



M O D U L E 5

Infant Feeding in the Context of HIV Infection



Module 5: Objectives

- Describe the epidemiology of MTCT through breast milk
- Discuss Nigerian policy on infant and young child feeding
- List the advantages and disadvantages of various infant and young child feeding options
- Discuss strategies for making infant formula safe
- Describe infant and young child feeding counselling for HIV–positive mothers



Introduction to Infant Feeding

- Breast milk is the best nutrition source for infants
- Nigeria: 97% breastfeed, but only 17% exclusively for first 6 months
- Breastfeeding accounts for 1/3 of MTCT, but lack of breastfeeding corresponds to other morbidity/mortality
- ARV prophylaxis and adherence to national infant feeding recommendations and guidelines can reduce MTCT



Definitions

Exclusive Breastfeeding

- Giving an infant only breast milk, with the exception of drops or syrups consisting of vitamins, mineral supplements, or drugs
- No food or drink other than breast milk—not even water

Mixed feeding

- Other things in addition to breastfeeding

Replacement feeding

- Feeding an infant a diet other than breast milk, providing required nutrients in quantity and quality



Infant Feeding in the Context of HIV Infection

Section 1

Overview of Mother-to-Child Transmission of HIV through Breastfeeding

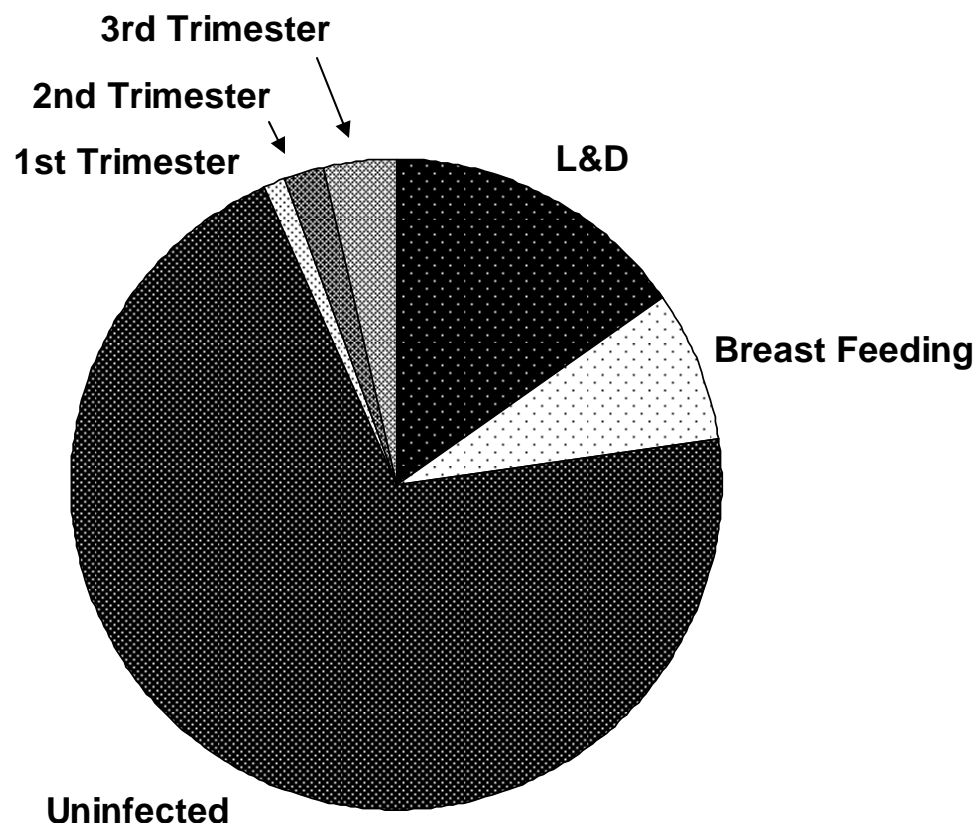


Overview of Mother to Child Transmission of HIV

- 800,000 children infected with HIV globally in 2003
 - 90% from mother-to-child transmission
 - 90% in Sub-Saharan Africa
- ARV treatment and prophylaxis have substantially reduced MTCT
 - This does not provide long-term protection to infant who is breastfeeding
- Without intervention, 5%-20% of infants breastfed by HIV+ mothers may acquire HIV through breastfeeding



Risk of mother-to-child transmission of HIV during pregnancy, delivery and breastfeeding





Factors that increase MTCT through breastfeeding

- High maternal viral load
- Duration of breastfeeding
- Mixed feeding
- Maternal mastitis
- Oral infections in infant



Malnutrition, Infant Feeding and Child Survival

- Malnutrition is an underlying cause of 50% of deaths in children under 5 years in Africa.
- Poor feeding practices contribute to insufficient nutritional balance, diarrhoea, low weight, morbidity and mortality.
- Counselling and support of infant and young child feeding
 - Addresses challenges of poor feeding practices listed above
 - Helps prevent HIV transmission to infants



Infant Feeding: Mothers who are not HIV-Infected

National infant and young child feeding policy:

- Exclusive breastfeeding for 6 months
- Combination of breastfeeding and complementary foods from 6-9 months
- Continue breastfeeding for up to 2 years or beyond while additionally giving household foods

Policy recommends modification of infant feeding guidelines on medical grounds, including maternal HIV infection. Every effort must be made to encourage EBF in HIV negative women as well as women with unknown HIV, since this has obvious advantages over formula feeds in these infants



Replacement Feeding Options

Recommendation

- **Replacement feeding when AFASS:**
 - **Acceptable**
 - **Feasible**
 - **Affordable**
 - **Sustainable**
 - **Safe**

- **Otherwise, exclusive breastfeeding**
for the first 6 months of life



International Code of Marketing Breast Milk Substitutes

This code helps provide safe and adequate nutrition for children by:

- Protecting and promoting breastfeeding
- Supporting proper and informed use of breast milk substitutes when necessary
- Promoting acceptable marketing and distributing practices



Prevention of Spill-Over Effect

- It is important that the use of breast milk substitutes by HIV-positive mothers who choose this option does not spill over to HIV-negative mothers
- Health workers should continue to emphasise the benefits of breastfeeding to those who are HIV-negative



Exercise 5.1

Strategies for optimal feeding: Large group discussion

- Review global strategies recommending optimal feeding for infants and young children
- Identify local practices and application of the national HIV infant and young feeding policy



Infant Feeding in the Context of HIV Infection

Section 2

Feeding Options during the First 6 Months



Making Decisions about Infant Feeding

Healthcare workers should provide infant-feeding counselling that includes the following:

- Information about the risk of HIV transmission through breastfeeding
- Advantages and disadvantages of each option
- Make the partner central to the decision-making process
- Referral to trained infant feeding counsellors



Replacement feeding

- Provides infants who are receiving no breast milk with a diet that provides nutrients until the child can receive family foods
- During the first 6 months of life, replacement feeding should be with a suitable breast milk substitute
- Two types of breast milk substitutes
 - Commercial infant formula
 - Home-modified animal milk with micronutrient supplements



Commercial Infant Formula

Advantages

- No risk of transmitting HIV
- Made especially for infants
- Includes most nutrients an infant needs
- Others can feed infant

Disadvantages

- Infant is more likely to get sick
- Need reliable formula supply
- Formula is expensive
- Requires clean water
- Must be made fresh each time
- Not breastfeeding may raise questions about mother's HIV status



Home-Modified Animal Milk

Advantages

- No risk of transmitting HIV
- Can be less costly than commercial formula
- Can be used when commercial infant formula is not available
- Others can feed infant

Disadvantages

- Infant more likely to get sick
- Must be made fresh each time
- Difficult to digest
- Micronutrient supplements are needed
- Must add boiled water and sugar
- Does not contain antibodies
- Not breastfeeding may raise questions about mother's HIV status



Exclusive Breastfeeding

Advantages

- Easily digestible
- Nutritious and complete
- Always available
- No special preparation needed
- Protects from diarrhoea, pneumonia, and other infections/diseases
- Promotes bonding

Disadvantages

- Risk of passing HIV to baby
- Requires feeding on demand
- Mother requires additional calories to support breastfeeding



Exclusive Breastfeeding with Early Cessation

Advantages

- Early cessation limits infant's exposure to HIV
- Easily digestible
- Nutritious and complete
- Always available
- No special preparation needed
- Protects from diarrhoea, pneumonia, and other infections/diseases
- Promotes bonding

Disadvantages

- Breast milk substitute is must be AFASS
- Mother's breasts may become engorged
- Mother at risk of becoming pregnant if sexually active
- Stigma



Wet Nursing

Wet nursing is not encouraged in Nigeria

- High HIV prevalence and many people of unknown HIV status
- May be difficult to establish HIV status of wet nurse
- Difficult to establish infant's HIV status
- Transmission of HIV from infant to wet nurse has been reported



Expressed Heat-Treated Breast milk

This process kills HIV and still retains essential nutrients, but is labor-intensive.

Steps for breast milk preparation:

- Wash all containers with soap and water
- Heat enough expressed milk for one feed
- Heat to boiling and cool
- Use within one hour



Exercise 5.2

National and local infant feeding policies: Large group discussion

- Critically review the national policy on infant and young child feeding in the light of HIV in Nigeria
- Convey an understanding of the advantages and disadvantages of feeding options and how to make each option safer and healthier for the infant and mother



Infant and Young Child Feeding in the Context of HIV Infection

Section 3

Making Infant Formula Safe



Making Infant Formula Safe

- Infant formula and home-modified animal milk require a lot of handling at different stages, giving room for disease-causing germs to contaminate the food
- This is a major challenge in the management of this method of feeding



Making Infant Formula Safe

Contamination of infant formula maybe decreased by careful attention to the following principles:

- Manufacturers' details
- Clean hands and utensils
- Safe water and food
- Safe storage
- Cup feeding



Preparation Guide

Commercial infant formula

- Wash hands, utensils and cups in clean water
- Boil water and let cool
- Measure the correct amount of milk powder and mix with boiled water
- Prepare formula before each feed if no refrigeration
- Feed by cup

Home-modified animal milk

- Wash hands, utensils and cups in clean water
- Boil water and let cool
- Measure amounts of water, milk, and sugar required
- Prepare formula before each feed if no refrigeration
- Feed by cup
- Give multivitamins with formula or separately



Infant and Young Child Feeding in the Context of HIV Infection

Section 4

Infant Feeding Counselling and Support



Infant and Young Child Feeding Counselling and Support

Infant-feeding counselling, education and support is:

- Provided before birth and during first 2 years of life
- Based on Nigeria National PMTCT guidelines
- Based on a woman's circumstances



Infant and Young Child Feeding Counselling and Support

- Offer information on risk of HIV transmission through breastfeeding
- Include information on infant-feeding options and advantages and disadvantages of each
- Consider family and local customs, practices and beliefs
- Discuss morbidity associated with replacement feeding
- Prepare non-breastfeeding women for questions



Infant and Young Child Feeding Counselling and Support

- Informs families on various feeding options and advantages and disadvantages of each
- Provides women with safer feeding skills
 - Gives demonstrations and opportunities for practice
- Involves partners as integral part of infant-feeding decisions



Infant and Young Child Feeding Counselling and Support

The final decision about her infant-feeding strategy should be the couple's and must be supported



Infant and Young Child Feeding Counselling and Support

Counselling Visits

- At least once during the antenatal period
- Immediately after birth
- Within 7 days of birth to monitor postpartum and infant-feeding progress
- Monthly follow-up sessions
 - More frequent if extended family is a threat to replacement feeding
- Additional sessions may be required during high-risk time periods
- Discuss testing infant for HIV at these sessions



Infant and Young Child Feeding Counselling and Support

Infant-Feeding Counselling Steps:

STEP 1: Explain risks of MTCT

STEP 2: Explain advantages and disadvantages of different feeding options, starting with mother's initial preference

STEP 3: Explore mother's home and family situation and determine if BMS is AFASS



Infant and Young Child Feeding Counselling and Support

STEP 4: Help mother choose appropriate option.

STEP 5: Demonstrate how to practise chosen feeding option.

- Replacement feeding
- Exclusive breastfeeding
- Other breast milk options

STEP 6: Provide follow-up counselling and support.



Breast management for mothers who choose replacement feeding

- Due to lack of breast emptying, breasts may become engorged and painful.
- Suggestions for management include
 - Firm brazier
 - Express and discard small quantities of milk
 - Analgesics
- Not recommended
 - Fluid restriction
 - Hormonal agents
 - Diuretics



Exercise 5.3

Infant Feeding Counselling and Support

- Provide information on issues that may arise when counselling for infant feeding



Module 5: Key Points

- Maternal viral load and duration of breastfeeding are major determinants of MTCT through breastfeeding
- Risk of HIV transmission continues the entire time an HIV-positive mother breastfeeds her child
- Respect the International Code of Marketing of Breast Milk Substitutes



Module 5: Key Points

- PMTCT staff can prevent spill-over or misuse of replacement feeding in two ways:
 - Promote exclusive breastfeeding for the general population
 - Discourage use of replacement milk supplies by mothers whose infants do not need them
- A mother has the right to choose how she wants to feed her infant; the healthcare worker's job is to support her choice



Module 5: Key Points

- Mothers who are HIV-positive should avoid breastfeeding when replacement feeding is **acceptable, feasible, affordable, sustainable, and safe** – or AFASS
- Exclusive breastfeeding and early breastfeeding cessation are appropriate when breastfeeding is the chosen option
- Economic considerations for infant-feeding options go beyond monetary terms



Module 5: Key Points

- Infant formula can be made safer by careful attention to the following issues:
 - Manufacturers' details
 - Clean hands and utensils
 - Safe water and food
 - Safe storage
 - Cup feeding



Module 5: Key Points

- All women who are HIV-positive need infant-feeding counselling and support
- Counselling, education, and support are key to establishing and maintaining safer infant-feeding practices
- Postnatal counselling and infant follow-up are required throughout the first 2 years of the infant's life