Combined course on growth assessment and IYCF counselling:

Participant's Manual

World Health Organization

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various v.+ slides

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Mercedes de Onis, NHD contributed to the development and field-testing of the course material

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Other contributors include staff of UNICEF and WHO regional and country offices, many individuals from the countries where the course was field-tested, namely, Solomon Islands, Malaysia and Zambia.

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Total time for sessions 1 – 38 = about 36 H

Introduction to the Course

Why this course is needed

The sixty-third World Health Assembly Resolution WHA63.23 urges Member States to implement the WHO Child Growth Standards by their full integration into child health programmes. This course combines the skills required to assess child growth accurately and to effectively counsel and support mothers in the appropriate feeding of their infants and young children.

The World Health Organization and UNICEF developed the Global Strategy for Infant and Young Child Feeding in 2002 to revitalize world attention to the impact that feeding practices have on the nutritional status, growth, development, health, and survival of infants and young children. This strategy is based on the conclusions and recommendations of expert consultations, which resulted in the global public health recommendation to protect, promote and support exclusive breastfeeding for six months, and to provide safe and appropriate complementary foods with continued breastfeeding for up to two years of age or beyond.

The WHO Child Growth Standards, published in 2006, were developed using a sample of children from six countries: Brazil, Ghana, India, Norway, Oman, and the United States of America. The WHO Multicentre Growth Reference Study (MGRS)[1] was designed to provide data describing how children should grow, by including in the study's selection criteria certain recommended health behaviours (for example, breastfeeding, providing standard paediatric care, and not smoking). A key characteristic of the new standards is that they explicitly identify breastfeeding as the biological norm and establish the breastfed child as the normative model for growth and development[2] and are a most appropriate complement to the WHO/UNICEF Global Strategy on Infant and Young Child Feeding.

Many children are not fed in the recommended way. Many mothers, who initiate breastfeeding satisfactorily, often start complementary feeds or stop breastfeeding within a few weeks of delivery. In addition, many children, even those who have grown well for the first six months of life, do not receive adequate complementary feeds. This may result in malnutrition, which is an increasing problem in many countries. More than one-third of under-five children are malnourished – whether stunted, wasted, or deficient in vitamin A, iron or other micronutrients – and malnutrition contributes to about one third of the 8.1 million deaths each year among young children in developing countries.

On the other hand, inappropriate feeding is probably contributing to increased overweight/ obesity in childhood. The application of the WHO Child Growth Standards and the counselling on infant and young child feeding presented in this course aim to address as much the practices that lead to undernutrition as those that pre-dispose to the accumulation of excessive weight.

Information on how to feed young children comes from family beliefs, community practices and information from health workers. Advertising and commercial promotion by food manufacturers is sometimes the source of information for many people, both families and health workers. It has often been difficult for health workers to discuss with families how best to feed their young children due to the confusing, and often conflicting, information available. Inadequate knowledge about how to breastfeed, the appropriate complementary foods to give, and good feeding practices are often a greater determinant of malnutrition than the availability of food.

[1] de Onis M, Garza C, Victora CG, Bhan MK, Norum KR, editors. WHO Multicentre Growth Reference Study (MGRS): Rationale, Planning and Implementation. Food Nutr Bull 2004;25 (Suppl 1):S1–89.
[2] WHO Child Growth Standards. Mercedes de Onis, Cutberto Garza, Adelheid W. Onyango, Reynaldo Martorell, guest editors. Acta Paediatrica, 2006; Suppl 450: 1-101.

There is therefore an urgent need to train those involved in infant feeding counselling in the skills needed to support and protect breastfeeding and good complementary feeding practices. The growth assessment skills acquired in the present course will equip them to work with mothers towards achieving the complementary aims of appropriate infant and young child feeding (IYCF) and healthy child growth.

The present course is developed by combining the core elements of two existing courses:

- WHO/UNICEF: Infant and Young child Feeding Counselling: An Integrated Course (5 days)
- WHO: Training Course on Child Growth Assessment (3.5 days)

This 5-day *Combined course on growth assessment and IYCF counselling* does not set out to replace these courses. Sections that address special needs, e.g., IYCF in the context of HIV, are excluded from the present course but will be presented as a supplementary section for use in populations where special needs pose challenges to appropriate IYCF.

'Counselling' is an extremely important component of this course, as it is in the parent courses. The concept of 'counselling' may be new and can be difficult to translate. Some languages use the same word as 'advising'. However, counselling means more than simple advising. Often, when health workers advise people, they tell them what they think should be done. However, the aim of counselling is to listen and help the person decide what is best from various options or suggestions, and then build their confidence to carry out the decision. This course aims to give health workers basic counselling skills so that they can help mothers and caregivers more effectively.

Health workers and counsellors can help mothers and caregivers to make appropriate choices about infant feeding and to feed their children successfully. It is important that you give this help during the whole of the first and second year of a child's life. You can give mothers good advice about feeding their babies at all times, when they are well and when they are sick.

You may feel that you have not been adequately trained to give this kind of help. In the past, counselling and support skills have seldom been included in the curricula of either doctors, nurses, or midwives. This course aims to give you training in basic counselling skills, which should enable you to give mothers the support and encouragement that they need to feed their children optimally.

During the course you will be asked to work hard. You will be given a lot of information, and you will be asked to do a number of exercises and practical sessions to develop your counselling skills. Hopefully you will find the course interesting and enjoyable, and the skills that you learn will make your work with mothers and babies in future more helpful for them, and more rewarding for you.

Course Objectives

After completing this course, participants will be able to assess breastfeeding and complementary feeding, measure children, plot measurements on growth charts, and interpret growth indicators and counsel and support mothers to carry out WHO/UNICEF recommended feeding practices for their infants and young children.

Each session of this course has a set of learning objectives to guide you track the acquisition of necessary skills and competencies.

The Course and the Manual

Combined course on growth assessment and IYCF counselling consists of 38 sessions, which can be arranged in different ways to suit the local situation. Your Course Director will plan the course that is most suitable for your needs, and will give you a timetable.

This Manual, the *Participant's Manual,* is your main guide to the course, and you should keep it with you at all times, except during practical sessions. In the following pages, you will find a summary of the main information from each session, including descriptions of how to do each of the skills that you will learn. You do not need to take detailed notes during the sessions, though you may find it helpful to make notes of points of particular interest, for example from discussions. Keep your Manual after the course, and use it as a source of reference as you put what you have learnt into practice.

Your manual also contains:
- Copies of the key slides that you might want to memorize
- Forms, lists and checklists for exercises and practical sessions
- Written exercises that you will be asked to do individually.

You will receive separate copies of the forms, lists and checklists to use for the practical sessions, so that you do not have to carry your Manual at these times.

You will receive Answer Sheets for each written exercise after you have done the exercise. These enable you to check your answers later, and to study any questions that you may not have had time to complete.

Notes

Session 1

An Introduction to Infant and Young Child Feeding and the WHO child growth standards

Objectives

After completing this session participants will be able to:

- describe the Global Strategy for Infant and Young Child Feeding
- list the operational targets of the Global Strategy
- state the current recommendations for feeding children from 0-24 months of age
- describe the significance of the WHO child growth standards

The Global Strategy for Infant and Young Child Feeding

The Global Strategy for Infant and Young Child Feeding was developed jointly by WHO and UNICEF and launched in 2002, to revitalize world attention to the impact that feeding practices have on the nutritional status, growth, development and health, and thus the very survival of infants and young children.

Malnutrition has been responsible, directly or indirectly, for about one third of the 8.1 million deaths annually among children under five. Well over two-thirds of these deaths, which are often associated with inappropriate feeding practices, occur during the first year of life.

The Global Strategy was built on previous initiatives such as the International Code of Marketing of Breast-milk Substitutes in 1981, the Innocenti Declaration in 1990 and the Baby-friendly Hospital Initiative in 1991.

The Global Strategy is designed for use by governments and other concerned parties, such as health professional bodies, non-governmental organizations, commercial enterprises and international organizations.

The Strategy lists the WHO/UNICEF recommendations for appropriate feeding of infants and young children, explains the obligations and responsibilities of governments and concerned parties, and describes the actions they could take to protect, promote and support mothers to follow recommended feeding practices.

Operational targets of the Global Strategy for Infant and Young Child Feeding

Global Strategy for Infant and Young Child Feeding

Summary of Operational Targets

All governments are urged to:

A. Follow up previous targets from Innocenti Declaration:
   1. Appoint a national breastfeeding coordinator with appropriate authority, and establish a multisectoral national breastfeeding committee
   2. Ensure that every facility providing maternity services fully practises all the 'Ten steps to successful breastfeeding' set out in the WHO/UNICEF statement on breastfeeding and maternity services
   3. Implement the International Code of Marketing of Breast-milk Substitutes and subsequent resolutions
   4. Enact imaginative legislation protecting the breastfeeding rights of working women and establish means for its enforcement

B. Introduce these five NEW targets:
   5. Develop, implement, monitor and evaluate a comprehensive policy on infant and young child feeding
   6. Ensure that health and other relevant sectors protect, promote and support exclusive breastfeeding for six months and continued breastfeeding up to two years of age or beyond, while providing women access to the support they require
   7. Promote timely, adequate, safe and appropriate complementary feeding with continued breastfeeding
   8. Provide guidance on feeding infants and young children in exceptionally difficult circumstances
   9. Consider what new legislation or other suitable measures may be required to implement the International Code of Marketing of Breast-milk Substitutes and subsequent resolutions

Breastfeeding for the first six months of life

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants. As a global public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health.

DEFINITION OF EXCLUSIVE BREASTFEEDING

Exclusive breastfeeding means giving a baby only breast milk, and no other liquids or solids, not even water. Drops or syrups consisting of vitamins, mineral supplements or medicines (including ORS) are permitted.

Mothers need skilled practical help from people like yourself, who can help to build their confidence, improve feeding technique and prevent or resolve breastfeeding problems, if they are to succeed in breastfeeding exclusively.

Complementary feeding

After six months of age, all babies require other foods to complement breast milk – we call these **complementary foods**. When complementary foods are introduced breastfeeding should still continue for up to two years of age or beyond.

Complementary foods should be:

timely – meaning that they are introduced when the need for energy and nutrients exceeds what can be provided through exclusive and frequent breastfeeding

adequate – meaning that they provide sufficient energy, protein and micronutrients to meet a growing child's nutritional needs

safe – meaning that they are hygienically stored and prepared and fed with clean hands using clean utensils and not bottles and teats

properly fed – meaning that they are given consistent with a child's signals of hunger and that meal frequency and feeding methods are suitable for the child's age.

Feeding in exceptionally difficult circumstances

The Global Strategy also talks about feeding in exceptionally difficult circumstances. It includes emergency situations, malnourished children, low-birth-weight babies, infants of HIV-infected mothers and orphans. In this course we will discuss feeding low-birth-weight babies and HIV and infant feeding.

Development of the WHO child growth standards

The World Health Organization (WHO) developed growth standards based on a sample of children from six countries: Brazil, Ghana, India, Norway, Oman, and the United States of America. The WHO Multicentre Growth Reference Study (MGRS) was designed to provide data describing how children *should* grow, by including in the study's selection criteria certain recommended health behaviours (for example, breastfeeding, providing standard paediatric care, and not smoking). The study followed term babies from birth to 2 years of age, with frequent observations in the first weeks of life; another group of children, age 18 to 71 months, were measured once, and data from the two samples were combined to create the growth standards for birth to 5 years of age.

The WHO Multicentre Growth Reference Study

The WHO child growth standards differ from many existing single country references which merely describe the size of children assumed to be healthy. By including children from many countries who were receiving recommended feeding and care, the MGRS resulted in prescriptive standards for normal growth, as opposed to simply descriptive references.

The standards

- show what growth can be achieved with recommended feeding and health care (e.g. immunizations, care during illness).
- can be used anywhere in the world since the study also showed that children everywhere grow in similar patters when their nutrition, heath, and care needs are met.

Benefits of the new growth standards

The new standards establish the breastfed infant as the model for normal growth and development. As a result, health policies and public support for breastfeeding will be strengthened. The new standards will help better identify stunted and overweight/obese children. New standards such as BMI (body mass index) are useful for measuring the increasing worldwide epidemic of obesity. Charts that show standard patterns of the expected growth rate over time enable health care providers to identify children at risk of becoming undernourished or overweight early, rather than waiting until a problem level is reached.

Gross motor milestones

In addition to standards for physical growth, the WHO Child Growth Standards include six gross motor development milestones: sitting without support, standing with assistance, hands-and-knees crawling, walking with assistance, standing alone, and walking alone. All healthy children are expected to achieve these milestones during specified age ranges between 4 and 18 months. The expected age ranges for achieving these milestones (or "windows of achievement") are included in the WHO child Growth Record provided with this course. This course, however, focuses on physical growth assessment and does not provide training on assessing motor development.

Notes

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Session 2

Why Breastfeeding is Important

Objectives

After completing this session participants will be able to:

- state the advantages of exclusive breastfeeding
- list the disadvantages of artificial feeding
- describe the main differences between breast milk and artificial milks

Introduction

The Global Strategy for Infant and Young Child Feeding recommends that infants be exclusively breastfed for the first six months of life. You need to understand why breastfeeding is important so you can help to support mothers who may have doubts about the value of breast milk. You also need to know the differences between breast milk and artificial milks.

The advantages of breastfeeding

This diagram summarizes the main advantages of breastfeeding. It is useful to think of the advantages of both breast milk (listed on the left) and breastfeeding (listed on the right).

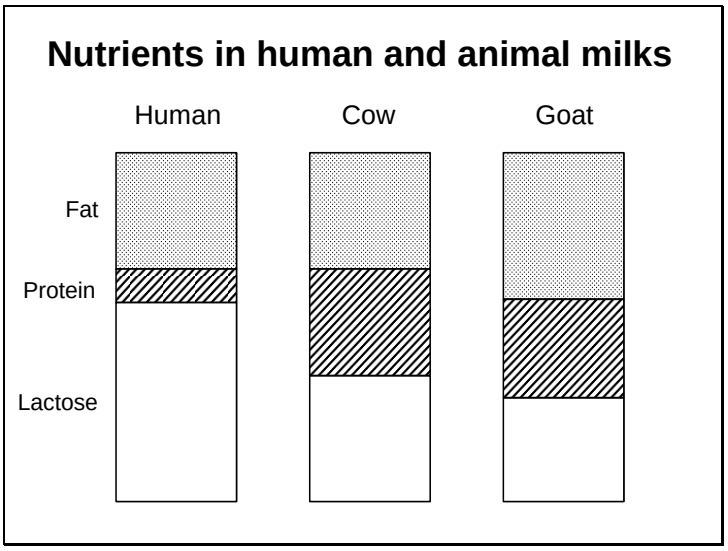
Advantages of breastfeeding

Breast milk
- Perfect nutrients
- Easily digested; efficiently used
- Protects against infection

Breastfeeding
- Helps bonding and development
- Helps delay a new pregnancy
- Protects mothers' health

- Costs less than artificial feeding

Nutrients in human and animal milks



Formula milks are made from a variety of products, including animal milks, soybean, and vegetable oils. Although they have been adjusted so that they are more like human milk, they are still far from perfect for babies.

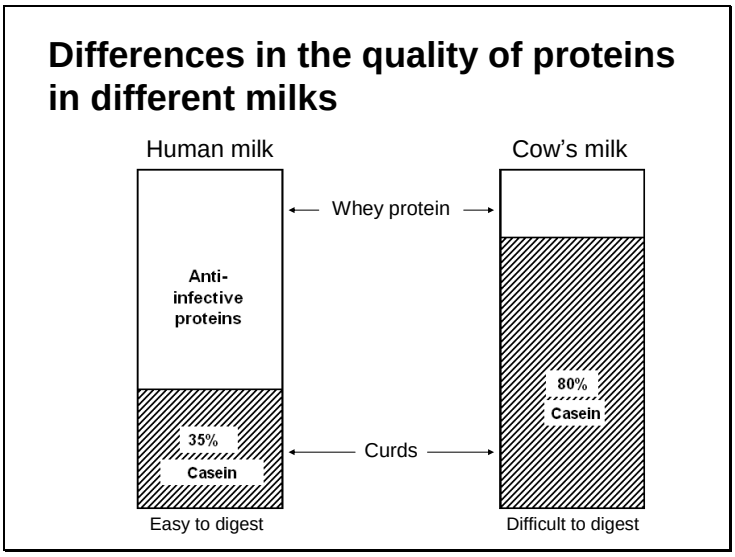
In order to understand the composition of formula milk we need to understand the differences between animal and human milk and how animal milks need to be modified to produce formula milk.

This chart compares the nutrients in breast milk with the nutrients in fresh cow's and goat's milk. All the milks contain fat which provides energy, protein for growth and a milk sugar called lactose which also provides energy.

The animal milk contains more protein than human milk. It is difficult for a baby's immature kidneys to excrete the extra waste from the protein in animal milks.

Human milk also contains essential fatty acids that are needed for a baby's growing brain and eyes, and for healthy blood vessels. These fatty acids are not present in animal milks, but may have been added to formula milk.

Quality of protein in different milks



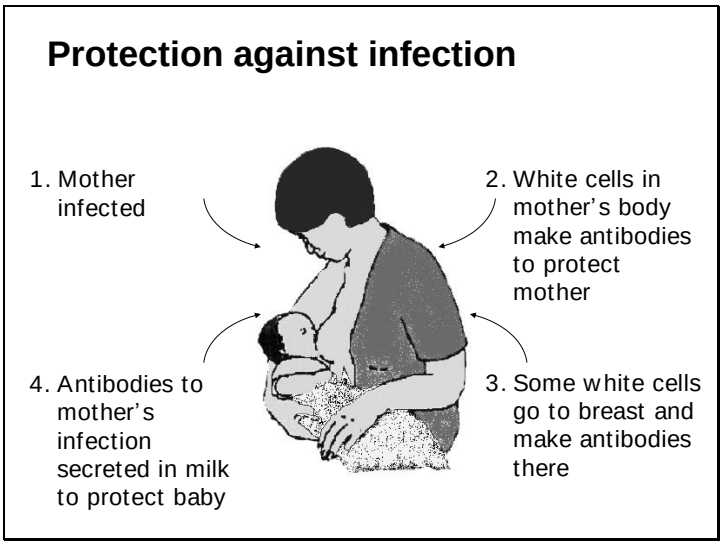
The protein in different milks varies in quality, as well as in quantity. Whilst the quantity of protein in cow's milk can be modified to make formula, the quality of proteins cannot be changed.

This chart shows that much of the protein in cow's milk is **casein**. Casein forms thick, indigestible curds in a baby's stomach.

Human milk contains more whey proteins. The whey proteins contain anti-infective proteins which help to protect a baby against infection.

Artificially fed babies may develop intolerance to protein from animal milk. They may develop diarrhoea, abdominal pain, rashes and other symptoms when they have feeds that contain the different kinds of protein.

Protection against infection



Breast milk contains white blood cells, and a number of anti-infective factors, which help to protect a baby against many infections. Breastfeeding protects babies against diarrhoeal and respiratory illness and also ear infections, meningitis and urinary tract infections.

This diagram shows that when a mother develops an infection (1), white cells in her body become active, and make antibodies against the infection to protect her (2). Some of these white cells go to her breasts and make antibodies (3) which are secreted in her breast milk to protect her baby (4).

So a baby should not be separated from his mother when she has an infection, because her breast milk protects him against the infection.

Variations in the composition of breast milk

Colostrum is the breast milk that women produce in the first few days after delivery. It is thick and yellowish or clear in colour. It contains more protein than mature milk.

Mature milk is the breast milk that is produced after a few days. The quantity becomes larger, and the breasts feel full, hard and heavy. Some people call this the breast milk 'coming in'.

Foremilk is the milk that is produced early in a feed.

Hindmilk is the milk that is produced later in a feed.

Hindmilk looks whiter than foremilk, because it contains more fat. This fat provides much of the energy of a breastfeed. This is an important reason not to take a baby off a breast too quickly. The baby should be allowed to continue until he has had all that he wants.

Foremilk looks thinner than hindmilk. It is produced in larger amounts, and it provides plenty of protein, lactose, and other nutrients. Because a baby gets large amounts of foremilk, he gets all the water that he needs from it. Babies do not need other drinks of water before they are six months old, even in a hot climate. If they satisfy their thirst on water, they may take less breast milk.

Colostrum

Colostrum

Property	Importance
• Antibody rich	- protects against allergy & infection
• Many white cells	- protects against infection
• Purgative	- clears meconium - helps to prevent jaundice
• Growth factors	- helps intestine to mature - prevents allergy, intolerance
• Rich in Vitamin A	- reduces severity of infection

Colostrum contains more antibodies and other anti-infective proteins than mature milk. It contains more white blood cells than mature milk. Colostrum helps to prevent the bacterial infections that are a danger to newborn babies and provides the first immunization against many of the diseases that a baby meets after delivery.

Colostrum has a mild purgative effect, which helps to clear the baby's gut of **meconium** (the first dark stools). This clears bilirubin from the gut, and helps to prevent jaundice from becoming severe.

Colostrum contains many growth factors which help a baby's immature intestine to develop after birth. This helps to prevent the baby from developing allergies and intolerance to other foods.

Colostrum is rich in vitamin A which helps to reduce the severity of any infections the baby might have.

So it is very important for babies to have colostrum. Colostrum is ready in the breasts when a baby is born. Babies should not be given any drinks or foods before they start breastfeeding. Artificial feeds given before a baby has colostrum are likely to cause allergy and infection.

Psychological benefits of breastfeeding

Breastfeeding helps a mother and baby to form a close, loving relationship, which makes mothers feel deeply satisfied emotionally. Close contact from immediately after delivery helps this relationship to develop. This process is called bonding.

Babies tend to cry less if they are breastfed and may be more emotionally secure. Some studies suggest that breastfeeding may help a child to develop intellectually. Low-birth-weight babies fed breast milk in the first weeks of life perform better on intelligence tests in later childhood than children who are artificially fed.

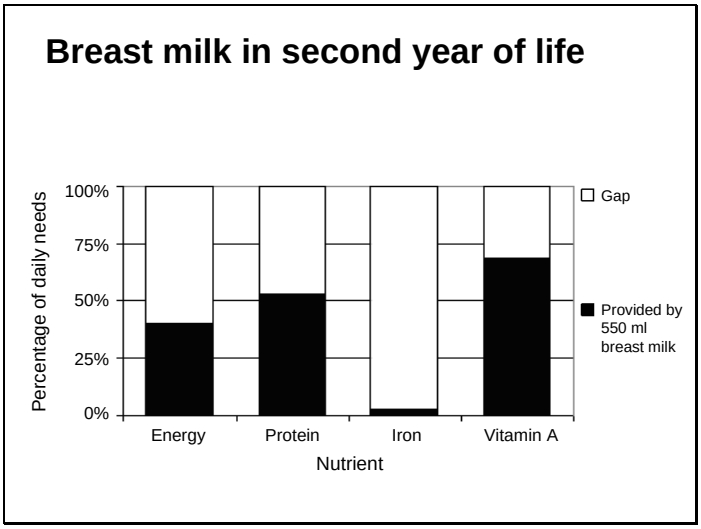
Disadvantages of artificial feeding

This chart summarizes the main disadvantages of artificial feeding.

Disadvantages of artificial feeding

- Interferes with bonding
- More diarrhoea and persistent diarrhoea
- More frequent respiratory infections
- Malnutrition; Vitamin A deficiency
- More allergy and milk intolerance
- Increased risk of some chronic diseases
- Obesity
- Lower scores on intelligence tests
- Mother may become pregnant sooner
- Increased risk of anaemia, ovarian cancer, and breast cancer in mother

Breast milk in the second year of life



For the first six months of life, exclusive breastfeeding can provide all the nutrients and water that a baby needs. From the age of six months, breast milk is no longer sufficient by itself. In Session 1 we learnt that all babies need complementary foods from six months, in addition to breast milk. However, breast milk continues to be an important source of energy and high quality nutrients beyond six months of age.

Notes

Session 3

How Breastfeeding Works

Objectives

After completing this session participants will be able to:

- name the main parts of the breast and describe their function
- describe the hormonal control of breast milk production and ejection
- describe the difference between good and poor attachment of a baby at the breast
- describe the difference between effective and ineffective suckling

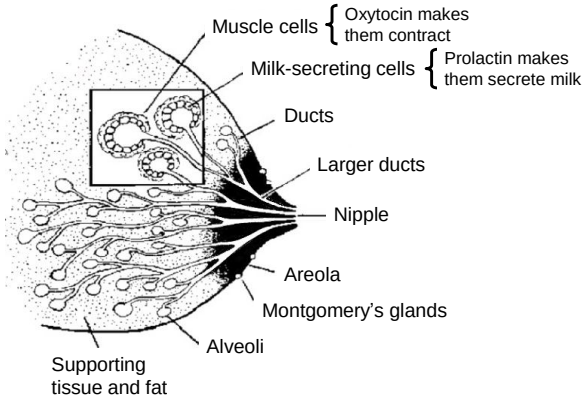
Introduction

In this session, you will learn about the anatomy and physiology of breastfeeding. In order to help mothers, you need to understand how breastfeeding works.

You cannot learn a specific way of counselling for every situation, or every difficulty. But if you understand how breastfeeding works, you can work out what is happening, and help each mother to decide what is best for her.

Anatomy of the breast

Anatomy of the breast



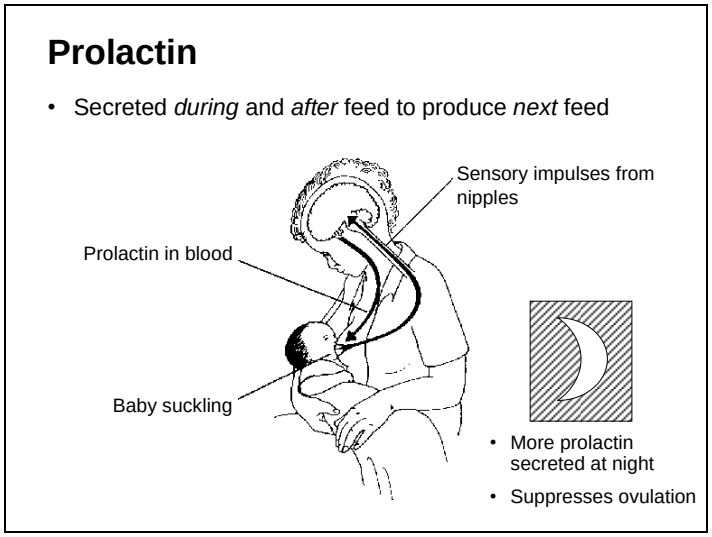
This diagram shows the anatomy of the breast.

The dark skin around the nipples is called the areola. In the areola are small glands called Montgomery's glands which secrete an oily fluid to keep the skin healthy. Inside the breast are the alveoli, which are very small sacs made of milk-secreting cells. There are millions of alveoli – the diagram shows only a few. The box shows three of the alveoli enlarged. A hormone called prolactin makes these cells produce milk.

Around the alveoli are muscle cells, which contract and squeeze out the milk. A hormone called oxytocin makes the muscle cells contract. Small tubes, or ducts, carry milk from the alveoli to the outside. Milk is stored in the alveoli and small ducts between feeds.
The larger ducts beneath the areola dilate during feeding and hold the breast milk temporarily during the feed.

The secretory alveoli and ducts are surrounded by supporting tissue, and fat. It is the fat and other tissue which give the breast its shape, and which makes most of the difference between large and small breasts. Small breasts and large breasts both contain about the same amount of gland tissue, so they can both make plenty of milk.

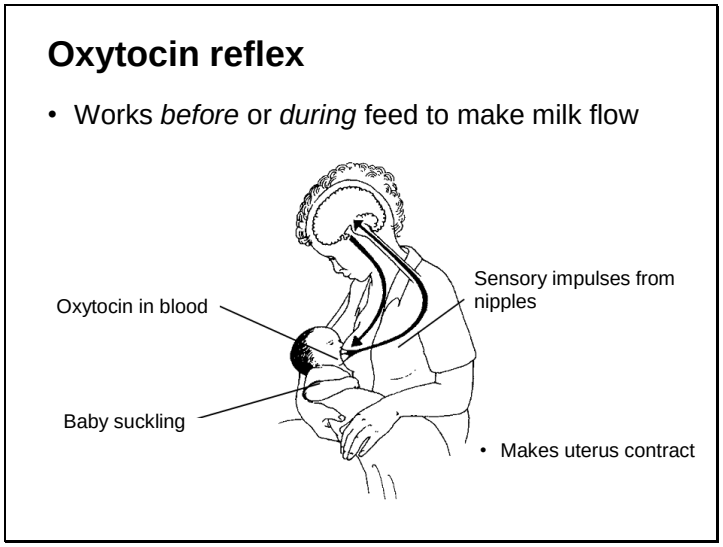
Prolactin



When a baby suckles at the breast, sensory impulses go from the nipple to the brain. In response, the pituitary gland at the base of the brain secretes prolactin. Prolactin goes in the blood to the breast, and makes the milk-secreting cells produce milk. The more a baby suckles the more milk the breasts produce.

Most of the prolactin is in the blood about 30 minutes after the feed – so it makes the breast produce milk for the next feed. For this feed, the baby takes the milk which is already in the breast.

Oxytocin



When a baby suckles, sensory impulses go from the nipple to the brain. In response, the pituitary gland at the base of the brain secretes the hormone oxytocin. Oxytocin goes in the blood to the breast, and makes the muscle cells around the alveoli contract.

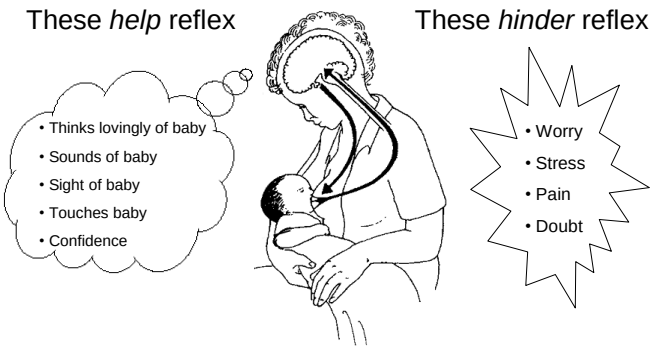
This makes the milk which has collected in the alveoli flow along the ducts to the larger ducts beneath the areola. Here the milk is stored temporarily during the feed. This is the oxytocin reflex, the milk ejection reflex or the 'let-down' reflex.

Oxytocin is produced more quickly than prolactin. It makes the milk in the breast flow for *this* feed. Oxytocin can start working before a baby suckles, when a mother learns to expect a feed. If the oxytocin reflex does not work well, the baby may have difficulty in getting the milk. It may seem as if the breasts have stopped producing milk. However, the breasts are producing milk, but it is not flowing out.

Oxytocin makes a mother's uterus contract after delivery. This helps to reduce bleeding, but it sometimes causes uterine pain and a rush of blood during a feed for the first few days. The pains can be quite strong.

The oxytocin reflex is easily affected by a mother's thoughts and feelings. Good feelings, for example feeling pleased with her baby, or thinking lovingly of him, and feeling confident that her milk is the best for him, can help the oxytocin reflex to work and her milk to flow. Sensations such as touching or seeing her baby, or hearing him cry, can also help the reflex. But bad feelings, such as pain, or worry, or doubt that she has enough milk, can hinder the reflex and stop her milk from flowing. Fortunately, this effect is usually temporary.

Helping and hindering of oxytocin reflex



SIGNS AND SENSATIONS OF AN ACTIVE OXYTOCIN REFLEX

A mother may notice:

- A squeezing or tingling sensation in her breasts just before she feeds her baby, or during a feed.
- Milk flowing from her breasts when she thinks of her baby, or hears him crying.
- Milk dripping from her other breast, when her baby is suckling.
- Milk flowing from her breasts in fine streams, if her baby comes off the breast during a feed.
- Pain from uterine contractions, sometimes with a rush of blood, during feeds in the first week.
- Slow deep sucks and swallowing by the baby, which show that breast milk is flowing into his mouth.

Control of breast milk production within the breast.

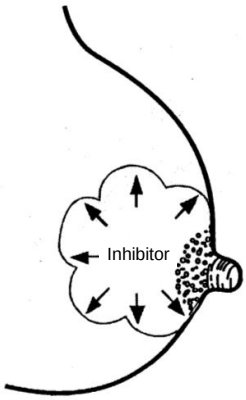
You may wonder why sometimes one breast stops making milk, while the other breast continues to make milk – although oxytocin and prolactin go equally to both breasts. The following diagram shows why.

There is a substance in breast milk which can reduce or inhibit milk production.
If a lot of milk is left in a breast, the inhibitor stops the cells from secreting any more. This helps to protect the breast from the harmful effects of being too full. It is obviously necessary if a baby dies or stops breastfeeding for some other reason. If breast milk is removed, by suckling or expression, the inhibitor is also removed. Then the breast makes more milk.

This helps you to understand why if a baby stops suckling from one breast, that breast stops making milk. If a baby suckles more from one breast, that breast makes more milk and becomes larger than the other.

It also helps you to understand why for a breast to continue to make milk, the milk must be removed. If a baby cannot suckle from one or both breasts, the breast milk must be removed by expression to enable production to continue.

Inhibitor in breast milk

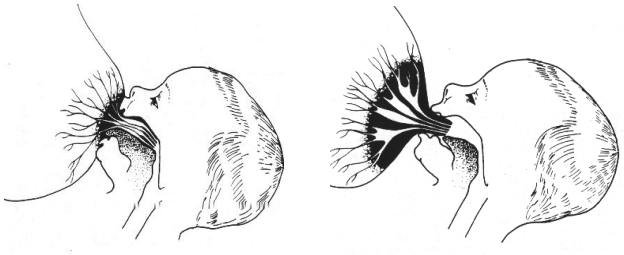


If breast remains full of milk, secretion stops

Attachment to the breast

Good and poor attachment

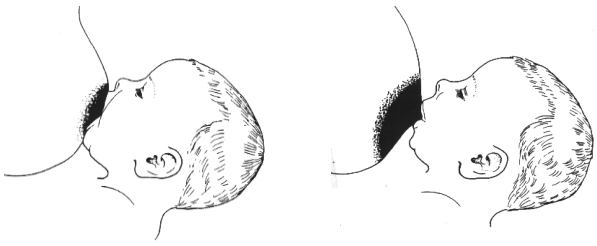
What differences do you see?



1 2

Attachment (outside appearance)

What differences do you see?



1 2

The 4 key points of attachment are:

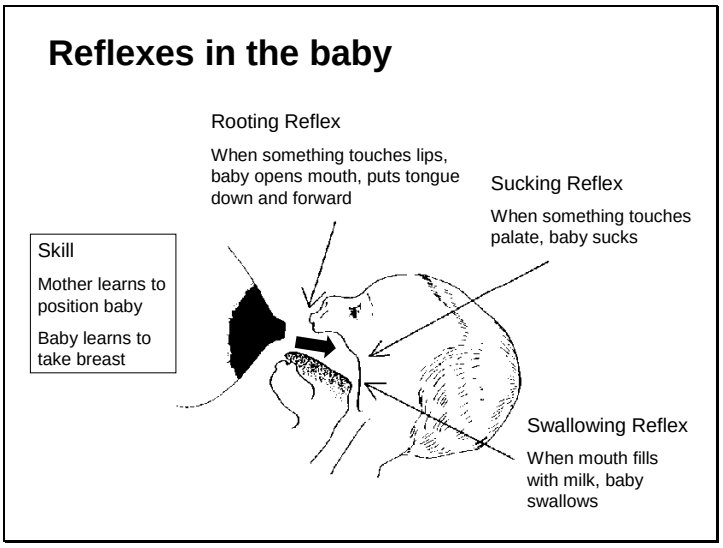
1. More areola above baby's top lip than below bottom lip
2. Baby's mouth wide open
3. Lower lip turned outwards
4. Baby's chin touches breast

Results of poor attachment

If a baby is poorly attached and he 'nipple sucks', it is painful for his mother. Poor attachment is the most important cause of sore nipples. As the baby sucks hard to try to get the milk, he pulls the nipple in and out. This makes the nipple skin rub against his mouth. If a baby continues to suck in this way, he can damage the nipple skin and cause cracks (also known as fissures). As the baby does not remove breast milk effectively the breasts may become engorged, the baby may be unsatisfied and cry a lot. Eventually, if breast milk is not removed the breasts may make less milk. A baby may fail to gain weight and the mother may feel she is a breastfeeding failure.

To prevent this all mothers need skilled help to position and attach their babies. Babies should not be given feeding bottles, especially before breastfeeding is established.

Reflexes in the baby



There are three main reflexes - the **rooting reflex**, the **sucking reflex**, and the **swallowing reflex**.

When something touches a baby's lips or cheek, he opens his mouth and may turn his head to find it. He puts his tongue down and forward. This is the 'rooting' reflex. It should normally be the breast that he is 'rooting' for. When something touches a baby's palate, he starts to suck it. This is the sucking reflex. When his mouth fills with milk, he swallows. This is the swallowing reflex. All these reflexes happen automatically without the baby having to learn to do them.

Notes

Session 4

Assessing a Breastfeed

Objectives

After completing this session participants will be able to:

- explain the 4 key points of attachment
- assess a breastfeed by observing a mother and baby
- identify a mother who may need help
- recognize signs of good and poor attachment and positioning
- explain the contents and arrangement of the BREASTFEED OBSERVATION JOB AID

Introduction

Assessing a breastfeed helps you to decide if a mother needs help or not, and how to help her. You can learn a lot about how well or badly breastfeeding is going by observing, before you ask questions. There are some things you can observe when a baby is not breastfeeding. Other things you can only observe if a baby is breastfeeding.

BREASTFEED OBSERVATION JOB AID

Mother's name _____ Date _____

Baby's name _____ Baby's age _____

Signs that breastfeeding is going well:	Signs of possible difficulty:
GENERAL	
Mother:	Mother:
☐ Mother looks healthy	☐ Mother looks ill or depressed
☐ Mother relaxed and comfortable	☐ Mother looks tense and uncomfortable
☐ Signs of bonding between mother and baby	☐ No mother/baby eye contact
Baby:	Baby:
☐ Baby looks healthy	☐ Baby looks sleepy or ill
☐ Baby calm and relaxed	☐ Baby is restless or crying
☐ Baby reaches or roots for breast if hungry	☐ Baby does not reach or root
BREASTS	
☐ Breasts look healthy	☐ Breasts look red, swollen, or sore
☐ No pain or discomfort	☐ Breast or nipple painful
☐ Breast well supported with fingers away from nipple	☐ Breast held with fingers on areola
☐ Nipple stands out, protractile	☐ Nipple flat, not protractile
BABY'S POSITION	
☐ Baby's head and body in line	☐ Baby's neck and head twisted to feed
☐ Baby held close to mother's body	☐ Baby not held close
☐ Baby's whole body supported	☐ Baby supported by head and neck only
☐ Baby approaches breast, nose to nipple	☐ Baby approaches breast, lower lip/chin to nipple
BABY'S ATTACHMENT	
☐ More areola seen above baby's top lip	☐ More areola seen below bottom lip
☐ Baby's mouth open wide	☐ Baby's mouth not open wide
☐ Lower lip turned outwards	☐ Lips pointing forward or turned in
☐ Baby's chin touches breast	☐ Baby's chin not touching breast
SUCKLING	
☐ Slow, deep sucks with pauses	☐ Rapid shallow sucks
☐ Cheeks round when suckling	☐ Cheeks pulled in when suckling
☐ Baby releases breast when finished	☐ Mother takes baby off the breast
☐ Mother notices signs of oxytocin reflex	☐ No signs of oxytocin reflex noticed

Fig. 4.1 How does the mother hold her baby?

a. Baby's body close, facing breast
Face to face attention from mother

b. Baby's body away from mother, neck twisted
No mother baby eye contact

Fig. 4.2 How does the mother hold her breast?

a. Resting her fingers on her chest wall so that her first finger forms a support at the base of the breast

b. Holding her breast too near the nipple

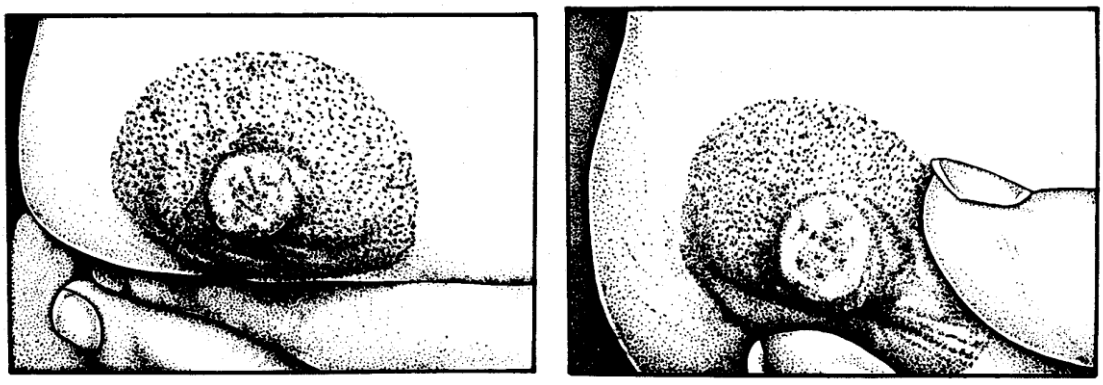
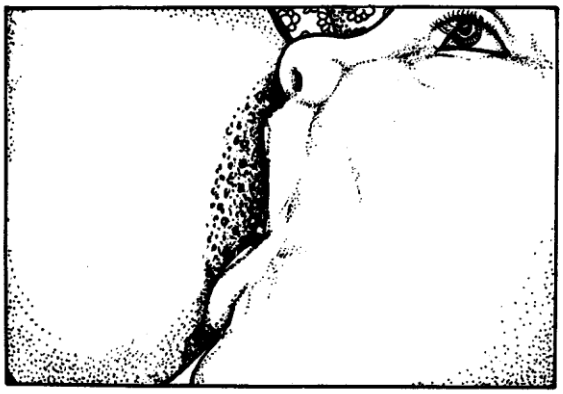
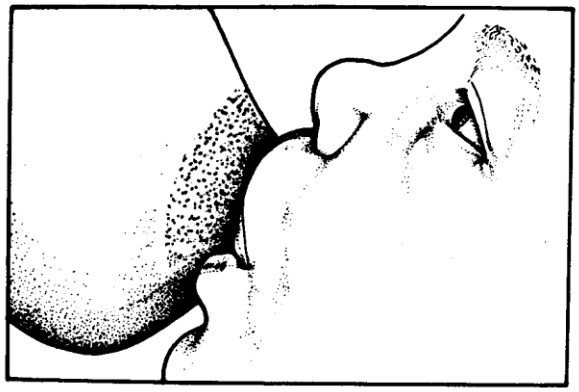


Fig. 4.3 How is the baby attached to the breast?

a. A baby well attached to his mother's breast



b. A baby poorly attached to his mother's breast



Exercise 4.a. Using the BREASTFEED OBSERVATION JOB AID

In this exercise, you practise recognizing the signs of good and poor attachment in some slides of babies breastfeeding. In some of the photographs you will also see signs of good and poor positioning.

With Slides 4/8-4/9, use your observations to practise filling in one of the BREASTFEED OBSERVATION JOB AIDS on the following pages. There are two forms. Fill in one form for each slide.

- If you see a sign, make a ✓ in the box next to the sign.
- If you do not see a sign, leave the box empty.

BREASTFEED OBSERVATION JOB AID – SLIDE 4/8

Mother's name _____ Date _____

Baby's name _____ Baby's age _____

Signs that breastfeeding is going well:	**Signs of possible difficulty:**
GENERAL	
Mother:	Mother:
☐ Mother looks healthy	☐ Mother looks ill or depressed
☐ Mother relaxed and comfortable	☐ Mother looks tense and uncomfortable
☐ Signs of bonding between mother and baby	☐ No mother/baby eye contact
Baby:	Baby:
☐ Baby looks healthy	☐ Baby looks sleepy or ill
☐ Baby calm and relaxed	☐ Baby is restless or crying
☐ Baby reaches or roots for breast if hungry	☐ Baby does not reach or root
BREASTS	
☐ Breasts look healthy	☐ Breasts look red, swollen, or sore
☐ No pain or discomfort	☐ Breast or nipple painful
☐ Breast well supported with fingers away from nipple	☐ Breast held with fingers on areola
☐ Nipple stands out, protractile	☐ Nipple flat, not protractile
BABY'S POSITION	
☐ Baby's head and body in line	☐ Baby's neck and head twisted to feed
☐ Baby held close to mother's body	☐ Baby not held close
☐ Baby's whole body supported	☐ Baby supported by head and neck only
☐ Baby approaches breast, nose to nipple	☐ Baby approaches breast, lower lip/chin to nipple
BABY'S ATTACHMENT	
☐ More areola seen above baby's top lip	☐ More areola seen below bottom lip
☐ Baby's mouth open wide	☐ Baby's mouth not open wide
☐ Lower lip turned outwards	☐ Lips pointing forward or turned in
☐ Baby's chin touches breast	☐ Baby's chin not touching breast
SUCKLING	
☐ Slow, deep sucks with pauses	☐ Rapid shallow sucks
☐ Cheeks round when suckling	☐ Cheeks pulled in when suckling
☐ Baby releases breast when finished	☐ Mother takes baby off the breast
☐ Mother notices signs of oxytocin reflex	☐ No signs of oxytocin reflex noticed

BREASTFEED OBSERVATION JOB AID – SLIDE 4/9

Mother's name _____ Date _____

Baby's name _____ Baby's age _____

Signs that breastfeeding is going well:	**Signs of possible difficulty:**
GENERAL	
Mother:	Mother:
☐ Mother looks healthy	☐ Mother looks ill or depressed
☐ Mother relaxed and comfortable	☐ Mother looks tense and uncomfortable
☐ Signs of bonding between mother and baby	☐ No mother/baby eye contact
Baby:	Baby:
☐ Baby looks healthy	☐ Baby looks sleepy or ill
☐ Baby calm and relaxed	☐ Baby is restless or crying
☐ Baby reaches or roots for breast if hungry	☐ Baby does not reach or root
BREASTS	
☐ Breasts look healthy	☐ Breasts look red, swollen, or sore
☐ No pain or discomfort	☐ Breast or nipple painful
☐ Breast well supported with fingers away from nipple	☐ Breast held with fingers on areola
☐ Nipple stands out, protractile	☐ Nipple flat, not protractile
BABY'S POSITION	
☐ Baby's head and body in line	☐ Baby's neck and head twisted to feed
☐ Baby held close to mother's body	☐ Baby not held close
☐ Baby's whole body supported	☐ Baby supported by head and neck only
☐ Baby approaches breast, nose to nipple	☐ Baby approaches breast, lower lip/chin to nipple
BABY'S ATTACHMENT	
☐ More areola seen above baby's top lip	☐ More areola seen below bottom lip
☐ Baby's mouth open wide	☐ Baby's mouth not open wide
☐ Lower lip turned outwards	☐ Lips pointing forward or turned in
☐ Baby's chin touches breast	☐ Baby's chin not touching breast
SUCKLING	
☐ Slow, deep sucks with pauses	☐ Rapid shallow sucks
☐ Cheeks round when suckling	☐ Cheeks pulled in when suckling
☐ Baby releases breast when finished	☐ Mother takes baby off the breast
☐ Mother notices signs of oxytocin reflex	☐ No signs of oxytocin reflex noticed

Session 5

Introducing child growth assessment

Objectives

After completing this session participants will be able to:

- Start a Growth Record for a child and select pages to use at a given visit
- Determine a child's age on the visit day
- Identify the correct charts to use (age and sex) on a given visit and where these charts are in the growth record

Child growth assessment

Basic growth assessment involves measuring a child's weight and length or height[3] and comparing these measurements to growth standards.

The purpose is to determine whether a child is growing "normally" or has a growth problem or trend towards a growth problem that should be addressed.

The steps involve measuring weight, length, and height, plotting these measurements on growth charts, and interpreting growth indicators.

Correct measurement, plotting, interpretation are essential for identifying growth problems.

If a child has a growth problem or trend towards one the health care provider should talk with the mother or other caregiver[4] to determine the causes.

It is then critically important to take action to address the causes of poor growth. Growth assessments that are not supported by appropriate response programmes are not effective in improving child health.

In circumstances such as extreme poverty or emergencies, growth assessment aims to identify children who need urgent intervention, such as therapeutic or supplementary feeding, to prevent death.

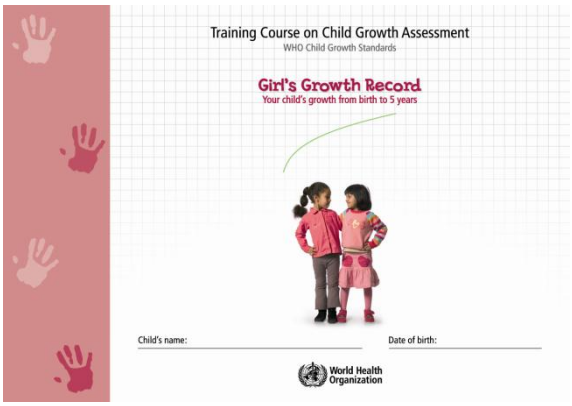
In health facility settings children with severe forms of undernutrition should be referred for specialized care.

Children with obesity should be referred for medical assessment and specialized management if these services are available. Non-severe problems can be managed through counselling, including age-appropriate advice on feeding and physical activity.

[3] There are other growth measures (e.g. head circumference), but these are not covered in this course. Length of children less than 2 years old is measured lying down, while standing height is measured for children age 2 years or older. Throughout the manuals the phrase length/height is used to indicate that the age-appropriate measurement for linear growth should be used.

[4] In this course the word "mother" is often used to refer to the child's primary caregiver. It is understood that the primary caregiver may be another person, such as the father, grandmother, or another relative or guardian.

Use the Growth Record



A *Growth Record* is a booklet that contains all of the charts needed to record and assess the growth of a child from birth up to 5 years of age.

It also contains recommendations on child feeding and care, a useful reference for parents, other caregivers and health care providers.

A different *Growth Record* is needed for boys and girls because boys and girls have different weights and lengths beginning at birth.

Starting a new Growth Record

A *Growth Record* should be started for each child and kept by the mother.

The box below summarizes the contents of the *Growth Record* with page references to help you navigate through the booklet.

Growth Record contents

- Personal data (pg 1)
- Visit notes (pp 6 -11)
- Special care (pg 12)
- Feeding recommendations (pp 13 -19)
- Food safety and hygiene (pg 20)
- Care for development (pp 21 -26)
- Growth charts (LH/A, WA, WL/H)
  - 0-6 mo (pp 29, 30, 31)
  - 6-24 mo (pp 33, 34, 35)
  - 2-5 y (pp 37, 38, 39)
- Gross motor milestones (page 41)

The pages titled Visit Notes (pp 6-11) should be used for recording visit dates, age, reasons for clinic visits, measurements, information that will help explain any problems that may be observed during the assessment, and observations on the physical status of the child, for example a child looks:

- Wasted* (too thin)
- Lean (fleshed out, no noticeable fat)

- Normal (rounded contours, no noticeable excess fat)
- Heavy (sturdy, mostly muscular, not lean or thin)
- Overweight* (noticeable fat)
- Obese* (excess fat)

* You will learn more technical definitions for these terms later in the course

The reference sections of the Growth record (special care, feeding recommendations, food safety and hygiene, and care for development) are handy references for parents and health care providers.

We will not use the BMI charts in this course although they are included in the *Growth Record.* In the 0-6 mo charts (pp 29, 30, 31), the first 3 months are plotted in weeks (and 13 weeks make 3 months exactly).

Before starting a new *Growth Record,* verify the child's sex and select the correct growth record for a boy or girl. Ideally the growth record is started for each child at birth so as to enter correct information on date of birth, gestational age, birth weight, length and head circumference. Correct birth information is necessary for correct growth assessment later as it affects age calculation and the interpretation of growth trends. Date of birth of the next younger sibling is entered later if and when the mother gives birth to the next child. Similarly, information on feeding and any adverse events will be entered later as and when the relevant events happen.

Record reason for visit and child's age on the visit day

It is important to know the precise age of the child in order to assess certain growth indicators. Where the exact date of birth is unknown, a local events calendar could be used to establish the child's likely date of birth.

Determine the age of the child on the visit day by using a computerized system (if available) or a "child age calculator." The WHO child age calculator is a rotating disk mounted on a calendar that is turned to calculate a child's age in completed weeks or months in the first year of life. If the child is more than a year old, you will need to mentally calculate the child's completed years and then use the disk to determine the number of additional months completed beyond the completed years.

Locate the date of the visit on the stationary calendar and count on the rotating disk how many months (or weeks if less than 3 months old) the child has completed since birth or the last birthday. Instructions are given on the back of the calculator and in the table below.

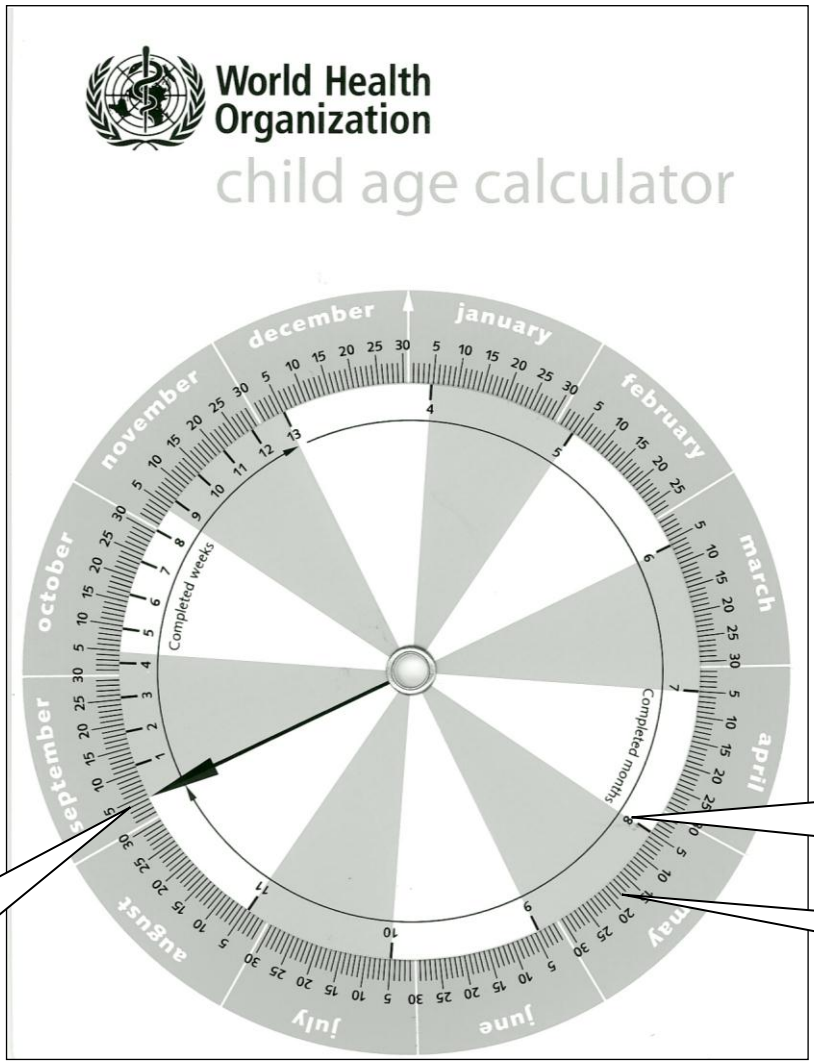
INSTRUCTIONS FOR USE OF THE WHO CHILD AGE CALCULATOR

1. Determine the child's date of birth. This date should already be recorded in the Growth Record on page 1 (Personal Data).
2. Determine and note down the number of full years the child has completed, e.g. ask the mother how many birthdays have been celebrated if this is a local custom. (Note: Simply subtracting the year of birth from the current year will be accurate only if the child has already had a birthday this year.)
   - If the child is one or more years old, you will turn the disk to calculate the number of additional months completed.
   - If the child is less than one year old, you will use the disk to count the number of weeks (in the first 3 months) or months (from 3–11 months) completed since birth.
3. Turn the disk until the bold arrow points to the child's birthday (month and day) on the stationary circular calendar.
4. Locate the date of the visit on the stationary calendar and count on the rotating disk how many months (or weeks if less than 3 months old) the child has completed since birth or the last birthday.
5. Record the child's age today in the Visit Notes of the Growth Record. Use abbreviations agreed upon for year, month, and week.
   - If the child is more than 1 year old, record completed years and months, for example, "1 yr 6 mo," "2 yr 3 mo." If no months have been completed beyond the child's birthday, record as "1 yr 0 mo," "2 yr 0 mo," etc.
   - If the child is between 3 months and 1 year old, record completed months, for example, "4 mo," "11 mo."
   - If the child is less than 3 months old, record completed weeks, for example, "9 wk."[5] Notice that 13 weeks = 3 months.
   - If the child was born on 29 February, place the bold arrow on 28 February.

[5] If a country uses different growth charts that count months rather than weeks from birth, it will not be necessary to record weeks.

Example

Grace Madu is seen at a clinic on 18 May 2006. Her mother has brought her for immunization. Grace's date of birth is already recorded on the Personal Data page of her Girl's Growth Record as 4 September 2005. She has not yet completed one year since birth.



The bold arrow is placed on Grace's birthday, 4 September.

Grace has completed 8 months since birth

Today is 18 May

WRITTEN EXERCISE A: DETERMINING A CHILD'S AGE TODAY AND SELECTING

GROWTH CHARTS TO USE IN THE GROWTH RECORD

In this exercise you will determine the age of several children using the WHO child age calculator. Then you will determine which growth charts in the Growth Record should be used during the child's growth assessment.

Answer the questions about each case described below:

1. On 30 June 2006, Mrs. Ismail brings her son Salaam to the health centre because he has ear pain. The Personal Data page in Salaam's Boy's Growth Record says that he was born on 12 September 2004.

   What is Salaam's age today (30 June 2006), as it should be recorded in the Visit Notes (page 6) of the Boy's Growth Record?

   After weighing and measuring Salaam and recording his weight and length in the Visit Notes, which three growth charts from the Growth Record should the health care provider use for Salaam's growth assessment?

   Title of growth chart: Page number:

   1.

   2.

   3.

2. On 19 April 2006, a girl named Ruby is seen at the health centre for a well-child visit. Ruby's grandmother says that Ruby's Girl's Growth Record has been lost. She says that Ruby will celebrate her first birthday soon, on the first day of May. The health care provider begins a new Girl's Growth Record for Ruby by completing the Personal Data page.

   What is Ruby's date of birth, as it should be recorded on the Personal Data page?

   What is Ruby's age today (19 April 2006), as it should be recorded on the Visit Notes page?

After weighing and measuring Ruby and recording her weight and length in the Visit Notes, which three growth charts should the health care provider use?

Title of growth chart: Page number:

1.

2.

3.

3. On 20 August 2006, a baby boy named Ivan is brought to the health centre for immunization. The boy's birth record says that he was born on 26 May 2006. The health care provider begins a Boy's Growth Record for Ivan by completing the Personal Data page. He then turns to the Visit Notes page to record Ivan's age today.

   What is Ivan's age today (20 August 2006), as it should be recorded on the Visit Notes page?

   After weighing and measuring Ivan and recording his weight and length in the Visit Notes, which three growth charts should the health care provider use?

   Title of growth chart: Page number:

   1.

   2.

   3.

WRITTEN EXERCISE B: CONTINUING CASE STUDIES - NALAH AND TOMAN

In this exercise, you will begin a Growth Record for a girl named Nalah and another for a boy named Toman. You will continue to follow the growth of Nalah and Toman throughout this course. You have been given a Girl's Growth Record and a Boy's Growth Record to use in this and other exercises about Nalah and Toman.

Read the information about each child below and follow the instructions given.

Nalah

Nalah Parab was born on 7 February 2006. She was a single, term birth (38 weeks of pregnancy). According to her birth record, her weight was 2.9 kg and length was 49 cm. Her head circumference was not measured.

Nalah's parents are Hamid and Shira Parab. Their address is at 40 Rim Road. Nalah is the first and only child born to her mother. She is breastfed, but she has also been taking some water since she was 3 weeks old. There have been no unusual adverse events in her life so far.

The date of Nalah's visit to the health centre is 25 March 2006. Her mother has brought her for immunization.

Instructions:

1. Complete the Personal Data page of the Girl's Growth Record for Nalah. (You may make up a record number.)

2. In the Visit Notes section of the Girl's Growth Record, record Nalah's date of birth. On the first row, enter the date of Nalah's visit, her age on the visit day, and the reason for her visit.

3. List below the titles and page numbers of the three growth charts that the health care provider should use during Nalah's growth assessment.

Title of growth chart:	Page number:
1.	
2.	
3.	

Toman

Toman Baruni comes to the health centre with his mother, Salwa Baruni, on 15 August 2006 for a well-child visit. Mrs Baruni thinks that it must be time for Toman to have another immunization, but she has lost his Growth Record, so she is not sure. She says that his last visit to the health centre was at 6 months, and he had received all of his immunizations at that point.

In order to start a new Boy's Growth Record, the health care provider asks Mrs Baruni about Toman's birth. Mrs Baruni says that Toman was born on 10 July 2005. He was a single, term birth and weighed 3.5 kg. She does not remember his length or head circumference.

Mrs Baruni was sick at Toman's birth, and Toman was given infant formula by the nurses for 3 days in the hospital. After leaving the hospital Mrs Baruni breastfed Toman, but she stopped after 3 months.

Toman is Mrs Baruni's second child. He lives with her at 100 Centre Street, Apartment 22. Mrs Baruni's first child was born of a different husband and lives with him. Toman has no younger siblings. Mrs Baruni is separated from Shaka Baruni, but Toman spends weekends with his father. Mrs Baruni does not think that the separation has been traumatic for Toman.

Instructions:

1. Complete the Personal Data page of the Boy's Growth Record for Toman. (You may make up a record number.)

2. Above the Visit Notes section of the Boy's Growth Record, record Toman's date of birth for easy reference. On the first row, enter the date of Toman's visit, his age on the visit day, and the reason for his visit.

3. List below the titles and page numbers of the three growth charts that the health care provider should use during Toman's growth assessment.

Title of growth chart:	Page number:
1.	
2.	
3.	

When you have finished this exercise, review your answers with a facilitator.

Written Exercise C: Continuing case studies - Nalah and Toman -- Homework :

In Exercise B you began a Girl's Growth Record for Nalah and a Boy's Growth Record for Toman. In this exercise you will enter additional information from a series of visits by each child on the Visit Notes page, and determine age at each visit.

Nalah

On the Visit Notes page of Nalah's Girl's Growth Record, you have already recorded some information from her visit of 25 March 2006, when she was 6 weeks old. Open her Growth Record to the Visit Notes.

1. Nalah's weight at 6 weeks was 3.5 kg and her length was 51.3 cm. Record her weight and length at 6 weeks on the Visit Notes page.
2. Following is information from four subsequent visits by Nalah. Enter this information on the Visit Notes page. Determine Nalah's age at each visit and enter that as well.

Date of visit	Weight	Length	Reason for visit
20 April 2006	4.2 kg	54.8 cm	immunization
22 May 2006	4.3 kg	54.8 cm	diarrhoea
26 June 2006	4.8 kg	56.2 cm	immunization
15 August 2006	5.4 kg	58.1 cm	well-baby visit

Toman

On the Visit Notes page of Toman's Boy's Growth Record, you have already recorded some information from his visit of 15 August 2006, when he was 1 year and 1 month old. Open his Growth Record to the Visit Notes.

1. Toman's weight at 1 year and 1 month old was 11.9 kg and his length was 79.0 cm. Record his weight and length at this age on the Visit Notes page.
2. Following is information from three subsequent visits by Toman. Enter this information on the Visit Notes page. Determine Toman's age at each visit and enter that as well.

Date of visit	Weight	Length/Height	Reason for visit
15 December 2006	13.5 kg	84.5 cm	well-child visit
16 March 2007	15.0 kg	87.0 cm	ear pain
12 July 2007	16.8 kg	90.9 cm	well-child visit

When you have finished this exercise,
review your answers with a facilitator.

Notes

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Session 6

Measuring weight, length and height

Objectives

After completing this session participants will be able to:

- Use the available weighing and measuring equipment
- Weigh a child
- Measure length
- Measure height

This is a practical session beginning with how to use the measuring equipment and an introduction to taking the actual measurements. The instructions given here are also available in the job aid titled W*eighing and Measuring a Child* that is part of the growth assessment course.

Measuring weight

It is recommended to weigh children using a scale with the following features:

- Solidly built and durable
- Electronic (digital reading)
- Measures up to 150 kg
- Measures to a precision of 0.1 kg (100g)
- Allows tared weighing

"Tared weighing" means that the scale can be re-set to zero ("tared") with the person just weighed still on it. Thus, a mother can stand on the scale, be weighed, and the scale tared. While remaining on the scale, if she is given her child to hold, the child's weight alone appears on the scale. Tared weighing has two clear advantages:

- There is no need to subtract weights to determine the child's weight alone (reducing the risk of error).
- The child is likely to remain calm when held in the mother's arms for weighing.

There are many types of scales currently in use. The UNISCALE (made by UNICEF) has the recommended features listed above and is used in this course to demonstrate weighing techniques.

It is powered by a lithium battery that is good for a million measurement sessions. The scale has a solar on-switch, so it requires adequate lighting to function. Footprints may be marked on the scale to show where a person should stand. How to weigh a child using the UNISCALE or a similar model is described in the following sections.

A taring scale is easy to use and reliable. However, there are other types of scales that may be reliable, for example, an electronic baby scale, or a paediatric beam balance that has been calibrated. Children who can stand alone can be weighed standing on a scale. Otherwise, the mother can be weighed alone; then the mother and child can be weighed together and the mother's weight subtracted to determine the child's weight.

Bathroom scales are not recommended as they tend to be unreliable. Hanging scales are also not reliable when weighing agitated babies.

Prepare for weighing

Explain to the mother the reasons for weighing the child, for example, to see how the child is growing, how the child is recovering from a previous illness, or how the child is responding to changes that have been made in his feeding or care.

If the child is less than 2 years old or is unable to stand, you will do tared weighing. Explain the tared weighing procedure to the mother as follows. Stress that the mother must stay on the scale until her child has been weighed in her arms.

The mother will remove her shoes and step on the scale to be weighed alone first. She may need to adjust any long garments that could cover the display and solar panel of the scale. After the mother's weight appears on the display, tell her to remain standing on the scale.

Re-set the reading to zero by covering the solar panel of the scale (thus blocking out the light). Then give the mother her child to hold. The child's weight will appear on the scale. Record the child's weight.

If the child is 2 years or older, you will weigh the child alone if the child will stand still. Explain that the child will need to step on the scale alone and stand very still.

Undress the child. Explain that child needs to remove outer clothing in order to obtain an accurate weight. A wet diaper, or shoes and jeans, can weigh more than 0.5 kg. Babies should be weighed naked; wrap them in a blanket to keep them warm until weighing. Older children should remove all but minimal clothing, such as their underclothes.

If it is too cold to undress a child, or if the child resists being undressed and becomes agitated, you may weigh the clothed child, but note in the Growth Record that the child was clothed. It is important to avoid upsetting the child so that the length/height measurements can also be taken.

If it is socially unacceptable to undress the child, remove as much of the clothing as possible.

Note: If the child has braids or hair ornaments that will interfere with length/height measurements, remove them before weighing to avoid delay between the measurements. Especially with young children whose length will be measured, it is important to move quickly and surely from the scale to the length board to avoid upsetting the child.

Weigh a child using tared weighing

Be sure that the scale is placed on a flat, hard, even surface. It should not be placed on a loose carpet or rug, but a firm carpet that is glued down is acceptable. Since the scale is solar powered, there must be enough light to operate the scale.

To turn on the scale, cover the solar panel for a second. When the number 0.0 appears, the scale is ready.

Check to see that the mother has removed her shoes. You or someone else should hold the naked baby wrapped in a blanket.

Ask the mother to stand in the middle of the scale, feet slightly apart (on the footprints, if marked), and remain still. The mother's clothing must not cover the display or solar panel. Remind her to stay on the scale even after her weight appears, until the baby has been weighed in her arms.

With the mother still on the scale and her weight displayed, tare the scale by covering the solar panel for a second. The scale is tared when it displays a figure of a mother and baby and the number 0.0.

Gently hand the naked baby to the mother and ask her to remain still. The baby's weight will appear on the display. Record this weight in the Visit Notes of the child's Growth Record. Be careful to read the numbers in the correct order (as though you were viewing while standing on the scale rather than upside-down).

Note: If a mother is very heavy (e.g. more than 100 kg) and the baby's weight is relatively low (e.g. less than 2.5 kg), the baby's weight may not register on the scale. In such cases, have a lighter person hold the baby on the scale.

Note that the scale pictured above weighs with a precision to the nearest 0.1 kg. Precision describes the smallest exact unit that the scale can measure. The accuracy of the measurements, however, depends on whether the scale is calibrated and whether the observer reads the display correctly.

Weigh a child alone

If a child is 2 years old or older and will stand still, weigh the child alone. Ask the mother to help the child remove shoes and outer clothing. Talk with the child about the need to stand still. Communicate with the child in a sensitive, non-frightening way.

To turn on the scale, cover the solar panel for a second. When the number 0.0 appears, the scale is ready. Ask the child to stand in the middle of the scale, feet slightly apart (on the footprints, if marked), and to remain still until the weight appears on the display. Record the child's weight to the nearest 0.1 kg.

If the child jumps on the scale or will not stand still, you will need to use the tared weighing procedure instead.

Measure length or height

Depending on a child's age and ability to stand, measure the child's length or height. A child's length is measured lying down (recumbent). Height is measured standing upright.

If a child is less than 2 years old, measure recumbent length. If the child is aged 2 years or older and able to stand, measure standing height.

In general, standing height is about 0.7 cm less than recumbent length. This difference was taken into account in developing the WHO growth standards used to make the charts in the Growth Record. Therefore, it is important to adjust the measurements if length is taken instead of height, and vice versa.

If a child less than 2 years old will not lie down for measurement of length, measure standing height and add 0.7 cm to convert it to length. If a child aged 2 years or older cannot stand, measure recumbent length and subtract 0.7 cm to convert it to height.

Equipment needed to measure length is a length board (sometimes called an infantometer) which should be placed on a flat, stable surface such as a table. To measure height, use a height board (sometimes called a stadiometer) mounted at a right angle between a level floor and against a straight, vertical surface such as a wall or pillar.

A good length or height board should be made of smooth, moisture-resistant (varnished or polished) wood. The horizontal and vertical pieces should be firmly joined at right angles. A movable piece serves as the footboard when measuring length or the headboard when measuring height. Unless there is a digital counter, a measuring tape should be fixed firmly in a

groove along the length of the board, so that moving parts do not scrape it and rub off the markings. Care of length and height boards is described in section 5.0.

Prepare to measure length or height

Be prepared to measure length/height immediately after weighing, while the child's clothes are off. Check that the child's shoes, socks, and hair ornaments have been removed. Undo braids if they will interfere with the measurement of length/height.
If a baby is weighed naked, a dry diaper can be put back on to avoid getting wet while measuring length. If the room is cool and there is any delay, keep the child warm in a blanket until length/height can be measured.

Whether measuring length or height, the mother is needed to help with measurement and to soothe and comfort the child. Explain to the mother the reasons for the measurement and the steps in the procedure. Answer any questions that she may have. Show her and tell her how she can help you. Explain that it is important to keep the child still and calm to obtain a good measurement.

Measure length

Cover the length board with a thin cloth or soft paper for hygiene and for the baby's comfort.

Explain to the mother that she will need to place the baby on the length board herself and then help to hold the baby's head in place while you take the measurement. Show her where to stand when placing the baby down, i.e. opposite you, on the side of the length board away from the tape. Also show her where to place the baby's head (against the fixed headboard) so that she can move quickly and surely without distressing the baby.

When the mother understands your instructions and is ready to assist:

Ask her to lay the child on his back with his head against the fixed headboard, compressing the hair. Quickly position the head so that an imaginary vertical line from the ear canal to the lower border of the eye socket is perpendicular to the board. (The child's eyes should be looking straight up.) Ask the mother to move behind the headboard and hold the head in this position.

Speed is important. Stand on the side of the length board where you can see the measuring tape and move the footboard.

Check that the child lies straight along the board and does not change position.
Shoulders should touch the board, and the spine should not be arched. Ask the mother to inform you if the child arches the back or moves out of position.

Hold down the child's legs with one hand and move the footboard with the other. Apply gentle pressure to the knees to straighten the legs as far as they can go without causing injury.
Note: it is not possible to straighten the knees of newborns to the same degree as older children. Their knees are fragile and could be injured easily, so apply minimum pressure.

If a child is extremely agitated and both legs cannot be held in position, measure with one leg in position.

While holding the knees, pull the footboard against the child's feet. The soles of the feet should be flat against the footboard, toes pointing upwards. If the child bends the toes and prevents the footboard from touching the soles, scratch the soles slightly and slide in the footboard quickly when the child straightens the toes.

Read the measurement and record the child's length in centimetres to the last completed 0.1 cm in the Visit Notes of the Growth Record. This is the last line that you can actually see. (0.1 cm = 1 mm)

Remember: If the child whose length you measured is 2 years old or more, subtract 0.7 cm from the length and record the result as height in the Visit Notes.

Important: this information will be used later to assess growth so if there are any errors in what you enter here, you will not be able to assess their growth correctly.

Notes

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Session 7

Listening and Learning

Objectives

After completing this session participants will be able to:

- list the six listening and learning skills
- give an example of each skill
- demonstrate the appropriate use of the skills when counselling on infant and young child feeding

Introduction

Counselling is a way of working with people in which you understand how they feel, and help them to decide what they think is best to do in their situation. In this session we will discuss mothers who are feeding young children and how they feel.

Counselling mothers about feeding their infants is not the only situation in which counselling is useful. Counselling skills are useful when you talk to patients or clients in other situations. You may also find them helpful with your family and friends, or your colleagues at work. Practise some of the techniques with them – you may find the result surprising and helpful.

The first two counselling skills sessions are about 'listening and learning'. A mother may not talk about her feelings easily, especially if she is shy, and with someone whom she does not know well. You need the skill to listen, and to make her feel that you are interested in her. This will encourage her to tell you more. She will be less likely to 'turn off', and say nothing.

Skill 1. Use helpful non-verbal communication

'Non-verbal communication' means showing your attitude through your posture, your expression, everything except through speaking. Helpful non-verbal communication makes a mother feel that you are interested in her, so it helps her to talk to you.

Skill 2. Ask open questions

Open questions are very helpful. To answer them a mother must give you some information. Open questions usually start with 'How? What? When? Where? Why?'
For example: "How are you feeding your baby?"

Closed questions are usually less helpful. They tell a mother the answer that you expect, and she can answer them with a 'Yes' or 'No'. They usually start with words like 'Are you?', 'Did he?', 'Has he?', 'Does she?' For example: "Did you breastfeed your last baby?" If a mother says "Yes" to this question, you still do not know if she breastfed exclusively, or if she also gave some artificial feeds.

To start a conversation, general open questions are helpful.
For example: "Tell me about your baby?"
To continue a conversation, a more specific open question may be helpful.
For example: "How old is your baby now?"

Sometimes it is helpful to ask a closed question, to make sure about a fact.
For example: "Are you giving him any other food or drink?"
If she says "Yes", you can follow up with an open question, to learn more.
For example: "What made you decide to do that?"

Skill 3. Use responses and gestures which show interest

Another way to encourage a mother to talk is to use gestures such as nodding and smiling, and simple responses such as "Mmm", or "Aha". They show a mother that you are interested in her.

Skill 4. Reflect back what the mother says

'Reflecting back' means repeating back what a mother has said to you, to show that you have heard, and to encourage her to say more. Try to say it in a slightly different way. For example, if a mother says: "I don't know what to give my child, she refuses everything."
You could say: "Your child is refusing all the food you offer her?"

Skill 5. Empathize - show that you understand how she feels

Empathy or empathizing means showing that you understand how a person feels.
For example, if a mother says: "My baby wants to feed very often and it makes me feel so tired," you could say: "You are feeling very tired all the time then?"

This shows that you understand that she feels tired, so you are empathizing.
If you respond with a factual question, for example, "How often is he feeding? What else do you give him?" you are not empathizing.

Skill 6. Avoid words which sound judging

'Judging words' are words like: right, wrong, well, badly, good, enough, properly. If you use these words when you ask questions, you may make a mother feel that she is wrong, or that there is something wrong with her baby. However, sometimes you need to use the 'good' judging words to build a mother's confidence (see Session 12 'Building confidence and giving support').

HELPFUL NON-VERBAL COMMUNICATION

- Keep your head level
- Pay attention
- Remove barriers
- Take time
- Touch appropriately

LISTENING AND LEARNING SKILLS

- Use helpful non-verbal communication
- Ask open questions
- Use responses and gestures which show interest
- Reflect back what the mother says
- Empathize - show that you understand how she feels
- Avoid words which sound judging.

Notes

Session 8 - Homework

Listening and Learning Exercises

Exercise 8.a Asking open questions

How to do the exercise:
Questions 1-4 are 'closed' and it is easy to answer 'yes' or 'no'.
Write a new 'open' question, which requires the mother to tell you more.

Example:

'Closed' Questions	**'Open' Questions**
Do you breastfeed your baby?	*How are you feeding your baby?*

To answer:

'Closed' Questions	**'Open' Questions**
1. Does your baby sleep with you?	
2. Are you often away from your baby?	
3. Does Sara eat porridge?	
4. Do you give fruit to your child often?	

Exercise 8.b Reflecting back what a mother says

How to do the exercise:
Statements 1-3 are some things that mothers might tell you.
Underneath 1-3 are three responses. Mark the response that 'reflects back' what the statement says. For statement 4 make up your own response which 'reflects back' what the mother says.

Example:

My mother says that I don't have enough milk.

a) Do you think you have enough?

b) Why does she think that?

✓ c) She says that you have a low milk supply?

To answer:

1. Mika does not like to take thick porridge.

a) Mika does not seem to enjoy thick foods?

b) What foods have you tried?

c) It is good to give Mika thick foods as he is over six months old.

2. He doesn't seem to want to suckle from me.

a) Has he had any bottle feeds?

b) How long has he been refusing?

c) He seems to be refusing to suckle?

3. I tried feeding him from a bottle, but he spat it out.

a) Why did you try using a bottle?

b) He refused to suck from a bottle?

c) Have you tried to use a cup?

4. “My husband says our baby is old enough to stop breastfeeding now.”

Exercise 8.c Empathizing - to show that you understand how she feels

How to do the exercise:
Statements 1-4 are things that mothers might say.
Underneath statements 1-4 are three responses that you might make.
Underline the words in the mother’s statement which show something about how she feels. Mark the response that is most empathetic.
For stories 5 and 6 underline the feeling words, then make up your own empathizing response.

Example:

My baby wants to feed so often at night that I feel exhausted.

a. How many times does he feed altogether?

b. Does he wake you every night?

✓ c. You are really tired with the night feeding.

To answer:

1. James has not been eating well for the past week. I am very worried about him.

a. You are anxious because James is not eating?

b. What did James eat yesterday?

c. Children often have times when they do not eat well.

2. My breast milk looks so thin - I am afraid it is not good.

a. That's the foremilk - it always looks rather watery.

b. You are worried about how your breast milk looks?

c. Well, how much does the baby weigh?

3. I feel there is no milk in my breasts, and my baby is a day old already.

   a. You are upset because your breast milk has not come in yet?

   b. Has he started suckling yet?

   c. It always takes a few days for breast milk to come in.

4. I am anxious as sit seems that my daughter is smaller than other children her age.

   a. I can see you are worried about the growth of your baby?

   b. Would you like me to explain to you about how children grow and what affects their length?

   c. What have you heard about how frequently to check the growth of children of your daughter's age?

5. Angelique brings Sammy to see you. He is nine months old. Angelique is worried. She says: "Sammy is still breastfeeding and I feed him three other meals a day, but I am so upset, he still looks so thin." What would you say to Angelique to empathize with how she feels?

6. Catherine comes to the clinic. She is pregnant with her first baby and has found out she has HIV. She says: "I am so frightened that my mother-in-law might find out". What would you say to Catherine to empathize with how she feels?

Exercise 8.d Translating judging words

JUDGING WORDS			
Well	**Normal**	**Enough**	**Problem**
good	correct	adequate	fail
bad	proper	inadequate	failure
badly	right	satisfied	succeed
	wrong	plenty of	success
		sufficient	

USING AND AVOIDING JUDGING WORDS			
English	**Local language**	**Judging question**	**Non-judging question**
Well		Does he suckle well?	
Normal		Are his stools normal?	
Enough		Is he gaining enough weight?	
Problem		Do you have any problems breastfeeding?	

Notes

Session 9

Practical Session 1

Listening and Learning
Measuring children

Objectives

After completing this session participants will be able to:

- demonstrate appropriate listening and learning skills when talking with a mother while measuring her child
- weight children
- measure length
- measure height

These notes are a summary of the instructions that the trainer will give you about how to do the practical session. Try to make time to read them to remind you about what to do during the session. During the practical session, you work in small groups, and take turns to talk to a mother, while the other member(s) of the group observe.

What to take with you:

- one copy of LISTENING AND LEARNING SKILLS CHECKLIST
- the MEASURING WEIGHT, LENGTH AND HEIGHT WORKSHEET
- pencil and paper to make notes
- you do not need to take books or manuals

If you are the one who talks to the mother:

Introduce yourself to the mother, and ask permission to talk to her. Introduce the group, and explain that you are interested in measuring children to assess how they grow.

Practise as many of the listening and learning skills as possible. Try to get the mother to tell you about herself, her situation and her child. You can talk about ordinary life, not only the measuring of her child.

You will start by determining the child's date of birth, then age, etc. You should record results on the MEASURING WEIGHT, LENGTH AND HEIGHT WORKSHEET (page 57 of your manual).

If a mother is extremely heavy, you may need to ask a lighter adult to hold the child on a taring scale.

Check your measurement results by comparing with those of others who measured the same children. Consult with a facilitator if there are discrepancies that you cannot resolve.

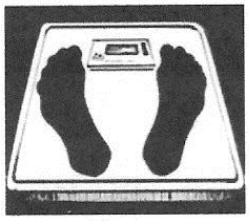
Once you have finalized, thank the mother for her time and say something to praise and support her

If you are observing:

Stand quietly in the background. Try to be as still and quiet as possible. Do not comment, or talk among yourselves.

Make general observations of the conversation between the mother and the participant. Notice for example: Who does most of the talking? Does the participant ask open questions? Does the mother talk freely, and seem to enjoy it?

Make specific observations of the participant's listening and learning skills, including non-verbal communication. Mark a ✓ on your LISTENING AND LEARNING SKILLS CHECKLIST when he/she uses a skill, to help you to remember for the discussion. Notice if she makes a mistake, for example if she uses a judging word, or if she asks a lot of questions to which the mother says 'yes' and 'no'.



Practical Session 1

Measuring weight, length, and height worksheet

This will be a practical exercise in a clinic setting, or in the classroom if children and measuring equipment can be brought there. The mothers should be present, if possible, to tell the children's dates of birth and to assist with measuring and reassuring them.

Your facilitator will assign you to work in pairs. Each pair should do the following steps for at least two children, one who is less than 2 years old and one who is 2–5 years old.

- Review records or ask the mother to determine the child's name, sex, and date of birth. Record this information in the inset box below on the left.
- Use the age calculator to determine the child's age today.
- Make a visual assessment of the child (e.g. does the child appear thin, fat, active, lethargic)?
- Observe the child for signs of marasmus or kwashiorkor. If there is any apparent oedema, test for oedema of both feet.
- Weigh the child.
- Measure the child's length or height.

} **Each person take a turn.**

- Record results on the Visit Notes page below.

Visit Notes

	Date	Age today (Completed years/months or weeks)	Measurements (Record below; then plot on charts)		Reason for visit, observations, recommendations
			Weight (kg)	Length/ Height (cm)	
Child 1: **Sex:** **DOB:**					
Child 2: **Sex:** **DOB:**					
Child 3: **Sex:** **DOB:**					
Child 4: **Sex:** **DOB:**					

Notes

Session 10

Measuring: it's not so easy

Objectives

After completing this session participants will be able to:

- Identify common errors in measuring weight, length and height

A series of picture slides will be shown and the group will try to pick out any problems or particular good points they can see on how the various measurements are being taken.

The following are the important points to keep in mind regarding taking measurements:

- Four pieces of information are essential for growth assessment: age, sex, weight and length or height. If any of these is incorrect, the growth assessment will be incomplete or inaccurate.
- For correct age assessment, use any available written records or make a local events calendar to help determine children's ages as precisely as possible. The local events calendar has to be updated regularly.
- Equipment needs to be in good working order and to be calibrated regularly.
- Measuring children requires specific skills, speed and confidence. With practice everyone can improve their measuring skills.

Notes

Session 11

Positioning a Baby at the Breast
Practical Session: Positioning a Baby Using Dolls

Objectives

After completing this session participants will be able to:

- explain the 4 key points of positioning
- describe how a mother should support her breast for feeding
- demonstrate the main positions – sitting, lying, underarm and across
- help a mother to position her baby at the breast, using the 4 key points in different positions

Introduction

Always observe a mother breastfeeding before you help her. Take time to see what she does, so that you can understand her situation clearly. Do not rush to make her do something different.

Give a mother help only if she has difficulty. Some mothers and babies breastfeed satisfactorily in positions that would make difficulties for others. This is especially true with babies more than about two months old. There is no point trying to change a baby's position if he is getting breast milk effectively, and his mother is comfortable.

Let the mother do as much as possible herself. Be careful not to 'take over' from her. Explain what you want her to do. If possible, demonstrate on your own body to show her what you mean.

Make sure that she understands what you do so that she can do it herself. Your aim is to help her to position her own baby. It does not help if you can get a baby to suckle, if his mother cannot.

How to help a mother to position her baby

HOW TO HELP A MOTHER TO POSITION HER BABY

- Greet the mother and ask how breastfeeding is going.
- Assess a breastfeed.
- Explain what might help, and ask if she would like you to show her.
- Make sure that she is comfortable and relaxed.
- Sit down yourself in a comfortable, convenient position.
- Explain how to hold her baby, and show her if necessary.
  The four key points are:
  Baby's head and body in line
  Baby held close to mother's body
  Baby's whole body supported
  Baby approaches breast, nose to nipple.
- Show her how to support her breast:
  With her fingers against her chest wall below her breast
  With her first finger supporting the breast
  With her thumb above
  Her fingers should not be too near the nipple.
- Explain or show her how to help the baby to attach:
  Touch her baby's lips with her nipple
  Wait until her baby's mouth is opening wide
  Move her baby quickly onto her breast, aiming his lower lip below the nipple.
- Notice how she responds and ask her how her baby's suckling feels.
- Look for signs of good attachment. If the attachment is not good, try again.

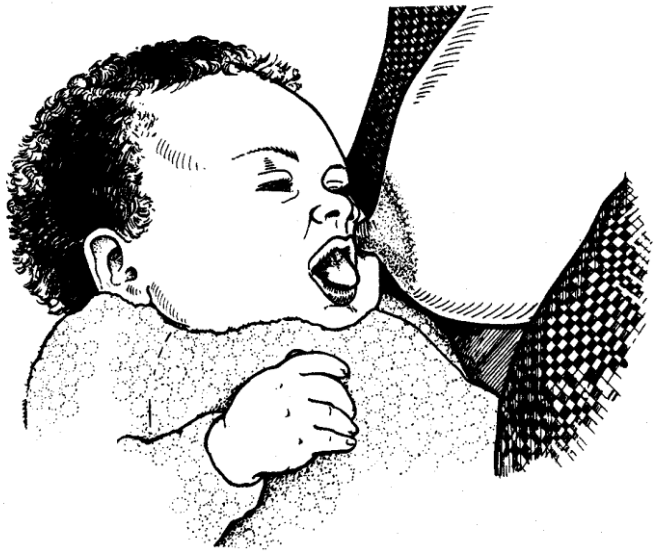


Fig. 11.1
The mother's nipple is touching her baby's lips. He is opening his mouth and putting his tongue forward ready to take the breast.

HOW TO HELP A MOTHER WHO IS SITTING

Greet the mother, introduce yourself, and ask her name and her baby's name. Ask her how she is and ask one or two open questions about how breastfeeding is going.

Assess a breastfeed. Ask if you may see how her baby breastfeeds, and ask her to put him to her breast in the usual way. (If the baby has had a feed recently, you may have to arrange to come back later). Observe the breastfeed.

If you decide that the mother needs help to improve her baby's attachment: First say something encouraging, like: "He really wants your breast milk, doesn't he?"

Then explain what might help and ask if she would like you to show her. For example, say something like: "Breastfeeding might be more comfortable for you if (baby's name) took a larger mouthful of breast when he suckles. Would you like me to show you how?" If she agrees, you can start to help her.

Make sure that she is sitting in a comfortable, relaxed position. Sit down yourself, so that you also are comfortable and relaxed, and in a convenient position to help.

Explain to the mother how to hold her baby. Show her what to do if necessary.

Make these four key points about positioning a baby clear:

- Baby's head and body in line
- Baby held close to mother's body
- Baby's whole body supported
- Baby approaches breast, nose to nipple

Show her how to support her breast with her hand to offer it to her baby:

- She should rest her fingers on her chest wall under her breast, so that her first finger forms a support at the base of the breast (see Fig. 4.2, page 23).
- She can use her thumb to press the top of her breast slightly. This can improve the shape of the breast so that it is easier for her baby to attach well.
- She should not hold her breast too near to the nipple.
- Explain how she should touch her baby's lips with her nipple, so that he opens his mouth.
- Explain that she should wait until her baby's mouth is opening wide, before she moves him onto her breast. His mouth needs to be wide open to take a large mouthful of breast.

Explain or show her how to quickly move her baby to her breast, when he is opening his mouth wide. She should bring her baby to her breast. She should not move herself or her breast to her baby. She should aim her baby's lower lip below her nipple, so that his chin will touch her breast.

Notice how the mother responds. Does she seem to have pain? Does she say "Oh that feels better!" If she says nothing, ask her how her baby's suckling feels. Look for all the signs of good attachment. If the attachment is not good, try again.

HOW TO HELP A MOTHER WHO IS LYING DOWN

Help the mother to lie down in a comfortable, relaxed position. It is better if she is not 'propped up' on her elbow, as this can make it difficult for the baby to attach to the breast.

Show her how to hold her baby. Exactly the same **four key points** are important, as for a mother who is sitting. She can support her baby with her lower arm. She can support her breast if necessary with her upper arm. If she does not support her breast, she can hold her baby with her upper arm.

OTHER POSITIONS IN WHICH A MOTHER CAN BREASTFEED

Mothers breastfeed in many different positions.

Some useful positions that you may want to show mothers are:

- the underarm position
- holding the baby with the arm opposite the breast

Fig. 11.2 A mother holding her baby in the underarm position

Useful for:
- twins
- blocked duct
- difficulty attaching the baby

Fig 11.3 A mother holding her baby with the arm opposite the breast

Useful for:
- very small babies
- sick babies

Fig. 11.4 A mother breastfeeding her baby lying down

Session 12

Building Confidence and Giving Support

Objectives

After completing this session participants will be able to:

- list the 6 confidence and support skills
- give an example of each skill
- demonstrate the appropriate use of the skills when counselling on infant and young child feeding

Introduction

This counselling skills session is about 'building confidence and giving support'. A mother easily loses confidence in herself. This may lead her to feel that she is a failure and give in to pressure from family and friends. You may need these skills to help her to feel confident and good about herself.

It is important not to make a mother feel that she has done something wrong. A mother easily believes that there is something wrong with herself, how she is feeding her child, or with her breast milk if she is breastfeeding. This reduces her confidence.

It is important to avoid telling a mother what to do. Help each mother to decide for herself what is best for her and her baby. This increases her confidence.

Skill 1. Accept what a mother thinks and feels

Sometimes a mother has a *mistaken idea* that you do not agree with. If you disagree with her, or criticize, you make her feel that she is wrong. This reduces her confidence. If you agree with her, it is difficult later to suggest something different.

It is more helpful to *accept* what she thinks. Accepting means responding in a neutral way, and not agreeing or disagreeing. 'Reflecting back' and 'responses and gestures which show interest' are both useful ways to show acceptance, as well as being useful listening and learning skills.

Sometimes a mother feels very upset about something that you know is not a serious problem. If you say something like "Don't worry, there is nothing to worry about!" you make her feel that she is wrong to feel the way that she does. This makes her feel that you do not understand, and it reduces her confidence. If you accept that she is upset, it makes her feel that it is alright to feel the way she does, so it does not reduce her confidence. Empathizing is one useful way to show acceptance of how a mother feels.

Skill 2. Recognize and praise what a mother and baby are doing right

As health workers, we are trained to look for problems. We see only what we think people are doing wrong, and we try to correct them. As counsellors, we must learn to look for and recognize what mothers and babies do right. Then we should praise or show approval of the good practices.

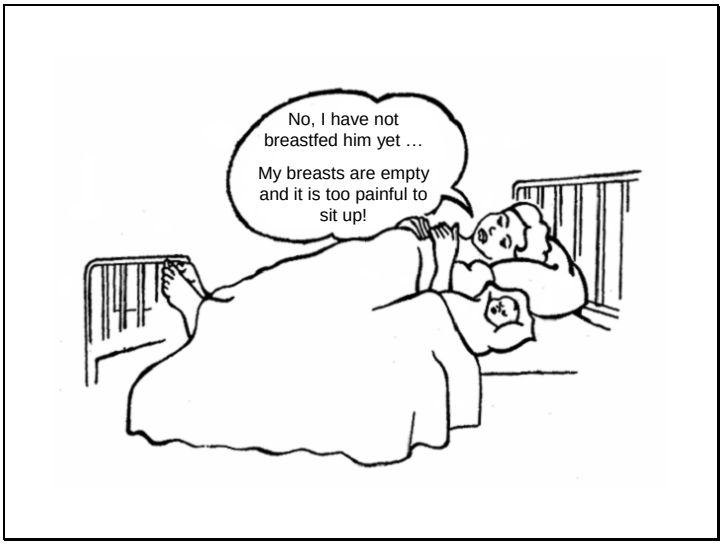
Praising good practices has these benefits:
- It builds a mother's confidence.
- It encourages her to continue those good practices.
- It makes it easier for her to accept suggestions later.

Skill 3. Give practical help

Sometimes practical help is better than saying anything. For example:
- when a mother feels tired or dirty or uncomfortable
- when she is hungry or thirsty
- when she has had a lot of information already
- when she has a clear practical problem.

Some ways to give practical help are these:
- Help to make her clean and comfortable
- Give her a drink, or something to eat
- Hold the baby yourself while she gets comfortable, or washes, or goes to the toilet.

Practical help also includes showing caregivers how to prepare feeds rather than just giving them a list of instructions. It also includes practical help with breastfeeding such as helping a mother with positioning and attaching, expressing breast milk, relieving engorgement or preparing complementary feeds.



Which response is more appropriate?

"You should let the baby suckle now, to help your breast milk to come in."
"Let me try to make you more comfortable, and then I'll bring you a drink."

Skill 4. Give a little, relevant information

Relevant information is information that is useful for a mother **now**.

When you give a mother information, remember these points:

- Tell her things that she can do today, not in a few weeks' time
- Explaining the reason for a difficulty is often the most relevant information when it helps a mother to understand what is happening.
- Try to give only one or two pieces of information at a time, especially if she is tired, and has already received a lot of advice.
- Wait until you have built her confidence, by accepting what she says, and praising what she and her baby do right. You do not need to give new information or to correct a mistaken idea immediately.
- Give information in a positive way, so that it does not sound critical. This is especially important if you want to correct a mistaken idea.

Skill 5. Use simple language

Use simple familiar terms to explain things to mothers. Remember that most people do not understand the technical terms that health workers use.

Skill 6. Make one or two suggestions, not commands

Be careful not to tell or command a mother to do something. This does not help her to feel confident.

Instead, when you counsel a mother, suggest what she could do differently. Then she can decide if she will try it or not. This leaves her feeling in control, and helps her to feel confident.

CONFIDENCE AND SUPPORT SKILLS

- Accept what a mother thinks and feels
- Recognize and praise what a mother and baby are doing right
- Give practical help
- Give a little, relevant information
- Use simple language
- Make one or two suggestions, not commands

Notes

Session 13 - Homework

Building Confidence and Support Exercises – Part 1

Exercise 13.a Accepting what a mother THINKS

How to do the exercise:
Examples 1-2 are mistaken ideas which mothers might hold.
Beside each mistaken idea are three responses. One agrees with the idea, one disagrees, and one accepts the idea, without either agreeing or disagreeing.
Beside each response write whether the response agrees, disagrees or accepts.

Example:

Mother of a six-month-old baby: "My baby has diarrhoea so it is not good to breastfeed now".	"You do not like to give him breast milk just now?"	*Accepts*
	"It is quite safe to breastfeed a baby when he has diarrhoea."	*Disagrees*
	"It is often better to stop breastfeeding a baby when he has diarrhoea."	*Agrees*

Examples 1 and 2:

To answer:

1. Mother of a one-month-old baby: "I give him drinks of water, because the weather is so hot now."	"Oh, that is not necessary! Breast milk contains plenty of water."	
	"Yes, babies may need extra drinks of water in this weather."	
	"You feel that he needs drinks of water sometimes?"	
2. Mother of a nine-month-old baby: "I have not been able to breastfeed for two days, so my milk is sour."	"Breast milk is not very nice after a few days."	
	"You are worried that your breast milk may be sour?"	
	"But milk never goes sour in the breast!"	

How to do the exercise:
Examples 3-5 are some more mistaken ideas which mothers might hold.
Make up one response that accepts what the mother says, without disagreeing or agreeing.

Example:

Mother of a one-week-old baby:
"I don't have enough milk because my breasts are so small".

Possible responses to accept what the mother thinks are:

"Mm. Mothers often worry about the size of their breasts?"

"I see you are worried about the size of your breasts."

"Ah ha"

To answer:

3. "The first milk is not good for a baby - I cannot breastfeed until it has gone."

4. "I don't let him suckle for more than ten minutes, because it would make my nipples sore."

5. "I need to give him formula now that he is two months old. My breast milk is not enough for him now".

Exercise 13.b Accepting what a mother FEELS

How to do the exercise:
After the Stories A and B below, there are three responses.
Mark with a ✓ the response that shows acceptance of how the mother feels.

Example:

Purla's baby boy has a cold and a blocked nose, and is finding it difficult to breastfeed. As Purla tells you about it, she bursts into tears.
Mark with a ✓ the response which shows that you accept how Purla feels.

a. Don't worry - he is doing very well.

b. You don't need to cry - he will soon be better.

✓ c. It's upsetting when a baby is ill, isn't it?

To answer:

Story A.

Marion is in tears. She says that her breasts have become soft again, so her milk must be less, but the baby is only three weeks old.

a. Don't cry - I'm sure you still have plenty of milk.

b. You are really upset about this, I know.

c. Breasts often become soft at this time - it doesn't mean that you have less milk!

Story B.

Dora is very bothered. Her baby sometimes does not pass a stool for one or two days. When he does pass a stool, he pulls up his knees and goes red in the face. The stools are soft and yellowish brown.

a. You needn't be so bothered - this is quite normal for babies.

b. Some babies don't pass a stool for four or five days.

c. It really bothers you when he does not pass a stool, doesn't it?

Exercise 13.c Praising what a mother and baby are doing right

How to do the exercise:
For Story C below, there are three responses. They are all things that you might want to say to the mother.
Mark with a ✓ the response which praises what the mother and baby are doing right, to build the mother's confidence.
For Story D make up your own response to praise the mother.

Example:

A mother is breastfeeding her three-month-old baby, and giving drinks of fruit juice. The baby has slight diarrhoea.

Mark the response which praises what she is doing right.

a. You should stop the fruit juice - that's probably what is causing the diarrhoea.

✓ b. It is good that you are breastfeeding - breast milk should help him to recover

c. It is better not to give babies anything but breast milk until they are about six months old.

To answer:

Story C.

The mother of a three-month-old baby says that he is crying a lot in the evenings, and she thinks that her milk supply is decreasing. The baby gained weight well last month.

a. Many babies cry at that time of day - it is nothing to worry about.

b. He is growing very well - and that is on your breast milk alone.

c. Just let him suckle more often - that will soon build up your milk supply.

Story D.

A four-month-old baby is completely fed on replacement feeds from a bottle. He has diarrhoea. The growth chart shows that he weighed 3.5 kilos at birth, and that he has only gained 200 grams in the last two months. The bottle smells very sour.

Exercise 13.d Giving a little, relevant information

How to do the exercise:
Below is a list of six mothers with babies of different ages.
Beside them are six pieces of information (a, b, c, d, e and f) that those mothers may need; but the information is not opposite the mother who needs it most.
Match the piece of information with the mother and baby in the same set for whom it is MOST RELEVANT AT THAT TIME.

After the description of each mother there are six letters.
Put a circle round the letter which corresponds to the information which is most relevant for her. As an example, the correct answer for Mother 1 is already marked in brackets.

To answer:

Mothers 1-6		Information
1. Mother returning to work	a b c d (e) f	a. Foremilk normally looks watery, and hindmilk is whiter
2. Mother with a 12-month-old baby	a b c d e f	b. Exclusive breastfeeding is best until a baby is six months old
3. Mother who thinks that her milk is too thin	a b c d e f	c. More suckling makes more milk
4. Mother who thinks that she does not have enough breast milk	a b c d e f	d. Colostrum is all that a baby needs at this time
5. Mother with a two-month-old baby who is exclusively breastfed	a b c d e f	e. Night breastfeeds are good for a baby and help to keep up the milk supply
6. A newly delivered mother who wants to give her baby prelacteal feeds	a b c d e f	f. Breastfeeding is valuable for two years or more

Exercise 13.e Using simple language

How to do the exercise:
Below are two pieces of information that you might want to give to mothers.
The information is correct, but it uses technical terms that a mother who is not a health worker might not understand.
Rewrite the information in simple language that a mother could easily understand.

Example:

Information:	**Using simple language:**
Colostrum is all that a baby needs in the first few days.	*The first yellowish milk that comes is exactly what a baby needs for the first few days.*

To answer:

Information:	**Using simple language:**
1. Exclusive breastfeeding is best up to six months of age.	
2. To suckle effectively, a baby needs to be well attached to the breast.	

Exercise 13.f Making one or two suggestions, not commands

How to do the exercise:
Below are some commands which you might want to give to a breastfeeding mother.
Rewrite the commands as suggestions.
The box below gives some examples of ways to make suggestions, not commands. You may find this helpful when doing the exercises below.

MAKING SUGGESTIONS, NOT COMMANDS

Commands use the imperative form of verbs (give, do, bring) and words like always, never, must, should.

Suggestions include:
Have you considered….?
Would it be possible….?
What about trying…to see if it works for you?
Would you be able to?
Have you thought about….? Instead of….?
You could choose between….and….and….
It may not suit you, but some mothers…… a few women….
Perhaps….might work.
Usually….Sometimes….Often….

Example:

Command: "Keep the baby in bed with you so that he can feed at night!"

Suggestions: *"It might be easier to feed him at night if he slept in bed with you."*
"Would it be easier to feed him at night if he slept with you?"

To answer:

1. Command: “Do not give your baby any drinks of water or glucose water, before he is at least six months old!”

Suggestions:

2. Command: “Feed him more often, whenever he is hungry, then your milk supply will increase!”

Suggestions:

Session 14

Plotting points for growth indicators

Objectives

After completing this session participants will be able to:

- Identify axes on growth indicator charts
- Plot single points for height-for-age, weight-for-age and weight-for-height charts

Plot points for growth indicators

Growth charts are provided on pages 27–40 of both the boy's and the girl's *Growth Records*. Select the appropriate Growth Record based on the child's sex. Then select the three charts to use based on the child's age at a given visit. Refer to the table of contents at the beginning of the Growth Record to make the selection. Growth measurements will be plotted on the selected charts (also called line graphs).

Growth indicators are used to assess growth considering together a child's age and measurements. The purpose is to determine whether a child is growing "normally" or has a growth problem or trend towards a growth problem that should be addressed.

In order to plot points, one needs to understand certain terms related to graphs and the plotting convention that applies in this course:

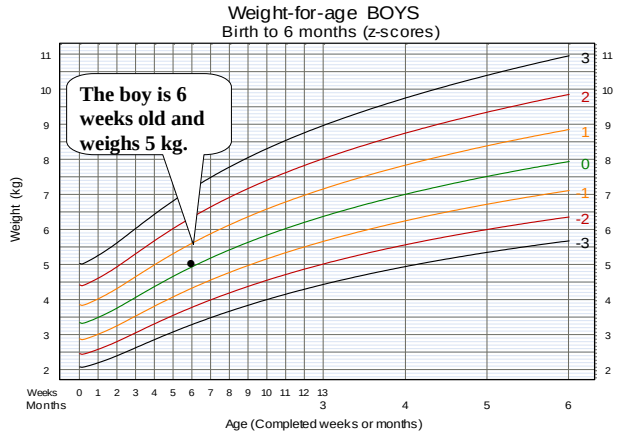
x-axis – the horizontal reference line at the bottom of the graph. In the Growth Record graphs, some x-axes show age and some show length/height. Plot points on vertical lines corresponding to completed age (in weeks, months, or years and months), or to length or height rounded to the nearest whole centimetre.

y-axis – the vertical reference line at the far left of the graph. In the Growth Record graphs, the y-axes show length/height or weight. Plot points on or between horizontal lines corresponding to length/height or weight as precisely as possible.

plotted point – the point on a graph where a line extended from a measurement on the x-axis (e.g. age) intersects with a line extended from a measurement on the y-axis (e.g. weight).

On the example graph below, age (in weeks or months) is on the x axis; weight in kilograms is on the y axis. The horizontal lines represent 0.1 kg (100 g) increments. A point has been plotted for an infant boy who is 6 weeks old and weighs 5 kg.

Example: plotted weight-for-age point



Plot length/height-for-age

Length/height-for-age reflects attained growth in length or height at the child's age at a given visit. This indicator can help identify children who are stunted (short) due to prolonged undernutrition or repeated illness. Children who are tall for their age can also be identified, but tallness is rarely a problem unless it is excessive and may reflect uncommon endocrine disorders.

Charts for length-for-age for younger age groups (birth to 6 months, and 6 months to 2 years) are given on pages 29 and 33 of the Growth Record. A chart for height-for-age (for children 2-5 years) is given on page 37. In each of these charts, the x-axis shows age, and the y-axis shows length or height in centimetres. Age is plotted in completed weeks from birth until age 3 months; in completed months from 3 to 11 months; and then in completed years and months.

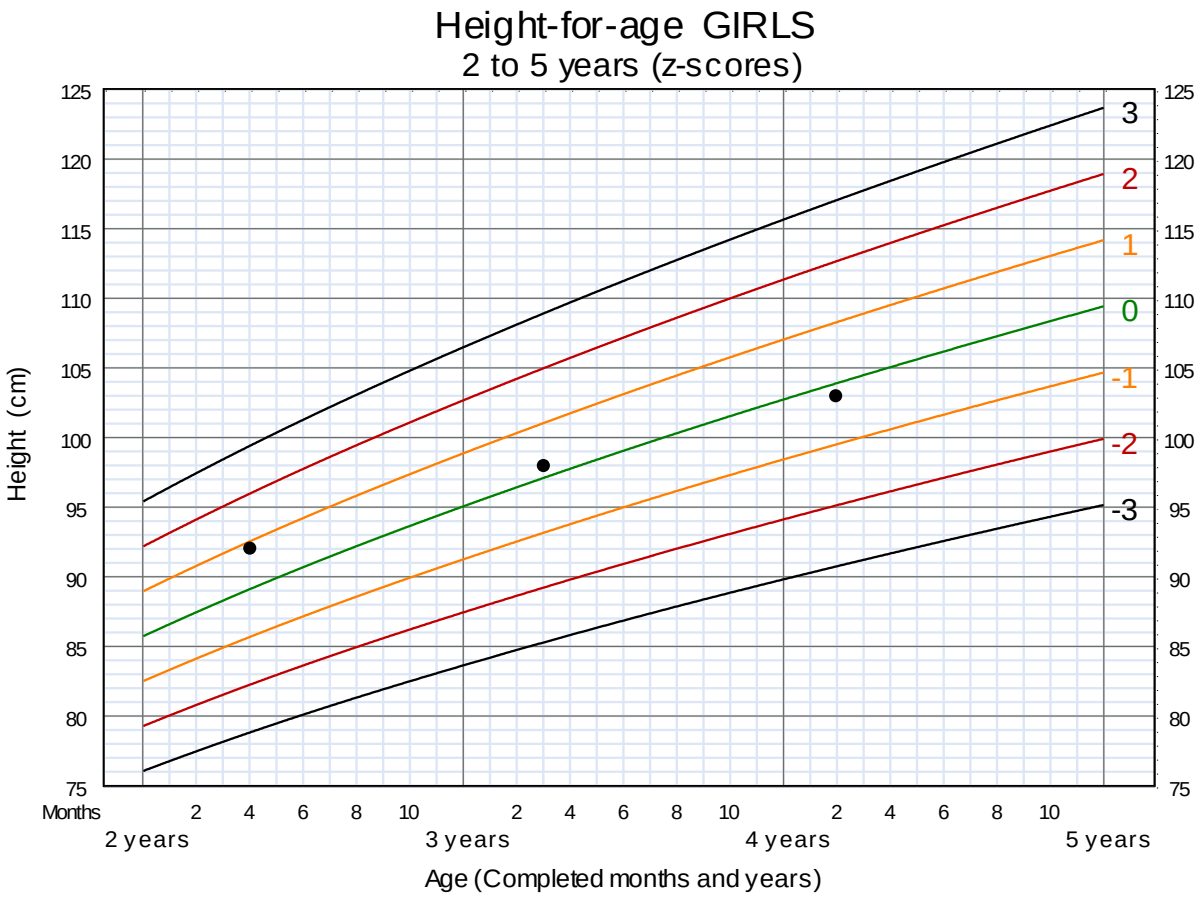
To plot length/height-for-age following the convention of this course, plot completed weeks, months, or years and months on a vertical line (not between vertical lines). For example, if a child is 5 ½ months old, the point will be plotted on the line for 5 months (not between the lines for 5 and 6 months). Plot length or height on or between the horizontal lines as precisely as possible. For example, if the measurement is 60.5 cm, plot the point midway between the horizontal lines 60 and 61 cm.

When points are plotted for two or more visits, connect adjacent points with a straight line to better observe the trend.

Judge whether a plotted point seems sensible, and if necessary, re-measure the child. For example, a baby's length should not be shorter than at the previous visit. If it is, one of the measurements was wrong.

Example – Anna

The following graph shows Anna's height-for-age at three visits. The horizontal lines represent 1 cm increments. At the first visit, Anna was 2 years and 4 months of age and was 92 cm in height.



SHORT ANSWER EXERCISE

1. Connect the plotted points on the growth chart for Anna above.
2. Fill in the blanks in the sentences below to describe the meaning of the points plotted.
   a) At her second visit, Anna was _____ in height at age ____ years and ____ months.
   b) At her third visit, Anna was _____ in height at age ____ years and _____ months.

Plot weight-for-age

Weight-for-age reflects body weight relative to the child's age on a given day. This indicator is used to assess whether a child is underweight or severely underweight, but it is not used to

classify a child as overweight or obese. Because weight is relatively easily measured, this indicator is commonly used, but it cannot be relied upon in situations where the child's age cannot be accurately determined, such as refugee situations. It is important to note also that a child may be underweight either because of short length/height (stunting) or thinness or both.

Note: If a child has **oedema of both feet**, fluid retention increases the child's weight, masking what may actually be very low weight. Plot this child's weight-for-age and weight-for-length/height, but mark clearly on the growth chart (close to the plotted point) that the child has oedema. Such a child is automatically considered severely undernourished and should be referred for specialized care.

Weight-for-age charts for three age groups are given on pages 30, 34, and 38 of the Growth Record. On each of these charts, the x-axis shows age, and the y-axis shows weight in kilograms. Age is plotted in completed weeks from birth until age 3 months; in completed months from 3 to 11 months; and then in completed years and months.

To plot weight-for-age, plot completed weeks, months, or years and months on a vertical line (not between vertical lines). Plot weight on a horizontal line or in the space between lines to show weight measurement to 0.1 kg, e.g. 7.8 kg.

When points are plotted for two or more visits, connect adjacent points with a straight line to better observe trends.

Example – Amahl

The following graph shows weight-for-age at three visits of a boy named Amahl. The horizontal lines represent 0.1 kg (100 g) increments.

SHORT ANSWER EXERCISE

Refer to Amahl's weight-for-age chart above to answer the following questions:

1. How much did Amahl weigh at age 9 months?

2. How old was Amahl at the visit when he weighed a little less than 9 kg?

3. What was Amahl's age and weight at the last visit shown?

4. Plot a point for Amahl's next visit, when he is age 1 year and 11 months and weighs 11.2 kg. Draw a line to connect this visit to the previous one.

Plot weight-for-length/height

Weight-for-length/height reflects body weight in proportion to attained growth in length or height. This indicator is especially useful in situations where children's ages are unknown (e.g. refugee situations). Weight-for-length/height charts help identify children with low weight-for-height who may be wasted or severely wasted. Wasting is usually caused by a recent illness or food shortage that causes acute and severe weight loss, although chronic undernutrition or illness can also cause this condition. These charts also help identify children with high weight-for-length/height who may be at risk of becoming overweight or obese.

Charts for weight-for-length are given on pages 31 and 35 of the Growth Record. The chart for infants from birth to 6 months (page 31) is an enlargement of part of the chart for children from birth to 2 years (page 35); the enlargement is provided to allow more room for plotting and detecting small changes in the growth of infants. A chart for weight-for-height (for children age 2 to 5 years) is given on page 39. In these charts, the x-axis shows length or height in centimetres, and the y-axis shows weight in kilograms.

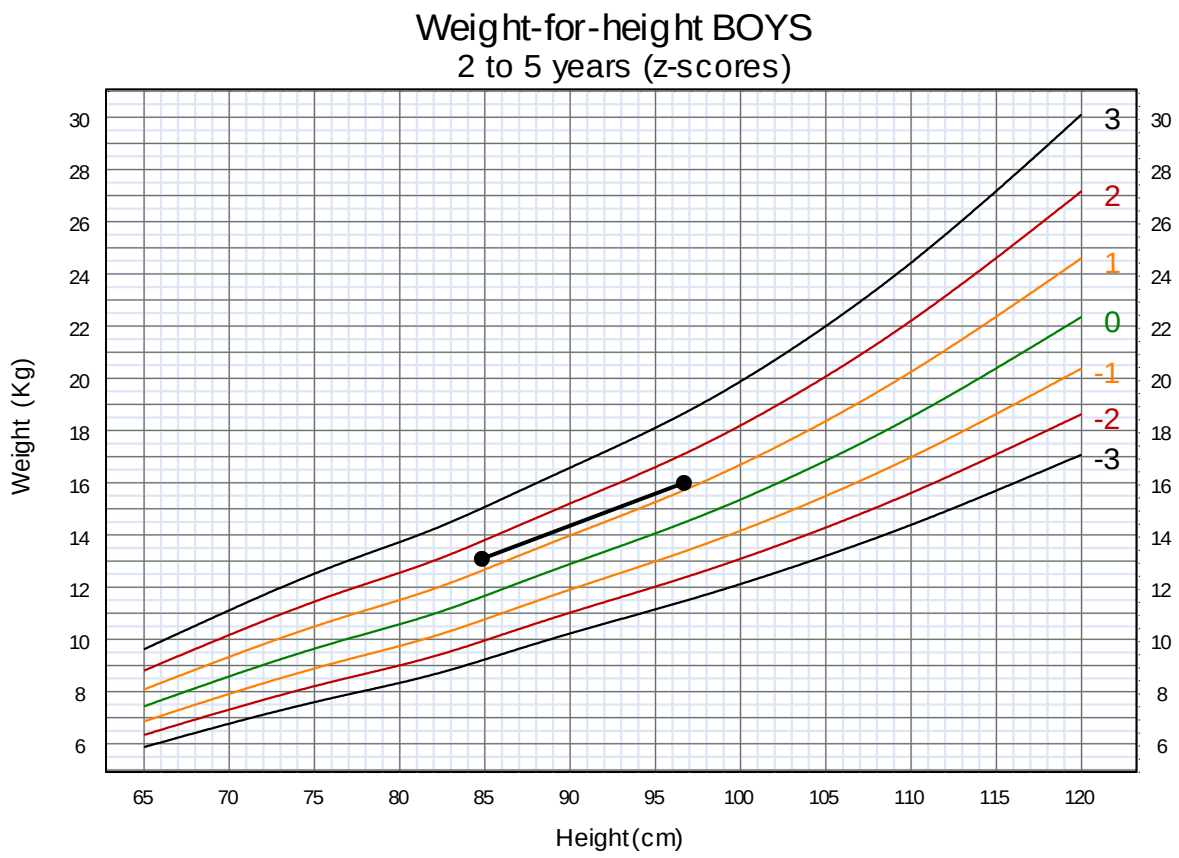
For weight-for-length/height, plot length or height on a vertical line (e.g. 75 cm, 78 cm). It will be necessary to round the measurement to the nearest whole centimetre (i.e. round down 0.1 to 0.4 and round up 0.5 to 0.9), and follow the line up from the x-axis to wherever it intersects with the weight measurement.

Plot weight as precisely as possible given the spacing of lines on the chart.

When points are plotted for two or more visits, connect adjacent points with a straight line to better observe the trend.

Example – Tran

This chart shows Tran's weight-for-height at two visits. The horizontal lines represent 0.5 kg (500 g) increments while the vertical lines represent 1 cm increments. At the first visit, Tran is 2 years and 2 months old. He is 85 cm in height and weighs 13 kg.



SHORT ANSWER EXERCISE

Refer to Tran's weight-for-height chart to answer the following questions:

1. How tall is Tran at the second visit shown on the graph?

2. How much does Tran weigh at the second visit?

3. Plot the point for Tran's next visit, when he is 112 cm tall and weighs 19 kg. Connect the plotted point to the point for previous visit.

Written Exercise D

Continuing Case Studies – Nalah and Toman

In session 5 you began a Girl's Growth Record for Nalah and a Boy's Growth Record for Toman. Get out these Growth Records now. In this exercise you will plot these children's measurements on the appropriate growth charts in each booklet.

Nalah

1. On the Personal Data page of Nalah's Girl's Growth Record, you have recorded her birth weight as 2.9 kg and her length as 49 cm. Look at the Visit Notes in Nalah's Girl's Growth Record. You have recorded information from four clinic visits there, including age, weight and length at each visit.
2. Find the three growth charts suitable for Nalah's age group in the Girl's Growth Record.
3. Use the information from Nalah's Personal Data page and Visit Notes to plot points on each growth chart. Plot and connect points for all five points available for Nalah on each growth chart.

► If you have difficulties, talk with a facilitator at any time.

Toman

1. Look at the Visit Notes page of Toman's Boy's Growth Record. You have recorded information from 4 visits there, including age, weight and length at each visit.
2. Find the three growth charts suitable for Toman's age group in the Boy's Growth Record.
3. Use the information from Toman's Visit Notes to plot points on each growth chart. Plot and connect points for all four visits on each growth chart.

When you have finished this exercise, review your answers with a facilitator.

Notes

Session 15

Interpreting plotted points for growth indicators

Objectives

After completing this session participants will be able to:

- Identify growth problems from plotted points on a single indicator chart
- Define a growth problem using several indicator charts and observations

Interpret plotted points

The curved lines printed on the growth charts will help you interpret the plotted points that represent a child's growth status.

The line labelled 0 on each chart represents the **median**, which is, generally speaking, the average.

The other curved lines are **z-score lines**,[6] which indicate distance from the average. The median and the z-score lines on each growth chart were derived from measurements of children in the WHO Multicentre Growth Reference Study.

Z-score lines on the growth charts are numbered positively (1, 2, 3) or negatively (−1, −2, −3).

In general, a plotted point that is far from the median in either direction (for example, close to the 3 or −3 z-score line) may represent a growth problem

To interpret points, consider other factors, such as the growth trend, the health condition of the child and the height of the parents.

- Next to each growth chart in the Growth Record, there is a list of the growth problems represented by plotted points that are above or below certain z-score lines. Read points as follows:
  - A point between the z-score lines **−**2 and **−**3 is "below **−**2."
  - A point between the z-score lines 2 and 3 is "above 2."

[6] Z-scores may also be called standard deviation (SD) scores. See the annex of this module for a more complete explanation of z-scores or SD scores.

Growth Problems

Compare the points plotted on the child's growth charts with the z-score lines to determine whether they indicate a growth problem. Measurements in the shaded boxes are in the normal range.

Z-score	Growth indicators			
	Length/height-for-age	**Weight-for-age**	**Weight-for-length/height**	**BMI-for-age**
Above 3	*See note 1*	*See note 2*	*Obese*	*Obese*
Above 2			*Overweight*	*Overweight*
Above 1			*Possible risk of overweight (See note 3)*	*Possible risk of overweight (See note 3)*
0 (median)				
Below −1				
Below −2	*Stunted (See note 4)*	*Underweight*	*Wasted*	*Wasted*
Below −3	*Severely stunted (See note 4)*	*Severely underweight (See note 5)*	*Severely wasted*	*Severely wasted*

**The z-score label in this column refers to a range. For example 'above 2' means 2.1 to 3.0; 'median' includes -1.1 to 1.0; 'below -2' refers to -2.1 to -3.0, etc.*

Notes:

1. *A child in this range is very tall. Tallness is rarely a problem, unless it is so excessive that it may indicate an endocrine disorder such as a growth-hormone-producing tumour. Refer a child in this range for assessment if you suspect an endocrine disorder (e.g. if parents of normal height have a child who is excessively tall for his or her age).*

2. *A child whose weight-for-age falls in this range may have a growth problem, but this is better assessed from weight-for-length/height or BMI-for-age.*

3. *A plotted point above 1 shows possible risk. A trend towards the 2 z-score line shows definite risk.*

4. *It is possible for a stunted or severely stunted child to become overweight.*

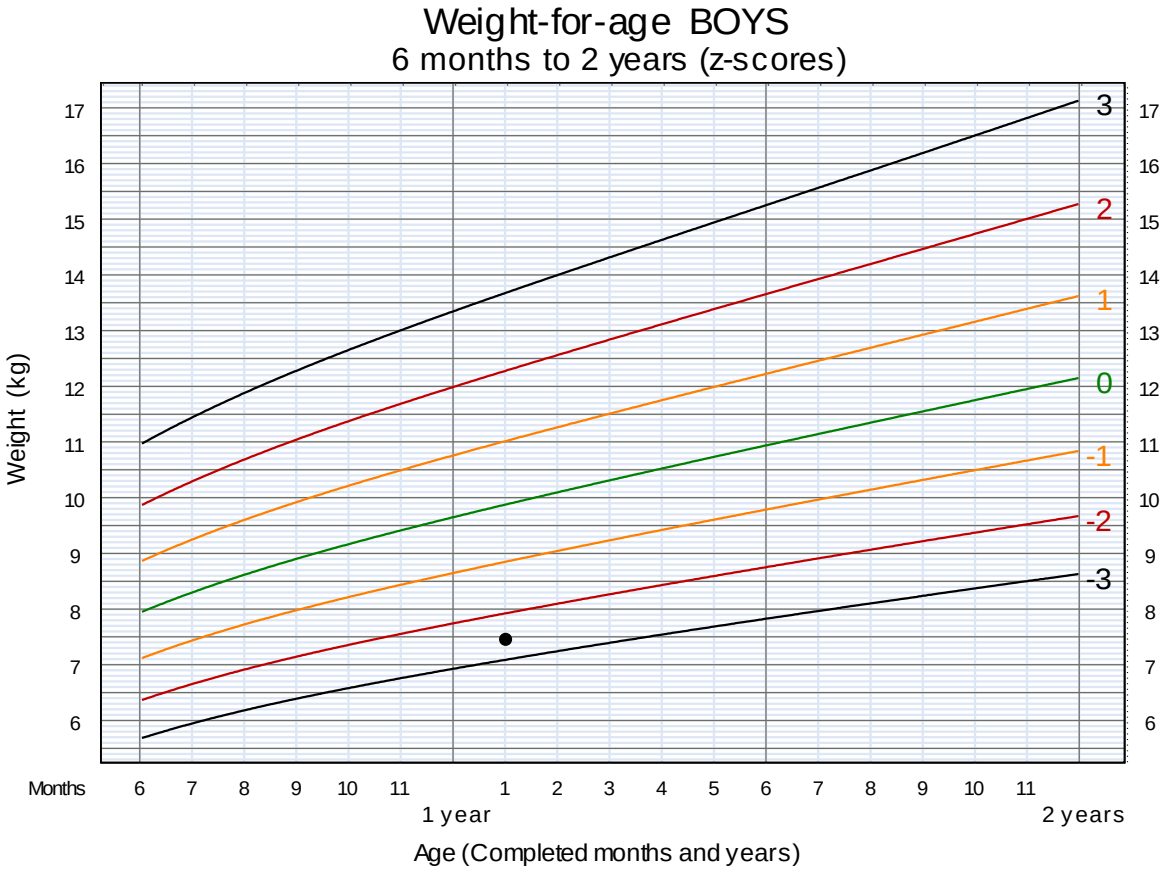
5. *This is referred to as very low weight in IMCI training modules. (Integrated Management of Childhood Illness, In-service training. WHO, Geneva, 1997).*

Study and discussion of examples of some of the growth problems identified above.

The examples are illustrated by selected growth charts and photos to show correspondence between growth indicators and clinical observations. Study the charts and refer as directed to the photos in *E: Photo Booklet* (From the *WHO Training Course on Child Growth Assessment. Geneva, 2008*).

Example – Underweight boy, photo 9

The following weight-for-age chart is for a boy who is 1 year and 1 month old. He weighs 7.5 kg and is 70.3 cm in length. Notice that his weight-for-age is below the −2 z-score line, so he is considered underweight. This boy is pictured in photo 9 in *E: Photo Booklet*. Look at his photo now.

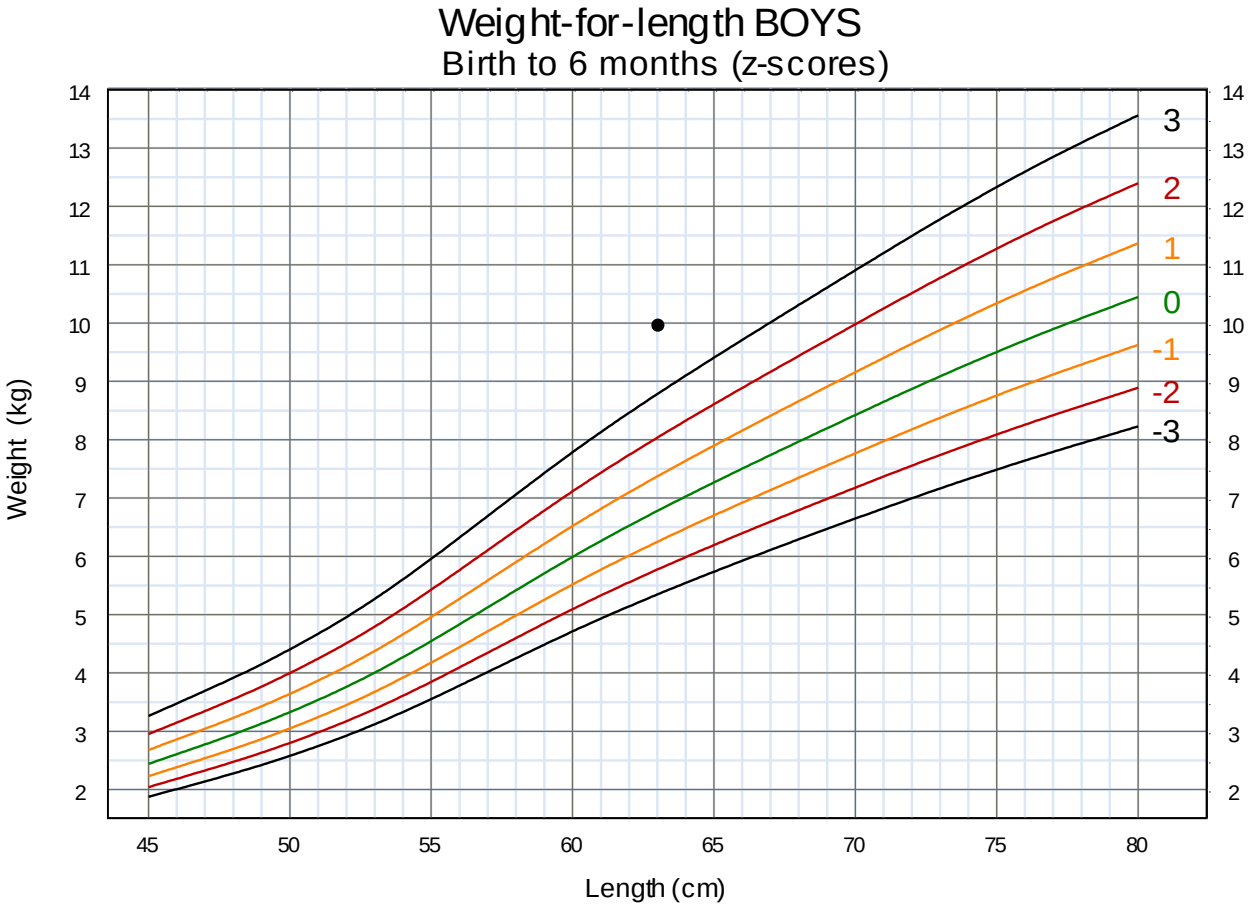


Example – Normal weight boy, photo 10

Look at photo 10 of a boy aged 3 years and 11 months. He weighs 19.5 kg and is 109.6 cm tall. His weight-for-age is above the 1 z-score line, and his height-for-age is above the 1 z-score line (charts not shown). His weight-for-height, shown on the chart below, is in the normal range.

Example – Obese boy, photo 11

Look at photo 11 of a boy who is 3½ months old. He weighs 10 kg and is 63 cm long. On the length-for-age chart he is above the median. His weight-for-length chart, shown below, indicates that he is obese. Notice that his weight-for-length is above the 3 z-score line.



Consider all growth charts and clinical observations

It is important to consider all of a child's growth charts together as their growth problem may be evident in one chart but not the others. For example, if a child is underweight according to the weight-for-age chart, you must also consider the child's length-for-age and weight-for-length.

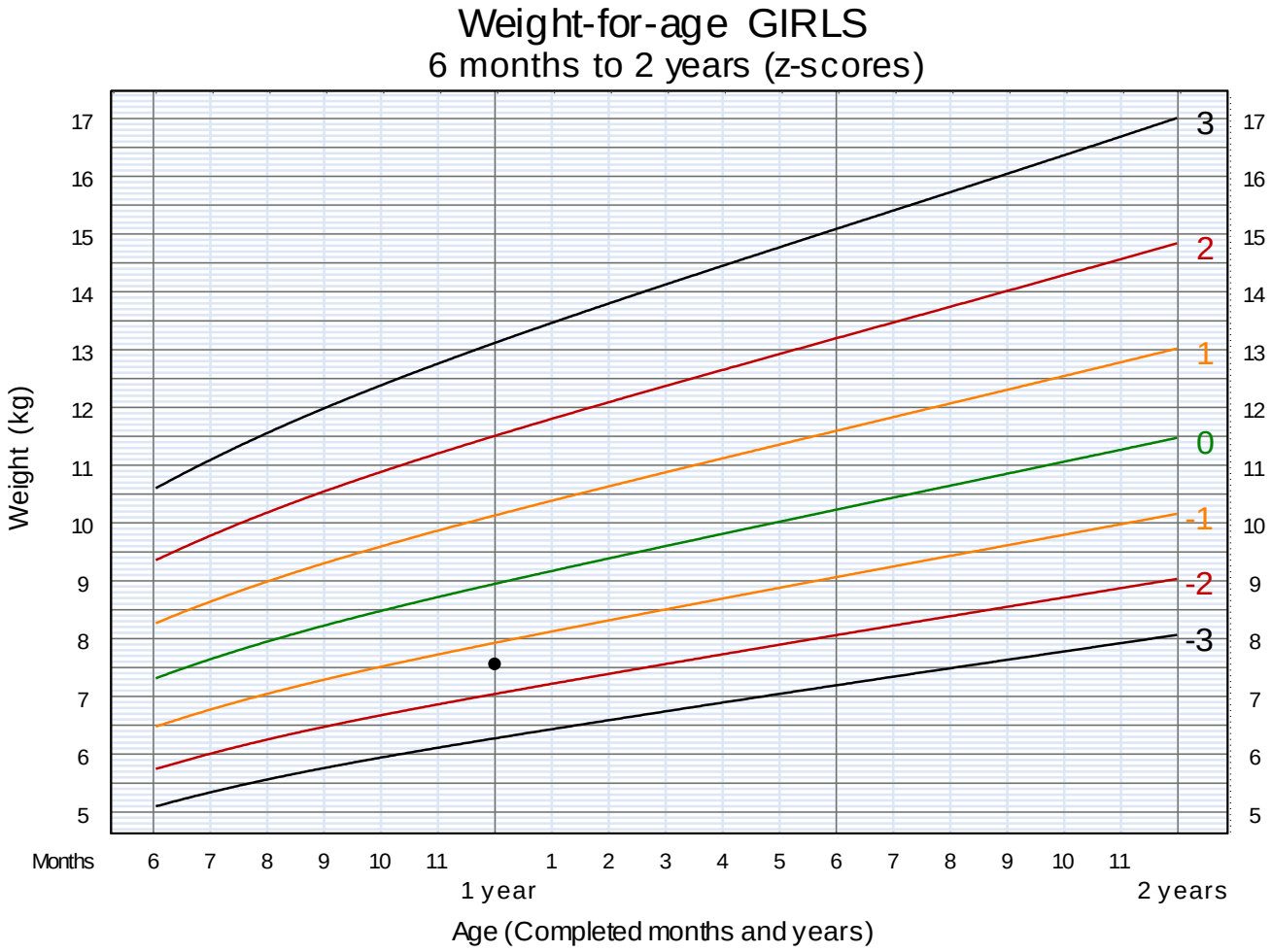
A stunted child may have a normal weight-for-height, but have low weight-for-age due to shortness, hence the recommendation to focus more on the weight-for-length/height and the length/height-for-age charts. Looking at the growth charts all together will help you to determine the nature of growth problems.

Note that weight-for-length/height is usable even when age is not known.

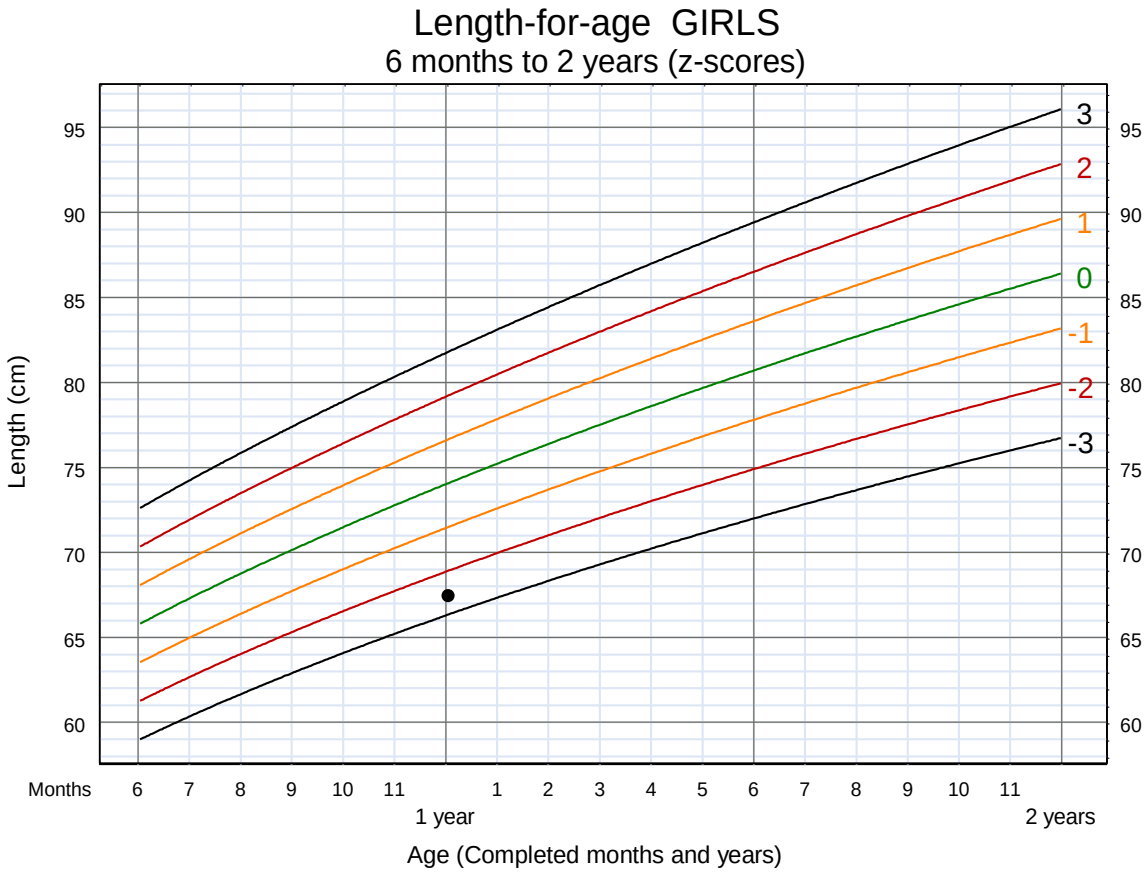
Study and discussion of growth status using various charts and clinical signs.

Example – stunting, photo 12

The girl in photo 12 is aged 1 year 0 months, is 67.8 cm long, and weighs 7.6 kg. Her weight-for-age chart is shown below, and her length-for-age and weight-for-length charts are on the next page. Notice that her weight-for-age is low, but still in the normal range. Her weight-for-length is on the median, so she has a completely normal appearance. Her length-for-age is below the –2 z-score line, however, showing that she is stunted.




Weight-for-length GIRLS
Birth to 2 years (z-scores)
Weight (kg)
Length (cm)
3
2
1
0
-1
-2
-3
2 4 6 8 10 12 14 16 18 20 22 24
45 50 55 60 65 70 75 80 85 90 95 100 105 110


Length-for-age GIRLS
6 months to 2 years (z-scores)
Length (cm)
3
2
1
0
-1
-2
-3
60 65 70 75 80 85 90 95
Months 6 7 8 9 10 11 1 2 3 4 5 6 7 8 9 10 11
1 year
2 years
Age (Completed months and years)

When interpreting the growth charts, remember to consider your observation of the child's appearance. A child who is below –1 in weight-for-length may be fine if he appears lean (fleshed out) rather than wasted (too thin). A child who is above 1 in weight-for-length may be fine if he appears heavy (sturdy, mostly muscular) as opposed to having noticeable fat.

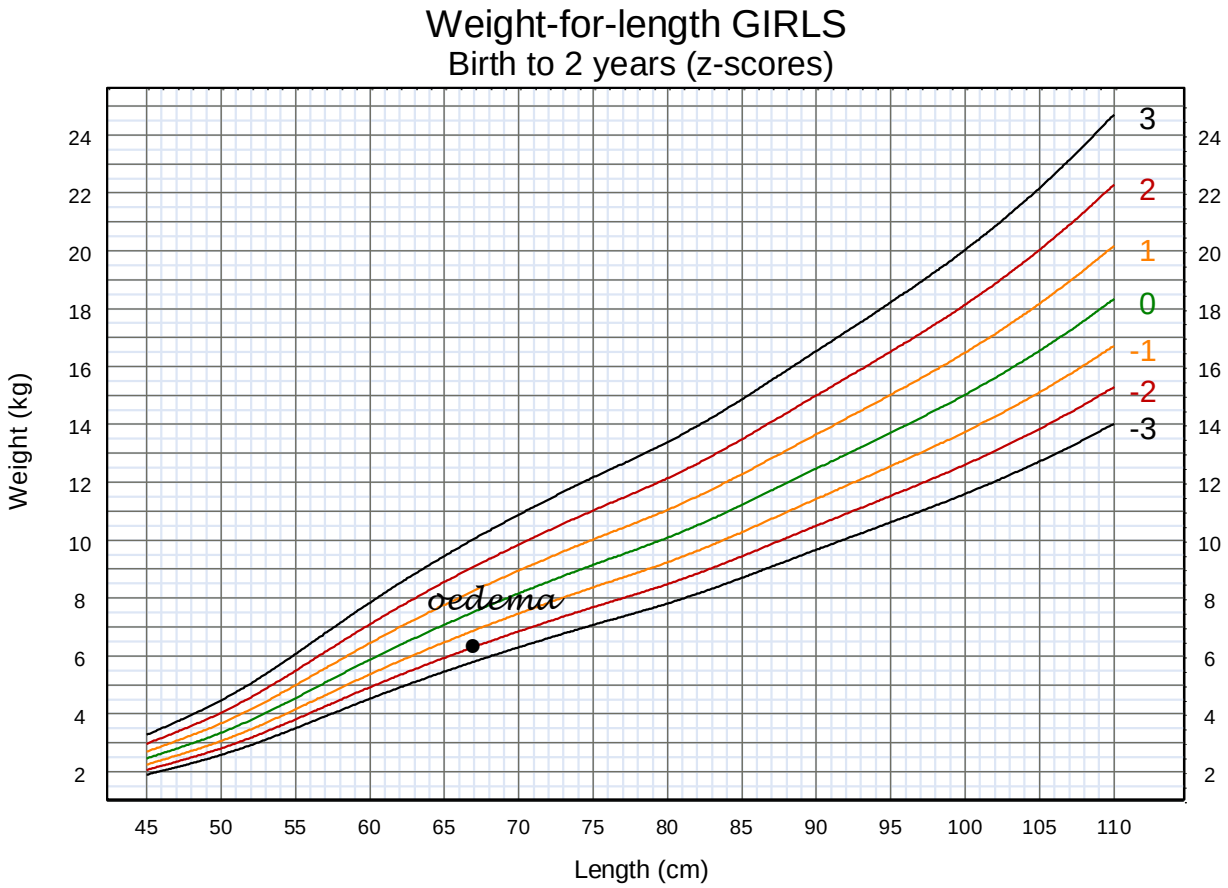
Clinical signs of marasmus and kwashiorkor require special attention. The wasting associated with marasmus (photos 1-3) will be apparent in the child's graphs for weight-for-age and weight-for-length/height. However, the oedema (fluid retention) associated with kwashiorkor (photos 4-8) can hide the fact that a child has very low weight. When you plot the weight of a child who has oedema of both feet, it is important to note on the growth chart that the child has oedema. A child with oedema of both feet is assumed to have a z-score below –3 and should be referred for specialized care.

Example – marasmus, photos 1 and 2

Look at photos 1 and 2, which show a child with marasmus. It is clear that the child needs immediate referral.

Example – oedema of both feet, photo 8

Look at photo 8, which shows a girl with oedema of both feet. She is aged 1 year and 8 months, weighs 6.5 kg and is 67 cm long. Since she has oedema of both feet, she should be referred. Her weight-for-length is graphed below; it appears to be above the –2 z-score line because her fluid retention masks her low weight.



Session 16

Practical Session 2

Building Confidence and Giving Support Positioning a Baby at the Breast

Objectives

After completing this session participants will be able to:

- demonstrate appropriate listening and learning skills when counselling a mother on feeding her infant
- assess a breastfeed using the BREASTFEED OBSERVATION JOB AID
- demonstrate the appropriate confidence and support skills when counselling a mother on feeding her infant
- demonstrate how to help a mother to position and attach her baby at the breast

These notes are a summary of the instructions that the trainer will give you about how to do the practical session. Try to make time to read them to remind you about what to do during the session. During the practical session, you work in small groups, and take turns to talk to a mother, while the other members of the group observe.

What to take with you:

- one copy of the list of COUNSELLING SKILLS CHECKLIST
- two copies each of the BREASTFEED OBSERVATION JOB AID
- pencil and paper to make notes.
- you do not need to take books or manuals

If you are the one who talks to the mother:

Introduce yourself to the mother, and ask permission to talk to her. Introduce the group, and explain that you are interested in infant feeding. Try to find a chair or stool to sit on. If necessary, and if allowed in the facility, sit on the bed.

If the baby is feeding, ask the mother to continue as she is doing. If the baby is not feeding, ask the mother to give a feed in the normal way at any time that the baby seems ready. Ask the mother's permission for the group to watch the feed.

Before or after the breastfeed, ask the mother some open questions about how she is, how the baby is, and how feeding is going, to start the conversation. Encourage the mother to talk about herself and the baby. Practise as many of the listening and learning skills as possible.

In addition, practise as many of the six confidence and support skills as possible. Try to do these things:

- Praise two things that the mother and baby are doing right
- Give the mother two pieces of relevant information that are useful to her now.

If you are observing:

Stand quietly in the background. Try to be as still and quiet as possible. Do not comment, or talk among yourselves.

Make general observations of the mother and baby. Notice for example: Does she look happy? Does she have formula or a feeding bottle with her? Make general observations of the conversation between the mother and the participant. Notice for example: Who does most of the talking? Does the mother talk freely, and seem to enjoy it?

Make specific observations of the participant's listening and learning skills, including her non-verbal communication. Mark a ✓ on your list of COUNSELLING SKILLS CHECKLIST on every skill that your partner uses.

Stay quietly watching the mother and baby as the feed continues. While you observe, fill in a BREASTFEED OBSERVATION JOB AID. Write the name of the mother and baby; mark a ✓ besides each sign that you observe; add the time that the feed takes.

Thank the mother for her time and say something to praise and support her.

MISTAKES TO AVOID

Do not say that you are interested in breastfeeding.
The mother's behaviour may change. She may not feel free to talk about bottle feeding. You should say that you are interested in "infant feeding" or in "how babies feed".

Be careful that the forms do not become a barrier.
The participant who talks to the mother should not make notes while she is talking. She needs to refer to the forms to remind her what to do, but if she wants to write, she should do so afterwards. The participants who are observing can make notes.

It is important that you practise helping a mother to position her baby at the breast, or to overcome any other difficulty. Often you will find that babies are sleepy. In this case you could say to the mother something like: “I see your baby seems to be sleepy now, but can we just go through the way to hold him when he is ready”. Then go through the 4 key points of positioning with the mother, holding her baby. If you do this quite a few babies will wake up and want another feed when their nose is opposite the nipple.

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Session 17

Interpreting trends on growth charts

Objectives

After completing this session participants will be able to:

- Interpret trends on growth charts
- Determine whether a child is growing normally, has a growth problem or is at risk of a growth problem

-

Interpret trends on growth charts

To identify trends in a child's growth, one needs to look at points for growth indicators plotted at a series of visits. Trends may indicate that a child is growing consistently and well, or they may show that a child has a growth problem, or that a child is "at risk" of a problem and should be reassessed soon.

"Normally" growing children follow trends that are, in general, parallel to the median and z-score lines. Most children will grow in a "track," that is, on or between z-score lines and roughly parallel to the median; the track may be below or above the median.

The following situations may indicate a problem or suggest risk:

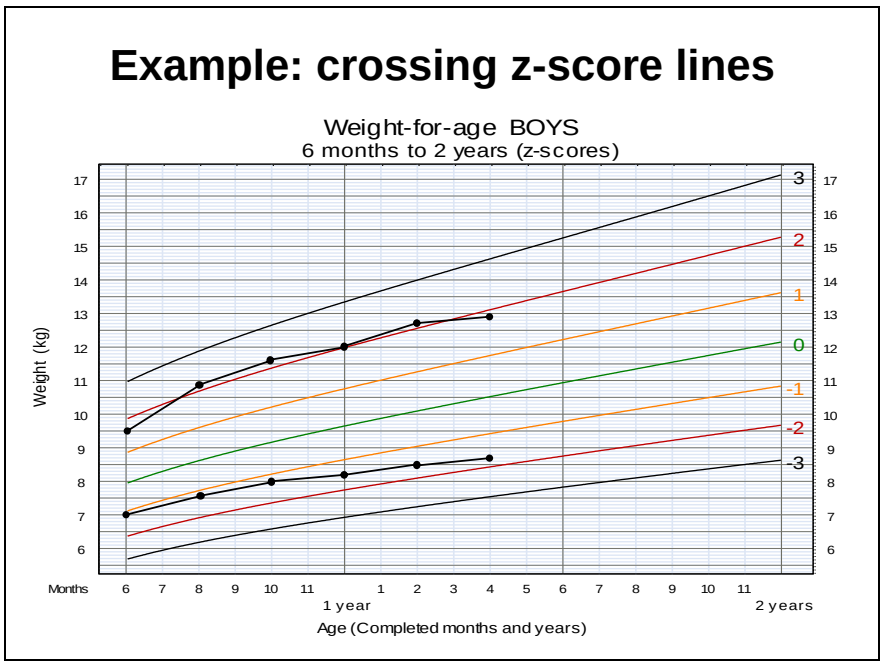
- A child's growth line crosses a z-score line and keeps going.
- There is a sharp incline or decline in the child's growth line.
- The child's growth line remains flat (stagnant); i.e. there is no gain in weight or length/height.

Whether or not the above situations actually represent a problem or risk depends on where the change in the growth trend began and where it is headed. For example, if a child has been ill and lost weight, a rapid gain (shown by a sharp incline on the graph) can be good and indicate "catch-up growth." Similarly, for an overweight child a slightly declining or flat weight growth trend towards the median may indicate desirable "catch-down." It is very important to consider the child's whole situation when interpreting trends on growth charts.

Growth lines that cross z-score lines (not just those that are labelled on the chart) indicate possible risk.

Children who are growing and developing normally will generally be on or between -2 and 2 z-scores of a given indicator.

The growth of an individual child plotted over time is expected to track fairly close to the same z-score.



The figure above presents two theoretical growth lines. In one of the lines growth generally tracks along 2 z-score crossing it from time to time in a pattern that indicates no risk. The other line shows a boy's weight falling away from his expected growth track. Although his growth line remains between -1 and -2 z-score, this child has in fact crossed z-scores following a systematic trend that indicates risk.

A growth line tending towards the median, is probably a good change. If it tends away from the median, this likely signals a problem or risk of a problem.

If the growth line is inclining or declining so that it may cross a z-score line soon, consider whether the change may be problematic. In the example graph, if the trend in the lower growth line continues, it will soon cross the cut-off line (-2 z-score) that defines underweight. If a trend towards stunting, overweight or underweight is noticed in time, it may be possible to intervene in good time to prevent a problem.

Sharp incline or decline

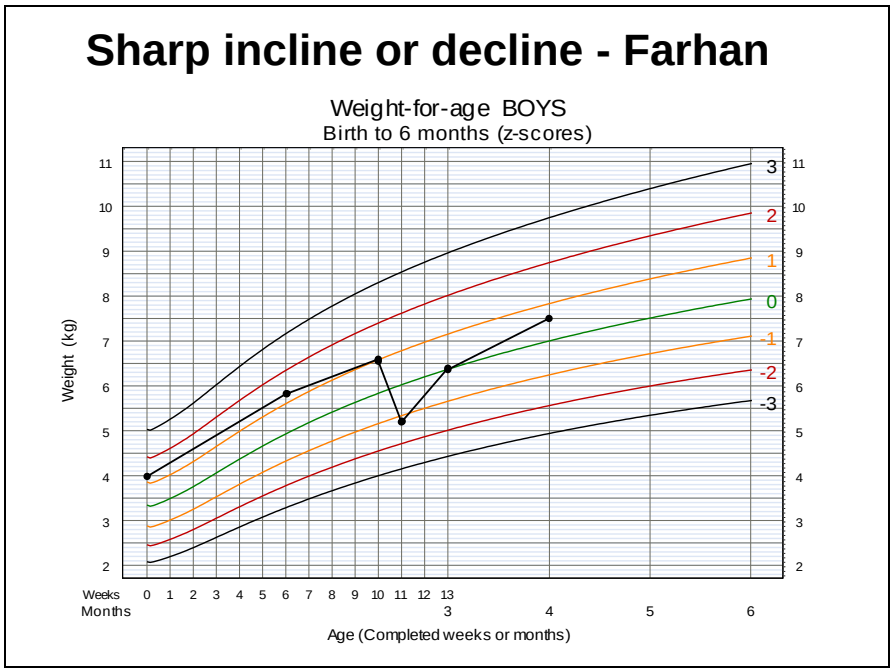
Any sharp incline or decline in a child's growth line requires attention. If a child has been ill or severely undernourished, a sharp incline is expected during the re-feeding period as the child experiences "catch-up" growth. Otherwise, a sharp incline is not good, as it may signal a change in feeding practices that will result in overweight.

If a child has gained weight rapidly, look also at height. If the child grew in weight only, this is a problem. If the child grew in weight and height proportionately, this is probably catch-up growth from previous undernutrition, because of improvement in feeding or cure of previous infection. In this situation, the weight-for-age and height-for-age charts should show inclines, while the weight-for-height growth line tracks steadily along the z-score curves.

A sharp decline in the growth line of a normal or undernourished child indicates a growth problem to be investigated and remedied.

Even if a child is overweight, he or she should not have a sharp decline in the growth line, as losing too much weight rapidly is undesirable. The overweight child should instead maintain his weight while increasing in height; i.e. the child should "grow into his weight."

Example – Farhan:



Farhan's weight-for-age chart shows a sharp decline from age 10 to 11 weeks, when he had diarrhoea and lost 1.3 kg. The chart shows a sharp incline after the episode of diarrhoea, during re-feeding, as Farhan gained back most of the lost weight.

Flat growth line (stagnation)

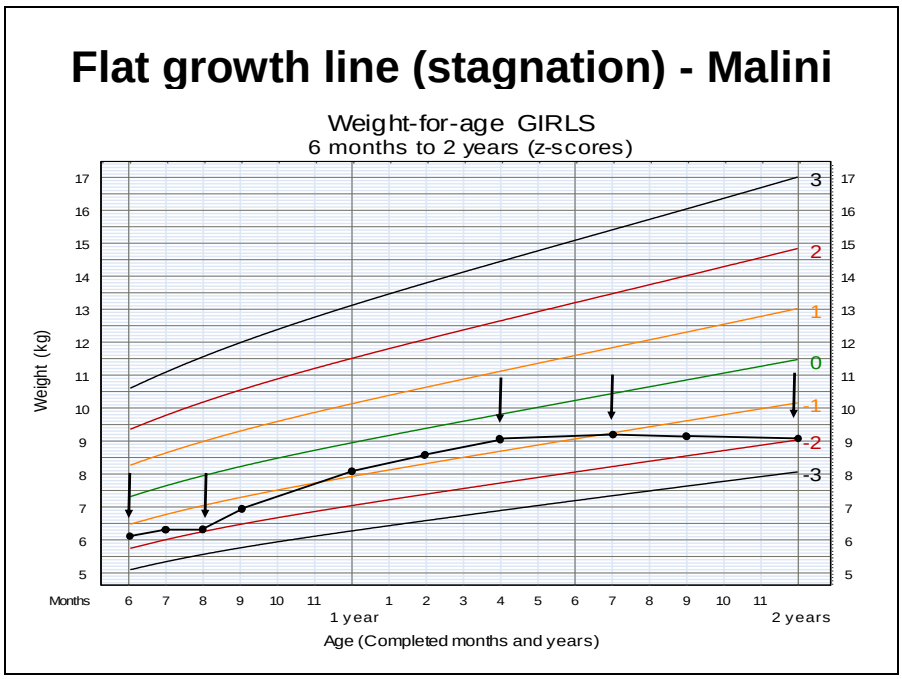
A flat growth line, also called stagnation, usually indicates a problem. If a child's weight stays the same over time as height or age increases, the child most likely has a problem. If height stays the same over time, the child is not growing. The exception is when an overweight or obese child is able to maintain the same weight over time, bringing the child to a healthier weight-for-height.

If an overweight child is losing weight over time, and the weight loss is reasonable, the child should continue to grow in height. However, if the child experiences no growth in height over time, there is a problem. This problem would be evident as a flat growth line on the height-for-age chart.

For children in age groups where the growth rate is fast, as shown by steep growth curves (e.g. during the first 6 months of life), even one month's stagnation in growth represents a possible problem.

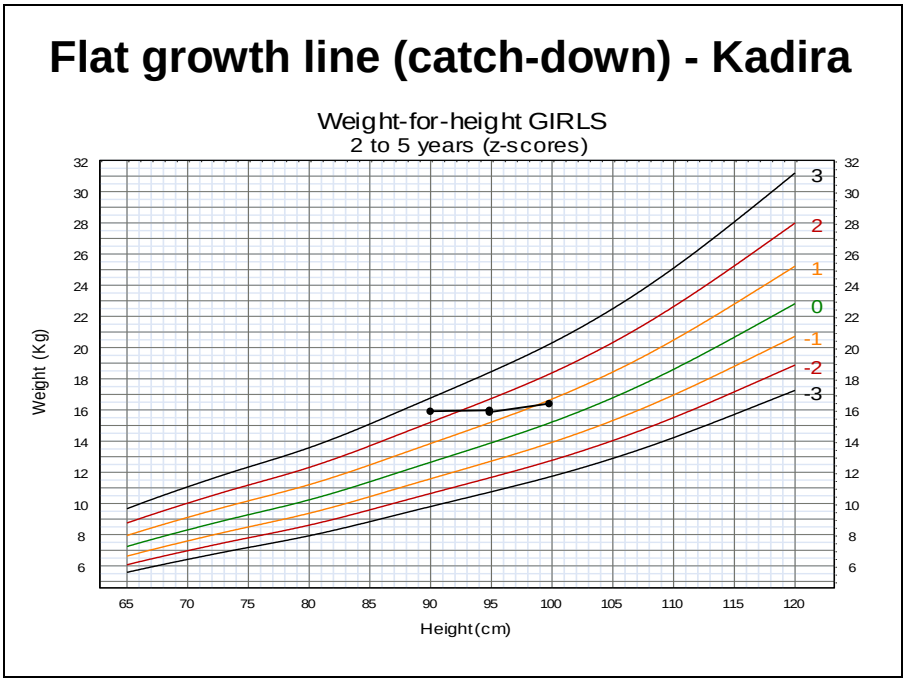
Example – Malini:

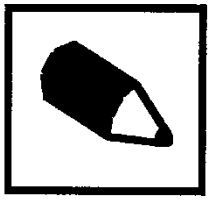
Malini's weight-for-age chart shows a flat growth line (stagnation) from age 6 months to 8 months and again from about 1 year and 4 months to 2 years. These periods of stagnation correspond to times when Malini was having malaria episodes (indicated by arrows). From 8 months up to 1 year and 4 months, she grew. Due to periods of stagnation, Malini's weight-for-age is about to cross the −2 z-score line.



Flat growth line (catch-down)

Unlike the flat line on Malini's chart, the flat line on Kadira's weight-for-height chart below shows a good trend. Kadira was overweight, but her weight remained about the same while she grew in height. She is no longer overweight.





Written Exercise E

Continuing Case Studies – Nalah and Toman

In Exercise D, Session 14, you plotted points on the growth charts in Nalah's and Toman's Growth Records. In this exercise you will review the growth charts for Nalah and Toman to identify:

- each child's growth patterns
- any current growth problem(s)
- any growth trend(s) that may become a problem

To describe growth problems, use the definitions given on page 88 of Session 15, and next to the growth charts in the Growth Record. To describe growth patterns and trends, point out whether the growth line shows an incline or decline, whether it is tracking along or between certain z-score lines, whether it has crossed a z-score line, etc.

Nalah

Review the growth charts that you completed in Nalah's Girl's Growth Record. Then write short answers to the questions below:

1. a) Describe the growth trend shown on Nalah's length-for-age chart.

   b) Does Nalah's length-for-age chart show a current growth problem or risk of a problem, and if so, what is it?

2. a) Describe the growth trend shown on Nalah's weight-for-age chart.

   b) Does Nalah's weight-for-age chart show a current growth problem or risk of a problem, and if so, what is it?

3. a) Describe the growth trend shown on Nalah's weight-for-length chart.

   b) Does Nalah's weight-for-length chart show a current growth problem or risk of a problem, and if so, what is it?

4. Summarize Nalah's growth pattern over the first 6 months of life below.

Toman

Review the growth charts that you completed in Toman's Boy's Growth Record. Then write short answers to the questions below:

1. a) Describe the growth trend shown on Toman's length-for-age chart.

   b) Does Toman's length-for-age chart show a current growth problem or risk of a problem, and if so, what is it?

2. a) Describe the growth trend shown on Toman's weight-for-age chart.

   b) Does Toman's weight-for-age chart show a current growth problem or risk of a problem, and if so, what is it?

3. a) Describe the growth trend shown on Toman's weight-for-length chart.

   b) Does Toman's weight-for-length chart show a current growth problem or risk of a problem, and if so, what is it?

4. Briefly summarize Toman's growth pattern from age 1 year and 1 month to age 2 years.

When you have finished this exercise, review your answers with a facilitator.

Notes

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Session 18

Taking a Feeding History

Objectives

After completing this session participants will be able to:

- take a feeding history of an infant 0-6 months old
- demonstrate appropriate use of the FEEDING HISTORY JOB AID, 0-6 MONTHS

Introduction

In this session we will learn how to take a feeding history of a child aged 0-6 months. The baby may be breastfeeding or receiving another form of milk and may, or may not, be receiving complementary feeds.

The FEEDING HISTORY JOB AID, 0-6 MONTHS will help you to remember the main questions to ask for any infant.

HOW TO TAKE A FEEDING HISTORY, 0-6 MONTHS

Greet the woman in a kind and friendly way.

Use the mother's name and the baby's name (if appropriate).

Ask her to tell you about herself and her baby in her own way, starting with the things that she feels are important.

Look at the child's growth charts.

They may tell you some important facts and save you asking some questions.

Ask the questions that will tell you the most important facts.

The FEEDING HISTORY JOB AID, 0-6 MONTHS is a guide to the facts that you may need to learn about. Decide what you need to know from each of the six sections.

Be careful not to sound critical.

Use confidence and support skills.

Try not to repeat questions.

If you do need to repeat a question, first say: “Can I make sure that I have understood clearly?” and then, for example “You said that (name) had both diarrhoea and pneumonia last month?"

Take time to learn about more difficult, sensitive things.

For example:

- What does the baby's father say? Her mother? Her mother-in-law?
- Is she happy about having the baby now? About the baby's sex?

Some mothers tell you these things spontaneously. Others tell you when you empathize, and show that you understand how they feel. Others take longer. If a mother does not talk easily, wait, and ask again later, or on another day, perhaps somewhere more private.

FEEDING HISTORY JOB AID, 0-6 MONTHS

Age of child
Particular concerns about feeding of child

Feeding
- Milk (breast milk, formula, cow's milk, other)
- Frequency of milk feeds
- Length of breastfeeds/quantity of other milks
- Night feeds
- Other foods in addition to milk (when started, what, frequency)
- Other fluids in addition to milk (when started, what, frequency)
- Use of bottles and how cleaned
- Feeding difficulties (breastfeeding/other feeding)

Health
- Growth chart (birth weight and length, weight and length now)
- Urine frequency per day (6 times or more), if less than 6 months
- Stools (frequency, consistency)
- Illnesses

Pregnancy, birth, early feeds (where applicable)
- Antenatal care
- Feeding discussed at ante-natal care
- Delivery experience
- Rooming-in
- Prelacteal feeds
- Postnatal help with feeding

Mother's condition and family planning
- Age
- Health – including nutrition and medications
- Breast health
- Family planning

Previous infant feeding experience
- Number of previous babies
- How many breastfed and for how long
- If breastfed – exclusive or mixed fed
- Other feeding experiences

Family and social situation
- Work situation
- Economic situation
- Family's attitude to infant feeding practices

The FEEDING HISTORY JOB AID, 0-6 MONTHS

The FEEDING HISTORY JOB AID, 0-6 MONTHS is a guide to organize your thoughts, so that you do not get lost when you talk with a mother who has an infant or young child.

It is a good idea to ask a mother something from each section to make sure you are clear about any difficulties she may be having. If at any time a mother wants to tell you something that is important to her, let her tell you that first. Ask about the other things afterwards.

Remember to use your counselling skills when you are taking a history from a mother. Try to ask questions in an open way, although you may also have to ask some closed questions if you need specific information. Remember to use other counselling skills, such as reflecting back, empathy, and praise, in between questions so that the mother is encouraged to talk more and to feel confident.

DEMONSTRATION 18.A TAKING A FEEDING HISTORY, 0-6 MONTHS

Health Worker:	"Good morning, I am Nurse Jane. May I ask your name, and your baby's name?"
Mother:	"Good morning, nurse; I am Mrs Green and this is my daughter Lucy."
Health Worker:	"She is lovely – how old is she?"
Mother:	"She is 5 months now."
Health Worker:	"Yes – and she is taking an interest in what is going on, isn't she? Tell me, what milk have you been giving her?"
Mother:	"Well, I started off breastfeeding her, but she is so hungry and I never seemed to have enough milk so I had to give her bottle feeds as well."
Health Worker:	"Oh dear, it can be very worrying when a child is always hungry. You decided to start bottle feeds? What are you giving her?"
Mother:	"Well, I put some milk in the bottle and then mix in a spoonful or two of cereal."
Health Worker:	"When did she start these feeds?"
Mother:	"Oh, when she was about 2 months old."
Health Worker:	"About 2 months. How many bottles do you give her each day?"
Mother:	"Oh, usually two – I mix up one in the morning and one in the evening, and then she just sucks it when she wants to – each bottle lasts quite a long time."
Health Worker:	"So she just takes the bottle little by little? What kind of milk do you use?"
Mother:	"Yes – well, if I have formula, I use some of that; or else I just use cow's milk and mix in some water, or sweetened milk, because they are cheaper. She likes the sweet milk!"
Health Worker:	"Formula is very expensive isn't it? Tell me more about the breastfeeding. How often is she doing that now?"
Mother:	"Oh she breastfeeds when she wants to – quite often in the night, and about 4 or 5 times in the day – I don't count. She likes it for comfort."
Health Worker:	"She breastfeeds at night?"
Mother:	"Yes she sleeps with me."
Health Worker:	"Oh that makes it easier, doesn't it? Did you have any other difficulties with breastfeeding, apart from worrying about not having enough?"

Mother: "No, it wasn't difficult at all."

Health Worker: "Do you give her anything else yet? Any other foods or drinks?"

Mother: "No – I won't give her food for a long time yet. She is quite happy with the bottle feeds."

Health Worker: "Can you tell me how you clean the bottles?"

Mother: "I just rinse them out with hot water. If I have soap I use that, but otherwise just water."

Health Worker: "OK. Now can you tell me about how Lucy is. Has she got a growth chart? Can I see it? [mother hands over growth record] Thank you, now let me see…. She was 3.5 kilograms when she was born, she was 5.5 kilograms when she was 2 months old, and now she is 6.0 kilograms. You can see that she gained weight fast for the first two months, but it is a bit slower since then. Can you tell me what illnesses she has had?"

Mother: "Well, she had diarrhoea twice last month, but she seemed to get better. Her stools are normal now."

Health Worker: "Can I ask about the earlier days – how was your pregnancy and delivery?"

Mother: "They were normal."

Health Worker: "What did they tell you about feeding her when you were pregnant, and soon after she was born? Did anyone show you what to do?"

Mother: "Nothing – they told me to breastfeed her, but that was all. The nurses were so busy, and I came home after one day."

Health Worker: "They just told you to breastfeed?"

Mother: "Yes – but I didn't have any milk in my breasts even then, so I gave her some glucose water until the milk started."

Health Worker: "It is confusing isn't it when your breasts feel soft after delivery? You need help then, don't you?"

Mother: "Yes."

Health Worker: "Can I ask about you? How old are you?"

Mother: "Sure – I am 22."

Health Worker: "And how is your health?"

Mother: "I am fine."

Health Worker: "How are your breasts?"

Mother: "I have had no trouble with my breasts."

Health Worker: "May I ask if you are thinking about another pregnancy at any time? Have you thought about family planning?"

Mother: "No – I haven't thought about it – I thought that you can't get pregnant when you are breastfeeding."

Health Worker: "Well, it is possible if you are also giving other feeds. We will talk about it more later if you like. Is Lucy your first baby?"

Mother: "Yes. And I do not want another one just yet."

Health Worker: "Tell me about how things are at home – are you going out to work?"

Mother: "No – I am a housewife now. I may try to find a job later when Lucy is older."

Health Worker: "Who else do you have at home to help you?"

Mother: "Lucy's father is with me. He has a job as a driver and he is very fond of Lucy, but he thinks she should not breastfeed at night – he thinks she breastfeeds too much and he wants her to sleep in another bed. But I am not sure……. He says that too much breastfeeding is what gives her diarrhoea."

Notes

Session 19

Common Breastfeeding Difficulties

Objectives

After completing this session participants will be able to identify the causes of, and help mothers with, the following difficulties:

- 'not enough milk'
- a crying baby
- breast refusal

In previous sessions we have looked at ways to find out how mothers are managing with breastfeeding.

These include:

- good counselling skills to encourage a mother to tell you what is worrying her
- assessing a breastfeed, using your skills of observation to see if a baby is well positioned and well attached
- taking a detailed feeding history.

There are many reasons why mothers stop breastfeeding or start to mix feed, even if they decided, antenatally, to breastfeed exclusively.

When helping mothers with difficulties you will need to use all the skills you have learnt so far. Lay counsellors and community health workers have important roles to support mothers through these difficulties, as mothers may not visit a health facility to seek help.

'NOT ENOUGH MILK'

One of the commonest reasons for a mother to stop breastfeeding is that she thinks she does not have enough milk. Almost all mothers can produce enough breast milk for one or even two babies. Usually, even when a mother thinks that she does not have enough breast milk, her baby is in fact getting all that he needs.

Sometimes a baby does not get enough breast milk. But it is usually because he is not suckling enough, or not suckling effectively (see Session 3 'How breastfeeding works'). It is rarely because his mother cannot produce enough.

So it is important to think not about *how much milk a mother can produce*, but about *how much milk a baby is getting*.

Reliable signs that a baby is not getting enough milk

Poor weight gain

Small amount of concentrated urine

- less than 6 times per day

Babies' weight gain is variable, and each child follows his or her own pattern. You cannot tell from a single weighing if a baby is growing satisfactorily- it is necessary to weigh several times over a few days at least. A baby who is below his or her birth weight at the end of the second week needs assessment.

From 2 weeks, babies who are breastfed may gain from about 500 g to 1 kg or more each month. All these weight gains are normal. Look at the baby's growth record if available, measure the baby now, and arrange to measure him/her again in one week's time.

An exclusively breastfed baby who is getting enough milk usually passes dilute urine at least 6-8 times in 24 hours. If a baby is having other drinks, for example water, as well as breast milk, you cannot be sure he is getting enough milk if he is passing lots of urine.

Possible signs that a baby is not getting enough breast milk

- Baby not satisfied after breastfeeds
- Baby cries often
- Very frequent breastfeeds
- Very long breastfeeds
- Baby refuses to breastfeed
- Baby has hard, dry, or green stools
- Baby has infrequent small stools
- No milk comes out when mother expresses
- Breasts did not enlarge (during pregnancy)
- Milk did not 'come in' (after delivery)

There are several **possible** signs that a baby is not getting enough milk. Although these signs may worry a mother, there may be other reasons for them, so they are not reliable. For example, a baby may cry often because he has colic, although he might be getting plenty of milk.

REASONS WHY A BABY MAY NOT GET ENOUGH BREAST MILK			
BREASTFEEDING FACTORS	**MOTHER: PSYCHOLOGICAL FACTORS**	**MOTHER: PHYSICAL CONDITION**	**BABY'S CONDITION**
Delayed start Feeding at fixed times Infrequent feeds No night feeds Short feeds Poor attachment Bottles, pacifiers Other foods Other fluids (water, teas)	Lack of confidence Worry, stress Dislike of breastfeeding Rejection of baby Tiredness	Contraceptive pill, diuretics Pregnancy Severe malnutrition Alcohol Smoking Retained piece of placenta (rare) Poor breast development (very rare)	Illness Abnormality
These are COMMON		These are NOT COMMON	

The reasons in the first two columns ('Breastfeeding factors' and 'Mother: psychological factors') are common. The reasons in the second two columns ('Mother: physical condition' and 'Baby's condition') are not common. So it is not common for a mother to have a physical difficulty in producing enough breast milk.

How to help mothers with 'not enough milk'

Firstly find out whether the baby is really getting enough breast milk or not (using the reliable signs). If the baby is not getting enough breast milk you need to find out WHY so that you can help the mother. If the baby is getting enough breast milk, but the mother thinks that he isn't, you need to find out WHY she doubts her milk supply so that you can build her confidence.

Babies who are not getting enough breast milk: Low milk intake

Use your counselling skills to take a good feeding history. Assess a breast feed to check positioning and attachment and to look for bonding or rejection. Use your observation skills to look for illness or physical abnormality in the mother or baby. Make suggestions depending on the cause of the insufficient milk. Always arrange to see the mother again soon. If possible see the mother and baby daily until the baby is gaining weight and the mother feels more confident. It may take 3-7 days for the baby to gain weight.

Babies who are getting enough milk but the mother thinks they are not: Apparent milk insufficiency

Use your counselling skills to take a good feeding history. Try to learn what may be causing the mother to doubt her milk supply. Explore the mother's ideas and feelings about her milk and pressures she may be experiencing from other people regarding breastfeeding. Assess a breastfeed to check positioning and attachment and to look for bonding or rejection. Praise the mother about good points about breastfeeding technique and good points about her baby's development. Correct mistaken ideas without sounding critical. Always arrange to see the mother again soon. These mothers are at risk of introducing other foods and fluids and need a lot of support until their confidence is built up again.

Fig. 19.1 If a baby passes plenty of urine it usually means that he is getting plenty of breast milk

Mrs Singh says she does not have enough milk. Her baby is three months old and crying "all the time". Her baby gained 200g last month. Mrs Singh manages the family farm by herself, so she is very busy. She breastfeeds her baby about 2-3 times at night, and about twice during the day when she has the time. She does not give her baby any other food or drink.

What could you say to empathize with Mrs Singh?

Mrs Singh says she does not have enough breast milk – do you think her baby is getting enough milk?

What do you think is the cause of Mrs Singh's baby not getting enough milk?

Can you suggest how Mrs Singh could give her baby more breast milk?

CRYING BABY

We will now look at another common reason for a mother to stop breastfeeding – the crying baby. Many mothers start unnecessary foods or fluids because they think that their baby 'cries too much'. They think that their babies are hungry, and that they do not have enough milk. These additional foods and drinks do not make a baby cry less. Sometimes a baby cries more.

A baby who cries a lot can upset the relationship between him and his mother, and can cause tension among other members of the family. An important way to help a breastfeeding mother is to counsel her about her baby's crying.

REASONS WHY BABIES CRY	
▪ Discomfort	(dirty, hot, cold)
▪ Tiredness	(too many visitors)
▪ Illness or pain	(changed pattern of crying)
▪ Hunger	(not getting enough milk, growth spurt)
▪ Mother's food	(any food, sometimes cow's milk)
▪ Drugs mother takes	(caffeine, cigarettes, other drugs)
▪ Colic	
▪ 'High needs' babies	

Causes of crying

Hunger due to growth spurt:

A baby seems very hungry for a few days, possibly because he is growing faster than before. He demands to be fed very often. This is commonest at the ages of about two weeks, six weeks and three months, but can occur at other times. If he suckles often for a few days, the breast milk supply increases, and he breastfeeds less often again.

Mother's food:

Sometimes a mother notices that her baby is upset when she eats a particular food. This is because substances from the food pass into her milk. It can happen with any food, and there are no special foods to advise mothers to avoid, unless she notices a problem.

Colic:

Some babies cry a lot without one of the above causes. Sometimes the crying has a clear pattern. The baby cries continuously at certain times of day, often in the evening. He may pull up his legs as if he has abdominal pain. He may appear to want to suckle, but it is very difficult to comfort him. Babies who cry in this way may have a very active gut, or wind, but the cause is not clear. This is called 'colic'. Colicky babies usually grow well, and the crying usually becomes less after the baby is three months old.

'High needs' babies:

Some babies cry more than others, and they need to be held and carried more. In communities where mothers carry their babies with them, crying is less common than in communities where mothers like to put their babies down to leave them, or where they put them to sleep in separate cots.

How to help mothers whose babies cry a lot

As with 'not enough' milk, you have to try to find the cause of the crying so that you can help the mother. Use your counselling skills to take a good feeding history. Help the mother to talk about how she feels and empathize with her. She may be tired, frustrated and angry.

Accept her ideas about the cause of the problem and how she feels about the baby. Try to learn about pressures from other people and what they think the cause of the crying is.

Assess a breastfeed to check baby's suckling position and the length of a feed. Make sure the baby is not ill or in pain. Check the growth and refer if necessary. Where relevant, praise the mother that her baby is growing well and it not ill or bad or naughty.

Demonstrate way to carry and comfort a crying baby. Give relevant information where appropriate.

Give relevant information where appropriate.

Fig. 19.2 Some different ways to hold a colicky baby

a. Holding the baby along your forearm

b. Holding the baby round his abdomen, on your lap

c. Father holding the baby against his chest

Mrs Biyela's baby is three month's old. She says that for the last few days he has suddenly started crying to be fed very often. She thinks that her milk supply has suddenly decreased. Her baby has breastfed exclusively until now and has gained weight well.

What can you say to empathize with Mrs Biyela?

What can you praise to build Mrs Biyela's confidence?

What relevant information can you give to Mrs Biyela?

REFUSAL TO BREASTFEED

Refusal by the baby is a common reason for stopping breastfeeding. However, it can often be overcome. Refusal can cause great distress to the baby's mother. She may feel rejected and frustrated by the experience.

There are different kinds of refusal:

- Sometimes a baby attaches to the breast, but then does not suckle or swallow, or suckles very weakly.
- Sometimes a baby cries and fights at the breast, when his mother tries to breastfeed him.
- Sometimes a baby suckles for a minute and then comes off the breast choking or crying. He may do this several times during a single feed.
- Sometimes a baby takes one breast, but refuses the other.

You need to know why a baby is refusing to breastfeed, before you can help the mother and baby to enjoy breastfeeding again.

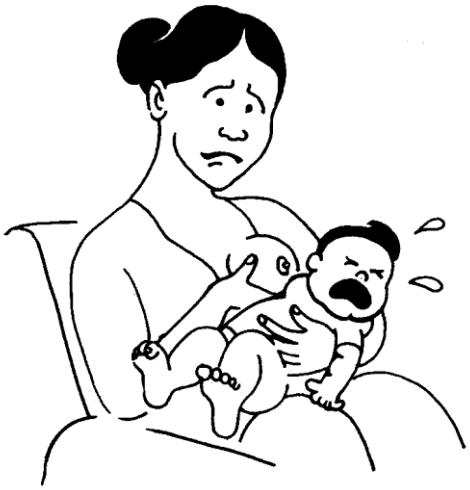
Most reasons why babies refuse to breastfeed fall into one of these categories.

- Baby ill, in pain or sedated
- Difficulty with breastfeeding technique
- Change which upsets baby
- Apparent, not real, refusal.

Fig. 19.3 A baby may be unable to suckle because he is sick.

CAUSES OF BREAST REFUSAL	
Illness, pain or sedation	Infection Brain damage Pain from bruise (vacuum, forceps) Blocked nose Sore mouth (thrush, teething)
Difficulty with breastfeeding technique	Use of bottles and pacifiers whilst breastfeeding Not getting much milk (e.g. poor attachment) Pressure on back of head when positioning Mother shaking breast Restricting length of feeds Difficulty co-ordinating suckle
Change which upsets baby (especially aged 3-12 months)	Separation from mother (e.g. if mother returns to work) New carer or too many carers Change in the family routine Mother ill Mother has breast problem e.g. mastitis Mother menstruating Change in smell of mother
Apparent refusal	Newborn - rooting Age 4-8 months - distraction Above one year - self-weaning

Fig. 19.4 Sometimes a baby refuses because breastfeeding has become unpleasant or frustrating



How to help mothers whose babies refuse the breast

HELPING A MOTHER AND BABY TO BREASTFEED AGAIN

Help the mother to do these things:

- Keep her baby close - no other carers
  - Give plenty of skin-to-skin contact at all times, not just at feeding times
  - Sleep with her baby
  - Ask other people to help in other ways.

- Offer her breast whenever her baby is willing to suckle
  - When her baby is sleepy, or after a cup feed
  - When she feels her ejection reflex working.

- Help her baby to take the breast
  - Express breast milk into his mouth
  - Position him so that he can attach easily to the breast – try different positions
  - Avoid pressing the back of his head or shaking her breast.

- Feed her baby by cup
  - Give her own expressed breast milk if possible; if necessary give artificial feeds
  - Avoid using bottles, teats, pacifiers.

Mrs Barlow delivered a baby by vacuum extraction two days ago. He has a bruise on his head. When Mrs Barlow tries to feed him, he screams and refuses. She is very upset and feels that breastfeeding will be too difficult for her. You watch her trying to feed her baby, and you notice that her hand is pressing on the bruise.

What could you say to empathize with Mrs Barlow?

What praise and relevant information can you give to build Mrs Barlow's confidence?

What practical help can you give to Mrs Barlow?

Summary

Notice how all the skills you have learnt so far can be used to help mothers in different situations: listening and learning skills; confidence and support skills; assessing a breastfeed; helping a mother to position and attach her baby; taking a detailed feeding history.

In many situations there may be no treatment, so giving the mother relevant information and suggestions is very important.

Notes

Session 20

Expressing Breast Milk and Cup Feeding

Objectives

After completing this session participants will be able to:

- list the situations when expressing breast milk is useful
- explain how to stimulate the oxytocin reflex
- demonstrate how to select and prepare a container for expressed breast milk
- describe how to store breast milk
- explain to a mother the steps of expressing breast milk by hand
- list the advantages of cup-feeding
- demonstrate how to cup-feed safely

Introduction

There are many situations in which expressing breast milk is useful and important to enable a mother to initiate or continue breastfeeding.

Expressing milk is useful to:

- leave breast milk for a baby when his mother goes out or goes to work
- feed a low-birth-weight baby who cannot breastfeed
- feed a sick baby, who cannot suckle enough
- keep up the supply of breast milk when a mother or baby is ill
- prevent leaking when a mother is away from her baby
- help a baby to attach to a full breast
- help with breast health conditions, e.g. engorgement (see Session 21)

All mothers should learn how to express their milk, so that they know what to do if the need arises. Certainly all those who care for breastfeeding mothers should be able to teach mothers how to express their milk.

Many mothers are able to express plenty of breast milk using rather strange techniques. If a mother's technique works for her, let her do it that way. But if a mother is having difficulty expressing enough milk, teach her a more effective technique.

Breast milk can be stored for about eight hours at room temperature or up to 24 hours in a refrigerator.

Stimulating the oxytocin reflex

The oxytocin reflex may not work as well when a mother expresses as it does when a baby suckles. A mother needs to know how to help her oxytocin reflex, or she may find it difficult to express her milk.

HOW TO STIMULATE THE OXYTOCIN REFLEX

- Help the mother psychologically:
  Build her confidence
  Try to reduce any sources of pain or anxiety
  Help her to have good thoughts and feelings about the baby.

- Help the mother practically. Help or advise her to:

  Sit quietly and privately or with a supportive friend.
  Some mothers can express easily in a group of other mothers who are also expressing for their babies.

  Hold her baby with skin-to-skin contact if possible.
  She can hold her baby on her lap while she expresses. If this is not possible, she can look at the baby. If this is not possible, sometimes even looking at a photograph of her baby helps.

  Warm her breasts.
  For example, she can apply a warm compress, or warm water, or have a warm shower. Warn her that she should test the temperature to avoid burning herself.

  Stimulate her nipples.
  She can gently pull or roll her nipples with her fingers.

  Massage or stroke her breasts lightly.
  Some women find that it helps if they stroke the breast gently with finger tips or with a comb.
  Some women find that it helps to gently roll their closed fist over the breast towards the nipple.

  Ask a helper to rub her back.

How to express breast milk by hand

Hand expression is the most useful way to express milk. It needs no appliance, so a woman can do it anywhere, at any time.

A woman should express her own breast milk. The breasts are easily hurt if another person tries.

If you are showing a woman how to express, show her on your own body as much as possible, while she copies you. If you need to touch her to show her exactly where to press her breast, be very gentle.

HOW TO PREPARE A CONTAINER FOR EXPRESSED BREAST MILK (EBM)

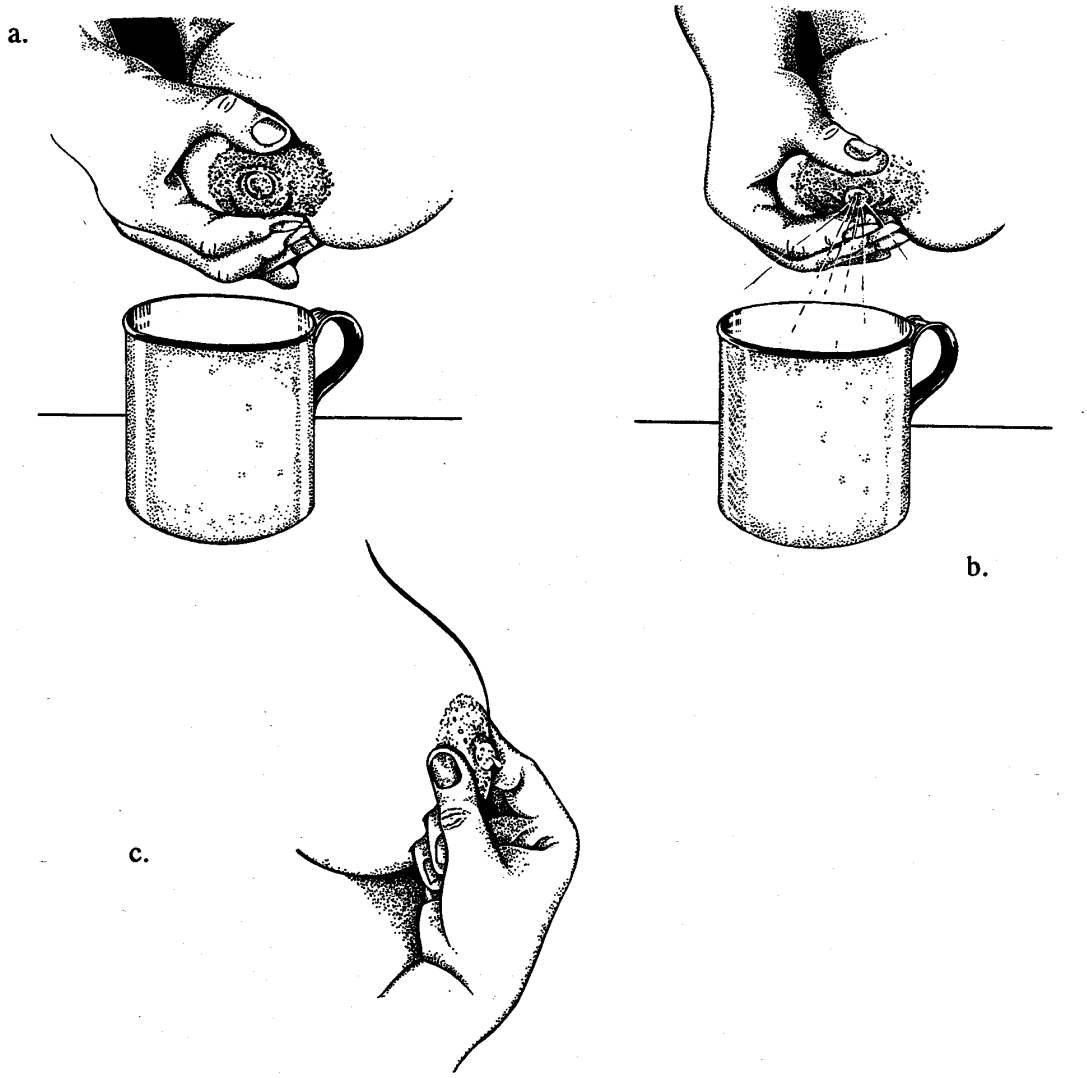
- Choose a cup, glass, jug or jar with a wide mouth.
- Wash the cup in soap and water (She can do this the day before).
- Pour boiling water into the cup, and leave it for a few minutes. Boiling water will kill most of the germs.
- When ready to express milk, pour the water out of the cup.

HOW TO EXPRESS BREAST MILK BY HAND

- Teach a mother to do this herself. Do not express her milk for her. Touch her only to show her what to do, and be gentle. Teach her to:
- Wash her hands thoroughly.
- Sit or stand comfortably, and hold the container near her breast.
- Put her thumb on her breast above the nipple and areola, and her first finger on the breast below the nipple and areola, opposite the thumb. She supports the breast with her other fingers (see Fig.20.2).
- Press her thumb and first finger slightly inwards towards the chest wall. She should avoid pressing too far or she may block the milk ducts.
- Press her breast behind the nipple and areola between her finger and thumb. She should press on the larger ducts beneath the areola. Sometimes in a lactating breast it is possible to feel the ducts. They are like pods, or peanuts. If she can feel them, she can press on them.
- Press and release, press and release. This should not hurt - if it hurts, the technique is wrong. At first no milk may come, but after pressing a few times, milk starts to drip out. It may flow in streams if the oxytocin reflex is active.
- Press the areola in the same way from the Sides, to make sure that milk is expressed from all segments of the breast.
- Avoid rubbing or sliding her fingers along the skin. The movement of the fingers should be more like rolling.
- Avoid squeezing the nipple itself. Pressing or pulling the nipple cannot express the milk. It is the same as the baby sucking only the nipple.
- Express one breast for at least 3-5 minutes until the flow slows; then express the other side; and then repeat both sides. She can use either hand for either breast, and change when they tire.
- Explain that to express breast milk adequately takes 20-30 minutes, especially in the first few days when only a little milk may be produced. It is important not to try to express in a shorter time.

Fig. 20.1 How to express breast milk.

a. Place finger and thumb each side of the areola and press inwards towards the chest wall.
b. Press behind the nipple and areola between your finger and thumb.
c. Press from the sides to empty all segments.



How often a mother should express milk

How often a mother should express her milk depends on the reason for expressing the milk. Usually she should express as often as the baby would breastfeed.

To establish lactation, to feed a low-birth-weight (LBW) or sick newborn she should start to express milk on the first day, as soon as possible after delivery. She may only express a few drops of colostrum at first, but it helps breast milk production to begin, in the same way that a baby suckling soon after delivery helps breast milk production to begin.

She should express as much as she can as often as her baby would breastfeed. This should be at least every three hours, including during the night. If she expresses only a few times, or it there are long intervals between expressions, she may not be able to produce enough milk.

To keep up her milk supply to feed a sick baby: She should express at least every three hours.

To build up her milk supply, if it seems to be decreasing after a few weeks: Express very often for a few days (every 2 hours or even every hour), and at least every three hours during the night.

To leave milk for a baby while she is out at work: Express as much as possible before she goes to work, to leave for her baby. It is also very important to express while at work to help keep up her supply.

To relieve symptoms, such as engorgement, or leaking at work: Express only as much as is necessary.

The advantages of cup-feeding

- Cups are easy to clean with soap and water, if boiling is not possible.
- Cups are less likely than bottles to be carried around for a long time, giving bacteria time to breed.
- Cup-feeding is associated with less risk of diarrhoea, ear infections and tooth decay.
- A cup cannot be left beside a baby, for the baby to feed himself. The person who feeds a baby by cup has to hold the baby and look at him and give him some of the contact that he needs.
- A cup does not interfere with suckling at the breast.
- A cup enables a baby to control his own intake.

HOW TO FEED A BABY BY CUP

- Wash your hands.
- Hold the baby sitting upright or semi-upright on your lap.
- Place the estimated amount of milk for one feed into the cup.
- Hold the small cup of milk to the baby's lips.
  Tip the 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 mouth and eyes.
  A low-birth-weight (LBW) baby starts to take the milk into his mouth with his 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 lips and let him take it himself.
- When the baby has had enough, he closes his mouth and will not take any more. If he has not taken the calculated amount, he may take more next time, or you may need to feed him more often.
- Measure his intake over 24 hours - not just at each feed.

Fig. 20.2 Feeding a baby by cup

Notes

Session 21

Breast Conditions

Objectives

After completing this session participants will be able to recognize and manage these common breast conditions

- flat and inverted nipples
- engorgement
- blocked duct and mastitis
- sore nipples and nipple fissure.

Introduction

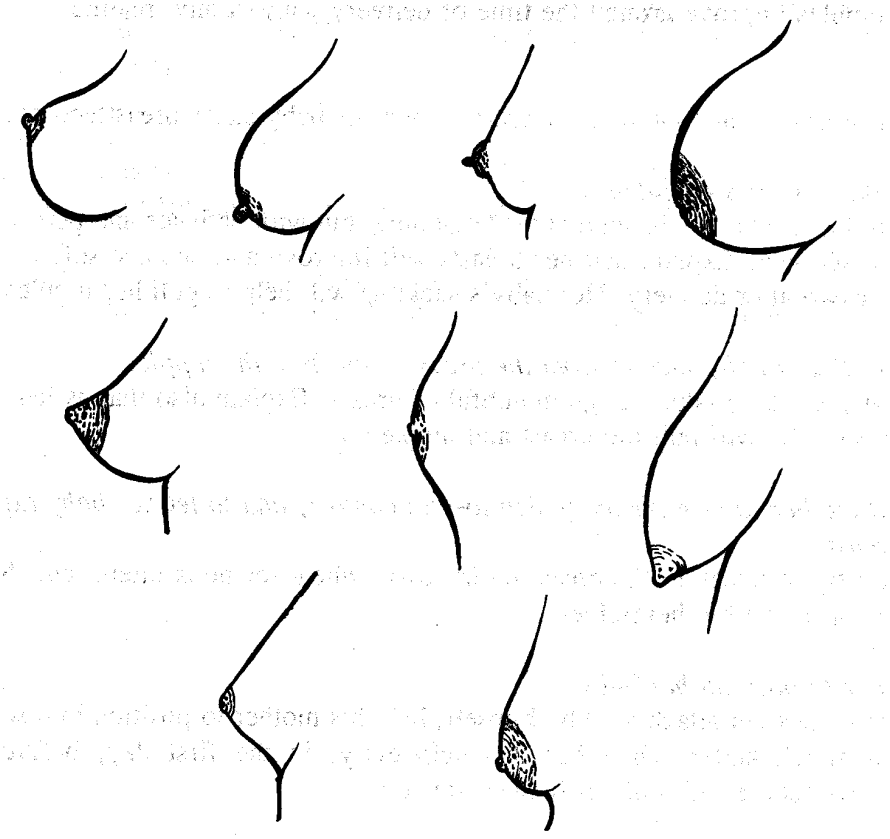
Recognition and management of these breast conditions are important both to relieve the mother, and to enable breastfeeding to continue. Treatment differs for some breast conditions if the woman is HIV-infected[7]. We will discuss these conditions during the session.

Different breast shapes

Many mothers worry about the size of their breasts. Women with small breasts often worry that they cannot produce enough milk. Differences in the sizes of breasts are mostly due to the amount of fat, and not the amount of tissue that produces milk. It is important to reassure women that they can produce enough milk, whatever the size of their breasts.

[7] For further information on breast conditions and HIV, refer to "*Infant and Young Child Feeding Counselling: A training course"*

Fig. 21.1 There are many different shapes and sizes of breast. Babies can breastfeed from almost all of them.



MANAGEMENT OF FLAT AND INVERTED NIPPLES

- Antenatal treatment

  Antenatal treatment is probably not helpful.

  For example, stretching nipples, or wearing nipple shells does not help.

  Most nipples improve around the time of delivery without any treatment.

  Help is most important soon after delivery, when the baby starts breastfeeding.

- Build the mother's confidence

  Explain that it may be difficult at the beginning, but with patience and persistence she can succeed.

  Explain that her breasts will improve and become softer in the week or two after delivery.

  Explain that a baby suckles from the breast - not from the nipple. Her baby needs to take a large mouthful of breast.

  Explain also that as her baby breastfeeds, he will stretch her nipple out.

  Encourage her to give plenty of skin-to-skin contact, and to let her baby explore her breasts.

  Let him try to attach to the breast on his own, whenever he is interested.

  Some babies learn best by themselves.

- Help the mother to position her baby

  If a baby does not attach well by himself, help his mother to position him so that he can attach better.

  Give her this help early, in the first day, before her breast milk 'comes in' and her breasts are full.

  Sometimes putting a baby to the breast in a different position makes it easier for him to attach.

  For example, some mothers find that the underarm position is helpful.

  Sometimes making the nipple stand out before a feed helps a baby to attach.

  Stimulating her nipple may be all that a mother needs to do.

  There is another method called the syringe method which we will discuss in this session.

  Sometimes shaping the breast makes it easier for a baby to attach. To shape her breast, a mother supports it from underneath with her fingers, and presses the top of the breast gently with her thumb.

- If a baby cannot suckle effectively in the first week or two, help his mother to try the following:
  - express her milk and feed it to her baby with a cup.
  - expressing milk helps to keep breasts soft, so that it is easier for the baby to attach to the breast; and it helps to keep up the supply of breast milk.

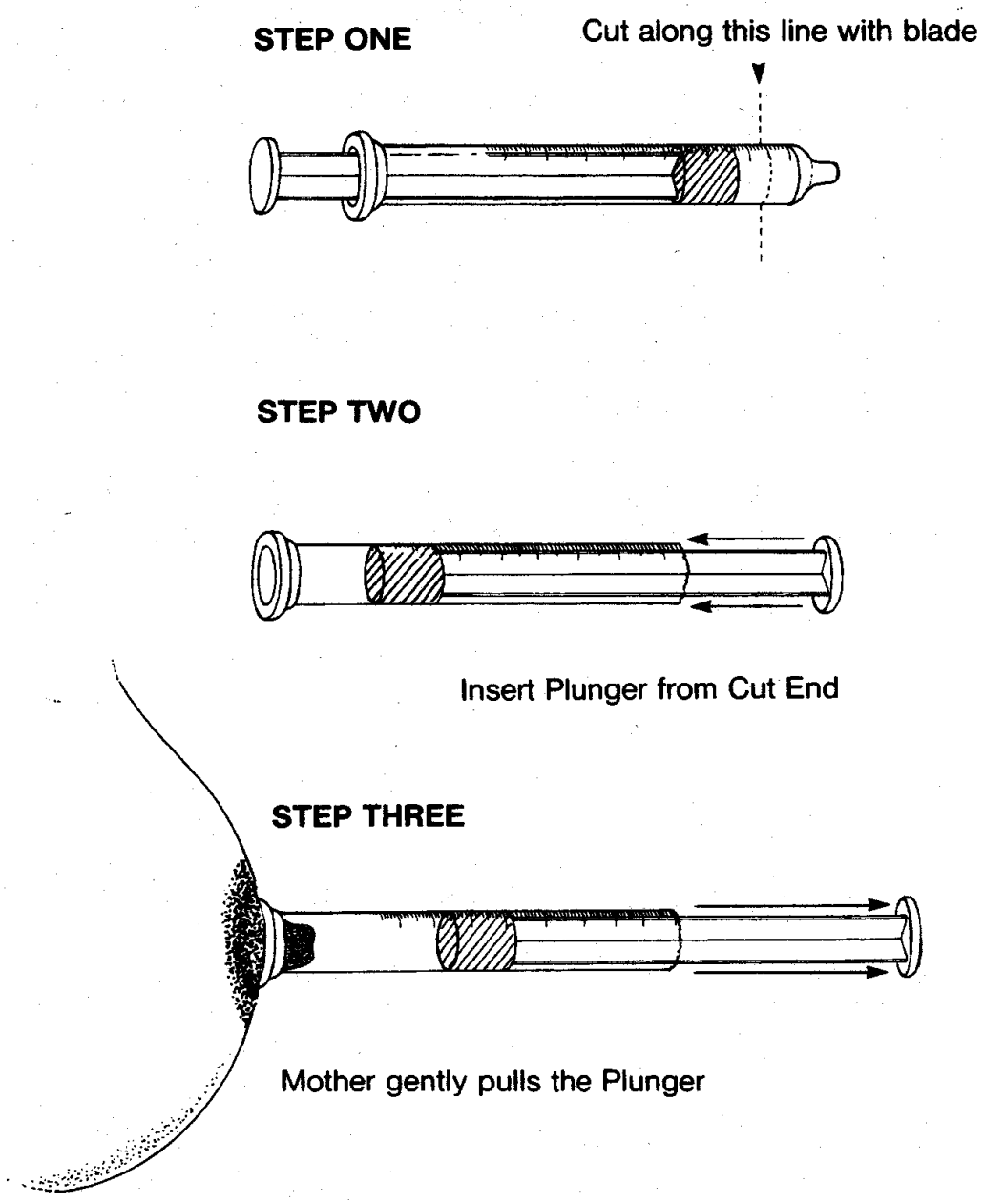
  She should not use a bottle, because that makes it more difficult for her baby to take her breast.

  Alternatively she could express a little milk directly into her baby's mouth.

  Some mothers find that this is helpful. The baby gets some milk straight away, so he is less frustrated. He may be more willing to try to suckle.

  She should continue to give him skin-to-skin contact, and let him try to attach to her breast on his own.

Fig. 21.2 Preparing and using a syringe for treatment of inverted nipples.



Full and engorged breasts

SUMMARY OF DIFFERENCES BETWEEN FULL AND ENGORGED BREASTS	
Full Breasts	**Engorged Breasts**
Hot	Painful
Heavy	Oedematous
Hard	Tight, especially nipple
	Shiny
	May look red
Milk flowing	Milk NOT flowing
No fever	May be fever for 24 hours

Breasts may become engorged if:
There has been a delay in starting breastfeeding after birth
There is poor attachment to the breast so breast milk is not removed effectively
There is infrequent removal of milk, for example if breastfeeding is not on demand
The length of breastfeeds is restricted

Engorgement may be prevented by letting babies feed as soon as possible after delivery, making sure the baby is well positioned and attached to the breast and encouraging unrestricted breastfeeding. Milk does not then build up in the breast.

TREATMENT OF BREAST ENGORGEMENT

- Do not 'rest' the breast. To treat engorgement it is essential to remove milk. If milk is not removed, mastitis may develop, an abscess may form and breast milk production decreases.
- If baby is able to suckle he should feed frequently. This is the best way to remove milk. Help the mother to position her baby, so that he attaches well. Then he suckles effectively, and does not damage the nipple.
- If baby is not able to suckle help his mother to express her milk. Sometimes it is only necessary to express a little milk to make the breast soft enough for the baby to suckle.
- Before feeding or expressing, stimulate the mother's oxytocin reflex. Some things that you can do to help her, or she can do are:
  put a warm compress on her breasts
  massage her back and neck
  massage her breast lightly
  stimulate her breast and nipple skin
  help her to relax
  sometimes a warm shower or bath makes milk flow from the breasts so that they become soft enough for the baby to suckle.
- After a feed, put a cold compress on her breasts. This will help to reduce oedema.
- Build the mother's confidence. Explain that she will soon be able to breastfeed comfortably again.

Mastitis

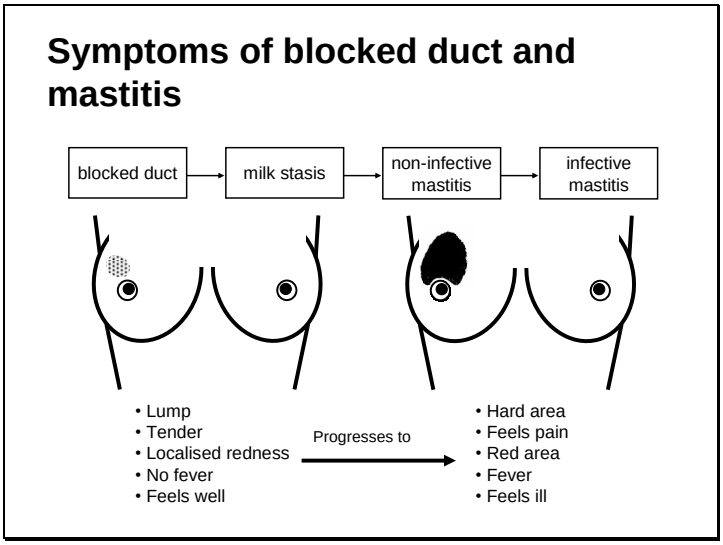
A woman with mastitis has severe pain, fever and she feels ill. Part of the breast is swollen and hard, with redness of the overlying skin.

Mastitis is sometimes confused with engorgement. However, engorgement affects the whole breast, and often both breasts. Mastitis affects part of the breast, and usually only one breast.

Mastitis may develop in an engorged breast, or it may follow a condition called **blocked duct.** Blocked duct occurs when the milk is not removed from part of a breast. Sometimes this is because the duct to that part of the breast is blocked by thickened milk. The symptoms are a lump, which is tender, and sometimes redness of the skin over the lump. The woman has no fever and feels well.

When milk stays in part of a breast, because of a blocked duct, or because of engorgement, it is called **milk stasis**. If the milk is not removed, it can cause inflammation of the breast tissue, which is called **non-infective mastitis**. Sometimes a breast becomes infected with bacteria, and this is called **infective mastitis**.

It is not possible to tell from the symptoms alone if mastitis is non-infective or infective. If the symptoms are all severe, however, the woman is more likely to need treatment with antibiotics.



Poor drainage of the **whole** breast may be due to infrequent breastfeeds or ineffective suckling. Infrequent breastfeeds may occur when a mother is very busy, when a baby starts feeding less often, for example when he starts to sleep through the night, or because of a changed feeding pattern for another reason, for example the mother returning to work. Ineffective suckling usually occurs when the baby is poorly attached to the breast.

Poor drainage of **part** of the breast may be due to ineffective suckling, pressure from tight clothes, especially a bra worn at night, or pressure of the mother's fingers which can block milk flow during a breastfeed.

If a baby is poorly attached and positioned and is suckling at the breast, this may cause a nipple fissure which provides a way for bacteria to enter the breast tissue and may lead to mastitis.

TREATMENT OF BLOCKED DUCT AND MASTITIS

The most important part of treatment is to improve the drainage of milk from the affected part of the breast.

Look for a cause of poor drainage, and correct it:

- Look for poor attachment.
- Look for pressure from clothes, usually a tight bra.
- Notice what the mother does with her fingers as she breastfeeds. Does she hold the areola, and possibly block milk flow?

Whether or not you find a cause, advise the mother to do these things:

Breastfeed frequently.

The best way is to rest with her baby, so that she can respond to him and feed him whenever he is willing.

Gently massage the breast while her baby is suckling.

Show her how to massage over the blocked area, and over the duct that leads from the blocked area, right down to the nipple. This helps to remove the block from the duct. She may notice that a plug of thick material comes out with her milk. (It is safe for the baby to swallow the plug).

Apply warm compresses to her breast between feeds.

Sometimes it is helpful to do these things:

Start the feed on the unaffected breast.

This may help if pain seems to be preventing the oxytocin reflex. Change to the affected breast after the reflex starts working.

Breastfeed the baby in different positions at different feeds.

This helps to remove milk from different parts of the breast more equally. Show the mother how to hold her baby in the underarm position, or how to lie down to feed him, instead of holding him across the front at every feed. However, do not make her breastfeed in a position that is uncomfortable for her.

Sometimes a mother is unwilling to feed her baby from the affected breast, especially if it is very painful. Sometimes a baby refuses to feed from an infected breast, possibly because the taste of the milk changes. In these situations, it is necessary to express the milk. If the milk stays in the breast, an abscess is more likely.

Usually, blocked duct or mastitis improves within a day when drainage to that part of the breast improves.

However, a mother needs additional treatment if there are any of the following**:**

- severe symptoms when you first see her, OR
- a fissure, through which bacteria can enter, OR
- no improvement after 24 hours of improved drainage.

Treat her, or refer her for antibiotics, analgesics (ibuprofen) and rest.

ANTIBIOTIC TREATMENT FOR INFECTIVE MASTITIS		
The commonest bacterium found in breast abscess is Staphylococcus aureus. Therefore it is necessary to treat breast infections with a penicillinase-resistant antibiotic such as either flucloxacillin or erythromycin.		
Drug	**Dose**	**Instructions**
Flucloxacillin	250 mg orally 6 hourly for 7-10 days	Take dose at least 30 minutes before food
Erythromycin	250-500 mg orally 6 hourly for 7-10 days	Take dose 2 hours after food

Nipple Fissure

The most common cause of sore nipples and a nipple fissure is poor attachment to the breast. If a baby is poorly attached, he pulls the nipple in and out as he sucks, and rubs the skin of the breast against his mouth. This is very painful for his mother. At first there is no fissure. The nipple may look normal; or it may look squashed with a line across the tip when the baby releases the breast. If the baby continues to suckle in this way it damages the nipple skin and causes a fissure.

If a mother has sore nipples or a fissure, help her to improve her baby's position so that he is well attached.

Suggest to the mother not to wash her breasts more than once a day and not to use soap or rub hard with a towel. Washing removes natural oils from the skin and makes soreness more likely. Do not recommend medicated lotions and ointments because these can irritate the skin. Suggest that after feeding she rubs a little expressed breast milk over the nipple and areola with her finger. This promotes healing.

Candida Infection (Thrush)

The second commonest cause of sore nipples is infection with candida, also known as 'thrush'. Candida infection can make the skin sore and itchy. Candida infections often follow the use of antibiotics to treat mastitis and other infections.

Some mothers describe a burning or stinging which continues after a feed. Sometimes the pain shoots deep into the breast. A mother may say that it feels as though needles are being driven into her breast.

Suspect Candida if sore nipples persist even when the baby's attachment is good. Check the baby for thrush. He may have white patches inside his cheeks or on his tongue. He may have a rash on his bottom.

Treat both the mother and the baby with nystatin. Suggest to the mother to stop using pacifiers (dummies).

TREATMENT OF CANDIDA OF THE BREAST

Nystatin cream 100,000 IU/g:
Apply to nipples 4 times daily after breastfeeds.
Continue to apply for 7 days after lesions have healed.

Nystatin suspension 100,000 IU/ml:
Apply 1 ml by dropper to child's mouth 4 times daily after breastfeeds for 7 days, or as long as mother is being treated.

Stop using pacifiers, teats, and nipple shields.

Session 22

Importance of Complementary Feeding

Objectives

After completing this session participants will be able to:

- explain the importance of continuing breastfeeding
- define complementary feeding
- explain why there is an optimal age for children to start complementary feeding
- list the Key Messages from this session
- list their current complementary feeding activities

Introduction

So far we have concentrated on the time from birth to six months of age. The time from six months of age until two years is also of critical importance in the child's growth and development. You have an important role in helping families during this time.

During the next few sessions we will develop a list of 10 Key Messages to discuss with caregivers about when to start complementary feeds. The Key Messages are listed in the back of your Manual.

Sustaining breastfeeding

Breast milk alone, **exclusive breastfeeding**, should continue for the first six months.

From 6-12 months, breastfeeding continues to provide half or more of the child's nutritional needs, and from 12-24 months, at least one-third of their nutritional needs. As well as nutrition, breastfeeding continues to provide protection to the child against many illnesses and provides closeness and contact that helps psychological development.

Feeding counsellors like you can do a lot to support and encourage women who want to breastfeed their babies. You can help to protect good practices in a community. If you do not actively support breastfeeding, you may hinder it by mistake.

Every time you see a mother, try to build her confidence. Praise her for what she and her baby are doing right. Give relevant information, and suggest something appropriate.

Key Message 1

Breastfeeding for two years or longer helps a child to develop and grow strong and healthy.

Definition of complementary feeding

Complementary feeding means giving other foods in addition to breast milk.

These other foods are called complementary foods.

Additional foods and liquids are called complementary foods, as they are additional or complementary to breastfeeding, rather than adequate on their own as the diet. Complementary foods must be nutritious foods and in adequate amounts so the child can continue to grow.

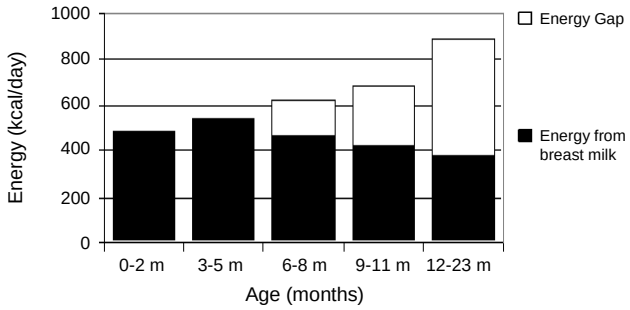
During the period of **complementary feeding**, the young child gradually becomes accustomed to eating family foods, though breastfeeding continues to be an important source of nutrients and protective factors until the child is at least two years old.

The optimal age to start complementary feeding

Our body uses food for energy to keep alive, to grow, to fight infection, to move around and be active. Food is like the wood for the fire – if we do not have enough good wood, the fire does not provide good heat or energy. In the same way, if young children do not have enough good food, they will not have the energy to grow and be active.

Energy Gap

Energy required by age and the amount supplied from breast milk



On this graph, each column represents the total energy needed at that age. The columns become taller to indicate that more energy is needed as the child becomes older, bigger and more active. The dark part shows how much of this energy is supplied by breast milk.

From about six months onwards there is a **gap** between the total energy needs and the energy provided by breast milk. The gap increases as the child gets bigger.

Therefore, for most babies, six months of age is a good time to start complementary foods. Complementary feeding from six completed months helps a child to grow well and be active and content.

Key Message 2

Starting other foods in addition to breast milk at six completed moths helps a child to grow well.

At six completed months, babies need to learn to eat thick porridge, puree and mashed foods as these foods fill the energy gap more than liquids.

At six completed months of age it becomes easier to feed thick porridge, puree and mashed food because babies:

- show interest in other people eating and reach for food
- like to put things in their mouth
- can control their tongue better to move food around their mouth
- start to make up and down ‘munching’ movements with their jaws.

In addition, at this age, babies’ digestive systems are mature enough to begin to digest a range of foods.

Most babies do not need complementary foods before six months of age. If the baby is less than six months old, counsel the mother on how to breastfeed exclusively in a way that helps the baby to get enough breast milk.

If the baby is not receiving breast milk, continue using adequate replacement milk feeding until six months of age rather than add complementary foods early.

RISKS TO 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 non-human protein well
- increase the mother's risk of another pregnancy if breastfeeding is less frequent.

RISKS TO 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.

Most babies do not need complementary foods before six completed months of age.

All babies older than six completed months of age should receive complementary foods.

EXERCISE 22.A ASSESS YOUR PRACTICES				
Does this practice occur?	**With all children**	**With some children**	**Does not occur**	**Comments**
Weigh child				
Measure child's length				
Look at child's growth chart				
Discuss how the child is feeding				
Note on child's chart that feeding was discussed				
Carry out demonstrations of young children's food preparations and feeding techniques				
Make home visits to assess foods and feeding practices				
Other Activities				

Most frequent activities occurring in your health facility

Least frequent activities occurring in your health facility

Summary

The nutritional status of a child affects overall health. Health is not only growth and development but also the ability to fight off illness, and recover from illness. This means the nutritional status of children is important to all health staff, and that all health staff should promote good feeding practices.

Creating a health facility environment that gives importance to children's nutrition will go a long way in promoting healthy children.

Notes

Session 23 - Homework

Building Confidence and Giving Support Exercises – Part 2

Exercise 23.a Accepting what a mother THINKS

How to do the exercise:
Examples 1-2 are mistaken ideas which mothers might hold.
Beside each mistaken idea are three responses. One agrees with the idea, one disagrees, and one accepts the idea, without either agreeing or disagreeing.
Beside each response write whether the response agrees, disagrees or accepts.

Example:

Mother of a healthy 19-month- old baby whose weight is on the median: "I am worried that my child will become a fat adult so I will stop giving him milk".	"You are worried about giving him milk?"	*Accepts*
	"It is important that children have some milk in their diet until they are at least two years of age".	*Disagrees*
	"Yes, fat babies tend to turn into fat adults."	*Agrees*

Examples 1-2:

1. Mother of a 7-month-old baby: "My child is not eating any food that I offer so I will have to stop breastfeeding so often. Then he will be hungry and will eat the food."

   "Oh, no, you must not give him less breast milk. That is a bad idea."

   "I see…".

   "Yes, sometimes babies do get full up on breast milk?"

2. Mother of a 12-month-old child:

   "My baby has diarrhoea so I must stop giving him any solids."

   "Yes, often foods can make the diarrhoea worse."

   "You are worried about giving foods at the moment?"

   "But solids help a baby to grow and gain weight again – you must not stop them now."

How to do the exercise:
Examples 3-4 are some more mistaken ideas which mothers might hold.
Make up a response that accepts what the mother says, without disagreeing or agreeing.

Examples 3-4:

3. "My neighbour's child eats more than my child and he is growing much bigger. I must not be giving my child enough food."

4. "I am worried about giving my one-year-old child family food in case he chokes."

Possible responses to accept what the mother thinks are:

Exercise 23.b Accepting what a mother FEELS

How to do the exercise:

After the Stories A, and B below, there are three responses.
Mark with a ✓ the response which shows acceptance of how the mother feels.

Example:

Edith's baby boy has not gained much weight over the past two months. As Edith tells you about it, she bursts into tears.
Mark with a ✓ the response which shows that you accept how Edith feels.

a. Don't worry – I am sure he will gain weight soon.

b. Shall we talk about what foods to give your baby?

✓ c. You're really upset about this aren't you?

To answer:

Story A.

Agnes is in tears. Her baby is refusing to eat vegetables and she is worried.

a. Don't cry – many children do not eat vegetables.

b. You are really worried about this, I know.

c. It is important that your baby eats vegetables for the vitamins he needs.

Story B.

Susan is crying. Since starting complementary feeds her baby has developed a rash on his buttocks. The rash looks like a nappy rash.

a. Don't cry - it is not serious.

b. Lots of babies have this rash – we can soon make it better.

c. You are really upset about this rash, aren't you?

Exercise 23.c Praising what a mother and baby are doing right

How to do the exercise:

For Stories C and D below, make up a response which praises something the mother and baby are doing right.

Example:

(In your answer, you only need to give ONE answer):

A mother is giving her nine-month-old baby fizzy drinks. She is worried that he is not eating his meals well. He is growing well at the moment. She offers him three meals and one snack per day.

"It is good that you are offering him three meals and one snack per day."

"Your child is growing well on the food you are giving him."

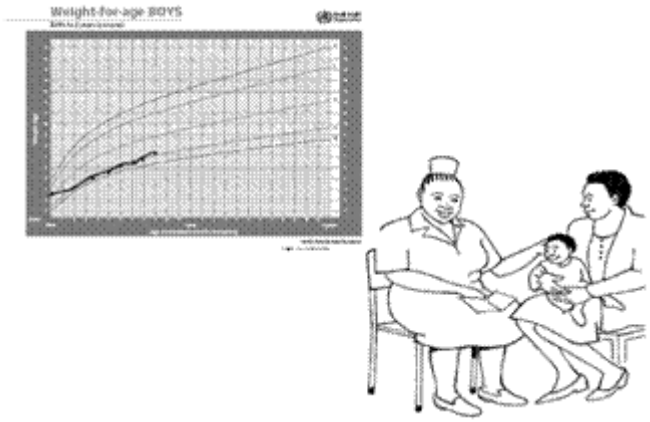
To answer:

Story C.

A 15-month-old child is breastfeeding and having thin porridge and sometimes tea and bread. He has not gained weight for six months, and is thin and miserable.

Story D.

A nine-month-old baby and his mother have come to see you. Here is the growth chart of the baby.



Exercise 23.d Giving a little, relevant information

How to do the exercise:
Below is a list of four mothers with babies of different ages.
Beside them are four pieces of information (a, b, c and d) that those mothers may need; but the information is not opposite the mother who needs it most.
Match the piece of information with the mother and baby in the same set for whom it is MOST RELEVANT AT THAT TIME
After the description of each mother there are four letters.
Put a circle round the letter which corresponds to the information which is most relevant for her.

To answer:

Mothers 1-4		Information
1. Mother with a seven-month old baby	a b c d	a. Children need extra water at this age – about 4-5 cups in a hot climate.
2. Mother with a 15-month-old baby who is getting two meals per day.	a b c d	b. Children who start complementary feeding at six completed months of age grow well.
3. Mother with a 12-month-old baby who thinks that the baby is too old to breastfeed any longer.	a b c d	c. Growing children of this age need three to four meals per day plus one to two snacks if hungry, in addition to milk.
4. Mother of a non-breastfed child who is 11 months old.	a b c d	d. Breastfeeding to at least two years of age helps a child to grow strong and healthy.

Exercise 23.e Using simple language

How to do the exercise:
Below are two pieces of information that you might want to give to mothers.
The information is correct, but it uses technical terms that a mother who is not a health worker might not understand.
Rewrite the information in simple language that a mother could easily understand.

Example:

Information:	**Using simple language:**
Dark-green leaves and yellow-coloured fruit and vegetables are rich in vitamin A.	*"Dark-green leaves and yellow-coloured vegetables help the child to have healthy eyes and fewer infections."*

To answer:

Information:	**Using simple language:**
1. Breastfeeding beyond six months of age is good as breast milk contains absorbable iron, calories and zinc.	
2. Non-breastfed children aged 14 months should receive protein, zinc and iron in appropriate quantities.	

Exercise 23.f Making one or two suggestions, not commands

How to do the exercise:
Below are some commands which you might want to give to a mother.
Rewrite the commands as suggestions.

Example:

Command:	**Suggestions:**
	(In your answer, you only need to give ONE answer):
"You must start complementary foods when your baby is six completed months old."	*"Children who start complementary foods at six completed months grow well and are active and content."*
	"Could you start some foods in addition to milk now that your baby is six completed months old?"

To answer:

Command:	**Suggestions**
"You must use thick foods."	
"Your child should be eating a full bowl of food by one year of age."	

Notes

Session 24

Foods to Fill the Energy Gap

Objectives

After completing this session participants will be able to:

- list the local foods that can help fill this energy gap
- explain the reasons for recommending using foods of a thick consistency
- describe ways to enrich foods
- list the Key Message from this session

Foods that can fill the energy gap

All foods provide some energy. However, every community has at least one *staple* or main food. People generally eat large amounts of these staples and they provide much of the energy needed. Staples also provide some protein and other nutrients, but they cannot provide all the nutrients needed on their own. The staple must be eaten with other foods for a child to get enough nutrients.

It is important that you know what are the main staples that families eat in your area. Then you can help them to use these foods for feeding their young children.

The stomach of a young child is small. At eight months of age the stomach can hold about 200 ml at one time. Thin foods and liquids fill it quickly.

The consistency or thickness of foods makes a big difference to how well that food meets the young child's energy needs. Foods of a thick consistency help to fill the energy gap.

Key Message 3

Foods that are thick enough to stay in the spoon
give more energy to the child.

Just right

Too thin

WAYS TO ENRICH A CHILD'S FOODS

Foods can be made more energy and nutrient rich in a number of ways:

- For a porridge or other staple
  - Prepare with less water and make a thicker porridge as we just saw. Do not make the food thin and runny.
  - Toast cereal grains before grinding them into flour. Toasted flour does not thicken so much, so less water is needed to make porridge.

- For a soup or stew
  - Take out a mixture of the solid pieces in the soup or stew such as beans, vegetables, meat and the staple. Mash this to a thick puree and feed to the child instead of the liquid part of the soup.

- Add energy or nutrient rich food to the porridge, soup or stew to enrich it. This enriching is particularly important if the soup is mostly liquid with few beans, vegetables or other foods in it
  - Replace some (or all) of the cooking water with fresh or soured milk, coconut milk, or cream.
  - Add a spoonful of milk powder after cooking.
  - Mix legume, pulse or bean flour with the staple flour before cooking.
  - Stir in a paste made from nuts or seeds such as groundnut paste (peanut butter) or sesame seed paste (tahini/sim sim).
  - Add a spoonful of margarine, ghee or oil.

Fats and oils

FATS AND OILS

- Oils and fats are concentrated sources of energy. A little oil or fat, such as one-half teaspoon, added to the child's bowl of food, gives extra energy in a small volume. The addition of fatty/oily foods also makes thicker porridge or other staple softer and easier to eat.
- Fats and oils can also be used for frying foods, or spread on foods such as bread. The fat or oil should be fresh as it can go bad with storage.
- If a large amount of oil is added, children may become full before they have eaten all the food. This means they may get the energy from the oil but less of the other nutrients because they eat less food overall.
- If a child is growing well, extra oil is usually not needed. The child who takes too much oil or fried foods can become overweight.
- Sugar, jaggery and honey are also energy-rich and can be added to foods in small quantities to increase the energy concentration. However, these foods do not contain any other nutrients.
- Caregivers need to watch that sugary foods do not replace other foods in the diet. For example, sweets, sweet biscuits and sugary drinks used instead of a meal for a young child.
- Essential fatty acids are needed for a child's growing brain and eyes, and for healthy blood vessels. These essential fatty acids are present in breast milk (see Session 2).
- For children over six months old, who are not breastfed, good sources of essential fatty acids are fish, avocado, nut pastes and vegetable oil. Animal-source foods also provide essential fatty acids (see Session 24).

FERMENTED PORRIDGE OR GERMINATION OF GRAIN FOR FLOUR

Fermented porridge

- Fermented porridge can be made in two ways - the grain can be mixed with water and set to ferment overnight or longer before cooking, or the grain and water is cooked into porridge and then fermented. Sometimes some of a previous batch of the fermented porridge (starter) is added to speed up the process of fermentation. Porridge made from germinated grain can also be fermented.
- The advantages of using fermented porridge are:
  - It is less thick than plain porridge so more grain/flour can be used for the same amount of water. This means each cupful of porridge contains more energy and nutrients than plain (unfermented) porridge.
  - Children may prefer the taste of 'sour' porridge and so eat more.
  - The absorption of iron and some other minerals is better from the soured porridge.
  - It is more difficult for harmful bacteria to grow in soured porridge, so it can be kept for a day or two.
- Grain is also fermented to make alcohol. However, the short fermentation talked about here to make fermented porridge will not make alcohol or make the child drunk!

Germinated or sprouted flour

- Cereal or legume seeds are soaked in water and then left to sprout. The grains are then dried (sometimes toasted) and ground into flour. A family can do this at home but it is more common to buy flour already germinated.
- Mixed flours that include germinated (or malted) flour in addition to the main flour may be available in the store.
- If families in your area use germinated grain, the following ways can be used to make a thicker and more nutritious porridge:
  - Use this germinated flour to make porridge. This type of flour does not thicken much during cooking so less water can be used.
  - Add a pinch of the germinated flour to cooked thick porridge that has cooled a little bit. The porridge should be boiled again for a few minutes after adding the germinated flour. This addition will make the porridge softer and easier for the child to eat.
- Germination also helps more iron to be absorbed.

Session 25

Foods to Fill the Iron and Vitamin A Gaps

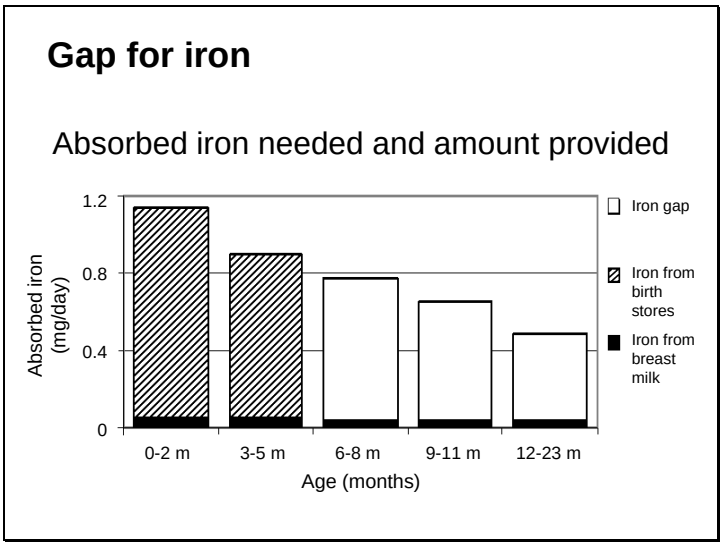
Objectives

After completing this session participants will be able to:

- list the local foods that can fill the nutrient gaps for iron and vitamin A
- explain the importance of animal-source foods
- explain the importance of legumes
- explain the use of processed complementary foods
- explain the fluid needs of the young child
- list the Key Messages from this session

Iron Gap

Another nutrient gap to be filled is for iron. The young child needs iron to make new blood, to assist in growth and development and to help the body to fight infections.



In this graph, the top of each column represents the amount of absorbed iron that is needed per day by the child. A full-term baby is born with good stores of iron to cover his needs for the first six months *(This is the striped area).*

The black area along the bottom of the columns shows us that there is some iron provided by breast milk all the time breastfeeding continues.

The young child grows faster in the first year than in the second year. This is why the need for iron is higher when the child is younger.

These iron stores are used up over this first six months, so after that time we see a gap between the child's needs and what they receive from breast milk. This gap needs to be filled by complementary foods *(The white area – this is the gap).*

Zinc is another nutrient that helps children to grow and stay healthy. It is usually found in the same foods as iron, so we assume if they are eating foods rich in iron they are also receiving zinc.

Your goals, as health workers, are:

- to identify local foods and food preparations that are rich sources of iron
- to assist families to use these iron rich foods to feed their young children.

The importance of animal-source foods

Foods from animals, the flesh (meat) and organs/offal such as liver, heart and blood, as well as milk, yoghurt, cheese and eggs are rich sources of many nutrients.

The flesh and organs of animals, birds and fish (included shell fish and tinned fish), as well as foods prepared with blood, are the best sources of iron and zinc. Liver is not only a good source of iron but also of vitamin A.

Animal-source foods should be eaten daily or as often as possible. This is especially important for the non-breastfed child.

Foods from animals such as milk and eggs are good for children because they are high in protein and other nutrients. However, milk and milk products, such as cheese and yoghurt, are not good sources of iron.

Milk fat (cream) contains vitamin A so foods made from whole milk are good sources of vitamin A.

Foods made from milk (whole milk or skimmed or powdered) and any food containing bones, such as pounded dried fish, are good sources of calcium to help bones to grow strong.

Egg yolk is another store of nutrients and a rich source of vitamin A.

It can be hard for children to meet their iron needs without a variety of animal foods in their diet. Fortified or enriched foods such as fortified flours, pasta, cereals, or instant foods, helps to meet these nutrient needs. Some children may need supplements if they do not eat enough iron containing foods or if they have particularly high needs for iron.

Key Message 4

Animal-source foods are especially good for children,

to help them grow strong and lively.

The importance of legumes - pulses, nuts and seeds

Legumes or pulses such as beans, peas, and lentils as well as nuts and seeds, are good sources of protein. Legumes are a source of iron as well.

Key Message 5

Peas, beans, lentils, nuts and seeds

are also good for children.

Some ways these foods could be prepared in a way that would be easier for the child to eat and digest are:

- Soak beans before cooking and throw away the soaking water.
- Remove skins by soaking raw seeds and then rubbing the skins off before cooking.
- Boil beans then sieve to remove coarse skins.
- Toast or roast nuts and seeds and pound to a paste.
- Add beans/lentils to soups or stews.
- Mash cooked beans well.

Eating a variety of foods at the same meal can improve the way the body uses the nutrients. For example, combining a cereal with a legume (example: rice and beans), or adding a milk product or egg to the legume (example: maize meal with milk).

Iron absorption

As well as pulses, dark-green leaves are also a source of iron. However, it is not enough that a food has iron in it; the iron must also be in a form that the child can absorb.

IRON ABSORPTION

The amount of iron that a child absorbs from food depends on:

- the amount of iron in the food
- the type of iron (iron from meat and fish is better absorbed than iron from plants and eggs)
- the types of other foods present in the same meal (some increase iron absorption and others reduce absorption)
- whether the child has anaemia (more iron is absorbed if anaemic).

Eating these foods at the same meal increases the amount of iron absorbed from eggs and plant foods such as cereals, pulses, seeds, and vegetables:

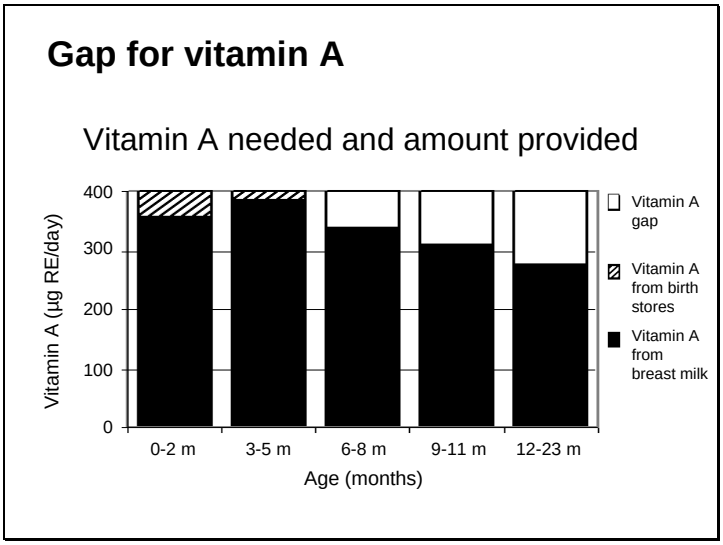
- foods rich in vitamin C such as tomato, broccoli, guava, mango, pineapple, papaya, orange, lemon and other citrus fruits
- small amounts of the flesh or organs/offal of animals, birds, fish and other sea foods.

Iron absorption is decreased by

- drinking teas and coffee
- foods high in fibre such as bran
- foods rich in calcium

Foods that can fill the vitamin A gap

Another important nutrient is vitamin A, which is needed for healthy eyes and skin and to help the body fight infections.



Again, on this graph the top of each column represents the amount of vitamin A that the child needs each day. Breast milk supplies a large part of the vitamin needed provided the child continues to receive breast milk and the mother's diet is not deficient in vitamin A. As the young child grows, there is a gap for vitamin A that needs to be filled by complementary foods.

Good foods to fill this gap are dark-green vegetables and yellow-coloured vegetables and fruits. Other sources of vitamin A that we mentioned already were:

- organ foods/offal (liver) from animals
- milk and foods made from milk such as butter, cheese and yoghurt
- egg yolks
- margarine, dried milk powder and other foods fortified with vitamin A.

Unbleached red palm oil is also rich in vitamin A.

Vitamin A can be stored in a child's body for a few months. Encourage families to feed foods rich in vitamin A as often as possible when these foods are available, ideally every day. A variety of vegetables and fruits in the child's diet help to meet many nutrient needs.

Health workers need to be aware of the products that are available in the area. If the health worker knows about the products, they can discuss with an individual family if these products are useful for their child or not.

Key Message 6

Dark-green leaves and yellow-coloured fruits and vegetables help a child to have healthy eyes and fewer infections.

In some countries, there are low priced processed complementary foods such as iron fortified flour and fortified baby cereals that are made locally. These are usually convenient and nutritious and families can be made aware of them.

FORTIFIED COMPLEMENTARY FOODS

When discussing fortified complementary foods with caregivers, there are some points to consider:

What are the main contents or ingredients?
The food may be a staple or cereal product or a flour. It may have some vegetables, fruit or animal-source foods in it.

Is the product fortified with micronutrients such as iron, vitamin A or other vitamins?
Added iron and vitamins can be useful, particularly if there are few other sources of iron containing foods in the diet.

Does the product contain ingredients such as sugar and/or oil to add energy?
These added ingredients can make these products a useful source of energy, if the child's diet is low in energy. Limit use of foods that are high in sugar and oil/fat but with few other nutrients.

What is the cost compared to similar home-produced foods?
If processed foods are expensive, spending money on them may result in families being short of money.

Does the label or other marketing imply that the product should be used before six months of age or as a breast-milk substitute?
Complementary foods should not be marketed or used in ways that undermine breastfeeding. To do so is a violation of the International Code of Marketing of Breast-milk Substitutes and subsequent resolutions and should be reported to the company concerned and the appropriate government authority.

The fluid needs of the young child

The baby who is exclusively breastfeeding receives all the liquid he needs in the breast milk. When other foods are added to the diet, the baby may need extra fluids. Likewise, a baby who is under six months of age and only receiving replacement milks does not need extra water.

Offer fluids when the child seems thirsty. Extra fluid is needed if the child has a fever or diarrhoea.

FLUID NEEDS OF THE YOUNG CHILD

- Water is good for thirst. A variety of pure fruit juices can be used also. Too much fruit juice may cause diarrhoea and may reduce the child's appetite for foods.
- Drinks that contain a lot of sugar may actually make the child thirstier as their body has to deal with the extra sugar. If packaged juice drinks are available in your area, find out which ones are pure juices and which ones have added sugar. Fizzy drinks (sodas) are not suitable for young children.
- Teas and coffee reduce the iron that is absorbed from foods. If they are given, they should not be given at the same time as food or within two hours before or after food.
- Sometimes a child is thirsty during a meal. A small drink will satisfy the thirst and they may then eat more of their meal.
- Drinks should not replace foods or breastfeeding. If a drink is given with a meal, give only small amounts and leave most until the end of the meal. Drinks can fill up the child's stomach so that they do not have room for foods.
- Remember that children who are not receiving breast milk need special attention and special recommendations. A non-breastfed child aged 6-24 months of age needs approximately 2-3 cups of water per day in a temperate climate and 4-6 cups of water per day in a hot climate. This water can be incorporated into porridges or stews, but clean water should also be offered to the child several times a day to ensure that the infant's thirst is satisfied.

EXERCISE 25.A WHAT IS IN THE BOWL?

Choose foods that are available to families in your area to form one meal for a young child, aged _____

What are Key Messages you could give for the foods that you have chosen?

Session 26

Quantity, Variety and Frequency of Feeding

Objectives

After completing this session participants will be able to:

- explain the importance of using a variety of foods
- describe the frequency of feeding complementary foods
- outline the quantity of complementary foods to offer
- list the recommendations for feeding a non-breastfed child
- list the Key Messages from this session

The importance of using a mixture or variety of foods

Most adults and older children eat a mixture of foods at mealtime. In the same way, it is important for young children to eat a mix of good complementary foods.

When you build on the usual food preparations in a household, it is easier for families to feed their young children a diet with good complementary foods.

The gaps for iron and for energy may be the hardest to fill.

Animal-source foods are special foods for children. These foods should be eaten every day or as often as possible. If foods fortified with iron are available, these could be used to help fill the iron gap.

If an iron-rich food is not available, you as the health worker may need to recommend using a micronutrient supplement to ensure the child gets sufficient iron and other micronutrients.

To give more energy foods, families can give some extra foods between meals that are easy to prepare. These extra foods are in addition to the meals – they should not replace them. These extra foods are often called snacks. However, they should not be confused with foods such as sweets, crisps or other processed foods, which may include the term snack foods in their name.

Good snacks provide both energy and nutrients. Yoghurt and other milk products; bread or biscuits spread with butter; margarine, nut paste or honey, fruit, bean cakes, cooked potatoes, are all good snacks.

Suggest that families try each day to give a dark-green vegetable or yellow-coloured fruit or vegetable and an animal-source food in addition to the staple food.

The frequency of feeding complementary foods

Key Message 7

A growing child needs 2-4 meals a day plus 1-2 snacks if hungry**:**
give a variety of foods.

Recommendations for the non-breastfed child

Recommendations for feeding the non-breastfed child

The non-breastfed child should receive:

- extra water each day (2-3 cups in temperate climate and 4-6 cups in hot climate)
- essential fatty acids (animal-source foods, fish, avocado, vegetable oil, nut pastes)
- adequate iron (animal-source foods, fortified foods or supplements)
- milk (1-2 cups per day)
- extra meals (1-2 meals per day)

Amount of complementary food to be offered

When a child starts to eat complementary foods, he needs time to get accustomed to the new taste and texture of the foods. A child needs to learn the skill of eating. Encourage families to start with 2-3 small spoonfuls of the food twice a day.

AMOUNTS OF FOODS TO OFFER			
Age	**Texture**	**Frequency**	**Amount of food an average child will usually eat at each meal [8]**
6-8 months	Start with thick porridge, well mashed foods Continue with mashed family foods	2-3 meals per day plus frequent breastfeeds Depending on the child's appetite 1-2 snacks may be offered	Start with 2-3 tablespoonfuls per feed increasing gradually to ½ of a 250 ml cup
9-11 months	Finely chopped or mashed foods, and foods that baby can pick up	3-4 meals plus breastfeeds Depending on the child's appetite 1-2 snacks may be offered	½ of a 250 ml cup/bowl
12-23 months	Family foods, chopped or mashed if necessary	3-4 meals plus breastfeeds Depending on the child's appetite 1-2 snacks may be offered	3/4 to one 250 ml cup/bowl
If baby is not breastfed, give in addition: 1-2 cups of milk per day, and 1-2 extra meals per day.			

As the child gets older, the amount of food offered increases. Give as much as the child will eat with active encouragement.

The amounts of food included in the table are recommended when the energy density of the meals is about 0.8 to 1.0 Kcal/g.

If the energy density of the meals is about 0.6 Kcal/g, recommend that the mother increases the energy density of the meal (adding special foods) or increase the amount of food per meal. For example:

- For 6-8 months; increase gradually to $^2/_3$ of cup
- For 9 to 11 months give ¾ of cup
- For 12 to 23 months give a full cup

Find out what the energy content of complementary foods is in your setting and adapt the table according to this information.

Counsel the mother/caregiver to feed the child using the principles of responsive feeding, recognizing the signs of hunger and satiety, these signs should guide the amount of food given at each meal and the need for snacks

Key Message 8

A growing child needs increasing amounts of food**.**

[8] Adapt the chart to use a suitable local cup/bowl to show the amount. The amounts assume an energy density of 0.8 to 1 Kcal/g.

EXERCISE 25.A AMOUNTS TO OFFER		
Age of child	**Frequency**	**Amount**
6 months 2 days		
22 months		
8 months		
12 months		
7 months		
15 months		
9 months		
13 months		
19 months		
11 months		
21 months		
3 months		

Notes

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Session 27

Growth assessment results and feeding counselling when the child is growing well

Objectives

After completing this session participants will be able to:

- explain to a mother the results of her child's growth assessment
- explain how to deal with a child who has severe growth problems
- gather information on feeding practices using the FOOD INTAKE JOB AID, 6-23 MONTHS

The mother will be very curious to know what you found when you assessed her child's growth, so the first step is to inform her in a clear and sensitive way using appropriate counselling skills.

If the child is growing well, the next step is to provide counselling on appropriate feeding for the child's upcoming age group, so that the child will continue to grow well.

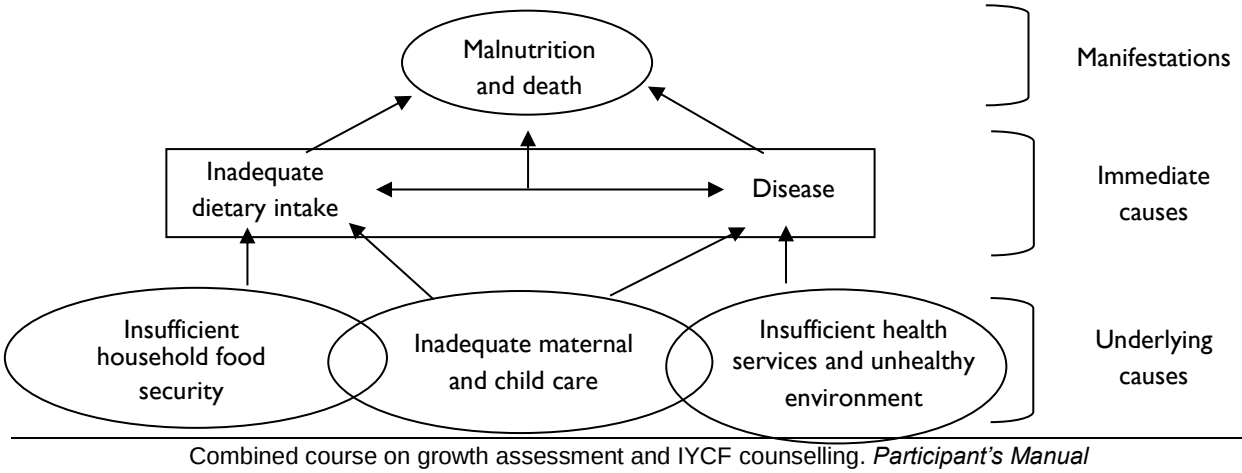
If there is a growth problem, or a trend towards a problem, you will interview the mother to identify possible causes of the problem. A booklet is provided with this course to assist in these interviews; the booklet includes two job-aids:

- *Investigating causes of undernutrition*
- *Investigating causes of overweight*

The job-aids suggest questions to ask the mother to identify causes of problems and also specific advice related to each possible cause.

Many social and environmental factors can affect a child's feeding, care, and resulting growth. That is why it is very important to determine the most important causes of a problem for a particular child **before** counselling. For example, if a child is wasted primarily because the family lacks food, it will not be helpful simply to advise the mother to feed the child more often. In such a situation, it would be better to guide the family to a source of assistance.

Causes of undernutrition



As implied in the diagram, in order to resolve the immediate causes of undernutrition, i.e. inadequate diet and disease, it may be necessary to address causes in the home environment, such as the absence of a responsible adult to care for the child during the day, or poor sanitation or contaminated water. It is not always possible to resolve these causes, but the health care provider can help the mother to understand them and think of positive actions to take.

Causes of overweight and obesity are also typically rooted in the environment. For example, a busy family may rely on high-energy convenience foods instead of taking time for leisurely, well-planned meals. Children may not be able to play outdoors safely and thus spend too much inactive time watching television or playing video games. Resolving problems of overweight and obesity will require addressing root environmental causes as well as immediate dietary causes.

During the counselling session it is important to agree on actions to improve the child's growth that are feasible for the mother or caregiver. If too many actions are suggested, she may forget many of them or be discouraged. Suggest the most important and feasible actions (two or three), and encourage the mother to bring the child back for follow-up. The follow-up visit will give the mother a chance to report success and the health care provider a chance to give additional advice as needed. Change takes time and the underlying causes of poor growth are unlikely to be resolved in a single counselling session. The need to follow up and monitor the child's feeding, care, and growth is critical.

Throughout the growth assessment, the mother has seen you recording measurements in the Growth Record and plotting and connecting points on the growth charts. She is likely to be curious about the results. Explain that you have plotted the points to see if the child is growing as expected, or if there is any growth problem. Explain the points and trends on each chart to her clearly and simply.

If a child is growing well, be sure to say so to the mother and compliment her. If there are problems, it is still very important to keep the discussion positive. Avoid any suggestion of accusing or judging the mother. You want to build the mother's trust and communicate that she can help the child.

Use clear, non-medical language as much as possible. If you use an unfamiliar word, such as "obese," explain it to the mother. For example, you could say, "obese means very heavy for one's height." Words such as "stunted," "wasted," and "obese" are used in the Growth Record, so be prepared to explain them in simple words.

Refer children with severe growth problems

Children with any of the following **severe undernutrition** problems should be referred **urgently for specialized care:**

- severely wasted (below −3 z-score for weight-for-length/height or BMI-for-age)
- clinical signs of marasmus (e.g. appears severely wasted, like "skin and bones")
- clinical signs of kwashiorkor (e.g. generalized oedema; thin, sparse hair; dark or cracking/peeling patches of skin)
- oedema of both feet

An undernourished child may have a current illness (such as diarrhoea) or a chronic health problem that could be contributing to undernutrition. If so, treat the contributing illness or problem if you are able to. If not, refer the child for appropriate treatment. If you know or suspect that a child has a chronic health problem (such as HIV/AIDS), refer the caregiver/child for counselling or testing as appropriate.

Refer children with obesity (above 3 z-score for weight-for-length/height) for **medical assessment and specialized management** if these services are available.

Whenever you refer a child, explain to the mother the reasons for the referral and stress its importance. According to your usual practice, provide a referral form or note for the mother to take with her. Also write a note in the *Growth Record* in the Visit Notes section, and show the mother this note. Ensure that she knows when and where to take the child. Ask whether she has transportation, and help her to arrange it if necessary. Follow up later to ensure that the child was taken for the required urgent care or medical assessment.

Every time you see a mother, try to build her confidence. Praise her for what she and her baby are doing right. Give relevant information, and suggest something appropriate.

Using the FOOD INTAKE JOB AID, 6-23 MONTHS

If you are going to counsel a mother on complementary feeding you need to find out what her child is eating. This is quite complicated because children eat different things at different times in a day.

In Session 18 you looked at the FEEDING HISTORY JOB AID, 0-6 MONTHS. You learnt how to take a feeding history.

Now we are going to look at assessing the intake of complementary feeds in more detail.

A useful way to find out what a child eats is to ask the mother what the child ate yesterday. This information can be used to praise the good feeding practices that are there already and to identify any Key Messages to help improve practises.

The FOOD INTAKE JOB AID, 6-23 MONTHS helps you to do this.

The mother is asked to recall everything the child consumed the previous day. This includes all foods, snacks, drinks, breastfeeds and any vitamin or mineral supplements.

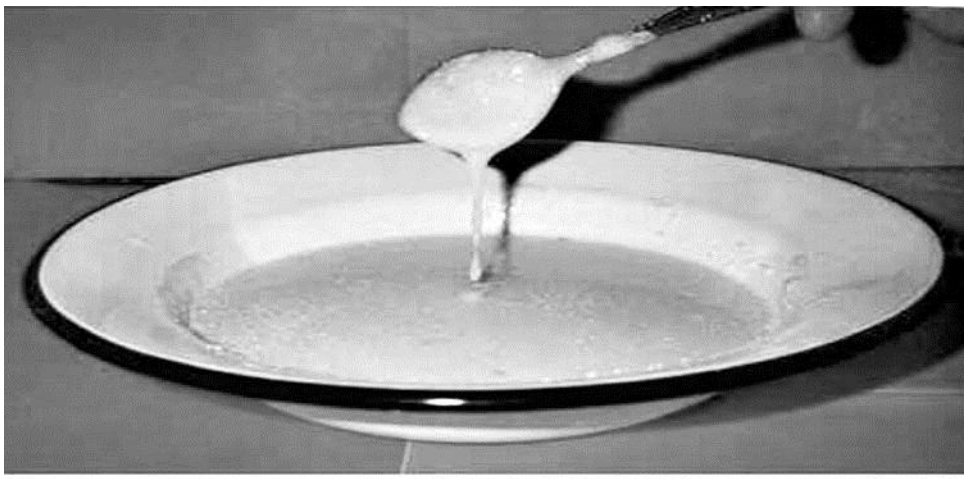
INSTRUCTIONS TO COMPLETE FOOD INTAKE JOB AID, 6-23 MONTHS

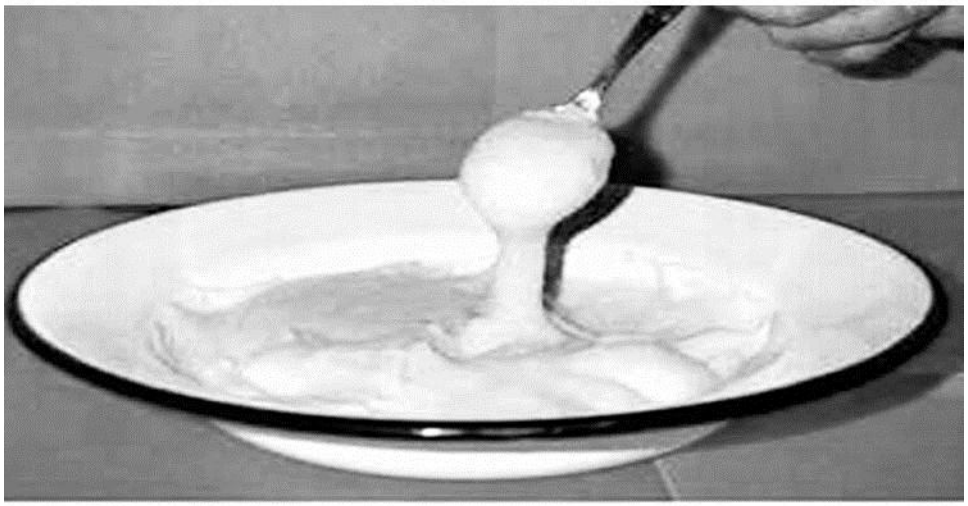
1. Greet the mother. Inform her that her child is growing well and complement her. Explain that you want to review how she's feeding and (if applicable) speak about how to feed in the approaching age group so the child will continue to grow well.
2. Start with: "(Mother name), let us talk about what (child's name) ate yesterday."
3. Continue with: "As we go through yesterday, tell me all (name) ate or drank, meals, other foods, water or breastfeeds."
   "What was the first thing you gave (name) after he woke up yesterday?"
   "Did (child's name) eat or drink anything else at that time or breastfeed?"
4. If the mother mentions a preparation, such as a porridge or stew, ask her for the ingredients in the porridge or stew.
5. Then continue with:
   "What was the next food or drink or breastfeed (child's name) had yesterday?"
   "Did (child's name) eat/drink anything else at that time?"
6. Remember to 'walk' through yesterday's events with the mother to help her remember all the food/drinks/breastfeeds that the child had.
7. Continue to remind the mother you are interested in what the child ate and drank yesterday (mothers may talk about what the child eats/drinks in general).
8. Clarify any points or ask for further information as needed.
9. Mark on the Food Intake Job Aid, 6-23 Months the practices that are present. If appropriate, show the mother the pictures of thin and thick consistency (for porridge and mixed foods). Ask her which drawing is most like the food she gave the child. Was it thick, stayed in the spoon and held a shape on the plate, or thin, flowed off the spoon and did not hold its shape on the plate?
10. Praise practices you wish to encourage. Offer 2-3 Key Messages as needed and discuss how the mother might use this information.

Enter ✓ in the Yes column if the practice is in place.
Enter your initials if a message is given (see FOOD INTAKE REFERENCE TOOL, 6-23 MONTHS for the message).

FOOD INTAKE JOB AID, 6-23 MONTHS		
Child's name		
Date of birth	Age of child at visit	
Feeding practice/situation	**Yes / number where relevant**	**Key Message given**
Growth appropriate?		
Child received breast milk?		
How many meals of a thick consistency did the child eat yesterday? (use consistency photos as needed)		
Child ate an animal-source food yesterday? (meat/fish/offal/bird/eggs)?		
Child ate a dairy product yesterday?		
Child ate pulses, nuts or seeds yesterday?		
Child ate a dark-green or yellow vegetable or yellow fruit yesterday?		
Child ate sufficient number of meals and snacks yesterday, for his/her age?		
Quantity of food eaten at main meal yesterday appropriate for child's age?		
Mother assisted the child at meals times?		
Child took any vitamin or mineral supplements?		
Child ill or recovering from an illness?		

FOOD INTAKE REFERENCE TOOL, 6-23 MONTHS		
Feeding Practice/situation	**Ideal Feeding Practice**	**Key Messages to help counsel mothers**
Growth appropriate?		Look at the shape of the growth curves of the child: is the child growing "normally"?
Child received breast milk?	Yes	Breastfeeding for 2 years of age or longer helps a child to develop and grow strong and healthy
How many meals of a thick consistency did the child eat yesterday? (use consistency photos as needed)	3 meals	Foods that are thick enough to stay in the spoon give more energy to the child
Child ate an animal-source food yesterday? (meat/fish/offal/bird/eggs)?	Animal-source foods should be eaten daily	Animal-source foods are especially good for children to help them grow strong and lively
Child ate a dairy product yesterday?	Try to give dairy products daily	Animal-source foods are especially good for children to help them grow strong and lively
Child ate pulses, nuts or seeds yesterday?	If meat is not eaten pulses or nuts should be eaten daily, with an iron enhancer such as a vitamin C rich food	Peas, beans, lentils, nuts and seeds are good for children
Child ate a dark-green or yellow vegetable or yellow fruit yesterday?	A dark-green or yellow vegetable or yellow fruit should be eaten daily	Dark-green leaves and yellow-coloured fruits and vegetables help the child to have healthy eyes and fewer infections
Child ate sufficient number of meals and snacks yesterday, for his/her age?	Child 6 – 8 months: 2 – 3 meals plus 1 – 2 snacks if child hungry Child 9 – 23 months: 3 – 4 meals plus 1 – 2 snacks if child hungry	A growing child needs 2 – 4 meals a day plus 1 – 2 snacks if hungry: give a variety of foods
Quantity of food eaten at main meal yesterday appropriate for child's age?	Child 6 – 8 months: gradually increased to approx. ½ cup at each meal Child 9 – 11months: approx. ½ cup at each meal Child 12 – 23 months: approx. 3/4 to 1 cup at each meal	A growing child needs increasing amounts of food
Mother assisted the child at meal times?	Yes, assists with learning to eat	A young child needs to learn to eat: encourage and give help… with lots of patience
Child took any vitamin or mineral supplements?	Vitamin and mineral supplements may be needed if child's needs are not met by food intake	Explain how to use vitamin and mineral supplements if they are needed
Child ill or recovering from an illness?	Continue to eat and drink during illness and recovery	Encourage the child to drink and eat during illness and provide extra food after illness to help them recover quickly





Enter ✓ in the Yes column if the practice is in place.
Enter your initials if a message is given (see FOOD INTAKE REFERENCE TOOL for the message)

FOOD INTAKE JOB AID, 6-23 MONTHS		
Child's name:		
Date of birth:	Age of child at visit: 11 months	
Feeding practice/situation	**Yes / number where relevant**	**Key Message given**
Growth appropriate?	Slow growth	
Child received breast milk?	√	
How many meals of a thick consistency did the child eat yesterday? (use consistency photos as needed)	2	Yes
Child ate an animal-source food yesterday? (meat/fish/offal/bird/eggs)?	√	
Child ate a dairy product yesterday?	√	
Child ate pulses, nuts or seeds yesterday?	√	
Child ate a dark-green or yellow vegetable or yellow fruit yesterday?	√	
Child ate sufficient number of meals and snacks yesterday, for his/her age?	√	
Quantity of food eaten at main meal yesterday appropriate for child's age?	√	
Mother assisted the child at meal times?	√	
Child took any vitamin or mineral supplements?	-	
Child ill or recovering from an illness?	-	

Session 28

Investigating causes of undernutrition

Objectives

After completing this session participants will be able to:

- explain when to investigate causes of undernutrition
- identify the key sections of the job-aid for investigating undernutrition causes
- explain how to use the job aid
- identify the 8 steps involved in investigating causes and counselling for undernutrition

It is important to investigate the causes of the problem before counselling the mother.

This Investigation should be carried out for any child who is:

- wasted (below −2 z-score for weight-for-length/height)
- underweight (below −2 z-score for weight-for-age)[1]
- stunted (below −2 z-score for length/height-for-age)[9] and not overweight or at risk of overweight
- has a growth trend towards one of these problems.

Job aid: Investigating causes of undernutrition

Use the job-aid titled *Investigating Causes of Undernutrition* provided with this course. The left side of this job-aid lists questions to ask the mother. The right side lists advice to be given depending on the mother's answers. Some pages of the job-aid are used only for children in a specific age group, while others apply to all children.

To use the job-aid, first ask all of the relevant questions about causes. Give advice only after the investigation of causes is complete, so that you can tailor your advice to the most important causes.

To investigate causes of undernutrition:

- Ask all the relevant questions for the child's age.
- Listen carefully to the mother's answers.
- Ask follow-up questions as needed to get complete information to understand the causes of the child's undernutrition.
- Note causes that are applicable for the child.

[9] In highly undernourished populations, the number of children below −2 z-score in weight-for-age and length/height-for-age will be high. It may therefore be necessary to consider lower z-score cut-offs for selecting children for counselling.

If there are many applicable causes, try to identify the most important ones. Ask the mother for her opinion about which causes are most important. You may comment on causes as they are discovered, but give advice only when the investigation of causes is complete.

If the child is currently ill or has a chronic disease that could be a cause of undernutrition, treat the child (or refer the child for treatment) rather than completing the entire interview about causes. Also advise the mother **how to feed the child during illness** using the feeding recommendations for the child's age group in the *Growth Record*. When the child returns for follow-up, you can investigate other possible reasons for the undernutrition.

If the child has experienced a trauma (such as death in the family or a change in caregiver), this may be a contributing factor to a decrease in food intake. In this type of situation, assess whether it would be better to wait to conduct the interview at a later time.

Questions in the interview are related to breastfeeding, the child's appetite, types and variety of foods given, frequency of feeding, family mealtime habits, illnesses, recent trauma, and social and environmental factors that may contribute to undernutrition. The interview also includes a question to ask the mother directly what she thinks the causes may be.

The interview requires taking time with the mother, but taking this time is critical in order to identify the most relevant and helpful advice. In a busy health facility, it may be necessary to assign specific health care providers to do the tasks of interviewing and counselling mothers. Group counselling is an option to consider if the number of undernourished children is too large for staff to deal with individually.

Steps in investigating causes of undernutrition

- **Step 1:** Find out if the child is currently ill
- **Step 2:** If not ill, initiate investigation of causes
- **Step 3:** Ask about any recent changes in eating and/or breastfeeding
- **Step 4:** Discuss age-specific questions about the child's feeding
- **Step 5:** Ask about recurrent illnesses
- **Step 6:** Assess possible underlying social and environmental causes
- **Step 7:** Jointly with the mother/caregiver, identify causes
- **Step 8:** Counsel

Take time now to study the job-aid titled Investigating Causes of Undernutrition. Focus on the questions listed on the left side. Remember that you will ask all of the relevant questions for the child's age, listen to the mother's or caregiver's replies, and determine the most important causes of undernutrition before giving advice.

While interviewing the mother, you may note several possible causes of undernutrition, for example, feeding practices that differ from the recommendations for the child's age. You may also note sanitation problems that could cause illnesses leading to undernutrition. In addition, you may note social and environmental factors that could affect the child's feeding and care. Following are some examples:

If three or more children under 5 years of age live in the household, the child is at risk of undernutrition and neglect. The risk is decreased if there are two or more people who share responsibilities for child feeding and care.

If there is no mother or no father present in the household (e.g. due to family separation or death), or if one parent is not involved in the child's care, the child's risk of undernutrition and neglect is increased.

If the mother or father is not in good health, the child's risk is increased.

If the mother states that there is not usually enough food to feed the family, she is facing serious obstacles and needs food assistance as well as advice.

When there are several possible causes of undernutrition, it is helpful to focus on the main causes that can be changed. After asking the questions in the interview, ask the mother's opinion of the causes, so that you know which causes she recognizes. Then summarize what you see as the main causes. The next exercise includes an example of an interview with the mother of an undernourished child.

Dialogue with Nalah's mother

The scripted interview follows the job-aid titled Investigating the Causes of Undernutrition. The steps are labelled in the script.

- Step 1 is covered in the background information and at the beginning of the interview, when the nurse explains the nutritional problem to Mrs Parab.
- (The nurse locates the pages in the job aid for a baby age 6 months to 1 year.)
- In Step 2, the nurse asks permission to interview the mother about causes of the problem.
- Since Nalah is not ill, the nurse will do Step 3 of the job-aid (asking about breastfeeding).
- Then the nurse will go to Step 4 and ask questions about feeding from that page.
- The nurse will then ask the questions intended for children of all ages (listed in Steps 5–6).
- The first part of the dialogue will end with Step 7, identifying likely causes of undernutrition. The next exercise will deal with counselling to address these causes.

Nalah is now 6 months old and has visited the health centre 5 times since her birth. Nalah is the only child at home living with her mother and father. Both parents are in good health; neither is known to be HIV positive. Her growth has been charted in the Girl's Growth Record. Because Nalah is below the −2 z-score line in both length-for-age and weight-for-age, the nurse will counsel the mother, Mrs Parab, about growth and feeding. Before giving any advice, the nurse will interview Mrs Parab about Nalah's feeding and the home situation in order to find out possible causes of her undernutrition.

Step 1: Nalah is not currently ill and has no known chronic disease.

Script – Dialogue with Nalah's mother about the causes of undernutrition
Nurse: Thank you for bringing Nalah back again, Mrs Parab. Now that we have measured and weighed her, let's take a minute to talk, shall we? Mrs Parab: Of course.

Nurse: (Showing the growth charts) As you can see from her length chart, Nalah was an average length at birth and she could have grown along this green line if all was going well. But we can see that she is a lot shorter than an average girl of 6 months. Her weight also is a lot lower than the average. Since her growth in both weight and length has slowed down together, she does not look too thin. But we want her to grow longer and to gain weight.

Mrs Parab: What should we do?

Step 2

Nurse: Well, since Nalah has not been ill, I think we should focus on her feeding. Do you mind if I ask you some questions so that we can better understand the reasons why her growth has slowed down?

Mrs Parab: That would be fine.

Step 3

Nurse: Alright then, has Nalah been breastfeeding less or eating less than usual?

Mrs Parab: Maybe less, because it's hard to breastfeed when I have to go to work. Sometimes I have to leave her with my neighbour.

Step 4: The nurse turns to page 5 of the job aid since Nalah is 6 months old.

Nurse: So you are still breastfeeding?

Mrs Parab: Yes, when I can.

Nurse: That's good. How many times is that during a day and a night?

Mrs Parab: When I have Nalah with me at work, I breastfeed about 4 or 5 times from morning until night. If she stays with my neighbour, I can only breastfeed twice, once in the morning and once at night.

Nurse: Do you have any difficulty with breastfeeding itself? Is Nalah attaching well to the breast and emptying the breasts whenever she breastfeeds?

Mrs Parab: Well, I have never thought about that. I was told that I should feed her from both breasts so sometimes I switch to the other breast before the first is empty.

Nurse: That is something we can look at together in a moment. Do you give Nalah any other fluids besides breast milk?

Mrs Parab: I sometimes have given her water, and I leave her some milk when she stays with my neighbour.

Nurse: What kind of milk?

Mrs Parab: I buy it at the shop. It's cow's milk from a tin.

Nurse: Do you add any water to it?

Mrs Parab: No, because it already looks thin to me.

Nurse: How many times does the neighbour give her the milk?

Mrs Parab: Twice, I think.

Nurse: And how does she feed Nalah the milk?

Mrs Parab: In a cup.

Nurse: That is good. Do you or the neighbour give Nalah any semi-solid or solid foods?

Mrs Parab: My neighbour gives her some porridge if she seems hungry after the milk.

Nurse: How often is that?

Mrs Parab: Not more than once a day.

Nurse: How does the neighbour feed Nalah the porridge?

Mrs Parab: With a spoon.

Nurse: Have you offered Nalah any porridge at home?

Mrs Parab: Not yet.

Step 5

Nurse: Let me just ask you a few more questions about Nalah's health and your home.

Is Nalah often tired, or sick with diarrhoea, cough, or fever?

Mrs Parab: Nalah does not seem strong to me. She sometimes has a runny nose, and she likes to be held. She does not move around a lot but lies still.

Step 6

Nurse: Tell me about where you live. Do you have a latrine or toilet?

Mrs Parab: No, we live in a poor area. There is a common latrine for many houses.

Nurse: Where do you get water?

Mrs Parab: We get water from a tap in the yard, and once a week I buy water in large cans.

Nurse: Do you boil or treat your water?

Mrs Parab: I boil the drinking water, but not the water for washing dishes.

Nurse: It is very good that you boil the water for drinking. How is water stored in your home?

Mrs Parab: I just keep it in the same cans that we buy it in.

Nurse: How many people are living at home now?

Mrs Parab: Just me, my husband, and Nalah.

Nurse: And how is your health?

Mrs Parab: We are fine, although I am very tired, I must admit.

Nurse: Does Mr. Parab help with Nalah?

Mrs Parab: He is out looking for construction work most days, but he helps a bit.

Nurse: Do you have enough food to feed the family?

Mrs Parab: We have enough to manage.

Step 7

Nurse: What do you think is the most important reason for Nalah's small size and tiredness?

Mrs Parab: Well, I thought she looked small but I did not know why. Maybe she needs more food. I wish that I could stay home and breastfeed more…

Nurse: Yes, that would be good if you can do it. From what you have said, it seems to me that Nalah may be growing slowly for a number of reasons, but most probably because she is not getting enough food. Please put her to the breast for a feed so we can see if she attaches well and let's speak more about the emptying of the breasts.

Session 29

Counsel mother whose child has a problem of undernutrition

Objectives

After completing this session participants will be able to:

- involve the mother in identifying possible causes of undernutrition
- find age-appropriate advice for the problem identified
- set goals for improving growth of an undernourished child
- provide examples of checking questions to use when counselling

Counselling related to the causes of undernutrition

During the first part of the interview with the mother or other caregiver, you summarized the possible causes of the child's undernutrition and determined which causes seemed most applicable and important. Next, focusing on the main causes that the mother or caregiver recognizes as important, ask her:

"What do you think that you can do to help the child, given these causes?"

Then discuss what is feasible to do and who can provide help and support. Acknowledge any difficulties in the mother's situation. Encourage her to take action.

Specific advice related to feeding is given on the right-hand side of the job-aid, next to the related questions. If you noted that a feeding practice differs from what is recommended, explain the recommended practice. Also commend the mother if she is following some of the recommendations.

If there are many causes of undernutrition, there may be much applicable advice, but the mother will only be able to remember a limited number of actions to take. Limit your advice to two or three actions that are most important and feasible.

A stunted child whose weight-for-length/height is within normal range needs a diet that will improve growth in length/height without excessive weight gain that could result in overweight or obesity. Rather than increasing their energy intake, a strategy for such children is to improve the amount and bioavailability of micronutrients in their diet by increasing consumption of animal-source foods. Animal-source foods are high in micronutrients, and many minerals are better absorbed from meat than they are from plant-derived foods.[10] Among vegetarian populations or where access to a micronutrient-adequate diet is limited, strategies to improve micronutrient intake include using fortified foods and sprinkles or providing micronutrient supplements.

[10] Allen LH, Gillespie SR. 2001. What works? A review of the efficacy and effectiveness of nutrition interventions. United Nations Administrative Committee on Coordination, Sub-Committee on Nutrition, Geneva in collaboration with the Asian Development Bank, Manila.

Set a goal for improving growth

Since improvement in the child's growth may take some time, and the rate of improvement cannot be predicted, set goals for a few (2 or 3) actions that the caregiver can take towards improving the child's growth. Suggest actions that can be taken within a few weeks. You can praise and encourage the caregiver when they are accomplished. Make notes (e.g. in the Growth Record) of the underlying causes of undernutrition for discussion at follow-up visits, when goals may be set for additional actions to take.

If the cause of the child's undernutrition is a recent illness, the goal is to return the child to his previous, normal growth line in a reasonable amount of time, such as 3 months.

If there are other causes of the child's undernutrition, the first goal is to stop the trend towards undernutrition and eventually reverse the trend. Stress that the mother can help to achieve these goals by following the recommendations discussed.

Avoid setting any specific target for weight gain, especially for a stunted child. If the stunted child gains weight without increasing in length, he or she may become overweight. Express goals in terms of improving growth so that length and weight increase appropriately in relation to one another.

At the end of the discussion with the mother or other caregiver, it is important to set a reasonable time for the child's next visit and to set a general goal for improved growth. The next visit may be at the time that an immunization is required or at another convenient time.

Example

Hamid is 11 months old and weighs 8.0 kg and has a length of 74 cm. His length-for-age is just below the median, but his weight-for-age is below the −1 z-score line. Hamid's weight-for-length is on the − 2 z-score line.

After discussing with Hamid's mother how to improve his feeding, the health care provider suggests that Hamid return in 1 month for another growth assessment. The goal is that Hamid will start gaining weight and avoid becoming wasted.

Script 2 **– Conclusion of counselling session with Nalah's mother**	
Nurse:	Nalah's breast attachment is very good. Well done. Now whenever you breastfeed, leave her to empty each breast so that she gets the hindmilk which has more fat than the foremilk. Let's talk now about how frequently you can feed her. You said that you would like to stay home and breastfeed more. Is there any way that you could do that?
Mrs Parab:	If my husband could get more work, I could stay home and breastfeed more.
Nurse:	That would be helpful to Nalah if you can do it. Let's talk about some more ways to help Nalah. Let's look in the Growth Record for the feeding recommendations for her age.
	(*The nurse opens the Growth Record to pages 16-17 to show the recommendations to Mrs Parab.*)
①	Since Nalah is now 6 months old, we need to follow the recommendations for infants 6 months to 1 year of age. You see that the first recommendation is to breastfeed as often as Nalah wants. Even if you cannot breastfeed more during the day, you could do it at night.
	Nalah also needs a good soft staple food now that she is 6 months old. What kind of porridge is she eating at your neighbour's home?

Mrs Parab: The porridge is made of maize meal.

Nurse: That is a fine staple food. You need to feed Nalah thick porridge 2–3 times each day, about 2–3 tablespoons. (Shows amount with her hands or a spoon) If she is already taking more than this, do not reduce the amount.

②

Mrs Parab: Should I give her any other foods?

Nurse: Yes, but start just one new food at a time to be sure that she can tolerate it. For example, you can start giving some mashed fruit, such as banana. Let's look at the list of some appropriate foods on page 15 of Nalah's Growth Record.

③

The porridge will give Nalah energy, but she needs a variety of other foods for their nutrients to help her grow. Just remember to introduce them one at a time.

Mrs Parab: But I don't have all of these foods. Foods like chicken and butter are too expensive.

Nurse: You don't have to give those. Let's talk about what you do have. What animal source foods can you give her?

Mrs Parab: I can get eggs, and sometimes fish or a bit of meat.

Nurse: That will do very well. Can you get leafy green and yellow-coloured vegetables and fruit?

Mrs Parab: Yes. For vegetables I can get pumpkin and chard. And banana and papaya for fruit.

Nurse: And do you have oil or fat that you could add a little to her food?

Mrs Parab: I have oil, but I think it causes constipation in babies.

Nurse: Oil should not cause constipation, but what it will do is to increase the energy in Nalah's food.

Mrs Parab: That all seems like too much food.

Nurse: Well, you will not give all of these foods every day. Remember, at first you will only give a small amount 2 or 3 times each day. And you will only introduce one new food every 3–4 days. Please tell me why you should introduce new foods one at a time.

Checking question

Mrs Parab: To be sure that the new food does not make her sick.

Nurse: That's right.

Mrs Parab: What about breastfeeding? How long should I breastfeed?

Nurse: Keep breastfeeding as often as Nalah wants to, day and night for two years or more.

Mrs Parab: I hope that I can do that.

Nurse: I think that if you feed Nalah the way that we have discussed, she will be better nourished and more lively. The food will help her grow and develop more. Now, to review, please tell me how you will feed Nalah for the next month.

Mrs Parab: I will try to breastfeed more often.

Nurse: Good. What else?

Mrs Parab: I will give her porridge.

Nurse: OK. That's good. How much porridge and how often?

Mrs Parab: About this much (shows with hands) two or three times a day.

Nurse: Very good. And what other foods will you start giving, one at a time?

Mrs Parab: Mashed banana, papaya, pumpkin.

Nurse: What food will you give that comes from an animal?

Mrs Parab: Eggs, most likely.

Nurse: All of these foods will help Nalah grow. If you can feed her as we have agreed for one month, there should be a change in her health. Do you think that you could bring Nalah back next month?

Mrs Parab: Yes, I can bring her back.

Nurse: Good. We will weigh and measure her again. When she is getting enough food, you will see her being more active instead of lying still. We should also see her growing in length and weight. So, next month we will speak about her feeding needs at 7–8 months, and maybe also look for ways to prevent problems like the runny nose that you mentioned.

Mrs Parab: Okay, I will bring her back in one month.

Nurse: That's great. Let me write the date for that visit in her book. Of course, if Nalah gets sick or if you have any problems or questions, you can come sooner. I look forward to seeing you again.

Mrs Parab: Thank you.

Session 30

Investigate causes and counsel mother whose child is overweight

Objectives

After completing this session participants will be able to:

- explain when to investigate causes of overweight
- identify the key sections of the job-aid for investigating overweight causes
- identify the 5 steps involved in investigating causes and counselling for overweight
- involve the mother in identifying possible causes of overweight
- set goals for improving growth of an overweight child

As with problems of undernutrition, it is important to investigate the causes of overweight before giving advice to the mother. Investigate the causes by interviewing the mother of any child who:

- is overweight (above 2 z-score for weight-for-length/height)
- has a growth trend towards overweight (above 1 z-score for weight-for-length/height, with a trend towards the 2 z-score line)

A stunted child can be overweight or obese.

Note: Obese children (above 3 z-score) need referral for medical assessment and specialized management. If there is a referral system for obese children, refer them. If not, interview the mother about causes and counsel her as you would for a child who is overweight.

Investigating causes of overweight

Use the job-aid titled Investigating Causes of Overweight provided with this course. The left side of this job-aid lists questions to ask the mother. The right side lists advice to be given depending on the mother's answers. Some questions in the job-aid are used only for children in a specific age group, while others apply to all children.

To use the job-aid, first ask all of the relevant questions about causes. Give advice only after the investigation of causes is complete, so that you can tailor your advice to the most important causes.

To investigate the causes of overweight:

- Ask all the relevant questions for the child's age.
- Listen carefully to the mother's answers.
- Ask follow-up questions as needed to get complete information to understand the causes of the child's overweight.
- Note causes that are applicable for the child.

To identify the causes of overweight, you will ask the mother questions about her child's diet and frequency of feeding/eating. For older children, also ask about leisure activities (such as hours spent watching television) and level of physical activity. Take care to ask these questions in a sensitive way that will not offend the mother or imply that she is at fault. If a child is being fed too much or too often, ask follow-up questions to determine why. Particularly in late infancy (age 6–12 months), a child may be overfed by parents who are anxious to keep up the child's weight. Knowing the reasons for overfeeding will help you express your advice in the most relevant way.

You may need to be particularly sensitive if the mother herself appears to be overweight. If one parent is obese, the child has 40% probability of being overweight; if both parents are obese, the probability that the child will be overweight goes up to 70%. Although children do have a genetic tendency towards leanness or overweight, the causes of overweight are primarily factors such as family eating patterns and environment (for example, poor dietary habits, high consumption of energy-dense foods, and little physical activity). If parents have poor eating and activity habits, the child is likely to learn the same habits. During the interview about causes of overweight, focus on the child's eating and activity patterns rather than the parents'. However, realize that the parents may need to change some of their habits in order to address the causes of the child's overweight.

When there are several possible causes, it is helpful to focus on the main ones that can be changed. After asking the questions in the interview, ask the mother's opinion of the main causes of overweight, so that you know which causes she recognizes. Then summarize what you see as the main causes.

Steps in investigating causes of overweight

- Step 1: Initiate investigation of causes
- Step 2: Discuss age-specific questions about the child's feeding
- Step 3: Ask about physical activity (children over age 6 months)
- Step 4: Jointly with the caregiver, identify causes
- Step 5: Counsel

Take time now to study the job-aid titled Investigating Causes of Overweight. Focus on the questions listed on the left side. Remember that you will ask all of the relevant questions for the child's age, listen to the mother's or caregiver's replies, and determine the most important causes of overweight **before** giving advice.

Dialogue with Toman's mother

The scripted interview follows the job-aid titled Investigating the Causes of Overweight. The steps are labelled in the script. Preview the script as follows:

- Step 1: First the nurse will explain the nutritional problem and the purpose of the interview to Mrs Baruni.
- Step 2: Since Toman is exactly 2 years old, the nurse will start with the questions for a baby from 6 months to 2 years to establish how Toman has been fed up to this point.
- Step 3: The nurse will ask about physical activity.

- This script will end with Step 4, identifying likely causes of overweight. The next exercise will deal with counselling to address these causes.

Toman is now 2 years old. Toman is the only child at home living with his mother. Mr and Mrs Baruni are separated, and Toman spends weekends with his father. Both parents are in good health; neither is known to be HIV positive. Mrs Baruni does not appear to be overweight.

His growth has been charted in the Boy's Growth Record. Because Toman is above the 2 z-score line in weight-for-height, the nurse is going to counsel his mother, Mrs Baruni, about growth and feeding. Before giving any advice, the nurse will interview Mrs Baruni about Toman's feeding and the home situation in order to find out the possible causes of his overweight.

Script 3 – Dialogue with Toman's mother about the causes of overweight

Step 1

Nurse: Let's look together at Toman's Growth Record. Looking at his length-for-age, we see that he is a nice height, a bit taller than average for boys his age.

The other charts show that Toman is quite heavy for his height. What do you think? Would you agree that Toman is overweight?

Mrs Baruni: I don't know. I think that he is a big, healthy boy. I never thought he was really overweight. Is this a problem?

Nurse: It will be a problem if he continues gaining weight so fast. We need to slow down his weight gain until his height catches up. Do you mind if I ask you some questions about Toman's eating and his physical activity? Then we can both understand why he seems to be gaining weight faster than expected.

Mrs Baruni: Alright.

Step 2

Nurse: Is Toman breastfed?

Mrs Baruni: No, I stopped breastfeeding him when he was 3 months old.

Nurse: Is he fed any milk formula or other milk?

Mrs Baruni: He drinks lots of milk. He loves milk.

Nurse: About how much milk does he drink each day?

Mrs Baruni: Oh, probably a litre. He has a glass in the morning, then at about 10:00, and also with snacks. I also give him a bottle to help him go to sleep without crying at night.

Nurse: How is the milk prepared? Is anything added to sweeten or thicken it?

Mrs Baruni: Usually it's just fresh milk from a packet, but sometimes I warm it and add a bit of sugar or chocolate powder.

Nurse: How many meals does he eat each day?

Mrs Baruni: Three.

Nurse: OK. About how much does he eat at each meal?

Mrs Baruni: A small bowl full.

Nurse: What type of bread does Toman eat?

Mrs Baruni: He likes regular sliced bread, toast, and sweet breads.

Nurse: Does he eat cakes or other sweets?

Mrs Baruni: Well, he eats sweets like cookies and cake when he stays with his father and his father's mother over the weekend. My mother-in-law likes to bake and feed Toman sweets. She is a bit heavy herself.

Nurse: Does Toman drink soft drinks?

Mrs Baruni: Yes, sometimes.

Nurse: How often?

Mrs Baruni: At my mother-in-law's house he has soft drinks with his meals. I give him juice instead.

Nurse: What about spreads on bread? Does Toman eat a lot of butter, margarine, or sweet spreads on his bread?

Mrs Baruni: Oh yes, he loves chocolate and hazelnut spread.

Nurse: Does he eat high-energy snacks like chips?

Mrs Baruni: No, I don't think so.

Nurse: What about fried foods, such as deep-fried breads or meats, or French fries?

Mrs Baruni: I don't usually fry foods. I may add some oil when I cook, but not much.

Nurse: Does he eat fatty meat?

Mrs Baruni: He likes meat, but I don't know whether the meat is fatty.

Nurse: You said that Toman eats 3 meals each day. Does he also have snacks?

Mrs Baruni: Well, he eats breakfast, a snack around 10:00, lunch, a snack after his nap, then dinner, and finally his bottle of milk before bed. So I guess he eats about 6 times each day.

Nurse: Do you think that Toman eats too much at meals?

Mrs Baruni: No, not really.

Nurse: Besides the planned snacks, does Toman eat between meals?

Mrs Baruni: I don't think so, but I don't really know what happens at his grandmother's house.

Nurse: Do you and Toman sit down at a table to eat?

Mrs Baruni: We try, but sometimes we may sit in front of the television to eat.

Step 3

Nurse: How many physically inactive hours does Toman spend each day, for example, watching the television?

Mrs Baruni: When he's at home with the babysitter while I am at work, he watches a lot of television.

Nurse: How often is that?

Mrs Baruni: Five days each week while I am working.

Nurse: When he is at his father's, what kind of meals does he have?

Mrs Baruni: Oh, at his father's he is sure to have fast foods. That's why they usually eat at his grandmother's.

Nurse: Does Toman have many opportunities for active physical play?

Mrs Baruni: He really doesn't. The babysitter stays indoors with him.

Step 4

Nurse: What do you think could be the main reasons that Toman is overweight?

Mrs Baruni: You know, I think he's just a big boy like his father. He seems healthy to me, but maybe he needs to play outside and run around more.

Nurse: I agree. From what you have told me, Toman's weight could be caused by a number of things, including lack of activity and food choices.

Counselling related to the causes of overweight

During the first part of the interview with the mother or other caregiver, you found out about the possible causes of the child's overweight and asked which causes seemed most important. Next, focusing on the main causes that the mother or caregiver recognizes as important, ask:

"What do you think that you can do to help the child, given these causes?'

Then discuss with her what is feasible to do and who can provide help and support. Acknowledge her situation and encourage her to take action.

Specific advice related to feeding and physical activity is given on the right-hand side of the job-aid, next to the related questions. If you noted that a feeding practice differs from what is recommended, explain the recommended practice. Also commend the mother if she is following some of the recommendations.

In your recommendations, include local examples of high-energy snacks to avoid and nutritious foods to provide. Describe specifically how to prepare foods using less fat and sugar. Also discuss feasible ways for the child to participate in active physical play. Encourage parents to find ways to increase the child's activity and reduce anxiety, insecurity, or boredom, which are feelings that may lead to overeating.

Also encourage parents to adopt a healthy lifestyle including healthy eating habits, physical activity, and positive interaction at family meals. The best way to influence children to have healthy lifestyles is for the parents to model the desired behaviours

Set a goal for improving growth of an overweight child

Set goals for a few (2–3) actions that the caregiver can take towards improving the child's growth. These actions can be reviewed at the next visit. Encourage and praise the caregiver when the actions are accomplished. Make notes (e.g. in the Growth Record) of the underlying causes of overweight for discussion at follow-up visits, when goals may be set for additional actions to take.

It is not recommended for an overweight child to try to lose weight, but instead to decrease the rate of weight gain while growing in height.

Because one cannot predict the child's rate of growth, it is not possible to set a specific weight target for a certain time. Instead, discuss the importance of slowing the child's weight gain so that he or she eventually reaches a more normal weight-for-height.

At the end of the discussion with the mother or other caregiver, it is important to set a reasonable time for the child's next visit and to set a general goal for improved growth. The next visit may be at the time that an immunization is required or at another convenient time.

The script we are going to read covers Step 5 of the job-aid titled Investigating Causes of Overweight. The "nurse" will counsel Mrs Baruni using relevant advice from the right-hand side of the job-aid. The three main actions suggested are indicated by numbers to the left of the script.

Script 4 – Conclusion of counselling session with Toman's mother

Nurse: ① Your idea of taking Toman outside to play more is a good one. It will help him to have more physical activity. Can you ask the baby sitter to take him outside to play?

Mrs Baruni: Yes, I will ask her to do that.

Nurse: On the weekends, is it possible that Toman's father would take him outside to a playground or to play ball?

Mrs Baruni: I can explain to him that Toman is getting fat and ask him to do that. But I really do not have much control over what he does or eats with his father and grandmother. If I make a suggestion to her, she resents it.

Nurse: ② I understand. Then let's discuss first what you can do in your own home. I suggest that you stop adding sugar or sweetened chocolate to Toman's milk. If you sweeten it, it is more fattening. Also he is likely to drink more than he needs because it tastes so good.

Mrs Baruni: He will not like the milk as much if I don't sweeten it.

Nurse: ③ That is alright. He doesn't need so much milk as you are giving him. Half a litre each day is plenty. And if he is thirsty before bed, give him milk or water in a cup, not a bottle. He will drink more than he needs from a bottle, and it is bad for his teeth to fall asleep with a bottle.

Mrs Baruni: I will never get him to sleep then.

Nurse: It's alright to let him cry a bit as he falls asleep. He needs to be able to fall asleep without a bottle. It may help to rock him and sing to him. Besides, if he has been outside to play, he may be very tired and have no problem falling asleep.

Mrs Baruni: I had not thought of that.

Nurse: From what you have told me, there are more feeding changes that would be helpful, but for now let's focus on getting him out to play, reducing sugar in his diet, and decreasing the amount of milk given daily. How do you feel about trying these three things?

Mrs Baruni: I am willing to try, but his grandmother will give him all the sweet foods he wants!

Nurse: I understand the difficulty. Can you discuss the situation with your husband? Maybe he can help.

Mrs Baruni: Not easily, but I could write a letter, or perhaps you could write a note or call him?

Nurse: That is a good idea. I will call him. Please give me his phone number.

Mrs Baruni: Yes, he may listen to you more than me.

Nurse: I will call him. If you make the feeding changes that we have agreed on, and if your husband and mother-in-law make some changes as well, it will be very good for Toman, especially if he also gets more physical activity. Now, just to review, let me ask you how you will reduce the amount of sugar that Toman is taking.

Mrs Baruni: I will stop adding the sugar and chocolate to his milk.

Nurse: And how will you reduce the total amount of milk that Toman drinks each day to about half a litre? **[Checking question]**

Mrs Baruni: I will try to stop giving him the bottle at night.

Nurse: And how will you increase his activity?

Mrs Baruni: I will instruct the baby sitter to take him outside to play.

Nurse: That sounds great. We could weigh and measure Toman again in about 3 months to see his progress. Could you come back in 3 months?

Mrs Baruni: Yes, I will do that.

Nurse: Very well. At that time we will speak about more ways to improve Toman's health. Let me write the date for his next visit in his Growth Record.

Mrs Baruni: Could you tell me what Toman's father says after you speak with him?

Nurse: Of course! I will give you a call.

Mrs Baruni: Thank you.

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Session 31

Checking Understanding and Arranging Follow-up

Objectives

After completing this session participants will be able to:

- demonstrate how to ensure that a mother understands information provided by using checking questions
- arrange referral or follow-up of a child

Hasta aca

Checking understanding

Often you need to check the caregiver understands a practice or action they plan to carry out. Ask open questions to find out if further explanation is needed. Avoid asking closed questions, because they suggest the answer and can be answered with a simple 'yes' or 'no'. They do not tell you if the caregiver really understands.

Checking understanding also helps to summarize what you have talked about. The dialogues between the Nurse and the mothers of Nalah and Toman in Sessions 29 and 30 illustrate how to check understanding.

Arrange follow-up or referral

All children should receive regular visits to check their general health and feeding. If a child has a difficulty that you are unable to help with, you may need to refer him for more specialized care.

Follow-up is especially important if there has been any difficulty with feeding. Ask the caregiver to visit the health facility in 5 days for follow-up.

If the child is malnourished or having inappropriate growth, ask the mother to visit the health facility at the time recommended according to the problem found.

This follow-up includes checking what foods are used and how they are given, checking the child's weight, general development and care.

The follow-up visits also give an opportunity to praise and reinforce practices thus building the caregiver's confidence, to offer relevant information and to discuss suggestions as needed.

It is especially important for children with special difficulties, for example children whose mothers are living with HIV to receive regular follow-up from health workers. These children are at special risk. In addition it is important to follow-up how the mother is coping with her own health and difficulties.

To conclude the counselling session with Mrs Parab, the nurse asked her to return in one month while she asked Mrs Baruni to return in three months. The difference is determined by how soon it is possible to detect a difference in growth. Nalah at age 6 months should be growing rapidly so it is possible to see an improvement in her growth status and activeness within as little as a month if she receives appropriate feeding and care. Toman who is overweight needs to "decrease the rate of weight gain while growing in height" and this requires a longer time (at least 3 months) before a change in weight relative to height becomes measurable.

Notes

Session 32

Gathering information and counselling on feeding and growth - Role plays

Objectives

After completing this session participants will be able to gather information and provide counselling on feeding and growth by:

- demonstrating appropriate use of counselling skills
- using the FOOD INTAKE JOB AID, 6-23 MONTHS to provide appropriate feeding counselling according to age
- investigating causes of growth problems using the job aids on undernutrition and overweight
- providing appropriate counselling on the identified problem
- setting a target for growth to be reviewed at a follow-up visit

Practising gathering information on growth and complementary feeding practices

You will use role-play to practise gathering information to assess complementary feeding practices.

You will work in small groups, taking turns to be a 'mother' a 'health care provider' or a observer. When you are the 'mother', play the part of the story on your card. The 'health worker' gathers information about your child's feeding. The other participant in the group observes.

You will need the following materials when you go to the small groups:
- Job-aid on Investigating Causes of Undernutrition and Investigating Causes of Overweight
- The FOOD INTAKE JOB AID, 6-23 MONTHS
- Boy's Growth Record and Girl's Growth Record
- Note pad and pen or pencil for taking notes during the interview

When you are the 'health care provider:

1. Study the growth charts thoroughly and determine:
   - Whether the child is growing well or has a growth problem
   - If they have a growth problem whether it is undernutrition or overweight
   - Which of the three counselling job aids you will use
2. Greet the "mother" and introduce yourself. Ask for her name and her child's name, and use them
3. Ask one or two open questions to start the conversation and to find out in general how the child is
4. Explain to the "mother" the growth status of her child using the points plotted on the three growth charts

5. Refer to the relevant job-aid as a guide for conducting the interview and counselling session with the mother.
6. If the child has no growth problem:
   - explain that you would like to learn about how her child is eating. Ask the mother to tell you about the child's eating on the previous day. Prompt as needed. Fill out the Food Intake Job Aid, 6-23 Months as you listen.
   - try to think of suggestions you would make and Key Messages to give to the mother.
7. If there is a growth problem,
   - explain the growth problem to the mother. Then use the job-aid to investigate causes. It is helpful to take notes on the causes.
   - after discussing causes, work out with the mother what actions (2–3) to take. Use the Growth Record as a reference for giving feeding advice. Ask checking questions as needed.
8. Try to praise the things the mother is doing right.
9. Agree on a time that the mother and child will return for follow-up.

When you are the 'mother':

1. Study the background information presented about you and your child in the role play situation in which you are the mother.
2. Respond to the health care provider's questions realistically, as if you were the mother described. If necessary, you may make up additional information that is realistic and fits in with the story.
3. Answer the questions, but do not volunteer information unless the health care provider asks for it. If your health care provider uses good listening and learning skills, and makes you feel that he/she is interested, you can tell more.

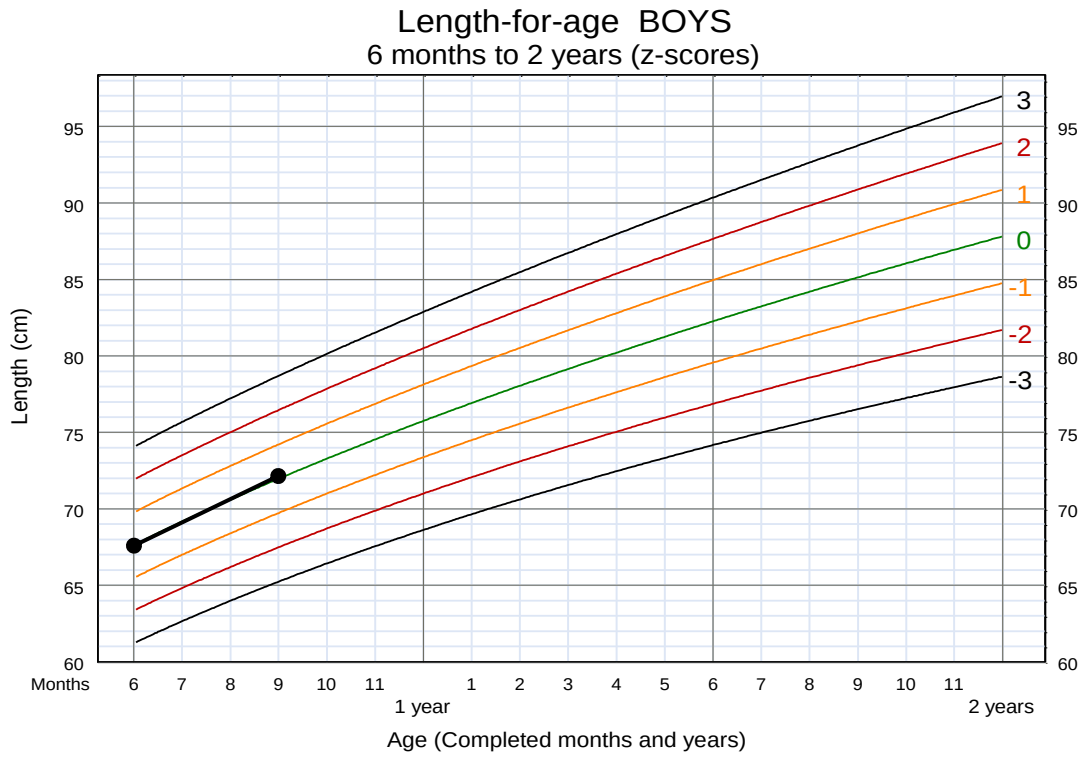
When you are observing:

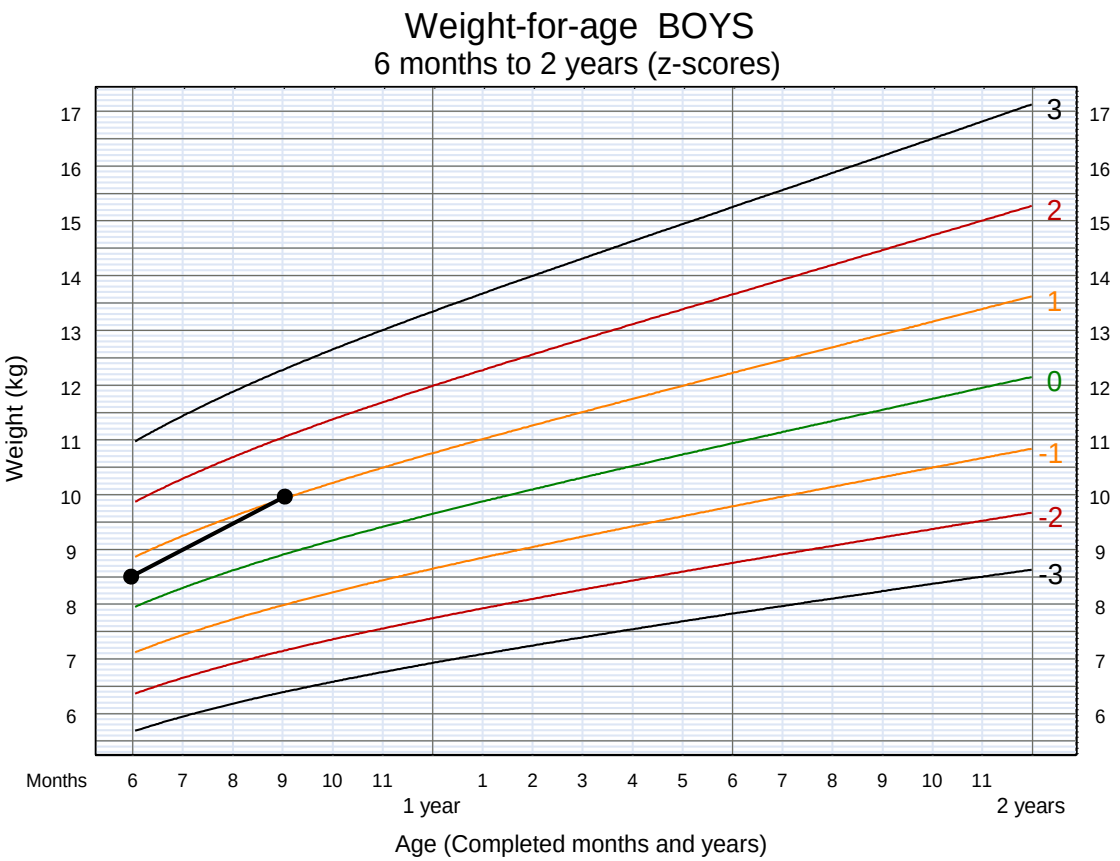
1. Study the background information on the mother and child and the growth charts shown on the following pages for the role play situation that you will observe.
2. As the health care provider interviews the mother, follow the relevant job-aid.
3. Notice which counselling skills the health care provider uses and which he/she does not use
4. After the role play, be prepared to praise what the heath care provider does right, and suggest what he/she could do better. Comment on whether:
   - all of the relevant questions were asked;
   - the most important, relevant advice was given in an appropriate manner;
   - checking questions were asked to ensure that the mother understood what to do.
5. Ask the mother and then the health care provider for their comments on the role play, for example, what was done well, what was omitted, or possible improvements.

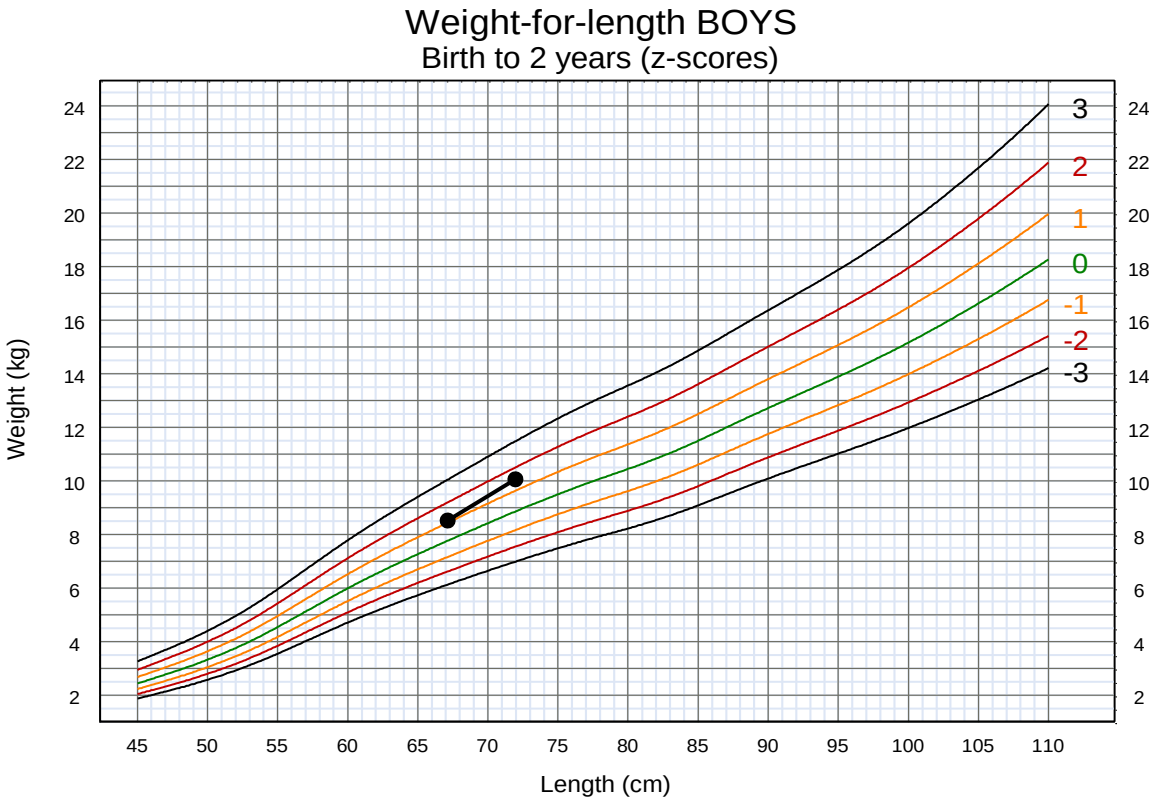
Role play situation 1 – Background information on Mrs Khan and her son Veebol

Mrs Khan has a son named Veebol, who is 9 months old. He is still breastfed, but he also takes formula in a bottle occasionally. Mrs Khan stays home to care for her son while her husband travels as a bicycle salesman. Their home is comfortable and has many conveniences, including a television. There is plenty of money for food. Veebol takes about a cup of mashed foods (such as porridge or sweet potatoes) 3 or 4 times each day. Mrs Khan appears to be overweight, and her son's growth lines show a trend towards overweight, but Mrs Khan does not think that there is any problem. He is beginning to crawl but is carried around much of the time because his mother does not want him to get his hands dirty and put them into his mouth. Veebol's growth charts are shown on pages 203–204.

Growth Charts for Veebol



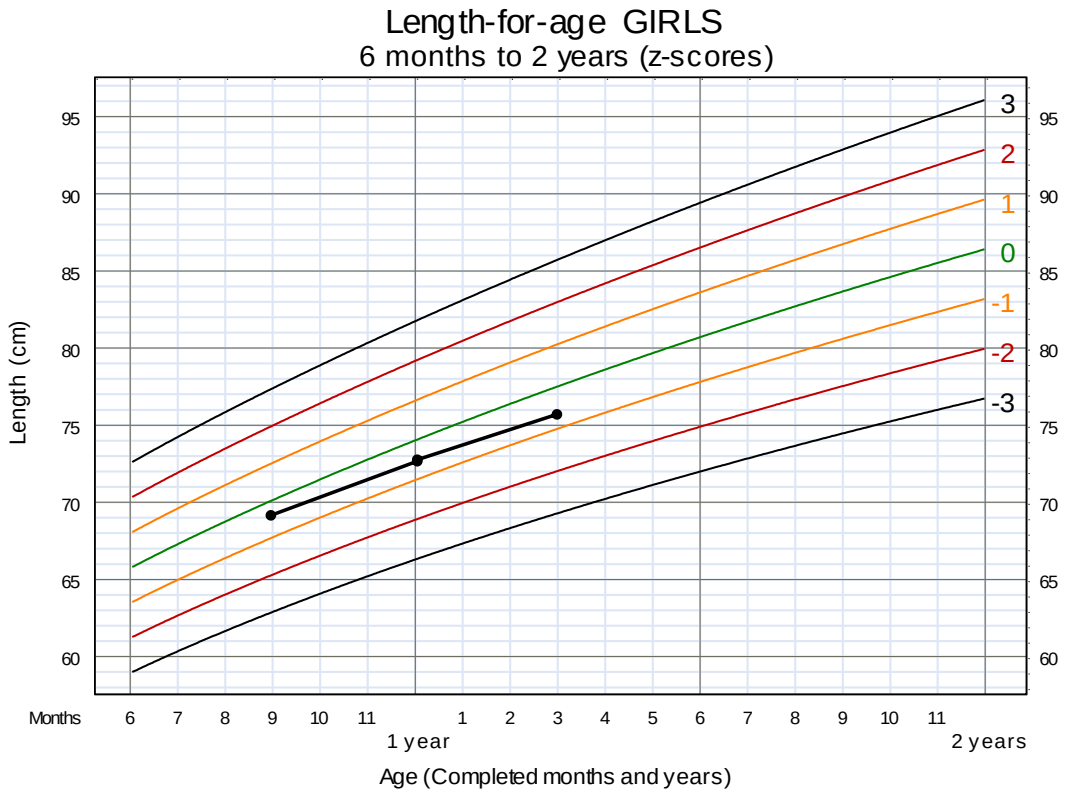

Weight-for-age BOYS
6 months to 2 years (z-scores)
Weight (kg)
17
16
15
14
13
12
11
10
9
8
7
6
3
2
1
0
-1
-2
-3
Months
6 7 8 9 10 11
1 2 3 4 5 6 7 8 9 10 11
1 year
2 years
Age (Completed months and years)

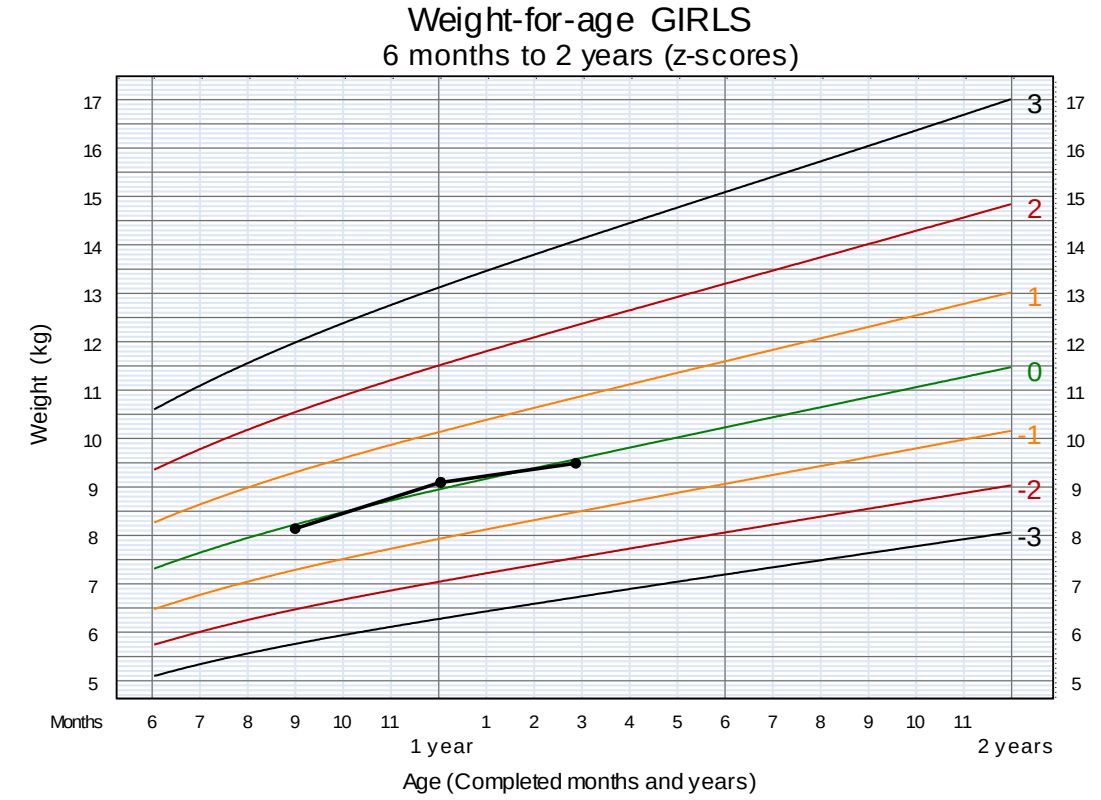

Weight-for-length BOYS
Birth to 2 years (z-scores)
Weight (kg)
24
22
20
18
16
14
12
10
8
6
4
2
3
2
1
0
-1
-2
-3
45 50 55 60 65 70 75 80 85 90 95 100 105 110
Length (cm)

Role play situation 2 — Background information on Mrs Smith and her daughter Mary

Mrs Smith has a daughter Mary who is 15 months old. Her growth charts indicate that she is growing well. Her mother says that she breastfeeds frequently (she can't keep count of how many times in a day). The heath care provider asks about Mary's complementary feeding (using the 24-hour recall method). Yesterday Mary had 3 meals and two snacks. She had ½ cup of mixed-cereal porridge in the morning and some bread and peanut butter at mid-morning. She had bean stew and a little rice for lunch followed by a slice of mango. She did not have any snack in the afternoon but breastfed several times. For supper she ate steamed fish and greens. The health care provider has measured Mary and plotted all measurements in her growth charts.

Growth Charts for Mary



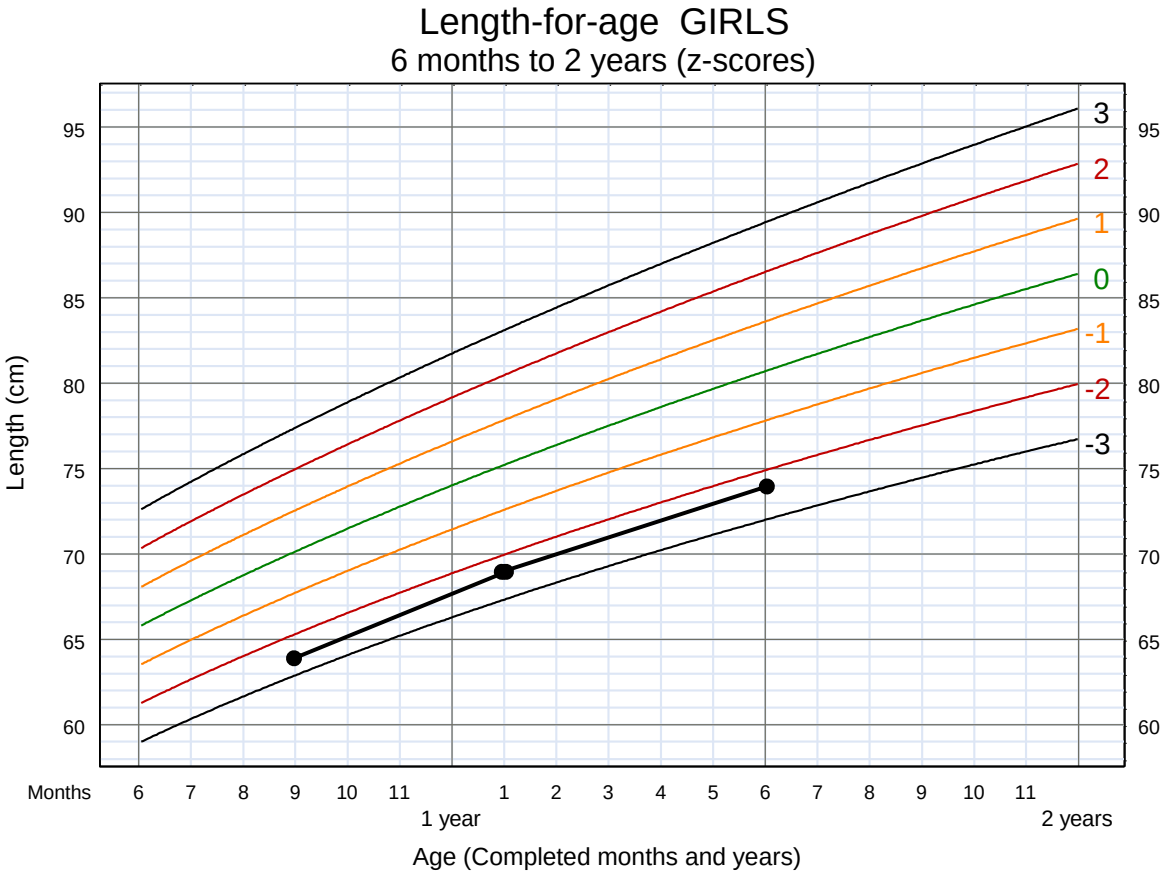

Weight-for-age GIRLS
6 months to 2 years (z-scores)
Weight (kg)
3
2
1
0
-1
-2
-3
Months
1 year
2 years
Age (Completed months and years)

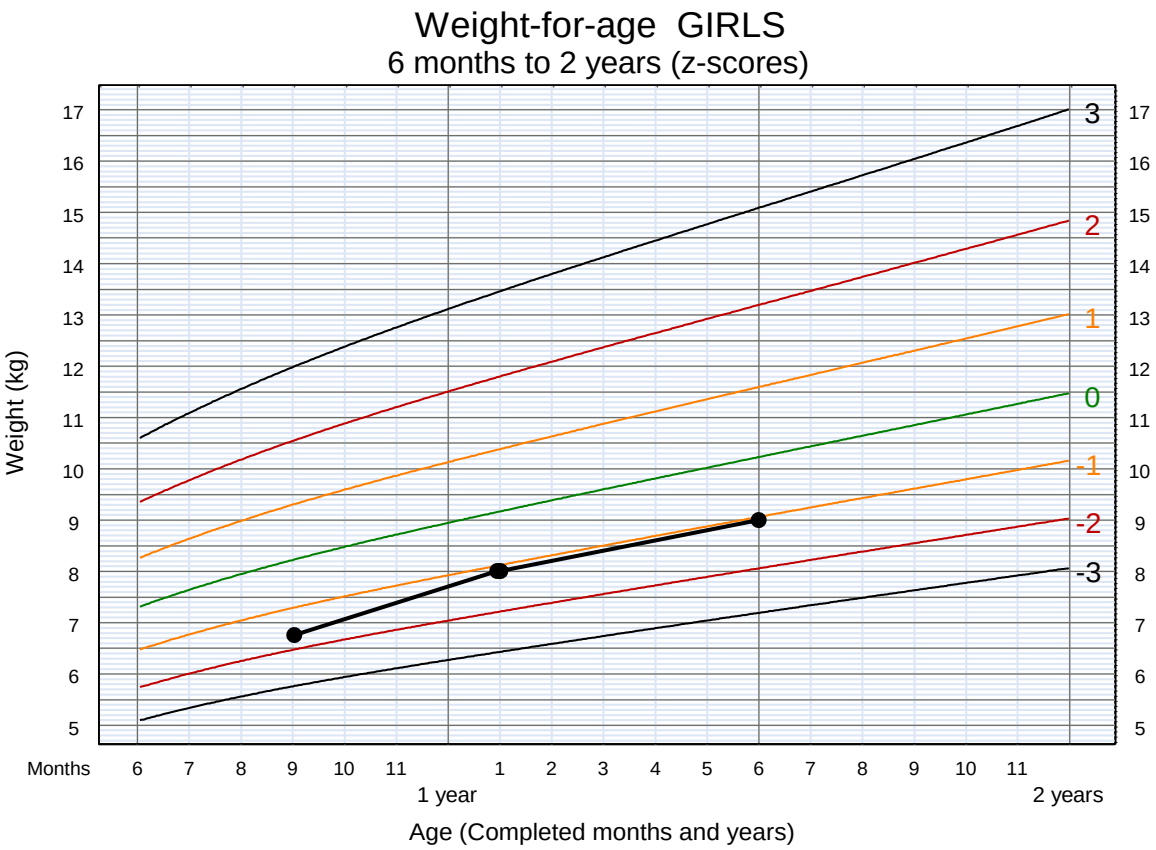

Weight-for-length GIRLS
Birth to 2 years (z-scores)
Weight (kg)
3
2
1
0
-1
-2
-3
Length (cm)

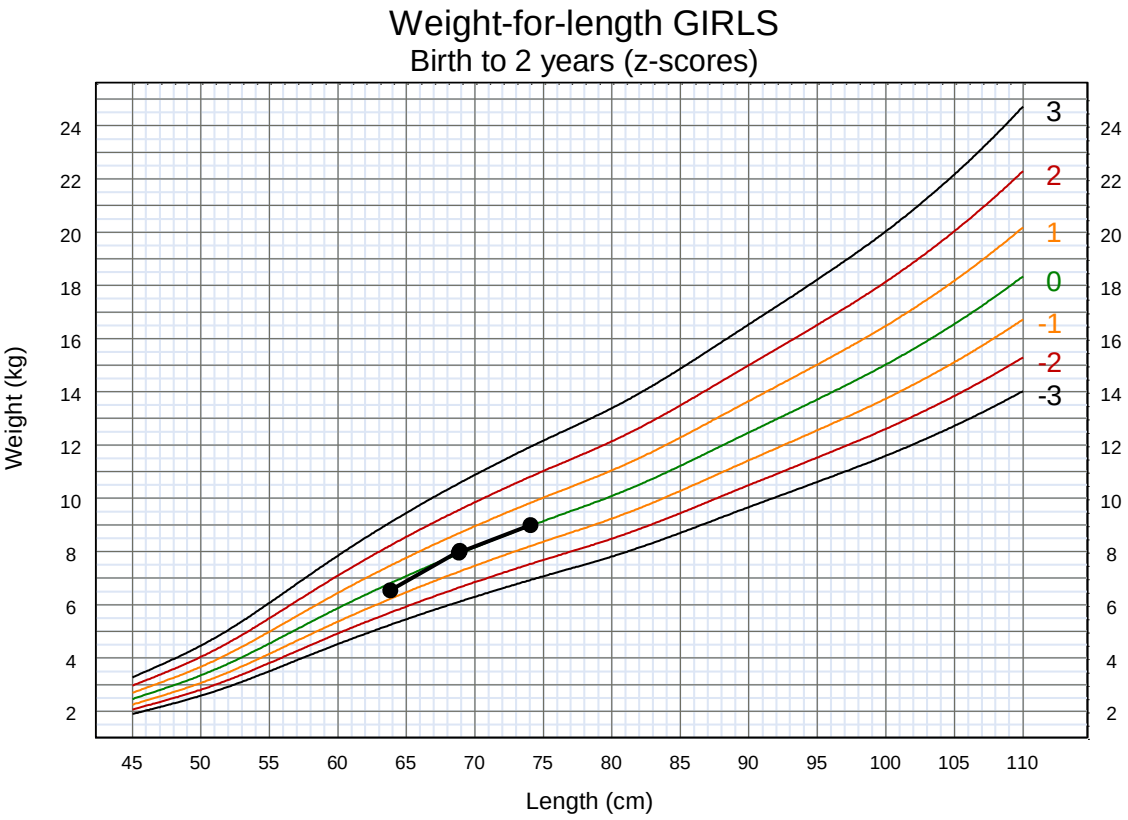
Role play situation 3 – Mrs Lima and her daughter Anete

Mrs Lima is the mother of Anete, age 18 months, who seems happy and active. Anete is stunted but looks healthy. She is not breastfed. She does not like to eat and prefers to move around rather than sit still for meals. Although Mrs Lima tries to feed Anete 3 times each day, sometimes she will only take ¼ cup of food at a time. Anete's growth charts are shown on pages 207–208. Mrs Lima appears to be normal height. She does not have HIV. Her home is simple, but there is enough money for food.

Growth Charts for Anete




Weight-for-age GIRLS
6 months to 2 years (z-scores)
Weight (kg)
3
2
1
0
-1
-2
-3
Months
1 year
2 years
Age (Completed months and years)


Weight-for-length GIRLS
Birth to 2 years (z-scores)
Weight (kg)
3
2
1
0
-1
-2
-3
Length (cm)

Session 33

Hygienic preparation of feeds and food demonstration

Objectives

After completing this session participants will be able to:

- explain ways of assisting clean and safe feeding of young children
- demonstrate how to prepare a cup hygienically for feeding a baby
- prepare a plate of food suitable for an infant or young child
- explain why they have chosen these foods
- conduct a food demonstration with a caregiver

Requirement for clean and safe feeding

After six months of age all children require complementary feeds. Clean, safe preparation and feeding of complementary foods are essential to reduce the risk of contamination and the illnesses that it causes.

The main points to remember for clean and safe preparation of feeds are:

- Clean hands
- Clean utensils
- Safe water and food
- Safe storage

Safe water and food

Safe water and food

- Treat water for drinking and baby's feeds
- Keep water in clean covered container
- Boil milk before use
- Give freshly prepared complementary foods

Water can be made safe for feeding babies by bringing the water to a rolling boil before use. This will kill most harmful micro-organisms. A rolling boil is when the surface of the water is moving vigorously. It only has to 'roll' for a second or two.

The water should then be stored in a clean, covered, container. The best kind of container has a narrow top, and a tap through which the water comes out. This prevents people from dipping their hands and cups into it.

If the water has been stored for more than 48 hours it is better to use it for something else, for example cooking or give to older children to drink.

Fresh cow's milk or other animal's milk to be used for a baby also needs to be briefly boiled to kill harmful bacteria. Boiling also makes the milk more digestible. The milk and water can be boiled together.

Milk sold in the shops may already have been heat-treated in various ways such as pasteurization, UHT (ultra-high temperature) or sterilization. These treatments kill the harmful micro-organisms, and they help the milk to keep longer if it is not opened.

If a mother is giving complementary foods, she should prepare them freshly each time she feeds the baby, especially if they are semi-liquid.

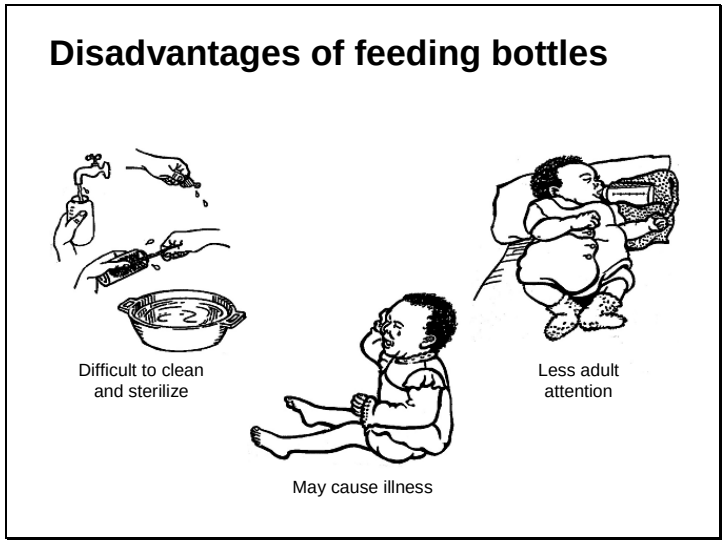
Safe storage

Safe storage

- Keep foods in tightly covered containers
- Store foods dry if possible (e.g. milk powder, sugar)
- Use milk within one day if refrigerated
- Use prepared feeds within one hour

If there is need to store foods, the mother or caregivers should follow simple rules to ensure hygienic conditions of the food.

Disadvantages of feeding bottles



Bottles and teats are more difficult to clean than cups and you should discourage their use.

Cleaning a cup

A cup does not need to be boiled. To clean a cup, wash it and scrub it in hot soapy water each time it is used. If possible, dip the cup into boiling water, or pour boiling water over it just before use, but this is not essential. An open, smooth surfaced cup is easiest to clean. Avoid tight spouts, lids or rough surfaces where milk could stick and allow bacteria to grow.

Preparation and consumption of safer foods is important for the health of the child as well as the whole family. There are five sets of simple measures that help to ensure safety of foods; they are summarized in the following page.

FIVE KEYS TO SAFER FOOD

Keep clean

- Wash your hands before handling food and often during food preparation.
- Wash your hands after going to the toilet, changing the baby or in contact with animals.
- Wash very clean all surfaces and equipment used for food preparation or serving.
- Protect kitchen areas and food from insects, pests and other animals.

Separate raw and cooked foods

- Separate raw meat, poultry and seafood from other foods.
- Use separate equipment and utensils such as knives and cutting boards for handling raw foods.
- Store foods in covered containers to avoid contact between raw and prepared foods.

Cook thoroughly

- Cook food thoroughly, especially meat, poultry, eggs and seafood.
- Bring foods like soups and stews to boiling point. For meat and poultry, make sure juices are clear, not pink.
- Reheat cooked food thoroughly. Bring to the boil or heat until too hot to touch. Stir while re-heating.

Keep food at safe temperatures

- Do not leave cooked food at room temperature for more than 2 hours.
- Do not store food too long, even in a refrigerator.
- Do not thaw frozen food at room temperature.
- Food for infants and young children should ideally be freshly prepared and not stored at all after cooking.

Use safe water and raw materials

- Use safe water or treat it to make it safe.
- Choose fresh and wholesome foods.
- Use pasteurized milk.
- Wash fruits and vegetables in safe water, especially if eaten raw.
- Do not use food beyond its expiry date.

Food Demonstration

To teach a new skill or behaviour, you could:

- tell the mother how to do it - this is good
- ask the mother to watch while you talk and prepare the food – this is better
- help the mother to actually prepare the food themselves – this is the BEST method

AMOUNTS OF FOODS TO OFFER			
Age	**Texture**	**Frequency**	**Amount of food an average child will usually eat at each meal [11]**
6-8 months	Start with thick porridge, well mashed foods Continue with mashed family foods	2-3 meals per day plus frequent breastfeeds Depending on the child's appetite 1-2 snacks may be offered	Start with 2-3 tablespoonfuls per feed increasing gradually to ½ of a 250 ml cup
9-11 months	Finely chopped or mashed foods, and foods that baby can pick up	3-4 meals plus breastfeeds Depending on the child's appetite 1-2 snacks may be offered	½ of a 250 ml cup/bowl
12-23 months	Family foods, chopped or mashed if necessary	3-4 meals plus breastfeeds Depending on the child's appetite 1-2 snacks may be offered	3/4 to one 250 ml cup/bowl
If baby is not breastfed, give in addition: 1-2 cups of milk per day, and 1-2 extra meals per day.			

[11] Adapt the chart to use a suitable local cup/bowl to show the amount. The amounts assume an energy density of 0.8 to 1 Kcal/g.

EXERCISE 33.A PREPARING A YOUNG CHILD'S MEAL		
Group:		
Task	**Achieved**	**Comments**
Mixture of foods: Staple		
Animal-source food		
Bean / pulse plus vitamin C fruit or vegetable		
Dark-green vegetable or yellow-coloured fruit or vegetable		
Consistency		
Amount		
Prepared in a clean and safe manner		

Key Messages:

1.

2.

Watching a demonstration is useful. However, it is easier to remember a new skill if a mother actually prepares the food herself.

How you assist a mother to learn is important. Your counselling can also be used when helping a mother to learn a new skill.

You can use your skills to:

- use open questions to find out if the mother understands
- avoid judging words and sounding critical, and praise the mother
- explain things in a simple and suitable way to help her understand.

Whenever possible, let the mother prepare the food herself, with your support, until she is confident and competent. Watching a health worker prepare foods is not enough, particularly if there is a difficulty with the child's weight gain or feeding. Supportive teaching can help to build her confidence as well as making it easier for her to learn.

Planning guide for a group demonstration of the preparation of young children's food

Gather the Equipment and Materials

- Cooked food for the preparation
- Plates and utensils for the preparation
- Utensils for mothers and infants to taste the preparation
- Table on which to prepare the food
- Facilities for washing hands

Review Objectives of the Demonstration:

1. Teach mothers how to prepare a simple and nutritious food for young children using local ingredients (to learn through doing).
2. Demonstrate to mothers the appropriate consistency (thick) for these foods.
3. Demonstrate the taste and acceptability of the food preparations for mothers and young children.

Decide the Key Messages

- Select 1-3 Key Messages to say to mothers (see Key Messages, inside back cover)
- Follow each message with a checking question (a question that you cannot answer with a simple 'yes' or 'no').

For example:

1. Foods that are thick enough to stay in the spoon give more energy to the child.

   Checking question: What should the consistency of foods be for a small child? (*Answer:* thick, so the food stays in the spoon).

2. Animal-source foods are especially good for children, to help them grow strong and lively.

   Checking question: What animal-source food could you give your child in the next two days?
   (*Answer:* meats, fish, egg, milk, cheese - these are special foods for the child).

3. A young child needs to learn to eat: encourage and give help … with lots of patience.

   Checking question: How should you feed a child learning to eat?
   (*Answer:* with patience and encouragement).

Give the Participatory Demonstration

- Thank the mothers for coming.
- Present the recipe that will be prepared.
- Hold up each of the ingredients. Mention any ingredients that can be easily substituted, for example oil for butter, powdered milk or tinned milk (unsweetened) for fresh milk, or cooking water or boiled water if no milk is available.
- Invite at least two mothers to prepare the food. If possible, have enough ingredients to have 2 or 3 pairs of mothers to participate in the preparation, each pair working with their own plate of ingredients and utensils.

- Talk the mothers through each step of the preparation, for example:

  Wash hands

  Mashing a potato or _____

  Adding the correct quantity of fish or egg, etc.

  Adding correct quantity of milk or water.

- Point out the consistency of the preparation as the mothers are making it, and demonstrate with a spoon when they are finished.
- Reinforce the use of local inexpensive and nutritious ingredients, especially using foods from the family pot.
- Ask the mothers if they would have difficulty in obtaining any of the ingredients (suggest alternatives). Ask the mothers if they could prepare the food in their household.

Offer Food Preparations to Taste

- Invite the mothers who prepared the food to taste it in front of the rest and give their opinion (use clean spoons).
- Invite all the mothers to taste the preparation and to give it to their small children (who are at least six months old). Use a clean spoon for each child.
- Use this time to stress the Key Messages you decided to use when planning the demonstration.

Ask Checking Questions

- What are the foods used in this recipe? Wait for responses.
- Then the health worker reads out the list of the foods again.
- Ask the mothers when they think they can prepare this food for their young child (e.g. tomorrow).
- You may repeat the Key Messages and checking questions again.

Conclude Demonstration

- Thank the mothers for coming and participating.
- Ask the mothers to share their new knowledge of preparing this food with a neighbour who has small children.
- Invite mothers to visit the health facility for nutrition counselling and growth checks.

Recipes for Food Demonstration - fill in the food and the amount needed

Recipe 1

Family food for a 10-month-old child's main course
(about ½ cupful – a cup/bowl that holds 250 ml)

Staple:_____

Meat or fish or beans:_____

If using beans or egg instead of meat, include a source of vitamin C to help iron absorption:
_____

Dark-green or yellow vegetable: _____

Milk or hot boiled water or soup water if milk is not available: 1 Tablespoon (large spoon)

Wash hands and use clean surface, utensils and plates.
Take the cooked foods and mash them together.
Add the oil or margarine and mix well.

Check the consistency of the mashed food with a spoon – it should stay easily on the spoon without dripping off.
Add the milk or water to the mashed foods and mix well. Only add a small amount of milk or water to make the right consistency.

Recipe 2

Family food for a 15-month-old child's main course (a full cup)

Staple:_____

Meat or fish or beans:_____

If using beans or egg instead of meat, include a source of vitamin C to help iron absorption:
_____

Dark-green or yellow vegetable: _____

Oil or margarine: 1 teaspoon (small spoon)

Wash hands and use clean surface, plates and utensils.
Take the cooked foods cut them into small pieces or slightly mash them together (depending on the child's age).
Add the oil or margarine and mix well.

Session 34

Feeding Techniques

Objectives

After completing this session participants will be able to:

- describe feeding practices and their effect on the child's intake
- explain to families specific techniques to encourage a young child to eat
- list the Key Message from this session

Feeding care practices and their effect on intake

A child needs food, health and care to grow and develop. Even when food and health care are limited, good care giving can help make best use of these limited resources.

Care refers to the behaviours and practices of the caregivers and family that provide the food, health care, stimulation and emotional support necessary for the child's healthy growth and development.

An important time to use good care practices is at mealtimes – when helping young children to eat.

RESPONSIVE FEEDING PRACTICES
Assist children to eat, being sensitive to their cues or signals. Feed slowly and patiently, encourage but do not force. Talk to children during feeding with eye-to-eye contact.

Assist children to eat, being sensitive to their cues or signals

A child needs to learn how to eat, to try new food tastes and textures. A child needs to learn to chew, move food around the mouth and to swallow food. The child needs to learn how to get food effectively into the mouth, how to use a spoon and how to drink from a cup.

Therefore, it is very important also to talk to caregivers and offer suggestions about *how* to encourage the child to learn to eat the foods offered. This can help families to have happier meal times.

Families tend to feed their young children in one of three different ways:

- One way is **high control** of the feeding by the caregiver who decides when and how much the child eats. This may include force-feeding.
- Another feeding style is that the **children are left to feed themselves**. The caregiver believes that the child will eat if hungry. The caregiver may also believe when the child stops eating that he has had enough to eat.
- The third style is feeding **in response to the child's cues** or signals using encouragement and praise.

Feed slowly and patiently, encourage but do not force.

RESPONSIVE FEEDING TECHNIQUES

- Respond positively to the child with smiles, eye contact and encouraging words
- Feed the child slowly and patiently with good humour
- Try different food combinations, tastes and textures to encourage eating
- Wait when the child stops eating and then offer again
- Give finger foods that the child can feed him/herself
- Minimize distractions if the child loses interest easily
- Stay with the child through the meal and be attentive.

Talk to children during feeding with eye to eye contact

Feeding times are periods of learning and love. Children may eat better if feeding times are happy. Feed when the child is alert and happy. If the child is sleepy or over-hungry and upset, he may not eat well. Regular mealtimes and the focus on eating without distractions, may also help a child learn to eat.

Key Message 9

A young child needs to learn to eat: encourage and give help
…with lots of patience.

Session 35

Practical Session 3

Measuring growth and counselling on growth and feeding

Objectives

After completing this session participants will be able to:

- demonstrate how to gather information about complementary feeding using counselling skills and the FOOD INTAKE JOB AID, 6-23 MONTHS
- provide information about complementary feeding and continuing breastfeeding to a mother of a 6-23 month old child
- measure a child and inform the mother about growth assessment results
- provide counselling to a mother whose child has malnutrition

These notes are a summary of the instructions that the trainer will give you about how to do the practical session. Try to make time to read them to remind you about what to do during the session.

During the practical session, you work in small groups of 2-4 and take turns to talk to a mother while the others in your group observe.

You will need:

- Your child age calculator
- The FOOD INTAKE REFERENCE TOOL, 6-23 MONTHS.
- Pencil
- Two copies of the COUNSELLING SKILLS CHECKLIST
- Two copies of the FOOD INTAKE JOB AID, 6-23 MONTHS and the picture of the thick and thin consistency
- The job aids for investigating causes of undernutrition and overweight
- One copy of *Boy's Growth Record* and one of *Girl's Growth Record*

Additionally, each pair of you will have a common bowl used to feed a young child.

What to do:

You will measure the child as you have done during practical session 1. ***It will not be necessary to start growth records for the children seen at the clinic. Note each child's age and measurements on a note pad. Plot the child's measurements on the appropriate pages of a growth record (in pencil, so that you can erase them later). Then use those pages for interpretation and conversation with the caregivers.***

In case of children 6-23 months old with appropriate growth one participant talks with the mother, filling in the FOOD INTAKE JOB AID, 6-23 MONTHS at the same time. The others in the group observe and fill in the counselling checklist.

If you meet a child who is ill or has a major feeding difficulty, encourage the mother to bring the child to the local health centre. Do not offer suggestions for treatment of an ill child.

In case of children 6-23 months old with a growth problem, use the job aids for investigating causes of undernutrition or overweight, as appropriate

For all children 2 years or older, use the growth charts and job aids for investigating causes of undernutrition or overweight, as appropriate

1. After measuring and plotting, show and explain the meaning of the charts to the mother.
2. If the child is growing well, let the mother know and congratulate her. Then review the feeding recommendations for the child's present age or the one approaching. Thank the mother and let her go.
3. If there is a growth problem, determine if the mother recognizes it as this will influence how the dialogue continues.
4. Follow the steps in the relevant job-aid: Investigating causes of undernutrition or overweight.
5. Ask the mother what she thinks are the most common causes of her child's growth problem.
6. Counsel: suggest 2 – 3 actions only for her to take (do not forget to praise the mother for things she is doing correctly!)
7. Ask checking questions
8. Speak to a staff member of the facility if you have proposed a return visit for follow-up. Thank the mother and let her go.

When you talk with a mother:

Introduce yourself to the mother and ask permission to talk with her. Introduce the others in your group and explain you are interested in learning about feeding young children in general. You may wish to say you are on a course.

Measure the child

Try to find a chair or stool to sit on, so you are at the same level as the mother.

Practise as many of the counselling skills as possible as you gather information from the mother using the FOOD INTAKE JOB AID, 6-23 MONTHS, or a job aid for investigating causes of malnutrition

Listen to what the mother is saying and try not to ask a question if you have already been told the information.

Fill out the FOOD INTAKE JOB AID, 6-23 MONTHS or the card as you listen and learn from the mother.

Use the information you have gathered and then:

- Try to praise two things that are going well
- Offer the mother two or three pieces of relevant information
- Offer two or three suggestions that are useful at this time.
- Be careful not to give a lot of advice.
- Answer any questions the mother may ask as best as you can. Ask your trainer for assistance if necessary.

When you are the observer:

Mark a ✓ on the COUNSELLING SKILLS CHECKLIST for every skill that you observe the 'counsellor' practising. Remember to observe what the 'counsellor' is doing rather than thinking about what you would say if you were talking to the mother. The observer does not ask the mother any questions.

Remember to use your counselling skills when giving feedback to the participant who was doing the counselling.

Notice other feeding practices in the area such as:

- if children are eating any food or drinks
- whether children are given a bottle or soother/pacifier while waiting
- general interaction between mothers and children
- any posters or other information on feeding in the area.

Notes

Session 36
Overview of HIV and Infant Feeding

Objectives

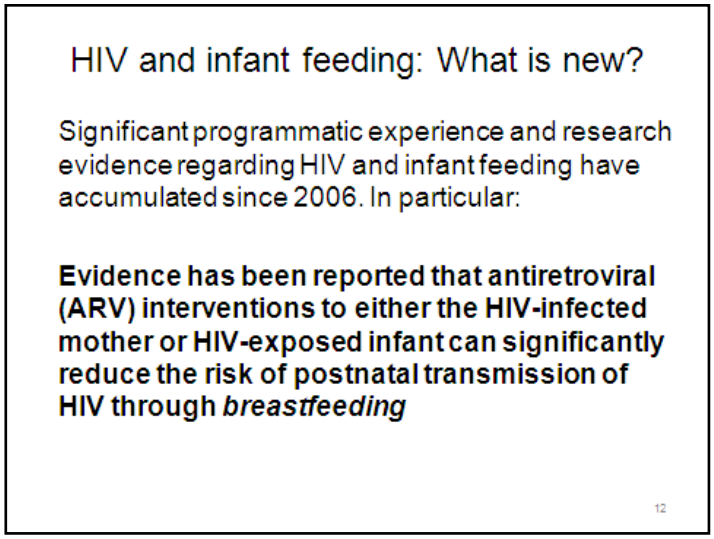
After completing this session participants will be able to:

- explain the risk of mother-to-child transmission of HIV
- describe factors which influence mother-to-child transmission
- explain HIV-free survival
- describe the key principles and recommendations for infant feeding in the context of HIV
- describe the importance of antiretroviral drugs in reducing mother-to-child transmission of HIV and in increasing HIV free survival in infants

HIV is a devastating disease which touches many aspects of our lives. It affects people of all ages, the rich and the poor, all sectors of society, and can lead to the breakdown of community and family life. It is a worldwide challenge, though it is more prevalent in some countries than in others.

A woman who is HIV positive can pass HIV on to her baby during pregnancy, labour and delivery and importantly also during breastfeeding; once a person is infected with the virus there is no cure, and many untimely deaths of young children and their mothers, fathers and grandparents occur as a result of being infected with HIV.

This quote is from the 2010 revised HIV and infant feeding guidelines



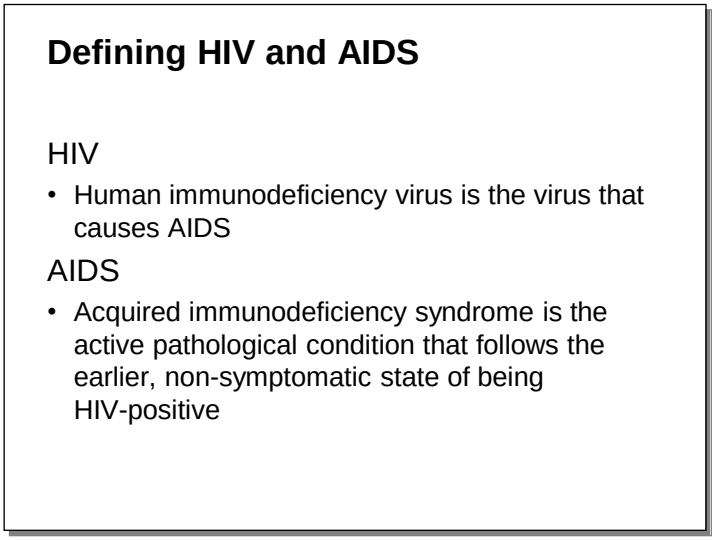
This breakthrough, resulting from programmatic experience and research evidence was published in two WHO documents in 2010. These are “Guidelines on HIV and infant feeding 2010” and “Antiretroviral drugs for treating pregnant women and preventing HIV infection in infants”. These publications are important to us because they show that improved antiretroviral drug regimens given to women can reduce the risk of mother-to-child transmission during

pregnancy, labour and delivery as well as during breastfeeding, all of which increases de chances of HIV free survival of the baby.

Other major changes have also been made, to the decision making process of how babies of HIV positive mothers should be fed, and there are important new modifications in the infant feeding recommendations.

Health workers have a vital role in communicating information to all women and counselling and supporting individual women, including HIV positive women, in feeding their babies. Health workers have another very important role in the context of HIV, to help educate men and women from becoming infected with HIV in the first place and particularly ensuring men understand their responsibility in protecting their family's health.

What is HIV and how is it transmitted



People infected with HIV feel well at first and usually do not know they are infected. They may remain healthy for many years as the body produces antibodies and other specialised immune cells called CD4 cells that fight HIV. For many years the CD4 cells are able to keep the virus under control in the body. However, eventually the HIV virus gets control and destroys the CD4 cells

When these cells are destroyed, the body becomes less able to fight other types of infections such as pneumonia, diarrhoea, TB and meningitis. The person then becomes ill, loses weight – when these symptoms are present, we call the disease "AIDS". Without treatment, eventually he or she usually dies.

A special blood test can be done to see if people have HIV antibodies in their blood. A positive test means that the person is infected with HIV. This is called HIV-positive or seropositive.

Once people have the virus in their body, they are infectious and can give the virus to other people.

HIV is passed from an infected man or woman to another person through:

- exchange of HIV-infected body fluids such as semen, vaginal fluid or blood during unprotected sexual intercourse
- HIV-infected blood transfusions or
- contaminated needles, for example in the case of drug users sharing needles or due to needle injuries in hospitals.

HIV is not however transmitted by saliva or touching people or sharing food utensils like spoons or forks.

Mother-to-Child Transmission of HIV

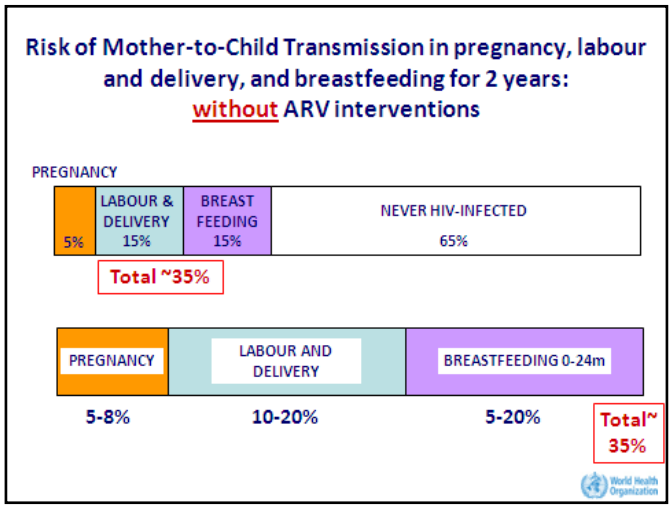
Young children who get HIV are usually infected through their mother

- during pregnancy across the placenta
- at the time of labour and birth through blood and secretions
- through breastfeeding

This is called mother-to-child transmission of HIV or MTCT

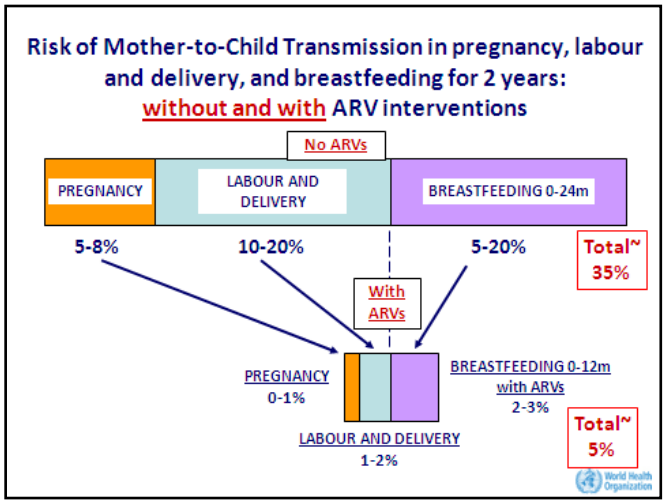
HIV can also pass from an infected woman to her child during at different periods of time, including in the postnatal period. This is called *mother-to-child transmission* or MTCT.

Risk of mother-to-child transmission of HIV



Not all babies born to HIV-infected mothers become infected with HIV, even without interventions. An average of 35% of babies will become HIV infected through mother-to-child transmission if the mother receives no ARV treatment. But, as clearly shown in the graphic, a much larger percentage, 65%, do not become infected with HIV at all and remain healthy and HIV free.

For some HIV-positive women who do not learn their HIV status or who do not receive ARV treatment, this is still a reality. Although the number of mothers and babies receiving antiretroviral drugs is increasing, there are still many women and babies who do not yet have access to them. It is important when counselling a mother about HIV testing that she understands the risk for her baby if she is HIV positive but remains untreated.



We can compare the average percentage of babies who become infected if the mother remains untreated with the percentage who become infected if she is treated with ARV drugs.

During pregnancy, on average 5-8% of babies will be infected if the woman is not treated, the percentage reduces to 0-1% when treatments of newly recommended ARV regimens are used. This is a large reduction of risk.

Without treatment, around 10-20% babies may be infected during labour and delivery; this is a very high percentage considering how short is this period of time when compared with the length of pregnancy and the breastfeeding period. When the mother is treated with ARVs, 1-2% of babies will be infected with HIV during labour and delivery; again, this is a great reduction in the risk of transmission.

About 5-20% of infant born to HIV-infected mothers will get the virus through breastfeeding if no treatment is given; the risk continues as long as the mother breastfeeds, and is more or less constant over time. When ARVs are given either to the mother or the baby and continued until the baby completely stops breastfeeding, 2-3 of babies may become HIV infected which is a considerable reduction in risk.

The overall risk of MTCT when mothers are treated with antiretroviral drugs is an average of 5% compared to an average of 35% when mothers do not receive treatment. This is a considerable reduction in risk and illustrates the impact of ARVs in increasing the number of babies who can be expected to be free of HIV if the 2010 recommendations are followed correctly.

Factors which affect mother-to-child transmission of HIV

The chance of mothers transmitting the virus to their infants depend on a number of factors such as how ill the mothers are, how much virus is in their blood, whether they are taking ARVs and how long breastfeeding lasts. This also explains the differences in risk of infection for individual mothers.

Since several factors affect these rates, and interventions can reduce them, understanding the factors may help us to find ways to reduce transmission.

Factors which affect mother-to-child transmission of HIV include:

- Recent infection with HIV
- Severity of disease
- Sexually transmitted infections

- Obstetric procedures
- Duration of breastfeeding
- Exclusive breastfeeding or mixed feeding
- Condition of the breasts
- ARV treatment of prophylaxis to the mother
- ARV prophylaxis to the baby

Some of the factors included in the list above affect transmission of HIV through breastfeeding. Sexually transmitted infections and obstetric procedures only affect transmission during pregnancy or delivery.

FACTORS WHICH AFFECT MTCT OF HIV THROUGH BREASTFEEDING

Recent infection with HIV
If a woman becomes infected with HIV during pregnancy or while breastfeeding, she has higher levels of virus in her blood, and her infant is more likely to be infected. It is especially important to prevent an HIV-negative woman from becoming infected at this time because then both the woman and her baby are at risk. All sexually active people need to know that unprotected sex exposes them to infection with HIV. They may then infect their partners, and their baby too will be at high risk, if the infection occurs during pregnancy or while breastfeeding.

Severity of HIV infection
If the mother is ill with HIV-related disease or AIDS and is not being treated with drugs for her own health, she has more virus in her body and transmission to the baby is more likely.

Duration of breastfeeding
The virus can be transmitted at any time during breastfeeding. In general, the longer the duration of breastfeeding the greater the risk of transmission.

Exclusive breastfeeding or mixed feeding
The risk of transmission is greater if an infant is given any other foods or drinks at the same time as breastfeeding during the first months of life. The risk is less if breastfeeding is exclusive. Other foods or drinks may cause diarrhoea and damage the gut, which might make it easier for the virus to enter the baby's body.

Condition of the breast
Nipple fissure (particularly if the nipple is bleeding) mastitis or breast abscess may increase the risk of HIV transmission through breastfeeding. Good breastfeeding technique helps to prevent these conditions, and may also reduce transmission of HIV.

ARV treatment or prophylaxis to the mother
HIV-infected mothers provided with lifelong antiretroviral therapy or antiretroviral prophylaxis interventions have a much lower risk of passing on HIV to their infants.

ARV prophylaxis to the baby
Drugs to the baby soon after birth, or a daily drug to the infant during the breastfeeding period also greatly reduces the risk of mother-to-child transmission.

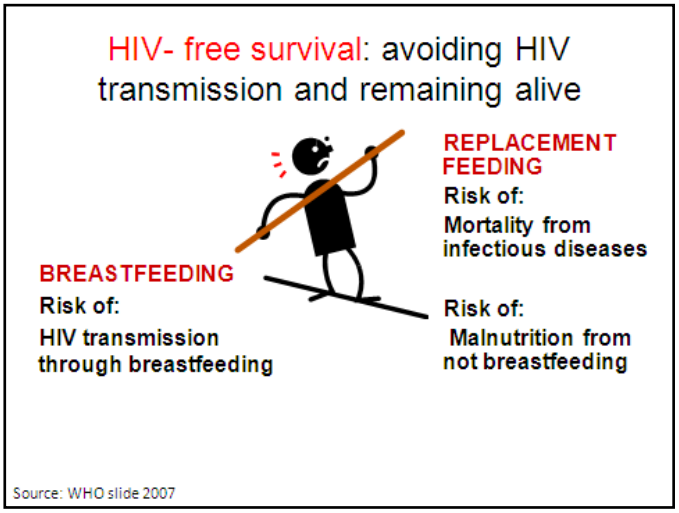
This list of factors suggests several strategies that would be useful for all women, whether they are HIV-positive or HIV-negative. They provide ways to reduce the risk of HIV transmission, which can be adopted for everyone, and they do not depend on knowing women's HIV status.

Other strategies, such as the avoidance of breastfeeding, can be harmful for babies, so they should only be used if a woman knows that she is HIV-positive and has been counselled fully on using replacement feeding.

It is clear, from the 2010 publications, that antiretroviral drugs mean more babies who are breastfed will survive their infancy HIV-free, because MTCT is greatly reduced. This means when deciding how a baby should be fed we now have to consider which method of feeding poses the lowest risk of illness or of death.

HIV-free survival

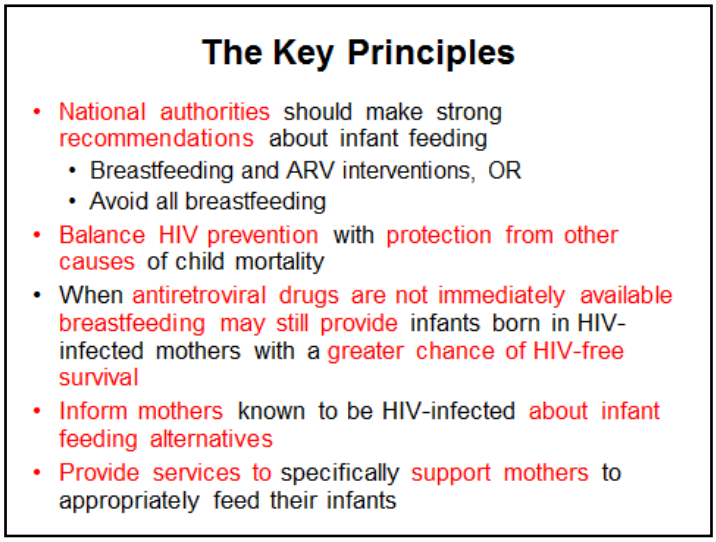
HIV-free survival describes the goal of infants of HIV-infected mothers remaining both HIV uninfected and also alive and healthy. The problem is that some interventions that can prevent transmission of HIV e.g. giving the infant formula feeds can also increase the risk of HIV exposed infants dying from other common infections and illnesses such as diarrhoea or pneumonia and malnutrition. Preventing HIV infection to the infant is not enough if the child then dies or another common childhood illness.



HIV exposed babies benefit from breastfeeding for all the reasons already discussed, but we also know there is still a very small possibility of the baby becoming HIV positive even when the mother is being treated with antiretroviral drugs. It is also very clear that statistically many babies who are not breastfed but who have replacement feeding are slightly more likely to die from the infections mentioned earlier.

The dilemma is which is the safest method of infant feeding for a mother who is HIV positive or a mother who does not know her HIV status. Or for a baby who is HIV exposed and is HIV negative. There are principles and recommendations on HIV and infant feeding which may provide guidance to overcome these dilemmas.

The Key Principles on HIV and infant feeding



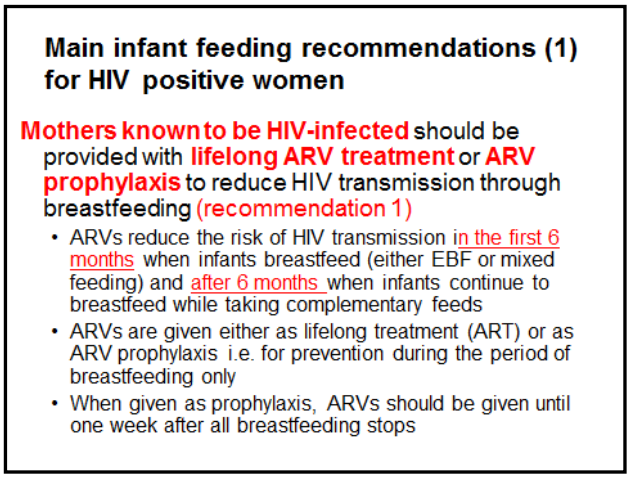
There is a set of current principles on HIV and infant feeding, which help to shape national infant feeding strategies.

- National health authorities should now clearly communicate which feeding practices is promoted and supported in public clinics and hospitals throughout a country or region for HIV positive mothers and their babies. The national health authority will decide whether to promote and support breastfeeding with antiretroviral intervention to reduce HIV transmission or to avoid all breastfeeding and give replacement feeding. Health workers should communicate to pregnant women and mothers what the national health authority recommends. It is not expected that health workers will sit with every pregnant woman to individually discuss what is the most appropriate feeding practice for the infant
- This means that infant feeding counselling should focus on the practical aspects of feeding rather than focusing on the one-to-one decision-making process which happened previously.
- It is felt that recommending one feeding practice for all HIV positive mothers and their babies will make it easier than trying to decide what is most appropriate for each individual mother and child.
- The second point emphasises the need to have a balanced approach to HIV prevention by protecting the baby from other causes of child mortality.
- If antiretroviral drugs are not immediately available mothers should be counselled to exclusively breastfeed for the first six months of life and then continue breastfeeding alongside complementary feeding. Breastfeeding may still provide the baby with a best chance of HIV-free survival, unless the social and environmental conditions are safe and supportive for replacement feeding.
- HIV-positive pregnant women and mothers should be informed about the national recommendations, but they should also be informed about feeding alternatives which a woman has a right to use if she chooses not to follow national recommendations.
- ALL pregnant women and mothers, regardless of their HIV status should be provided with skilled counselling and support for their infant feeding practices. This means having health workers specifically trained in infant feeding counselling available to support HIV-positive and HIV-negative pregnant women and mothers.

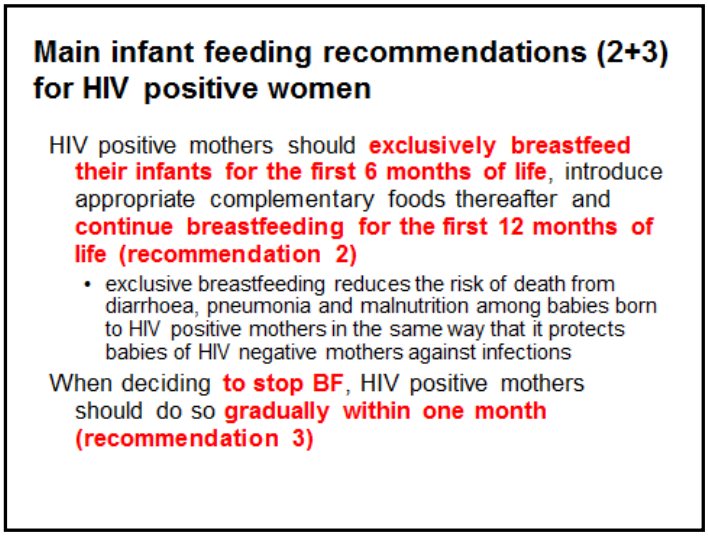
- Support is crucially important. There is a lot of evidence to show that poor infant feeding practices and malnutrition increases the risk of babies dying. The aim of all the principles is to make sure babies survive and remain HIV-free.

Main infant feeding recommendations for HIV-positive women

This slide includes some of the main feeding recommendations in the 2010 guidelines on HIV and infant feeding.



The first main recommendation is that HIV positive mothers who are breastfeeding should receive antiretroviral drugs (ARVs) throughout the period of time the baby is breastfeeding and until one week after all breastfeeding has stopped. These ARVs reduce the risk of HIV transmission to the child when she is breastfeeding in the first 6 months – even if the mother is not exclusively breastfeeding – and also when the mother continues to breastfeed after 6 months when she also gives complementary feeds. ARVs may be given to some women if they have more advanced HIV infection and need this treatment in order to improve their own health. We call this lifelong antiretroviral treatment (ART) and mothers should continue taking these drugs even when all breastfeeding has stopped. Alternatively, ARVs may only be given for the duration of breastfeeding to prevent transmission of the virus to the infant. We call this antiretroviral prophylaxis.



The second recommendations indicates that HIV positive mothers who breastfeed should exclusively breastfeed their infant for the first six months of life, introduce complementary foods thereafter, and continue breastfeeding for the first 12 months of age. HIV positive mothers

should exclusively breastfeed their babies in the first 6 months because it reduces the risk of death from diarrhoea, pneumonia and malnutrition in the same way that it protects babies of HIV negative mothers against infections.

And the third recommendation is that, if the HIV positive mother decides to stop breastfeeding, she should do it gradually within one month.

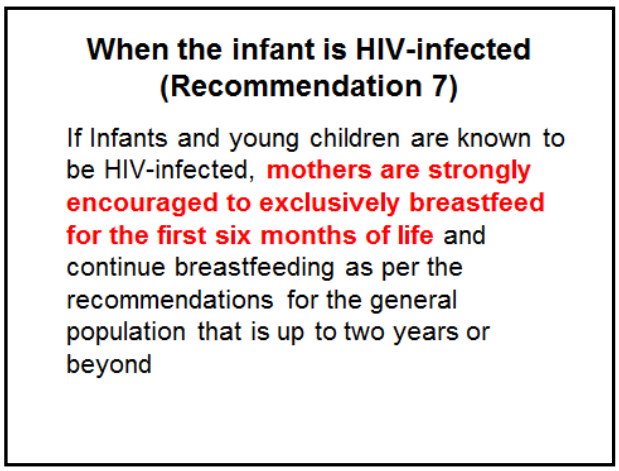
The current recommendation continues to promote exclusive breastfeeding and also complementary feeding and continued breastfeeding but now ARVs should also be given. Also, a gradual cessation of breastfeeding is recommended rather than stopping abruptly as was previously recommended.

Conditions needed to safely formula feed

Recommendation number five refers to the conditions needed to safely formula-feed; these conditions correspond to what was formerly referred as AFASS. These points are almost the same as previously but have now been expressed more simply.

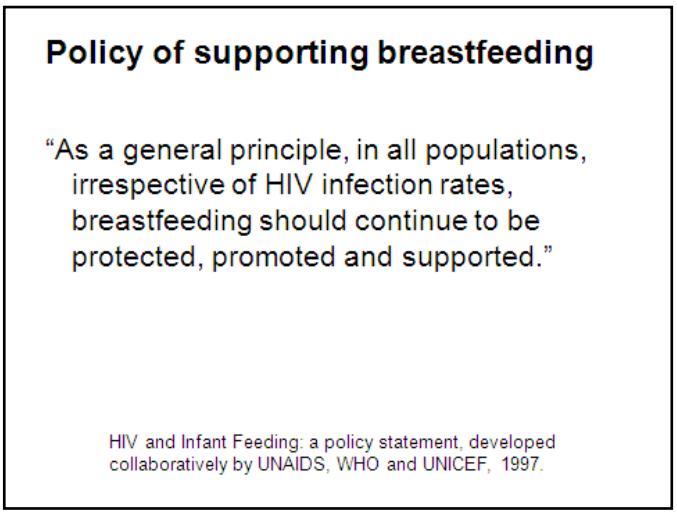
National authorities should make sure that these conditions exist when deciding to support the formula feeding option.

When the infant is HIV-infected



Inevitably and sadly, some babies will become HIV-positive, mothers of these babies are strongly encouraged to breastfeed for all the reasons discussed earlier; this is recommendation number seven. These babies should all be started on lifelong antiretroviral treatment as soon as possible.

To give an HIV-positive baby replacement feeds would increase the likelihood of the baby dying from common infections because he or she would no longer be receiving the constant source of protective factors breast milk provides. There are emotional benefits to breastfeeding for both the mother and the baby as well as health benefits and these should also be considered when making the decision to breastfeed.

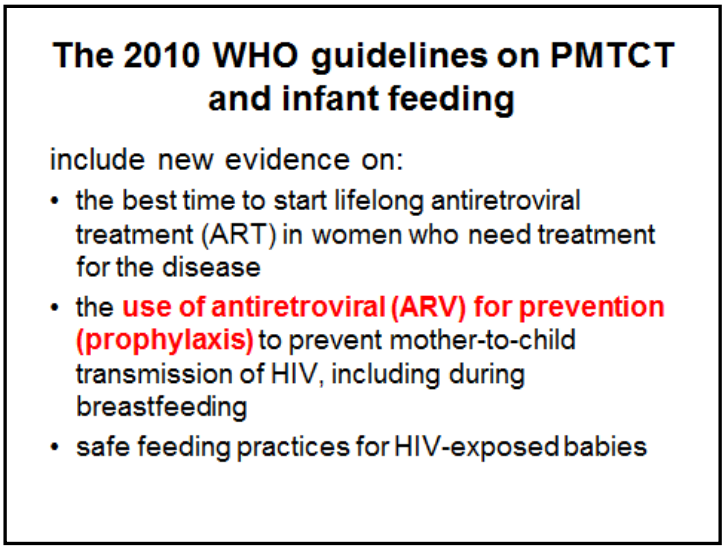


Approaches to prevent mother-to-child transmission of HIV

Reducing HIV transmission to pregnant women, mothers and their children, including transmission by breastfeeding, should be part of a comprehensive approach both to HIV prevention, care and support, and to antenatal, perinatal and postnatal care and support.

Policies should serve the best interests of the mother and infant as a pair in view of the critical link between survival of the mother and that of the infant.

Prevention of HIV transmission during breastfeeding should be considered in a broad context that takes into account the need to promote breastfeeding of infants and young children in the general population.

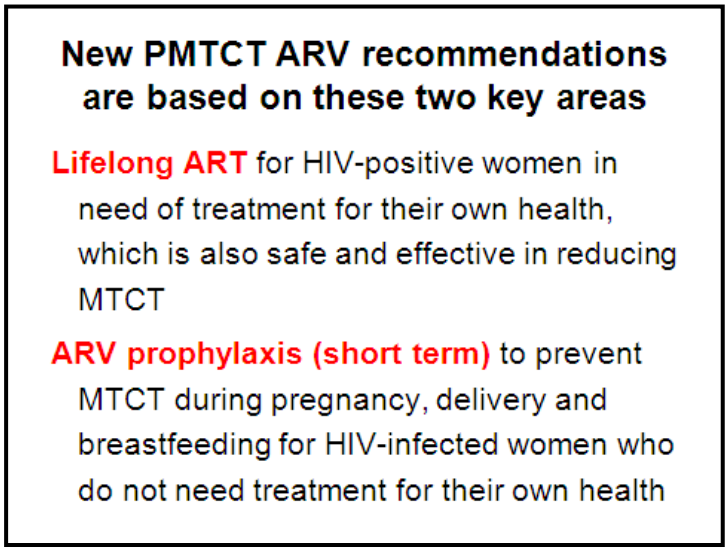


In 2010 WHO issued two new sets of guidelines on preventing mother-to-child transmission also known as PMTCT, and infant feeding, these sets cover:

- The new evidence concerning the best time to start lifelong antiretroviral treatment, known as ART, in women who meet the eligibility conditions to start this treatment for HIV
- The use of antiretroviral or ARV prophylaxis to prevent mother-to-child transmission of HIV, including during the complete breastfeeding period, and finally
- Safe feeding practices for HIV exposed babies, which means, babies who have been exposed to HIV during pregnancy, labour or delivery or during breastfeeding but who remain free of HIV. Is worth to remember that this will be the majority of babies born to HIV-positive mothers.

When a woman tests positive for HIV, in addition to the counselling she will receive on a variety of different topics, the decision also has to be made about appropriate treatment for her.

New PMTCT ARV recommendations



A woman requiring lifelong antiretroviral treatment (ART) will be suffering from HIV-related conditions and symptoms and will require ART for her own health, but if she is pregnant the same treatment will reduce the risk of passing HIV on to her baby.

An HIV-positive pregnant woman who is well and does not need treatment for her own health should be given antiretroviral prophylaxis. This is given for a limited period of time only. Antiretroviral prophylaxis is only given to prevent mother-to-child transmission of HIV during pregnancy, labour and delivery and if she breastfeeds it is continued postnatally.

The decision about eligibility for lifelong antiretroviral treatment is made by using two possible measures. The woman's CD4 count or whether she has any of the conditions or symptoms in a classification system known as the WHO clinical stages.

Once the decision is made that a woman is eligible for ART, it should begin as soon as possible regardless of her gestational age. The important point is that she will need to continue to take ART for the rest of her life.

ARV prophylaxis to prevent MTCT

ARV prophylaxis is recommended for HIV-positive women who are not eligible for ART. The purpose of ARV prophylaxis is to prevent mother-to-child transmission of HIV during pregnancy, labour and delivery and in the postnatal period, if she breastfeeds her baby.

There are two antiretroviral regimes recommended for preventing HIV transmission to babies i.e. prophylaxis, Option A and Option B, in HIV positive women who do not need lifelong ART; both are considered equally effective.

Option A is based on the mother taking the antiretroviral drug AZT, and Option B is based on the mother taking triple antiretroviral prophylaxis. The choice of which option to adopt should be made at country level not by individual women.

Antiretroviral prophylaxis should be started from 14 weeks gestation or as soon as possible afterwards, for example, if a woman comes to the hospital in late pregnancy, or in labour or at delivery and is then found to be HIV-positive, the antiretroviral prophylaxis should be commenced then.

In Option A, if the baby is to be breastfed he or she is given ARV prophylaxis from birth until breastfeeding stops. The mother stops ARV prophylaxis at 7 days postpartum.

Another ARV intervention is recommended in some countries that is called Option B+. With Option B+, all HIV positive pregnant women should be started on lifelong ART even if they do not fulfil all the conditions for starting this treatment. It is felt that in some settings, this strategy will be easier to implement and will improve the survival of mothers as well as protecting young babies.

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Session 37

Feeding During Illness and Low-Birth-Weight Babies

Objectives

After completing this session participants will be able to:

- explain why children need to continue to eat during illness
- describe appropriate feeding during illness and recovery
- describe feeding of low-birth-weight babies
- estimate the volume of milk to offer to a low-birth-weight baby
- list the Key Message from this session

Why children need to continue to eat during illness

During infections, the child needs more energy and nutrients to fight the infection. If children do not get extra food, their fat and muscle tissue is used as fuel. This is why they lose weight, look thin and stop growing.

The goal in feeding a child during and after illness is to have him return to the growth he had before illness.

Key Message 10

Encourage the child to drink and to eat during illness and provide extra food after illness to help them recover quickly.

Appropriate feeding during illness and recovery

Sick children often need *extra* drinks and food during illness – for example if they have fever or diarrhoea. A sick child may prefer breastfeeding to eating other foods. Do not withhold food from a sick child.

FEEDING THE CHILD WHO IS ILL

- Encourage the child to drink and to eat – with lots of patience
- Feed small amounts frequently
- Give foods that the child likes
- Give a variety of nutrient-rich foods
- Continue to breastfeed – often ill children breastfeed more frequently

Feeding during recovery

A child's appetite may be poor during illness. Even with encouragement to eat, the child may not eat well. The child's appetite usually increases after the illness so it is important to continue to give extra attention to feeding after the illness. This is a good time for families to give extra food so that lost weight is quickly regained. This allows 'catch-up' growth.

Young children need extra food until they have regained all their lost weight and are growing at a healthy rate.

FEEDING DURING RECOVERY

- Give extra breastfeeds
- Feed an extra meal
- Give an extra amount
- Use extra rich foods
- Feed with extra patience.

Low-birth-weight babies

The term *low-birth-weight* (LBW) means a birth weight of less than 2,500 grams (up to and including 2,499g), regardless of gestational age. This includes babies who are born *premature* (that is, who are born before 37 weeks of gestational age), and babies who are *small for gestational age*. Babies may be small for both these reasons

In many countries 15-20% of all babies are low-birth-weight.

Low-birth-weight babies are at particular risk of infection, and they need breast milk more than larger babies. Yet they are given artificial feeds more often than larger babies.

Many LBW babies can breastfeed without difficulty. Babies born at term, who are small-for-date, usually suckle effectively. They are often very hungry and need to breastfeed more often than larger babies, so that their growth can catch up.

Babies who are born preterm may have difficulty suckling effectively at first. But they can be fed on breast milk by tube or cup, and helped to establish full breastfeeding later. Breastfeeding is easier for these babies than bottle feeding.

Mothers of LBW babies need skilled help to express their milk and to cup-feed.

It is important to start expressing on the first day, within six hours of delivery if possible. This helps to start breast milk to flow, in the same way that suckling from soon after delivery helps breast milk to 'come in'.

If a mother can express just a few millilitres of colostrum it is valuable for her baby.

Babies of about 32 weeks gestational age or more are able to start suckling on the breast.

Babies between about 30-32 weeks gestational age can take feeds from a small cup, or from a spoon.

Babies below 30 weeks usually need to receive their feeds by a tube in hospital.

Let the mother put her baby to her breast as soon as he is well enough. He may only root for the nipple and lick it at first, or he may suckle a little. Continue giving expressed breast milk by cup to make sure the baby gets all that he needs.

When a LBW baby starts to suckle effectively, he may pause during feeds quite often and for quite long periods. For example, he may take 4-5 sucks and then pause for up to 4 or 5 minutes.

It is important not to take him off the breast too quickly. Leave him on the breast so that he can suckle again when he is ready.

He can continue for up to an hour if necessary. Offer a cup-feed after the breastfeed.

Make sure that the baby suckles in a good position. Good attachment may make effective suckling possible at an earlier stage.

The best positions for a mother to hold her LBW baby at the breast are:

- across her body, holding him with the arm on the opposite side to the breast
- the underarm position.

Low-birth-weight babies need to be followed up regularly to make sure that they are getting all the breast milk that they need.

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Session 38

Follow-up after training

Objectives

After completing this session participants will be able to:

- describe the contents and arrangement of the table of competencies they are expected to acquire
- describe the components of the follow-up session
- list the tasks they should complete for the follow-up session

You should receive a follow-up session between one and three months after this course. This follow-up is not an exam or a test. It is designed to help you to continue to learn the competencies expected of participants, and to help you with any difficulties you may have come across in growth assessment and infant feeding when you return to your facilities.

The trainer who comes to conduct this follow-up session might be one of the trainers who has facilitated this course or another trainer who you may not have met. However, it will be someone who is experienced in growth assessment and infant feeding counselling and who is a trainer on this course.

Competencies

On page 243 of your Manual you will see a table of competencies. To become competent in something you need to have the relevant knowledge and relevant skills. The table has three columns – a column for the competency, a column for the knowledge required and a column for the skills required. Most people find that they obtain the 'knowledge' part of the competency more quickly than the 'skills' part.

You will see that the competencies at the top of the table are essential for managing many situations. For example, the counselling skills that you have learnt in this course will be used in most situations. As you go further down the table you will see situations where you have to correctly apply a number of the competencies that are higher up in the table.

You may feel that you already have acquired much of the knowledge listed in the table from attending this course. However, you may feel that you need much more practice to develop the skills listed - for example the skill to interpret the growth of a child and provide advice to the caregiver for prevention of overweight or the skill to use counselling skills to gather information of complementary feeding using the FOOD INTAKE JOB AID, 6-23 MONTHS.

When you go back to your facility you will have the opportunity to practise many of these skills. The more you practise the more skilled you will become.

The follow-up session

The follow-up session will take one full day. The trainer who is coming to assess you will make arrangements with your facility for this follow-up to occur.

The morning will be practical sessions and the afternoon will be used to go over written exercises and to discuss any difficulties you have had. This is the time to discuss any difficult cases you may have seen.

If there are several of you at one facility the afternoon discussion can take place together, but the written exercises will be individual.

The competencies that you will be assessed on in the morning are all in the table you have in your Manual. You may be taken to the post-natal ward and asked to teach a mother with a newborn baby to position and attach her baby. Or you may be asked to counsel a mother on the growth and feeding of her child. Or you may be asked to measure a child, plot and interpret the child's growth chart.

Preparation for the follow-up session

Here are things you need to prepare for the follow-up session.

1. Complete the exercises on page 252 of your Manual. These are all exercises on growth assessment and infant and young child feeding so that you can practise applying the knowledge and counselling skills that you have learnt. Complete your answers in pencil in your Manual, as you have been doing during this course. During your follow-up session the trainer will go over these exercises individually with you.
2. Complete the log of skills on page 248 of your Manual. This log has three columns: one for skills, one for the date and one for comments. When you practise a skill at your facility you should list the skill and write the date next to it and any comments. Remember the list of skills which you are expected to learn are on pages 243-247 of your Manual.

So, for example. On the 1st July 2005 you practise the skill of assessing a breastfeed using the BREASTFEED OBSERVATION JOB AID. You would write the date in the first column and the skill in the second column.

Perhaps you found that the mother was not holding her breast in the recommended way, but was using the scissor grip. You might have suggested to her that she tries to hold her breast in a different way. Note this down in the third column.

Make particular notes of any difficult cases you have had to deal with so that you can discuss these with your trainer when s/he comes for follow-up.

3. Finally on page 250 of your Manuals there is space to note down the difficulties you experience trying to implement what you have learnt during the course. For example, you may have had difficulty measuring the length of a child because the clinic in which you work does not have appropriate measuring boards, is too crowded and there are too few staff. You may have difficulties trying to help mothers who have had a caesarean section to give the first breastfeed because their babies are kept in the nursery after delivery. These difficulties can be discussed with your trainer at the follow-up session.

During the afternoon of the follow-up session the trainer will look at your log of skills with you and see which skills you have been able to practise.

Competencies participants will be expected to master during training and follow-up

Competency	Knowledge	Skills
1. Use Listening and Learning skills to counsel a mother	. List the 6 Listening and Learning skills . Give an example of each skill	. Use the Listening and Learning skills appropriately when counselling a mother on child growth and feeding her infant or young child
2. Use Confidence and Support skills to counsel a mother	. List the 6 Confidence and Support skills . Give an example of each skill	. Use the Confidence and Support skills appropriately when counselling a mother on child growth and feeding her infant or young child
3. Assess a breastfeed	. Explain the contents and arrangement of the Breastfeed Observation Job Aid	. Assess a breastfeed using the Breastfeed Observation Job Aid . Recognize a mother who needs help using the Breastfeed Observation Job Aid
4. Help a mother to position a baby at the breast	. Explain the 4 key points of positioning . Describe how a mother should support her breast for feeding . Explain the main positions – sitting, lying, underarm and across	. Recognize good and poor positioning according to the 4 key points . Help a mother to position her baby using the 4 key points, in different positions
5. Help a mother to attach her baby to the breast	. Describe the relevant anatomy and physiology of the breast and suckling action of the baby . Explain the 4 key points of attachment	. Recognize signs of good and poor attachment and effective suckling according to the Breastfeed Observation Job Aid . Help a mother to get her baby to attach to the breast once he is well positioned
6. Explain to a mother about the optimal pattern of breastfeeding	. Describe the physiology of breast milk production and flow . Describe unrestricted (or demand) feeding, and implications for frequency and duration of breastfeeds and using both breasts alternatively	. Explain to a mother about the optimal pattern of breastfeeding and demand feeding
7. Help a mother to express her breast milk by hand	. List the situations when expressing breast milk is useful . Describe the relevant anatomy of the breast and physiology of lactation . Explain how to stimulate the oxytocin reflex . Describe how to select and prepare a container for expressed breast milk . Describe how to store breast milk	. Explain to a mother how to stimulate her oxytocin reflex . Rub a mother's back to stimulate her oxytocin reflex . Help a mother to learn how to prepare a container for expressed breast milk . Explain to a mother the steps for expressing breast milk by hand . Observe a mother expressing breast milk by hand and help her if necessary

Competency	Knowledge	Skills
8. Help a mother to cup-feed her baby	. List the advantages of cup-feeding	. Demonstrate to a mother how to prepare a cup hygienically for feeding . Practise with a mother how to cup-feed her baby safely
9. Measure weight, length and height	. Describe how to measure weight length and height . Determine when to measure length and when to measure height	. Measure weight of a young child held by a mother and an older child alone . Measure length correctly . Measure height correctly
10. Plot single points on various growth charts	. Explain how to place a point on a graph combining information from two axes . Describe where to find the age, weight, and length/height on various growth indicator charts	. Plot weight and length/height points on weight-for-age and length/height-age charts . Plot weight points on weight-for-length/height charts
11. Interpret single points on various indicator charts	. Identify growth problems based on points plotted on a single indicator chart . Define a growth problem using a combination of indicator charts	. Identify children who are stunted, underweight, wasted and overweight based on points plotted on several indicator charts
12. Interpret growth trends using a combination of indicators	. Interpret trends on growth charts	. Identify a child who are growing normally, has a growth problem or is at risk of a growth problem
13. Take a feeding history for an infant 0-6 months	. Describe the contents and arrangement of the Feeding History Job Aid, 0-6 Months	. Take a feeding history using the job aid and appropriate counselling skills according to the age of the child
14. Teach a mother the 10 Key Messages for complementary feeding	. List and explain the 6 Key Messages about what to feed to an infant or young child to fill the nutrition gaps (Key Messages 1-6) . Explain when to use the food consistency pictures, and what each picture shows . List and explain the 2 Key Messages about quantities of food to give to an infant or young child (Key Messages 7-8) . List and explain the Key Message about how to feed an infant or young child (Key Message 9) . List and explain the Key Message about how to feed an infant or young child during illness (Key Message 10)	. Explain to a mother the 6 Key Messages about what to feed to an infant or young child to fill the nutrition gaps (Key Messages 1-6) . Use the food consistency pictures appropriately during counselling . Explain to a mother the 2 Key Messages about quantities of food to give to an infant or young child (Key Messages 7-8) . Explain to a mother the Key Message about how to feed an infant or young child (Key Message 9) . Explain to a mother the Key Message about how to feed an infant or young child during illness (Key Message 10)

Competency	Knowledge	Skills
15. Counsel a pregnant woman about breastfeeding	. List the Ten Steps to Successful Breastfeeding . Describe how the International Code of Marketing of Breast-milk Substitutes helps to protect breastfeeding . Discuss why exclusive breastfeeding is important for the first six months . List the special properties of colostrum and reasons why it is important	. Use counselling skills appropriately with a pregnant woman to discuss the advantages of exclusive breastfeeding . Explain to a pregnant woman how to initiate and establish breastfeeding after delivery, and the optimal breastfeeding pattern . Apply competencies 1, 2 and 6
16. Help a mother to initiate breastfeeding	. Discuss the importance of early contact after delivery and of the baby receiving colostrum . Describe how health care practices affect initiation of exclusive breastfeeding	. Help a mother to initiate skin-to-skin contact immediately after delivery and to introduce her baby to the breast . Apply competencies 1, 2, 4 and 5
17. Support exclusive breast feeding for the first six months of life	. Describe why exclusive breastfeeding is important . Describe the support that a mother needs to sustain exclusive breastfeeding	. Apply competencies 1, 8 and 13 appropriately
18. Help a mother to sustain breastfeeding up to 2 years of age or beyond	. Describe the importance of breast milk in the 2nd year of life	. Apply competencies 1, 2, 12 and 14, including explaining the value of breastfeeding up to 2 years and beyond .
19. Help a mother with 'not enough milk'	. Describe the common reasons why a baby may have a low breast milk intake . Describe the common reasons for apparent insufficiency of milk . List the reliable signs that a baby is not getting enough milk	. Apply competencies 1, 3, 12 and 13 to decide the cause . Apply competencies 2, 4, 5, and 6 to overcome the difficulty, including explaining the cause of the difficulty to the mother .
20. Help a mother with a baby who cries frequently	. List the causes of frequent crying . Describe the management of a crying baby	. Apply competencies 1, 3, 12 and 13 to decide the cause . Apply competencies 2, 4, and 5 to overcome the difficulty, including explaining the cause of the difficulty to the mother . Demonstrate to a mother the positions to hold and carry a colicky baby

Competency	Knowledge	Skills
21. Help a mother whose baby is refusing to breastfeed	. List the causes of breast refusal . Describe the management of breast refusal	. Apply competencies 1, 3, 12 and 13 to decide the cause . Apply competencies 2, 4 and 5 to overcome the difficulty, including explaining the cause of the difficulty to the mother . Help a mother to use skin-to-skin contact to help her baby accept the breast again . Apply competencies 7 and 8 to maintain breast milk production and to feed the baby meanwhile
22. Help a mother who has flat or inverted nipples	. Explain the difference between flat and inverted nipples and about protractility . Explain how to manage flat and inverted nipples	. Recognize flat and inverted nipples . Apply competencies 2, 4, 5, 7 and 8 to overcome the difficulty . Show a mother how to use the syringe method for the treatment of inverted nipples
23. Help a mother with engorged breasts	. Explain the differences between full and engorged breasts . Explain the reasons why breasts may become engorged . Explain how to manage breast engorgement	. Recognize the difference between full and engorged breasts . Apply competencies 2, 4, 5, 6 and 7 to manage the difficulty
24. Help a mother with sore or cracked nipples	. List the causes of sore or cracked nipples . Describe the relevant anatomy and physiology of the breast . Explain how to treat candida infection of the breast	. Recognize sore and cracked nipples . Recognize candida infection of the breast . Apply competencies 2, 3, 4, 5, 7 and 8 to manage these conditions
25. Help a mother with mastitis	. Describe the difference between engorgement and mastitis . List the causes of a blocked milk duct . Explain how to treat a blocked milk duct . List the causes of mastitis . Explain how to manage mastitis, including indications for antibiotic treatment and referral . List the antibiotics to use for infective mastitis	. Recognize mastitis and refer if necessary . Recognize a blocked milk duct . Manage blocked duct appropriately . Manage mastitis appropriately using competencies 1, 2, 3, 4, 5, 6, 7, 8 and rest, analgesics and antibiotics if indicated. Refer to the appropriate level of care

Competency	Knowledge	Skills
26. Help a mother to breastfeed a low-birth-weight baby or sick baby	. Explain why breast milk is important for a low-birth-weight baby or sick baby . Describe the different ways to feed breast milk to a low-birth-weight baby . Estimate the volume of milk to offer a low-birth-weight baby per feed and per 24 hours	. Help a mother to feed her LBW baby appropriately . Apply competencies, especially 7, 8 and 12, to manage these infants appropriately . Explain to a mother the importance of breastfeeding during illness and recovery
27. Help mothers whose babies are over six months of age to give complementary feeds	. List the gaps which occur after six months when a child can no longer get enough nutrients from breast milk alone . List the foods that can fill the gaps . Describe how to prepare feeds hygienically	. Apply competencies 1, 2, 12 and 14 . Use the FOOD INTAKE JOB AID, 6-23 MONTHS to learn how a mother is feeding her infant or young child . Identify the gaps in the diet using the FOOD INTAKE JOB AID, 6-23 MONTHS and the FOOD INTAKE REFERENCE TOOL, 6-23 MONTHS
28. Counsel a mother whose child has undernutrition	. Describe causes of stunting, wasting, and underweight . Involve the mother in identifying possible causes of her child's undernutrition . Find age-appropriate advice for the problem identified . Set goals for improving growth of an undernourished child	. Identify the key sections of the job-aid INVESTIGATING CAUSES OF UNDERNUTRITION . Use the job-aid appropriately (find the correct pages for the child's age, complete the investigation before counselling, counsel using age-appropriate recommendations) . Check mother's understanding using checking questions . Involve mother in setting goals for improved growth
29. Counsel a mother whose child is overweight	. Describe causes of overweight/obesity . Involve the mother in identifying possible causes of her child's overweight . Set goals for improving growth of an overweight child	. Identify the key sections of the job-aid INVESTIGATING CAUSES OF OVERWEIGHT . Use the job-aid appropriately (find the correct pages for the child's age, complete the investigation before counselling, counsel using age-appropriate recommendations) . Check mother's understanding using checking questions . Involve mother in setting goals for improved growth

LOG OF SKILLS PRACTISED		
Date	Skill practised	Comments

LOG OF SKILLS PRACTISED		
Date	Skill practised	Comments

DIFFICULTIES EXPERIENCED		
Date	Difficulty experienced	Comments

DIFFICULTIES EXPERIENCED		
Date	Difficulty experienced	Comments

EXERCISES TO BE COMPLETED

There are 13 exercises to be completed in your Manual before the follow-up session. The trainer will go through these exercises with you at the follow-up session and discuss any difficulties you had answering them.

How to do the exercise:
Read the stories and write your answers to the questions in pencil in the spaces. These exercises are based on Sessions 14 and 20 in your Manuals. The exercises also use the counselling skills from Sessions 5 and 10. Refer to these Sessions to help you with these exercises.

Example:

Mrs A says that both her breasts are swollen and painful. She put her baby to her breast for the first time on the third day, when her milk 'came in'. This is the sixth day. Her baby is suckling, but now it is rather painful, so she does not let him suck for very long. Her milk is not dripping out as fast as it did before.

What is the diagnosis?

Engorged breasts.

What may have caused the condition?

Delay starting to breastfeed.

How can you help Mrs A?

Help her to express her milk, and help her to position her baby at her breast, so that he can attach better.

To answer:

Mrs B says that her right breast has been painful since yesterday, and she can feel a lump in it, which is tender. She has no fever and feels well. She has started to wear an old bra which is tight, because she wants to prevent her breasts from sagging. Her baby now sometimes sleeps for 6-7 hours at night without feeding. You watch him suckling. Mrs B holds him close, and his chin is touching her breast. His mouth is wide open and he takes slow, deep sucks.

What could you say to empathize with Mrs B's worries about her figure?

What is the diagnosis?

What may be the cause?

What three suggestions would you give Mrs B?

Mrs C has had a painful swelling in her left breast for three days. It is extremely tender, and the skin of a large part of the breast looks red. Mrs C has a fever and feels too ill to go to work today. Her baby sleeps with her and breastfeeds at night. By day, she expresses milk to leave for him. She has no difficulty in expressing her milk. But she is very busy, and it is difficult for her to find time to express milk, or to breastfeed her baby during the day.

What could you say to empathize with Mrs C?

What is the diagnosis?

Why do you think that Mrs C has this condition?

How would you treat Mrs C?

Mrs D complains of nipple pain when her 6-week-old baby is suckling. You examine her breasts while her baby is asleep, and can see no fissures. When he wakes, you watch him feeding. His body is twisted away from his mother's. His chin is away from the breast, and his mouth is not wide open. He takes rapid, shallow sucks. As he releases the breast, you notice that the nipple looks squashed.

What is the cause of Mrs D's nipple pain?

What could you say to build Mrs D's confidence?

What practical help could you give her?

Mrs E's baby was born yesterday. She tried to feed him soon after delivery, but he did not suckle very well. She says that her nipples are inverted, and she cannot breastfeed. You examine her breasts, and notice that her nipples look flat. You ask Mrs E to use her fingers and to stretch her nipple and areola out a short way. You can see that the nipple and areola are protractile.

What could you say to accept Mrs E's idea about her nipples?

How could you build her confidence?

What practical help could you give Mrs E?

Mrs F's baby is 3 months old. She says that her nipples are sore. They have been sore on and off since an attack of mastitis several weeks ago. The mastitis cleared up after a course of antibiotics. This new pain feels like needles going deep into her breast whenever her baby suckles. You watch her baby breastfeeding. His mouth is wide open, his lower lip is turned out, and his chin is close to the breast. He takes some slow deep sucks and you see him swallow.

What might be the cause of Mrs F's sore nipples?

What treatment would you give to her and her baby?

How would you build Mrs F's confidence?

Mrs G is 16 years old. Her baby was born 2 days ago, and is very healthy. She has tried to breastfeed him twice, but her breasts are still soft, so she thinks that she has no milk, and will not be able to breastfeed. Her young husband has offered to buy her a bottle and some formula.

What could you say to accept what Mrs G says about her breast milk?

Why does Mrs G think that she will not be able to breastfeed?

What relevant information would you give her, to build her confidence?

What practical help could you give Mrs G?

Mrs H says that her breast milk seems to be decreasing. Her baby is 4 months old, and has gained weight well from when he was born. Last month she started giving him cereal three times a day. She says that he is breastfeeding less often, and for a shorter time than before she started cereal feeds. Mrs H is at home all day, and her baby sleeps with her at night.

Why do you think that Mrs H's breast milk seems to be decreasing?

What are Mrs H and her baby doing right?

What could you suggest to Mrs H, so that she continues to breastfeed?

Mrs I's baby is 7 weeks old. She says that her breast milk is not good. Her baby does not seem satisfied after breastfeeds. He cries and wants to feed again very soon, sometimes in half an hour, or an hour. He cries and wants to breastfeed often at night too, and Mrs I is exhausted. He passes urine about 6 times a day. When he breastfeeds, you notice that his lower lip is turned in, and there is more areola visible below his bottom lip than above his top lip.

The baby weighed 3.7 kilos at birth. He now weighs 4.8 kilos.

Is Mrs I's baby getting as much breast milk as he needs?

What may be the reason for his behaviour?

What could you praise, to build Mrs I's confidence?

What practical help would you offer to Mrs I?

Mrs J says that she is exhausted, and will have to bottle feed her 2-month-old baby. He does not settle after breastfeeds, and wants to feed very often - she cannot count how many times in a day. She thinks that she does not have enough breast milk, and that her milk does not suit her baby. While she is talking to you her baby wants a feed. He suckles in a good position. After about two minutes, he pauses, and Mrs J quickly takes him off her breast.

The baby's growth chart shows that he gained 250 g last month.

What could you say to show that you accept Mrs J's ideas about her milk?

Is Mrs J's baby getting enough breast milk?

What is the reason for this?

What can you suggest to help Mrs J?

Mrs K says that her 3-month-old baby is refusing to breastfeed. He was born in hospital and roomed-in from the beginning. He breastfed without any difficulty. Mrs K returned to work when her baby was 2 months old. Her baby has 2-3 bottle feeds while she is at work. For the last week, he has refused to breastfeed when she comes home in the evening. She thinks that her milk is not good, because she works hard and feels hot all day.

What could you say to accept Mrs K's ideas about her milk?

What might be the cause of her baby's refusal to breastfeed?

What praise and relevant information could you give to build Mrs K's confidence?

What could you suggest that she does to breastfeed again, if she decides to try?

Mrs L has a baby who is one month old. The baby was born in hospital, and was given three bottle feeds before he started to breastfeed. When Mrs L went home, her baby wanted to breastfeed often, and he seemed unsatisfied. Mrs L thought that she did not have enough milk. She continued to give bottle feeds, in addition to breastfeeding, and hoped that her breast milk supply would increase. Now her baby is refusing to breastfeed. When Mrs L tries to breastfeed, he cries and turns away. Mrs L wants very much to breastfeed, and she feels rejected by her baby.

What could you say to empathize with Mrs L?

Why is Mrs L's baby refusing to breastfeed?

What relevant information might be helpful to Mrs L?

What four things would you offer to help Mrs L to do, so that she and her baby can enjoy breastfeeding again?

Follow-up after training scenario on growth and complementary feeding

Mrs M brings an 8 month-old baby boy whose length is 70 cm and weight 7.5 kg. She says he was always very healthy until a month ago when she started him on porridge and fruit juice. He had diarrhoea after two days and for a week she went back to only breastfeeding. He doesn't like other foods (except juice) but she still tries to force him to eat some porridge.

Identify where, in relation to plotted growth curves, Baby M's z-scores are for length-for-age, weight-for-age and weight-for-height

Explain to Mrs M what her baby's growth status is in light of the feeding history she has given you.

Find two things to praise about what Mrs M has told you and your assessment of Baby M's growth.

Chose two key messages on complementary to give to Mrs M and give her a follow-up appointment with a target for her to work towards.

Notes

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Glossary of Terms

Absorbed iron: This is the iron that passes into the body after it has been released from food during digestion. Only a small proportion of the iron present in food is absorbed. The rest is excreted in the faeces.

Accuracy: Correctness. The accuracy of a measurement depends on whether the instrument is correctly calibrated and whether the observer measures correctly (i.e. takes, reads, and records the measurement correctly).

Active encouragement: Assistance given to encourage a child to eat. This includes praising, talking to the child, helping the child put food on the spoon, feeding the child, making up games.

Afterpains: Contraction of the uterus during breastfeeding in the first few days after childbirth, due to oxytocin released.

AIDS: Acquired immune deficiency syndrome, which means that the HIV-positive person has progressed to active disease.

Allergy: Symptoms when fed even a small amount of a particular food (so it is not dose-related).

Alveoli: Small sacs of milk secreting cells in the breast.

Amenorrhoea: Absence of menstruation.

Anaemia: Lack of red cells or lack of haemoglobin in the blood.

Antenatal preparation: Preparing a mother for the delivery of her baby.

Antibodies: Proteins in the blood and in breast milk which fight infection.

Anti-infective factors: Factors which prevent or which fight infection. These include antibodies.

Appropriate touch: Touching somebody in a socially acceptable way.

Areola: Dark skin surrounding the nipple.

Artificial feeding: Feeding an infant on a breast-milk substitute.

Artificial feeds: Any kind of milk or other liquid given instead of breastfeeding.

Artificially fed: Receiving artificial feeds only, and no breast milk.

Asthma: Wheezing illness.

Attachment: The way a baby takes the breast into his mouth; a baby may be well attached or poorly attached to the breast.

Baby-friendly Hospital Initiative (BFHI): An approach to transforming maternity practices as recommended in the joint WHO/UNICEF statement on Protecting, promoting and supporting breastfeeding: the special role of maternity services (1989).

Baby-led feeding: See demand feeding.

Bedding-in: A baby sleeping in bed with his mother, instead of in a separate cot.

Bilirubin: Yellow breakdown products of haemoglobin which cause jaundice.

Blocked duct: A milk duct in the breast becoming blocked with thickened milk, so that the milk in that part of the breast does not flow out.

BMI: Body mass index; a number that indicates a person's weight in proportion to height/length, calculated as kg/m2.

BMI-for-age: A growth indicator that relates BMI to age.

Bonding: Mother and baby developing a close loving relationship.

Bottle-feeding: Feeding an infant from a bottle, whatever is in the bottle, including expressed breast milk, water, formula, etc.

Breast pumps: Devices for expressing milk.

Breast refusal: A baby not wanting to suckle from his mother's breast.

Breastfeeding support: A group of mothers who help each other to breastfeed.

Breast-milk substitute: Any food being marketed or otherwise represented as a partial or total replacement for breast milk, whether or not it is suitable for that purpose.

Calibrate: To check a measuring instrument for accuracy and adjust if necessary and possible.

Calories: Kilocalories or Calories measure the energy available in food.

Candida: Yeast which can infect the nipple, and the baby's mouth and bottom. Also known as 'thrush'.

Care for development: Care intended to stimulate emotional, intellectual, and motor development.

Casein: Protein in milk which forms curds.

Cessation of breastfeeding: Completely stopping breastfeeding, including suckling.

Chapati: A flat bread made by mixing whole wheat flour with water and then shaping pieces of the dough into flat circles and baking on a griddle (hot metal sheet). Traditionally eaten in India and Pakistan.

Cleft lip or palate: Abnormal division of the lip or palate.

Closed questions: Questions which can be answered with `yes' or `no'.

Colic: Regular crying, sometimes with signs suggesting abdominal pain, at a certain time of day; the baby is difficult to comfort but otherwise well.

Cold compress: Cloths soaked in cold water to put on the breast.

Colostrum: The special breast milk that women produce in the first few days after delivery; it is yellowish or clear in colour.

Confidence: Believing in yourself and your ability to do things.

Contaminated: Containing harmful bacteria or other harmful substances.

Commercial infant formula: A breast-milk substitute formulated industrially in accordance with applicable *Codex Alimentarius* standards to satisfy the nutritional requirements of infants during the first months of life up to the introduction of complementary foods.

Complementary feeding: The process of giving an infant food in addition to breast milk or infant formula, when either becomes insufficient to satisfy the infant's nutritional requirements.

Complementary food: Any food, whether manufactured or locally prepared, used as a complement to breast milk or to a breast-milk substitute.

Counselling: A way of working with people so that you understand their feelings and help them to develop confidence and decide what to do.

Cup-feeding: Feeding from an open cup without a lid, whatever is in the cup.

Deficiency: Shortage of a nutrient that the body needs.

Dehydration: Lack of water in the body.

Demand feeding: Feeding a baby whenever he shows that he is ready, both day and night. This is also called `unrestricted' or `baby-led' feeding.

Distraction (during feeding): A baby's attention easily taken from the breast by something else, such as a noise.

Ducts, milk ducts: Small tubes which take milk to the nipple.

Dummy: Artificial nipple made of plastic for a baby to suck. Also known as a pacifier/soother.

Early contact: A mother holding her baby during the first hour or two after delivery.

Eczema: Skin condition, often associated with allergy.

Effective suckling: Suckling in a way which removes the milk efficiently from the breast.

Empathize: Show that you understand how a person feels from her point of view.

Engorgement: Swollen with breast milk, blood and tissue fluid. Engorged breasts are often painful and oedematous and the milk does not flow well.

Essential fatty acids: Fats which are essential for a baby's growing eyes and brain, which are not present in cow's milk or most brands of formula.

Exclusive breastfeeding: An infant receives only breast milk and no other liquids or solids, not even water, with the exception of drops or syrups consisting of vitamins, mineral supplements or medicines.

Expressed breast milk (EBM): Milk that has been removed from the breasts manually or by using a pump.

Express: To squeeze or press out.

Family foods: Foods that are part of the family meals.

Feeding history: All the relevant information about what has happened to a mother/caregiver and baby, and how their present feeding situation developed.

Fermented foods: Foods that are soured. For example, yoghurt is fermented milk. These substances can be beneficial and kill pathogens that may contaminate food.

Fissure: Break in the skin, sometimes called a `crack'.

Flat nipple: A nipple which sticks out less than average.

Foremilk: The watery breast milk that is produced early in a feed.

Formula: Artificial milks for babies made out of a variety of products, including sugar, animal milks, soybean, and vegetable oils. They are usually in powder form, to mix with water.

Fortified foods: These are foods that have certain nutrients added to improve their nutritional quality.

Full breasts: Breasts which are full of milk, and hot, heavy and hard, but from which the milk flows.

Gastric suction: Sucking out a baby's stomach immediately after delivery.

Germinated seeds/flour: Seeds that have been soaked and allowed to sprout. The sprouted seeds can be dried and milled to make germinated flour. If a little of this flour is added to warm thick porridge it makes the porridge soft and easy to eat. Germinated seeds are easier to digest than ungerminated seeds.

Gestational age: The number of weeks of pregnancy.

Ghee: Butter that has been heated so that the fat melts and the water evaporates. It looks clear. It can be made from cow or buffalo milk and is widely used in India. In the Middle East it is called *samna*.

Gross motor development: Development of movement and body control related to use of the larger muscles (e.g. development of crawling and walking skills), as contrasted with fine motor development (e.g. use of hands and fingers to grasp small objects). See gross motor milestones below.

Gross motor milestones: Important achievements related to movement and body control, including sitting without support, standing with assistance, hands-and-knees crawling, walking with assistance, standing alone, and walking alone.

Growth factors: Substances in breast milk which promote growth and development of the intestine, and which probably help the intestine to recover after an attack of diarrhoea.

Growth spurt: Sudden increased hunger for a few days.

Gruel: Another name for thin porridge. Examples are *atole* in Central America, uji in East Africa.

Gulp: Loud swallowing sounds, due to swallowing a lot of fluid.

`High needs' babies: Babies who seem to need to be carried and comforted more than other babies.

Hindmilk: The fat-rich breast milk that is produced later in a feed.

HIV: Human immunodeficiency virus, which causes AIDS (acquired immune deficiency syndrome).

HIV-infected: Refers to a person infected with HIV, but who may not know that he/she is infected.

HIV-negative: Refers to people who have taken a test with a negative result and who know their result.

HIV-positive: Refers to persons who have taken an HIV test, whose results have been confirmed and who know and/or their parents know that they tested positive.

HIV-status unknown: Refers to people who have not taken an HIV test or who do not know the result of their test.

HIV testing and counselling: Testing for HIV status, preceded and followed by counselling. Testing should be voluntary and confidential, with fully informed consent. The expression means the same as the terms: counselling and voluntary testing, voluntary counselling and testing, and voluntary and confidential counselling and testing. Counselling is a process, not a one-off event: for the HIV-positive client it should include life planning, and, if the client is pregnant or has recently given birth, it should include infant-feeding considerations.

Hormones: Chemical messengers in the body.

Infant: A child not more than 12 months of age.

Infant feeding counselling: Counselling on breastfeeding, on complementary feeding, and, for HIV-positive women, on HIV and infant feeding.

Infantometer: A board designed to be placed on a horizontal surface to measure length (lying down) of a child less than 2 years old.

Immune system: Those parts of the body and blood, including lymph glands and white blood cells, which fight infection.

Immunity: A defence system that the body has to fight diseases.

Ineffective suckling: Suckling in a way which removes milk from the breast inefficiently or not at all.

Infective mastitis: Mastitis due to bacterial infection.

Inhibit: To reduce or stop something.

Inspection: Examining by looking.

Intolerance (of food): Inability to tolerate a particular food.

Inverted nipple: A nipple which goes in instead of sticking out, or which goes in when the mother tries to stretch it out.

Jaggery: Brown sugar made from the sap of the palm flower. It is widely used in the Indian subcontinent.

Jaundice: Yellow colour of eyes and skin.

Judging words: Words which suggest that something is right or wrong, good or bad.

Kwashiorkor: A form of severe undernutrition referred to alternatively as oedematous malnutrition. Symptoms may include oedema; thin, sparse or discoloured hair; and skin with discoloured patches that may crack and peel.

Lactation: The process of producing breast milk.

Lactation Amenorrhoea Method (LAM): Using the period of amenorrhoea after childbirth as a family planning method.

Lactose: The special sugar present in all milks.

Length/height-for-age: A growth indicator that relates length or height to a child's age.

Lipase: Enzyme to digest fat.

Low-birth-weight (LBW): Weighing less than 2.5 kg at birth.

Marasmus: A form of severe undernutrition referred to alternatively as nonoedematous malnutrition. A child with marasmus is severely wasted and has the appearance of "skin and bones."

Mastitis: Inflammation of the breast (see also infective and non-infective mastitis).

Matooke: Green banana.

Mature milk: The breast milk that is produced a few days after birth.

Median: The middle value in a rank-ordered series of values.

Median duration of breastfeeding: The age in months when 50% of children are no longer breastfed.

Micronutrients: Nutrients such as vitamins and minerals present in foods in small amounts, needed by the body for growth and prevention of infections.

Micronutrient supplements: Preparations of vitamins and minerals.

Milk ejection: Milk flowing from the breast due to the oxytocin reflex, which is stimulated in response to the sight, touch or sound of the baby.

Milk stasis: Milk staying in the breast and not flowing out.

Mistaken idea: An idea that is incorrect.

Milk expression: Removing milk from the breasts manually or by using a pump.

Mixed feeding: Feeding both breast milk and other foods or liquids.

Montgomery's glands: Small glands in the areola which secrete an oily liquid.

Multiple birth: Birth of more than one child at the same time, e.g. twins.

Natural (passive) immunity: Is the protection a baby inherits from his/her mother.

`Nipple confusion': A term sometimes used to describe the way babies who have fed from a bottle may find it difficult to suckle effectively from a breast.

Nipple sucking: When a baby takes only the nipple into his mouth, so that he cannot suckle effectively.

Non-infective mastitis: Mastitis due to milk leaking out of the alveoli and back into the breast tissues, with no bacterial infection.

Non-verbal communication: Showing your attitude through your posture and expression.

Nutrients: Substances the body needs that come from the diet. These are carbohydrates, proteins, fats, minerals and vitamins.

Nutritional needs: The amounts of nutrients needed by the body for normal function, growth and health.

Mother-to-child transmission: Transmission of HIV to a child from an HIV-infected woman during pregnancy, delivery or breastfeeding.

Mother-support group: A community-based group of women providing support for optimal breastfeeding and complementary feeding.

Obese: Severely overweight; weight-for-length/height or BMI-for-age above the 3 z-score line.

Obesity: The condition of being obese.

Oedema: Swelling due to excess fluid in the tissues.

Offal/organs: Liver, heart, kidneys, brain, intestines, blood.

Open questions: Questions which can only be answered by giving information, and not with just a `yes' or a `no'.

Overweight: Weighing too much for one’s length/height; weight-for-length/height or BMI-for-age above the 2 z-score line.

Oxytocin: The hormone which makes the milk flow from the breast.

Pacifier: Artificial nipple made of plastic for a baby to suck, a dummy.

Palpation: Examining by feeling with your hand.

Partially breastfed: Breastfed and given some artificial feeds.

Pasteurized: Food (usually milk) made safe by heating it to destroy disease-producing pathogens.

Pathogen: Any organism that causes disease.

Perinatal: Around the time of birth.

Perpendicular: positioned at a right angle (90o angle).

Persistent diarrhoea: Diarrhoea which starts like an acute attack, but which continues for more than 14 days.

Pesticides: Substances (usually sprays) used by farmers to prevent pests from attacking crops.

Phytates: Substances present in cereals, especially in the outer layer (bran), and in peas, beans and nuts. Phytates combine with iron, zinc and calcium in food to form substances that the body cannot absorb. Eating foods containing vitamin C helps protect iron from the adverse effect of phytates.

Pneumonia: Infection of the lungs.

Poorly protractile: Used to describe a nipple which is difficult to stretch out to form a `teat'.

Porridge: Is made by cooking cereal flour with water until it is smooth and soft. Grated cassava or other root, or grated starchy fruit can also be used to make porridge.

Positioning: How a mother holds her baby at her breast; the term usually refers to the position of the baby's whole body.

Postnatal check: Routine visit to a health facility after a baby is born.

Precision: The smallest exact unit that an instrument can measure. For example, the UNISCALE measures with precision to the nearest 0.1 kg.

Predominantly breastfed: Breastfed as the main source of nourishment, but also given small amounts of non-nutritious drinks such as tea, water and water-based drinks.

Prelacteal feeds: Artificial feeds given before breastfeeding is established.

Premature, preterm: Born before 37 weeks gestation.

Prolactin: The hormone which makes the breasts produce milk.

Protein: Nutrient necessary for growth and repair of the body tissues.

Protractile: Used to describe a nipple which is easy to stretch out.

Psychological: Mental and emotional.

Pulses: Peas, lentils, beans and groundnuts.

Puree: Food that has been made smooth by passing through a sieve or mashing with a fork, pestle or other utensil.

Quinoa: A cereal grown at high altitude in the Andes in South America.

Recumbent: Lying down.

Reflect back: Repeat back what a person says to you, in a slightly different way.

Reflex: An automatic response through the body's nervous system.

Rejection of baby: The mother not wanting to care for her baby.

Relactation: Re-establishing breastfeeding after a mother has stopped, whether in the recent or distant past.

Replacement feeding: The process of feeding a child who is not receiving any breast milk with a diet that provides all the nutrients the child needs until the child is fully fed on family foods. During the first six months this should be with a suitable breast-milk substitute. After six months it should be with a suitable breast-milk substitute, as well as complementary foods made from appropriately prepared and nutrient-enriched family foods.

Responsive feeding: Feeding infants directly and assisting older children when they feed themselves, being sensitive to their hunger and satiety cues.

Restricted breastfeeds: When the frequency or length of breastfeeds is limited in any way.

Retained placenta: A small piece of the placenta remaining in the uterus after delivery.

Rooming-in: A baby staying in the same room as his mother.

Rooting: A baby searching for the breast with his mouth.

Rooting reflex: A baby opening his mouth and turning to find the nipple.

Rubber teat: The part of a feeding bottle from which a baby sucks.

Scissor hold: Holding the breast between the index and middle fingers while the baby is feeding.

SD score: Standard deviation score. See z-score.

Symmetrical: The same (mirror images) on opposite sides separated by a straight line.

Secrete: Produce a fluid in the body.

Self-weaning: A baby more than one year old deciding by himself to stop breastfeeding.

Sensory impulses: Messages in nerves which are responsible for feeling.

Silver nitrate drops: Drops put into a baby's eyes to prevent infection with gonococcus or chlamydia.

Skin-to-skin contact: A mother holding her naked baby against her own skin.

Sore nipples: Pain in the nipple and areola when the baby feeds.

‘Spillover’: A term used to designate the feeding behaviour of new mothers who either know that they are HIV-negative or are unaware of their HIV status – they do not breastfeed, or they breastfeed for a short time only, or they mix-feed, because of unfounded fears about HIV or of misinformation or of the ready availability of breast-milk substitutes.

Stadiometer: a board for measuring the standing height of children age 2 years or older.

Stagnation: staying the same. A flat growth line indicates stagnation of growth.

Stunted: Short for one’s age; length/height-for-age below the -2 z-score line**. Severely stunted** is below the -3 z-score line.

Sucking: Using negative pressure to take something into the mouth.

Sucking reflex: The baby automatically sucks something that touches his palate.

Suckling: The action by which a baby removes milk from the breast.

Supplements: Drinks or artificial feeds given in addition to breast milk

Support: Help.

Sustaining: Continuing to breastfeed up to 2 years or beyond; helping breastfeeding mothers to continue to breastfeed.

Swallowing reflex: The baby automatically swallows when his mouth fills with fluid.

Sympathize: Show that you are sorry for a person, from your point of view.

Tare: As used in these modules, to store a weight in the memory of a scale so that an additional weight can be registered independently. In **tared weighing**, the scale is re-set to zero while an adult is still standing on it; when the adult is then given a child to hold, only the child’s weight appears.

Taring scale: A scale that can be re-set to zero while someone (who has just been weighed) is still standing on it. When she then holds a child on the scale, only the child’s weight appears.

Tarwi: A bean grown in the Andes in South America.

`Teat': Stretched out breast tissue from which a baby suckles.

Term: A birth occurring at 37–41 completed weeks of pregnancy. A pre-term birth is early (i.e. before 37 weeks). A **post-term** birth is late (i.e. at or after 42 weeks).

Thrush: Infection caused by the yeast Candida; in the baby's mouth, thrush forms white spots

Tortilla: A flat bread made by mixing maize flour and water and then making the dough into a thin round shape. It is cooked on a hot metal griddle. Traditionally eaten in Central America. Wheat flour can also be used.

Toxin: A poisonous substance.

Undernourished: Any of the following:

- underweight or severely underweight (below the -2 or -3 z-score line in weight-for-age)
- wasted or severely wasted (below the -2 or -3 z-score line in weight-for-length/height or BMI-for-age)
- stunted or severely stunted (below -2 or -3 z-score line in length/height for age). But if overweight or trending toward overweight, the child is no longer considered as primarily undernourished.

Undernutrition: The condition of being undernourished.

Underweight: Weight-for-age below the -2 z-score line. **Severely underweight**: is below the -3 z-score line.

UNISCALE: An electronic scale made by UNICEF that allows tared weighing.

Unrestricted feeding: See demand feeding.

Wasted: Weight-for-length/height or BMI-for-age below the -2 z-score line. **Severely wasted** is below the -3 z-score line.

Warm compress: Cloths soaked in warm water to put on the breast.

Weight-for-age: A growth indicator that relates weight to age.

Weight-for-length/height: A growth indicator that relates weight to length (for children less than 2 years old) or height (for children age 2 years and older).

Whey: Liquid part of milk which remains after removal of casein curds.

Young child: For the purpose of this course, a young child is a person in the second year of life (from 12 up to 24 months).

z-score: a score that indicates how far a measurement is from the median. Also known as standard deviation (SD) score. The reference lines on the growth charts (labelled 1, 2, 3, -1, -2, -3) are called **z-score lines**; they indicate how far points are above or below the median (z-score 0).

KEY MESSAGES FOR COMPLEMENTARY FEEDING

1. Breastfeeding for two years of age or longer helps a child to develop and grow strong and healthy.
2. Starting other foods in addition to breast milk at 6 months helps a child to grow well.
3. Foods that are thick enough to stay in the spoon give more energy to the child.
4. Animal-source foods are especially good for children, to help them grow strong and lively.
5. Peas, beans, lentils, and nuts and seeds, are good for children.
6. Dark-green leaves and yellow-coloured fruits and vegetables help the child to have healthy eyes and fewer infections.
7. A growing child needs 2-4 meals a day plus 1-2 snacks if hungry: give a variety of foods
8. A growing child needs increasing amounts of food
9. A young child needs to learn to eat: encourage and give help…with lots of patience.
10. Encourage the child to drink and to eat during illness and provide extra food after illness to help them recover quickly.

COUNSELLING SKILLS

Listening and Learning Skills

- Use helpful non-verbal communication
- Ask open questions
- Use responses and gestures which show interest
- Reflect back what the mother/caregiver says
- Empathize – show that you understand how she/he feels
- Avoid words which sound judging

Building Confidence and Giving Support Skills

- Accept what a mother/caregiver thinks and feels
- Recognize and praise what a mother/caregiver and child are doing right
- Give practical help
- Give a little, relevant information
- Use simple language
- Make one or two suggestions, not commands

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