

Theme 4: Infant and Young Child Feeding

Objectives:

By the end of the session we shall be able to:

1. Describe infant and young child feeding patterns in Ethiopia, and their implications for child health;
2. Recite optimal breastfeeding behaviors;
3. Recite optimal complementary behaviors;
4. Describe the benefits of breastfeeding for the infant, mother, family and community;
5. Understand how to address IYCF during times of emergencies ;
6. Describe key elements of the Code of Marketing of Breast Milk Substitutes;
7. Describe key elements of the Baby Friendly Hospital Initiative;
8. Identify common breastfeeding problems and their solutions; and
9. Describe the issues related to Infant Feeding and HIV and AIDS, including different infant feeding options.

BENEFITS OF BREAST FEEDING FOR THE CHILD

Breast milk:

- Saves infant lives
- Is a 'whole' food for the infant, contains balanced proportions and sufficient quantities of all the required nutrients for the first 6 months of life
- Contains antibodies (especially in colostrums) that protect against diseases, especially against diarrhoea and respiratory diseases
- Promotes normal growth and development, as only few diseases occur, thus preventing stunting
- Is always clean
- Is always ready and at the right temperature
- Is easy to digest and nutrients are well absorbed
- Protects against allergies because it contains no substance that could provoke allergic reactions
- Contains enough fluids for the baby's needs during first six months of life (breast milk is 87% water)
- Helps teeth to develop and suckling helps to develop facial muscles
- The mother-child physical relationship is good for the infant's development: frequent skin-to-skin contacts between mother and child lead to better psychomotor and social development of the baby

BENEFITS OF BREASTFEEDING FOR THE MOTHER

- Breastfeeding provides a 98%-efficient contraceptive method during the first 6 months after birth IF breastfeeding is exclusive and menses have not returned
- Immediately putting the baby to the breast helps to expel the placenta because the baby's sucking stimulates uterine contractions, and thus reduces risks of post-partum hemorrhage
- Initiating breastfeeding soon after birth (within 1 hour) helps to promote breast milk production and lactation
- Immediate and frequent suckling helps to prevent engorgement
- Breastfeeding helps to reduce the mother's workload since breast milk is available at anytime and anywhere, is always clean, healthy and available at the right temperature
- Breastfeeding is economical
- Increases nurturing bond between mother and child
- Reduces risks of breast cancer

BENEFITS OF BREASTFEEDING FOR THE FAMILY

- No money spent on buying infant formula, firewood or other fuel to boil water, milk or utensils. Money saved can be used to meet the family's other needs
- Healthier baby means fewer health care costs to family and decreased worries about sick infants
- Births are spaced due to the contraceptive effect of exclusive breastfeeding
- Time is saved for family members if infants are healthier
- Breastfeeding the baby also means less work for family members as breast milk is always available and ready

BENEFITS OF BREASTFEEDING FOR THE COMMUNITY AND COUNTRY

- Saves on foreign exchange as do not need to import formula and utensils necessary for its preparation
- Healthy babies make a healthy nation
- Savings are made in the health sector as less infants are sick
- Improves child survival by reducing mortality.
- Protects the environment since trees are not used for firewood to boil water, milk and utensils
- Breast milk is a renewable resource

Optimal breastfeeding behaviors¹ for women of unknown or negative HIV status

Breastmilk is the best food for an infant, providing all the nutrients in the correct amounts that an infant needs to satisfy hunger and thirst. Infants who are fed only breastmilk through the first 6 months of life are likely to have fewer diarrheal, respiratory, and ear infections. Exclusive breastfeeding also helps space births by delaying the return of fertility.

Exclusive breastfeeding from 0 to 6 months

1. Behavior: Mother gives infant only breastmilk for the first 6 months.

- Breastmilk is the best food for an infant. Breastmilk provides all the nutrients in the correct amounts that an infant needs to satisfy hunger and thirst.
- Infants who are fed only breastmilk through the first 6 months of life are likely to have fewer diarrhea, respiratory, and ear infections.
- Exclusive breastfeeding helps space births by delaying the return of fertility.

2. Behavior: Mother positions and attaches infant correctly at the breast.

- Mother positions and attaches (infant latches on) correctly to help prevent sore or cracked nipples, stimulate her milk supply, make it easier for her infant to breastfeed, and make breastfeeding more comfortable for her and her infant.
- Mother does not breastfeed from breast with a cracked nipple or mastitis but instead expresses milk from that breast and discards it and expresses and discards milk frequently from infected breast until it is healed.
- Signs that infant is properly positioned:
 - a. Mother's back is supported whether sitting or lying down.
 - b. Infant's whole body is facing the mother and is close to her.
 - c. Mother holds infant's entire body, not just the neck and shoulders.
- Signs that infant is properly attached:
 - a. Mother brings infant toward her breast, not the breast toward her infant.
 - b. Infant's mouth is open wide.
 - c. Infant's bottom lip is curled outwards.
 - d. Infant's chin touches mother's breast.
 - e. Mother's entire nipple and a good portion of the areola (dark skin around the nipple) are in infant's mouth.

3. Behavior: Mother initiates breastfeeding within 1 hour of birth.

Immediate initiation:

¹ Adapted from The LINKAGES Project, Guidelines for Infant Feeding in Communities Affected by HIV (draft), 2003

- Takes advantage of the newborn's intense suckling reflex and alertness
- Stimulates breastmilk production
- Protects infant from disease by providing the thick yellowish first milk (colostrum), the infant's first vaccine
- Helps expel the placenta more rapidly and reduce blood loss
- Helps expel meconium, the infant's first stool
- Keeps newborn warm through skin-to-skin contact
- Fosters bonding between mother and infant

4. Behavior: Mother breastfeeds frequently, day and night.

- Mother allows infant to breastfeed on demand (as often as infant wants). This means feeding every 2-3 hours (8-12 times per 24 hours) or more frequently if needed, especially in the early months.
- Breastmilk is perfectly adapted to the infant's small stomach size because it is quickly and easily digested.
- Mother breastfeeds frequently to stimulate milk production, help prevent breast engorgement and cracked nipples, help delay the return of menses, and protect against possible pregnancy.

5. Behavior: Mother offers second breast after infant empties the first.

- Mother empties first breast so that infant receives both "fore" milk (which has a high water content to quench the infant's thirst) and "hind" milk (which is rich in fat and nutrients). Then mother offers second breast.
- Mother does not give bottles and pacifiers (dummies) to her breastfed infant because they can interfere with breastfeeding and cause diarrhea and other common infections.

6. Behavior: Mother continues breastfeeding when either she or the infant is sick.

- If mother is sick with a cold, flu, or diarrhea, she continues breastfeeding because the germs do not pass through her milk. In fact, breastmilk protects against illness in the infant.
- If infant is sick, mother breastfeeds more often (or expresses her milk if the infant cannot breastfeed) so that infant recuperates faster.
- Mother breastfeeds because breastmilk replaces needed water and nutrients lost through frequent loose stools and is the most easily digestible food for the sick infant.

7. Behavior: Mother who will be away from her infant for an extended period expresses her breastmilk. Caregiver feeds expressed breastmilk from a cup.

- Mother expresses breastmilk by following these steps:
 - a. Washes hands
 - b. Prepares a clean container
 - c. Gently massages breasts in a circular motion
 - d. Positions her thumb on the upper edge of the areola and the first two fingers on the underside of the breast behind the areola
 - e. Pushes straight into the chest wall
 - f. Avoids spreading the fingers apart

- g. For large breasts, first lifts and then pushes into the chest wall
- h. Rolls thumb and fingers forward as if making thumb and fingerprints
- i. Repeats rhythmically: position, push, roll; position, push, roll
- j. Rotates the thumb and finger positions
- Mother stores breastmilk in a clean, covered container. Milk can be stored 8-10 hours at room temperature in a cool place and 72 hours in the refrigerator.
- Mother or caregiver gives infant expressed breastmilk from a cup. Bottles are unsafe to use because they are difficult to wash and can be easily contaminated.

Optimal complementary feeding behaviors¹ for women of unknown or negative HIV status

Both the quantity and quality of complementary food are important to ensure good health and development. Infants should eat a variety of nutrient-rich foods, including animal products, fruits, and vegetables. Because it is usually not possible for the infant to consume sufficient quantities of animal foods to meet the needs for iron, zinc, or calcium, a fortified food or micronutrient supplement should be considered if economically feasible.

- 1. Behavior: At 6 months, mother or caregiver introduces soft, appropriate foods and continues breastfeeding on demand.**
 - When infant is 6 months old, mother gives the infant complementary foods—foods in addition to breastmilk—to help the infant grow strong and healthy. Breastmilk cannot meet all the nutritional needs for growth and development.
 - Mother continues to give breastmilk as the main food throughout the infant's first year. Breastmilk will continue to protect the child against illness.
- 2. Behavior: Mother or caregiver increases the amount of food and the number of feedings as the child gets older. Mother or caregiver uses a separate bowl for the child. Mother continues frequent breastfeeding.**
 - As child grows, mother or caregiver gives more food. Complementary foods must meet an increasing proportion of the energy requirements. Mother or caregiver begins complementary feeding by adding available, feasible, local foods to staple foods.
 - Family makes feeding young children a priority to ensure that they get enough food. One way to know children are getting enough food is to put their portions in separate bowls and to help them eat (responsive feeding).
 - Mother or caregiver gives small children small feeds frequently throughout the day because they have very small stomachs. The appropriate number of feeds depends on the energy density of the local foods and the usual amounts consumed at each feed. Recommended complementary feeding: 2-3 times a day for infants 6-8 months old and 3-4 times a day for infants and young children 9-24 months old, with nutritious snacks offered 1-2 times a day. Snacks are defined as foods eaten between meals, usually self-fed, convenient, and easy to prepare.

¹ Adapted from The LINKAGES Project, Guidelines for Infant Feeding in Communities Affected by HIV (draft), 2003

- 3. Behavior: Mother or caregiver increases food thickness and variety as the child gets older, adapting to the child's nutritional requirements and physical abilities.**
 - Mother or caregiver gives child a variety of foods, which he or she is ready to eat as the gastrointestinal tract and immune system mature and other developmental changes occur. During complementary feeding, mother or caregiver gradually accustoms child to family foods.
 - At 6 months mother or caregiver gives infant pureed, mashed, and semi-solid foods.
 - At 8 months mother or caregiver gives foods that infant can eat alone, such as cut-up fruit and vegetables.
 - By 12 months mother or caregiver gives child family foods.

- 4. Behavior: Mother or caregiver interacts with child during feeding (responsive feeding)**
 - Mother or caregiver interacts with child during feeding to help child ingest food and stimulate child's verbal and intellectual development.
 - Mother or caregiver feeds infant directly and helps older child eat, being sensitive to hunger and satiety cues.
 - Mother or caregiver experiments with food combinations, tastes, textures, and ways to encourage child who refuses many foods.
 - Mother or caregiver minimizes distractions during meals if child loses interest easily.
 - Mother or caregiver remembers that feeding times are periods of learning and love, talking to child during feeding with eye-to-eye contact.
 - Mother or caregiver is patient, encouraging but not forcing infant to eat. Counselors in Ghana give the message, "Coax your child to eat. Never force feed. Help your child eat. It may seem to take more time, but it will ensure that the child continues to grow big and strong. A well-fed and healthy infant is a joy for everyone. Sing songs, use games, or tell stories to make feeding enjoyable. Encourage everyone who feeds the child to do the same."

- 5. Behavior: Mother or caregiver practices good hygiene and safe food preparation.**
 - In resource-poor settings, mother or caregiver feeds liquids from a small cup or bowl. Bottles are difficult to keep clean, and contaminated bottles can cause diarrhea.
 - Before feeding child, mother or caregiver washes her/his hands and child's hands with soap and water and uses clean utensils and bowls or dishes to avoid introducing dirt and germs that might cause diarrhea and other infections. Food can be contaminated as a result of poor basic hygiene, poor sanitation, and poor methods of food preparation and storage.
 - Mother or caregiver serves food immediately after preparation.

- 6. Behavior: Mother breastfeeds until child is at least 2 years old.**
 - Mother breastfeeds during the second year of life, when breastmilk continues to be an important source of energy, fat, protein, and micronutrients, especially vitamin A.
 - Mother continues to breastfeed to reduce the risk of infection in a young child.

7. Behavior: Mother continues to breastfeed when child is ill and encourages child to eat during and after illness.

- Mother continues to breastfeed and feed the child soft, mashed favorite foods. Breastfeeding is extremely important during illness. Children who are ill often continue to breastfeed even if they refuse other foods.
- After illness, mother or caregiver increases the quantity of food and feeds child more often so child will recover quickly. Children are often very hungry during recovery from illness and need more food to support catch-up growth and replace nutrient stores.

Signs of Proper Positioning and Attachment

When positioning and attachment are correct:

- The baby's whole body is facing the breast, and the baby's stomach is touching the mother's stomach.
- The baby's head, back, and buttocks are in a straight line.
- The baby's face is close to the breast.
- The baby is brought to the breast with buttocks supported.
- The baby's chin is touching the breast.
- The baby's mouth is wide open with the lower lip curled outward.
- More areola is showing above the baby's upper lip and less below the lower lip (baby should take most of the dark part into his/her mouth).
- The baby takes slow, deep sucks.
- The baby is relaxed and satisfied at the end of the feed.
- The mother does not feel nipple pain.
- The mother may be able to hear the baby swallow.
- The breast feels softer after a feeding.



*Source: Adapted from Savage King, F. 1992. **Helping Mothers to Breastfeed**. Revised edition.*

TEN CONDITIONS FOR A SUCCESSFUL BABY FRIENDLY HOSPITAL

1. Adopt a written breastfeeding policy which will be systematically brought to the knowledge of all care units staff;
2. Provide all care units staff with the skills needed to implement this policy;
3. Inform all pregnant women on the advantages of breastfeeding and its practice;
4. Help mothers to initiate breastfeeding within half hour after delivery;
5. Indicate to mothers how to practice breastfeeding and how to maintain lactation even if they are separated from their infant;
6. Do not feed newborns food or drinks other than breast milk, except on medical indication;
7. Let the child stay with the mother 24 hours of the day;
8. Encourage breastfeeding on demand;
9. Do not give breastfed babies teats or pacifiers;
10. Encourage the formation of breastfeeding support groups and refer mothers to them at discharge from the hospital or the clinic.

Breastfeeding problems and their solutions for women who are HIV negative or of unknown status

Problems	Prevention and Solutions
Retractile nipples	<p>To detect during PNC</p> <div style="text-align: right; border: 1px solid black; padding: 2px; width: fit-content; margin: 10px auto;">Solutions</div> <ol style="list-style-type: none"> 1. Stretch often the tip of the breast, 2. Make a hole in the bra at nipple level, 3. Ask someone to suck the breasts if this is acceptable,
Sore nipples	<p>Causes: Wrong attachment, candidiasis, engorgement</p> <div style="text-align: right; border: 1px solid black; padding: 2px; width: fit-content; margin: 10px auto;">Solutions</div> <ol style="list-style-type: none"> 1. Good attachment, 2. Frequent feeds, 3. Apply breast milk on the infected zone and do not wash the breast too often, 4. Treat the candidiasis.
Mastitis and abscess	<p>Causes: Cracks, untreated obstructions, or engorgement</p> <div style="text-align: right; border: 1px solid black; padding: 2px; width: fit-content; margin: 10px auto;">Solutions</div> <ol style="list-style-type: none"> 1. Hygiene + + +, 2. Treat the abscess, 3. The mother should rest, 4. If engorgement or obstruction of ducts have caused mastitis or abscess, treat them.

Problems	Prevention and Solutions
<p>Baby who refuses breast</p>	<div data-bbox="1214 422 1481 495" style="text-align: right; border: 1px solid black; padding: 2px;">Solutions</div> <ol style="list-style-type: none"> 1. Always examine breasts carefully, 2. Put the baby in good position and breastfeed often, 3. Treat engorgement if any, 4. Avoid giving the child teats, bottles, pacifiers, 5. Wait for the child to be wide-awake and willing to suck before offering him/her the breast, 6. Gently tease the baby's mouth with the nipple until he/she opens his/her mouth to attach, 7. Do not limit the duration of feeds, 8. Do not insist more than a few minutes if the baby refuses to suck, 9. Avoid pressing potentially painful body parts during feeds (pain due to forceps, vacuum extractor or clavicle fracture), 10. Give the expressed milk using a cup or a spoon.
<p>Premature baby underweight at birth</p>	<div data-bbox="1192 1253 1458 1327" style="text-align: right; border: 1px solid black; padding: 2px;">Solutions</div> <ol style="list-style-type: none"> 1. Encourage the close contact - "Baby Kangaroo" style - between mother and child, 2. Use a cup or teaspoon to give breast milk, 3. Encourage mothers to breastfeed as soon as possible, 4. Consider ability to suckle as more important than the baby's weight which is not a sure indicator of the baby's capacity to suck.

<p>Hare-lipped or clef palate baby</p>	<p style="text-align: right;">Solutions</p> <ol style="list-style-type: none"> 1. Tell the mother breast milk is important for the baby, 2. Try to fill the Hare lips in order for the child to keep the nipple and areola in his/her mouth during feeds (mother's finger or special tooth plaque (obturator), sometimes the mother's breast can fill the crack), 3. Express milk and give it to the child using a cup or a teaspoon.
<p>Baby with neural problems</p>	<p style="text-align: right;">Solutions</p> <ol style="list-style-type: none"> 1. Practice Dancer's hand position, 2. Give the child breast milk using a cup or a teaspoon, 3. Use the American football position.
<p>Sick baby</p>	<p style="text-align: right;">Solutions</p> <ol style="list-style-type: none"> 1. Increase breastfeeding during and after the sickness (nutritional replenishment).
<p>Medical reasons to give the child other foods than breast milk</p>	<p style="text-align: right;">Solutions</p> <ol style="list-style-type: none"> 1. Child having galactosemia – phenylketonuria, 2. Weight under 1000g or very premature below 32 weeks age of gestation, 3. Baby severely dehydrated.
<p>Mother and baby separated (mother working)</p>	<p style="text-align: right;">Solutions</p> <ol style="list-style-type: none"> 1. Always take the baby with her, 2. Breastfeed during breaks, 3. Express her milk.

Problems	Prevention and Solutions
Mother infected by HIV	<div style="text-align: right;">Solutions</div> <ol style="list-style-type: none"> 1. Explain the risk 2. Counsel on different feeding options, within AFASS context (acceptable, feasible, affordable, safe and sustainable) 3. Support the mother's feeding choice
Dead mother	<div style="text-align: right;">Solutions</div> <ol style="list-style-type: none"> 1. Find another mother who is actually breastfeeding or who has breastfed in the past, to breastfeed the child, N.B. : Breastfeeding can in most cases be initiated in women who have breastfed in the past.
Low production of milk	<div style="text-align: right;">Solutions</div> <ol style="list-style-type: none"> 1. Increase the number and duration of feeds: the more the child sucks, the more the mother produces milk.
Drugs and medicines	<div style="text-align: right;">Solutions</div> <ol style="list-style-type: none"> 1. Avoid drugs as far as possible, 2. Ask advice from care staff, 3. Raise awareness among physicians on breastfeeding and the necessity to prescribe medicines with contra-indication.