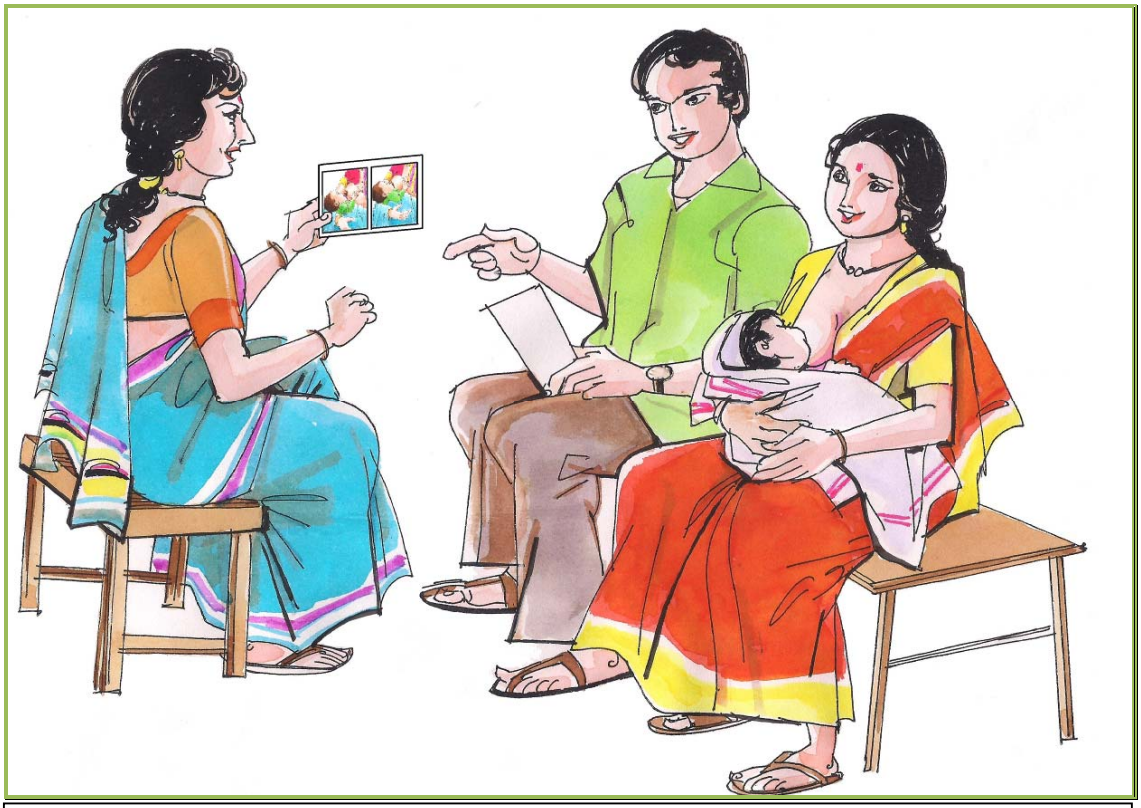
Question and Answer Guide on Infant and Young Child Feeding (IYCF) for Health Care Providers



A reference tool for health care workers of PMTCT and MCH program

Directions for Use

This *Question and Answer Guide* on the Infant and Young Child Feeding in the Context of HIV was developed at the request of people like you — health care providers working in the prevention of mother to child transmission of HIV and to improve maternal and child health and nutrition. It was specifically designed for health care providers who counsel pregnant and lactating women with specific reference to HIV-infected pregnant women and mothers of HIV-exposed infants and young children less than two years of age.

This guide summarizes the infant and young child feeding guidance (2011) in Indian context. Concrete ideas are also given to help explain the importance of safe and optimal infant and young child feeding and nutrition to attain the goal of HIV-free survival of children: exclusive breastfeeding until 6 months of age and, starting complementary feeding at six months with continued breastfeeding until 12 months. It is designed to help you, the health care provider, give information and the support to HIV-infected pregnant women and mothers to reduce HIV-transmission and malnutrition in their children, using simple and culturally acceptable language. Furthermore, the tool also provides health care providers and counselors with practical guidance in special scenarios.

This guide is meant as a quick reference. It provides accurate, easy-to-understand answers to some of the most commonly asked questions that HIV-infected mothers, their families, and communities are asking about the infant and young child feeding guidance. General recommendations for infant and young child feeding are also provided. The answers in this guide are based on the latest evidence and international recommendations.

Although this material is meant to be used with women in the health care setting —antenatal clinics (ANC), maternities and well-baby and under-5 clinics— it can also be used while counseling or discussing infant and young child feeding with other caregivers, fathers, elders, youth, local leaders, and others in the community. This tool is not a complete reference guide, and it is not meant as a substitute for PMTCT or infant and young child feeding training. Counselors who use this guide are expected to already have some formal training on these issues. A package of educational materials and teaching tools are also needed to support good interpersonal communication and counseling. We hope this tool will make your job as a health care worker and counselor easier and successful in reaching the goal of HIV-free survival in HIV-exposed children.

If you have any questions about how to use this guide or suggestions on how to improve it, please contact egpaf.saathii@gmail.com

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Preface

The country-led movement towards elimination of new HIV infections among children and keeping their mothers alive has led to adoption of WHO guidelines for "Prevention of Parent To Child Transmission" (PPTCT). It carries great significance as it is a paradigm shift from the usage of Sd Nevirapine to more efficacious triple drug regimens. The availability of triple drug regimens for HIV pregnant women makes the breastfeeding much safer and further paves way for improved health of mother and child.

The information presented here in this Q&A guide is a culmination of the global guidelines on Infant and Young Child feeding of UNICEF, WHO, BPNI and national guidelines 2011. With the revisions in the PPTCT guidelines, the country promotes exclusive breastfeeding for 6 months for HIV exposed children and continued breastfeeding for 12 months with the introduction of complementary feeding at 6 months of age.

This guide will support the country's guidelines for infant feeding and also act as a tool for health care workers for promoting optimal infant and young child feeding.

I. Infant and Young Child Feeding

1. What is the importance of optimal infant and young child feeding?

Optimal infant and young child feeding practices include early initiation, exclusive breastfeeding for the first six months of life, timely and appropriate complementary feeding and continued breastfeeding up to two years and beyond. These practices ensure young children the best possible way to start life. Breast-feeding is undoubtedly the nature's way of nurturing the child and creates bond between the mother and the child. It provides development and learning opportunities for the infant stimulating all five senses of the child – sight, smell, hearing, taste and touch. Breast-feeding fosters emotional security and affection with a life-long impact on psycho social development. Special fatty acids in breast milk lead to increased intelligence quotient (IQ) and better visual acuity.

> ***Optimal breastfeeding practices*** *include early initiation, exclusive breastfeeding for the first six months of life, timely and appropriate complementary feeding and continued breastfeeding up to two years and beyond.*

2. Why do we encourage exclusive breastfeeding for the first 6 months, no matter what the HIV status of a mother is? Why is it important?

- Exclusive breastfeeding (EBF) for the first 6 months helps a child grow and develop to his/her maximum potential. Breastfeeding should be initiated within the first hour after birth.
- Exclusive breastfeeding provides the best food for a baby by supplying all the nutrients and water a baby needs for the first 6 months of life. No additional foods or water are needed.
- Colostrum (the thick yellowish milk that mothers produce during the first few days after delivery) provides babies with very special protection against many infectious diseases.

- Colostrum also helps the baby to pass the first stool. There is no need to give water or anything else to initiate bowel movements. After the colostrum is finished, breast milk continues to give the baby the special vitamins, nutrients and antibodies that help to make a baby stronger and able to fight infections. Breast milk helps protect the baby from getting sick, and promotes recovery if the baby does fall sick.
- Breast milk is also very gentle and does not irritate a baby's sensitive digestive tract. Other foods like porridge, rice, tea, animal milks, even infant formula and plain water, can hurt a baby by exposing him or her to germs and disease. Some liquids and foods can also cause allergies.
- These germs or allergies can damage a baby's sensitive mouth and digestive tract. They can even cause diarrhoea, pneumonia and other life-threatening illnesses.
- Exclusive breastfeeding increases the likelihood of lactation amenorrhea (LAM) and optimal spacing between pregnancies. Mothers should receive counselling on family planning by six weeks postpartum and guidance on safer sexual practices.

- For women with HIV, exclusive breastfeeding also helps protect the infant against HIV. Mixing breast milk with any other foods or liquids is dangerous for infants less than 6 months of age.

3. **How frequently should a mother breastfeed her infant?**
   Newborn babies usually should be fed 10 to 12 times during day and night but the frequency will usually decrease as the infant grows older. However, demand feeding is advisable for successful establishment of breastfeeding. Demand feeding refers to feeding the baby as often as he wants both day and night.

4. **How can a mother tell that a baby is getting enough breast milk?**
   A baby is generally getting enough breast milk when he or she:
   - passes pale yellow urine frequently (6 times or more in a day)
   - passes at least one stool a day (usually)
   - starts gaining weight after a few days after birth
   - releases the breast spontaneously after a feed, and looks relaxed and sleepy
   - puts on weight as appropriate for his/her age, which can be checked at growth promotion and monitoring sessions

5. **How can a mother increase her breast milk supply?**
   Mothers often worry that they do not have enough breast milk or their breast milk is not nutritious enough. Breast milk production can be increased by feeding more frequently during the day and night and longer at each breastfeed. If there is any concern about breast milk supply, mother should be encouraged to:
   - Make sure that her baby is correctly positioned and attached to the breast. Breastfeed frequently, 12 times a day if the baby wants.
   - Breastfeed exclusively, day and night, for the first six months. Feeding other food, water or other liquids will reduce the baby's suckling on the breast and reduce milk production. Any other food that is introduced before the baby is six months is not as digestible or nutritious as breast milk.
   - Breastfeed longer at each feed to make sure that the baby feeds from each breast and each breast is emptied (becomes soft). If the baby is ill or sleepy, wake him or her and offer the breast often. If the baby does not want to suckle, express breast milk and feed the baby with a cup or spoon.
   - Offer the breast to comfort the baby.
   - Look for support from the family to perform household work and help care for other children.
   - Avoid using bottles, pouted cups and teats. They can confuse the baby and make it difficult to suckle from the breast. They are also difficult to clean and can cause the baby to become sick.
   - Increase the amount of food and water the mother is consuming and the variety of her diet.

Frequent breastfeeding, correct positioning and good attachment to the breast, feeding exclusively both day and night and avoidance of teats, pouted cups and bottles will help in increased production of milk

6. **How can a mother sustain breastfeeding when working away from home?**

A working mother with a formal employment has the right, according to the Indian law, to paid maternity leave of 180 working days (and the father to 15 days of paternity leave). After returning to work, some employers will allow a breastfeeding mother to take an extra break in order to breastfeed her baby or to express breast milk for her baby. When a mother goes back to work she should be supported to continue to breastfeed, and should be encouraged to:

- Express breast milk to be fed to the baby while she is away
- Express breast milk at work to keep the milk flow going
- If possible, carry the baby to the place of work or have someone bring the baby when she has a break
- Take extra time for the feeds immediately before leaving for work and immediately after she comes back from work
- Increase the number of feeds when she is able to physically be with the baby; e.g. increase night and weekend feedings
- Look for extra support at the workplace and at home to reduce her physical work load to the greatest extent possible

END OF SECTION I

II. Infant Feeding in the context of HIV

7. What are the different infant feeding options for an HIV infected mother?

The 2011 national guidelines on feeding for HIV exposed and infected infants < 6 months old recommends exclusive breast feeding for at least 6 months or exclusive replacement feeding may be considered ONLY in situations where breastfeeding cannot be done (maternal death, severe maternal illness) or individual mother's choice.

> ***Exclusive Breastfeeding*** *means giving the infant ONLY breast milk and no other foods or liquids. Exclusive breastfeeding is recommending until the baby is 6 months old.*

> ***Exclusive Replacement Feeding*** *is not breastfeeding, but instead feeding the baby with other suitable replacement milks, such as infant formula or animal milk (Indian context).*

8. What is the risk of HIV transmission to an infant born to HIV infected mother through breastfeeding with and without ARV prophylaxis?

Antiretroviral (ARV) treatment and prophylaxis has substantially reduced mother-to-child transmission (MTCT) of HIV. Without intervention, 5% to 20% of infants' breastfed by mothers who are HIV-infected may acquire HIV-infection through breast-feeding. Infant-feeding practices that carefully follow national guidelines can reduce the likelihood of MTCT through breastfeeding and reduce the risk of infant death from diarrhoea and other childhood infections.

> ***Without intervention,***
> *5-20% of infants breastfed by mothers who are HIV+ may acquire HIV through breastfeeding.*

9. What factors are linked to breast milk HIV transmission?

There are various factors that are linked to or associated with breast milk transmission of HIV. These include the severity of the illness of the mother (mothers with CD4 counts lower than 350); a rise in viral load caused when a mother becomes infected or re-infected with HIV during the breastfeeding period; mixed feeding (giving anything other than breast milk to the baby before 6 months of age); breast infections (especially mastitis or cracked and bleeding nipples) and the presence of sores in the baby's mouth (often caused by thrush). Non adherence to ART by mother (during postnatal period) or of baby ARV can increase the risk of MTCT.

10. What actions can be taken to reduce the chances of a mother transmitting HIV to her baby through breast milk?

- Take ARVs. If the mother is HIV-infected and opted for breast-feeding, the baby should receive ARV prophylaxis from birth to 6 weeks and the mother until one week after breastfeeding has completely stopped (option B).
- In the states where the revised guidelines are yet to be rolled-out, follow the existing protocol.
- Take precautions to avoid STIs and HIV during pregnancy and breastfeeding. It is important for all women to make sure that they do not become infected (or re-infected) with HIV during pregnancy or breastfeeding. A recent HIV infection can greatly increase

the risk of passing on the virus through pregnancy and delivery as well as through breast milk. STIs can increase the risk of becoming infected with HIV. All pregnant women and breastfeeding mothers, and their partners, should take precautions by abstaining or avoiding unprotected sexual intercourse, or by using a condom correctly and consistently during pregnancy and breastfeeding.

- Practice exclusive breastfeeding for first 6 months. Exclusive breastfeeding lowers the risk of HIV transmission.
- Avoid mixed feeding for the first 6 months. Mixed feeding injures the immature infant digestive tract and increases the chances of HIV transmission from the mother to the child through breast milk and exposes the infant to contamination. Mixed feeding increases the risk of diarrhoea, pneumonia, malnutrition and death.
- Avoid early weaning which introduces complementary feeding before 6 months
- Weaning should be introduced gradually and not abruptly
- Complementary feeding should be initiated after 6 months and breastfeeding should continue until 12 months.
- Treat sores in the child's mouth immediately. A mother should immediately seek medical treatment if she notices oral thrush or any sores in or around her baby's mouth.
- Practice good breast care. If a mother is breastfeeding, she should take special precautions and take good care of her breasts by ensuring that her baby is properly positioned and attached to the breast during feeding, beginning with the very first feeds. She should also breastfeed on demand (day and night) and avoid long periods between feeds. If a mother needs to be separated from her baby for a long period of time (for more than 3 hours) because of work or for any reason, she should express some breast milk to avoid engorgement and other problems that can occur, such as mastitis. Breast care should start during pregnancy only.
- Attend appropriate clinic for follow-up counselling and care. A mother should continue to receive care through postpartum visits at a health centre for counselling on infant feeding and assess the need to start on lifelong ART. Her child should be assessed regularly through Maternal Child Health Services and receive early testing (DNA PCR HIV testing available at 6 weeks of age), preventive treatment and access to care and treatment.

Taking ARVs ,avoiding STIs and HIV, practising exclusive breastfeeding, avoiding mixed feeding, treating sores in baby's mouth, practising good breast care and attending clinic regularly decreases reduces the chance of transmitting HIV to baby through breast milk

11. Why do we now advise HIV-infected women to breastfeed until up to a period of 12 months?

Breast milk is proven best for the babies and there is no other alternative for it, and role of breastfeeding in preventing infant mortality and morbidity is very large. The national guidelines emphasises that breastfeeding should be continued until 12 months of age irrespective of whether the mother is on ART or ARV prophylaxis even if the infants are

diagnosed HIV negative. The ultimate aim of the PMTCT program is to ensure the HIV-free survival of all exposed infants. The many benefits of breastfeeding are the foundation for child survival. Now that ARVs are available to all HIV-infected women during the breastfeeding period, the risks of HIV infection during breastfeeding are dramatically reduced and breastfeeding provides additional nutrients and protection from disease. Breastfeeding should stop only when a nutritionally adequate and safe diet without breast milk can be provided.

*For breastfeeding **infant's diagnosed HIV negative,** breastfeeding should be continued until 12 months of age irrespective of whether the mother is on ART or ARV prophylaxis.*

12. **What preparation is required if a woman chooses to stop breastfeeding before 12 months?**

Some women will choose to stop breastfeeding earlier than 12 months and should be supported to do this correctly and safely. The most important thing is that the baby will need to have enough variety of good quality foods to provide adequate growth and development without breast milk. WHO recommends that the non-breastfed child between 6-23 months of age should receive at least two servings of dairy products (e.g., milk, yogurt) per day to meet the criteria of a minimum acceptable diet. If a woman cannot afford or does not have access to dairy products, she should continue breastfeeding. Some amount of breast milk protects all children from risk of dying from infections such as diarrhoea and pneumonia. Women who choose to stop breastfeeding should be counselled to stop breastfeeding over a period of one month, and on the amount and types of food that the child will need.

***Breastfeeding should only stop** when a nutritionally adequate and safe diet without breast milk can be provided.*

***If a woman cannot afford** or does not have access to dairy products, she should continue breastfeeding*

13. **What kind of support will an HIV-infected mother needs when feeding decisions are reconsidered?**

Health services should follow up all HIV-exposed infants, and continue to offer infant feeding counselling and support, particularly at key points when feeding decisions may be reconsidered, such as the time of early infant diagnosis and at 6 months of age.

The Health care worker must emphasize upon exclusive feeding options either breastfeeding or replacement feeding until at least for 6 months from birth. However in situations where the mother wants to reconsider feeding options the following is the guidance to:

- Avoid or at least minimize the dangers of mixed feeding and successfully transition from exclusive breastfeeding to exclusive replacement feeding over a one month period of time. This can be done by getting the baby used to cup feeding of breast milk. Then, replacement feeding can be introduced. If the baby refuses replacement feeding, heat treatment of breast milk should be considered in this changeover (transition) period.
- Ensure that the baby has at least 2 cups (or 500 ml) of other forms of milk on a daily basis until the baby is about 2 years old. Without milk, it is very difficult to replace the important nutrients that breast milk provides for growth and development.
- Start giving nutritious complementary foods at six months, increasing the quantity, density and diversity of the foods as the baby grows

- Understand the importance of hygiene and safe preparation of the feeds.
- Be aware of the common danger signs and the importance of regular check-ups for the baby.

14. Can women on life-long ART choose to continue breastfeeding beyond 12 months?

Women on ART who cannot provide nutritionally adequate diet to their infants can continue to breastfeed beyond 12 months. While the ART will keep the levels of HIV in breast milk very low, there is still a very small risk of HIV transmission. The woman should be counselled to help her make her decision on balancing this risk with the benefits of continued breastfeeding beyond 12 months.

15. Should the mother continue to breastfeed if the infant tests HIV infected?

If an infant is tested and found to be HIV-infected, the mother should definitely continue breastfeeding for as long as possible to provide protection against many other illnesses and help the baby stay healthy and grow. It is very important that the child receives adequate diet as per the age and needs of the child. The mother should also have her own health checked according to the National Guidelines, and discuss whether she should stop taking ARVs or whether she needs to continue for her own health. The HIV-infected child should be referred to care and treatment so that treatment can be initiated immediately.

16. Since there is a chance that HIV can pass from an HIV infected mother to her baby through breast milk, why isn't replacement feeding considered better for the baby?

The ultimate aim of the PMTCT program is to ensure the HIV-free survival of all exposed infant. The many benefits of breastfeeding are the foundation for child survival. Now that ARVs are available to all HIV-infected women and their exposed infants, the risks of HIV transmission during breastfeeding are dramatically reduced. If an HIV infected woman chooses not to breastfeed her baby, health workers should assess, with the woman, her individual situation - at home and in the community - to ensure that all the conditions exist for her to safely replacement feed using infant formula or animal milk. These conditions should always be discussed thoroughly with mothers who have opted for replacement feeding.

17. What are key questions to help assess whether replacement feeding will be safe for an HIV-exposed infant?

Mothers known to be HIV-infected if insist on opting for exclusive replacement feeding which is contrary to the WHO/NACO's guidelines of giving exclusive breastfeeds for first 6 months, are doing so at their own risk. No MIXED FEEDING should be done during the first 6 months. When opting for Exclusive Replacement Feeding, they should fulfil the AFASS criteria given below:

1. Safe water and sanitation are assured at the household level and in the community, and can prepare clean feeds

2. The mother, or other caregiver can reliably afford to provide sufficient replacement feeding (milk), to support normal growth and development of the infant, and can sustain it un-interruptedly for first 6 months at least
3. The mother or caregiver can prepare it frequently enough in a clean manner so that it is safe and carries a low risk of diarrhoea and malnutrition.
4. The mother or caregiver can, in the first six months exclusively give replacement feeding, and is feasible
5. The family is supportive of this practice, and accepts it without forcing her to breastfeed during the first 6 months.

END OF SECTION II

III. Practical guidance to Counsellors in Special Scenarios:

18. What does it mean to express and heat treat breast milk, and when should a mother consider using heat treatment?

Expressing and heat treating breast milk (sometimes called flash-heating) is a simple method that can be used by HIV-infected mothers in their homes to make the breast milk free from the HIV that is found in breast milk while protecting it beneficial properties. Heat treating allows an HIV-infected mother to continue to give breast milk to her baby during high risk times or for special circumstances. Further, mothers known to be HIV-infected may consider expressing and heat-treating breast milk as *an interim feeding strategy* in special circumstances such as:

- When the infant is born with low birth weight or is otherwise ill in the neonatal period and unable to breastfeed; **or**
- When the mother is unwell and temporarily unable to breastfeed or has a temporary breast health problem such as mastitis; **or**
- To assist mothers to stop breastfeeding; **or**

Heat treated breast milk should be fed to a baby using a cup.

19. How does a mother express and heat treat her breast milk?

- Wash hands with clean water and soap.
- Always wash all utensils to be used for expressing and heat treating the breast milk with clean water and soap. It is best to boil these utensils after washing to make sure that they are clean.
- Express milk (using correct technique for manual expression) into a heat resistant glass (not plastic) jar. The amount of milk should be between 50 ml and 150 ml. This could be divided it into 2 jars if the volume is higher.
- Place the jar of milk in a small pan of water. Make sure the water is about two fingers above the level of milk so that all the milk will be heated well.
- Heat the water on a very hot fire or on the highest level of the stove until the water reaches a rolling boil (when the water has large bubbles). Stay close by because this should only take 3-5 minutes. Leaving the water to boil too long will damage some of the nutrients in the milk. The milk should **not** boil.
- Remove the jar of milk from the boiling water immediately after the water comes to a rolling boil. Place the jar in a container of cool water, or let it stand alone to cool until it reaches room temperature.
- Protect the milk as it cools and during storage by placing a clean lid or small plate on it. Heated milk can be fed to the baby safely anytime within 6 hours.
- Always feed the baby using a clean open cup. Even a newborn baby learns quickly how to drink from a cup. Avoid using bottles and nipples. They are difficult to clean and may make your baby sick.

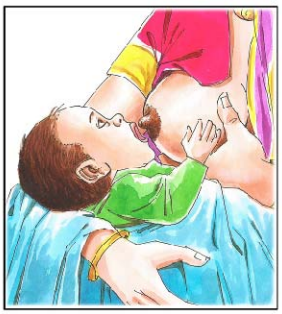
20. What should a breastfeeding mother do in case she has blocked ducts and/or mastitis?

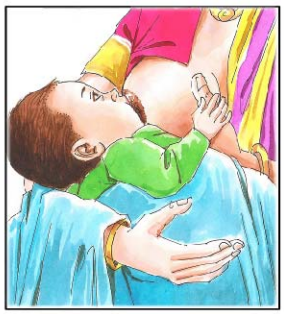
Mastitis and blocked ducts are recognized by a lump in the breast, which is tender and often red. It is not possible to tell from the symptoms alone if mastitis is infective or non-infective but if symptoms are severe the woman is more likely to need treatment with antibiotics. The

most important intervention is to improve drainage of the milk in the affected area of the breast. If the woman is HIV negative, this can be done by having the baby breastfeed, facing the painful area. HIV-infected women, however, should express and either heat-treat the breast milk or discard the milk from the affected breast.

21. How can you treat a sore nipple and/or nipple fissure?

The most common cause of sore nipples is poor attachment; the mother should make sure the infant has the nipple and (part of the) areola in his/her or her mouth when feeding (as shown in the picture). A woman with sore nipples should not wash her breasts more than once a day, and should not use soap or rub hard with a towel. She should not use lotions and ointments, but rub a little expressed breast milk over the nipple and areola with her finger after each feed. This promotes healing.





22. What are the special precautions that an HIV infected mother should take to keep her breasts and nipples healthy?

- Nipple care should start during antenatal period.
- All women who breastfeed, regardless of their HIV status, should appropriately position and attach their infants to the breast to prevent cracked or sore nipples, engorged breasts, mastitis and breast abscesses. An HIV infected woman who chooses to breastfeed needs to know that these breast conditions increase the chances of transmitting HIV to her baby. She should receive good counselling and support to help prevent problems. It is particularly important to practice good breast care, to position and attach the baby correctly and to seek help right away if any problems develop.
- All mothers should breastfeed frequently, both day and night, whenever the baby indicates that he or she is hungry. When a baby is less than 6 months old, he or she should breastfeed at least 10 to 12 times in 24 hours. This will help to ensure healthy breasts and nipples, as well as help maintain milk production. Older babies do not have to breastfeed as frequently, but should always breastfeed 6 to 8 or more times in 24 hours. During periods of separation from the baby, the mother should express her milk to prevent engorgement.

23. What should an HIV infected mother do if her breasts or nipples develop problems while breastfeeding?

- If an HIV infected mother develops any cracks or sores or has any discharge from either of her nipples, she should stop feeding through the affected breast and visit the health facility immediately for treatment. If her breast starts to become engorged, she should feed the baby as often as possible from that breast and see if the engorgement goes away. If the mother's breast develops mastitis or an abscess, she should also seek care and treatment immediately. She should hand express and discard the milk from the

affected breast and should not feed the baby from that breast until it has healed. She should continue to feed often from the other breast.

- If the nipples on BOTH breasts develop cracks, sores or discharge, the mother should seek care and treatment right away. If the baby is under 6 months old, the mother should be counselled to express and heat treat her breast milk, feeding it to her baby using a cup, until at least one of her breasts heal and she is able to resume breastfeeding. (*See question below on heat treatment of breast milk.*)
- It is important for all mothers to check their babies' mouth regularly for thrush (Candida) or sores and to seek medical treatment right away. Thrush in the baby's mouth is often associated with painful and irritated nipples. If a baby has thrush, the mother should also be examined and treated if necessary to avoid other problems
- Ensure exclusive breastfeeding until the baby is 6 months old.

24. How can you treat breast engorgement (or swelling)?

Engorgement can be prevented and treated by letting the baby feed as often as possible; starting to breastfeed immediately after birth; making sure that the baby is well positioned and attached to the breasts; and encouraging breastfeeding for as long as the baby wants. If the baby has difficulties in suckling, the mother can express little milk until the breast is soft enough for the baby to suckle. Warm compresses, massage, relaxation or a warm shower can reduce the pain of engorgement.

25. How do we counsel a breastfeeding mother who has flat and/or inverted nipples?

If this is detected (also during pregnancy) have the mother try to pull the nipple out, and rotate frequently (like a knob of a radio). The mother should gain confidence and by practicing good positioning of the baby she will eventually be able to breastfeed. If a baby cannot suckle effectively in the first weeks, the mother can feed expressed breast milk out of a clean open cup.

26. How can you identify Candida infection?

Candida infections often follow the use of antibiotics to treat infections, and the mother will complain of sore (sometimes the feeling of needles in her breasts) and itchy nipples. There is a shiny red area of skin on the nipple and areola. Candida can also be suspected if sore nipples persist and the baby's attachment is good. The baby should be checked for thrush, he or she may have white patches inside his/her cheeks or on his/her tongue, or may have rash on his/her bottom. Both mother and baby should be treated with appropriate medication.

27. How do we sustain breastfeeding even when a baby is sick?

Babies who are sick recover more quickly if they continue to take breast milk during the illness.

- **If a baby is in hospital:** Admit his mother too so that she can stay with him and breastfeed him
- **If a baby can suckle well:** Encourage his mother to breastfeed more often. Mother can increase the number of feeds up to 12 times a day or more for her child when he is sick. Sometimes a baby loses his appetite for other foods, but continues to want to

breastfeed. This is quite common in children with diarrhoea. Sometimes a baby likes to breastfeed more when he is ill than before, and this can increase the supply of breast-milk.

- **If a baby suckles, but less than before at each feed:** Suggest that his mother may give in more frequent feeds, even if they are shorter
- **If a baby is not able to suckle, or refuses, or is not sucking enough:** Help his mother to express her milk, and give it by cup. Let the baby continue to suckle when he is willing. Even babies on intravenous fluids may be able to suckle, or to have expressed breast-milk.

- **If a baby is unable to take expressed milk from a cup:** It may be necessary to give the EBM through a naso-gastric tube for a few feeds
- **If a baby cannot take oral feeds:** Encourage his mother to express her milk to keep up the supply for when her baby can take oral feeds again. She should express as often as her baby would feed, including at night. As soon as her baby recovers, she can start breastfeed again. If he refuses at first, help him to start again.

  One should consider all the above points to sustain the breastfeeding even when baby is sick.

28. How to feed a baby by cup?

Avoid using bottles, pouted cups and teats to feed the baby. They can confuse the baby and make it difficult to suckle from the breast. They are also difficult to clean and can cause the baby to become sick. Follow the below steps to feed the baby by a cup.

- Hold the baby sitting upright or semi upright on your lap
- Hold the small cup of milk to the baby's lips
- Tilt cup so that the milk just reaches the baby's lips
- The cup rests lightly on the baby's lower lip, and the edges of the cup touch the outer part of the baby's upper lip.
- The baby becomes alert and opens his/her mouth and eyes
- A LBW starts to take the milk into his/her mouth with his/her tongue
- A full term or older baby sucks the milk, spilling some of it.
- Do not pour the milk into the baby's mouth. Just hold the cup to his/her lips and let him take t himself
- When the baby has had enough, he closes his/her mouth and will not take anymore. If he has taken the calculated amount, he may take more next time, or you may need to feed him more often.
- Measure his/her intake over 24 hours and not just at each feed.

29. How do we support breastfeeding in the following situations?

a. Mothers with c-section delivery:

It is usually possible for a mother to breastfeed soon after a caesarean section as soon as she has regained consciousness. Exactly how soon depends partly on how ill the mother is and partly on the type of anaesthetic used. After epidural anaesthesia, babies can often breastfeed within half to one hour.

- A healthy, term baby usually needs no food or drink before his mother can feed her/him. S/he can wait a few hours until the mother is ready.
- A baby can 'room-in' with her/his mother and she can feed him whenever s/he is hungry.
- Most mothers need help to find a comfortable position for the first few days. There are several positions in which the mother can feed her baby. (as shown in the picture)

- Often a mother finds it easier to breastfeed lying down at first.
- She may lie on her back with the baby on top of her
- She may find it easier to lie on her side, with the baby lying beside her and facing her. This prevents the baby pressing on her womb. She may need to turn over, and to move her baby from one side to the other
- Later, she may like to sit and hold her baby across her abdomen above the operation wound or under her arm

Whatever position a mother uses, make sure the baby is in a good position facing her breast, so that s/he is well attached to the breast.

b. Breast-feeding in low birth weight (LBW) baby/pre-term baby/pre-mature baby/full term but small for gestational age by:

- LBW babies need breast milk even more than larger babies. The best milk for a LBW baby is his/her own mother's milk. Pre-term milk is specially adapted to the needs of a pre-term baby. It contains extra protein, and extra anti infective factors. For the first few days, a baby may not be able to take any oral feeds and s/he may require intravenous fluids. Oral feeds should begin as soon as the baby tolerates them.

- Babies who are less than 30-32 weeks gestational age usually need to be fed by naso-gastric tube. Give expressed breast milk by tube. The mother can let her baby suck on her finger while he is having the tube feeds. This probably stimulates the digestive tract and helps in gaining weight.
- If possible, let the mother hold him and give him skin to skin contact against her body for several times a day. This contact helps

bonding, and it helps a mother to produce breast milk and helps breastfeeding. (as shown in the picture)

- Babies between 32-34 weeks gestational age can take feeds from a small cup or from a spoon. The mother can start giving cup feeds once or twice a day while the baby still has most of his/her feeds by tube. The tube feeds can be reduced gradually if the baby takes cup feeds well. Another way to feed a baby at this stage is expressing milk directly into the baby's mouth.
- Babies of about 32 weeks gestational age or more are able to start sucking on the breast. The mother can put her baby to the breast as soon as s/he is well enough. Continue giving expressed breast milk by cup or tube, to make sure the baby gets all that he needs.
- When a LBW baby starts to suckle effectively, s/he may pause during feeds quite often and for quite long periods. It is important not to take her/him off the breast too quickly. Leave her/him on the breast so that s/he can suckle again when ready. Offer a cup feed after the breast feed or offer alternate breast and cup feeds.

c. Breastfeeding the baby who has Jaundice:

- Jaundice is not a reason to stop breastfeeding or to give supplements.
- Early jaundice occurs between the 2nd and 10th days of life. It is more common and worse among babies who do not get enough breast milk. Extra fluids such as water or glucose water do not help because they reduce breast milk intake.
- To help prevent jaundice from becoming severe, babies need more breast milk
- They should start to breastfeed early, soon after delivery
- They should have frequent, unrestricted breastfeeds
- Babies fed on expressed breast milk should have 20% extra EBM

d. Breastfeeding by the mother who has tuberculosis (Refer to annexure 4):

Current recommendations for tuberculosis (TB) infected mothers' are based on the following principles:

- The best way to prevent infection in the infants of TB infected mothers is timely and properly administered multi-drug therapy for the mother
- Mothers can breastfeed – exclusively for a period of 6 months and, provided the infant is growing satisfactorily they should continue breastfeeding with adequate and appropriate complementary feeding.
- Give isoniazid to the infant for six months

In parts of the world where both HIV infection and TB are common, the principles of TB control are the same.

e. **Breastfeeding by the mother who has Cholera:**

Vibrio (the organism causing cholera) is not transmitted through breast-milk. The vibrio is in the gastro-intestinal track and the route of transmission is by fecal-oral contamination. Exclusively breastfed infants rarely develop cholera, unless the vibrio is introduced through the infant's mouth, which is prevented by exclusive breastfeeding.

An antibiotic is given only to the infected mother, not to the uninfected healthy infant. Since cholera can cause dehydration, the amount of breast-milk from a dehydrated mother is reduced, and she needs corrective rehydration. Severe dehydration can be improved within an hour by intravenous fluids; she should also have Oral Rehydration Solution (ORS).

f. **Breastfeeding by the mother who has malaria**:
A nursing mother should continue to breastfeed her baby even if she has contracted malaria. Malaria cannot be transmitted through breast-milk. Moreover, co-trimoxazole prophylaxis is known to reduce malaria incidence in both HIV-infected adults and HIV exposed infants. WHO also recommends that all HIV-infected and mothers who are nursing take co-trimoxazole prophylaxis (also known as trimethoprim-sulfamethoxazole or TS, Bactrim, or Septra); for infants born to HIV-infected mother's co-trimoxazole prophylaxis should be given from six weeks of age. For children who are breastfeeding, prophylaxis should continue until breastfeeding has stopped and HIV negative status is confirmed.

30. Are there any special considerations for an HIV-infected pregnant woman related to antenatal care?

Yes, pregnancy lowers a woman's immunity, and HIV lowers it even further. A woman is more susceptible to diseases, including opportunistic infections such as tuberculosis and fungal infections, if her immune system is impaired. Therefore, during pregnancy, an HIV infected woman should be encouraged to:

- Attend regular antenatal visits to monitor her pregnancy, check her general health, and receive key interventions, tetanus toxoid, iron folate and other micronutrients, counselling and psycho-social support
- Continue to visit the health facility monthly for assessment, to receive medications, and for referral to other programs if needed
- Sleep under an insecticide-treated bed net and take an anti-malarial medication as a preventive measure, regardless of symptoms, during the second and third trimesters
- Practice good personal hygiene, safe food preparation and careful disposal of faeces to prevent infections that can cause diarrhoea and increase her nutritional needs
- Take nutritious diet in pregnancy
- Reduce the energy that she uses by avoiding strenuous labor and resting for at least 1 hour during the day, especially in the last 3 months of pregnancy
- Avoid cigarettes, alcohol and narcotic drugs
- Avoid medicines that are not prescribed by her health care provider
- Take a tuberculosis prophylaxis for 6 months if she is living in the same household with someone with active tuberculosis
- Deliver at a health facility and choose a family planning method before being discharged from the facility
- Use condoms consistently and correctly during pregnancy to prevent re-infection with HIV and other STIs

31. What are the special considerations for post partum follow-up of HIV infected mothers?

HIV infected mothers need special follow-up care. Mothers should be encouraged to:

- Attend scheduled appointments at the clinic
- Follow schedule for post partum care services (1–2weeks, 6 weeks and then ongoing support for infant feeding after), consisting of routine physical assessments, infant feeding support, and reproductive health care
- Check for breast problems and treat immediately
- Eat nutritionally balanced meals
- Join a community support group for HIV and/or breastfeeding
- Practice safe sex by using condoms consistently and correctly to avoid re-infection with HIV and other STIs

32. What is LAM of family planning? Can a woman who is HIV-infected use LAM?

Lactation Amenorrhea Method (LAM) is over 98% effective at preventing pregnancy if ALL of the following criteria are met:

- The woman is practicing exclusive breastfeeding
- The baby is less than 6 months old
- The woman's monthly bleeding has not returned

Women who are HIV-infected have the right to decide freely and voluntarily to choose LAM as their birth control method, based on complete and accurate information related to breastfeeding in the context of HIV. Important guidelines to consider before making this decision are noted below.

- If infants are uninfected or if their status is unknown, mothers are encouraged to exclusively breastfeed for 6 months, then complementary feed and continue breastfeeding for the first 12 months of life. Mothers are not advised to rapidly wean.
- If infants are known to be HIV-infected, mothers are encouraged to exclusively breastfeed for the first 6 months and continue breastfeeding as per the recommendations for the general population (up to 2 years).
- All HIV-infected women should be supported in their infant-feeding decision and contraceptive choice.
- In spite of LAM condom use is essential

END OF SECTION III

IV. Appropriate and Timely Complementary Feeding

33. What is meant by complementary feeding?

Complementary feeding means giving other foods and liquids to complement, not replace, the nutrients in breast milk or replacement milks.

34. When should a baby begin to receive complementary foods?

Babies should begin to receive complementary foods in addition to breast milk when they are 6 months old. For babies who are breastfed, breast-milk continues to provide essential nutrients to the baby and half or more of the child's nutritional needs from 6-to-12 months and at least one-third of their nutritional needs are met from 12-to-24 months. In addition to nutrition, breast-milk continues to protect the child from many illnesses. It also improves bonding that facilitates psychological development.

Babies who are receiving appropriate replacement milk do not need additional food until 6 months. Thereafter, they require at least 500 ml of replacement milk every day, in addition to complementary foods. Babies who are not breastfeeding need this replacement milk until they are about 2 years old, in order to ensure adequate growth and development.

35. How should babies be given complementary foods and what foods should they receive?

- Mothers and other caregivers should wash their hands and the babies' hands before preparing foods and feeding. All bowls, cups and utensils should be cleaned well. It is best to use a separate plate to feed the baby.
- As babies grow, they gradually need to increase the amount, density and diversity of the foods they eat to ensure that their nutritional needs are met.

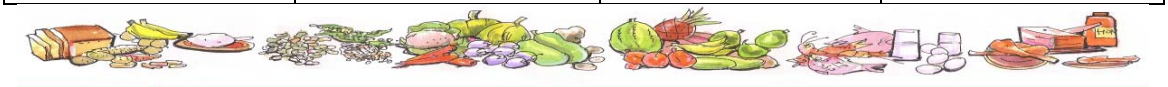
- When babies first begin to eat, they should receive about 3 tablespoons of food 2 times each day, slowly increasing the amount, thickness and types of food that are offered.
- Between 7 and 8 months of age, babies need to eat 3 meals per day if they are receiving some kind of milk. If no milk is available, babies need to eat 5 meals per day. The baby's food should be mashed, pureed or semi-solid, but be thick enough so that it does not run off the spoon.
- The mashed food should have food from a variety of food groups (see below).
- Between 9 and 11 months of age, babies need to eat 3 meals each day, plus one healthy snack in between meals.
- Between 12 and 24 months of age, babies continue to need 3 to 4 meals each day, plus 2 healthy snacks in between meals. At this age, children can eat the same types of food as adults.
- Babies should be offered a variety of foods from all of the food groups, including: animal-source foods (meat, chicken, fish, liver), and eggs and dairy products); staple

foods (maize, wheat, rice, millet and sorghum); roots and tubers (cassava, potatoes); legumes (beans, lentils, peas, groundnuts) and seeds (sesame); vitamin A-rich fruits and vegetables (mango, papaya, passion fruit, oranges, dark-green leaves, carrots, yellow sweet potato and pumpkin), and other fruit and vegetables (banana, pineapple, watermelon, tomatoes, avocado, eggplant and cabbage)

- Introduce animal-source foods early to babies and young children and give them as often as possible. Cook them well and chop them finely.
- Additional nutritious snacks (extra food between meals) such as pieces of ripe mango, papaya, banana, avocado, other fruits and vegetables, boiled potato, sweet potato and fresh and fried bread products can be offered once or twice per day. Avoid sugary cookies and fried "snack" foods.
- Babies should be actively encouraged to eat from his or her own plate. This promotes better hygiene and allows the mother or caregiver to know how much the baby has actually eaten.
- Feed babies slowly and patiently. Assist older children when they feed themselves, being sensitive to their hunger and satisfaction cues.
- Do not give drinks that have no nutritional value such as tea, coffee, soda and other sugary drinks.
- Always boil fresh animal milks and any water that is given to babies.
- During and after illness, babies need to be fed frequently, and often need extra encouragement to eat.

Table 1: AMOUNTS OF FOODS TO OFFER

Age	Texture	Frequency	Amount at each meal
from 6 months	Soft porridge, well mashed vegetable, meat, fruit	Two times per day plus frequent breastfeeds	2 to 3 tablespoonfuls
7 to 8 Months	Mashed foods	Three times per day plus frequent breastfeeds	increasing gradually to 2/3 of a 250 ml cup at each meal
9 to 11 months	Finely chopped or mashed foods, and foods that baby can pick up	Three meals plus one snack between meals plus breastfeeds	3/4 of a 250 ml cup/bowl
12 to 24 months	Family foods, chopped or mashed if necessary	Three meals plus two snacks between meals plus breastfeeds	A full 250 ml cup/bowl



Points to remember

- ✓ Starting other foods in addition to breast milk at six months helps a child to grow well.
- ✓ Breastfeeding for two years of age or longer helps a child to develop and grow strong and healthy.
- ✓ Foods that are thick enough to stay in the spoon give more energy to the child.
- ✓ Animal foods are especially good for children, to help them grow strong and lively.
- ✓ Peas, beans, lentils, and nuts and seeds, are good for children.
- ✓ Dark green leaves and orange coloured fruits and vegetables help the child to have healthy eyes and fewer infections.
- ✓ A growing child needs three meals and snacks: give a variety of foods
- ✓ A growing child needs increasing amounts of food
- ✓ A young child needs to learn to eat: encourage and give help…with lots of patience.
- ✓ Encourage the child to drink and to eat during illness and provide extra food after illness to help them recover quickly.

Note: Refer to Annexure-2 for more information on complementary feeding

END OF SECTION IV

V. HIV and Nutrition

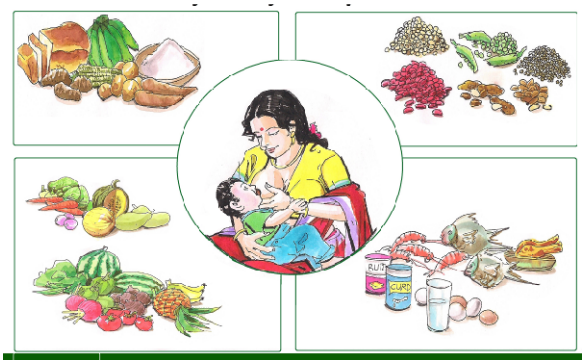
36. Why is good nutrition important for people living with HIV/ AIDS?

A nutritious diet is essential not only for growth but also to perform work and protect the body from infections and diseases.

- When HIV attacks a person, it weakens the body's defence system against infections. Other infective agents can then attack the weakened defence system more easily. To cope with HIV and other infections, the person needs increased amount of energy and other nutrients.
- Malnutrition occurs if these increased needs are not met. Malnutrition contributes to a weakened immune system, which worsens the effects of HIV. This leads to a rapid progression to AIDS.

37. What constitutes a nutritious diet?

A nutritious diet includes foods from different food groups in adequate quantities and combinations. It should include the following types of foods as per the availability and choices of people:



- Energy giving foods (carbohydrates and fats) such as whole cereals, starchy vegetables and fruits, sugar and jaggery.
- Fats and oils need to be consumed in moderation.
- Body building foods (proteins) such as milk and milk products, pulses, meat, fish and eggs
- Protective foods are rich in minerals and vitamins. They protect the body from infections and strengthen the immune system. Eat fresh green leafy vegetables and locally available seasonal fruits like guava, banana, mango and papaya etc.
- Water is essential for body function. Drink plenty of fluids (at least eight glasses a day). Always boil drinking water for 10 minutes and filter it with a clean cloth.

38. What are the special nutritional considerations for an HIV infected woman during pregnancy and while breastfeeding?

- Any pregnant or breastfeeding woman, whether HIV-infected or not, has increased nutritional demands.
- An HIV-infected woman should be encouraged to eat balanced meals and a variety of appetizing foods every day.
- She should either increase the amount of food in each meal or she should take frequent meals.
- While breastfeeding, two whole extra meals should be added each day. Pregnant and breastfeeding women need to eat plenty of fruits, vegetables, animal products and/or beans.

- They should also take iron and folic acid tablets according to health care provider's recommendations. Good nutritional status of the mother helps to improve the physical and mental development of her baby.
- Those with opportunistic infections should further increase their energy intakes. After a severe illness or infection, calorie consumption should be greatly increased to promote quicker recovery.
- Do not forget to take the iron folate tables daily. They may also need to take multivitamin supplements of vitamin B, C and E (not vitamin A), if the doctor advises.

39. What diet is recommended for an asymptomatic mother living with HIV?

Even when there are no symptoms, HIV+ persons need to increase their energy intake by 10% or 200 kcals to prevent loss of muscle and wasting. Their diet should be rich in protein, minerals, vitamins and antioxidants.

To achieve this:

- Eat one extra meal a day
- Increase the amount of whole cereals and millets like wheat, rice, bajra and jowar consumed daily
- Include at least some milk, pulses and egg in daily intake
- Consume vegetables and fruits in moderation
- Drink at least eight glasses of water and other fluids like green coconut water, sugarcane and water melon juice etc. Restrict the consumption of tea, coffee or carbonated sweetened drinks etc

Points to remember

- ✓ A nutritious diet includes foods from different food groups in adequate quantities and combinations
- ✓ Any pregnant or breastfeeding woman, whether HIV-infected or not, has increased nutritional demands
- ✓ An HIV-infected woman should be encouraged to eat balanced meals and a variety of appetizing foods every day

Refer to annexure – 3 for more information

END OF SECTION V

VI. Dietary Modifications

40. What are the suggested dietary modifications for mother suffering from Tuberculosis?

Opportunistic infections like tuberculosis (TB) and pneumonia increase the body's metabolic rate and therefore, require more food intake.

- Increase intake of energy giving foods like rice, wheat and vegetables
- Consume dals, chana, gur, chicken, milk or milk products like paneer in meals. Eat in small quantities throughout the day to increase overall intake of energy foods
- TB and its medications may reduce your appetite and therefore adequate food intake is important
- Rifampicin (red capsule) should be taken on an empty stomach, 1-2 hours before meals. This may cause your urine to become red in colour. Do not worry
- Alcohol must be avoided

41. What are the suggested dietary modifications for the children suffering from diarrhoea?

- Ensure adequate fluid intake in diarrhoea.
- Give oral rehydration solution (ORS).
- Give plenty of fluids like rice water, dal water, clear soups, strained fruit juices, coconut water, lemon water.
- Give small frequent feedings of these fluids. Avoid milk initially if it aggravates the diarrhoea.
- Start soft, bland foods such as soft vegetables and fruits like banana, potatoes and carrots, and porridge from refined cereals such as semolina (Sooji), rice and khichri once condition improves.
- Reduce fat intake. Avoid fried foods.
- Avoid very spicy and strongly flavoured foods.
- Do not stop eating when having diarrhoea.
- Ensure proper hygiene while preparing these foods.

42. What are the dietary modifications for the children during and when recovering from an illness?

It is often difficult to encourage children to eat during a febrile illness or when otherwise unwell e.g. difficulty breathing. During these acute illnesses, HIV-infected children are likely to lose weight. If this weight is not recovered in the weeks after the illness, then the child's growth curve is likely to drop to a lower level in the long term. Hence it is important to optimise intake during illnesses if possible (in hospital this may require inserting a naso-gastric tube) and targeting the recovery period to recover lost weight by ensuring the best care and nutritional intake. In the recovery period it is important to:

- increase energy and protein consumed in everyday foods;
- ensure that food is available day and night so that if the child is hungry then he/she has something appropriate to eat; and encourage the child in simple and loving ways.

Some of the ways to encourage a child to eat include the following:

- Make the child comfortable;
- Be patient and feed slowly;

- Feed small amounts frequently. Children may tire easily while eating, making it difficult to eat sufficient food at a sitting. Offering feeds frequently may be needed to increase food intake;
- Give foods that the child likes;
- Give a variety of foods and extra fluids;
- If the child is thirsty give fluids that have some energy e.g. milk, rather than commercial juices or fizzy drinks that have very little nutritional value;
- Pay attention to the child and make feeding a happy time;
- Sick children need extra drinks and food during illness, for example if they have fever or diarrhoea. A sick young child may prefer breastfeeding to eating other foods. Do not withhold food from a sick child unless there is a medical reason.

Note: Refer to annexure -1 for more information

END OF SECTION VI

ANNEXURE: 1

Guidelines for an Integrated Approach to the Nutritional care of HIV-infected children (6 months-14 years)

Suggestion sheets to improve food intake

Suggestion sheet 1. How to add extra energy and protein to everyday foods
(*Adapt according to local practices*)

- Add milk, cheese, butter or oil to mashed vegetables, potatoes, rice, soups and stews, and other foods
- To make fortified milk: add 4 spoons (15 ml spoons) of milk powder to 500 ml of cow's milk. Stir well and keep in a cool place. Use full fat milk powder if available instead of skimmed milk powder. Use this fortified milk in tea, on cereals, and in cooking
- Milk powder can also be added to soup to give more protein.
- Stir a beaten egg into hot porridge or mashed potatoes and cook for 1-2 minutes more to cook the egg. Do not feed the child raw or undercooked eggs. Always cook eggs.
- Put extra spread on sandwiches: nut spreads, jam, butter/margarine, and tinned fish.
- Nuts are a good source of energy, keep them near to feed the child as a snack and put chopped nuts or nut paste into foods.
- Add cream, evaporated milk, or yoghurt to soups, puddings, cereals and milky drinks.
- Use local foods that are rich in fat, such as avocado, fatty fish, coconut, oil and fried foods, if tolerated.
- Sprinkle crispy fried onions, fried fatty meat or similar on top of meals.
- Feed the child dried fruits such as raisins and dates – as an extra, not as a replacement for a meal.

Suggestion sheet 2. What to try if the child does not feel like eating **(Adapt according to local practices)**

- Give the child small, frequent meals – so he/she eats something every 2–3 hours.
- Give the child food whenever he/she is hungry or feels like eating. Do not wait until a meal time.
- Choose foods that the child enjoys most. Some children are very 'picky' eaters and are more likely to eat these foods.
- On days the child feels well or is eating well, try to give extra meals.
- Take the child for a walk in the fresh air before eating and eating in a well-ventilated room may help.
- Feed the child with family or other people so it is a social event. If the child is in bed, have the family eating at his/her bedside. Children sometimes eat better when others are present and sometimes they are better alone as other people may cause unhelpful distraction. Be prepared to try different ways. Always stay with the child while eating, both to watch for difficulties and to encourage eating.
- Make sure the child has enough liquid in the day. Try to use fluids such as milk and other energy-containing drinks.
- Encourage the child to eat slowly and relax for a while after eating. Avoid him/her lying down immediately after a meal.

- Make meals as attractive as possible – garnish, carefully served, set table nicely.
- Some foods may stimulate the appetite such as ginger tea, or lemon juice in clean boiled water.
- When the appetite has returned or the illness has passed, be sure to feed the child an extra meal (or increased amount per meal) to make up for the missed meals.
- Lack of appetite may be a sign of an infection such as tuberculosis or of depression; talk to your doctor about it.

Suggestion sheet 3. What to try if the child has a sore/dry mouth or throat?

(These are suggestions. Always check for oral and oesophageal thrush or mouth sores, e.g. herpes stomatitis or Kaposi lesions)

Sore mouth

- If oral thrush is visible or other mouth ulcers are present then specific treatment might be required e.g. oral fluconazole and/or nystatin. If these are not available then apply gentian violet (GV) to the mouth after washing your hands. Wash again after applying the GV. Do not give any fluids or feeds for 20 minutes after giving oral nystatin or applying gentian violet. Refer children with a sore mouth/mouth ulcer. If mother/caregiver says that child is not eating, child has lost weight in past week or is clinically dehydrated.
- Clean mouth frequently, at least twice a day morning and evening, preferably after every meal. Rinse with slightly salty warm water: use clean boiled water.
- Use cinnamon tea as a mouthwash (1/4 teaspoon of cinnamon to one cup of boiling water; cover and allow to cool).
- Add gravy, sauce or custard to meals to make them moist but not sticky or dip foods in liquid.
- Suggest that the child uses a straw to drink.
- Chop or mash food.
- Avoid rough foods such as toast or raw vegetables.
- Avoid sticky foods such as peanut butter.
- Avoid very hot or very cold foods.
- Avoid spicy, salty or acidic foods that irritate the mouth of the child.
- Suggest that the child drinks sour/fermented milk or yoghurt.
- If mouth ulcers are present, local anaesthetic e.g. lignocaine 1% can be applied with a cotton wool ball onto ulcer. Can be repeated every 3-4 hours or 10 minutes prior to meals.

Sore throat

- The suggestions above for a sore mouth may be helpful. Also, try the following:
- Honey with water has a soothing effect: one tea spoon of honey in half cup of lukewarm water.
- Feed the child soft foods that are easy to swallow.
- Offer the child nourishing liquids if solid food is too hard to eat.

Dry mouth

- Stimulate saliva production by offering the child a hard sweet, or chewing gum.
- Serve liquids with meals and make the child sip cold drinks frequently during the day.
- Rinse mouth with clean warm salty water.
- Avoid very hard foods and drinks high in caffeine such as coffee, strong tea and sodas.

Suggestion sheet 4. What to try if the child has a change in taste **(These are suggestions)**

- Clean the child's mouth frequently. Rinse with slightly salty warm water: use clean boiled water
- Use salt, sugar, spices, vinegar, lemon, and other flavours to mask any unpleasant taste in the child's mouth. Some medications may make mint, garlic and ginger taste less pleasant.
- Feed the child the foods he/she likes.
- Try a variety of foods as the child's taste may come back after a few weeks.
- Very cold foods may taste better.
- Fresh fruits and fruit juice are refreshing and may leave a pleasant taste in the child's mouth.

Suggestion sheet 5. What to try if the child has diarrhoea

All children with diarrhoea should receive oral zinc supplements for 2 weeks.
Children older than 6 months, should receive 20 mg daily for 2 weeks
(These are suggestions)

- Encourage the child to continue eating and drinking when there is diarrhoea. The child should eat foods he/she can tolerate.
- Encourage the child to drink lots of fluids: more than 8 cups a day especially clean boiled water, to prevent dehydration. If dehydrated, make up oral rehydration solution (see below).
- Feed the child small meals, five or more times in the day. He/she should eat slowly and chew well.
- Give particular attention to food hygiene. Use clean boiled water, keep food and utensils very clean, store food for as short a time as possible in a cold place. If you are reheating food, make sure it is very hot. Keep raw food separate from cooked foods.
- Make rice soup. Boil one cup of rice in 5–6 cups of clean water with a bit of salt for 1 hour. Feed the child both the rice and the rice water.
- Feed the child ripe yellow banana, cooked apple or mango; avoid unripe fruits.
- Peel and cook vegetables rather than feeding the child raw vegetables.
- Feed the child refined cereals rather than wholegrain cereals and flour while he/she has diarrhoea.
- Avoid beans, gas-forming foods, fizzy drinks and highly-spiced foods.
- Feed the child warm foods, rather than very hot or cold foods.
- Fat is a good source of energy, so do not cut out fat if it is not causing the child a problem. Reduce fatty foods temporarily if they make the child feel worse but introduce again later.
- For children: sometimes cow's milk or dried milks purchased from the shops can be a problem. If breastfeeding, continue, or increase breastfeeding. Fermented milks, when available, can be used for the older child.
- Be prepared to try different foods until you find something that suits you or your child.
- Some medications may cause diarrhoea. Talk to your doctor or nurse.
- Oral rehydration solution is not needed in ordinary diarrhoea of short duration where the child is not dehydrated.

Preparation of oral rehydration solution (ORS) to use if there is dehydration

Use clean water, boiled if possible.
From a packet: Follow directions on the packet.

With salt and sugar: To one litre of water, add one-half teaspoon of salt and eight teaspoons of sugar. Stir or shake well. The water should taste no more salty than tears.

With powdered cereals: To one litre of water, add one-half teaspoon of salt and eight teaspoons of powdered cereals. Rice is best, but fine ground wheat flour, maize, sorghum or cooked mashed potatoes can also be used. Boil for five to seven minutes to make a liquid soup or watery porridge. Cool the drink quickly.

In addition to ORS, also have the child eating and drinking foods and fluids that are tolerated.

Annexure-2

Risks of starting complementary foods too early

Adding complementary foods *too soon* (before six months) may:

- take the place of breast milk, making it difficult to meet the child's nutritional needs;
- result in a diet that is low in nutrients if thin, watery soups and porridges are used because these are easy for babies to eat;
- increase the risk of illness because less of the protective factors in breast milk are consumed;
- increase the risk of diarrhoea because the complementary foods may not be as clean or as easy to digest as breast milk;
- increase the risk of wheezing and other allergic conditions because the baby cannot yet digest and absorb other foods well;
- increase the mother's risk of another pregnancy if breastfeeding is less frequent

Risks of starting complementary foods too late

Starting complementary foods *too late* is also a risk because:

- The child does not receive the extra food required to meet his/her growing needs;
- The child grows and develops slower;
- Might not receive the nutrients to avoid malnutrition and deficiencies such as anaemia from lack of iron.

Annexure -3

Malnutrition in pregnant women affects birth outcomes

- Maternal malnutrition may lead to:
- Increased risk of fetal, neonatal, and infant death
- Intra-uterine growth restriction, low birth weight and prematurity
- Birth defects
- Cretinism
- Brain damage
- Increased risk of infection

Common HIV-related problems

This can be used in clinical practice to help counsel on the dietary management of common HIV-related problems.

DIETARY PROBLEM	**MESSAGES**
Anorexia or loss of appetite	Eat small frequent meals spaced throughout the day (5-6 meals/day). Schedule regular eating times. Eat protein from animal or plant sources with snacks and meals whenever possible. Drink plenty of liquids, preferably between meals. Take walks before meals to stimulate appetite. Choose and prepare food that look and smell good to you Use spices such as onions, garlic, cinnamon and ginger to stimulate appetite, improve flavour and digestion Eat with others as this makes food more enjoyable
Sores in the mouth or throat	Avoid citrus fruits, tomatoes, and spicy, salty, sweet, or sticky foods. Drink liquids with a straw to ease swallowing. Eat foods at room temperature or cold. Eat soft, pureed, or moist foods such as porridge, mashed bananas, potatoes, carrots, or other non-acidic vegetables and fruits. Avoid smoking, caffeine, and alcohol. Drink sour milk to prevent yeast from growing Rinse mouth daily to prevent thrush with 1 teaspoon baking soda mixed in a glass (250 ml) of warm boiled water. Do not swallow the mixture
Nausea and vomiting	Avoid having an empty stomach, which makes

	the nausea worse. Eat small, frequent meals. Try dry, salty, and bland foods, such as dry bread or toast, or other plain dry foods and boiled foods. Drink plenty of liquids between meals rather than with meals. Avoid foods with strong or unpleasant odors, greasy or fried foods, alcohol, and coffee. Do not lie down immediately after eating; wait 1-2 hours. Try eating sour or salty food or drinking lemon juice, herbal or ginger drink to reduce nausea. If vomiting, drink plenty of fluids to replace fluids and prevent dehydration. The management of nausea and vomiting in the first trimester of the pregnancy is the same
Diarrhoea	Drink plenty of fluids (8-10 cups a day) such as diluted fruit juices, soup, ORS, and water. Consume fermented drinks such as sour milk, yoghurt Eat small, frequent meals. Use low fibre foods such as refined flour, mashed potatoes, green bananas Eat bananas, mashed fruit, soft, boiled white rice, and porridge, which help slow transit time and stimulate the bowel. Avoid intake of high fat or fried foods and foods with insoluble fiber; Remove the skin from fruits and vegetables. Avoid coffee and alcohol because they inhibit absorption of some vitamins and minerals. Avoid strong spices such as curry and pepper because they irritate the gut Eat food at room temperature; very hot or very cold foods stimulate the bowels and diarrhea worsens. **If diarrhea is severe:** Give oral rehydration solution to prevent dehydration. Withhold food for 24 hours or restrict food to clear fluids (e.g., soups, soft foods, white rice, porridge, and mashed fruit and potatoes)
Constipation	Drink plenty of fluids, especially water. Increase intake of fiber by eating vegetables and

	fruits. Do not use laxatives. Eat high fibre foods such as fresh fruits, vegetables and unrefined cereals and legumes. Increase physical activities to improve digestion
Bloating	Avoid foods associated with cramping and bloating (cabbage, beans, onions, green peppers, brinjal). Eat slowly and try not to talk while chewing
Altered taste	Use a variety of flavour enhancers such as salt, spices, and herbs to increase taste and mask unpleasant taste sensations. Try different textures of food. Chew food well and move around mouth to stimulate taste receptors
Fever	Drink plenty of fluids throughout the day. Eat smaller, more frequent meals at regularly scheduled intervals. Take energy rich foods such as germinated cereal porridge or enriched soup
Fat malabsorption	Eliminate oils, butter, ghee, margarine, and foods that contain or are prepared with these. Trim all visible fat from meat and remove the skin from chicken. Avoid deep fried, greasy, or high fat foods. Eat smaller, more frequent meals spaced out evenly throughout the day. Take a daily multivitamin, if available.
Muscle wasting	Increase quantity of food and frequency of consumption. Eat a variety of foods. Eat protein from animal and vegetal origin. Increase intake of cereals and staples. Eat small, but frequent meals
High triglycerides	Limit sweets and excessive carbohydrate and saturated fat intake. Eat fruits, vegetables, and whole grains daily. Avoid alcohol and smoking. Exercise regularly according to capacity

Adapted from: Lwanga 2001 and from National Guide on Nutrition Care and Support for PLHAs, Tanzania 2003

Annexure 4: