conflict; disease outbreaks; or other events, such as massive food contamination or chemical or radionuclear spills.

Within this definition, there is a spectrum of different types of emergencies, for example:

- recurrent climate-related events, which may be acute (e.g. a hurricane) or slow onset (e.g. drought);
- one-off conflicts, which may also be acute (e.g. arising from disputed elections) or protracted (e.g. civil war).

Different types of emergencies may have short- and/or long-term consequences, including chronic displacement of populations, and may have extensive political, economic, social and public health impacts. The seriousness of an emergency of a similar magnitude in low- and middle-income countries may vary depending on preparedness and capacity, and, in the context of this guidance, whether there is low or high HIV prevalence.

Wherever possible, government is the lead coordination authority in an emergency. Where this is not possible or support is needed, United Nations agencies and NGOs may respond to help meet the needs of those affected.

In the case of slow-onset emergencies, more preparation is likely to have taken place. Many countries have specific government entities set up that can take action in any type of event, although they may be more or less effective. In others, there may be no functioning government or health network in the most-affected area, such as where there is a sudden conflict or in fragile states. In the 2013–2016 west African outbreak of ebola, for example, marginally functional health systems were quickly overwhelmed by the nature and extent of the problem.

Emergencies are characterized by a lack of, or reduced, access to services and supplies. Those relevant to HIV and infant feeding include HIV testing and counselling, ARVs, food, safe water and sanitation, breast-milk substitutes (BMS), and support services for breastfeeding mothers (who may have needs that are heightened by or specific to the emergency). The situation may undermine recommended breastfeeding and complementary feeding practices; increase stress on mothers; compromise maternal nutrition, health and well-being; and produce conditions that heighten the risks of suboptimal IYCF practices.

Challenges also include poor coordination between agencies and sectors, inadequate numbers of trained staff, lack of knowledge of relevant guidelines, inconsistencies between national policy and global recommendations, and incomplete linkages with multisectoral long-term planning. There may be no national policy to address HIV and infant feeding in emergencies.

The emergency context may also include population mobility, complicating identification and follow-up of mothers living with HIV and HIV-exposed infants; higher mortality rates and relative risks associated with not breastfeeding than in a stable setting; safety and security concerns; and varying HIV prevalence (and other issues) in pre-emergency situations, with a possible increase in the need for PMTCT interventions. Emergencies may increase HIV transmission, for example if treatment is interrupted. Any emergency may be complicated by a secondary outbreak of infectious disease, for example cholera in Haiti after the earthquake of 2010.

Various (including potentially new) stakeholders at national and international level are often involved in an emergency response. This may mean that understanding and awareness of issues and policy guidance may not be up to date, may be inconsistent, or may not reflect global recommendations. United Nations agencies

have instituted a cluster approach since 2006, to better coordinate the response in humanitarian crises (see **section 5.2**).

The publication *Infant feeding in emergencies. Operational guidance for emergency relief staff and programme managers* (OG-IFE) was first produced by the Interagency Working Group on Infant and Young Child Feeding in Emergencies in 2001 *(5)*, and was most recently updated in October 2017 *(6)* by the Infant Feeding in Emergencies Core Group, co-led by ENN and UNICEF. It was endorsed in a World Health Assembly Resolution in 2010 (WHA63.23). The OG-IFE aims to provide concise, practical guidance on how to ensure appropriate IYCF in emergencies. It applies to emergency preparedness, response and recovery worldwide, to minimize infant and young child morbidity and/or mortality risks associated with feeding practices and to maximize child nutrition, health and development. **Annex 3** contains the key points of the guidance.

2.2 HIV and infant feeding recommendations in the context of emergencies

WHO has periodically reviewed its guidance on HIV and infant feeding over the years, most recently in 2016 *(3)*. While some new and revised principles and recommendations were formulated, it was also agreed that nearly all those from 2010 *(4)* remained valid.

The WHO HIV and infant feeding principles and recommendations most relevant for emergencies include those from 2010, which are presented next *(4)*.

HIV and infant feeding principles

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 ART or prophylaxis for the woman's health and for PMTCT.

Setting national or subnational recommendations for infant feeding in the context of HIV

National or subnational health authorities should decide whether health services will principally counsel and support mothers known to be living with HIV to either:

- breastfeed and receive ARV interventions; or
- avoid all breastfeeding

as the strategy that is most likely give their infants the greatest chance of HIV-free survival.

This decision should be based on international recommendations and consideration of the:

- socioeconomic 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;
- main causes of maternal and child undernutrition and infant and child mortality.

When antiretroviral drugs are not (immediately) available

When ARVs are not (immediately) available, breastfeeding may still provide infants born to mothers living with HIV with a greater chance of HIV-free survival. Every effort should be made to accelerate access to ARVs, for both maternal health and also prevention of HIV transmission to infants.

While ARV interventions are being scaled up, national authorities should not be deterred from recommending that mothers living with HIV breastfeed as the most appropriate infant feeding practice in their setting.

Even when ARVs are not available, mothers should be counselled to exclusively breastfeed in the first 6 months of life and continue breastfeeding thereafter unless environmental and social circumstances are safe for, and supportive of, replacement feeding.

In circumstances where ARVs are unlikely to be available, such as acute emergencies, breastfeeding of HIV-exposed infants is also recommended, to increase survival.

Avoiding harm to infant feeding practices in the general population

Counselling and support to mothers known to be living with HIV, and health messaging to the general population, should be carefully delivered so as not to undermine optimal breastfeeding practices among the general population.

HIV and infant feeding recommendations

Which breastfeeding practices and for how long

In settings where national authorities have decided that the maternal and child health services will principally promote and support breastfeeding and ARV interventions as the strategy that is most likely to give infants born to mothers known to be living with HIV the greatest chance of HIV-free survival.

- Mothers living with HIV (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 at least 12 months and up to 24 months or longer, while being fully supported for ART adherence.
- Breastfeeding should then only stop once a nutritionally adequate and safe diet without breast milk can be provided.

What to feed infants when mothers stop breastfeeding

When mothers known to be living with HIV decide to stop breastfeeding at any time, infants should be provided with safe and adequate replacement feeds to enable normal growth and development.

Alternatives to breastfeeding include:

- For infants less than 6 months of age:
  - commercial infant formula milk, as long as the home conditions outlined next are fulfilled;
  - expressed, heat-treated breast milk.

Home-modified animal milk is not recommended as a replacement food in the first 6 months of life.

Conditions needed to safely formula feed

Mothers known to be living with HIV 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 all the following specific conditions are met:

- safe water and sanitation are assured at the household level and in the community;
- the mother or other caregiver can reliably provide sufficient infant formula milk to support normal growth and development of the infant;
- the mother or caregiver can prepare the infant formula milk cleanly and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition;
- the mother or caregiver can, in the first 6 months of life, exclusively give infant formula milk;
- the family is supportive of this practice;
- the mother or caregiver can access health care that offers comprehensive child health services.

Further recommendations on HIV and infant feeding, including feeding infants and young children aged 6–24 months, and related topics, are presented in **Annex 4**.

Specific challenges associated with HIV in emergency settings

During the discussion in 2015 for the revised guidance *(3)*, the consultation noted that HIV adds specific challenges and considerations to infant feeding in emergencies:

- Crises change risk profiles, and the relative risks and acceptability of various feeding practices among mothers and communities therefore need to be re-evaluated. For example, replacement feeding may become much more dangerous. In such settings, the criteria for determining the appropriateness of use of replacement foods

set out in the 2010 guidance *(4)* may be useful. Infants established on replacement feeding pre-crisis will need urgent identification and support to minimize risks.

- The prevailing policy on HIV and infant feeding may not be in accordance with international recommendations on infant feeding in emergency settings. Thus, mothers may not receive the most evidence-based information and support, or technical tensions may arise between international and national policy positions.
- ARV supplies may be disrupted, or no ARVs may be available at all, which may mean that responders could misjudge the risks of breastfeeding without ARVs and feel obliged to recommend replacement feeding even when it is not appropriate.
- Girls and women may be especially vulnerable and at additional risk of HIV infection, with the implication that there may be more new infections and thus the potential for increased mother-to-child transmission (MTCT), especially if testing is unavailable or unacceptable.
- The fear of HIV transmission among families and health staff may result in inappropriate responses, including avoiding breastfeeding in the absence of testing, and demand for, or offers of, infant formula milk, with implications for child health.

3. Adapting existing guidance in the context of HIV and emergencies

This section outlines a process for adapting existing guidance on HIV and infant feeding for emergency settings *(6)*. The objective is to clarify for the target audience the principles and actions that should guide decisions and responses in emergencies.

3.1 Guiding principles

Guiding principles are intended to reflect a set of values that contextualize the provision of care in programmatic settings. Such values cannot be subjected to formal research but represent public health approaches and preferences. The following principles were proposed by participants in the meeting held to discuss this guidance, and further developed later. Each principle addresses HIV, infant feeding and emergencies, and is specific to an exceptional challenge or issue associated with HIV and infant feeding in emergencies

Principle 1. Health and nutrition sectors in government and partner agencies must work together on issues related to HIV and infant feeding in emergencies.

Principle 2. The aim of interventions on HIV and infant feeding in emergencies is to prioritize the HIV-free survival of children, by balancing HIV prevention with protection from other risk factors for child mortality.

Principle 3. To minimize an emergency's negative impact on infant feeding practices and ensure nutrition needs are met, preparedness is critical and interventions should begin immediately in the first phase of an emergency response.

Principle 4. Interventions should focus on supporting caregivers living with HIV and channelling resources to meet the nutritional needs of the infants and young children in their charge, and to provide or re-establish supplies of ARVs to avoid disruption of treatment. Mothers living with HIV, and their infants, should have their health and nutrition needs prioritized.

Principle 5. To minimize the risks of mortality and morbidity related to inappropriate feeding practices, the aim of the emergency response should be to create and sustain an environment that encourages and supports breastfeeding according to international recommendations for children aged up to 2 years or beyond. For infants and young children who have no possibility of breastfeeding, replacement feeding needs to be provided in line with international guidance.

Principle 6. In an emergency setting, infants who are not breastfed need early identification, and then targeted support and follow-up to minimize risks and maximize their nutrition and health.

Principle 7. Where replacement feeding is indicated, supplies of BMS should be based on an individual needs assessment, purchased, and targeted to those in need, with commitment to continued supplies and supportive nutrition, water, sanitation and hygiene, and health care. Where individual-level access is compromised, the designated authority for coordination of IYCF in emergencies should be consulted for advice on adapted options. Donations of BMS should not be sought or accepted in emergencies.

Principle 8. Regardless of the infant feeding recommendations for women living with HIV that are promoted during the emergency response, maternal decisions regarding infant feeding should be respected.

Principle 9. Preparedness and response need to build on existing systems and national capacity related to HIV and infant feeding.

3.2 Actions before and during emergencies

The actions described in this section should be taken by the lead actors in each specific emergency. The lead actor should normally be government, with the support of United Nations agencies, international and national NGOs, and other partners. However, depending on the circumstances, another group may need to play the lead role. Some of the actions proposed may be more or less relevant, depending on the specific context of the emergency.

General actions to be taken before and in all emergencies

Coordination between relevant sectors within government, and between and within partners, is crucial in each phase of an emergency. One agency should ensure HIV and infant feeding is coordinated across the response. Of note, among United Nations agencies, coordination of IYCF in emergencies, including in the context of HIV, is the mandated responsibility of UNICEF or the Office of the United Nations High Commissioner for Refugees (UNHCR), depending on the situation, in close collaboration with government, other United Nations agencies and operational partners (see **section 5.2**).

Each sector has a specific role to play in ensuring low mortality and morbidity in the population affected, and in preventing undernutrition and HIV transmission. However, intersectoral coordination and collaboration is necessary to ensure that each sector reaches its goals.

Emergency preparedness should be context specific with regard to policies and HIV prevalence. Infant feeding in the context of HIV should be included in emergency-preparedness plans, and emergency preparedness should be included in HIV plans as well as IYCF plans. Considerations on HIV and infant feeding in emergencies should be included in pre-service and in-service training of relevant staff. Local implementing partners and health staff should ensure that information about infant feeding in the context of HIV is widely available to communities, women and health workers before an emergency happens. Buffer stocks of ARVs should be part of emergency-preparedness plans at regional, local and individual level.

Timely, accurate and harmonized communication between the population, emergency responders and media is important. An interagency joint statement, issued and endorsed by relevant authorities, may be used to highlight relevant HIV and infant feeding information, provide context-specific rapid guidance, and harmonize communication. Development of the statement should be led by the designated coordination authority; UNICEF and WHO have key roles in catalysing and supporting the process. During preparedness activities, a joint statement should be drafted and preliminary approval secured with relevant authorities. A model joint statement, for contextualization, is available *(7)*.

Specific actions are covered in the next sections.

Specific actions to be taken before and in all humanitarian settings

Actions for preparedness

1. Development and emergency actors (clusters or sectors) should obtain and review the following information and make it available to one another for possible joint analysis, including risk analysis, and action:
    a. names and detailed information about decision-makers and mechanisms for relevant national policies, preparedness and response;
    b. existing policies and protocols on HIV, PMTCT, IYCF and HIV and infant feeding;
    c. the prevalence of HIV, disaggregated by sex, age and geographic location, to the extent possible;
    d. data on ART coverage for pregnant women, children and adolescents;
    e. IYCF practices, including the prevalence of replacement feeding;
    f. the availability of services related to HIV and to IYCF, and the implementation of relevant policies on availability;
    g. access to services related to HIV and to IYCF, and the implementation of relevant policies on access;
    h. the quality of services related to HIV and to IYCF, and the implementation of relevant policies on quality;
    i. the quality of supply-chain management for HIV test kits and ARVs, and for replacement feeding in contexts where this is applicable.

2. Development and emergency actors (clusters or sectors) should undertake relevant preparedness actions, which could include:

    a. updating or clarifying policies and protocols on infant feeding in the context of HIV and PMTCT; and drafting provisional/interim guidance where policies/protocols are absent, including a short brief that clearly states the situation regarding HIV and infant feeding in the specific context;

    b. building capacity on ART, PMTCT, HIV and infant feeding, and IYCF service delivery and counselling, including training counsellors on emergency-related IYCF challenges, as part of the training package;

    c. where necessary and possible, strengthening availability and access to services, for example specifically in areas that are prone to regular natural disasters, such as regional floods, and examining how programmes can be made more resilient to shocks (risk informed);

    d. strengthening IYCF counselling and distribution of relevant materials (e.g. job aids);

    e. strengthening HIV-related and (where applicable) replacement feeding supply-chain management, where needed (including a possible increase in buffer stocks prior to predicted floods or cyclones, and agreement on customs and importation procedures);

    f. strengthening patient education and preparedness, including via distributing client-retained health records and providing patients with additional ARV supplies;

    g. building HIV and IYCF into national and subnational emergency-preparedness plans;

    h. clarifying coordination mechanisms, roles and responsibilities for HIV and infant feeding in emergencies.

Assessments/stocktaking after the onset of the emergency

1. As soon as possible after the onset of an emergency, emergency actors (clusters or sectors) need to update the information obtained in the preparedness phase by doing assessments, and specifically looking at:

    a. who is the designated coordination authority on IYCF in the context of HIV in the emergency;

    b. which actors are assigned/taking responsibility for action on HIV and IYCF;

    c. who are the decision-making authorities at different levels;

    d. any modification of high-risk groups resulting from the emergency;

    e. possible IYCF challenges related to the specific emergency;

    f. sustained availability of safe water, hygiene and sanitation facilities;

    g. the availability of services related to HIV and IYCF and the status of implementation of relevant policies in the affected areas;

    h. access to services related to HIV and IYCF and the status of implementation of relevant policies on access in the affected areas;

    i. the quality of services related to HIV and IYCF and whether the implementation of relevant policies has been impacted by the emergency in the affected areas;

    j. the quality of supply-chain management for HIV test kits, ARVs and, in contexts where this is applicable, replacement feeding (BMS; safe and adequate water supplies; minimum hygiene and sanitation standards; preparation and feeding equipment);

    k. communication channels and networks on HIV and IYCF.

2. National authorities, supported by emergency actors, should take stock of the situation by:

    a. undertaking the assessments described in the list (clusters or sectors) above;

    b. combining the information from the assessments with baseline information already available (see "Actions for preparedness"; including, for example, HIV prevalence, under-five mortality rate, etc.);

    c. collecting information about the number of people (preferably by sex and age group) affected by the emergency.

Guided by this information, the authorities should subsequently provide strategic direction to inform priority interventions in the immediate and longer term.

3.3 Specific long-term aims and immediate, medium- and long-term actions in emergency settings, depending on the infant feeding scenario

The actions required related to HIV and infant feeding in a particular emergency situation will depend on the national policies in place, and the type of HIV epidemic. Separate tables have been developed for three scenarios: national policy is breastfeeding plus ARVs (see **Table 1**); national policy is replacement feeding (see **Table 2**); and HIV and infant feeding policy is unclear or not up to date (see **Table 3**). The actions are divided into those that should be in place in a stabilized situation, and the short-term and medium-term actions that can be taken until services are restored.

Table 1. Scenario: national policy is breastfeeding plus antiretroviral drugs

POSSIBLE CHALLENGE RELATED TO THE EMERGENCY	POSSIBLE IMPLICATIONS FOR INFANT FEEDING	LONG-TERM AIM	POSSIBLE IMMEDIATE AND SHORT-TERM ACTIONS	POSSIBLE MEDIUM-TERM ACTIONS
No HIV testing available	Health services are not able to provide specific infant feeding support to women living with HIV Provider reluctance to recommend breastfeeding and/or wet-nursing	**High HIV prevalence/generalized epidemic:** provider-initiated HIV testing and counselling (PITC) is offered to all pregnant and lactating women (PLW); testing of HIV-exposed children	Recommend and support women with unknown serostatus to breastfeed *(4)* Undertake HIV risk assessment for potential wet-nurses	Identify ways to undertake HIV testing and counselling
No HIV testing available	Health services are not able to provide specific infant feeding support to women living with HIV	**Low HIV prevalence/concentrated epidemic:** PITC is offered to all antenatal care (ANC) clients with symptoms or medical conditions indicating HIV infection or PITC is considered for all ANC clients	Recommend and support women with unknown serostatus to breastfeed *(4)*	Identify ways to undertake HIV testing and counselling
Insufficient access to/availability of individual breastfeeding support	Women not supported to provide recommended infant feeding	**All HIV prevalences/types of epidemic:** adequate breastfeeding support for mothers living with HIV with children under 2 years of age and pregnant women living with HIV is provided/maintained	Prioritize funding and actions to provide breastfeeding support Provide rapid orientation/targeted messaging to front-line health workers and medical staff	Build capacity and systems for breastfeeding support and counselling (health workers, health systems, peer-support systems)
Reduced availability of and access to antiretroviral drugs (ARVs)	Risk of mother-to-child transmission of HIV (MTCT) through breastfeeding is increased Provider reluctance to recommend breastfeeding Caregiver concern/reluctance to breastfeed	Availability of and access to ARVs for PLW and HIV-exposed neonates and infants is provided/maintained	Identify alternative distribution mechanisms for ARVs (and co-trimoxazole) to reach PLW, neonates and infants Ensure that PLW remain a priority group for ARV distribution Recommend and support mothers living with HIV to breastfeed, even in the absence of ARVs *(4)* If disruption is short term, consider recommending expressing and heat-treating breast milk, informed by feasibility assessment	Not discussed

POSSIBLE CHALLENGE RELATED TO THE EMERGENCY	POSSIBLE IMPLICATIONS FOR INFANT FEEDING	LONG-TERM AIM	POSSIBLE IMMEDIATE AND SHORT-TERM ACTIONS	POSSIBLE MEDIUM-TERM ACTIONS
Reduced availability of health workers for ARV distribution and adherence support	Mothers may not realize the implications of irregular compliance, leading to increased risk of MTCT	Adherence counselling is available for PLW as a priority group	Task-shifting: train additional relevant health cadres and lay workers in ARV distribution, adherence support and breastfeeding support	Build capacity and systems for ARV distribution and adherence support
Reduced adherence and retention of PLW in ART	Possible increased risk of MTCT through breastfeeding	Not discussed	Establish alternative retention and adherence mechanisms	Build capacity and systems for ARV distribution and adherence support
Food insecurity compromises maternal nutrition and increases exposure to risky coping strategies	Possible increased risk of HIV transmission to mothers, and thus to infants through breastfeeding Maternal well-being is reduced, reducing capacity to care for and feed infants	Food security for PLW with breastfed infants is increased/ensured	Ensure PLW are enrolled in food/voucher/cash-distribution mechanisms	Link/transition to livelihood and social welfare programmes
Poor understanding of current HIV and infant feeding recommendations *(3, 4)* among response providers	Inappropriate information/advice is given to mothers, leading to possible increased risk of HIV transmission/lowered HIV-free survival and inappropriate feeding practices	Response providers are aware of current HIV and infant feeding recommendations *(3, 4)*	Target communication on policy provisions at key response providers, e.g. include them in interagency joint statements	Target ongoing orientation and communication on policy provisions at key response providers Work closely with development partners in restoration/transition to routine services Share lessons learnt, to inform future preparedness Provide ARVs and co-trimoxazole, according to existing global guidance *(8)*, to neonates and eligible PLW
Access of and to mothers and children is compromised (e.g. displaced, mobile, conflict)	Mothers are unable to seek feeding and health support and ARVs; health-care providers are not able to identify and target services	Necessary services, supplies and access are re-established/developed	Collaborate with other sectors to secure access/shared access Use communication channels to transmit key messages on infant and young child feeding (IYCF) Use local informal networks and contacts for supplies	Integrate HIV and infant feeding into mobile services Build capacity of local nongovernmental organizations on IYCF, exploring remote/third-party support and supplies provision where possible

Table 2. Scenario: national policy is replacement feeding

POSSIBLE CHALLENGE RELATED TO EMERGENCY	POSSIBLE IMPLICATIONS FOR INFANT FEEDING	LONG-TERM AIM	POSSIBLE IMMEDIATE AND SHORT-TERM ACTIONS	POSSIBLE MEDIUM-TERM ACTIONS
No HIV testing available	Health services are not able to provide specific infant feeding support to women living with HIV	**High HIV prevalence/generalized epidemic:** provider-initiated HIV testing and counselling (PITC) is offered to all pregnant and lactating women (PLW); testing of HIV-exposed children	Recommend and support women with unknown serostatus to breastfeed *(4)* Undertake rapid reorientation of health workers on revised feeding recommendations and rationale	Identify ways to undertake HIV testing and counselling
No HIV testing available	Health services are not able to provide specific infant feeding support to women living with HIV	**Low HIV prevalence/concentrated epidemic:** PITC is offered to all antenatal care (ANC) clients with symptoms or medical conditions indicating HIV infection or PITC is considered for all ANC clients	Recommend and support women with unknown serostatus to breastfeed *(4)* Undertake rapid reorientation of health workers on revised feeding recommendations and rationale	Identify ways to undertake HIV testing and counselling
Unidentified HIV-exposed infants	Mothers may be advised to breastfeed, against national policy; increased risk of transmission if the mother is unaware of her HIV status and not given antiretroviral drugs (ARVs)	Identify infants who are HIV exposed	Support according to existing national guidance Identify and support infants who are not breastfed and investigate whether they have known HIV exposure	Find ways to identify HIV-exposed infants
Procurement and distribution channels disrupted, or new ones need to be established for the emergency	Unavailability/inadequate amounts of infant formula milk, safe water and related supplies may lead to use of poor feeding substitutes, leading to malnutrition and increased morbidity in infants	Distribute or sell replacement feeds, in line with global guidance on infant feeding in emergencies *(6)* (as prior to the emergency) and appropriate national recommendations	Identify alternative procurement and distribution channels in line with the OG- IFE *(6)* and the *International Code of Marketing of Breast-milk Substitutes* and subsequent relevant World Health Assembly resolutions (the Code) *(9)*	Consider modifying the policy for the affected area to breastfeeding plus ARVs for neonates (if relevant/possible and specifically when there is a long-term change in the balance of risks); and/or that infants born after the onset of the emergency should be breastfed If providing free infant formula milk, manage risks of stigma (if associated with HIV), and spillover (to breastfeeding population)

POSSIBLE CHALLENGE RELATED TO EMERGENCY	POSSIBLE IMPLICATIONS FOR INFANT FEEDING	LONG-TERM AIM	POSSIBLE IMMEDIATE AND SHORT-TERM ACTIONS	POSSIBLE MEDIUM-TERM ACTIONS
Procurement and distribution channels for other supplies/ equipment for feeding disrupted	As above	Distribute or sell feeding utensils (preferably cups) Distribute or sell preparation equipment	Identify alternative procurement and distribution channels, in line with the OG-IFE *(6)* and the Code *(9)*	Establish sustainable systems for procurement and distribution channels, in line with the OG-IFE *(6)* and the Code *(9)*
Reduced availability of and access to safe water, sanitation and hygiene	Higher risk of diarrhoea and malnutrition in infants; inability to safely prepare feeds	Ensure/maintain availability of and access to safe water and sanitation	Collaborate with the water, sanitation and hygiene sector, to ensure safe water and sanitation for the affected community Where services are constrained, advocate to prioritize families of non-breastfed infants/provide communal areas for hygienic preparation of feeds Consider a temporary shift from powdered infant formula milk to ready-to-use infant formula (RUIF) (include cost and storage implications) Collaborate with water, sanitation and hygiene providers to target services to families of non-breastfed infants/ provide communal areas for hygienic preparation of feeds Strengthen education and counselling on safe preparation of replacement feeds	Establish sustainable systems for the availability of and access to safe water and sanitation Consider modifying the policy for the affected area to breastfeeding plus ARVs (if relevant/possible, and specifically when there is a long-term change in the balance of risks)
Reduced availability of options for heating water	As above	Ensure/maintain facilities to heat water	Prioritize facilities for heating water (equipment, fuel, advice) for families of non-breastfed infants Strengthen education and counselling on safe preparation of replacement feeds Consider a temporary shift from powdered infant formula milk to RUIF Provide communal preparation areas	Establish systems for heating water in the affected population Consider modifying the policy for the affected area to breastfeeding plus ARVs

POSSIBLE CHALLENGE RELATED TO EMERGENCY	POSSIBLE IMPLICATIONS FOR INFANT FEEDING	LONG-TERM AIM	POSSIBLE IMMEDIATE AND SHORT-TERM ACTIONS	POSSIBLE MEDIUM-TERM ACTIONS
Poor understanding of current HIV and infant feeding recommendations *(3, 4)* among response providers (national, international)	Inappropriate information/advice is given to mothers, leading to possible increased risk of HIV transmission/ lowered HIV-free survival and inappropriate feeding practices	Response providers are aware of current HIV and infant feeding recommendations *(3, 4)*	Target orientation and communication on policy provisions targeted at key response providers, e.g. include them in interagency joint statements	Target ongoing orientation and communication on policy provisions at key response providers Work closely with development partners in restoration/transition to routine services Share lessons learnt, to inform future preparedness Provide ARVs and co-trimoxazole, according to existing global guidance *(8)*, to neonates and eligible PLW
Access of and to mothers and children is compromised (e.g. displaced, mobile, conflict)	Mothers are unable to seek feeding and health support and supplies of breast-milk substitutes (BMS) and ARVs; health -care providers are not able to identify and target services	Necessary services, supply chains and access to meet needs are re-established/developed	Collaborate with other sectors to secure access/shared access Use communication channels to transmit key messages on infant and young child feeding (IYCF) Where BMS supplies can be provided remotely (e.g. through voucher/cash schemes), include key information on their use and intended targets	Integrate HIV and infant feeding into mobile services Build capacity of local nongovernmental organizations on IYCF, exploring remote/third party support and supplies provision where possible

Table 3. Scenario: HIV and infant feeding policy is unclear or not up to date

SITUATION	POSSIBLE IMPLICATIONS FOR INFANT FEEDING	ACTIONS REQUIRED	POSSIBLE CHALLENGE RELATED TO THE EMERGENCY	POSSIBLE SOLUTION
No existing policy for the affected area	Different response providers may give varying advice to mothers, creating confusion and inappropriate feeding practices	Develop ad hoc policy among actors led by coordination authority for infant and young child feeding (IYCF) in emergencies (via clusters/sectors), based on global guidance on HIV and infant feeding and IYCF in emergencies, and taking into account the availability of antiretroviral drugs (ARVs), the water and sanitation situation, capacity for support for breastfeeding and possibilities of secure distribution of replacement food See **Tables 1** and **2**. Ensure health workers are aware of new policy	See **Tables 1** and **2**.	See **Tables 1** and **2**. Consider working with (national) authorities to develop a policy (see also long-term aims) Ideally, this gap is identified and interim policy developed as a preparedness action
National policy does not concur with latest global guidance on HIV and infant feeding *(3, 4)* (for example, is based on World Health Organization (WHO) recommendations from 2006 *(10)*)	Inappropriate feeding practices based on earlier guidance may be promoted, leading to higher risk of mother-to-child transmission of HIV and malnutrition	Identify any risks with current guidance recommendations in emergency context Where risks are identified, issue ad hoc policy as above When policy is in line with 2010 global guidance *(4)*, implementation is largely similar to that in **Table 2**	See **Tables 1** and **2**.	See **Tables 1** and **2**. Closely liaise with government regarding ad hoc policy guidance, to ensure synergies and avoid policy conflict
Policy in country of origin is different than the policy in host country (refugee situation)	Different response providers may give varying advice to mothers, creating confusion and inappropriate feeding practices	Support mothers to implement the feeding practice that best ensures HIV-free survival Inform mothers if the ARV regimen in the host country is different from that in the country of origin	See **Tables 1** and **2**.	See **Tables 1** and **2**.

3.4 Questions and answers

Besides the broad information already presented, health workers and others may have specific questions on how to implement this guidance in their work. This question and answer section is intended to respond to that need, and to include the most frequent queries. It assumes that the mother of an infant knows her HIV status. Mothers whose status is unknown should be supported to follow the IYCF recommendations for the general population (see **Annex 4**), and encouraged to be HIV tested when services are in place.

Settings where the national policy for mothers living with HIV is breastfeeding plus antiretroviral drugs

QUESTION 1

How can exclusive and continued breastfeeding be protected, promoted and supported in emergency settings where HIV is also prevalent?

National and local health authorities should actively coordinate and implement services and activities to protect, promote and support breastfeeding among women living with HIV *(3)*.

WHO guidance clearly states that mothers need continued support to maintain exclusive and continued breastfeeding, and to establish adequate complementary feeding when the child is 6 months of age and older. Steps recommended in emergencies include training; enabling access to breastfeeding assessment/support/referral pathways in services accessed by mothers and infants; and establishing, as necessary, areas to access skilled breastfeeding counselling and support. These recommendations and actions are applicable irrespective of HIV prevalence. An added consideration is to ensure there is sensitive access to these services for mothers living with HIV *(6)*.

Some mothers may not exclusively breastfeed their infants aged less than 6 months, and health workers may be concerned regarding HIV transmission in this situation. Although exclusive breastfeeding is recommended, practising mixed feeding is not a reason to stop breastfeeding in the presence of ARV drugs. Mothers living with HIV, and health-care workers, can be reassured that ART reduces the risk of postnatal HIV transmission in the context of mixed feeding in infants aged less than 6 months.

QUESTION 2

What if there are no antiretroviral drugs available? What is the recommended duration of breastfeeding without antiretroviral drugs?

In general, when ARVs are not available, mothers should be advised and supported to breastfeed as per the general population, that is, exclusive breastfeeding for the first 6 months of life and continued breastfeeding until 2 years of age or beyond *(3)*.

Principle 4 of the 2010 HIV and infant feeding guideline *(4)*, which is still valid, states that "When ARV drugs are not (immediately) available, breastfeeding may still provide infants born to mothers living with HIV a greater chance of HIV-free survival". In addition, it states that in circumstances where ARVs are unlikely to be available, such as acute emergencies, breastfeeding of HIV-exposed infants is also recommended, to increase survival.

A woman starting on ARVs needs 3 months to achieve full viral suppression. If ARVs are interrupted, it is likely to be 3 months after restarting before viral suppression can be assured again, assuming drug resistance has not developed due to the interruption. HIV-exposed infants who are receiving ARVs for PMTCT (infant prophylaxis) can be assumed to be protected immediately, regardless of whether the mother is taking ARVs (see **Annex 4**).

Infant prophylaxis should be considered where interruption of ARV supply continues. In the absence of ARVs, the risk of HIV transmission through breastfeeding is cumulative with longer durations of breastfeeding and the risk depends on the clinical status of the mother – mothers who are clinically well have a much lower risk of transmitting to their infant compared to mothers living with HIV who are unwell; this needs to be balanced with the risk of other infectious diseases, malnutrition and death if breastfeeding ceases in an emergency-affected population.

Infants of mothers who are receiving ART and are breastfeeding should receive 6 weeks of infant prophylaxis with daily nevirapine (NVP) *(11)*. Breastfed infants who are at high risk of acquiring HIV, including those first

identified as exposed to HIV during the postpartum period, should continue infant prophylaxis for an additional 6 weeks (total of 12 weeks of infant prophylaxis) using either zidovudine (AZT; twice daily) and NVP (once daily) or NVP alone *(8)*.

The dangers of not breastfeeding are greater among infants aged less than 6 months; the younger the infant, the more vulnerable he or she will be. For older infants and young children, a decision on stopping breastfeeding (if no ARVs are available) will depend on the child's general health, age, availability of and access to a nutritionally safe and adequate diet, counselling services and other support available, and the risk of other infectious diseases, malnutrition and death if breastfeeding ceases.

Every effort should be made by the health system to accelerate access to ARVs.

QUESTION 3

What change in support (counselling, follow-up schedule, nutritional supplements to mothers) is needed in the absence of antiretroviral drugs?

When ARVs are not available, additional counselling should be given to mothers on how to make breastfeeding safer and on maintaining their own health, and supplementary foods, screening and treatment for opportunistic infections, and prophylactic co-trimoxazole may be provided.

Whether ARVs are available or not, mothers with infants aged under 6 months need support to exclusively breastfeed. This support is especially critical in the immediate postpartum period. Mothers living with HIV may have additional needs to maintain confidence in the importance of breastfeeding for child survival and support on making it safer. Conditions of the breast or of the child's mouth are factors that can affect MTCT. Nipple fissure (particularly with bleeding), mastitis or breast abscess may increase the risk of HIV transmission. Therefore, prioritizing access to skilled breastfeeding support is particularly important for this group.

General health screening and evaluation of the mother for opportunistic infections should be conducted, guided by WHO's clinical staging for HIV/AIDS (see Annex 10 in reference *(8)*), especially with regard to new symptoms that have emerged since stopping ARVs. Treatment for opportunistic infections should be provided whenever available, as well as prophylactic co-trimoxazole.

An assessment of whether a woman should continue breastfeeding may be carried out if her overall health is changing or she has developed specific complications, such as mastitis. This assessment should ideally be carried out by, or in consultation with, a provider who is trained on infant feeding. Progression in clinical staging may be correlated with increased HIV transmission to the infant, and thus would indicate a higher priority for introducing BMS if resources and safe conditions are in place.

Mental health screening, counselling and therapies should be introduced when resources are available.

The nutritional status of every pregnant or lactating woman living with HIV should be assessed on a frequent basis, where possible. Supplementary foods for mothers may be needed, given the extra metabolic demands of breastfeeding and HIV. A breastfeeding mother's intake should be increased by about 10% if she is asymptomatic, and up to about 40% if she has symptoms of AIDS. However, the nutritional demands on a woman are significantly influenced by whether she starts taking lifelong ART, which is necessary for all persons living with HIV.

QUESTION 4

What if a woman is unable or does not wish to breastfeed, or she is separated from her child?

If breastfeeding by the natural mother is impossible for any reason, an appropriate choice for feeding should be made among the available alternatives, depending on the situation of the mother and the age of the child. These may include expression of breast milk, wet-nursing, donor human milk from a human milk bank, or commercial infant formula milk.

Very few women are unable to breastfeed at all. If a mother appears to be unable to breastfeed because of stress or other psychological issues, then counselling by an infant feeding counsellor trained on psychosocial issues, or referral to mental health services (if available), may help her to start/resume breastfeeding.

If a woman who has been breastfeeding is separated from her child for only a short period, she may be able to express her breast milk and feed it to the infant later. Facilities for storage may help to facilitate this. Heat treatment of expressed breast milk may be feasible for some women if ARVs are temporarily not available.

If there is a pre-existing human milk bank with appropriate screening for infectious disease and storage facilities, and a cold chain can be maintained during transport, donor human milk may be used. The establishment of human milk banks is not usually feasible in the acute phase of an emergency.

Wet-nursing may be an option if it is culturally acceptable, and should ideally be done by a close family member who is not suspected to have HIV. If resources are available, the wet-nurse should be screened for HIV (see **question 9**).

For infants aged less than 6 months for whom their mother's own milk or another mother's breast milk is not available, commercial infant formula milk, either in powder form or ready-to-use infant formula (RUIF), is the only suitable option.

Non-breastfed children from 6 months to 2 years of age need some kind of milk as part of their diet, in addition to safe and appropriate complementary foods. This can be regular infant formula milk or pasteurized full-cream animal milk *(12)* (see **Annex 4**).

Settings where national policy for mothers living with HIV is replacement feeding

QUESTION 5

How long should infants be supplied with breast-milk substitute?

Once provided, BMS should continue to be supplied for as long as the infant needs it.

Use of infant formula milk in children aged over 6 months will depend on pre-emergency practices, the resources available, sources of safe alternative milks, the adequacy of complementary foods, and government or agency policy. Where supplies of infant formula milk are necessary but limited, identified infants aged up to 6 months should be prioritized for provision. RUIF should be treated the same as other BMS. Follow-on, growing-up milks and toddler milks marketed to children over 6 months of age are not necessary and should not be provided; the composition of standard infant formula milk is adequate for this age group.

Infants under 6 months of age need a replacement for breast milk, as described in **question 4**. If donor human milk or a wet-nurse is not available, commercial infant formula milk is the only suitable option. After 6 months, children can receive infant formula milk or pasteurized full-cream milk. Meals, including milk-only feeds, other foods and combinations of milk feeds and other foods, should be provided four or five times per day. All children need complementary foods from 6 months of age onward *(13)*. The youngest children, and specifically infants under 6 months of age, should receive priority.

QUESTION 6

Do the mothers living with HIV whose infants are not breastfed also need antiretroviral drugs?

Yes. WHO recommends that ART should be initiated in all pregnant and breastfeeding women living with HIV, regardless of WHO clinical stage and at any CD4 cell count, and continued lifelong *(8)*.

This recommendation is to protect the woman's own health and not only for PMTCT. (The same recommendation applies to all children, adolescents and adults.)

QUESTION 7

What if a woman living with HIV whose infant is not breastfed wants to start breastfeeding?

It is possible for a non-breastfeeding mother to re-lactate, but she will require skilled breastfeeding support until lactation is re-established.

The re-establishment of breastfeeding is an important management option in emergency situations. Most women can re-lactate several years after their last child, but it is easier for women who stopped breastfeeding recently, or

if the infant still suckles sometimes. Success will depend on the mother's motivation to re-lactate; the age of the infant (very young infants will benefit most); how long ago the mother ceased breastfeeding; and her ability to access sustained support *(14)*. There may be a period of mixed feeding if ARVs are not available (see **question 3**).

QUESTION 8

What if there is no commercial infant formula milk or other breast-milk substitute available? Are there alternatives for infants aged under 6 months and over 6 months?

In emergency situations where there is no suitable BMS, the recommendation for HIV-exposed neonates should be to breastfeed, with provision of maternal and/or infant ARVs if possible.

For infants already being fed BMS but where supplies of safe water are not available, re-lactation by the mother may be possible (see **question 7**). In some settings, wet-nursing by a family member or close friend may be an alternative (see **question 9**). If a human milk bank and safe transportation mechanisms for the milk exist, these services can be used. WHO does not recommend modified animal milk for infants aged under 6 months *(4)*.

Children from 6 months to 2 years of age need some kind of milk as part of their diet, in addition to safe and appropriate complementary foods. This can be regular infant formula milk or pasteurized full-cream animal milk *(12)* (see **Annex 4**).

QUESTION 9

Is wet-nursing safe and practical in emergencies?

Wet-nursing in emergencies can be life saving, providing an immediate source of breast milk for infants, and is likely to carry a small risk of HIV transmission.

Ideally, wet-nurses should be tested for HIV and counselled, and efforts should be made to make testing available for this and other reasons. Many women, even in an emergency setting, will have had an HIV test at some point.

In the absence of testing, an HIV risk assessment of the wet-nurse should be undertaken, if feasible. An assessment should consider the HIV status of current or previous partners, the practice of unprotected sex, the history of sexually transmitted disease, and whether the woman appears to be in good health. The decision on an infant feeding practice requires a balance of risk factors that influence HIV-free survival of the child. In addition to the above assessment of the wet-nurse, this will include consideration of the prevalence of HIV, the likely duration of wet-nursing, the HIV test history of the wet-nurse (e.g. during previous pregnancy), and other factors such as the risks of not breastfeeding and the feasibility and safety of artificial feeding in the specific circumstance.

An infant being wet-nursed by a woman of unknown HIV status is at low risk of HIV transmission, if the woman does not engage in high-risk behaviours and has no obvious symptoms. In most settings, the large majority of women are not HIV infected. The overall duration of breastfeeding by a wet-nurse is likely to be short, and even in the absence of ARVs, the risk is about 0.8% per month of breastfeeding.

In settings with high HIV prevalence, health services should aim to provide rapid HIV testing as early as possible in the emergency response. It may not be feasible or a priority to do this immediately after the emergency response when a woman starts to wet–nurse, but it may be possible to offer it within a few weeks.

If a wet-nurse is confirmed to be HIV infected and there are no other immediate options for safe infant feeding, then oral NVP (daily oral dose) should be provided to the infant for 4 weeks beyond the total period of breastfeeding and then the HIV status of the child should be tested.

For more information, see references *(6)* and *(15)*.

QUESTION 10

What if safe conditions do not exist for replacement feeding?

If safe conditions do not exist for replacement feeding, then mothers should be encouraged to breastfeed, with the provision of ARVs as soon as possible. Appropriate policy guidance should be issued.

If the official policy remains replacement feeding, then the government and other partners should work as quickly as possible to ensure that the conditions needed to safely formula feed are put in place, including:

- safe water and sanitation are assured at the household level and in the community;
- the mother or other caregiver can reliably provide sufficient infant formula milk to support normal growth and development of the infant;
- the mother or caregiver can prepare the infant formula milk cleanly and frequently enough so that it is safe and carries a low risk of diarrhoea and malnutrition;
- the mother or caregiver can, in the first 6 months of life, exclusively give infant formula milk;
- the family is supportive of this practice;
- the mother or caregiver can access health care that offers comprehensive child health services.

RUIF, or formula prepared centrally *(16)* and distributed to mothers, may be safer in situations where these conditions cannot be guaranteed.

QUESTION 11

What if a pregnant woman living with HIV wants to breastfeed once she delivers?

Maternal choice on infant feeding should be respected, as long as the mother understands the risks and benefits of her choice.

Mothers living with HIV should be supported to breastfeed, as any other breastfeeding woman would be. Consideration may be given to prioritizing them for ARVs if these are in short supply.

General questions

QUESTION 12

Is it ethical to differentiate between the HIV status of mothers and infants if it is not possible to offer the care and services that are needed?

Ethical considerations should be taken into account if any assessment of HIV status is planned, and identification of new HIV cases should be accompanied by appropriate services.

Even without ARVs, some support and services can be provided, such as individual counselling about HIV, infant feeding counselling, prophylactic co-trimoxazole, and condoms to limit onward transmission.

QUESTION 13

What additional nutritional and health support should be available for HIV-exposed infants in an emergency setting?

The nutritional and health status of HIV-exposed infants should be assessed, and any issues identified should be managed using standard protocols.

Close assessment and surveillance of nutritional (e.g. anthropometric assessment, testing for bilateral oedema) and health (HIV staging, opportunistic infections, fever, hydration, etc.) status should be conducted as the situation allows, and ideally not just for HIV-exposed infants. Any issues suspected or identified (e.g. prolonged diarrhoea, moderate or severe malnutrition, tuberculosis, pneumonia) should be managed using the usual treatment protocols. Where possible, co-trimoxazole should be provided to HIV-exposed uninfected infants who are still breastfeeding.

QUESTION 14

What if HIV testing is not available or is limited in availability?

If HIV testing is not available, all new mothers whose HIV status has not been established should be advised to breastfeed.

If a new mother is known to be living with HIV, she should also be advised to breastfeed, with ARVs if possible. If testing is limited in availability, then mothers identified as at high risk of being HIV infected should be prioritized for supplies, as should their infants.

QUESTION 15

How can adherence to antiretroviral therapy be supported?

Health and nutrition workers in contact with mothers living with HIV and/or their children should sensitively encourage and support the mother to adhere to ART.

Suboptimal adherence to treatment is a major challenge worldwide, even when there is no emergency. In pregnant women living with HIV, conditions such as nausea and vomiting may negatively affect adherence to ART. Other individual factors include suboptimal understanding of HIV, ART and PMTCT; lack of partner disclosure and support; and fear of stigma and discrimination. Barriers to service delivery include poor-quality clinical practices; gaps in provider knowledge and training; poor access to services; and health worker attitudes.

In non-emergency settings, some interventions can improve adherence for people on ART: peer support networks; peer counsellors; mobile phone text messages; reminder devices (interventions using calendars, alarms, system devices for disease-management assistance, and pagers); therapy aimed at changing behaviour; behavioural skills training and medication adherence training; and/or fixed-dose combinations and once-daily regimens (see section 6.5 in reference *(8)*). Whether it is feasible to implement these will depend on the specific conditions in the emergency setting.

Emergency programmes that provide health and nutrition services to mothers and/or infants, including malnutrition treatment programmes, should promote and support ART adherence as a contribution to child nutrition and health.

QUESTION 16

What should be done about populations where women face significant stigma about HIV and thus don't want to be tested?

Enabling access to support for breastfeeding and complementary feeding for all children means that mothers living with HIV are not distinguished in that regard.

Mothers need to be assured that confidentiality will be maintained even in an emergency. Any information on a woman's HIV status should be stored securely, and staff correctly trained to maintain confidentiality.

Integrated services have been seen to improve relationships between providers and patients, which may result in less fear of stigmatization. Demonstration of smooth transitioning of pregnant and postpartum women between maternal and child health services and HIV care may also help.

QUESTION 17

How to can health workers be encouraged to counsel and test pregnant and lactating women for HIV?

The acceptance by health workers of counselling and testing as part of their work may be facilitated by understanding the benefits (e.g. planning for ART and infant feeding choices, co-trimoxazole); integration of services; and task-sharing between cadres of health workers.

Health workers may not wish to counsel and test for HIV because of the demands of the emergency, and the stress of a heavy workload. They may be concerned about perceived potential negative consequences for women diagnosed as HIV positive. They also may not see the benefit of HIV testing if ARVs are not immediately available. Lay providers who are trained and supervised to use rapid diagnostic tests may be able to independently conduct safe and effective services for HIV testing, even in an emergency.

QUESTION 18

How should priorities be established as to who to initiate on antiretroviral therapy in case of limited stocks?

When ARV stocks are limited, decisions should be based on health status, e.g. the existence of life-threatening opportunistic infections; likelihood of onward transmission, e.g. pregnant and lactating women living with HIV; and then children, as the most vulnerable populations.

However, a key issue in an emergency should be to establish reliable ARV supplies, so that prioritization is not necessary.

QUESTION 19

What are the minimum standards of care to initiate antiretroviral therapy in pregnant and lactating women and their infants?

A minimum HIV response requires assured, continued ARV supply for women known to be HIV positive and on ARVs; access to safe and clean deliveries; infant feeding counselling; and perinatal prophylaxis for HIV-exposed infants.

Emergencies should not affect access to HIV services, and ARV delivery should also be included as part of comprehensive HIV services in emergency settings. Health workers should identify mothers living with HIV who are already on ART, in order to promote and support ART adherence and retention in treatment; to facilitate alternative distribution mechanisms for ARVs where usual systems are disrupted; and to advocate that these women remain a priority group for ARV distribution. In addition, health workers can provide links to existing care and support services, and access to contraceptives and malnutrition treatment services. HIV testing and counselling should be established as soon as possible.

Overall principles regarding ART in emergencies include:

- regardless of migration or displacement status, ART should be initiated;
- a history of displacement, or the possibility of travel, should not be a reason to deny or delay treatment, although there may be modifications to the treatment plan;
- at follow-up, as with all patients, the focus should be on supporting the patient's ability to adhere to treatment;
- among those patients whose treatment has been interrupted, the focus should be on preventing treatment interruptions in the future and re-initiating treatment as quickly as possible. The absence of laboratory facilities should not be a reason to delay restarting treatment.

The following issues related to initiating ART should be taken into account: the availability of counselling; facilities for testing/retesting (could be rapid diagnostic tests); the stability of the situation and continuity of health services; the likelihood of supplies being available; possibilities for ongoing disease monitoring; and the likelihood of adherence/support for adherence.

QUESTION 20

How can complementary feeding for HIV-positive and HIV-exposed infants be supported?

Mothers living with HIV should be supported in the same way as other mothers in the general population regarding complementary feeding for their HIV-positive and HIV-exposed infants.

All mothers and caregivers need support to be able to provide complementary feeding according to the guiding principles *(13)*. Complementary feeding interventions in an emergency will depend on the context, objectives and

time-frame of the response. Basic services to be provided include: counselling and support; provision of/assured access to adequate amounts of appropriate complementary foods (such as supply of nutrient-rich/fortified foods; cash/voucher schemes; home food fortification with micronutrients; livelihood and safety net programmes); provision of non-food items and cooking supplies; advice and support for hygienic food preparation; and monitoring of infants' nutritional status.

Non-breastfed children have heightened nutrient needs *(12)*. If a mother living with HIV is considering stopping breastfeeding, or the national policy is replacement feeding, a key question should be whether there is adequate available and affordable replacement feeding and complementary food in the setting.

HIV-positive children from 6 months of age who are growing well and asymptomatic, or with mild symptoms only, have increased energy needs of about 10%; those with chronic illnesses may require an extra 20–30% energy each day; children with severe malnutrition need 50–100% extra energy each day (based on actual weight rather than expected weight-for-age), for a limited period until weight is recovered *(17)*.

4. Data gaps and implementation research

There are several data gaps where further research is needed, regarding how to support mothers living with HIV and infant feeding. In addition to formal research, case-studies can help to capture experiences around HIV and IYCF in emergencies. Data gaps include those listed next.

4.1 All children, including issues around infant and young child feeding

- The safety of RUIF and powdered infant formula milk or milk for infants and young children by age (under and over 12 months) in different contexts
- The use of human milk banks in emergency settings

4.2 Mothers living with HIV and feeding of their infants and young children

- Morbidity and mortality following cessation of breastfeeding in HIV-exposed young children aged 12–23 months when ARVs are also interrupted; these outcomes need to be explored in different emergency contexts
- Psychosocial needs of mothers in emergencies, with the added dimension of HIV
- Managing risks of HIV transmission in the context of emergencies
- The efficacy of infant ARV prophylaxis to prevent HIV transmission through breastfeeding where there are interruptions to maternal ARVs
- Infant mortality risks in the acute emergency versus the subsequent period
- Relative risks associated with non-breastfeeding/commercial infant formula milk/other foods in HIV-exposed infants aged:
  - 0 to <6 months
  - ≥6 to <12 months
  - ≥12 months
- Interventions/response strategies to mitigate risk
- Long-term health and development outcomes associated with children exposed to emergencies

4.3 Operational gaps

- How to carry out HIV risk assessments
- How to evaluate changing risks in emergencies, in order to adapt policies
- How to effect policy change in emergencies

5. Roles and responsibilities

The various organizations and partners that support the national authorities in an emergency have different roles and responsibilities, which may vary depending on the setting. While respecting these roles, the most important issue is having the different sectors (emergencies/HIV/health/IYCF) work together, and ensuring that it is clear who will be setting standards related to HIV and infant feeding. Capacity to coordinate IYCF, including regarding HIV, should be identified within coordination mechanisms in every emergency response. Ideally, roles, responsibilities and provisions should be discussed in advance, as part of preparedness.

With regard to IYCF in emergencies, key relevant international policy guidance includes the Code *(8)* and the OG-IFE *(6)*. The Code expresses the collective will of governments regarding the marketing of BMS and sets out the responsibilities of the manufacturers and distributors of products covered by the Code, health workers, national governments and concerned organizations *(9)*. The OG-IFE applies to emergency preparedness, response and recovery worldwide, is relevant across sectors and disciplines and includes specific provisions regarding HIV and infant feeding in emergencies *(6)*.

5.1 Government

Government is the primary responder and responsible body in emergencies, including being the lead coordination authority on IYCF in emergencies. Various other partners may be involved, working with and supporting the government. In some circumstances, government authority may be limited, compromised or absent; other bodies may provide temporary or long-term support to a coordinated response (see **sections 5.2**, **5.3** and **5.4**).

The role of the government is to lead in preparedness planning, and in the emergency response. It should coordinate the efforts of other groups, and ensure that applicable norms are disseminated. Relevant government decision-makers, policy-makers and national and subnational government managers and planners should all be involved.

5.2 United Nations agencies

The United Nations has developed a cluster approach to strengthen system-wide preparedness and technical capacity to respond to emergencies, and provide clear leadership and accountability in the main areas of humanitarian response. At country level, it aims to strengthen partnerships and the predictability and accountability of international humanitarian action, by improving prioritization and clearly defining the roles and responsibilities of humanitarian organizations.

The United Nations Nutrition and Health Clusters work closely together on HIV and IYCF, but it is more likely that the Nutrition Cluster will take the lead with respect to infant feeding in an emergency.

Where government leadership on IYCF in emergencies is not possible, or support is needed, among United Nations agencies and in accordance with mandates, coordination for this aspect is the responsibility of UNICEF or UNHCR, whereby:

- UNICEF's coordination authority may be as cluster lead agency within the Inter-Agency Standing Committee cluster approach to humanitarian response, where a country cluster is activated, or as the United Nations agency with mandated responsibility for IYCF in humanitarian situations;
- in responses to internally displaced persons, UNICEF is responsible for coordination of IYCF;
- in refugee responses, UNHCR is responsible for coordination of IYCF;

- in all settings, UNICEF and UNHCR should maximize synergies between their respective technical and management capacities, availability of resources and response capacities.

The World Food Programme is responsible for mobilizing food assistance in emergencies. WHO is responsible for supporting Member States to prepare for, respond to and recover from emergencies with public health consequences.

UNICEF and WHO have key responsibilities in supporting national/subnational policy preparedness on HIV and IYCF in emergencies.

5.3 International and local nongovernmental organizations

International and local NGOs play a very important role in emergencies, providing rapid programmatic response and surge capacity, and support to existing services, which may involve technical and logistical staff, food and medical supplies and equipment. Often they can step in as leads/co-leads in technical areas, with a United Nations agency, for example, nominating an NGO as cluster co-lead, or chairing working groups formed to address key technical challenges. The precise role of any specific organization will vary with the type of emergency and its previous experience in the country/area.

In order to ensure a coordinated response, NGOs present in emergency-prone countries should be involved in preparedness and response planning. They should be aware of national and local health guidelines, including HIV and nutrition recommendations, as well as international guidance, and support authorities to ensure they are updated, reflect emergency contexts, and are upheld. In particular, they have a role to play in supporting adherence to the Code *(9)*, and in upholding and supporting implementation of the provisions of the OG-IFE *(6)*. New agencies that respond to an emergency should be targeted for orientation on key policy provisions with regard to HIV and infant feeding.

5.4 Donors

While donors' primary role is often seen as funding, they can also provide technical and logistical assistance, and support data collection and implementation research. One key area is often data analysis for planning and decision-making.

Donors can insist on standards in programming from those they fund, and should also be accountable for the programmes that they fund. They should accommodate requests for breastfeeding support, support for replacement feeding, and ARV provision in emergency response.

Annex 1: Meeting description

The World Health Organization (WHO) Department of Nutrition for Health and Development, in collaboration with the WHO Department of Maternal, Newborn, Child and Adolescent Health, the United Nations Children's Fund and the Emergency Nutrition Network, convened a consultation on Implementation considerations for HIV and infant feeding in the context of emergencies, in Geneva, on 14–16 September 2016. This meeting was a response to requests for clarification on how to implement the most recent WHO guidelines on HIV and infant feeding (2016) *(3)* in different settings and types of emergency situations.

The overall objective was to review operational experiences with HIV and infant feeding in the context of emergencies and to develop guidance to support the implementation of the *Guideline: updates on HIV and infant feeding (3)* in emergencies. The specific objectives of the meeting included the following:

- to identify challenges and programmatic issues for HIV and infant feeding in emergencies and risk-prone contexts;
- to agree on guiding principles addressing HIV and infant feeding in emergencies;
- to map out clear implementation strategies and pathways for putting guidance into practice, including stakeholder partnerships and engagement across sectors;
- to map clear entry points for integration into health programmes, e.g. HIV, prevention of mother-to-child transmission of HIV, and infant and young child feeding (IYCF), in emergencies.

A cross-section of senior-level participants attended from United Nations agencies, governments, nongovernmental organizations, academia, and other agencies working in nutrition and HIV in emergencies.

In preparation for the meeting, a background paper, *Infant feeding and HIV in emergencies: a snapshot of evidence, policy and practice*, was prepared and presented for discussion (see **Annex 2**). Other background documents described actions depending on infant feeding scenarios, and compiled principles for humanitarian action on HIV and IYCF from existing sources.

During the meeting, case-studies were presented to help in understanding experiences. Much of the time was spent in group work defining principles and key questions.

The outcome of the meeting has served to inform the development of this operational guidance. Evidence gaps and priority research questions were also identified.

It is intended to follow this meeting with further formal and informal consultations on the subject.

Annex 2: Country experiences

As part of the preparation of the background paper for the meeting in September 2016 (see **Annex 1**), *Infant feeding and HIV in emergencies: a snapshot of evidence, policy and practice*, a call was made for sharing country experiences. Brief cases-studies submitted included reports on operations during the ebola crisis in Sierra Leone in 2015, and Kenya's Dadaab refugee camp, including its Somali-specific population. The case-studies arise from the diverse contexts of disease outbreak, floods, civil and political unrest, and protracted response. In addition, key informant interviews were conducted to capture programming experiences from Malawi, South Sudan and Ukraine.

The case-studies and programming experiences provide a snapshot of operational challenges and innovations from a variety of contexts. In terms of policy guidance, all programmes used, referred to, or integrated essential principles identified by WHO guidelines on infant feeding and HIV, specifically from 2006 *(18)* or 2010 *(4)*.

Observations from the country experiences included those listed next.

- The need for preparedness in terms of policy, supplies (antiretroviral drugs [ARVs] and breast-milk substitutes), coordination mechanisms and staff/system capacity has hampered timely, efficient and appropriate support for infant and young child feeding (IYCF) in the context of HIV.
- In moving from national policy to programme implementation by national and international actors, clear guidance is needed on nutrition, health, HIV, and emergency programming and planning, to identify the most contextually appropriate recommendations. The role of interim/rapid guidance development to respond to unanticipated challenges needs examination. Emergency-focused policy development may allow for more rapid accommodation of the latest international recommendations; national guidance-development processes typically take more time. Policies require dissemination.
- Populations affected by emergencies may be marginalized in terms of access, affecting applicable policy and access to services and supplies.
- In outbreaks of infectious disease, the consequences of modifying IYCF practices in terms of HIV-free child survival may not be appreciated.
- Responses are heavily dependent on health-system capacity, but the systems in affected countries are often already weak or overburdened.
- Investments made to meet acute needs in a response may have longer-term benefits in strengthening policy and health systems, as well as capacity.
- Front-line health staff influence feeding practices. It is challenging to change established cultural practices and norms regarding HIV and infant feeding quickly in a crisis. Reorientation and retraining of staff in response to changing guidance will have significant resource implications.
- The management of replacement feeding in emergencies is immensely challenging, both in breastfeeding contexts and in populations where replacement feeding is recommended.
- Investment in context-specific behaviour-change communication that engages mothers and key influencers is critical to support breastfeeding but is often under-resourced.
- Appraising any changes in risk associated with infant feeding practices during an emergency is difficult, but necessary to gauge whether any policy change is required in an emergency regarding recommended feeding practices (e.g. switching from replacement feeding to breastfeeding plus ARVs).

- There are examples of integration of HIV, health and nutrition policies in the context of the management of severe acute malnutrition and in antenatal care services. However, a lack of integration at programme level impedes efforts to address gaps in implementation of policies on infant feeding and HIV.
- Data gaps and data limitations are common, e.g. information on the number of women and mothers living with HIV affected in an emergency, which presents challenges when deciding programme responses and monitoring progress.

Annex 3: Extracts from *Infant and young child feeding in emergencies. Operational guidance for emergency relief staff and programme managers*, version 3, 2017 *(6)*

Key points

1. Appropriate and timely support of infant and young child feeding in emergencies (IFE) saves lives; protects child nutrition, health and development; and benefits mothers.
2. Emergency preparedness is critical to a timely, efficient and appropriate IFE response.
3. Key provisions regarding IFE should be reflected in government, multi-sector and agency policies and should guide emergency responses.
4. Sensitization and training on IFE is necessary at multiple levels and across sectors.
5. Capacity to coordinate IFE should be established in the coordination mechanism for every emergency response. Government is the lead IFE coordination authority. Where this is not possible or support is needed, IFE coordination is the mandated responsibility of the United Nations Children's Fund (UNICEF) or the Office of the United Nations High Commissioner for Refugees (UNHCR), depending on the context, in close collaboration with government, other United Nations agencies and operational partners.
6. Timely, accurate and harmonized communication to the affected population, emergency responders and the media is essential.
7. Needs assessment and critical analysis should inform a context-specific IFE response.
8. Immediate action to protect recommended infant and young child feeding (IYCF) practices and minimize risks is necessary in the early stages of an emergency, with targeted support to higher-risk infants and children.
9. In every emergency, it is necessary to assess and act to protect and support the nutrition needs and care of both breastfed and non-breastfed infants and young children. It is important to consider prevalent practices, the infectious disease environment, cultural sensitivities and expressed needs and concerns of mothers and caregivers when determining interventions.
10. Multi-sector collaboration is essential in an emergency to facilitate and complement direct IYCF interventions.
11. In every emergency, it is important to ensure access to adequate amounts of appropriate, safe, complementary foods and associated support for children and to guarantee nutritional adequacy for pregnant and lactating women.
12. In emergencies, the use of breast-milk substitutes (BMS) requires a context-specific, coordinated package of care and skilled support to ensure the nutritional needs of non-breastfed children are met and to minimize risks to all children through inappropriate BMS use.
13. Donations of BMS, complementary foods and feeding equipment should not be sought or accepted in emergencies; supplies should be purchased based on assessed need. Do not send supplies of donor human milk to an emergency that is not based on identified need and part of a coordinated, managed intervention. BMS, other milk products, bottles and teats should not be included in a general or blanket distribution.
14. It is essential to monitor the impact of humanitarian actions and inaction on IYCF practices, child nutrition and health; to consult with the affected population in planning and implementation; and to document experiences to inform preparedness and future response.

Key provisions regarding HIV and infant feeding

5.33 Check **national/subnational policies on HIV** and infant feeding. Assess whether they are in line with the latest World Health Organization (WHO) recommendations; address emergency situations, including refugee and internally displaced person contexts where applicable; and if necessary, support updating as part of preparedness. Rapid issuance of updated interim guidance may be necessary in a response where policy is outdated or to address unforeseen issues. Key emergency considerations include change in risk exposure to non-HIV infectious disease and malnutrition; likely duration of the emergency; access of refugee populations to antiretroviral drugs (ARVs) and health services; whether the conditions for safe formula feeding are available; and the availability of ARVs.

5.34 In accordance with global guidance, support **breastfeeding mothers living with HIV** to breastfeed for at least 12 months (early initiation and exclusive breastfeeding for the first 6 months) and to continue breastfeeding for up to 24 months or longer while being fully supported for adherence to antiretroviral therapy (see **5.38**). Where ARVs are unlikely to be available (such as interrupted supply in an emergency), breastfeeding of HIV-exposed infants is recommended in the interests of child survival. Breastfeeding should only stop once a nutritionally adequate and safe diet without breast milk can be provided.

5.35 Support breastfeeding women who are known to be **HIV uninfected or whose HIV status is unknown** to exclusively breastfeed for the first 6 months of life and to continue breastfeeding for 24 months or beyond, in accordance with recommended IYCF practices.

5.36 Prospective **wet-nurses** should undergo HIV counselling and rapid testing where available. In the absence of testing, if feasible undertake HIV risk assessment. If HIV risk assessment/counselling is not possible, facilitate and support wet-nursing. Provide counselling on avoiding HIV infection during breastfeeding.

5.37 Urgently identify and provide support to infants established on **replacement feeding**.

5.38 Work with the health sector to identify HIV-positive mothers on ART to promote and **support ART adherence and retention in treatment**; to facilitate alternative distribution mechanisms for ARVs where usual systems are disrupted; and to advocate that pregnant and lactating women remain a priority group for ARV distribution. A minimum HIV response requires assured, continued ARV supply for pregnant and lactating women known to be HIV positive and on ARVs; access to safe and clean deliveries; infant feeding counselling; and perinatal prophylaxis for HIV-exposed infants. Provide links to existing care and support services; and access to contraceptives, malnutrition treatment services, and food or livelihood support where indicated. Treatment options should be expanded to include HIV rapid testing and counselling and initiation of ART as soon as possible. HIV test kits should be prioritized (low-cost, robust regarding storage and temperature stability, and easy to use).

5.39 Clearly **communicate** with emergency responders, health providers and HIV-exposed mothers regarding applicable HIV and infant feeding recommendations, such as in joint statements issued.

HIV risk assessment

A process (usually a set of questions) which provides insight into the likelihood that a prospective wet-nurse has been exposed to HIV. A standard HIV risk assessment or score does not exist for appraisal of a prospective wet-nurse. An assessment will consider HIV status of current or previous partners, practice of unprotected sex, history of sexually transmitted disease and if the woman appears to be in good health. However, even if these questions are asked, there is presently no agreed guidance on how to quantify the risk of HIV infection and what feeding practice to suggest. The decision on infant feeding practice requires a balance of risk factors that influence HIV-free survival of the child. This will include consideration of the prevalence of HIV, the likely duration of wet-nursing, whether the wet-nurse is in good health, HIV test history (e.g. during previous pregnancy) and other factors such as the risks of not breastfeeding and the feasibility and safety of artificial feeding in this circumstance.

Breast-milk substitutes for children aged 6 months and older

Alternative milks may be used as a BMS in children aged 6 months and older, such as pasteurized or boiled full-cream animal milk (cow, goat, buffalo, sheep, camel), ultra-high temperature milk, reconstituted evaporated (but not condensed) milk, fermented milk or yogurt. Use of **infant formula in children over 6 months of age** will depend on pre-emergency practices, resources available, sources of safe alternative milks, adequacy of complementary foods, and government and agency policies.

Annex 4: World Health Organization recommendations relevant to HIV and infant feeding in emergencies

World Health Organization (WHO) recommendations in three areas are especially relevant to HIV and infant feeding in emergencies: infant and young child feeding (IYCF); HIV and infant feeding; and antiretroviral drugs (ARVs). While extensive, none of the WHO recommendations are specific to HIV and infant feeding in emergencies. There is little recent guidance on how to provide HIV services, including ARVs, in emergencies. Other gaps include how to do risk assessments, how to evaluate changing risks in emergencies, and the need to adapt policies in certain emergency contexts.

Recommendations on infant and young child feeding

In relation to breastfeeding, WHO recommends:

- early initiation of breastfeeding within one hour of birth (place babies in skin-to-skin contact with their mothers immediately following birth for at least an hour and encourage mothers to recognize when their babies are ready to breastfeed, offering help if needed) *(14)*.
- infants should be exclusively breastfed for the first 6 months of life to achieve optimal growth, development and health *(19)*;
- introduction of nutritionally adequate and safe complementary (solid) foods at 6 months, together with continued breastfeeding up to 2 years of age or beyond *(13)*.

WHO has developed *Guiding principles for complementary feeding of the breastfed child (13)* and *Guiding principles for feeding non-breastfed children 6–24 months of age (12)*:

Guiding principles for complementary feeding of the breastfed child (13)

- Continue frequent, on-demand breastfeeding until 2 years of age or beyond.
- Practise responsive feeding (for example, feed infants directly and assist older children when they feed themselves; feed slowly and patiently and encourage children to eat, but do not force them; talk to children during feeding and maintain eye contact).
- Practise good hygiene and proper food handling.
- Start at 6 months of age with small amounts of food and increase the quantity gradually as the child gets older, while maintaining frequent breastfeeding.
- Gradually increase food consistency and variety as the infant gets older, adapting to the infant's requirements and abilities.
- Increase the number of times that the child is fed complementary foods as he or she gets older: two to three meals per day for infants aged 6–8 months and three to four meals per day for infants aged 9–23 months, with one or two additional nutritious snacks as required.
- Use fortified complementary foods or vitamin–mineral supplements for the infant, as needed.
- During illness, increase fluid intake, including more breastfeeding, and encourage the child to eat soft, varied appetizing, favourite foods.

Guiding principles for feeding non-breastfed children 6–24 months of age (12)

- Ensure that energy needs are met.
- Gradually increase food consistency and variety as the infant gets older, adapting to the infant's requirements and abilities.
- For the average healthy infant, meals should be provided four to five times per day, with additional nutritious snacks offered once or twice per day, as desired.
- Feed a variety of foods to ensure that nutrient needs are met.
- As needed, use fortified foods or vitamin–mineral supplements (preferably mixed with or fed with food) that contain iron.
- Non-breastfed infants and young children need at least 400–600 mL/day of extra fluids in a temperate climate, and 800–1200 mL/day in a hot climate.
- Practise good hygiene and proper food handling.
- Practise responsive feeding, applying the principles of psychosocial care.
- Increase fluid intake during illness and encourage the child to eat soft, varied, appetizing, favourite foods. After illness, give food more often than usual and encourage the child to eat more.

There is one recommendation from *Guidelines for an integrated approach to the nutritional care of HIV-infected children (17)*:

- Children living with HIV should be assessed, classified and managed according to a nutrition care plan to cover their nutrient needs associated with the presence of HIV and nutritional status and to ensure appropriate growth and development.

Recommendations on HIV

WHO updated its *Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection (8)* in 2016. The guidance for pregnant and breastfeeding women living with HIV reflects treatment both for their own health and for prevention of mother-to-child transmission of HIV. Relevant parts of the guidelines for HIV and IYCF in emergencies include those listed next.

- *Good practice statement:* in settings with a high risk of mother-to-child transmission of HIV (MTCT), in addition to providing enhanced infant prophylaxis, antiretroviral therapy should be initiated urgently in all pregnant and breastfeeding women, even if they are identified late in pregnancy or postpartum, because the most effective way to prevent MTCT is to reduce maternal viral load.
- *Recommendation:* ART should be initiated in all pregnant and breastfeeding women living with HIV, regardless of WHO clinical stage and at any CD4 cell count and continued lifelong.

The three most relevant recommendations in the *Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection (8)* on infant prophylaxis during breastfeeding are:

- Infants born to mothers with HIV who are at high risk[1] of acquiring HIV should receive dual prophylaxis with zidovudine (AZT) (twice daily) and nevirapine (NVP; once daily) for the first 6 weeks of life, whether they are breastfed or formula fed.
- Breastfed infants who are at high risk of acquiring HIV, including those first identified as exposed to HIV during the postpartum period, should continue infant prophylaxis for an additional 6 weeks (total of 12 weeks of infant prophylaxis) using either AZT (twice daily) and NVP (once daily) or NVP alone.

[1] High-risk infants are defined as those: born to women with established HIV infection who have received less than 4 weeks of ART at the time of delivery; OR born to women with established HIV infection with viral load >1000 copies/mL in the 4 weeks before delivery, if measurement of viral load is available; OR born to women with incident HIV infection during pregnancy or breastfeeding; OR identified for the first time during the postpartum period, with or without a negative HIV test prenatally.

- Infants of mothers who are receiving ART and are breastfeeding should receive 6 weeks of infant prophylaxis with daily NVP. If infants are receiving replacement feeding, they should be given 4–6 weeks of infant prophylaxis with daily NVP (or twice-daily AZT).

The *Consolidated guidelines on the use of antiretroviral drugs for treating and preventing HIV infection (8)* provide a good practice statement regarding testing of HIV-exposed children:

- Children with a parent living with HIV should be routinely offered HIV testing and, if found to be either infected or at high risk of infection through breastfeeding, should be linked to services for treatment or prevention.

HIV and infant feeding

While the 2016 *Guideline: updates on HIV and infant feeding (3)* reviewed only specific issues, the *Guidelines on HIV and infant feeding 2010 (4)* formulated several principles and produced a longer list of recommendations. Only the recommendations related to which breastfeeding practices should be used and for how long were updated in 2016 *(3)*. (The most relevant ones on HIV and infant feeding in emergencies are already included in **section 2.2** and so they are not expanded in the lists that follow here.)

Relevant points from the two guidelines are listed next. The reader should refer to the individual guidelines for further details of the specific recommendations.

2010 guidelines *(4)*: HIV and infant feeding principles

1. Balancing HIV prevention with protection from other causes of child mortality
2. Integrating HIV interventions into maternal and child health services
3. Setting national or subnational recommendations for infant feeding in the context of HIV
4. When ARVs are not (immediately) available
5. Informing mothers known to be HIV infected about infant feeding alternatives
6. Providing services to specifically support mothers to appropriately feed their infants
7. Avoiding harm to infant feeding practices in the general population
8. Advising mothers who are HIV uninfected or whose HIV status is unknown
9. Investing in improvements in infant feeding practices in the context of HIV

2010 guidelines *(4)*: HIV and infant feeding recommendations

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 breast milk
7. (Feeding) when the infant is HIV infected

2016 updates *(3)*: recommendations

1. *The duration of breastfeeding by mothers living with HIV*: mothers living with HIV should breastfeed for at least 12 months and may continue breastfeeding for up to 24 months or longer (similar to the general population) while being fully supported for ART adherence.
2. *Interventions to support infant feeding practices by mothers living with HIV*: national and local health authorities should actively coordinate and implement services in health facilities and activities in workplaces, communities and homes to protect, promote and support breastfeeding among women living with HIV.

2016 updates *(3)*: guiding practice statements

1. *What to advise when mothers living with HIV do not exclusively breastfeed:* mothers living with HIV and health-care workers can be reassured that ART reduces the risk of postnatal HIV transmission in the context of mixed feeding. Although exclusive breastfeeding is recommended, practising mixed feeding is not a reason to stop breastfeeding in the presence of ARV drugs.
2. *What to advise when mothers living with HIV do not plan to breastfeed for 12 months:* mothers living with HIV and health-care workers can be reassured that shorter durations of breastfeeding of less than 12 months are better than never initiating breastfeeding at all.

Resources

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