



**Federal Democratic Republic of Ethiopia  
Ministry of Health**

# **Integrated Management of Newborn and Childhood Illness, Part 2**

**Blended Learning Module for the  
Health Extension Programme**



**HEAT**  
Health Education and Training  
HEAT in Africa



# Acknowledgements

*Integrated Management of Newborn and Childhood Illness* is one of 13 Blended Learning Modules for the Ethiopian Health Extension Programme. Together with the practical skills training sessions that accompany each of the supported self-study texts, this programme will upgrade the Health Extension Workers who complete the curriculum to Health Extension Practitioners at Level-IV of the Ethiopian Occupational Standards. The upgrading programme is sponsored by the Ethiopian Federal Ministry of Health (FMOH) and the Regional Health Bureaus (RHBs). The FMOH gratefully acknowledges the receipt of funding for this programme from the Ethiopian Office of UNICEF (the United Nations Children's Emergency Fund), The Open University UK, the Alan and Nesta Ferguson Foundation Trust UK, and AMREF (the African Medical and Research Foundation). We are also thankful for the support of the Ethiopian Offices of UNICEF, Save the Children, and the World Health Organization (WHO) for freely enabling their experts to participate in the development of this Module. We also thank the WHO for generous technical and financial support for the development of this theoretical module and its associated practical training manual.

This Module on the *Integrated Management of Newborn and Childhood Illness* was produced by a team of Ethiopian experts, who were trained and supported by experts in blended learning pedagogy from the HEAT (Health Education and Training) Team for Africa at The Open University UK. The contributors of original material are:

Dr Tedbabe Degeffie, Save the Children US, now at UNICEF Ethiopia

Dr Solomon Emyu, WHO Ethiopia

Dr Sirak Hailu, WHO Ethiopia

Dr Hailemariam Legesse, UNICEF Ethiopia

Dr Amha Mekasha (Module Academic Coordinator), Addis Ababa University

Dr Lulu Mussa Muhe (Critical Reader), WHO Geneva

Dr Solomon Tessema, Federal Ministry of Health

The Academic Editor of *Integrated Management of Newborn and Childhood Illness* is Lesley-Anne Long, HEAT Programme Director at The Open University UK, with contributions from Norma Sherratt and Eileen Oak in the Faculty of Health and Social Care at The Open University. The illustrations in colour were drawn by Dr Radmilla Mileusnic at The Open University. The other members of the HEAT Team are:

Dr Basiro Davey, HEAT Deputy Director (Ethiopia)

Alison Robinson, HEAT Programme Coordinator

Dawn Partner, HEAT Senior Production Assistant

Jessica Aumann, HEAT Programme Assistant

Ali Wyllie, HEAT Lead eLearning Adviser

We acknowledge the vital contributions of the Programme Coordinators within Ethiopia:

Ato Mohammed Hussein Abeseko, UNICEF Ethiopia and the Federal Ministry of Health

Ato Tedla Mulatu, AMREF Ethiopia

The cover design for *Integrated Management of Newborn and Childhood Illness* is by Chris Hough, Learning and Teaching Solutions, The Open University UK. The cover photographs are reproduced with the permission of Nancy Durrell McKenna, Founder Director of SafeHands for Mothers (large circle) and Lesley-Anne Long (small circle).

We particularly wish to acknowledge our use in this Module of adapted extracts and illustrations from the *Integrated Management of Newborn and Childhood Illness* Training Modules (Modules 1-6), Federal Ministry of Health, 2008, Addis Ababa, Ethiopia; *Integrated Management of Newborn and Childhood Illness Chart Booklet*, Federal Ministry of Health, 2008, Addis Ababa, Ethiopia; and the *Training Course Modules on the Outpatient Therapeutic Program of Severe Acute Malnutrition*, Federal Ministry of Health, 2010, Addis Ababa, Ethiopia (not printed). We also acknowledge the use of some illustrations from *Safe and Clean Birth and Newborn Care: A Reference for Health Extension Workers in Ethiopia* (2008), which was based on *A Book for Midwives: Care for Pregnancy, Birth and Women's Health* by Susan Klein, Suellen Miller and Fiona Thompson (2004), published by the Hesperian Foundation, Berkeley, California, USA. *The Book for Midwives* was created with the collaboration of hundreds of advisors, reviewers, writers, artists and others, whose expertise is gratefully acknowledged. It is through the generous permission and encouragement of the Hesperian Foundation for others to copy, reproduce, or adapt the original book, including its illustrations, to meet local needs — provided that reproductions are provided free or at cost and not for profit — that the production of parts of this *Integrated Management of Newborn and Childhood Illness* Module was made possible. *Safe and Clean Birth and Newborn Care* was adapted from the original book by the Ethiopian Federal Ministry of Health (FMOH) Safe Motherhood Technical Working Group, with P. Annie Clark, MPH, CNM, Midwifery Advisor, ACCESS Program/American College of Nurse Midwives, with the generous support of the US Agency for International Development under the terms of the ACCESS Cooperative Agreement GHS-A-00-04-00002-00.

The opinions expressed in this Module are those of the authors and do not necessarily reflect the views of any of the donor organisations whose generous support made the production of *Integrated Management of Newborn and Childhood Illness* possible.

# Contents

## Study Session

- 9**      Assessment of HIV Infection in Infants and Children
  - 10**     Infant and Young Child Feeding
  - 11**     Infant and Young Child Feeding Recommendations
  - 12**     Immunization and Related Interventions
  - 13**     Ear Problems and Other Common Childhood Infections
  - 14**     Counselling Mothers
  - 15**     Synthesis of IMNCI for Sick Child up to Five Years: Assess and Classify
  - 16**     Synthesis of IMNCI for Children up to Five Years: Treatment and Follow-up Care
- Notes on the Self-Assessment Questions (SAQs) for *Integrated Management of Newborn and Childhood Illness* Part 2



# Study Session 9 Assessment of HIV Infection in Infants and Children

## Introduction

Ethiopia is one of the Sub-Saharan African countries that is hit hard by the HIV/AIDS pandemic. Estimated HIV prevalence in the adult population is 2.4% (more than one million adults are living with HIV/AIDS). Currently an estimated 79,000 children under 14 years are living with HIV/AIDS. It is expected that more than 26,000 children require antiretroviral therapy (ART), but at the beginning of April 2009 only 10,077 children were receiving it. Without treatment 75% of all HIV-infected children will die before their fifth year.

The main way that children get HIV is from their HIV-infected mother. Not all HIV-infected mothers transmit the virus to their children. If 20 HIV-infected mothers give birth, only seven children will be HIV-infected (35%).

Children who are HIV-infected will have repeated other infections. Commonly occurring infections include pneumonia, persistent diarrhoea, ear discharge and oral thrush. The other common condition in HIV-infected children is malnutrition. You will learn about all of these in this study session.

Early identification of HIV infection in infants and children with ongoing follow-up and care can therefore help improve the quality of life of children who are HIV-infected. As a Health Extension Practitioner you have an important role in the identification and treatment of these children.

In this study session, you will learn how to assess and classify a child with possible HIV infection. The knowledge will help you to provide initial treatment, advice and referral of HIV cases.

## Learning Outcomes for Study Session 9

When you have studied this session, you should be able to:

- 9.1 Define and use correctly all of the key words printed in **bold**. (SAQs 9.1 and 9.2)
- 9.2 Assess and classify infants and children for confirmed, suspected and possible HIV infection. (SAQs 9.1 and 9.2)
- 9.3 Provide the necessary initial treatment, advice and referral of HIV cases according to IMNCI guidelines. (SAQs 9.1 and 9.3)
- 9.4 Counsel the mother about HIV testing. (SAQ 9.3)

### 9.1 Assess for HIV infection

An important aspect of supporting a mother with a child who has HIV is to develop a good professional relationship with her so that she is able to trust you and give you the information you need to provide the best possible services for her and her child. If you ask questions in a thoughtless or judgmental way, the mother may be reluctant to give you the information that you need. Good communication skills will help you to establish a rapport with the mother and help her to understand how to look after the sick child.



Figure 9.1 Supporting a mother who has HIV.



You should also reassure the mother that as far as possible, what you discuss will remain confidential. You will learn more about good counselling skills in Study Session 14 of this Module.

When you assess a child for HIV infection, first you should ask about the HIV status of the mother and the HIV status of the child. Then you should note if the child has the following conditions:

- Pneumonia or severe pneumonia now
- Persistent or severe persistent diarrhoea now
- Acute ear infection with ear discharge or chronic ear infection
- Moderate acute malnutrition or severe malnutrition.

If the mother or child is known to be HIV-positive, or if the child has one or more of the above conditions, you should assess the child for HIV infection.

Box 9.1 below reproduces the relevant section from the Assess and Classify chart which tells you how to assess a child for HIV infection.

### Box 9.1 Assess for HIV infection

ASSESS FOR HIV INFECTION	
Check for HIV infection:	
<ul style="list-style-type: none"> <li>➤ If the mother or child has a positive HIV test or</li> <li>➤ If the child has one or more of the following classifications now: <ul style="list-style-type: none"> <li>• Pneumonia or severe pneumonia</li> <li>• Persistent diarrhoea or severe persistent diarrhoea</li> <li>• Acute ear infection with discharge, or chronic ear infection</li> <li>• Moderate acute malnutrition or severe malnutrition</li> </ul> </li> </ul>	
NOTE OR ASK:	LOOK AND FEEL:
<ul style="list-style-type: none"> <li>• Is the mother known to have a positive HIV test?</li> <li>• Is the child known to have a positive HIV test?</li> <li>• Does the child have PNEUMONIA or SEVERE PNEUMONIA/VERY SEVERE DISEASE now?</li> <li>• Does the child have PERSISTENT / SEVERE PERSISTENT DIARRHOEA now?</li> <li>• Does the child have EAR DISCHARGE now?</li> <li>• Does the child have MODERATE ACUTE MALNUTRITION / SEVERE MALNUTRITION?</li> </ul>	<ul style="list-style-type: none"> <li>• Oral thrush</li> <li>• Bilateral Parotid enlargement for 14 days or more</li> <li>• Enlarged lymph node in two or more of the following sites: neck, axilla, or groin</li> </ul>

You are now going to look at how to test for and interpret HIV test results.

## 9.2 Testing infants and children for HIV

The presence of HIV infection in a child can be detected by doing tests. Different tests are available to diagnose HIV infection; the first one is *serological* and the other is *virological*.



## 9.2.1 Positive HIV test

**Serological** (or antibody) **tests** (also called **rapid tests**) detect antibodies made by immune cells in response to the virus. They *do not detect the virus* itself. An HIV-infected mother produces antibodies in her blood. These antibodies from the mother can get into the baby during delivery and may stay in the child's blood until the age of 18 months. This means that a positive antibody test in children under the age of 18 months is not reliable and does not confirm that the child is truly HIV-infected. Serological or antibody tests are used to confirm HIV infection in children who are more than 18 months of age. If a rapid antibody test is done for a child older than 18 months and the result is positive, then that child is *HIV-infected*.

**Virological tests**, such as **DNA PCR** tests, *directly detect HIV* in the blood. These tests can therefore detect HIV infection in the child before the child is 18 months old. If a DNA PCR test is done for an infant and the result is positive, then that infant is *HIV-infected*.

You may get a child whose initial HIV test is negative, but if you know the mother is HIV-positive and is continuing to breastfeed, you should repeat the test because HIV can be transmitted in breastmilk. The test should be repeated six weeks after breastfeeding has stopped.

As you read above, when you ask a mother about her or her child's HIV status, it is important that you pose the question in a careful way and maintain confidentiality as much as possible since this is sensitive information.

- A two-month-old baby has a positive virological test. Is the baby HIV-infected?
  - Yes, because virological tests detect HIV in the blood and a positive test shows the presence of HIV, whatever the age of the baby and whether or not the baby is exclusively breastfed.
- A two-month-old breastfeeding baby has a positive antibody (serological) test. Is the baby HIV-infected?
  - It is difficult to conclude in this case because, at two months, an antibody test cannot be used to confirm HIV infection. Antibodies can pass from mother to baby and may stay in the baby's blood for as long as 18 months.
- A 20-month-old child who has stopped breastfeeding more than six weeks ago has a positive HIV antibody test. Is that child HIV-infected?
  - Yes, because in a child who is 18 months or older, an antibody test can confirm the diagnosis of HIV infection.
- A nine-month-old breastfeeding baby has a negative virological test. Is the baby HIV-infected?
  - It is difficult to conclude in this case. Although the test suggests now that the baby is not infected, if he is breastfeeding from an HIV-infected mother, he may acquire the infection later. Once a child is 18 months or older, the antibody test can be repeated six weeks after stopping breastfeeding.

The method for the HIV rapid test is described in Study Session 24 of *Communicable Diseases, Part 3*. Study Session 28 of that Module deals with HIV in children.

---

## 9.3 Commonly occurring infections in HIV-infected children

In this section you will learn about some of the commonly occurring illnesses in HIV-infected children. You have already read about some of these infections in earlier study sessions in this Module. However, as we said above, infants and children with HIV are more likely to get these infections and get them more frequently. Therefore it is important for you to look at these infections again in the context of providing care for an infant or child with HIV.

### 9.3.1 Pneumonia

Pneumonia is the leading cause of hospital admissions and death in HIV-infected children and it presents in the same way in both infected and uninfected children. The difference is that bacterial pneumonia occurs repeatedly in children with HIV infection.

*Pneumocystis pneumonia* (PCP) is another cause of pneumonia in HIV-infected children that you need to know about. It occurs most commonly during the first year of life. PCP is one of the major causes of severe pneumonia and death in HIV-infected infants. To protect HIV-infected infants and children from developing PCP and other infections you should give cotrimoxazole. All HIV-exposed infants (infants born from HIV-infected mothers) should also receive cotrimoxazole prophylaxis against PCP from six weeks of age until it is established that the child is not HIV-infected.

**Prophylaxis** refers to any treatment given to prevent a disease from developing.

### 9.3.2 Persistent diarrhoea

This occurs with more frequency in HIV-infected children, and HIV-infected children with persistent diarrhoea are at higher risk of death compared with HIV-negative children with persistent diarrhoea. A child is said to have persistent diarrhoea if the diarrhoea lasts for 14 days or more.

### 9.3.3 Ear discharge

Acute and chronic ear infections are common in children with symptomatic HIV infection (i.e. symptoms of HIV disease are present); however, the management is the same as that of HIV-negative children.

### 9.3.4 Malnutrition

Symptomatic HIV infection is more frequently associated with moderate or severe degree of acute malnutrition. Micronutrient deficiencies are also common in children with HIV infection.

### 9.3.5 Oral thrush

Oral thrush is a thick white coating of the tongue and inside of the cheek. Unlike milk curds, it is difficult to remove and if removed it leaves small bleeding areas. It is the most common oral condition seen in HIV-infected children. Oral thrush is associated with difficulty or pain in swallowing or vomiting. It is caused by a fungus called *Candida*.

### 9.3.6 Parotoid enlargement

**Bilateral parotid enlargements** are swellings in front of both ears which do not cause pain and fever and last for more than 14 days. If you see bilateral parotid enlargement in a child, then the child is likely to be HIV-infected.

### 9.3.7 Lymph node enlargement

You should try to palpate for lymph nodes around the neck, in the axilla and groin. If you palpate lymph nodes and the size is greater than 1 cm then the lymph nodes are enlarged. **Persistent generalised lymphadenopathy** is defined as the development of enlarged lymph nodes in two or more of the following sites: neck, axilla and groin (see the photo of children with enlarged lymphnodes in Figure 9.2 below). Generalised lymphadenopathy is one of the most common early clinical presentations of HIV-infected children.



Figure 9.2 Children with enlarged lymph nodes. (Source: Teaching Aids at Low Cost, TALC)

Once you have completed your assessment of the child, the next thing you have to do is to classify the child based on your assessment findings.

## 9.4 Classify for HIV infection

There are five classifications in the Assess and Classify chart. The relevant section of the chart is reproduced in Table 9.1 below.

Table 9.1 Classifying an infant or child for HIV infection.

<ul style="list-style-type: none"> <li>Positive HIV antibody test in a child 18 months and above, OR, Positive PCR test at any age</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>Two or more of the following HIV - related conditions</li> <li>Pneumonia/Severe Pneumonia</li> <li>Persistent diarrhoea/severe persistent diarrhoea</li> <li>Ear discharge</li> <li>Moderate acute malnutrition/Severe Malnutrition</li> <li>Oral thrush</li> <li>Enlarged palpable lymph nodes in two or more sites</li> <li>Bilateral Parotid enlargement for 14 days or more</li> </ul>	<b>CONFIRMED SYMPTOMATIC HIV INFECTION</b>	<ul style="list-style-type: none"> <li>Give Cotrimoxazole prophylaxis</li> <li>Treat HIV-related conditions if present (e.g., thrush)</li> <li>Give multivitamin supplement</li> <li>Assess the child's feeding and counsel as necessary</li> <li>Counsel the mother about her own HIV status and arrange counselling and testing if necessary</li> <li>Advise the mother on home care</li> <li>Refer for ARV</li> </ul>
<ul style="list-style-type: none"> <li>Positive HIV antibody test in a child 18 months and above, OR, Positive PCR test at any age</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>Less than two HIV- related conditions</li> </ul>	<b>CONFIRMED HIV INFECTION</b>	<ul style="list-style-type: none"> <li>Give Cotrimoxazole prophylaxis</li> <li>Treat HIV-related conditions if present (e.g., thrush)</li> <li>Give multivitamin supplement</li> <li>Assess child's feeding and counsel as necessary</li> <li>Advise the mother on home care</li> <li>Counsel the mother about her own HIV status and arrange counselling and testing if necessary</li> <li>Refer for ARV</li> </ul>
<ul style="list-style-type: none"> <li>Positive HIV antibody test in a child under 18 months, OR, No HIV test result in a child</li> </ul> <b>AND</b> <ul style="list-style-type: none"> <li>Two or more HIV-related conditions</li> </ul>	<b>SUSPECTED SYMPTOMATIC HIV INFECTION</b>	<ul style="list-style-type: none"> <li>Give Cotrimoxazole prophylaxis</li> <li>Treat HIV-related conditions if present (e.g., thrush)</li> <li>Give multivitamin supplement</li> <li>Assess the child's feeding and counsel as necessary</li> <li>Advise on benefits of HIV test and do HIV test or refer for VCT (for both mother and child)</li> <li>Advise the mother on home care</li> <li>Follow-up in 14 days</li> </ul>
<ul style="list-style-type: none"> <li>Positive HIV antibody test in a child under 18 months,</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>Mother HIV Positive</li> </ul>	<b>POSSIBLE HIV INFECTION or (HIV EXPOSED)</b>	<ul style="list-style-type: none"> <li>Give appropriate feeding advice</li> <li>Treat HIV-related conditions if present (e.g., thrush)</li> <li>Give Cotrimoxazole prophylaxis and test for HIV at 18 months (If child still breastfed repeat HIV testing 6 weeks after stopping breastfeeding)</li> <li>Assess child's feeding and counsel as necessary</li> <li>Follow-up in 14 days</li> </ul>
<ul style="list-style-type: none"> <li>Not enough signs to classify as symptomatic or possible HIV infection</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>Negative HIV test in the mother or the child</li> </ul>	<b>HIV INFECTION UNLIKELY</b>	<ul style="list-style-type: none"> <li>Treat, counsel and f/up existing infections; advise on home care</li> <li>Encourage HIV testing if not tested</li> </ul>

You are now going to look in more detail at the basic differences between the different classifications set out in Table 9.1 above.

### 9.4.1 Confirmed symptomatic HIV infection

If a serological test for HIV in a child older than 18 months, or a DNA PCR test at any age, is positive and if you find two or more HIV-related conditions, you should classify the child as *confirmed symptomatic HIV infection*.

### 9.4.2 Confirmed HIV infection

If a child older than 18 months has a positive HIV serology, or a child at any age has a positive DNA PCR test, even if they have fewer than two HIV-related conditions, you should classify the child as *confirmed HIV infection*.

### 9.4.3 Suspected symptomatic HIV infection

A child with any two or more of the HIV-related conditions who either has no test result or, if under 18 months of age, has a positive serology test, the child should be classified as *suspected symptomatic HIV infection*.

### 9.4.4 Possible HIV infection

This classification is made when there are not enough signs to classify as confirmed/suspected symptomatic HIV infection. *Possible HIV infections* indicates HIV exposure evidenced by a positive HIV antibody test either in a child younger than 18 months old or in the mother.

### 9.4.5 HIV infection unlikely

When there are not enough signs and the HIV test of both the mother and the child are either not known or negative, you should classify the child as *HIV infection unlikely*.

## 9.5 Treating the child with HIV infection

A child classified as having confirmed symptomatic HIV infection, confirmed HIV infection or suspected symptomatic HIV infection, should receive cotrimoxazole prophylaxis treatment. You should also provide a multivitamin supplement, and refer the child for antiretroviral therapy (ART). In the case of a child with suspected symptomatic HIV infection, you should do an HIV test or refer. The child's feeding should be assessed and you should advise the mother as necessary about the best feeding plan for her child. You should also advise the mother on home care and tell her to return for a follow-up visit in two weeks.

### 9.5.1 Give cotrimoxazole prophylaxis

The child who is known or suspected to be HIV-infected should be started on long term prophylaxis with cotrimoxazole. Regular prophylaxis with cotrimoxazole given to infants born to HIV-positive women and confirmed or symptomatic HIV infection is likely to decrease sickness and death due to PCP and other common bacterial infections. Cotrimoxazole for prophylaxis purposes is given once daily (you should refer to your chart booklet, page 31, for information about the correct dose when used for prophylaxis).

### 9.5.2 Initiation of prophylaxis

PCP prophylaxis should be given from six weeks of age to children in the following categories:

- an HIV-exposed child
- a child with confirmed HIV infection
- a child with suspected symptomatic HIV infection.



---

### 9.5.3 Cessation of prophylaxis

You should continue cotrimoxazole prophylaxis as long as the HIV-infected child is alive. You can discontinue cotrimoxazole in the following conditions:

- Once HIV infection has been ruled out by serology at or after 18 months of age.
- If the child develops skin lesions all over their body or has severe palmar pallor, you should stop cotrimoxazole and refer the child urgently.

## 9.6 Counsel the mother about HIV testing

The mother of a child classified as suspected symptomatic HIV infection, or possible HIV infection/HIV-exposed, will need to be counselled about both her and her child's HIV testing. This is likely to be a sensitive subject. Many mothers, and even health workers, might have difficulty discussing HIV. However, HIV is present in the community and the problem will not be solved as long as there is secrecy. You should discuss HIV issues openly, ask the mother questions, and give appropriate advice about herself and her child.

When you have identified a young infant or child who is in need of HIV testing you should provide the mother with information. Tell the mother that the condition of the child makes you think that HIV may be the cause of the illness. Explain that if the child has often been ill, this can be a sign of HIV infection. You should help the mother to understand that the reason for HIV testing is so that the child can receive treatment that will improve their quality of life. It is important that the child is given antibiotics to prevent infections, vitamin supplementation, regular growth monitoring, prompt treatment of any illnesses and antiretroviral therapy if it is needed. Interventions can also prevent other members of the family from becoming infected.

When you have explained all of this in a clear and sensitive way, you should give the mother time to ask questions. When she has agreed to the test, you should arrange for her to receive proper voluntary counselling and testing (VCT) in the normal way at your clinic.

## 9.7 Counselling the mother of a child with confirmed/suspected symptomatic HIV infection

You should begin by reassuring the mother that with the help of the health post staff and others, much can be done to improve and maintain her child's health. You should:

- Advise the mother about future pregnancies, safe sex and early treatment of sexually transmitted diseases.
- Encourage the mother to seek voluntary counselling and testing.
- Ensure good nutrition; counsel the mother on feeding practices. Explain that she should breastfeed her child for the first six months and avoid introducing other foods (mixed feeding) during these six months.
- Explain the importance of early treatment of infections.
- Emphasise personal hygiene and the importance of hand washing.
- With the mother's consent, refer her to the community health worker and/or a local support group.

## Summary of Study Session 9

In Study Session 9, you have learned that:

- 1 There are key questions to ask and signs to look for in the assessment of a child for HIV infection.
- 2 Children with HIV infection are more likely to suffer from common childhood diseases.
- 3 There are five HIV classifications for children:
  - Confirmed symptomatic HIV infection
  - Confirmed HIV infection
  - Suspected symptomatic HIV infection
  - Possible HIV infection or HIV exposed
  - HIV infection unlikely.
- 4 Initial treatment in children with HIV infection includes cotrimoxazole prophylaxis and treatment for oral thrush.
- 5 It is important to keep confidentiality and maintain trust of the mother when counselling her about HIV testing.

## Self-Assessment Questions (SAQs) for Study Session 9

Now that you have completed this study session, you can assess how well you have achieved its Learning Outcomes by answering these questions. Write your answers in your Study Diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

### SAQ 9.1 (tests Learning Outcomes 9.1, 9.2 and 9.3)

Read Case Study 9.1 and answer the questions below.

#### Case Study 9.1 for SAQ 9.1

Gizaw is 18 months old. He weighs 7 kg. His temperature is 37°C. His mother brought him today because the child has had diarrhoea for three days. There is no blood in the stool. You checked for general danger signs and there was no general danger sign detected.

He does not have a cough or difficulty breathing. You assessed him for diarrhoea and classified him as diarrhoea, no dehydration. He has no fever. He does not have ear problems.

You next checked him for malnutrition or anaemia. Gizaw does not have visible severe wasting. There is no palmar pallor. He does not have oedema of both feet. You measured MUAC and it is 11.7 cm.

Then you assessed Gizaw for symptomatic HIV infection. He has oral thrush. His parotid glands are enlarged. He has no enlarged lymph nodes. He tested HIV-positive using the antibody test.



- (a) What are Gizaw's signs?
- (b) How would you classify Gizaw for HIV infection and why?
- (c) What treatment would you propose for Gizaw?

### **SAQ 9.2 (tests Learning Outcomes 9.1 and .2)**

Read Case Study 9.2 and then answer the questions below.

#### **Case Study 9.2 for SAQ 9.2**

Rediet is six months old. She weighs 7 kg. Her temperature is 36.8°C. Her mother brought her today because the child has been coughing for four days.

You checked for general danger signs and she does not have any of the general danger signs.

You assessed her for cough or difficult breathing. You counted 54 breaths per minute. Rediet has no chest wall in-drawing or stridor when calm. You classified Rediet as having pneumonia.

She does not have diarrhoea, fever or ear problems.

You next checked her for malnutrition or anaemia. Rediet does not have visible severe wasting. There is no palmar pallor. She does not have oedema of both feet. You measured MUAC and it is 11.5 cm.

Rediet's mother had a positive HIV test done during her pregnancy. Rediet has oral thrush. She has no enlarged lymph nodes. Her parotid glands are not enlarged.

- (a) How would you record Rediet's signs?
- (b) How would you classify Rediet for HIV infection?
- (c) How would you counsel Rediet's mother?

### **SAQ 9.3 (test Learning Outcomes 9.3 and 9.4)**

Why are good communication and counselling skills particularly important when you are advising the mother of a child with possible HIV infection?

# Study Session 10 Infant and Young Child Feeding

## Introduction

Adequate feeding is essential for growth and development. Poor feeding during infancy can have a lifelong effect. Therefore one of the important tasks you have as a Health Extension Practitioner is to assess a young infant's feeding and weight so that feeding can be improved if necessary.

The best way to feed a young infant is for the mother to breastfeed exclusively. **Exclusive breastfeeding** means that the infant takes only breastmilk, and has no additional food, water or other fluids (medicines and vitamins are exceptions) for the first six months of life.

Exclusive breastfeeding gives a young infant the best nutrition and protection from disease possible. If mothers understand that *exclusive* breastfeeding gives the best chances of good growth and development, they may be more willing and motivated to breastfeed. As a Health Extension Practitioner you can help the mother to understand this, encourage her to breastfeed her infant and overcome any difficulties she might be experiencing.

In this study session you will learn how to assess feeding problems, in particular in relation to breastfeeding, and how to support the mother so she can breastfeed her infant as effectively as possible. You will look at feeding recommendations for infants and young children in a range of age groups and how to counsel the mother to feed her child both during illness and when the child is well.

## Learning Outcomes for Study Session 10

When you have studied this session, you should be able to:

- 10.1 Define and use correctly all of the key words printed in **bold**. (SAQs 10.1 and 10.2)
- 10.2 Assess feeding problems in infants and young children, and determine weight for age. (SAQs 10.1 and 10.2)
- 10.3 Assess breastfeeding. (SAQs 10.1 and 10.2)
- 10.4 List signs of correct positioning and attachment for optimum breastfeeding. (SAQ 10.2)

### 10.1 Assessing feeding problems

Assessing feeding problems in infants and children is a two-stage process. First, there are some important questions that you need to ask the mother. Remember that she may be feeling anxious about her baby's feeding, so you should try asking questions in different ways if you feel that you are not getting the information you need to be able to complete your assessment. You should ask the mother if she is having difficulty feeding the infant, what the young infant is fed and how often. Secondly, you need to assess if the infant has any problems with breastfeeding or if the infant is low weight for their age (underweight).

Table 10.1 below sets out the questions you should ask the mother.

Table 10.1 Assessing feeding problems in infants.

Ask	Look, listen, feel:
<ul style="list-style-type: none"><li>• Is there any difficulty feeding?</li><li>• Is the infant breastfed? If yes:<ul style="list-style-type: none"><li>◦ How many times in 24 hours?</li><li>◦ Do you empty one breast before switching to the other?</li><li>◦ Do you increase frequency of breastfeeding during illness?</li><li>◦ Does the infant receive any other foods or drinks? If yes, how often?</li><li>◦ What do you use to feed the infant?</li></ul></li></ul>	<ul style="list-style-type: none"><li>• Determine weight for age</li></ul>

### ASK: Is there any difficulty feeding?

Any difficulty mentioned by the mother is important. She may need counselling or specific help with a difficulty and as a Health Extension Practitioner you have an important role to play in helping the mother overcome any problems she is experiencing. For example, the mother may mention difficulties in breastfeeding. These may include that her infant feeds too frequently, or not frequently enough; that she does not have enough milk; that her nipples are sore; that she has flat or inverted nipples; or that the infant does not want to take the breast.

If a mother says that the infant is *not able to feed*, you should assess breastfeeding or watch her try to feed the infant with a cup to see what she means by this. An infant who is not able to feed may have a serious infection or other life-threatening problem and should be referred urgently to hospital.

### ASK: Is the infant breastfed? If yes, how many times in 24 hours?

Young infants should be breastfed as often and for as long as the infant wants, day and night. This should be eight or more times in 24 hours.

### ASK: Does the infant receive any other foods or drinks? If yes, how often?

A young infant should be exclusively breastfed. Find out if the young infant is receiving *any* other foods or drinks such as other milk, juice, tea, thin porridge, dilute cereal, or even water. Ask the mother how often the infant receives it and the amount that the infant is eating. You need to know if the infant is mostly breastfed, or mostly fed on other foods.



An infant who can't feed may have a life-threatening problem. Refer urgently to hospital.

### ASK: What do you use to feed the infant?

If an infant takes other foods or drinks, find out if the mother uses a feeding bottle, cup or something similar to give her infant food and drink.

### LOOK: Determine weight for age

Use a weight for age chart to determine if the young infant is low weight for age. Notice that *for a young infant you should use the low weight for age (underweight) line*, instead of the very low weight for age (severely underweight) line, which is used for older infants and children. You decide low weight for age in young infants and very low weight for age in older infants and children in the following ways.

To determine weight for age:

- 1 For young infants calculate their age in weeks; for older infants and children you should calculate their age in months.
- 2 Weigh the infant/child if they have not already been weighed today. Use a scale that you know gives accurate measurements. The infant/child should wear light clothing when they are weighed. You should ask the mother to help remove any coat, sweater, or shoes.
- 3 Use the weight for age chart to determine the child's weight for age (see Figure 10.1 on the next page).
  - Look at the left-hand axis to locate the line that shows the infant's/child's weight.
  - Look at the bottom axis of the chart to locate the line that shows the infant's/child's age in weeks or months.
  - Find the point on the chart where the line for the infant's/child's weight meets the line for the infant's/child's age.
- 4 Decide where the point is situated.

In young infants, if the point is situated below the low weight for age line then the infant has low weight. If the point is above or on the low weight curve then the young infant is *not* low weight for age.

**Example:** A young infant is six weeks old and weighs 3 kg. Figure 10.1 shows you how the Health Extension Practitioner checked if the infant was low weight for age.

In older infants and children, if the point is below the line for very low weight (below the bottom curve) then the child has very low weight for age. If the point is above or on the bottom curve, the child is *not* very low weight for age.

**Example:** Look at Figure 10.2 (on the next page). This is a chart for a child who is 27 months old and weighs 8.0 kilograms. Look at how the Health Extension Practitioner determined the child's weight for age.

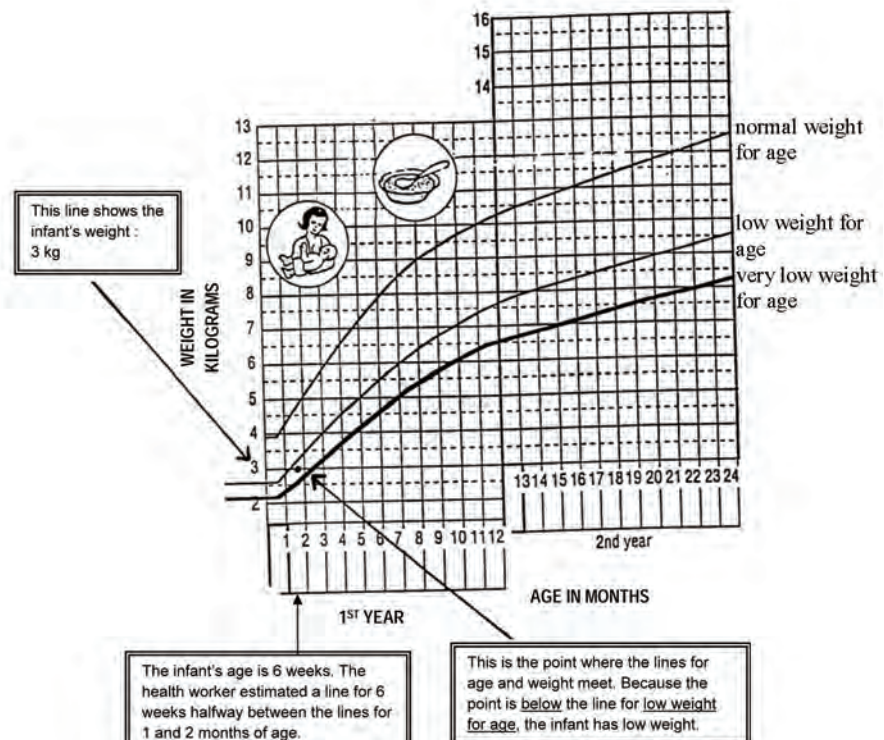


Figure 10.1 Weight for age chart (1).

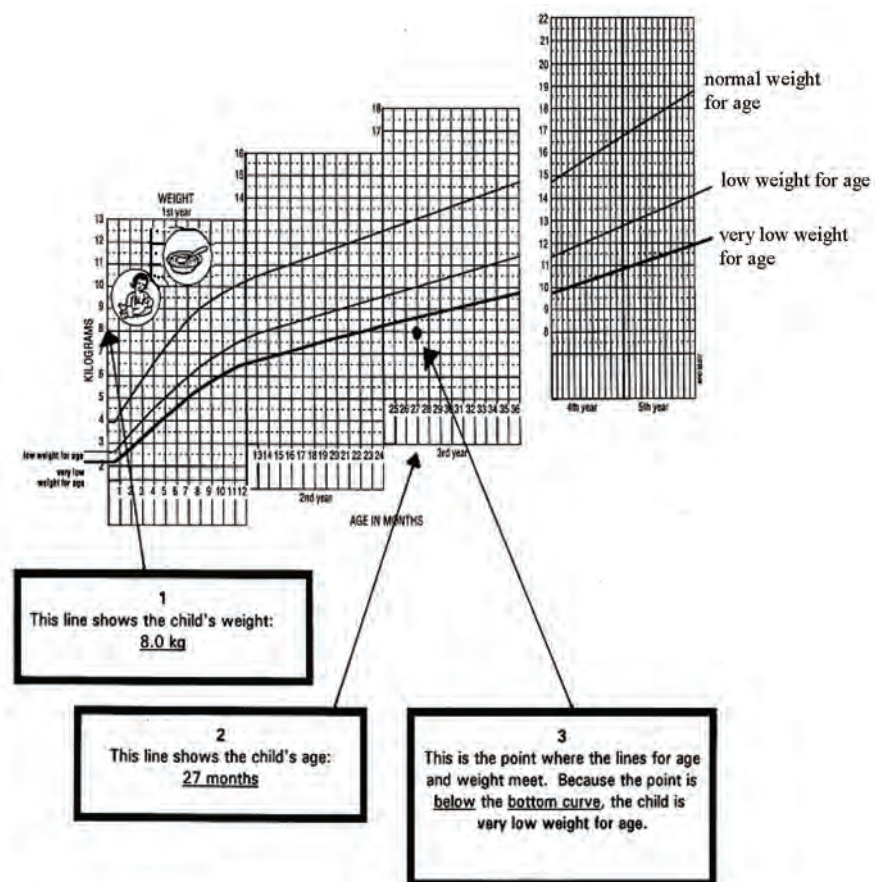


Figure 10.2 Weight for age chart (2).



- What is the best way to get information from the mother about her child's feeding?
- You should ask the mother questions to find out whether the child is feeding easily and, if under six months, whether breastfed exclusively. The mother may be feeling anxious about her child, so you should ask questions in a way she understands. This might mean you have to ask for the information you need in different ways. You should ensure she feels you are being supportive, rather than critical.

## 10.2 Assess breastfeeding

Not all infants need to be assessed for breastfeeding. For example, you will not need to do a breastfeeding assessment in the following cases:

- If the infant is exclusively breastfed without difficulty and is not low weight for age
- If the infant is not breastfed at all
- If the infant has a serious problem requiring urgent referral to a hospital.

In these situations, classify how the infant is feeding based on the information that you have already obtained.

If the mother's answers to your questions about breastfeeding indicate a difficulty, or if the infant is low weight for age, you should observe a breastfeed (how you do this is described below). Low weight for age in an infant is often due to low birth weight. Low birth weight infants are likely to have a problem with breastfeeding.

You should assess breastfeeding in the following circumstances:

If the infant:

- Has any difficulty feeding
- Is breastfeeding less than eight times in 24 hours
- Is taking any other foods or drinks
- Is low weight for age.

And/or the mother is:

- Switching the breast frequently without emptying one breast first, and
- Has not increased feeding if the infant is ill.

However, if the infant has any need for urgent referral then you should not try to assess breastfeeding. In this situation, you should just refer the infant.

You should not try to assess breastfeeding if the infant needs to be referred urgently.

### 10.2.1 Assessing breastfeeding

Assessing breastfeeding requires careful observation (Figure 10.3). Ask the mother when she last fed her infant and then, when the infant is ready to feed again, you should help the mother to feel relaxed and comfortable.

**ASK: Has the infant breastfed in the previous hour?**

If the infant has already been fed in the last hour, ask the mother to wait and tell you when the infant is willing to feed again. In the meantime, complete the assessment by checking the infant's immunization status. You may also decide to begin any treatment that the infant needs, such as giving an antibiotic for local bacterial infection or ORS solution for some dehydration.



Figure 10.3 Observing breastfeeding.

If the infant has not fed in the previous hour, he or she may be willing to breastfeed. Ask the mother to put her infant to the breast. Observe a whole breastfeed if possible, or observe for at least four minutes.

Sit quietly and watch the infant breastfeed.

### LOOK: Is the infant well positioned?

The four signs of good positioning are:

- The infant's body is straight
- The infant's head and body are facing the breast
- The infant's body is close to the mother's
- The mother is supporting the infant's whole body.

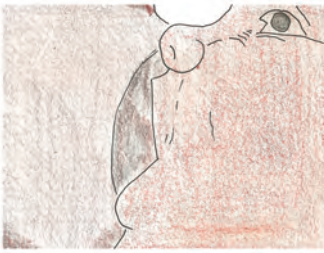


Figure 10.4 Good attachment.

### LOOK: Is the infant able to attach?

The four signs of good attachment (see Figure 10.4) are:

- The infant's chin is touching the breast (or is very close)
- The infant's mouth is wide open
- The lower lip is turned outward
- More areola is visible above than below the infant's mouth (the areola is the dark area of the breast around the nipple).

If all of these four signs are present, the infant has *good attachment*. This is also illustrated in Figure 10.5.



Figure 10.5 Baby's body close, facing breast.

If attachment is not good (see Figure 10.6), you may see:

- The infant's chin is not touching the breast
- The mouth is not wide open with the lips pushed forward
- The lower lip is turned in, or
- More areola (or an equal amount) is visible below the infant's mouth than above it.

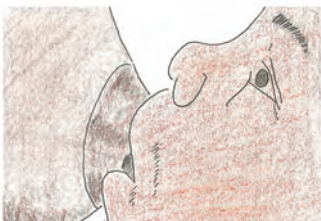


Figure 10.6 Poor attachment.



If you see any of these signs of poor attachment, the infant is *not well attached*. This is also illustrated in Figure 10.7.



Figure 10.7 Baby's body away from mother, neck twisted.

If a very sick infant cannot take the nipple into his mouth and keep it there to suck, he has *no attachment at all*. He is not able to breastfeed at all.

If an infant is not well attached, the results may be pain and damage to the mother's nipples. Or the infant may not remove breastmilk effectively, which may cause **engorgement** (swelling) of the breast. The infant may be unsatisfied after breastfeeds and want to feed very often or for a very long time. The infant may get too little milk and not gain weight, or the breastmilk may dry up. All these problems may improve if attachment can be improved.

You can support a breastfeeding mother to overcome attachment problems.

### LOOK: Is the infant suckling effectively?

The infant is suckling effectively if he suckles with slow deep sucks and sometimes pauses. You may see or hear the infant swallowing. If you can observe how the breastfeed finishes, look for signs that the infant is satisfied. If satisfied, the infant releases the breast spontaneously (that is, the mother does not cause the infant to stop breastfeeding in any way). The infant appears relaxed, sleepy, and loses interest in the breast.

An infant is *not suckling effectively* if he is taking only rapid, shallow sucks. You may also see in-drawing (inward movement) of the cheeks. You do not see or hear swallowing. The infant is not satisfied at the end of the feed, and may be restless. He may cry or try to suckle again, or continue to breastfeed for a long time.

An infant who is *not suckling at all* is not able to suck breastmilk into his mouth and swallow. Therefore, he is not able to breastfeed at all.

If a blocked nose seems to interfere with breastfeeding, you should clear the infant's nose. Then check again whether the infant can suckle more effectively.

### LOOK for ulcers or white patches in the mouth (thrush)

Look inside the mouth at the tongue and inside of the cheek. Thrush looks like milk curds on the inside of the cheek, or a thick white coating of the tongue. Try to wipe the white off and look to see if this leaves bleeding spots or a raw area.

- 
- What are the signs of good attachment?
  - There are four ways that you can tell if an infant is attached well during a breastfeed. The infant's chin should either touch or be very close to the mother's breast and the infant's mouth should be wide open, with the lower lip turned outwards. You should see if there is more areola visible above than below the mouth. If the infant's body is twisted away from the mother, there is unlikely to be good attachment.

## 10.3 Teach correct positioning and attachment for breastfeeding

You are now going to look at reasons for poor attachment and ineffective suckling and learn how you can help a mother position and attach her infant better during feeding.

### 10.3.1 Reasons for poor attachment and ineffective suckling

There are several reasons that an infant may be poorly attached or not able to suckle effectively. He may have had bottle feeds, especially in the first few days after delivery. His mother may be inexperienced. She may have had some difficulty and nobody to help or advise her. For example, perhaps the infant was small and weak, the mother's nipples were flat or there was a delay starting to breastfeed.

The infant may be poorly positioned at the breast. As you read above, correct positioning is important because poor positioning often results in poor attachment, especially in younger infants. If the infant is positioned well, the attachment is likely to be good.

### 10.3.2 Improving positioning and attachment

If in your assessment of breastfeeding you found any difficulty with attachment or suckling, you can help the mother position and attach her infant better. Make sure that the mother is comfortable and relaxed, for example, sitting on a low seat with her back straight. Then follow the steps in Box 10.1 on the next page.

### Box 10.1 Teach correct positioning and attachment for breastfeeding

- Show the mother how to hold/position her infant:
  - with the infant's head and body straight
  - facing her breast, with the infant's nose opposite her nipple
  - with the infant's body close to her body
  - supporting the infant's whole body, not just the neck, shoulder and head.
- Show the mother how to help the infant to attach. She should:
  - touch her infant's lips with her nipple
  - wait until her infant's mouth is opening wide (see Figure 10.8)
  - move her infant quickly onto her breast, aiming the infant's lower lip well below the nipple.
- Look for signs of good attachment and effective suckling. If the attachment or suckling is not good, ask the mother to try again.



Figure 10.8 Infant positioned correctly for good attachment.

Always observe a mother breastfeeding before you help her, so that you understand her situation clearly. Do not rush to make her do something different. If you see that the mother needs help, first say something encouraging, like:

‘She really wants your breastmilk, doesn’t she?’

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 your baby took a larger mouthful of breast. Would you like me to show you how?’

If she agrees, you can start to help her.

As you show the mother how to position and attach the infant, be careful not to take over from her. Explain and demonstrate what you want her to do. Then let the mother position and attach the infant herself.

Then look for signs of good attachment and effective suckling again (see Figure 10.8). If the attachment or suckling is not good, ask the mother to remove the infant from her breast and to try again. When the infant is suckling well, explain to the mother that it is important to breastfeed long enough at each feed, and to empty one breast before switching to the other. She should not stop the breastfeeding before the infant wants to stop.

### 10.3.3 Counselling about other feeding problems

If a mother is breastfeeding her infant less than eight times in 24 hours, you should advise her to increase the frequency of breastfeeding. Breastfeed as often and for as long as the infant wants, day and night.

If the infant receives other foods or drinks, you should counsel the mother about breastfeeding her infant more frequently, reducing the amount of the other foods or drinks she gives her infant, and if possible, stopping giving

Exclusive breastfeeding in the first six months is optimum for the infant's health and development.

---

alternatives altogether. If she does continue to provide other foods and drinks then you should advise her that any other drinks should be given from a cup, and not from a feeding bottle.

Tell the mother that she should come back for a follow-up visit in two days if the infant continues to have a feeding problem. This is especially important if you are recommending a significant change in the way the infant has been fed up until now.

- What advice on feeding would you give to the mother of a three-month-old infant?
- First you would advise and encourage the mother that she should breastfeed her infant exclusively and not give the infant any other foods for another three months. You would also explain to her that if the infant becomes unwell she should increase the frequency of breastfeeding during the illness.

## 10.4 Classify feeding

When you have watched a breastfeed and classified any problems the infant is experiencing, you need to help the mother by giving her clear advice on how to improve feeding. You also need to give her information about caring for the infant if there are problems such as thrush, or if the baby is underweight.

You can compare an infant's signs with those listed in Table 10.2. This sets out the appropriate classifications and the recommended advice that you should give to the mother.

Table 10.2 Classifying feeding in a young infant

Feeding problem	Classification	Recommended advice
If any one of the following signs: <ul style="list-style-type: none"> <li>• Not well positioned</li> <li>• Not well attached to breast, or</li> <li>• Not suckling effectively, or</li> <li>• Less than eight breastfeeds in 24 hours, or</li> <li>• Switching the breast frequently, or</li> <li>• Not increasing frequency of breastfeeding during the infant's illness, or</li> <li>• Receives other foods or drinks, or</li> <li>• The mother not breastfeeding at all, or</li> <li>• Low weight for age (underweight), or</li> <li>• Thrush (ulcers or white patches in mouth)</li> </ul>	FEEDING PROBLEM OR LOW WEIGHT	Advise the mother to breastfeed as often and for as long as the infant wants, day and night. <ul style="list-style-type: none"> <li>• If the infant is not well attached or not suckling effectively, teach correct positioning and attachment</li> <li>• If breastfeeding less than eight times in 24 hours, advise to increase frequency of feeding</li> <li>• Empty one breast completely before switching to the other</li> <li>• Increase frequency of feeding during and after illness</li> <li>• If the infant is receiving other foods or drinks, counsel the mother about breastfeeding more, reducing other foods or drinks, and using a cup</li> <li>• If not breastfeeding at all:</li> <li>• Advise about correctly prepared breastmilk substitutes and using a cup</li> <li>• If the infant has thrush, teach the mother to treat the thrush at home</li> <li>• Follow up any feeding problems or thrush in two days</li> <li>• Follow up underweight (low weight for age) in 14 days.</li> </ul>
<ul style="list-style-type: none"> <li>• Not low weight for age and no other signs of inadequate feeding</li> </ul>	NO FEEDING PROBLEM	Advise the mother to give home care for the young infant. Praise the mother for feeding the infant well.

### 10.4.1 Feeding problems or low weight (underweight)

Infants who are underweight (low weight for age), or who have some sign that their feeding needs improvement, are likely to have more than one of the feeding problems set out in Table 10.2.

### 10.4.2 No feeding problems

An infant in this classification is exclusively and frequently breastfed and the infant's weight for age is not below the line for 'underweight'. It is not necessarily normal or a good weight for the infant's age, but the infant is not in the high risk category that you are most concerned with.

In this study session you have learned that it is important to obtain as much information as possible about how the infant is feeding. You learned that you can do this by asking the mother different questions and by observing breastfeeding. You also learned how to assess whether a young infant is low weight or, in older infants and children, whether they are very low weight for

---

age. As a Health Extension Practitioner, you can provide a lot of support to encourage a mother and help her to overcome any difficulties she may be experiencing in feeding her infant. In the next study session you will look at recommendations you can give a mother for feeding her infant and children in ways that are appropriate to their age and needs.

## Summary of Study Session 10

In Study Session 10, you have learned that:

- 1 There are key questions to ask and signs to look for in the assessment of an infant and a child for feeding problems.
- 2 You should do a feeding assessment if an infant has any difficulties feeding, is fed less than eight times in 24 hours, receives other food or is low weight for age.
- 3 Examples of feeding problems include poor attachment or positioning, poor suckling, and thrush.
- 4 You can support a mother by helping her position her infant correctly and counselling her on the best feeding practices for her age.
- 5 There are some simple recommendations you can make to help a mother overcome problems associated with breastfeeding.

## Self-Assessment Questions (SAQs) for Study Session 10

Now that you have completed this study session, you can assess how well you have achieved its Learning Outcomes by answering these questions. Write your answers in your Study Diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

### **SAQ 10.1 (tests Learning Outcomes 10.1, 10.2 and 10.3)**

- (a) What steps would you take to assess feeding problems for a three-month-old infant?
- (b) What advice would you give the infant's mother?

### **SAQ 10.2 (tests Learning Outcomes 10.1, 10.2, 10.3 and 10.4)**

What are the different ways in which you can encourage and support a mother to breastfeed her infant as effectively as possible?

# Study Session 11 Infant and Young Child Feeding Recommendations

## Introduction

In the last study session you learned how to assess feeding problems, in particular in relation to breastfeeding, and how to support the mother so she can breastfeed her infant as effectively as possible. This study session looks at the feeding recommendations for infants and children in a range of age groups and teaches you how to counsel the mother on how to feed her child both during illness and when the child is well.

## Learning Outcomes for Study Session 11

When you have studied this session, you should be able to:

- 11.1 Define and use correctly all of the key words printed in **bold**. (SAQs 11.1 and 11.2)
- 11.2 Recommend appropriate foods to give infants and children according to their ages. (SAQs 11.2 and 11.3)
- 11.3 Know the feeding recommendations for a mother who is HIV-positive. (SAQ 11.1)
- 11.4 Identify a range of feeding problems and solutions to them. (SAQ 11.3)

### 11.1 Feeding recommendations

When you are helping a mother with her infant's feeding problems you should make sure that you give the appropriate advice for her child's age and situation.

During illness, children may not want to eat much. However, they should be offered the types of food recommended for their age, as often as recommended, even though they may not take much at each meal. After illness, good feeding helps make up for weight loss, prevent malnutrition, and prevent future illness.


Your follow-up visits to a sick child are a good opportunity to counsel the mother on how to feed the child both during illness and when the child is well.



## 11.2 Recommendations for infants up to six months old

Table 11.1 sets out the feeding recommendations for infants from birth to six months old. It will remind you of some of the important points you covered in the last study session.

Table 11.1 Recommendations for feeding infants up to six months.

Up to six months of age		
	<ul style="list-style-type: none"><li>• Initiate breastfeeding within one hour of birth.</li><li>• Breastfeed as often as the child wants, day and night, at least eight times in 24 hours.</li><li>• Feed the child only breastmilk for the first six months, not even giving water.</li><li>• Empty one breast before switching to the other for the baby to get the most nutritious hind milk.</li><li>• During illness and for at least up to two weeks after the illness increase the frequency of breastfeeding to help the child to recover faster.</li><li>• Do not give other foods or fluids, including water, to the child.</li><li>• Expose the child to sunshine for 20 to 30 minutes daily.</li></ul>	<p>The best way to feed a child from birth to at least six months of age is to breastfeed exclusively. Exclusive breastfeeding means that the child takes only breastmilk and no additional food, water, or other fluids (with the exception of medicines and vitamins, if needed). Advise the mother to empty one breast first before switching to the second to ensure the baby gets the nutrient-rich hind milk.</p>

### 11.2.1 Advantages of breastmilk

Promoting exclusive breastfeeding in infants up to six months old is important. As a Health Extension Practitioner you should encourage the mother to breastfeed her infant and not to give any other food or fluids in the first six months. You learned in Study Session 10 the different ways you can support a mother to breastfeed effectively. There are good reasons for promoting breastfeeding and these are outlined below.

### Some of the advantages of breastmilk/breastfeeding

- Breastmilk contains the necessary nutrients needed by an infant
- The nutrients in breastmilk are easily absorbed
- It provides all the water an infant needs, even in a hot, dry climate
- It protects an infant against infection
- Breastfeeding helps maternal-infant bonding
- Breastfeeding helps in child spacing, and facilitates uterine contractions thereby reducing post-partum bleeding
- It may also reduce the mother's risk of ovarian and breast cancers.

Exclusive breastfeeding for the first six months will give an infant the best chance to grow and stay healthy.




### Some of the disadvantages of replacement (formula) feeding

- It reduces breastmilk production and intake
  - It predisposes the infant to infections
  - If dilute, replacement food will lead to malnutrition
  - The infant may have difficulties digesting and absorbing nutrients from breastmilk substitutes
  - Replacement food could lead to allergic diseases
  - Replacement food could increase the risk of persistent diarrhoea.
- How can a mother ensure the infant receives the nutrient-rich breastmilk?
    - You should advise the mother to empty the first breast before switching to the second, as this will ensure that the infant receives the hind milk.
  - Why should you advise the mother to exclusively breastfeed for the first six months?
    - Breastfeeding is the optimal way of feeding an infant in the first six months of life. Additionally it has a lot of health benefits for the mother. If the mother replaces breastmilk with other drinks or food, there are risks to the infant's health.

## 11.3 Recommendations for infants from six to 12 months

You are now going to look at feeding and the range of foods appropriate for infants aged six–12 months (see Table 11.2 on the next page). As you will see, by six months, all children should have additional, nutritious food introduced into their diet, known as **complementary foods**.

Table 11.2 Recommendations for feeding infants from 6–12 months old.

Six months up to 12 months		
  	<ul style="list-style-type: none"> <li>• Breastfeed as often as the child wants.</li> <li>• Start complementary foods at six months.</li> <li>• Give adequate servings of freshly prepared and enriched foods e.g. porridge made of cereal and legume mixes, <i>Shiro fit-fit</i>, <i>Merek fit-fit</i>, mashed potatoes and carrot, mashed gommen, undiluted milk, egg and fruits.</li> <li>• <b>Enrich</b> the food by adding some oil or butter every time; also give animal foods (meat, liver, fish, eggs), legumes, vegetables (green leafy, carrots) and yellow fruits (orange, <i>papaya</i>, <i>mangos</i>).</li> <li>• Give these foods three times per day if breastfeeding; five times per day (three main meals and two snacks) if not breastfeeding.</li> <li>• Babies who stopped breastfeeding at six months should also get adequate replacement milk besides semi-solid complementary feeds.</li> <li>• Increase intake of food and fluids during illness, and give one additional meal of solid food for about two weeks after illness to help the child recover quickly.</li> <li>• Give vitamin A supplements from the age of six months, every six months.</li> <li>• Expose the child to sunshine.</li> </ul>	<p>By six months of age, all children should be receiving a soft, nutritious complementary food.</p> <p>It is important to actively feed the child. <b>Active feeding</b> means encouraging the child to eat. The child should not have to compete with older brothers and sisters for food from a common plate. He should have his own serving. Until the child can feed himself, the mother or another caregiver (such as an older sibling, father or grandmother) should sit with the child during meals and help get the spoon into his mouth.</p> <p>An '<b>adequate serving</b>' means that the child does not want any more food after active feeding.</p> <p>A <b>good daily diet</b> should be adequate in quantity and include an energy-rich food (for example, soft cereal-based porridge with added oil); meat, fish, eggs, or pulses; and fruits and vegetables.</p>

### 11.3.1 Good complementary foods

Good complementary foods are energy-rich, nutrient-rich and locally affordable. Examples in some areas are soft cereal-based porridge with added oil or milk, fruits, vegetables, pulses, meat, eggs, fish, and milk products. If the child receives cow's milk or any other breastmilk substitute, these and any other drinks should be given by cup, not by bottle.

#### Examples of good complementary foods

The list below will help you to advise a mother of the kinds of nutritious foods she can prepare for her child.

- Mashed potatoes softened with milk, *shiro fit-fit*, *merek fit-fit*, and porridge made of cereal and legumes mixed with butter or oil added are nutrient-rich complementary foods to start in a child 6–12 months of age. They are also recommended for a child 12 months up to two years.
- Porridge can be made from wheat, barley or *teff* with legumes added. Ask what cereals are available in the house. If it is feasible for her, advise the mother to make flour from several different grains plus peas. The consistency of the porridge should be thick enough to be fed by hand. When possible, use undiluted milk instead of water to prepare the porridge. Multi-mixes such as *Fafa* are very good if available. *Kitta*, softened in milk or prepared soft with oil or butter added, is another good alternative complementary food.

- Eggs provide good nutrition for infants and young children. They can be prepared by cooking or hard boiling. Tell the mother she can then break the egg up and feed it to the child or add it to the fit-fit. Egg can also be stirred into the porridge. Even if an egg can only be given once or a few times in a week it is very good for the child, especially if the child is malnourished.



Exclusive breastfeeding is *not* enough for a child over six months of age. A variety of thick, nutritious foods are needed to prevent malnutrition. You can advise the mother that she should also give mashed and boiled kale (*gommen*) and carrots, bananas, oranges and other fruits such as avocado or papaya to ensure her child has a healthy, balanced diet.

Give a variety of thick, nutritious food for an infant over six months of age in addition to the breastfeeding.

## 11.4 Recommendation for children from 12 months to two years

The table below (Table 11.3) sets out the appropriate types of foods for children from 12 months to two years. As you can see, the mother should continue breastfeeding if the child wants this, but additional foods should continue to be added to the child's diet.



Table 11.3 Recommendations for feeding children aged 12 months up to two years.

12 months up to two years		
	<ul style="list-style-type: none"> <li>Breastfeed as often as the child wants.</li> <li>Give adequate servings of enriched family foods: porridge made of cereal and legume mixes, <i>shiro</i>, <i>kik</i>, <i>merek fit-fit</i>, mashed potatoes and carrot, <i>gommen</i>, undiluted milk, eggs and fruits.</li> <li>Add some extra butter or oil to the child's food. Also give animal foods (meat, liver, fish, eggs), legumes, vegetables (green leafy, carrots) and yellow fruits (orange, papaya, mangos).</li> <li>Give these foods at least five times per day (three meals and two snacks/<i>mekses</i>).</li> <li>Children who stopped breastfeeding at an early age should also get adequate milk replacement besides complementary feeding.</li> <li>The child should have his own servings and the mother should actively feed the child.</li> <li>Give freshly prepared food and use clean utensils.</li> <li>Increase intake of food and fluids during illness, and give one additional meal of solid food for about two weeks after illness to help the child recover quickly.</li> <li>Give vitamin A supplements and Mebendazole every six months.</li> </ul>	<p>During this period the mother should continue to breastfeed as often as the child wants and also give nutritious complementary foods. The variety and quantity of food should be increased. Family foods should become an important part of the child's diet. They should be appropriately prepared, so that they are easy for the child to eat. Give nutritious complementary foods or family foods five times a day.</p> <p>Adequate servings and <b>active feeding</b> (encouraging the child to eat) continue to be important.</p>
		

## 11.5 Recommendations for children aged two years and older

At this age, children should be eating a variety of foods in three meals a day, as well as two snacks during the day. The table below (Table 11.4) sets out the recommendations.

Table 11.4 Recommendations for feeding children aged two years and older.

Two years and older		
 	<ul style="list-style-type: none"> <li>• Give adequate servings of freshly prepared enriched family foods, three or four meals a day.</li> <li>• Also, twice daily, give nutritious food between meals, such as egg, milk, fruits, <i>kitta</i>, <i>dabo</i>, ripe yellow fruits.</li> <li>• Give the child his own servings and actively feed the child.</li> <li>• Give freshly prepared food and use clean utensils.</li> <li>• Increase intake of food and fluids during illness, and give one additional meal of solid food for about two weeks after illness to help the child recover quickly.</li> <li>• Give vitamin A supplements and Mebendazole every six months.</li> </ul>	<p>At this age the child should be taking a variety of family foods in three meals per day. The child should also be given two extra feedings between meals (snacks) per day. These may be family foods or other nutritious foods which are convenient to give between meals.</p>

Examples of nutritional food include *kitta* (flat bread of non-fermented wheat flour) and *dabo* (home-made bread), softened with milk. These are good sources of protein and are energy-rich complementary foods for children over two years. In addition, consumption of potatoes and fruits, such as oranges and bananas, should be encouraged.

## 11.6 Feeding recommendations when a mother is HIV-positive

As you read earlier, breastfeeding has unsurpassed advantages over any other form of infant feeding. In resource-limited countries such as Ethiopia, breastfeeding is a key component of child survival interventions. Infant mortality is higher in settings where infants are not breastfed or breastfeed for a short time only (that is, less than six months).

Exclusive breastfeeding is the safest option for infants born to mothers who are HIV positive.

Although breastfeeding by an HIV-positive mother can transmit the virus to the infant, replacement feeding, if not instituted properly, is actually associated with increased risk of morbidity and mortality at a young age in low resource settings like Ethiopia. Exclusive breastfeeding (EBF) during the first six months of life is associated with decreased transmission of HIV and improved child survival compared with non-exclusive breastfeeding. Because of high infant mortality rates in Ethiopia, EBF for as long as possible up to six months is recommended as the only feasible and the safest option for infant feeding amongst HIV-infected women. At six months, complementary foods should be introduced in order to sustain normal growth. Most Ethiopian children will continue to benefit from breastfeeding until 12–18 months of age. Universal access to antenatal and postnatal prevention of mother-to-child

HIV transmission (PMTCT) services and prioritising antiretroviral therapy for eligible pregnant and lactating women is an important part of decreasing perinatal transmission of HIV.

The primary goals of infant feeding counselling and support are:

- Improve child survival by actively supporting exclusive breastfeeding for the first six months of life.
- Decrease HIV transmission via breastfeeding by treating pregnant and lactating HIV-infected women with low CD4 and advanced HIV disease.
- Provide antiretroviral prophylaxis to the mother or the infant to decrease HIV transmission.

CD4 refers to the type of white blood cells destroyed by HIV.

When the infant reaches six months, you should advise the mother to add complementary feeding in addition to the breastfeeding until the child reaches 12–18 months. For examples of complementary foods, you can look back at the feeding recommendation in Section 11.3. Breastfeeding should stop only when a nutritionally adequate diet without breastmilk can be provided. This is usually around 12–18 months of age. Infants who are known to be HIV-infected should continue to breastfeed according to recommendations for the general population.

- What feeding advice will you give for an infant born from an HIV-positive mother if the infant is under six months old?
- For infants under six months old you would advise the mother that she should breastfeed exclusively (only breastfeeding, not even water). If she or someone else in the family adds other foods or fluids this is known as mixed feeding, which will increase the chance of HIV transmission. For infants who are six months and above you would talk to the mother about complementary feeding and advise her that she should also continue breastfeeding.

## 11.7 Assess the child's feeding

As a Health Extension Practitioner you will assess feeding of children who:

- are classified as having anaemia or very low weight for age, or
- are younger than two years old.

In some cases, you may find that you have already discussed with and given the mother advice on many other aspects of her infant's health and provided several different treatment instructions. The mother may therefore be feeling overwhelmed and find it hard to take in more information at this stage. If you think this is the case, you may delay assessing feeding and counselling the mother about feeding until a later visit.

In Study Session 10 you learned how to assess breastfeeding. You will find more information about how to assess a child's feeding if you look at page 40 of the Assess and Classify chart booklet. If you ask the questions set out there you will be able to find out about the child's usual feeding and his feeding during his current illness. If you need to remind yourself of the kinds of questions to ask, go back to Study Session 10 and look at the guidance there.

Listen to any accounts of good feeding practices that the mother tells you about and praise her for the things she is doing well. It is important that you reinforce the positive things she is doing, as well as point out things that need to be changed. If an answer is unclear, ask another question. For example, if



the mother of a very low weight child says that servings are ‘large enough,’ you could ask, ‘When the child has eaten, does he still want more?’ Working closely with the mother in this way, and helping her to provide optimum feeding for her child will help to promote the child’s healthy growth and development.

### 11.7.1 Identify feeding problems

You should complete the assessment of feeding and identify all the feeding problems *before* giving advice to the mother.

Based on the mother’s answers to your questions, you will be able to identify any differences between the recommendations for feeding and the child’s actual feeding. These differences are problems and you can see some examples of them listed in Table 11.5 below.

Table 11.5 Examples of feeding problems in infants and children.

CHILD’S ACTUAL FEEDING	RECOMMENDED FEEDING
A three-month-old is given sugar water as well as breastmilk.	A three-month-old should be given only breastmilk and no other food or fluid.
A two-year-old is fed only three times each day.	A two-year-old should receive two extra feedings between meals, as well as three meals a day.
An eight-month-old is still exclusively breastfed.	A breastfed eight-month-old should also be given adequate servings of a nutritious complementary food three times a day.
A seven-month-old is given gruel with a bottle.	A seven-month-old should be give soft porridge in addition to breastmilk.
A 12-month-old is given plain <i>injera</i> in addition to breastmilk.	A 12-month-old should receive adequate servings of nutritious foods in the form of <i>fit-fit</i> , porridge, with some oil or butter added. In addition he should be given fruit and vegetables.
A nine-month-old is not breastfed and is given one third strength cow’s milk.	A nine-month-old who is not breastfed should receive adequate servings of nutritious foods five times per day.

- Can you think of other feeding problems that you might encounter?
- You might have thought about some of these examples:
  - *Use of a feeding bottle:* feeding bottles should not be used because they transmit infection easily.
  - *Lack of active feeding:* young children often need to be encouraged and assisted to eat.
  - *Relying on diluted milk or thin gruel (‘muk’) for nutrition:* dilution makes food less energy and nutrient dense and therefore might lead to malnutrition. Remind the mother that thick foods which are dense in energy and nutrients are necessary for infants and young children to grow.

Other examples of feeding problems that you might have identified include the following:



### Not feeding well during illness

During illness the child may be eating much less or eating different foods. Children often lose their appetite during illness. However, they should still be encouraged to eat the types of food recommended for their age, as often as recommended, even if they do not eat much. They should be offered their favourite nutritious foods, if possible, to encourage eating.

### Not enough variety in the diet

The mother may mention that she gives one bulky food (such as maize porridge) to the child. One bulky food alone does not provide adequate nutrient intake. You should encourage her to give other varieties of food to enrich locally available staple foods.

### Not giving the young child a share of meat, chicken or fish when this is eaten by the family

Young children often need to be given their own portions of the protein- and nutrient-rich family foods (such as meat, liver and chicken). Encourage mothers to provide such foods whenever they are available in the household.

### Not giving gommen or other foods with vitamin A

Mothers should always be encouraged to provide *gommen* or other food items (such as liver and carrots) which are rich in vitamin A.

In the sick child registration book, next to the feeding questions, there is a box labelled 'Feeding Problems'. You should use that space to record any feeding problem found and counsel the mother about these feeding problems, remembering to praise her for good practices and encouraging her (in a non-judgmental way) to adopt positive feeding approaches for her infant or child.

The chart in Table 11.6 below shows you how you should record feeding problems for a 4-month-old infant for whom a feeding assessment has been carried out.

Table 11.6 Record chart showing feeding problems.

ASSESS CHILD'S FEEDING if child has ANAEMIA OR VERY LOW WEIGHT FOR AGE or is less than two years old	Feeding problems
Do you breastfeed your child? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
If Yes, how many times in 24 hours? <u>5</u> times.	Not breastfed often enough
Do you breastfeed during the night? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Does the child take any other food or fluids? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Mixed Feeding
If Yes, what food or fluids? <u>cow's milk</u>	Giving cow's milk
How much is given at each feed? _____	
How many times in 24 hours? _____ times.	

What do you use to feed the child? Cup___ Bottle <input checked="" type="checkbox"/> Other _____	Using feeding bottle
<ul style="list-style-type: none"> <li>• If on replacement milk: What replacement milk are you giving? _____</li> </ul>	
<ul style="list-style-type: none"> <li>• How many times in 24 hours? _____times</li> <li>• How much is given at each feed? _____</li> <li>• How is the milk prepared? _____</li> <li>• How are you cleaning the utensils? _____</li> <li>• If very low weight for age: How large are the servings? _____</li> <li>• Does the child receive his own serving? Yes___ No ___</li> <li>• Who feeds the child and how? _____</li> </ul>	
<ul style="list-style-type: none"> <li>• During the illness, has the child's feeding changed? Yes ___ No <input checked="" type="checkbox"/> If Yes, how? _____</li> </ul>	Failed to increase feeding to help aid recovery

A feeding assessment should be done for all children who are less than two years old and for those who are classified as having anaemia or very low weight for age. If you find any feeding problems you should counsel the mother or the caregivers on the recommended feeding that corresponds to the child's age. The tables with feeding recommendations, set out in this study session, provide useful guidance if you need to remind yourself about the different foods appropriate at different times in the child's life.

In this study session, you have learned recommended feeding for infants and children according to their age. You have seen that complementary foods should be varied and energy rich, to promote growth and development of the child. The study session also stressed the importance of exclusive breastfeeding for infants of HIV-positive mothers. Additionally you have looked at how to assess and identify feeding problems, counselling and supporting the mother on recommended feeding practices, and how to record problems in the sick child registration book.

## Summary of Study Session 11

In Study Session 11, you have learned that:

- 1 There are different feeding recommendations for children according to their age.
- 2 Infants born to HIV-positive mothers should be exclusively breastfed for six months and then given complementary foods as well as breastmilk.
- 3 There are some common feeding problems in infants and children, and with some simple support and advice from you, mothers can usually overcome these difficulties.

## Self-Assessment Questions (SAQs) for Study Session 11

Now that you have completed this study session, you can assess how well you have achieved its Learning Outcomes by answering these questions. Write your answers in your Study Diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

### **SAQ 11.1 (tests Learning Outcomes 11.1 and 11.3)**

How should the way a child is fed change as he or she grows older?  
(Think about the kinds of foods a child will have, how much he will eat and also how he will eat.)

### **SAQ 11.2 (tests Learning Outcomes 11.1 and 11.2)**

Are the feeding recommendations for a mother who is HIV-positive the same as for a mother who does not have HIV? Give reasons for your answer.

### **SAQ 11.3 (tests Learning Outcomes 11.2 and 11.4)**

How would you go about assessing the way a mother breastfeeds? What kind of help might you be able to give the mother after your assessment?



# Study Session 12 Immunization and Related Interventions

## Introduction

In this study session, you will learn about the types of vaccines routinely given in the Expanded Programme of Immunization (EPI) and the schedule of their administration. Immunization is known as the single most cost-effective strategy to decrease childhood morbidity and mortality. The objective of the EPI is to reduce and control illness, death and disability among children caused by vaccine-preventable diseases. You will also learn about the routine administration of vitamin A and deworming of children.

Full details of the vaccines in the EPI, their cold storage, stock control and organisation of vaccination campaigns and routine clinics are given in the *Immunization Module*.

## Learning Outcomes for Study Session 12

When you have studied this session, you should be able to:

- 12.1 Define and use correctly all of the key words printed in **bold**. (SAQs 12.1 and 12.3)
- 12.2 Describe the type of vaccines covered under the EPI and their schedule of administration. (SAQs 12.1 and 12.2)
- 12.3 Describe how to check for immunization status and when the child needs immunizing. (SAQs 12.1, 12.2, 12.3 and 12.4)
- 12.4 List the contraindications to vaccine administration. (SAQs 12.1 and 12.2)
- 12.5 Describe the schedule of vitamin A administration and deworming for children. (SAQ 12.3)

## 12.1 The Expanded Programme of Immunization

In this study session you are going to look at the vaccines covered in the **Expanded Programme of Immunization (EPI)** and their schedule of administration. You will then go on to learn how to check a child's immunization status and understand when it is necessary to provide a child with a vaccine on the same day of the visit. You should be aware that the terms 'immunization' and 'vaccination' can be used interchangeably, so you will see both terms used in this study session.

Ideally, every child must complete his or her full vaccination before celebrating their first birthday. Therefore you must check every child when you meet them in their home or at the health post. You need to check whether they have been vaccinated against the EPI diseases and if not, you should give any missed vaccinations on the same day of the visit.

Every child should complete his or her full vaccination before the age of one year.

## 12.2 Vaccines covered under EPI and their schedule of administration

Currently, the EPI delivers eight vaccines to protect children against the following serious childhood illnesses: tuberculosis, poliomyelitis, diphtheria, pertussis, tetanus, *Haemophilus influenzae-B* (Hib) infections, hepatitis B disease and measles.

- *Haemophilus influenzae* type B and the hepatitis B vaccines are new vaccines introduced into the EPI programme in Ethiopia in 2007.

- *Haemophilus influenzae* type B vaccine prevents meningitis, pneumonia, epiglottitis and other serious infections caused by *Haemophilus influenzae* type B bacteria. The vaccine will not protect against these conditions if they are caused by other infectious agents such as viruses.
- *Hepatitis B* vaccine protects against liver disease. Hepatitis B infection in young children is usually asymptomatic (they don't develop symptoms). However, a larger proportion of children than adults may become **chronic carriers** who can transmit the hepatitis B virus to others for many years without showing symptoms themselves. Chronic carriers are more likely to develop severe chronic liver disease or liver cancer in later life.

Table 12.1 shows the recommended immunization schedule and the mode of administration of the eight childhood vaccines. The recommended vaccine should be given when the child reaches the appropriate age for each dose. If the vaccination is given too early, protection may not be adequate. If there is any delay in giving the appropriate vaccine, this will increase the risk of the child getting the disease. If you see a child who has not been immunized at the recommended age, you should give the necessary immunizations as soon as possible. Most vaccines (except BCG and measles) require administration of repeated doses, usually three times. For these vaccines, after the first dose, give the remaining doses at least four weeks apart.

Table 12.1 Immunization schedule and administration mode. (Source: *Immunization in Practice*, FMOH, 2009)

Age of vaccination	Type of vaccination	Dose	Mode of administration
At birth	BCG	0.1 ml	Upper right arm; intradermal
	OPV0	2 drops	Oral
6 weeks	DPT1-HepB1-Hib1	0.5 ml	Front outer side of the thigh muscle (intramuscular)
	OPV1	2 drops	Oral
10 weeks	DPT2-HepB2-Hib2	0.5 ml	Front outer side of the thigh muscle (intramuscular)
	OPV2	2 drops	Oral
14 weeks	DPT3-HepB3-Hib3	0.5 ml	Front outer side of the thigh muscle (intramuscular)
	OPV3	2 drops	Oral
9 months	Measles vaccine	0.5 ml	Upper right arm; subcutaneous

- BCG vaccine protects against tuberculosis (TB) and is given once only.
- OPV is the oral polio vaccine, given in four doses numbered 0 to 3.
- DPT is the diphtheria, pertussis, tetanus vaccine, combined in a single preparation with the Hepatitis B vaccine and the *Haemophilus influenzae* type B vaccine. Together, these five vaccines are known as the **pentavalent vaccine** ('penta' means five). Children get three doses.
- Measles vaccine is given only once.



You should not give OPV0 (the first dose of oral polio vaccine) to an infant who is more than 14 days old. Therefore, if an infant has not received OPV0 by the time he or she is 15 days old, you should wait until the child is four weeks old to give OPV-1. Then also give DPT1-HepB1-Hib1 at four weeks.

Children with diarrhoea who are due for OPV (any dose) should still receive the prescribed dose. However, you should not count this as it may be passed through the body. You should tell the mother to return with the child in four weeks' time so that you can give the child an extra dose of OPV.

## 12.3 How to check for immunization status

You must check the immunization status of all the children who visit your health post or when you visit them at home. You can use the Assess and Classify chart to help you find the recommended immunization schedule. Box 12.1 outlines the steps you need to take to check the immunization status of each child.

### Box 12.1 Steps for checking immunization status of children

**For ALL sick children ask the mother about the child's problem, check for general danger signs, ask about cough or difficult breathing, diarrhoea, fever, ear problem, and then check for malnutrition and anaemia, assess for HIV infection and then**

**CHECK IMMUNIZATION STATUS.**

Immunization Schedule	AGE	VACCINE	
	Birth	BCG	OPV-0
	6 weeks	DPT1-HepB1-Hib1	OPV-1
	10 weeks	DPT2-HepB2-Hib2	OPV-2
	14 weeks	DPT3-HepB3-Hib3	OPV-3
	9 months	Measles	Vitamin A

**DECIDE** if the child needs an immunization today, or if the mother should be told to come back with the child at a later date for an immunization.

**Note:** Remember there are no **contraindications** (conditions which makes administration of vaccines inadvisable) to immunization of a sick child if the child is well enough to go home.

**Then CHECK for other problems.**

(Source: *Assess and Classify the Sick Child Module: IMNCI Training Modules*, FMOH Ethiopia, June 2008)

- Why is it important to check the immunization status of all children under 24 months old?
- Immunization is the most effective strategy for decreasing childhood morbidity and mortality. It can reduce and control illness, disability or death caused by vaccine-preventable diseases.

- What dose of OPV would you give to a six-week-old baby who did not receive OPV when born? What are the reasons for your answer?
- You would give OPV1. OPV0 should not be given to an infant who is more than 14 days old. You would also give the six-week-old infant the DPT1-HepB1-Hib1 vaccination.

In order to decide whether the child needs immunizing right away, you should look at the child's age on the clinical record. If you do not have this, ask the mother about the child's age.

ASK the mother if the child has an immunization card. If the mother answers yes, ask her if she has brought the card with her to the health post.

- If she has brought the card with her, ask to see the card.
- Compare the child's immunization record with the recommended immunization schedule. Decide whether the child has had all the immunizations recommended for the child's age.
- On the recording form, check all immunizations the child has already received. Write the date of the immunization the child received most recently. Circle any immunizations the child needs in the current visit. These will be any vaccines the child should have already received but has not. For example, if a nine-week-old infant has not yet been vaccinated with DPT1-HepB1-Hib1 and OPV1 (which he should have received at six-weeks-old), you should give the child these vaccines while he is at the health post.
- If the child is not being referred, the mother needs to be advised that the child should receive the relevant immunization (or immunizations) during the visit.

If the mother does not have an immunization card and you have any doubts about what vaccines the child has received, immunize the child.

If the mother says that she does *not* have an immunization card with her:

- Ask the mother to tell you what immunizations the child has received.
- Use your judgement to decide if the mother has given a reliable report. If you have any doubt, immunize the child. Give the child OPV, DPT-HepB-Hib and the measles vaccine according to the child's age.

Give an immunization card (as shown in Box 12.2) to the mother and ask her to bring it with her each time she brings the child to the health post.

### Box 12.2 Example of immunization card

IMMUNIZATIONS (Record date given)				
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
BCG	DPT1-HepB1-Hib1	DPT2-HepB2-Hib2	DPT3-HepB3-Hib3	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
OPV0	OPV1	OPV2	OPV3	Measles
RETURN FOR NEXT IMMUNIZATION ON: _____				

(Source: As for Box 12.1)

So far, you have gone through the eight EPI vaccines, their schedule of administration and how to check immunization status of children. In the next section you will learn the contraindications for vaccination.

## 12.4 Contraindications to vaccine administration

A **contraindication** is one or more conditions which makes administration of vaccines inadvisable due to some potential side effects. Common illnesses are not contraindications for immunization, so *no* sick child, including the malnourished child, should miss immunization, unless there is a clear contraindication.

There are only three situations which are considered to be contraindications to immunization:

- Do not give BCG to a child known to have AIDS
- Do not give DPT2-HepB2-Hib2 or DPT3-HepB3-Hib3 to a child who has had convulsions or shock within three days of the last dose of the vaccine
- Do not give any doses of DPT-HepB-Hib to a child with recurrent convulsions or another active neurological disease of the central nervous system.

In all other situations, here is a good rule to follow:

- *There are no contraindications to immunization of a sick child if the child is well enough to go home*
- *If you are referring a child, you do not need to give him or her a vaccine before referral.* The staff at the referral site should make the decision about immunizing the child when the child is admitted. This will avoid delaying referral.

If a sick child is well enough to go home, there are no contraindications to vaccine administration.

As you read earlier, children with diarrhoea who are due for OPV should still receive this during their visit to the health post. However, the dose should not be counted and you should tell the mother to return with the child in four weeks for an additional dose of OPV.

You should also advise the mother to be sure the other children in the family are immunized.

## 12.5 Recording the child's immunization status

When you have checked the child's immunization status and given the correct dose of vaccines for the child's age you should use the case recording form (see Case Study 12.1 on the next page). Put a check mark (✓) for the immunizations already given and circle the immunizations needed at the current visit. If the child needs to return for an immunization, write the date that the child should return in the classification column.

The case study below illustrates how you should record the immunization status in the correct section of the case recording form.

### Case Study 12.1 Selam

Selam is four months old. She has no general danger signs. She is classified as having diarrhoea with no dehydration. Her immunization record (on the case recording form) shows that she has received BCG, OPV0, OPV1, OPV2, DPT1-HepB1-Hib1 and DPT2-HepB2-Hib2. You can see this below.

**MANAGEMENT OF THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS**

Child's Name: Selam Age: 4 months Weight: 5.5 kg Temperature: 36°C

ASK: What are the child's problems? Diarrhoea Initial Visit? ☒ Follow-up Visit? ☐

ASSESS (Circle all signs present)

**CHECK THE CHILD'S IMMUNIZATION STATUS** Circle immunizations needed today

<input checked="" type="checkbox"/> BCG	<input checked="" type="checkbox"/> DPT1-HepB1-Hib1	<input checked="" type="checkbox"/> DPT2-HepB2-Hib2	<input type="checkbox"/> DPT3-HepB3-Hib3
<input checked="" type="checkbox"/> OPV 0	<input checked="" type="checkbox"/> OPV 1	<input checked="" type="checkbox"/> OPV 2	<input type="checkbox"/> OPV 3
			Measles

**CLASSIFY**

Return for next immunization on: May/09  
(Date)

- What advice would you give a mother about her child's immunization programme?
- There are several things you could talk to the mother about, for example the correct age to bring her child for immunization, and that she should bring the child's immunization record card with her each time she comes to the health post. If you have given an OPV dose at a time the child has diarrhoea, you would also need to tell the mother that she must return for her child to receive another dose in four weeks. You should also tell her that it is important that the whole family is immunized.

Now that you have seen how to enter information about immunization on the child's record, you are going to learn about routine administration of vitamin A and deworming a child.

## 12.6 Routine administration of vitamin A and deworming

Vitamin A deficiency and worm infections are common in developing countries and both have serious health effects for a growing child. Preventive therapy should be given routinely for both conditions.

### 12.6.1 Vitamin A

Vitamin A helps maintain the surface linings of the eyes and the respiratory, intestinal and urinary tracts. It also helps the immune system to resist severe infections.

Vitamin A deficiency (VAD) is a public health problem in many countries, including Ethiopia. It is the leading cause of preventable blindness in children and increases the risk of disease and death from severe infections, particularly measles, diarrhoea and pneumonia. Improving the vitamin A status of children aged 6–59 months can reduce measles and diarrhoea mortality rates by 50% and 33% respectively, and can decrease overall under-five mortality by 23%.

Thus, routine bi-annual (every six months) supplementation of vitamin A is recommended for all children aged 6–59 months of age. You should give one dose if the child has not received a dose within the last six months. The first dose is usually given at nine months of age together with the measles vaccine, and it should then be given every six months up to five years of age.

Table 12.2 sets out the correct dose according to the child's age.

Table 12.2 Vitamin A dosage for children six months up to five years of age.  
(Source: *IMNCI Chart Booklet*, FMOH Ethiopia, 2008)

AGE	VITAMIN A CAPSULES (to be given once every six months)		
	200,000 IU	100,000 IU	50,000 IU
6 months up to 12 months	½ capsule	1 capsule	2 capsules
12 months up to 5 years	1 capsule	2 capsules	4 capsules

IU stands for International Units.

To administer vitamin A, cut across the nipple of the capsule with a clean instrument (surgical blade, razor blade, scissors or sharp knife). If the vitamin A capsule does not have a nipple, pierce the capsule with a clean needle. Squeeze the capsule gently so drops of vitamin A fall onto the child's tongue. Record the date each time you give vitamin A to a child. This is important. If you give repeated doses of vitamin A in a short period of time (in less than six months), there is danger of an overdose.

### 12.6.2 Deworming

Soil-transmitted intestinal worms represent a serious public health problem wherever the climate is tropical and inadequate sanitation and unhygienic conditions prevail. Three types of worms are the most prevalent and have the most damaging effect on the health of preschool children: roundworms, hookworms and whipworms.

Worm infections are associated with a significant loss of micronutrients from the child's body and contribute to vitamin A deficiency, anaemia, growth failure and malnutrition in children. An infected child's physical fitness and appetite are negatively affected and their school performance is impaired.

Therefore, all children 24 months of age or older need to be given Mebendazole or Albendazole every 6 months to treat intestinal parasites, especially hookworm and whipworm infections. Table 12.3 sets out the correct doses according to the child's age, for children who have not been tested in the previous 6 months.

Table 12.3 Doses of Mebendazole and Albendazole for children. (Source: *IMNCI Chart Booklet for Health Extension Workers*, FMOH Ethiopia, May 2010)

Mebendazole or Albendazole		
Drug	Give as a single dose every 6 months for all children in these age groups	
	0–2 years	2–5 years
Albendazole 400 mg tablet	None	1 tablet
Mebendazole 500 mg tablet or 5 tablets of 100 mg	None	1 tablet (500 mg)

When you see a child aged 24 months or older, you should check whether they have been given a dose of Mebendazole or Albendazole in the previous six months. If not, you should give them Mebendazole or Albendazole as indicated in Table 12.3 above.

Only chewable deworming tablets which taste good should be given to children under five years of age. For children under three years of age, tablets should be broken and crushed between two spoons, then water added to help administer the tablets.

Bear in mind that vitamin A supplements are given from the age of six months and deworming tablets are given from the age of two years.

## Summary of Study Session 12

In Study Session 12, you have learned that:

- 1 The EPI delivers eight vaccine antigens to protect children against tuberculosis, poliomyelitis, diphtheria, pertussis, tetanus, *Haemophilus influenzae* type B (Hib) infections, hepatitis B and measles.
- 2 Most vaccines (except BCG and measles) require administration of repeated doses.
- 3 Ideally, every child must complete his or her full vaccination programme before celebrating their first birthday.
- 4 You must check the immunization status of *all* the children who visit your health post or when you visit them at home. If you have any doubt whether the child has received all the relevant vaccinations you should immunize the child.
- 5 Common illnesses are not contraindications for immunization, and if the sick child is well enough to go home he or she should be vaccinated.
- 6 Vitamin A deficiency and worm infections are common. Both have serious health effects for a growing child and therefore preventive therapy should be given routinely for both conditions. Routine bi-annual supplementation of vitamin A is recommended for all children aged 6–59 months and deworming for all children 2–5 years of age.



## Self-Assessment Questions (SAQs) for Study Session 12

Now that you have completed this study session, you can assess how well you have achieved its Learning Outcomes by answering these questions. Write your answers in your Study Diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

### **SAQ 12.1 (tests Learning Outcomes 12.1, 12.2, 12.3 and 12.4)**

How do you decide whether a child who comes to the health post should be immunized?

### **SAQ 12.2 (tests Learning Outcomes 12.2, 12.3 and 12.4)**

Read Case Study 12.2 and then answer the questions below.

#### **Case Study 12.2 for SAQ 12.2**

Kelkay is three months old. She has no general danger signs. She is classified as having diarrhoea with no dehydration and she has anaemia.

Immunization history: BCG, OPV0, OPV1, and DPT1-HepB1-Hib1. OPV1 and DPT1-HepB1-Hib1 given five weeks ago.

- (a) What immunizations, if any, would you give Kelkay today?
- (b) What advice would you give to Kelkay's mother and why?

### **SAQ 12.3 (tests Learning Outcomes 12.1, 12.3 and 12.5)**

Read Case Study 12.3 and then answer the questions below.

#### **Case Study 12.3 for SAQ 12.3**

Tahir is 15 months old. He has no general danger signs. He is classified as having no pneumonia: cough or cold and no anaemia and not very low weight for his age. He has completed his full immunization programme, including measles vaccine at nine months of age, when he also took a dose of vitamin A.

- (a) What do you do for Tahir during this visit?
- (b) What advice do you need to give to Tahir's mother?



# Study Session 13 Ear Problems and Other Common Childhood Infections

## Introduction

In this study session you will learn about ear problems and other common conditions affecting children. These conditions do not directly lead to death, but may cause serious complications that can result in permanent disability or death by involving other vital organs. You will learn how to identify a number of the most common ailments in a simple way and offer appropriate treatment and care. You will begin the study session by looking at ear problems and then go on to look at throat, eye and skin infections.

## Learning Outcomes for Study Session 13

When you have studied this session, you should be able to:

- 13.1 Define and use correctly all of the key words printed in **bold**. (SAQs 13.1, 13.2, 13.3 and 13.4)
- 13.2 Assess, classify and treat a child with ear problems. (SAQ 13.1)
- 13.3 Assess, classify and treat a child with throat problems. (SAQ 13.2)
- 13.4 Identify and treat a child with eye infections. (SAQ 13.4)
- 13.5 Identify and treat a child with impetigo or scabies. (SAQ 13.3)
- 13.6 Give appropriate follow-up care for ear, throat, eye and skin infections. (SAQs 13.1, 13.2 and 13.3)

## 13.1 Ear problems

Ear infections rarely cause death but are major causes of morbidity. In developing countries, they are the leading cause of deafness and learning problems. Therefore it is important for you as a Health Extension Practitioner to know how to identify when a child has an ear problem, and that you are able to assess, classify and provide the appropriate treatment. You also need to know what follow-up care to give a child with an ear problem and how to advise the mother to give home treatment and care.

A child with an ear problem may have an ear infection which can cause ear pain and fever. If an ear infection is not treated on time, the ear drum may perforate and the child feels less pain. Examples of complications of ear infections are meningitis, brain abscess, mastoiditis and deafness.

Mastoiditis is pronounced 'mass-toy-dye-tiss'.

### 13.1.1 Assessing ear problems

The Assess and Classify chart will help you identify ear problems caused by ear infection. You should ask about ear problems for every sick child who is brought to your health post.

When you assess a child you will be looking for the following signs:

- ear pain
- ear discharge, and
- if discharge is present, how long the child has had the discharge, and
- tender swelling behind the ear, a sign of mastoiditis.

Box 13.1 is from the ‘Assess’ column in the Assess and Classify chart that tells you how to assess a child for ear problems.

### Box 13.1 Assess for ear problems

ASK: Does the child have an ear problem?

IF YES, ASK:	LOOK AND FEEL:
<ul style="list-style-type: none"><li>• Is there ear pain?</li><li>• Is there ear discharge?</li></ul> If yes, for how long?	<ul style="list-style-type: none"><li>• Look for pus draining from the ear</li><li>• Feel for tender swelling behind the ear</li></ul>

#### ASK: Does the child have an ear problem?

If the mother answers *no*, you do not need to assess the child for ear problems. Your next question in this case would be whether the child has a throat infection (you will learn about throat infections in Section 13.2 below).

If the mother answers *yes*, ask the next question:

#### ASK: Does the child have ear pain?

If the mother is not sure that the child has ear pain, ask if the child has been irritable and rubbing his ear. Whether the answer is *yes* or *no* you should ask the next question.

#### ASK: Is there ear discharge? If yes, for how long?

When asking about ear discharge, use words the mother understands. For example, ‘Is there any fluid that looks like pus coming out from the ears?’ If the child has had ear discharge, ask the mother for how long.

#### LOOK for pus draining from the ear

Look inside the child’s ear to see if pus is draining from the ear. Pus is usually white, creamy or light green and may have an offensive smell.

- An ear discharge that has been present for *two weeks or more* is defined as a **chronic ear infection**.
- An ear discharge that has been present for *less than two weeks* is defined as an **acute ear infection**.

#### FEEL for tender swelling behind the ear

Feel behind both ears. Compare them and decide if there is tender swelling of the mastoid bone. In infants, the swelling may be above the ear.

Both tenderness and swelling must be present to classify **mastoiditis**, a deep infection in the mastoid bone. You can see an illustration of this in Figure 13.1.



Figure 13.1 Mastoiditis (tender swelling behind the right ear).

- How can you find out whether a sick child brought to your health post has ear problems?
- You could ask the mother whether the child has been irritable and rubbing his ear, which suggests it might be painful. You would ask her whether there has been any fluid coming from the child's ear and for how long this has been happening.

### 13.1.2 Classify and treat ear problems

There are four classifications for ear problems:

- Mastoiditis
- Acute ear infection
- Chronic ear infection
- No ear infection.

Table 13.2 sets out the classification table for ear problems from the Assess and Classify chart. You can see in the top (pink) row that classification of mastoiditis requires you to give the child one dose each of cotrimoxazole and paracetamol and then refer the child urgently to hospital. The chart also outlines what treatment is required for both acute and chronic ear infection.

Table 13.2 Classification and treatment of ear problems.

• Tender swelling behind the ear	<b>MASTOIDITIS</b>	<ul style="list-style-type: none"> <li>• <i>Give first dose of Cotrimoxazole</i></li> <li>• <i>Give first dose of Paracetamol for pain</i></li> <li>• <i>Refer URGENTLY to hospital</i></li> </ul>
<ul style="list-style-type: none"> <li>• Pus is seen draining from the ear and discharge is reported for less than 14 days</li> <li>• Ear pain</li> </ul>	<b>ACUTE EAR INFECTION</b>	<ul style="list-style-type: none"> <li>• <b>Give Cotrimoxazole for 5 days</b></li> <li>• <b>Give Paracetamol for pain</b></li> <li>• Dry the ear by wicking [see below]</li> <li>• Follow-up in 5 days</li> </ul>
• Pus is seen draining from the ear and discharge is reported for 14 days or more	<b>CHRONIC EAR INFECTION</b>	<ul style="list-style-type: none"> <li>• Dry the ear by wicking</li> <li>• Treat with topical quinolone ear drops for 2 weeks</li> <li>• Follow-up in 5 days</li> </ul>
<ul style="list-style-type: none"> <li>• No ear pain and</li> <li>• No pus seen draining from the ear</li> </ul>	<b>NO EAR INFECTION</b>	• No additional treatment

You are now going to look in more detail at the different ear problems that a child might have and how you can treat these at the health post or support the mother treating them at home.

#### Mastoiditis

If a child has tender swelling behind the ear, classify the child as having mastoiditis.

#### Treatment

You must refer the child urgently to hospital. The child needs treatment with appropriate antibiotics. He may also need surgery. Before the child leaves for hospital, you should give him the first dose of an appropriate antibiotic. You should also treat his pain and high fever with paracetamol.

### Acute ear infection

If you see pus draining from the ear and discharge has been present for less than two weeks, or if there is ear pain, classify the child's illness as acute ear infection.

#### Treatment

Give cotrimoxazole to the child and relieve the ear pain and high fever with paracetamol. Wicking should be done to dry the pus draining from the ear; wicking is described in Study Session 14, which also describes how to counsel a mother about wicking. All Children with acute ear infection and ear discharge should be assessed for symptomatic HIV infection.

All children with acute or chronic ear infection should be assessed for symptomatic HIV.

### Chronic ear infection

If you see pus draining from the ear and discharge has been present for two weeks or more, classify the child's illness as chronic ear infection.

#### Treatment

Most bacteria that cause chronic ear infection are different from those which cause acute ear infections. The most important and effective treatment for chronic ear infection is to keep the ear dry by wicking. You should assess all children with chronic ear infection for symptomatic HIV infection.

Topical quinolone ear drops (such as ciprofloxacin solution, 0.2%) should be instilled into the ear after meticulous ear wicking, three drops three times daily for 14 days. You should show the mother how to wick the ear (see Study Session 14) and instil the ear drops and check whether she has understood the procedure.

Topical means 'applied to the outside of the body, not taken internally.'

### No ear infection

If there is no ear pain and no pus is seen draining from the ear, the child's illness is classified as no ear infection. The child needs no treatment.

### 13.1.3 Follow-up care for ear problems

If you classified a child with either acute or chronic ear infection you need to tell the mother to return for a follow-up visit five days after her first visit. Box 13.2 below outlines what follow-up care should be given to the child.

#### Box 13.2 Reassess for ear problems

Measure the child's temperature.

##### Treatment

- If there is tender swelling behind the ear or high fever (38.5°C or above), refer the child urgently to hospital.
- Acute ear infection: if ear pain or discharge persists, treat for five more days with the same antibiotic. Tell the mother to continue wicking to dry the ear, and to come for a follow-up visit in five days.
- Chronic ear infection: check that the mother is wicking the ear correctly. Encourage her to continue the ear wicking and giving the child topical quinolone ear drops. Discuss with her the importance of keeping the child's ear dry.



- If no ear pain or discharge, praise the mother for her careful treatment. If she has not yet finished the five days of antibiotic, tell her not to stop until the end of the fifth day.

You are now going to do an activity which will check your understanding of what you have learned so far.

### Activity 13.1

Case Study 13.1 (below) and Case Study 13.2 (on the next page) describe children who have ear problems. In the box after each case study make notes on the following:

- The steps would you take to assess each child's ear problem.
- How you would classify the ear problem in each case.
- What treatment you would give the child in each case.

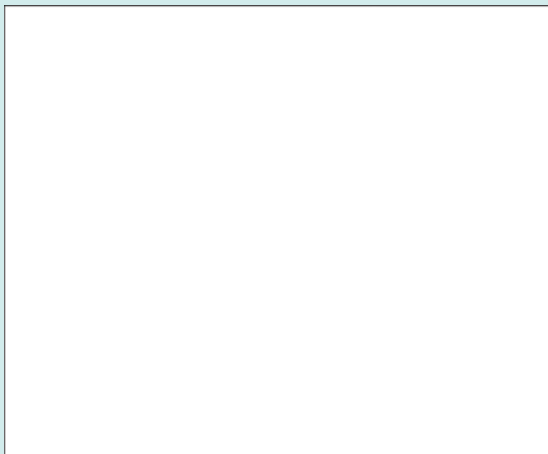
If you need to remind yourself of the different classifications, either use the wall chart or your chart booklet at your health post, or refer to the materials that you have already looked at in this study session.

#### Case Study 13.1 Mebrat

Mebrat is three years old. She weighs 13 kg. Her temperature is 37.5°C. Her mother came to the clinic today because Mebrat has felt hot for the last two days. The health worker checked and found no general danger signs.

Next the health worker asked about Mebrat's ear problem. The mother said she was sure Mebrat had no ear pain, but that she had seen discharge coming from Mebrat's ear for about three weeks. The health worker saw pus draining from the child's ear. She felt behind the child's ears and found tender swelling behind one ear.

**Write your notes in the space below on how to assess, classify and treat Mebrat's ear problems**



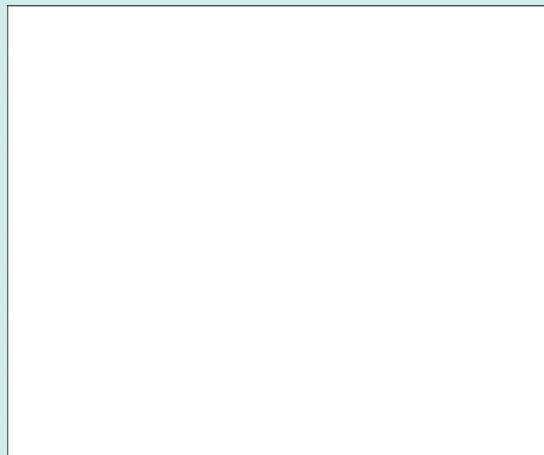
### Case Study 13.2 Danso

Danso is 18 months old. She weighs 9 kg. Her temperature is 37°C. Her mother says that Danso had discharge coming from one of her ears for the last three days.

Danso does not have any general danger signs. She does not have cough or difficult breathing. She does not have diarrhoea and she does not have fever.

The health worker asked about Danso's ear problem. The mother said that Danso does not have ear pain, but discharge has been coming from one ear for three or four days. The health worker saw pus draining from the child's right ear. She did not feel any tender swelling behind either ear.

**Write your notes in the space below on how to classify and treat Danso's ear problem**



### Comment

Clearly, the children in both cases have ear problems. You should have noted that Mebrat has *chronic ear infection* because the duration of the discharge from the ear is over two weeks. In addition there is a tender swelling behind one of her ears which indicates that she has *mastoiditis* which, as you learned, is a serious complication of ear infection. Mebrat therefore needs to be referred urgently after the first dose of an antibiotic has been administered. There is no need to waste time by showing her mother how to clean the ear.

In the case of Danso the duration of ear discharge is only three days. There is no swelling behind the ear. You should therefore have classified Danso as having *acute ear infection*. She should be treated with cotrimoxazole twice per day for five days. You should advise the mother to come back for a follow-up visit in five days. You should also assess Danso for symptomatic HIV.

## 13.2 Throat problems

You are now going to look at how to assess, classify and treat children who have throat problems. All children who are brought to your health post should be assessed for throat problems.

### 13.2.1 Assess for throat problems

When you assess for throat problems you should follow these steps:

ASK:

- Does the child have fever?
- Does the child have sore throat?

FEEL:

- For enlarged tender lymph nodes on the front of the neck.

LOOK:

- For red (congested) throat.
- For **exudate** (white or yellow patches) on the throat and tonsils.

The **pharynx** is the space behind the nose and the mouth. In a typical case of **pharyngitis** (sore throat) the pharynx is distinctly red and inflamed and the tonsils are enlarged and covered with yellow pus. There are complications of pharyngitis, including parapharyngeal abscess (this is when pus accumulates behind the structures of the pharynx) and disease of the heart and kidneys.

The key points above are summarised in Table 13.4, which is reproduced from the section in the Assess and Classify chart booklet that tells you how to assess a child for sore throat.

Table 13.4 How to check for throat problems.

ASK:	LOOK AND FEEL:
<ul style="list-style-type: none"> <li>• Does the child have fever? (by history or feels hot or temperature 37.5°C or more)</li> <li>• Does the child have a sore throat ?</li> </ul>	<ul style="list-style-type: none"> <li>• Feel for enlarged tender lymph nodes on the front of the neck.</li> <li>• Look for red (congested) throat.</li> <li>• Look for white or yellow exudates on the throat and tonsils.</li> </ul>

### 13.2.2 Classify for throat problems

There are three possible classifications of throat problem:

- *Streptococcal* sore throat (*Streptococci* are the bacteria most often involved in causing throat infections).
- No *streptococcal* sore throat
- No throat problem.

Table 13.5 (on the next page) reproduces the section from the Assess and Classify chart booklet for the classification and treatment of sore throat.

Table 13.5 Classification and treatment of throat problems.

<ul style="list-style-type: none"> <li>• Fever <b>OR</b> sore throat <b>AND TWO of the following:</b></li> <li>• Red (congested) throat.</li> <li>• White or yellow exudate on the throat or tonsils.</li> <li>• Enlarged tender lymph nodes on front of neck.</li> </ul>	<b>STREPTOCOCCAL SORE THROAT</b>	<ul style="list-style-type: none"> <li>➤ <i>Give amoxicillin</i></li> <li>➤ Soothe the throat with a safe remedy.</li> <li>➤ Give paracetamol for pain.</li> <li>➤ Advise mother when to return immediately.</li> <li>➤ Follow up in 5 days if not improving</li> </ul>
<ul style="list-style-type: none"> <li>• Insufficient criteria to classify as streptococcal sore throat</li> </ul>	<b>NO STREPTOCOCCAL SORE THROAT</b>	<ul style="list-style-type: none"> <li>➤ Soothe the throat with a safe remedy.</li> <li>➤ Give paracetamol for pain.</li> <li>➤ Advise mother when to return immediately.</li> <li>➤ Follow up in 5 days if not improving</li> </ul>
<ul style="list-style-type: none"> <li>• No throat signs or symptoms (with or without fever)</li> </ul>	<b>NO THROAT PROBLEM</b>	<ul style="list-style-type: none"> <li>➤ Continue assessment of the child</li> </ul>

## Treatment

As you can see from Table 13.5, there is a range of treatments that you should provide for a child with a throat problem:

- Give an oral antibiotic, amoxicillin for 10 days
- Give paracetamol if the child has a fever with a temperature higher than 38.5°C
- Soothe the child's throat with warm tea and honey.

### 13.2.3 Follow-up care for throat problems

If you have assessed the child as having a throat problem, you should tell the mother that she must return with the child for follow-up in five days if there is no improvement. When she returns, you should reassess the throat problem using the guidelines in the Assess and Classify chart booklet and described in this study session. You will need to measure the child's temperature and if you assess fever you should give the child paracetamol. If there has been no improvement in the sore throat you should refer the child to hospital.

## 13.3 Eye infection: conjunctivitis

Conjunctivitis is common in young children, especially if they come into contact with other children with conjunctivitis. There are different types of conjunctivitis that infants and children can suffer from, some more serious than others and potentially leading to loss of vision.

**Acute conjunctivitis**, or red eye, is usually a bacterial or viral infection of the eye characterised by a rapid onset of symptoms that persists for a few days.

**Neonatal conjunctivitis**, or *ophthalmia neonatorum*, is purulent conjunctivitis during the first ten days of life, usually acquired during birth. If the mother has gonorrhoea this can cause conjunctivitis in the newborn by infection during the birth.

**Purulent conjunctivitis** is eye infection with pus discharge from the eyes; it is caused by bacteria. In newborns, if the mother has gonorrhoea it can cause severe conjunctivitis with profuse purulent discharge.

## Treatment

There are a number of ways to treat acute conjunctivitis. You should show the mother how she can treat her child at home, following the steps outlined below.

Purulent is pronounced 'purr-you-lent', and means 'with pus'.

### 13.3.1 Treat eye infection with tetracycline eye ointment

- Clean both eyes three times daily, using a clean cloth for each eye.
  - Wash hands before and after treating the eye
  - Ask the child to close the eyes
  - Use the clean cloth and water to gently wipe away pus.
- Apply tetracycline eye ointment in both eyes three times per day.
  - Ask the child to look up
  - Squirt a small amount of ointment on the inside of the lower lid
  - Wash hands again.
- Treat until redness is gone
- Do not use other eye ointment or drops, or put anything else in the eye.

If you assess that the newborn has neonatal conjunctivitis you should refer the infant immediately because this is a serious problem that may lead to loss of vision. It needs treatment with injectable antibiotics.

### 13.3.2 Follow-up care for eye infection

You should advise the mother to return to the health post two days after the initial assessment. Box 13.3 sets out the steps to take at the follow-up visit.

#### Box 13.3 Follow-up for eye infection

##### Treatment for eye infection

After two days: Look for red eyes and pus draining from the eyes.

- If *pus is still draining from the eye*, ask the mother to describe how she has treated the eye infection. If treatment has been correct, refer the child to hospital. If treatment has not been correct, teach the mother the correct treatment.
- If *the pus is gone but redness remains*, tell the mother to continue with the treatment. After finishing the treatment, if there is no change she should return for further evaluation.
- If *no pus or redness*, stop the treatment.

## 13.4 Bacterial skin infections

In Ethiopia, skin diseases are common. In most situations caregivers do not seek medical help. However, your role in providing effective healthcare for a child means that you should look for and treat skin diseases. Some skin diseases can lead to serious complications unless treated appropriately. In this section you will learn how to assess, classify and treat some common childhood skin infections.

### 13.4.1 Assess skin infections

If the mother brings in her child because he has a skin infection, you should start by asking her some simple questions such as ‘Does the child have skin itchiness?’ Or, ‘Does the child have pain from the skin problem?’ If the mother answers yes to your questions you should then get more detailed information from her and look for the signs set out in Box 13.4.

### Box 13.4 Signs of skin infection

Ask the mother:

- ‘Does the child have skin itchiness?’
- ‘Does the child have pain from the skin problem?’

Then, look and feel more closely for:

- extensive warm, redness and swelling
- localised warm, tender swelling or redness
- swelling or redness around the eyes
- obvious lesions with pus or crusts
- small swellings on the skin of the hands, knees, elbows, feet, trunk
- round or oval scaly patches.

### 13.4.2 Classify and treat skin infections

After assessing the child for skin infections, the next step is to use all your findings so that you can classify the skin condition as shown in Table 13.6 reproduced from the Assess and Classify chart.

Table 13.6 Classify and treat skin infections.

Sign	Classification	Treatment
<ul style="list-style-type: none"><li>• Any general danger sign</li><li>• Extensive warm redness or swelling</li></ul>	Very severe skin disease	<ul style="list-style-type: none"><li>• Give first dose of antibiotic</li><li>• Refer URGENTLY to hospital</li></ul>
Discrete sores/lesions with pus or crusts	Impetigo	<ul style="list-style-type: none"><li>• Give oral antibiotic for 7 days</li><li>• Follow up in 5 days</li></ul>
Itchiness and papules	Scabies	<ul style="list-style-type: none"><li>• Give benzyl benzoate lotion for 3 days</li><li>• Treat all contacts</li><li>• Follow up in 2 weeks</li></ul>
If there are no enough signs to classify OR if other signs present are not found in the above boxes	Other skin diseases	Refer to health centre or hospital

#### Impetigo

Impetigo is common among preschool children and young adults as well. Impetigo begins as a single reddish tiny swelling containing fluid that progresses to one or many honey-coloured, crusted lesions weeping fluid. Impetigo most frequently occurs on the face, around the nose and mouth, and on the extremities. It is associated with increased risk of kidney disease and it should be treated by giving the child amoxicillin for seven days. Follow-up care should be provided five days after the initial classification.

#### Scabies

Scabies is characterised by severe itching. It is caused by small mites that burrow under the skin, and is transmitted by close contact the infected person. Itching is intense, particularly during the night.



**Vesicles** distributed in the web spaces of fingers, wrist, elbows, umbilical area, genital area and feet are often seen. Usually the face and neck are not affected.

**Vesicles:** small swellings on the skin containing clear fluid. Scabies is described in more detail in Study Session 39 of *Communicable Diseases, Part 4*.

Children with scabies should be treated with an application of 25% benzyl benzoate lotion daily to the whole body below the neck. The solution should be left on for 13 hours and should then be washed off. The treatment should continue for three days. All family members and close contacts of the child should be treated simultaneously, as scabies is very contagious. Follow-up care should be provided within two weeks of the initial classification.

In this study session you have learned about common problems in children, most of which may not appear to cause risk of immediate death. However, as you have seen, diseases of the ears, throat, eyes and skin can give rise to serious medical problems that may lead to death or to disability. Therefore your role in early identification of problems and providing the appropriate treatment and follow-up care is very important.

## Summary of Study Session 13

In Study Session 13, you have learned that:

- 1 All children brought to the health post should be assessed for ear, throat, eye and skin infections.
- 2 Disease of the ears, throat or eyes and skin infections in children under five can give rise to serious medical problems and may lead to disability or even death.
- 3 A child who has mastoiditis must be referred urgently to hospital.
- 4 Wicking a child's ear can be an effective treatment for less serious ear problems.
- 5 Conjunctivitis in newborns is a serious problem that may lead to loss of vision if not treated with antibiotics.
- 6 Some skin diseases can lead to serious complications, such as kidney disease, if they are not treated properly.

## Self-Assessment Questions (SAQs) for Study Session 13

Now that you have completed this study session, you can assess how well you have achieved its Learning Outcomes by answering these questions. Write your answers in your Study Diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

### SAQ 13.1 (tests Learning Outcomes 13.1, 13.2 and 13.6)

Read Case Study 13.3 and then answer the questions below.

#### Case Study 13.3 for SAQ 13.1

A mother brings her ten-month-old infant to your health post, saying that her child has had an ear discharge for about four or five days and he is crying more than usual. He has no swelling behind either ear.

- 
- (a) How would you classify this infant's illness? Give reasons for your answer.
  - (b) What complications might develop from the illness?
  - (c) How would you treat the infant?

**SAQ 13.2 (tests Learning Outcomes 13.1, 13.3 and 13.6)**

Read Case Study 13.4 and then answer the questions below.

**Case Study 13.4 for SAQ 13.2**

A four-year-old child is brought to your health post. Her mother says that the child is finding it painful to swallow and she has been feeling very hot to the touch for the last two days. When you examine the child's throat, you see it is red and there is some yellowish pus.

- (a) How would you classify this child's illness? Give reasons for your answer.
- (b) How would you treat the child?
- (c) How would you advise the mother?

**SAQ 13.3 (tests Learning Outcomes 13.1, 13.5 and 13.6)**

Read Case Study 13.5 and then answer the questions below.

**Case Study 13.5 for SAQ 13.3**

A three-year-old boy is brought to your health post because he has some small skin lesions on his neck. The lesions are crusted and have a yellow discharge.

- (a) How would you classify this problem? Give reasons for your answer.
- (b) What possible complications are linked with this problem?
- (c) How would you treat the child?

**SAQ 13.4 (tests Learning Outcomes 13.1 and 13.4)**

Describe how you would treat conjunctivitis, and give reasons for your answer.

# Study Session 14 Counselling Mothers

## Introduction

Good communication skills are important in order to carry out your work as a Health Extension Practitioner in a professional and effective way. Establishing a good relationship with mothers is particularly important; good communication helps to reassure the mother that her child will receive the best possible care.

A young infant or child who is treated at the health post often needs to have continuing treatment at home. The success of home treatment depends on how well you communicate and counsel the child's mother so she understands the importance of the treatment and how to provide it for her child.

In the previous study sessions you have learned how to assess, classify and treat the sick child. In this study session you will learn how to communicate effectively with mothers about the care of their children and how to teach them to provide treatment and care at home.

## Learning Outcomes for Study Session 14

When you have studied this session, you should be able to:

- 14.1 Define and use correctly all of the key words printed in **bold**. (SAQ 14.1)
- 14.2 Use good communication skills while counselling a mother. (SAQs 14.1 and SAQ 14.2)
- 14.3 Teach the mother to give oral drugs at home. (SAQs 14.1, 14.2 and 14.3)
- 14.4 Teach the mother to treat local infections at home. (SAQs 14.1 and 14.3)
- 14.5 Advise a mother to increase food and fluid during her child's illness. (SAQ 14.3)
- 14.6 Counsel a mother about when to return for a follow-up visit. (SAQs 14.1 and 14.3)

### 14.1 Using good communication skills

An important aspect of good communication skills, which should begin on the mother's first visit to the health post, is to **counsel**, that is to teach or advise, a mother about how to care and treat her child at home. Part of the discussion will include asking questions, listening to the mother's answers, praising and/or giving relevant advice, helping to solve problems, and checking her understanding.

This study session will help you to understand how to communicate effectively with mothers. We set out the steps below that you should follow.

- *Ask and listen* to find out what the child's problems are and what the mother is already doing for the child
- *Praise* the mother for what she has done well
- *Advise* her how to care for her child at home
- *Check* the mother's understanding, for example about home treatment.

---

## Ask and listen

Listen carefully to find out what the child's problems are and what the mother is already doing for her child. Then you will know what she is doing well, and what practices need to be changed.

## Praise

It is likely that the mother is doing something helpful for the child, for example, breastfeeding. Praise the mother for something helpful she has done. Be sure that the praise is genuine, and only praise actions that are indeed helpful to the child.

## Advise

Limit your advice to what is relevant to the mother at this time. Use language that the mother will understand. If possible, use pictures (**mother cards** or similar) or real objects to explain. For example, show amounts of fluid in a cup or container.

Advise against any harmful practices that the mother may have used. When correcting a harmful practice, be clear, but also be careful not to make the mother feel guilty or incompetent. Explain why the practice is harmful.

Some advice is simple. For example, you may only need to tell the mother to return with the child for a follow-up visit in two days. Other advice requires that you teach the mother how to do a task. Teaching how to do a task requires several steps.



### 14.1.1 Teaching the mother how to treat a child

Think about how you learned to write, cook or do any other task that involved special skills. You were probably first given instructions. Then you may have watched someone else to do the task. Finally you tried doing it yourself.

When you teach a mother how to treat a child, use three basic teaching steps:

- 1 *Give information.* Explain to the mother how to do the task.  
Example: explain to the mother how to prepare oral rehydration solution (ORS)
- 2 *Show an example.* Show the mother how to do the task.  
Example: show the mother how to use a packet of ORS and to mix the right amount of water with ORS
- 3 *Let her practise.* Ask the mother to do the task while you watch her.  
Example: Observe the mother while she mixes the ORS solution

Letting a mother *practise* is the most important part of teaching her a task. If a mother does a task while you observe, you will know what she understands and what is difficult for her. You can then help her do it better. The mother is more likely to remember something that she has practised than something that she has heard. Box 14.1 summarises the main points you need to remember when teaching mothers new skills.

### Box 14.1 Important points in advising/teaching mothers

When advising or teaching a mother about new skills you should:

- Use words that she understands
- Use teaching aids that are familiar to her, such as common containers for mixing ORS solution
- Give feedback when she practises. Praise what was done well and make corrections if necessary
- Allow more practice, if needed
- Encourage the mother to ask questions and answer all her questions.

- Why is it important to communicate effectively with mothers?
  - Good communication will help to reassure the mother, and will also help you know that she understands the importance of any home treatment she needs to provide for the child and how to give it.
- Can you think of examples of good communication skills?
  - You may have thought of several examples, such as being able to ask clear and relevant questions. Other examples would be listening actively to the mother, being able to make points using terms that she understands, praising the mother when she has done something well and encouraging her to ask questions.

## 14.2 Checking the mother's understanding

After you teach a mother how to treat her child, ask questions to find out what the mother understands and what, if anything, needs further explanation. Avoid asking **leading questions** (that is, questions which suggest the right answer) or questions that can be answered with a simple yes or no. Leading questions are a poor type of checking question.

### 14.2.1 Asking checking questions

**Checking questions** find out what a mother has learned. A checking question must be phrased so that the mother answers more than 'yes' or 'no'. Good checking questions require that she describes *why*, *how* or *when* she will give a treatment.

Knowing how to ask a good checking question is an important communication skill. Good checking questions begin with question words, such as *why*, *what*, *how*, *when*, *how many*, and *how much*. Poor questions, answered with a 'yes' or 'no', do not tell you how much a mother knows. Some examples of good and poor checking questions are given in Table 14.1 (on the next page).

Examples of good checking questions are:

- What foods will you give your child?
- How often will you give them?

After you ask a question, pause. Give the mother a chance to think and then answer. *Do not answer the question for her. Do not quickly ask a different question.* Wait for her to answer. Give her encouragement.

Table 14.1 Examples of good and poor (leading) checking questions.

Good checking questions	Poor checking questions
<ul style="list-style-type: none"><li>• <i>How</i> will you prepare the ORS solution?</li><li>• <i>How often</i> should you breastfeed your child?</li></ul>	<ul style="list-style-type: none"><li>• Do you remember how to mix the ORS?</li><li>• Should you breastfeed your child?</li></ul>

If you get an unclear response, ask another checking question. Praise the mother for understanding correctly, or clarify your advice as necessary.

If the mother answers incorrectly or says she does not remember, be careful not to make her feel uncomfortable. Give more *information, examples* or *practice* to make sure she understands. For example, you could teach her again how to give a treatment, then ask her some more good checking questions to be confident that she understands what to do. Box 14.2 summarises the key points you need to remember when checking whether a mother understands information you've given her or how to carry out a particular treatment.

### Box 14.2 Important points in checking understanding

When checking the mother's understanding:

- Ask questions that require the mother to explain what, how, how much, how many, when, or why. Do not ask questions that can be answered with just a 'yes' or 'no'.
- Give the mother time to think and then answer.
- Praise the mother for correct answers.
- If she needs it, give more information, examples or practice.

Sections 14.3 to 14.5 below describe the application of good communication and counselling skills in different cases or classifications.

## 14.3 Teach/advise the mother to give oral drugs at home

The oral drugs listed in previous study sessions are given for a range of reasons, administered in different doses (for example according to a child's age or weight) and on different schedules. However, the way to give each oral drug is similar. This section will give you the basic steps for teaching a mother how to give oral drugs to her child. If a mother learns how to give a drug correctly, then the child will be treated properly. The steps below outline how you can help a mother to treat her child with oral drugs at home.



### 14.3.1 Determine the appropriate drugs and dosage for the child's age or weight

Use the Treat the Child chart (from your chart booklet) to determine the appropriate drug and what dosage to give to the child.

### 14.3.2 Explain the reason for giving the drug to the child

Explain to the mother why you are giving the oral drug to her child, and what problem the drug is treating.

### 14.3.3 Demonstrate how to measure a dose

Collect a container of the drug and check its expiry date. Do not use expired drugs. Count out the amount needed for the child. Close the container.

If you are giving the mother *tablets* you should show the mother the amount to give per dose. If needed, show her how to divide a tablet. If a tablet has to be crushed before it is given to a child, add a few drops of clean water and wait a minute or so. The water will soften the tablet and make it easier to crush. It can be crushed between two clean spoons.

If you are giving the mother *syrup*, you should show the mother how to measure the correct number of millilitres (ml) for one dose at home. Use the bottle cap or a common spoon, such as a spoon used to stir sugar into tea or coffee. Show her how to measure the correct dose with the spoon.

One teaspoon (tsp) equals approximately 5.0 ml (see Table 14.2 below).

Table 14.2 Estimation of syrup dosage by teaspoon.

MILLILITRES (ml)	TEASPOONS (tsp)
1.25 ml	$\frac{1}{4}$ tsp
2.5 ml	$\frac{1}{2}$ tsp
5.0 ml	1 tsp
7.5 ml	$1\frac{1}{2}$ tsp
10.0 ml	2 tsp
15.0 ml	3 tsp

Adjust the above amounts based on the common spoons used in your area.

If you are giving the mother *capsules*, show the mother the amount to give per dose. If her child needs less than a whole vitamin A capsule (or cannot swallow a whole capsule), show the mother how to open the capsule and squirt part of its liquid into her child's mouth.

### 14.3.4 Watch the mother practise measuring a dose herself

Watch the mother as she practises. Tell her what she has done correctly and praise her for this. If she measured the dose incorrectly, show her again how to measure it.

---

### 14.3.5 Explain to the mother how to give the drug

Tell the mother how much of the drug she should give her child. This means communicating clearly how many times per day, when and for how many days the drug should be given to her child. You should also explain to the mother that if her child is vomiting, she should give the drug even though the child may vomit it up. Tell her to watch the child for 30 minutes. If the child vomits within the 30 minutes (the tablet or syrup may be seen in the vomit), give another dose. If the child is dehydrated and vomiting, she should wait until the child is rehydrated before giving the dose again.

### 14.3.6 If more than one drug is prescribed, collect, count and package each drug separately

Explain to the mother that her child is getting more than one drug because more than one illness is being treated. Show the mother the different drugs. Explain how to give each drug and what they are for.

### 14.3.7 Finishing the course of treatment

You should tell the mother that while the child is getting better, she should continue to treat the child. This is important because the bacteria or the malaria parasite may still be present even though the signs of disease are gone. Therefore all of the drugs in a course of treatment must be finished, even if the child appears better.

### 14.3.8 Check the mother's understanding before she leaves the health post

Ask the mother good checking questions before she goes home with her child so that you can be confident she understands how and when to provide the oral drug to her child.

## 14.4 Teach the mother how to treat local infections at home

This section describes how to teach a child's mother to treat **local infections** at home. Local infections include coughs, a sore throat, eye infection, mouth ulcers, ear infection, an umbilicus that is red or draining pus, skin pustules and thrush.

When teaching or advising a mother, you should:

- Explain what the treatment is and why it should be given
- Describe the treatment steps listed in the appropriate box on the TREAT charts (see your chart booklet)
- Watch the mother as she does the first treatment
- Tell her how often to do the treatment at home
- If needed for treatment at home, give the mother the tube of tetracycline ointment or a small bottle of gentian violet
- Check the mother's understanding about how to treat her child and how often, before she leaves the clinic.

Some treatments for local infections cause discomfort. Children often resist having their eyes, ears or mouth treated. Therefore, it is important that you show the mother how to hold her child still. This will prevent the child from interfering with the treatment.

The drawing in Figure 14.1 shows a good position for holding a child. Tilt the child's head back when applying eye ointment or treating mouth ulcers. Tilt the child's head to the side when wicking/cleaning the ear.

Do *not* attempt to hold the child still until immediately before treatment.

The following examples cover some of the material you have already read in an earlier section in this Module. However, these examples provide good revision for you and also help you see how to apply your knowledge about effective counselling to practical cases.

#### 14.4.1 Treat eye infection with tetracycline eye ointment

If the child is going to be *urgently* referred, you should treat the eye infection. Clean the eye gently. Pull down the lower lid. Squeeze the first dose of tetracycline eye ointment onto the lower eyelid and then refer him. Don't try to counsel the mother at this point, because there is not enough time.

If the child is *not* being referred, then you should teach the mother how to apply the tetracycline eye ointment.

Tell the mother that she should treat both eyes and that she will need to:

- Wash her hands before and after treating the eyes
- Clean the child's eyes immediately before applying the tetracycline eye ointment. Use a clean cloth to wipe each eye
- Repeat the process (cleaning the eyes and applying ointment) three times per day, in the morning, at mid-day and in the evening.

Then *show the mother* how to treat the eye. Be sure to wash your hands.

- Have someone hold the child still
- Wipe one of the child's eyes with the cloth
- Hold down the lower lid of child's eye. Tell her to be careful that the tube does not touch the eye or lid
- Squeeze the ointment onto the lower lid. Make sure the mother sees where to apply the ointment and the amount she should use (see Figure 14.2).



Figure 14.1 Positioning a child to apply medication.

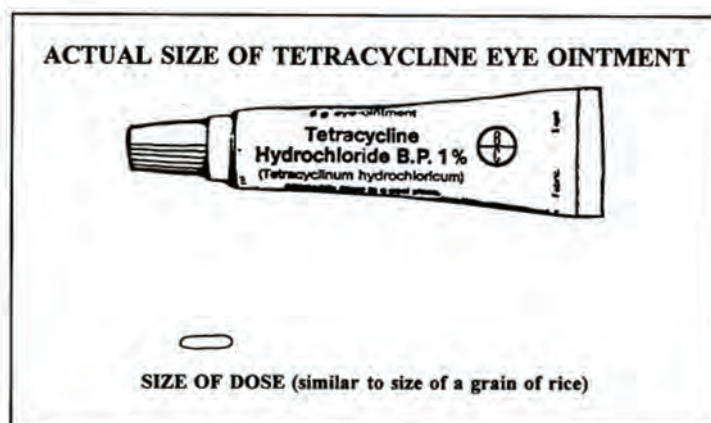


Figure 14.2 Actual size of tetracycline ointment to be applied to the child's eye. (Source: FMOH IMNCI Training Module)

Ask the mother to *practise* cleaning and applying the eye ointment in the child's other eye. Observe and give feedback as she practises. When she is finished, give her the following additional information.

- *Treat both eyes until the redness is gone from the infected eye.* The infected eye is improving if there is less pus in the eye or the eyes are not stuck shut in the morning
- Do *not* put any other eye ointments, drops or alternative treatments in the child's eyes. They may be harmful and damage the child's eyes
- After two days, if there is still pus in the eye, she should bring the child back to the health post.

Then give the mother the tube of ointment to take home. Give her the same tube you used to treat the child.

Before the mother leaves, ask *checking questions* to ensure that she understands how to give the treatment to her child at home.

#### 14.4.2 Dry a discharge from the ear by wicking

To teach a mother how to dry the ear by wicking, first tell her it is important to keep an infected ear dry to allow it to heal. Then show her how to wick her child's ear.

As you wick the child's ear, tell the mother to:

- Use clean, absorbent cotton cloth (see Figure 14.3) or soft strong tissue paper for making a wick. Explain to her that she must not use a cotton-tipped applicator, a stick or flimsy paper as these will fall apart in the ear
- Place the wick in the child's ear until the wick is wet
- Replace the wet wick with a clean one
- Repeat these steps until the wick stays dry. Then the ear is dry.

*Observe the mother as she practises.* Give feedback. When she is finished, give her the following information:

- Wick the ear three times daily
- Use this treatment for as many days as it takes until the wick no longer gets wet when put in the ear and no pus drains from the ear
- Do not place anything (oil, fluid, or other substance) in the ear between wicking treatments. Do not allow the child to go swimming. No water should get in the ear.

Before the mother leaves, ask *checking questions* to ensure that she knows how to wick the child's ear at home.

#### 14.4.3 Treat mouth ulcers with gentian violet

Treating mouth ulcers controls infection and helps the child to eat. Teach the mother to treat mouth ulcers with **half-strength gentian violet**. Gentian violet used in the mouth should be half strength (0.25%), not full strength (0.5%).

You should give the following information to the mother:

- Her child will start eating normally sooner if she paints the mouth ulcers in her child's mouth. It is important that the child eats
- She must clean the child's mouth. She should wrap a clean soft cloth around her finger, dip it in salt water and wipe the mouth

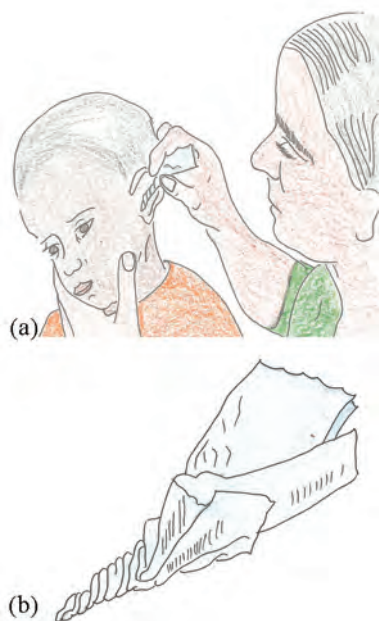


Figure 14.3 (a) Using an ear wick to treat an ear infection. (b) A wick should be made from clean cotton or strong tissue paper. Wick the ear three times daily.

- She must use a clean cloth or a cotton-tipped stick to paint gentian violet on the mouth ulcers. The gentian violet will kill the germs that cause the ulcers. Put a small amount of gentian violet on the cloth or stick. Tell her to ensure that the child does not drink the gentian violet
- She should treat the mouth ulcers twice a day, in the morning and evening
- She should come back to the health post after two days for a follow-up visit, but she needs to treat the mouth ulcers for five days.

Wrap a clean cloth around your finger and dip it into salt water. Show the mother how to first wipe the child's mouth clean and then how to paint with half-strength gentian violet.

Ask the mother to *practise*. Watch her wipe the child's mouth clean and paint the rest of the ulcers with gentian violet. Comment on what she does well and give feedback on anything that needs to be improved.

Give the mother a bottle of half-strength gentian violet to take home. Tell her to return in two days for a follow-up visit. Also tell her that she should return to the clinic earlier if the mouth ulcers get worse or if the child is not able to drink or eat.

Before the mother leaves, ask *checking questions* to ensure that she knows how to treat her child's mouth ulcers at home and when she should return to the clinic.

#### 14.4.4 Treat the young infant for local infections

There are *three types of local infections* in a young infant that a mother or caregiver can treat at home: red or pus-draining umbilicus, skin pustules, and oral thrush.

Twice each day, the mother should clean the infected area and then apply gentian violet. Teach the mother how to treat the infection and check her understanding. If the mother is going to treat oral thrush, give her a bottle of *half-strength* (0.25%) gentian violet. If the mother is going to treat skin pustules or umbilical infection, give her a bottle of *full-strength* (0.5%) gentian violet.

#### 14.4.5 Soothe the throat or relieve coughs with a safe remedy

To soothe the child's throat or relieve a cough, use a safe remedy. Such remedies can be homemade, for example honey, tea, warm soups, and warm gruel, and are as effective as those bought in a store. When explaining how to give the safe remedy, it is not necessary to watch the mother practise giving the remedy to the child. Exact dosing is not important with this treatment.

If the child is exclusively breastfed, tell the mother that she does not need to give other drinks or remedies. Breastmilk is the best soothing remedy for an exclusively breastfed child.

Harmful remedies may be used in your area. Tell the mother *not* to use cough syrups. These syrups may sedate the child and interfere with the child's feeding. They may also interfere with the child's ability to cough up secretions from the lungs. Medicated nose drops (that is, nose drops that contain anything other than salt) should also not be used; these drops might have similar side effects to cough syrups and are also relatively expensive.

### 14.4.6 Advise the mother to increase fluid during the child's illness

A sick child requires extra fluids. Advice about fluids is summarised in Box 14.3 below. Give this advice to every mother who is taking her child home *unless* she has already received many instructions and may be overwhelmed by more advice, or she has already been taught Plan A (on the Treat the Child chart).

#### Box 14.3 Advice on providing fluids to a sick child

##### For any sick child:

- Advise the mother to increase fluid during the illness. For example, give the child soup, rice water, yoghurt drinks or clean water.
- Breastfeed more frequently and for longer each feed.

##### For a child with diarrhoea:

- Extra fluid can be life saving. Give the child fluid according to Plan A or Plan B on the Treat the Child chart.

- What are the three basic steps you should take when teaching a mother to care for her child at home?
  - You should recall from the beginning of this study session that the three main steps are: give the mother information, show her an example and then let her practise. As you read, the mother is more likely to understand what to do if she has had a chance to practise first.
- What are examples of good checking questions?
  - Here are some examples you may have thought of, or you might have come up with some of your own: How often do you breastfeed your child? What do you need to do to treat your child's eye infection? What will you do if your child has a fever?

Remember you need to use words such as how, why, what and when so that the mother cannot just answer yes or no to your question.

### 14.5 Advise the mother when to return to see a health worker

Every mother who is taking her child home needs to be advised when to return to the health worker. She may need to return:

- for a follow-up visit in a specific number of days (for example, when it is necessary to check the progress of a child on an antibiotic)
- immediately, if signs appear that suggest the illness is worsening, or
- for the child's next immunization (the next **well-child visit**).



### 14.5.1 Follow-up visits

In the earlier study sessions in this Module, you learned that certain problems require follow-up visits in a specific number of days. For example, pneumonia, dysentery and acute ear infection require follow-up visits to ensure that an antibiotic is working. Persistent diarrhoea requires follow-up visits to ensure that feeding changes are working. Some other problems, such as fever or pus draining from the eye, require follow-up visits only if the problem persists.

At the end of the sick child visit, you should tell the mother when to return for a follow-up visit. Sometimes a child may need follow-up visits for more than one problem. In such cases, tell the mother the earliest *definite* time to return. Also explain to her that she may need to come for an earlier follow-up visit if a problem such as fever persists. Table 14.3 below sets out the advice you should give the mother on follow-up visits according to the child's illness.

Table 14.3 Summary of follow-up times for different problems.

If the child has the following illness	Return for follow-up in:
<ul style="list-style-type: none"> <li>• Pneumonia</li> <li>• Dysentery</li> <li>• Malaria, if fever persists</li> <li>• Fever, malaria unlikely, if fever persists</li> <li>• Fever, no malaria (no malaria risk), if fever persists</li> <li>• Measles with eye or mouth complications</li> </ul>	2 days
<ul style="list-style-type: none"> <li>• Persistent diarrhoea</li> <li>• Acute ear infection</li> <li>• Chronic ear infection</li> <li>• Feeding problem</li> <li>• Any other illness, if not improving</li> </ul>	5 days
<ul style="list-style-type: none"> <li>• Uncomplicated severe malnutrition</li> </ul>	7 days
<ul style="list-style-type: none"> <li>• Confirmed/confirmed symptomatic HIV infection (first follow-up)</li> <li>• Suspected symptomatic HIV infection (first follow-up)</li> <li>• Possible HIV infection (first follow-up)</li> <li>• Anaemia</li> </ul>	14 days
<ul style="list-style-type: none"> <li>• Very low weight for age/moderate acute malnutrition</li> <li>• Suspected symptomatic HIV infection (routine monthly follow-up)</li> <li>• Possible HIV infection (routine monthly follow-up)</li> </ul>	30 days

### 14.5.2 Immediate return visits

There will be situations where the mother should not wait for the prescribed time for follow-up but should return to the health worker *immediately*. It is extremely important that you stress this to the mother when you advise her about follow-up visits. Table 14.4 (on the next page) sets out when the mother should return to see you or another health worker immediately.



Table 14.4 Summary of when to return immediately to the health post.

Advise the mother to return immediately if the child has any of these signs:	
Any sick child	<ul style="list-style-type: none"> <li>• Not able to drink or breastfeed</li> <li>• Becomes sicker</li> <li>• Develops fever</li> </ul>
If child has no pneumonia: cough or cold	<ul style="list-style-type: none"> <li>• Fast breathing</li> <li>• Difficult breathing</li> </ul>
If child has diarrhoea	<ul style="list-style-type: none"> <li>• Blood in stool</li> <li>• Drinking poorly</li> </ul>

In your health post, you may have the mother's card resource. You can use the **Mother's Card** when teaching her the signs for when to return immediately. Use local terms that the mother can understand. The Mother's Card presents the signs in both words and drawings. Be sure to check the mother's understanding so that you are satisfied that she knows in what circumstances she should return to the health post immediately with her child.

### 14.5.3 Next 'well child' visit

Remind the mother of the next visit her well child needs for immunization, vitamin A and deworming *unless* the mother already has a lot to remember and will return soon anyway.

Good communication with mothers and caregivers of sick infants and children is important. Not only because you need to be confident that the child will receive the correct treatment when they are at home, but also so that you can reassure the mother, who may be feeling very anxious about her infant or child. Being sensitive to the mother's concerns, praising her for the things she is doing well and taking time to show her how to treat her child is therefore a key part of your role.

## Summary of Study Session 14

In Study Session 14, you have learned that:

- 1 It is important to ask the mother about the child's problems and listen to what she is already doing for the child; this will include praising her for the things that she is doing well and advising her on things she can do to improve the care of her child at home.
- 2 There are three basic teaching steps you should take when you are teaching a mother how to care for her child at home. These are: give information, show an example and let her practise. Letting a mother practise is the most important part of teaching a task because the mother is more likely to remember something that she has practised than something that she has heard.
- 3 Asking good checking questions (rather than poor, or leading, checking questions) allows you to check that the mother has understood what you have taught her and that she knows when she has to return for a follow-up visit.
- 4 Counselling the mother about how to care for local infections at home is very important. Local infections include cough, sore throat, eye infection, mouth ulcers, ear infection, an umbilicus that is red or draining pus, skin

pustules and thrush. A sick child requires extra fluids and you should give this advice to every mother who is taking her child home.

- 5 It is important that every mother who is taking her child home is advised when to return to the health worker; the three common reasons to return are for a follow-up visit to check on the progress of the child's recovery from illness, for immediate urgent reasons, and for the well child visit.

## Self-Assessment Questions (SAQs) for Study Session 14

Now that you have completed this study session, you can assess how well you have achieved its Learning Outcomes by answering the questions below. Write your answers in your Study Diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

### SAQ 14.1 (tests Learning Outcomes 14.1, 14.2, 14.3, 14.4 and 14.6)

- (a) What information would you give to a mother whose child has mouth ulcers?
- (b) What could you do to ensure that the mother understands your instructions?
- (c) List some of the good communication skills you would be using when advising the mother.

### SAQ 14.2 (tests Learning Outcomes 14.2 and 14.3)

- (a) Why is it important to ask mothers or caregivers good checking questions?
- (b) Suggest three examples of good checking questions.
- (c) Give examples of three poor checking questions, and say why these are not effective ways of ensuring the mother understands what you have explained to her during the visit.

### SAQ 14.3 (tests Learning Outcomes 14.3, 14.4, 14.5 and 14.6)

Read Case Study 14.1 and then answer the questions below.

#### Case Study 14.1 for SAQ 14.3

Mimi is a six-month-old child who is being treated for dysentery and an acute ear infection. She also has a fever.

- (a) What advice would you give the mother about a follow-up visit?
- (b) What information would you give the mother about treating the child at home, and how would you know if she understands your advice?
- (c) What signs would alert the mother that she needs to bring the child back to the health post immediately?



# Study Session 15 Synthesis of IMNCI for a Sick Child up to Five Years: Assess and Classify

## Introduction

This Module has introduced you to the integrated strategy for managing and treating the major childhood illnesses. You have learned how to assess, classify, identify and provide appropriate treatment for children under five years old. Each study session has been designed to help you understand each of the main symptoms individually. However, as you read in the introduction to the Module, IMNCI is an *integrated* strategy and therefore you need to understand how all the components work together to ensure you can provide the best possible care and support for a sick child and advise parents how to give effective home care. The purpose of the next two study sessions therefore, is to help you learn how to look at a child holistically. This study session will look at assessing and classifying the sick child.

## Learning Outcomes for Study Session 15

When you have studied this session, you should be able to:

- 15.1 Define and use correctly all of the key words printed in **bold**. (SAQ 15.1)
- 15.2 Demonstrate that you know how to determine health problems in children up to five years old. (SAQ 15.1)
- 15.3 Describe the severity of a child's condition. (SAQ 15.1)

## 15.1 Integrated case management process

The IMNCI guidelines are based on the following principles:

- All sick children must be checked for 'general danger signs' which indicate the need for immediate referral or admission to a higher health facility level.
- All sick children must be routinely assessed for major symptoms: cough, fever, diarrhoea, ear problems.
- Children should also be assessed for nutritional and immunization status, feeding problems and other problems.

You learned about all of these key principles in the earlier study sessions in this Module. We are now going to describe how to bring your learning together so you can treat the sick child in a holistic way.

Figure 15.1 (on the next page) summarises the integrated case management process in the form of a flow diagram. Take a few moments to look at this now. After assessing for general danger signs, other symptoms and problems, the next step is to use the colour coded **triage** system (identifying the appropriate treatment according to the priority or severity of the symptoms). This guides how you classify the child's main symptoms, feeding status and nutrition. You can see from Figure 15.1 that the classification will be either 'urgent referral is needed and possible' or 'no urgent referral needed or possible'.

Triage is pronounced 'tree-ahj'.

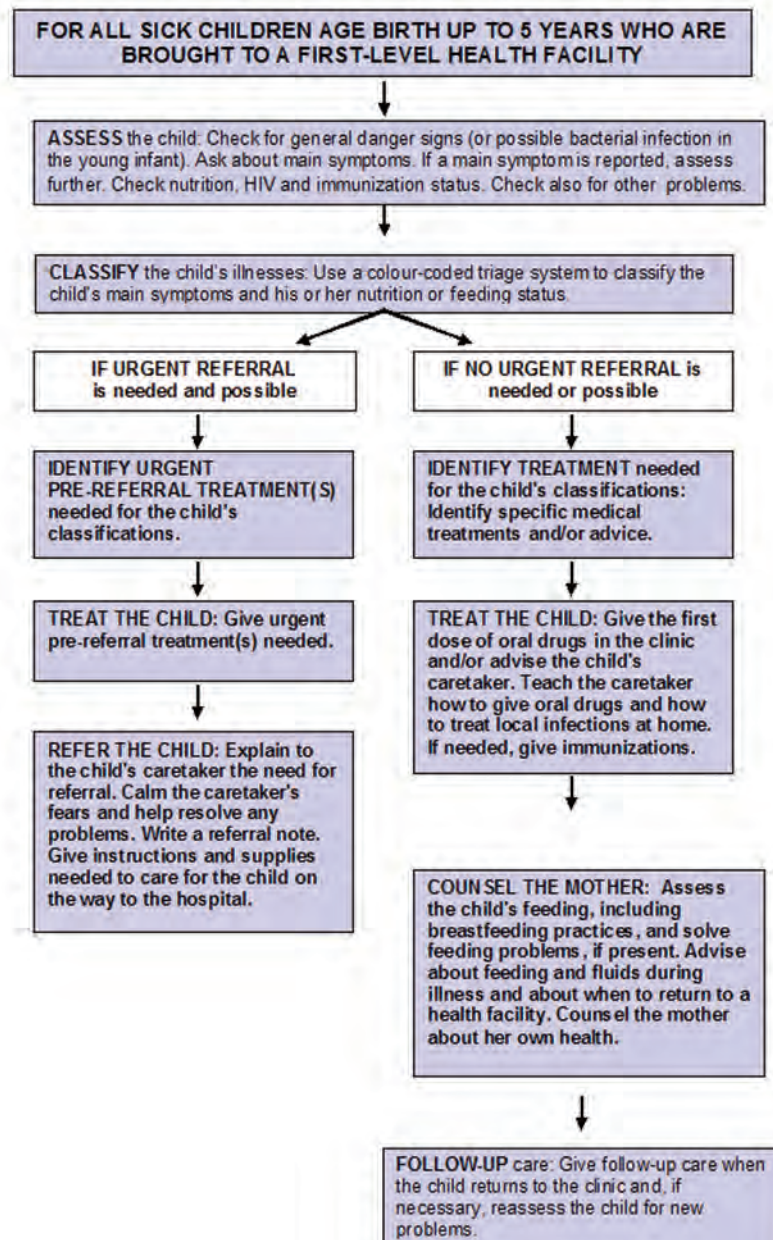


Figure 15.1 The integrated case management process.

As well as understanding the case management process, it is important that you know how to select the correct chart for managing the sick child.

## 15.2 Selecting the appropriate case management charts

The IMNCI chart booklet contains three charts for managing sick children aged two months up to five years, and a separate chart for managing sick young infants from birth up to two months.

Depending on the procedure for registering patients at the health post, the child's name, age and other information (such as address) may have been recorded already. If not, you should begin by asking the child's name and age, before deciding which age group a child is in, which will be either:

- Age birth up to two months, or
- Age two months up to five years.

You should then select the appropriate chart for the child. Figure 15.2 shows this decision-making process.

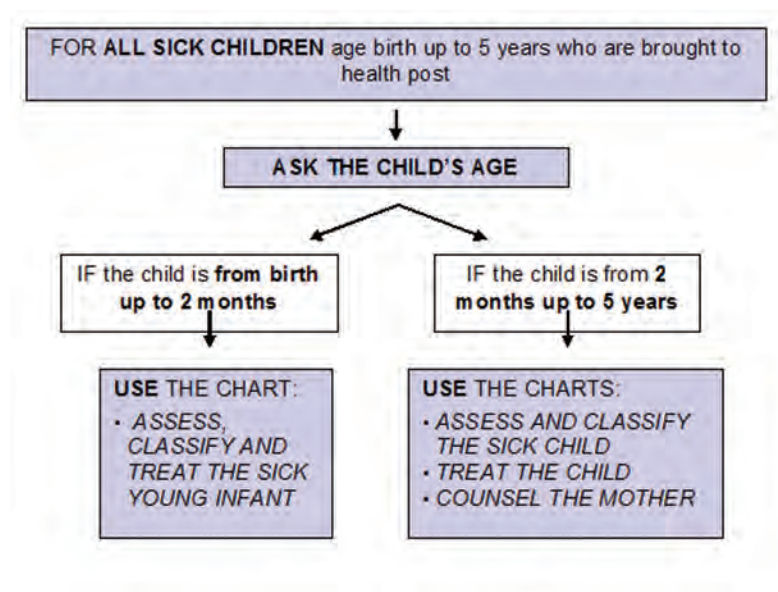


Figure 15.2 Selecting the appropriate case management chart.

The IMNCI case management charts guide you through the following steps:

- Assess the sick child or sick young infant
- Classify the illness
- Identify the treatment
- Treat the child or young infant
- Counsel the mother
- Give follow-up care.

The case management steps are the same for all sick children from birth up to five years. However, because signs, classifications, treatments and counselling differ between sick young infants and sick children, it is essential to start the case management process by selecting the appropriate set of IMNCI charts. The charts, tables and registration books for the sick child aged two months up to five years are briefly described below.

### 15.2.1 Assess and Classify chart

You are now going to look at how to use the Assess and Classify chart. You will need to have a copy of the IMNCI chart booklet with you. It will help you to have a copy to refer to throughout the rest of this study session.

First, complete Activity 15.1 on the next page.



---

### Activity 15.1 Using the Assess and Classify chart

Open your chart booklet on page 22. You will see that this is the Assess and Classify chart for a sick child aged two months up to five years. Take a few moments to read the information there, and look at how the Assess column on the left-hand side describes how to take a history and do a physical examination. You will see that it describes how to assess for general danger signs (in the upper box) and the main symptom, cough (in the lower box). When you complete the sick child's recording form you will need to make a note of the main symptoms and signs you found during the examination.

---

#### 15.2.2 Identify treatment

The Identify Treatment column of the Assess and Classify chart helps you to identify quickly the treatment needed for the classifications written on your case recording form. Appropriate treatments are recommended for each classification. When a child has more than one classification, you must look at more than one table to find the appropriate treatments, for each one, and write these on the reverse side of the case recording form.

#### 15.2.3 Treat the child

The IMNCI chart entitled Treat the Child shows you how to carry out the treatment steps identified on the Assess and Classify chart. '**TREAT**' can mean giving treatment in the health post, or prescribing drugs or other treatments to be given at home; it can also mean teaching the caregiver how to carry out the treatments. For example, if you look at page 29 in your chart booklet you can see that there are two boxes. The box on the left side of the page describes 'Teach the mother to give oral drugs at home' and on the right side you will see 'Give an appropriate oral antibiotics'.

#### 15.2.4 Give follow-up care

Several treatments in the Assess and Classify chart require the mother to return to the health post with her child for a follow-up visit. At a follow-up visit you can see whether the drug or other treatment that was prescribed for the child has been effective, and that the child's health is improving. The Give Follow-up Care section (page 38 in the chart booklet) of the Treat the Child chart describes the steps for conducting each type of follow-up visit.

#### 15.2.5 Counsel the mother

Recommendations on feeding, fluids for the sick child, and when the mother should return with her child to the health post are given on the chart titled Counsel the Mother. If you look at page 42 of your chart booklet you will see that it describes assessing the child's feeding. For many sick children, you will have to assess feeding and counsel the mother about any feeding problems that you have identified. For all sick children who are going home, you should advise the child's mother about feeding, fluids she must give the child, and when to return for further care. You should always write the results of any feeding assessment on the bottom of the case recording form. An important aspect of your role as a Health Extension Practitioner is to provide advice to the mother about her own health.



You are now going to look at how to assess and classify for children up to two months old, beginning with essential newborn care.

## 15.3 The sick young infant from birth up to 2 months

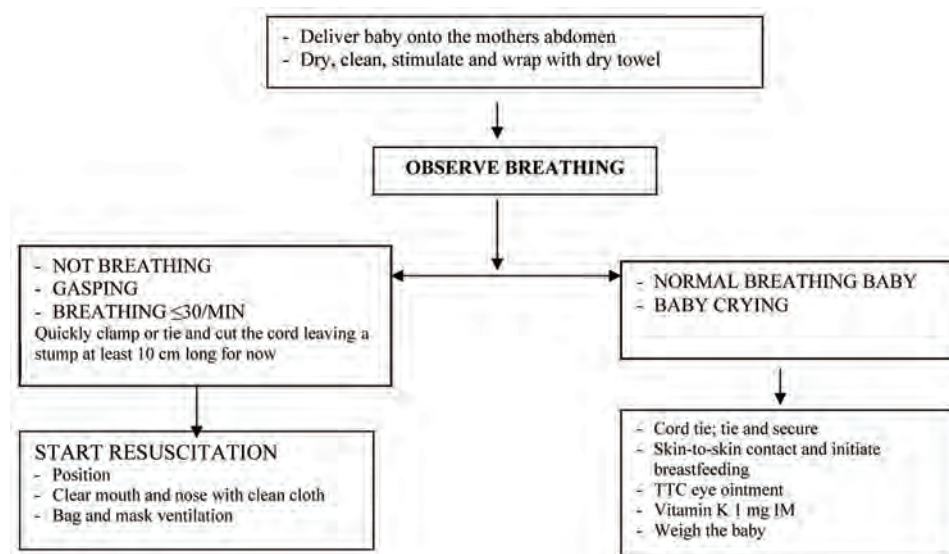
You have already come across some of the information earlier in your studies. However, as the immediate care of a newborn can make a significant difference to the life chances of that child, it is critical that you feel confident in being able to provide the most effective integrated care possible. You should therefore see this section as an opportunity to really understand your role and task as a Health Extension Practitioner when looking after a newborn baby.

The care you give immediately after birth is simple but important. Most babies breathe and cry at birth with no help. Remember that the baby has just come from the mother's uterus. It was warm and quiet in the uterus and the amniotic fluid and walls of the uterus gently touched the baby. You too should be gentle with the baby, and keep the baby warm. Skin-to-skin contact with the mother keeps the baby at the perfect temperature.

Care of the normal newborn, and the special care needed for preterm and low birth weight babies, is described in the *Postnatal Care Module*.

### 15.3.1 Steps of immediate newborn care

You have learned the steps of immediate care which should be given to all babies at birth. In case you need to remind yourself what these are, take a look at Figure 15.3 below.



If any danger sign is present refer the baby urgently.

Figure 15.3 Steps for newborn care.

Study Session 1 of this Module described the newborn danger signs (so look back at this if you need to remind yourself what they are).

- What are the newborn danger signs?

- You should have recalled that the newborn danger signs are that the child:
  - is not able to drink or breastfeed
  - vomits everything
  - has convulsions, in the past or during the visit
  - is lethargic or unconscious.

### 15.3.2 Assess and classify the sick young infant

This section describes the steps you should take to assess and classify a sick young infant at the initial visit.

When a sick child is brought to your health post for an initial visit you should always do the following:

- Check for signs of possible bacterial infection. Then classify the young infant based on the clinical signs found
- Ask about diarrhoea. If the infant has diarrhoea, assess for related signs. Classify the young infant for dehydration. Also classify for persistent diarrhoea and dysentery, if present
- Check for feeding problems or low weight. This may include assessing breastfeeding. Then classify feeding
- Check the young infant's immunization status
- Assess any other problems.

If you find a reason that a young infant needs urgent referral, you should continue the assessment. However, you should not carry out the breastfeeding assessment because this can take some time. Figure 15.4 below summarises these steps.

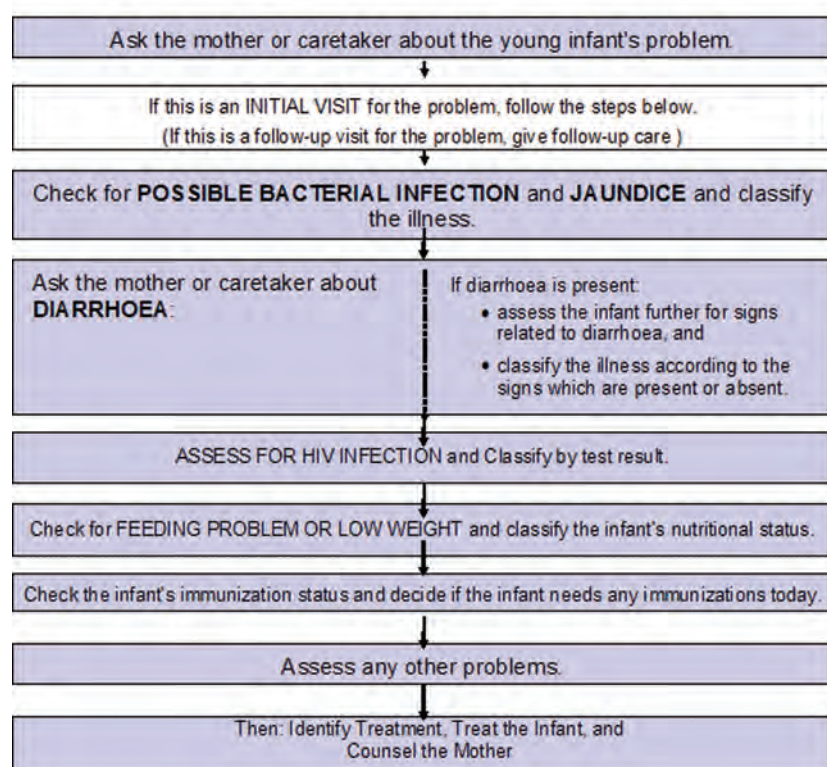


Figure 15.4 Assess and classify the sick young infant.

## How to classify possible bacterial infection

Assessing for bacterial infection is critically important and must be done for every sick young infant. In this step you are particularly looking for signs of a serious infection. A young infant can become sick and die very quickly from serious bacterial infections such as pneumonia, sepsis and meningitis.

You should assess and classify all sick young infants for bacterial infection and jaundice. Compare the infant's signs with the signs listed on the appropriate chart and choose the appropriate classification.

- If the infant has any sign in the top (pink) row, select *possible serious bacterial infection or very severe disease*.
- If the infant has any sign in the middle (yellow) row, select *local bacterial infection*.
- An infant who has none of the signs gets the classification of bacterial infection unlikely (green row).

## How to assess and classify a young infant for diarrhoea

Remember that you should always ask the mother whether the young infant has diarrhoea. If she says yes, or you see that the young infant has diarrhoea, you should classify for diarrhoea. You learned about this in Study Session 5 of this Module, and should be able to recall that a young infant with diarrhoea is assessed for:

- how long the child has had diarrhoea
- blood in the stool to determine if the young infant has dysentery, and
- signs of dehydration.

## Classify diarrhoea

Diarrhoea in a young infant is classified in the same way as it is in an older infant or young child.

## Assess for HIV infection

Look at the chart on assessing and classifying the sick young infant for HIV infection. You should ask the mother whether she or her child has had a positive HIV test. Remember this can be a very sensitive issue for the mother so you should ask her in a respectful way and reassure her that the information is confidential.

If the child has had an HIV test, determine whether the test was a rapid test for HIV antibodies, or a DNA PCR test for the virus, and then classify the sick young infant for HIV infection base on the test result.

## How to check a young infant for feeding problems or low weight

Assessing feeding and/or low weight problems has two steps. If you look at page 8 in your chart booklet you will see there are two sections in the box separated by a dashed line. In the first (upper) part are the questions you should ask the mother. You need to determine if she is having difficulty feeding the infant, what the young infant is fed and how often. You also need to determine weight for age.

If the infant has any problems with breastfeeding or is low weight for age, you assess how the infant breastfeeds. You will see this is the second (lower) part of the box on page 8 in your chart booklet.

---

### How to classify feeding problems or low weight

There are three possible classifications for feeding problems or low weight:

- Not able to feed — possible serious bacterial infection
- Feeding problem or low weight
- No feeding problem.

### How to check the young infant's immunization status

You should check the immunization status by checking the immunization card, and if this is not available you should ask the mother what vaccinations her child has received

### How to assess other problems

Assess any other problems mentioned by the mother or observed by you.

You are now going to look at how to assess and classify children aged between two months and five years.

## 15.4 Assess and classify the sick child aged two months to five years

When you see the mother, or the child's caregiver, with the sick child you should:

- Greet the mother appropriately and ask about the child
- Look to see if the child's weight and temperature have been recorded
- Ask the mother what the child's problems are
- Determine if this is an initial (first) or follow-up visit for this episode of an illness or problem.

If the child was seen a few days before for the *same* illness, this is a *follow-up* visit. A follow-up visit has a different purpose from an initial visit. During a follow-up visit, you find out if the treatment given during the initial visit has helped the child. If the child is not improving or is getting worse after a few days, you need to make a decision whether to refer the child to a hospital or change the child's treatment.

### 15.4.1 Assess and classify general danger signs

You are now going to look again at how you assess and classify a sick child ages two months to five years. First you need to assess for the general danger signs, then you need to assess the child for cough and difficult breathing.

### 15.4.2 Assess and classify cough or difficult breathing

Once you have assessed a child for general danger signs, you should ask the mother, 'Does the child have cough or difficult breathing'? If the answer is 'yes', continue with the assessment.

## How to classify cough or difficult breathing

There are three possible classifications for a child with cough or difficult breathing:

- Severe pneumonia or very severe disease
- Pneumonia
- No pneumonia, cough or cold.

### 15.4.3 Assess and classify diarrhoea

After you assessed for cough or difficult breathing, the next step is to assess the child for diarrhoea.

#### How to classify diarrhoea

The three classifications for diarrhoea are dehydration, persistent diarrhoea and dysentery. Dehydration and persistent diarrhoea are classified as follows:

##### Dehydration

- Severe dehydration
- Some dehydration
- No dehydration.

##### Persistent diarrhoea

- Severe persistent diarrhoea
- Persistent diarrhoea.

Dysentery does not have any other classification.

#### Fever

The next main symptom you need to assess is fever. A child with fever may have malaria, measles or another severe disease. Or, a child with fever may only have a simple cough or cold or other viral infection.

#### How to assess fever

If you open your chart booklet at p.24 you will find the assessment box for fever. You can see that the assessment of fever has two parts. The upper part of the box (above the broken line) describes how to assess the child for signs of malaria, measles, meningitis and other causes of fever. The lower part of the box describes how to assess the child for signs of measles complications, if the child has measles now or has had measles within the last three months.

Because fever can be caused by serious illnesses, such as malaria, measles and meningitis, as well as more simple illnesses (such as a common cold), it is important that you are able to recognise and assess fever and classify the illness that is causing it.

- If the child has a fever, what are the three levels of malaria risk?
- You will need to decide whether a child with fever has a *high* risk, a *low* risk or *no* risk for malaria. You should ask about the duration of the fever and, if the child has recently travelled, whether it was to a high or low risk area. If you are not certain, you should assume a high risk of malaria.

Ask about fever in ALL sick children.

- What signs should you look for in the child with fever?
- You should examine the child for stiff neck, runny nose and signs suggestive of measles, such as a generalised rash, cough or red eyes.

### How to classify fever

If the child has fever and no signs of measles, classify the child for fever only. If the child has signs of both fever and measles, classify the child for fever and for measles.

There are three possible classifications for fever in an area with low malaria risk:

- Very severe febrile disease
- Malaria
- Fever – malaria unlikely.

There are two possible classifications for fever in an area with no malaria risk:

- Very severe febrile disease
- Fever – malaria unlikely.

There are three possible classifications for measles:

- Severe complicated measles
- Measles with eye or mouth complications
- Measles.

You are now going to look at the management of children with ear problems.

## 15.5 Ear problems

### 15.5.1 How to assess an ear problem

You learned about ear problems in Study Session 13. As you read, although ear problems do not directly lead to death, they can cause serious complications that may result in permanent disability or death by involving other vital organs.

Ask about ear problems in *all* sick children. Ask the mother or caregiver whether the child has any ear pain or ear discharge and for how long they have had fever. Look for pus draining from the ear or feel for tender swellings behind the ear.

### 15.5.2 How to classify an ear problem

There are four classifications for ear problems:

- Mastoiditis
- Acute ear infection
- Chronic ear infection
- No ear infection.

Study Session 13 looked at each of these problems in detail, so you should return to this study session if you need to remind yourself what is the appropriate treatment for each classification.



## 15.6 Malnutrition and anaemia

A mother may bring her child to the health post because the child has an acute illness. A sick child can also be malnourished, but the child's family may not notice the problem, because the child may not have specific complaints that point to malnutrition and anaemia. A child with malnutrition has a higher risk of disease and death. There it is important that you check *all* sick children for signs suggesting malnutrition and anaemia.

Check ALL sick children for signs suggesting malnutrition and anaemia.

### 15.6.1 How to assess for malnutrition and anaemia

- Look for:
  - visible severe wasting
  - palmar pallor
  - oedema of both feet
  - weight for age.
- What are the signs of palmar pallor?
  - If the skin of the child's palm is pale, but has some pink areas, the child has some palmar pallor. If the skin is very pale or so pale that it looks white, the child has severe palmar pallor.
- How do you determine whether there is oedema?
  - If you press gently with your thumbs on the topside of each of the child's feet for at least three seconds and a dent remains following the pressuring, oedema is present.

### 15.6.2 How to classify nutritional status and anaemia

As you read in Study Session 7, adequate feeding is essential for a child's growth and development. Poor feeding during infancy can have a lifelong effect, so recognising problems and improving feeding if necessary is an important task for you as a Health Extension Practitioner.

There are six classifications for a child's nutritional status and anaemia:

- Severe malnutrition
- Very low weight
- Not very low weight
- Severe anaemia
- Anaemia
- No anaemia.

Take another look at the descriptions in Study Session 7 of this Module, if you need to remind yourself how to assess nutritional status and anaemia, and what recommendations you can give a mother for feeding her infant and young children in ways appropriate to their age and needs.

## 15.7 HIV infection

### 15.7.1 Assess for HIV infection

If during assessment up to this point, a child has been found to have at least one or more of the following classifications:



- Pneumonia or severe pneumonia now
- Persistent or severe persistent diarrhoea now
- Acute ear infection with ear discharge or chronic ear infection
- Very low weight for age or severe malnutrition

or, if the mother or child is known to be HIV positive, you should do an assessment for HIV infection.

### 15.7.2 Classify for HIV infection

There are five classifications in the Assess and Classify chart:

- Confirmed symptomatic HIV infection
- Confirmed HIV infection
- Suspected symptomatic HIV infection
- Possible HIV infection
- HIV infection unlikely.

You learned about these classifications in Study Session 9. As you read, children with HIV are more likely to get infections and get them more often, and pneumonia in particular is a leading cause of hospital admissions and death in HIV-positive children. The correct classification will enable you to identify the most appropriate treatment, if any, for the child.

## 15.8 Immunization status

Check the immunization status of ALL sick children.

Immunization is the single most cost-effective strategy to decrease childhood morbidity and mortality. Checking the immunization status of every child is therefore very important – ideally, every child will complete their full vaccination programme before their first birthday.

You must use the recommended immunization schedule. Take another look at Table 12.1 in Study Session 12 of this Module if you need to remind yourself what this schedule is from birth to nine months.

## 15.9 Other problems

In Study Session 13 you learned about some common childhood problems. You should always ask the mother whether the child has any problems as well as observe any during the child's visit. For example, the child may have throat, eye or skin problems. You need to assess for these and decide what treatment, if any, is needed.

As with ear problems, throat, eye and skin infections can give rise to serious medical problems that can lead to death or to disability. Therefore your role in early identification of these problems and providing appropriate treatment and follow-up care is very important.

## 15.10 Checking the mother

You should also remember that it is important to check the health of the mother.

- Ask if the mother is sick
- Ask if she has any breast problems
- Check the mother's immunization status

- Check if the mother has access to family planning, and counselling on sexually transmitted infections (STIs) and HIV/AIDS prevention.

In this study session you have looked at the integrated case management charts and learned what steps you need to follow in order to assess and classify a sick child. You learned that these steps are based on the IMNCI principles which ensure you consider the child as a whole. In the next and final study session we will remind you how to identify the necessary treatments and follow-up care for a sick child.

## Summary of Study Session 15

In Study Session 15, you have learned that:

- 1 IMNCI guidelines are based on principles that require you to assess and classify the whole child.
- 2 You need to choose the correct chart for the sick young infant and child.
- 3 There are integrated processes for assessing and classifying the sick young infant and child from birth up to five years old.
- 4 It is important to check the mother's own health.

## Self-Assessment Questions (SAQs) for Study Session 15

Now that you have completed this study session you can assess how well you have achieved its Learning Outcomes by answering these questions. Write your answer in your Study Diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

### SAQ 15.1 (tests Learning Outcomes 16.1, 16.2, 16.3 and 16.4)

Read Case Study 15.1 and then answer the questions that follow (on the next page).

#### Case Study 15.1 for SAQ 15.1

Rediet is six months old. She weighs 6 kg. Her mother has brought her into the health post because the child has a fever.

The health worker checks for general danger signs. Rediet is able to drink, has not vomited, has not had convulsions and is not lethargic or unconscious. She has not had any convulsions while at the health post.

The health worker assesses Rediet for cough or difficult breathing, and counts 54 breaths per minute. She notes that Rediet has no chest in-drawing or stridor when calm. Although Rediet has had diarrhoea for three days, there is no blood in her stool. She drinks eagerly and the skin pinch goes back slowly.

Rediet's family live where there is a high malaria risk. She has had a fever for five days. There is no rash, her eyes are not red, she does not have a stiff neck or a runny nose. There is some discharge from her ear, and her mother says that Rediet has had this fluid coming out of her ear for some weeks.

---

The health worker checks Rediet for malnutrition and anaemia; Rediet does not appear to have visible severe wasting. There is no palmar pallor and no signs of oedema. Her weight for age is also checked.

Rediet's mother tested as HIV-positive during her pregnancy. Rediet has oral thrush, and no enlarged lymph nodes or parotid glands.

- (a) How would you assess and classify Rediet? Give reasons for your answer.
- (b) What treatment does Rediet need and why? Does Rediet need to be referred urgently for any reason?
- (c) What advice would you give to Rediet's mother?

# Study Session 16 Synthesis of IMNCI for Children up to Five years: Treatment and Follow-up Care

## Introduction

In Study Session 15 you learned about assessment and classification of the sick young infant and child according to the IMNCI guidelines and principles. In this final study session of the Module, you are going to learn about identifying appropriate treatments, advising about follow-up care and counselling of the mother or caregiver. As in Study Session 14, this study session will briefly review some of the materials you have already covered in the Module in relation to treatment and follow-up care. It will help you to consolidate your learning so you can be confident in providing the best possible treatment and care for the sick young infants and children who are brought to your health post.

## Learning Outcomes for Study Session 16

At the end of this study session, you should be able to:

- 16.1 Define and use correctly all of the key words printed in **bold**. (SAQ 16.1)
- 16.2 Identify and prioritise the appropriate treatment for a sick young infant or child. (SAQ 16.1)
- 16.3 Determine when to refer a sick infant or child urgently to hospital. (SAQ 16.1)
- 16.4 List the urgent pre-referral treatments for a young infant. (SAQ 16.1)
- 16.5 Describe the different treatment that can be given to a sick infant or child at home. (SAQ 16.1)

## 16.1 Identifying treatment priorities

Following assessment and classification of the young infant or child's illness, the next step is to identify any necessary treatments. In some instances, the very sick infant or child will need *urgent* referral to hospital for additional care. If so, you will need to start urgent treatments before the child's departure. Figure 16.1 (on the next page) outlines the steps you need to follow to determine the correct IMNCI approach.

When a child has more than one classification, you must look at more than one classification table in the Assess and Classify charts to see the treatments listed. The coloured rows help you to quickly identify the correct treatment. As you should know by now:

- A classification in a *pink* row means that the child needs urgent attention and referral or admission for in-patient care. This is a severe classification.
- A classification in a *yellow* row means that the child needs an appropriate oral drug or other treatment. The treatment includes teaching the child's caregiver how to give oral drugs or to treat local infections at home. You must also advise her about caring for the child at home and when she should return for a follow-up visit.

- A classification in a *green* row means the child does not need specific medical treatment such as antibiotics. You would teach the child's caregiver how to care for the child at home. For example, you might advise her on feeding her sick child or giving fluid for diarrhoea. You would also teach her the signs indicating that the child should return immediately to the health post.

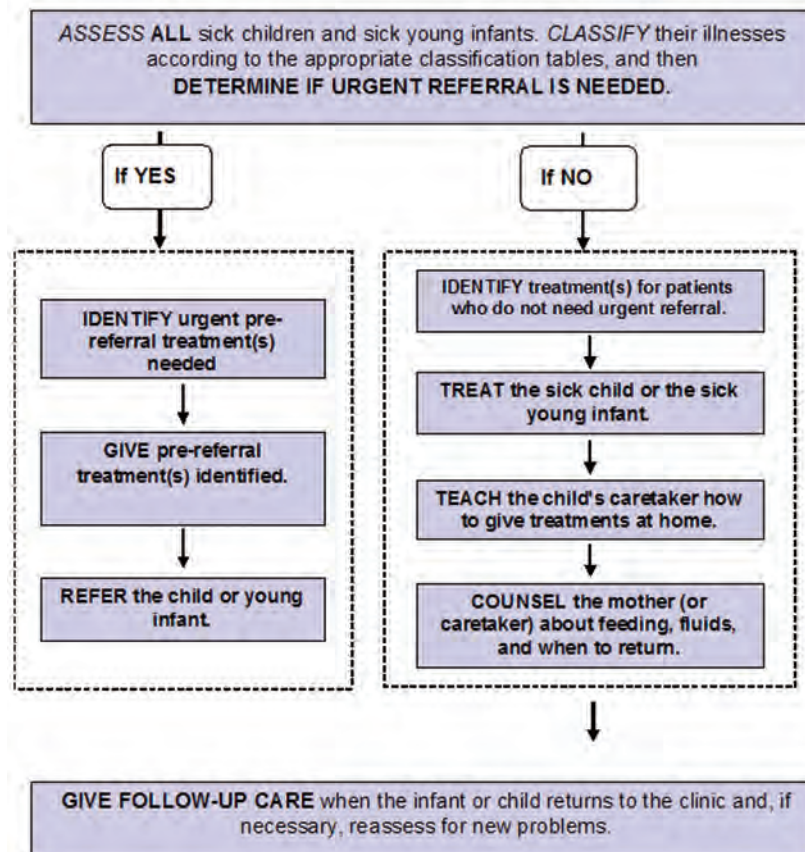


Figure 16.1 Identify treatment priorities.

Some of the treatments may be the same for different illnesses. For example, both pneumonia and ear infection require an antibiotic. You need to notice which treatments can be used for more than one problem, and when different treatments are needed.

If an infant or child has to be referred urgently, you must decide which treatments to do before referral. Some treatments (such as wicking an ear) are not necessary before referral. The following sections will help you to identify urgent pre-referral treatments.

If referral is not possible, or if the parents refuse to take the child to the hospital, you should advise and help the family care for the child. The child may stay near the health post to be seen several times a day. Or a health worker may visit the home to help give drugs on schedule and to help give the child fluids and food.

## 16.2 How to determine if the sick young infant needs urgent referral

All severe classifications on the Assess and Classify chart are in the pink row and include:

- Severe pneumonia or very serious disease
- Severe dehydration
- Severe persistent diarrhoea
- Very severe febrile disease
- Severe complicated measles
- Mastoiditis
- Severe malnutrition
- Severe anaemia.

In the treatment column for these severe classifications there is an instruction ‘Refer URGENTLY to hospital’. This instruction means to refer the child to hospital immediately after giving any necessary pre-referral treatments. Do not give treatments that would unnecessarily delay referral.

- If the young infant up to two months old has possible serious bacterial infection, he or she needs urgent referral
- If the young infant has severe dehydration (and does not have possible serious bacterial infection), the infant needs rehydration with IV fluids according to Plan C and you should urgently refer the infant for IV therapy. The mother should be advised to give the young infant frequent sips of oral rehydration solution (ORS) on the way and she should continue breastfeeding.

There is one exception: for severe persistent diarrhoea, the instruction is simply to ‘Refer to hospital’. This means that referral is needed, but not as urgently. Therefore, there is time to identify treatments and give all of the treatments the child requires before referral to hospital.

Most children who have a *general danger sign* also have a severe classification. They will be referred for their severe classification (or possibly treated, if they have severe dehydration only). In rare instances, children may have a general danger sign or signs without a severe classification. These children should also be referred urgently.

The Assess and Classify chart does not include all of the problems that children may have. You have to decide whether a child has any other severe problem that cannot be treated at this health post. For example, a child may have a severe problem that is not covered on the chart, such as severe abdominal pain. If you cannot treat a severe problem, you should always refer the child to hospital.

## 16.3 Identify urgent pre-referral treatment

When a young infant or a child needs urgent referral to hospital, you must quickly identify and begin the most urgent treatments for that child before he leaves for the hospital. Urgent treatments are in bold print on the classification tables. You will give just the first dose of the relevant drugs before referral.

The following urgent pre-referral treatments are for *young infants aged from birth up to two months*:

- Give the first dose of intramuscular or oral antibiotics
- Advise the mother how to keep the infant warm on the way to the hospital. If the mother is familiar with wrapping her infant next to her body, this is a good way to keep him or her warm on the way to the hospital. Keeping a sick young infant warm is very important
- Treat to prevent low blood sugar
- Refer urgently to hospital with the mother giving the child frequent sips of ORS on the way. Advise the mother to continue breastfeeding.

The following urgent pre-referral treatments are for *sick children aged two months up to five years*:

- Give an appropriate antibiotic
- Give an appropriate antimalarial drug for severe malaria
- Give vitamin A
- Treat the child to prevent low blood sugar
- Give paracetamol for high fever (38.5°C or above) or pain from mastoiditis
- Apply tetracycline eye ointment (if clouding of the cornea or pus draining from the eye)
- Provide ORS solution so that the mother can give the child frequent sips on the way to the hospital.

The first four treatments above are critical because they can prevent serious consequences such as progression of bacterial meningitis or cerebral malaria, corneal rupture due to lack of vitamin A, or brain damage from low blood sugar. The other treatments listed are also important in order to prevent worsening of the child's illness.

Do not delay referral to give non-urgent treatments.

Non-urgent treatments, for example wicking the ear, giving oral iron treatment, or teaching a mother how to treat a local infection, should not be done before referral. If immunizations are needed, do not give them before referral. Let hospital personnel determine when to give immunizations to avoid delaying referral.

You should write the *urgent pre-referral* treatments identified for each classification on the reverse side of the case recording form.

Box 16.1 below summarises the main steps to take when you refer an infant or child to hospital.

### Box 16.1 Refer the infant or child

There are four steps you need to follow when referring an infant or child to hospital:

- 1 Explain to the mother the need for referral, and get her agreement to take the child. If you suspect that she does not want to take the child, find out why.
- 2 Calm the mother's fears and help her resolve any problems. This might include reassuring her about the treatment her child will receive and helping her to find someone to look after any other children she has at home.



- 3 Write a referral note for the mother to take with her to the hospital. Tell her to give it to the health worker there.
- 4 Give the mother any supplies and instructions needed to care for her child on the way to the hospital, such as ORS and keeping her child warm.

## 16.4 When to return immediately

Notice that the case recording form states: ‘Advise mother when to return immediately’. You will need to teach each mother the signs that mean she should return immediately for more care for her child. You have covered each of these signs in previous study sessions.

- Can you think of examples of signs that should alert a mother to return to the health post immediately with her child?
- One example is if the mother notices that her child has fast or difficult breathing. Another is if the child becomes lethargic or unconscious.

## 16.5 Counsel the mother

As you read in the introduction to the Module, the IMNCI strategy includes working with families to help them understand how to prevent disease and illness. The strategy also involves helping the mother and family to provide effective home care and treatment for a sick young infant or child. You’ve read about the importance of good communication skills and how to teach the mother to give oral drugs and to treat infections at home. You have also learned about how to advise the mother on feeding her sick young infant or child, such as increasing fluid and food for the child during illness. Advising the mother or caregiver when to return to the health post is also important, so you are able to monitor a child’s progress.

## 16.6 Follow-up visits

The follow-up visit is very important. It is used to see if the treatment is working, and to give other treatment if needed. You should identify clearly what actions are included under ‘follow-up’, including when the mother should return for any other follow-up visits with her young infant or child to the health post.

## 16.7 The types of treatment

‘Treat’ means giving treatment in the health post, prescribing drugs or other treatments to be given at home, as well as also teaching the child’s mother or caregiver how to carry out the treatments. The Assess and Classify chart describes how to:

- Give oral drugs
- Treat local infections
- Give intramuscular drugs
- Treat the child to prevent low blood sugar
- Give extra fluid for diarrhoea and continue feeding, and

- Give follow-up care.

Treatment in the health post also involves:

- Teaching the child's mother or caregiver to give oral drugs and/or treat local infections at home, and
- Counselling the mother or caregiver about feeding, giving fluids and when to return to the health post.

This final study session has reviewed how you provide appropriate treatment for the sick young infant and child, including critical pre-treatments when urgently referring a child to hospital. You have now completed all of the stages of IMNCI: assessment, classification and treatment of the common problems of the young infant from birth to five years.

## Summary of Study Session 16

In Study Session 16, you have learned that

- 1 A sick young infant or child needs to be referred urgently to hospital when they have a severe classification (other than severe persistent diarrhoea when there is time to give treatment to the child before referral). Children with a general danger sign usually also need to be referred urgently.
- 2 Pre-referral treatments for a sick young infant or child are critical because they can prevent serious consequences such as progression of bacterial meningitis or brain damage. They can help prevent an illness from worsening.
- 3 When referring an infant or child to hospital you should reassure the mother, provide her with a referral note and supplies for the journey, and help her with arrangements for any other children at home.
- 4 Counselling the mother is an important aspect of your role.
- 5 'Treatment' refers to drugs or other treatment that you provide at the health post or that the caregiver can be taught to provide at home.

## Self-Assessment Questions (SAQs) for Study Session 16

Now that you have completed this study session, you can assess how well you have achieved its Learning Outcomes by answering the questions below. Write your answers in your Study Diary and discuss them with your Tutor at the next Study Support Meeting. You can check your answers with the Notes on the Self-Assessment Questions at the end of this Module.

### SAQ 16.1 (tests Learning Outcomes 16.1, 16.2 and 16.3)

Read Case Study 16.1 and then answer the questions below.

#### Case Study 16.1 for SAQ 16.1

Jemel is a six-week-old infant. His weight is 4.5 kg. His axillary temperature is 37°C. His mother has brought Jemel to the health post because he has diarrhoea and a rash. It is Jemel's first visit for this illness. The health worker checks for signs of possible bacterial infection. Jemel's mother says that he has not had convulsions. The health worker checks his breathing and counts 55 breaths per minute. There is no chest in-drawing or grunting, the fontanelle is not bulging, and there is no pus

coming from either ear. The umbilicus looks normal. Jemel does not have a fever and his movements are normal. The health worker notices some small skin pustules on Jemel. When asked about Jemel's diarrhoea, his mother says that it began three days ago, but there is no blood in the stool.

Jemel begins crying but when his mother puts him to her breast, he stops and begins feeding normally. When she stops, he begins crying again. Jemel's eyes look normal (not sunken). When the skin of his abdomen is pinched, it goes back slowly.

Jemel's mother says she has no difficulty feeding him and that he breastfeeds about five times in 24 hours. She says that she gives him other drinks and food. The weight-for-age measurement shows that Jemel is not underweight for his age. However, since he is feeding fewer than eight times in 24 hours and is taking other foods and drinks, the health worker decides to assess breastfeeding. Jemel's mother agrees to this and the health worker observes that positioning and attachment of Jemel while he is feeding are both good. When Jemel stops feeding, the health worker looks in his mouth, she does not see any ulcers or white patches.

- (a) Which Assess and Classify chart would you use for Jemel?
- (b) What problems do you assess Jemel as having?
- (c) How would you classify Jemel's problems?
- (d) What advice will you give to Jemel's mother?



# Notes on the Self-Assessment Questions (SAQs) for *Integrated Management of Newborn and Childhood Illness*, Part 2

## Study Session 9

### SAQ 9.1

- (a) Gizaw has moderate acute malnutrition with diarrhoea; he has oral thrush and enlarged parotid glands.
- (b) The classification is confirmed symptomatic HIV infection.
- (c) He should be treated with cotrimoxazole prophylaxis, and a multivitamin and be referred for antiretroviral therapy.

### SAQ 9.2

- (a) Rediet has pneumonia and oral thrush. Her mother has a positive HIV test.
- (b) The classification is suspected symptomatic HIV infection.
- (c) The mother needs to be advised that the treatment will help her to look after Rediet.

### SAQ 9.3

HIV is a sensitive subject and there can be secrecy about it in a community. So the mother might be reluctant to tell you her own HIV status if she knows it and also be very concerned about confidentiality. But you need the help of the mother in different ways: testing for herself, looking after the child and also preventing the rest of the family being infected. So you need to work hard to gain her trust.

## Study Session 10

### SAQ 10.1

- (a) First you need to ask the infant's mother questions that will give you as much information as possible to find out if the mother has any difficulty feeding her infant. You should ask her the following questions:

- Is the infant breastfeeding? If yes, how often?
- Do you empty one breast before switching to the other?
- Do you increase the frequency of breastfeeding when the infant is sick?
- Is the infant being given any other foods or drinks? If so, what do you use to feed the infant?

Then assess whether the infant is low weight or not. If you identify any feeding problem then you should observe the mother while breastfeeding her infant to check for good positioning and attachment and to see if the infant is suckling effectively.

- (b) It is important that an infant of three months is exclusively breastfed. Praise the mother if she is already doing this. If she is giving the infant other foods, for example, thin gruel, you should advise her that this is not a good replacement for breastmilk.

---

You should also advise the mother to switch to the other breast during a feed, but ensure that one breast is completely emptied before switching to the other. This will ensure the infant receives the rich breastmilk (hind milk). Finally, you would advise her that when her infant is ill, increasing breastfeeding during and after illness will help the infant maintain weight and prevent malnutrition.

### **SAQ 10.2**

One of the ways you can advise and support a breastfeeding mother is to teach her correct positioning and attachment. You would also explain to her that if the infant is suckling well, it is important to breastfeed long enough at each feed. Through careful observation of a breastfeeding session, you can identify any problems and then help the mother in positioning her infant in a way that will facilitate attachment. Making encouraging statements, as well as suggestions to improve feeding, is very important for the mother to feel confident.

## **Study Session 11**

### **SAQ 11.1**

A baby up to six months old should if possible be breastfed exclusively. After six months breastfeeding may gradually stop and the child given replacement milk; or breastfeeding may continue up to the age of the two years if the child wants it.

After six months, a child should be given additional complementary foods. These should be semi-solid. But as the child gets older, he can start to eat the same as the rest of the family.

After six months the child should be encouraged to eat, at first with the help of other members of the family and, as he grows older, by himself. He should always have his own serving.

From breastfeeding at least eight times in 24 hours the infant will change to feeding five times a day; then by the age of two he needs just three main meals a day with snacks in between.

### **SAQ 11.2**

It is very similar except that there is even more emphasis on exclusive breastfeeding up to the age of six months if the mother has HIV. Also, the breastfeeding should continue if possible until 12–18 months alongside complementary feeding.

### **SAQ 11.3**

You should first find out from the mother whether she thinks there are any problems and also ask her about frequency of feeding and whether the baby has any other foods. Then you need to observe her feeding the baby, for at least four minutes. This means looking at the position of the baby, how it attaches, and how it sucks. There should also be examination of the baby for white patches in the mouth.

The main help you can give the mother will be to give her advice about exclusive and frequent breastfeeding. You can also help by teaching her the correct position for feeding so that the baby attaches well.

## Study Session 12

### SAQ 12.1

First of all you need to check the child's age, and then consult the immunization schedule which tells you which vaccinations are due and when.

Then you need to check the immunization of the child against this schedule, either using the immunization card if the mother has brought it, or by asking the mother.

Once you know what vaccinations have been missed or are due now, you need to be sure that the child does not have AIDS, has not reacted badly to the previous dose of a vaccine, or have active neurological disease.

If a child is being referred, you should leave the vaccination to staff at the referral unit.

### SAQ 12.2

- (a) This question was asking you to decide whether Kelkay needed any immediate immunizations or not, and to give reasons for your answers. You should have identified that her immunizations are not up-to-date. This means that she needs OPV2 and DPT2-HepB2-Hib2 today. However, do not record OPV2 since she has diarrhoea currently and it needs to be repeated during the next immunization visit.
- (b) You should advise the mother that it is important that she ensures Kelkay is brought for her future vaccinations at the right age. You should tell her that she needs to return to the health post after four weeks (at four months of age) to receive DPT3-HepB3-Hib3 and repeat OPV2 immunizations.

### SAQ 12.3

- (a) Tahir has completed his immunization schedule and does not need additional vaccines. However, he had the last dose of vitamin A six months ago (at nine months of age). You should give the appropriate dose of vitamin A today.
- (b) You should advise the mother that it is important that she ensures Tahir is brought for his next dose of vitamin A after six months, and a dose of Mebendazole to treat worm infections when he is 2 years old. Tell her that he needs to return to the health post every six months to get both these treatments until he is five years old.

## Study Session 13

### SAQ 13.1

- (a) You should have classified this child as having *acute ear infection*. This is because the infant has not had pus draining from the ear for two weeks or longer (which would be a sign of chronic ear infection). As there is no swelling, the infant is not showing signs of mastoiditis.
- (b) If the infection is not treated, however, it could develop into mastoiditis, which you will recall is a serious condition that requires the child to be referred urgently. Untreated, the infection could also lead to deafness.



- 
- (c) The child should be given cotrimoxazole for five days and you should show the mother how to wick the child's ear each day. She could also give the child paracetamol to ease the pain.

### SAQ 13.2

- (a) The classification in this case is streptococcal sore throat. You might remember that enlarged and tender lymph nodes on the neck are also signs of this illness.
- (b) The treatment includes giving the child the antibiotic amoxycillin and soothing the throat with a safe home remedy such as warm tea or honey. Paracetamol can be given to ease the pain.
- (c) You would advise the mother to return immediately if her child's symptoms became much worse. Otherwise, she should treat the child at home and only return if the child is not showing signs of improvement five days after the visit to your health post.

### SAQ 13.3

- (a) In this case, the child has impetigo, identified by the crusted lesions weeping yellow fluid.
- (b) If impetigo is not treated effectively, it can lead to kidney disease.
- (c) To treat this condition, the child should be given an oral antibiotic for seven days, with a follow-up visit in five days.

### SAQ 13.4

You should have included the following steps in your answer: both eyes should be cleaned three times daily, using a clean cloth for each eye; tetracycline ointment should then be applied in both eyes three times per day until the redness has gone. Other eye ointments or drops should not be put into the child's eyes.

## Study Session 14

### SAQ 14.1

- (a) Mouth ulcers often affect children's ability to eat well. You should tell the mother that the ulcers will begin to improve, and her child will start eating normally, if she paints the ulcers with half-strength gentian violet (this kills the germs causing the ulcers). The mother should do this by first wrapping a clean cloth around her finger, dipping this in salt water and using it to clean the child's mouth. Next, the mother should paint the mouth ulcers with gentian violet on a cloth or cotton-tipped stick. Tell her she should make sure that the child does not drink any of the gentian violet.  
The mouth ulcers should be treated in this way two times per day, in the morning and evening for five days. However the mother should come back to the health post after two days for a follow-up visit so that you can check progress.
- (b) The way to be sure that the mother has understood your instructions is to ask her open-ended checking questions such as, 'Tell me what you're going to do before painting the ulcers with gentian violet?'; 'How often and for how many days do you need to treat the ulcers with gentian violet?'; 'Can you show me how you are going to do the treatment?'; and 'When are you going to return to see me with your child?'
- (c) You might have thought of quite a few good communication skills that you would have used in this case. For example, asking and listening to

the mother carefully when she tells you about her child and praising her for what she is already doing well. You would give her advice in clear terms that she can understand, and ask good checking questions to ensure she knows what to do and when.

### SAQ 14.2

- (a) Good checking questions are important to ensure the mother or caregiver really understands how she is going to provide the best possible home care and treatment for her child. If you have given the mother instructions such as how to give oral antibiotics or treat an eye infection then you need to know that the mother will be able to carry out these instructions safely and accurately at home. If mothers are feeling anxious they may say they know what to do, without really being sure. By asking good checking questions, you can be more certain that the mother has really understood how to care for her child at home and when, if at all, she needs to return for a follow-up visit.
- (b) These are some examples of good checking questions that we thought of — you will probably have thought of some other examples too:
  - Tell me how you are going to make a wick?
  - How many times are you going to clean your child's ear?
  - When are you going to come back to the health post for a follow-up visit?
- (c) Poor checking questions are 'closed' questions, that is, the mother can answer 'yes' or 'no' but you cannot be really sure she has understood what you have taught her. For example:
  - Do you know how to make a wick?
  - Are you going to clean your child's ear three times every day?
  - Do you know when you need to come back for the next follow-up visit?

### SAQ 14.3

- (a) The mother should be told that follow-up visits have to take place after two days and again after five days from the initial visit when Mimi's illness was classified. This is so that Mimi's progress can be monitored.
- (b) You would advise the mother to breastfeed Mimi more frequently and allow her to take more time at each feed. The mother should also give Mimi more fluids, according to either Plan A or Plan B (on your 'Treat the Child' chart). Show the mother how to wick Mimi's ear to dry up the discharge and remind her that the next follow-up visit is in two days' time. You would ask good checking questions to make sure that the mother understands everything you've told her during the visit.
- (c) Tell the mother that she should return immediately if Mimi is unable to breastfeed or drink, or is drinking poorly, or if her illness appears to be getting worse. If Mimi develops other symptoms, such as fever or blood in her stool, the mother should also return immediately to the health post.

---

## Study Session 15

### SAQ 15.1

- (a) Your assessment and classification for Rediet should have included the following information:

*Cough or difficult breathing*

Rediet has a cough and her breathing rate is 54. For her age she has fast breathing, but no chest in-drawing or stridor. Thus the classification is pneumonia.

*Diarrhoea*

Rediet has had diarrhoea for three days. She has also the following signs: drinking eagerly and skin pinch goes back slowly. Thus she is classified as 'some dehydration'.

*Fever*

Rediet has fever and she is from a high risk malaria area. Thus the classification is malaria.

*Ear discharge*

Rediet has had an ear discharge for some weeks. The classification is chronic ear infection, because the discharge has been happening for over two weeks.

Rediet has oral thrush, pneumonia and chronic ear discharge. Because her mother tested HIV-positive, Rediet must be classified as suspected symptomatic HIV infection. The reason it is suspected and not confirmed is because Rediet has not yet been tested.

- (b) You would provide the following treatments for Rediet, and advise the mother how to provide the best care for her baby:

*Pneumonia*

- Give cotrimoxazole for five days
- Soothe the throat and relieve the cough with a safe remedy
- Advise mother to return immediately if Rediet's condition gets worse
- Advise a follow-up visit in two days.

*Diarrhoea*

- Put Rediet on treatment Plan B
- Advise the mother to continue breastfeeding
- Advise mother in what circumstances she should return to the health post immediately
- Tell the mother to return for a follow-up visit in five days if Rediet is not improving.

*Fever*

- Treat with Coartem
- Give one dose of paracetamol in the clinic for high fever (38.5°C or above)
- Advise mother in what circumstances she should return to the health post immediately
- Tell the mother to come for a follow-up visit in two days if Rediet's fever persists
- If fever is present every day for more than seven days, you would have to refer Rediet for assessment.

*Ear discharge*

- Dry the ear by wicking
- Treat with topical Quinolone eardrops for two weeks
- Return to the health post for a follow-up visit in five days.

*Suspected symptomatic HIV infection*

- Give cotrimoxazole prophylaxis
- Treat HIV-related conditions if present (e.g. thrush)
- Give multivitamin supplements
- Assess Rediet's feeding and counsel the mother as necessary
- Advise the mother about the benefits of an HIV test for Rediet and refer both of them for voluntary counselling and testing
- Advise the mother on home care
- Tell the mother to return for a follow-up visit in 14 days.

*Oral thrush:*

- Tell the mother to paint the thrush with gentian violet 0.25% for 7 days
- Avoid feeding for 20 minutes after medication
- Check the mother's breasts for thrush. If present treat with Nystatin or gentian violet
- Advise the mother to wash her breasts after feeds. If Rediet is bottlefed, you should advise the mother to change to a cup
- If severe, recurrent or pharyngeal thrush is present, you should consider that Rediet has symptomatic HIV
- Give paracetamol if needed for pain.

(c) Rediet's mother needs referral for HIV counselling and testing.

As you can see from your notes and the information above, you will be providing Rediet's mother with a lot of information. She may be confused and you need to check carefully that she has understood what she has to do to look after Rediet, and when she should return the health post.

## Study Session 16

### SAQ 16.1

- (a) You would use the chart for the young infant, because Jemel is less than two months old.
- (b) Jemel has three problems:
  - Diarrhoea
  - Skin rash/pustules
  - Feeding problems.
- (c) You should have classified these problems as follows:
  - Diarrhoea with some sign of dehydration because Jemel is irritable and restless and his skin pinch goes back slowly. Thus the classification is *some dehydration*
  - *Local bacterial infection* because Jemel only has some skin pustules.
- (d) You would advise Jemel's mother as follows:
  - When she should return immediately to the health post

- 
- That she should return for a follow-up visit in two days if the skin pustules are not improving
  - Give fluids to treat diarrhoea on treatment Plan B
  - Advise her to increase the frequency of feeding
  - Tell her to empty one breast completely before switching to the other
  - Tell her to increase the frequency of feeding during and after illness
  - Counsel the mother on exclusive breastfeeding.

Advise the mother how to treat Jemel's local infections at home. Ask good checking questions to ensure that she understand the advice that you give her.



