INTEGRATED MANAGEMENT OF NEONATAL AND CHILDHOOD ILLNESS

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## CURRICULUM DESIGN COMMITTEE (Pre Revised)

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<thead>
<tr>
<th>Position</th>
<th>Name</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director, School of Health Sciences, IGNOU, New Delhi</td>
<td>Prof. S. B. Arora</td>
<td>IGNOU, New Delhi, A.K. Deorari, AIIMS, New Delhi</td>
</tr>
<tr>
<td>Ex-Director, School of Health Sciences, IGNOU, New Delhi</td>
<td>Prof. A.K. Agarwal</td>
<td>IGNOU, New Delhi, Division of Neonatology, AIIMS, New Delhi</td>
</tr>
<tr>
<td>Reader, School of Health Sciences, IGNOU, New Delhi</td>
<td>Dr. Pity Koul</td>
<td>IGNOU, New Delhi, RAK College of Nursing, New Delhi</td>
</tr>
<tr>
<td>Principal, Bombay Nursing Training, Bombay Hospital, Mumbai</td>
<td>Dr. N. B. Mathur</td>
<td>IGNOU, New Delhi, College of Nursing, Maulana Azad Medical College, New Delhi</td>
</tr>
<tr>
<td>Ex-Faculty, College of Nursing, Choithram Hospital &amp; Research Centre, Indore</td>
<td>Dr. Nanthini</td>
<td>IGNOU, New Delhi, Centre of Neonatology, Dept. of Child Health</td>
</tr>
<tr>
<td>Prof. in Nursing, School of Health Sciences, IGNOU, New Delhi</td>
<td>Dr. Jyoti Sareen</td>
<td>IGNOU, New Delhi, VM Medical College, Safdarjung Hospital, Delhi</td>
</tr>
<tr>
<td>Reader, College of Nursing, MM College of Nursing, Ambala</td>
<td>Dr. Poonam Joshi</td>
<td>IGNOU, New Delhi, Reader in Nursing, NIHFW, Delhi</td>
</tr>
<tr>
<td>Director, School of Health Sciences, IGNOU, New Delhi</td>
<td>Dr. V. K. Paul</td>
<td>IGNOU, New Delhi, Professor, Neonatology, AIIMS, New Delhi</td>
</tr>
<tr>
<td>Professor, Pediatric Division of Neonatology, AIIMS, New Delhi</td>
<td>Dr. A.K. Deorari</td>
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</tr>
<tr>
<td>Senior Consultant, Centre of Neonatology, Dept. of Child Health</td>
<td>Ms. O. K. Kathuria</td>
<td>IGNOU, New Delhi, RAK College of Nursing, New Delhi</td>
</tr>
<tr>
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## COURSE REVISION COMMITTEE

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<tr>
<td>Head of Dept. (Pediatric), Kasturba Hospital, Delhi</td>
<td>Dr. Jaipal</td>
<td>IGNOU, New Delhi, VM Medical College, Safdarjung Hospital, Delhi</td>
</tr>
<tr>
<td>Professor &amp; Director, MM College of Nursing, Ambala</td>
<td>Dr. Harish Chellani</td>
<td>IGNOU, New Delhi, Professor, Nursing, AIIMS, Delhi</td>
</tr>
<tr>
<td>Reader in Nursing, NIHFW, Delhi</td>
<td>Dr. Nanthini</td>
<td>IGNOU, New Delhi, Reader in Nursing, DDU, New Delhi</td>
</tr>
<tr>
<td>Lecturer, College of Nursing, AIIMS, Delhi</td>
<td>Dr. Poonam Joshi</td>
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<tr>
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<td>Dr. Pity Koul</td>
<td>IGNOU, New Delhi, Professor, Nursing, School of Health Sciences</td>
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## BLOCK PREPARATION TEAM

<table>
<thead>
<tr>
<th>Written/Modified/Updated By:</th>
<th>Unit Transformation</th>
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<tr>
<td>Dr. Poonam Joshi, College of Nursing, AIIMS, Delhi</td>
<td>Dr. Pity Koul, Director, School of Health Sciences, IGNOU, New Delhi</td>
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## CO-ORDINATION

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<td>Director, School of Health Sciences, IGNOU, New Delhi</td>
<td>Prof. Pity Koul</td>
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## PRODUCTION

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<tr>
<th>Position</th>
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<tr>
<td>Assistant Registrar (P)</td>
<td>Mr. T.R. Manoj</td>
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Printed at:
In previous blocks i.e. Block 1, 2, 3 and 4 of this course, you have learnt about essential newborn and infant care along with care of High risk neonates and infants.

As you know that more than 60 per cent of infant deaths take place during first 28 days of life. The main reason for these deaths is birth asphyxia, hypothermia, infections and Low Birth Weight. Newborn practices need to be improved to reduce the risk of these problems. In order to gain success and to improve infant survival, a strategy of Integrated Management of Neonatal and Childhood Illness (IMNCI), has been adapted by Govt. of India based on global generic strategy developed by WHO and UNICEF. The focus of this approach is on the total health of the young infant and child in an integrated manner by following well organized steps of assessing, classifying and providing treatment and preventive services, namely, counselling and immunization to young infant (up to two months of age) and child (aged two months up to five years). The steps are:

- Assess
- Classify
- Treat
- Counsel the mother
- Follow-up

The manifestations of the sickness are different in young infants, therefore, they need to be assessed, classified and treated in different manner than the child. In this block, we shall be focussing only on sick young infant since it comes within the target objectives of our course. You have to provide appropriate care before and after the delivery of infant and improve your skills in care of sick young infant so that majority of the deaths can be prevented. This block consists of three units:

Unit 1 : Assess and Classify Sick Young Infant
Unit 2 : Identify Treatment and Treat Sick Young Infant
Unit 3 : Counsel the Mother and followup

We hope this knowledge will help you to promote efficient care to newborn and infant, thus contributing to the effective delivery of health care services.
Integrated Management of Neonatal and Childhood Illness
UNIT 1 ASSESS AND CLASSIFY SICK YOUNG INFANT

Structure

1.0 Objectives

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   1.2.1 Assess Possible Bacterial Infection
   1.2.2 Classify Possible Bacterial Infection

1.3 Assess and Classify Sick Young Infant for Jaundice
   1.3.1 Assess Jaundice
   1.3.2 Classify Jaundice

1.4 Assess and Classify Sick Young Infant for Diarrhoea
   1.4.1 Assess Diarrhoea
   1.4.2 Classify Diarrhoea

1.5 Assess Feeding Problems and Malnutrition
   1.5.1 Assess Breastfeeding
   1.5.2 Classify Feeding Problems

1.6 Assess Immunization Status

1.7 Assess Other Problems

1.8 Let Us Sum Up

1.9 Answers to Check Your Progress

1.0 OBJECTIVES

After going through this unit, you should be able to:

- Assess various signs and sickness in young infant;
- Classify illness in a sick young infant based on signs and symptoms;
- Assess and classify feeding problems and malnutrition; and
- Assess immunization status.

1.1 INTRODUCTION

Newborn period is a crucial period for survival of an infant. Most of the illnesses that result into death of the young infant are preventable and if detected early can be managed at home. In this unit, you will learn to assess and classify various infections/illnesses that are common among young infants. You will also gain an understanding of IMNCI approach in Assessment and Classification of Sick Young Infant (0-2months).
1.2 ASSESS AND CLASSIFY SICK YOUNG INFANT FOR POSSIBLE BACTERIAL INFECTION

Assessment involves “asking”, “looking at”, “listening” and “feeling (using your hands)” to identify sickness of the young infant. All these skills of asking, looking and feeling will help you to assess the problems of young infant. You have to record the assessment in the recording sheet.

You should start assessment by asking questions to collect the information related to name, age and record weight and temperature of the young infant.

Ask the mother about the problems that the young infant is having. Ask if she has brought the infant to the clinic for the first time, that means is it her initial visit or follow-up visit. If it is follow-up visit then you have to reassess the problem of the infant for which infant has been treated earlier.

Use Tables 1.1 and 1.2 for assessing and classifying the sick young infant for various problems such as possible serious bacterial infection, local infection and diarrhoea etc.

1.2.1 Assess Possible Bacterial Infection

You have to assess the young infant for Possible Bacterial Infection as given in Table 1.1 below:

It is important that you assess the signs in the same order as given in the Table and keep the young infant calm, especially while assessing the first two signs (Refer Chart Book for assessment).

<table>
<thead>
<tr>
<th>Ask</th>
<th>Look, Listen &amp; Feel:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Has the infant had convulsions?</td>
<td>• Count the breaths in one minute. Repeat the count if elevated.</td>
</tr>
<tr>
<td></td>
<td>• Look for severe chest indrawing.</td>
</tr>
<tr>
<td></td>
<td>• Look for nasal flaring.</td>
</tr>
<tr>
<td></td>
<td>• Look and listen for grunting.</td>
</tr>
<tr>
<td></td>
<td>• Look and feel for bulging fontanel.</td>
</tr>
<tr>
<td></td>
<td>• Look for pus draining from the ear.</td>
</tr>
<tr>
<td></td>
<td>• Look at the umbilicus. Is it red or draining pus?</td>
</tr>
<tr>
<td></td>
<td>• Look for skin pustules. Are there 10 or more skin pustules or a big boil?</td>
</tr>
<tr>
<td></td>
<td>• Measure axillary temperature (if not possible feel for fever or low body temperature).</td>
</tr>
<tr>
<td></td>
<td>• See if the young infant is lethargic or unconscious.</td>
</tr>
<tr>
<td></td>
<td>• Look at the young infant’s movements. Are they less than normal?</td>
</tr>
<tr>
<td></td>
<td>• Look for Jaundice. Are the palms &amp; soles yellow?</td>
</tr>
</tbody>
</table>

YOUNG INFANT MUST BE CALM
The Table 1.1 shows that you have to ask questions and look for various signs in a young infant.

**ASK: Has the infant had convulsions?**

Ask the mother if the infant has suffered from convulsions or not during the current illness. Use the local term for convulsions. If she says “yes” record it by putting a circle & sign in the Recording Form/Sheet.

| Presence of convulsions could be a sign of infection in the meninges of the brain and hence is serious. |

**LOOK: Count the breathing rate**

Look at the infant’s chest and count the breathing rate accurately. You can observe it by rise and fall of the chest wall. You should count breathing rate for one full minute. Count breathing rate when the young infant is calm and quiet. It is difficult to count breathing rate correctly if the infant is crying, frightened or angry. You should repeat the count if elevated (60 breaths per minute or more) because breathing rate of the young infant is often irregular. If the breathing rate is fast in young infant, the young infant may have pneumonia. This is considered serious in young infants.

| The normal rate of breathing in a healthy young infant is 50-60 breaths per minute. The Young Infant has fast breathing if you count 60 breaths per minute or more during second count. |

**LOOK: For severe chest indrawing**

You should lift the shirt or ask the mother to lift the shirt of the infant in order to look for chest indrawing at the lower chest wall. Make sure that the young infant’s lower chest is fully exposed and you can see it clearly while checking for chest indrawing. Chest Indrawing is present when the whole of the lower chest wall goes IN when the young infant breathes IN. Normally the chest wall and abdomen moves OUT when the infant breathes IN. Chest indrawing must be present all the time as you are checking for it. Chest indrawing is not present if it is only seen when the infant is feeding or crying or if the chest indrawing is present in one position and not in another. For chest indrawing to be present, it must be clearly visible and present all the time. Mild chest indrawing (Fig. 1.1) is normal in a young infant because the chest wall is soft. Severe chest indrawing (Fig. 1.2) is very deep and easy to see. Severe chest indrawing is a sign of pneumonia and is serious in a young infant.

![Fig. 1.1: Normal mild indrawing of chest](image-url)
LOOK: for nasal flaring
Nasal flaring is widening of the nostrils when the young infant breathes in.

LOOK and LISTEN: for grunting
Grunting is the soft short sound a young infant makes when breathing out. Grunting occurs when infant has trouble in breathing.

LOOK at the umbilicus and SEE:
Is it red?
    Or
Draining pus?

Following Figs. 1.3 and 1.4 will help you to identify normal umbilicus and umbilicus with redness.
If the above mentioned signs are present you should record by encircling the statement in the Recording Form/Sheet.

**LOOK: for skin pustules**

Skin pustules are red spots or blisters, which contain pus. Examine the skin on the entire body and see if there are 10 or more skin pustules or a big boil. Presence of **10 or more pustules or a big boil** indicates a serious infection in a young infant (see Fig. 1.5).

![Fig. 1.5: Skin pustules](image)

**LOOK: See if the young infant is lethargic or unconscious**

Young infants often sleep most of the time, and this is not a sign of illness. Even when awake, a healthy young infant will usually not watch his mother and a health worker while they talk, as an older infant would.

A **lethargic young infant** is not awake and alert when he/she should be. The young infant may be drowsy and may not stay awake after a disturbance. If a young infant does not wake up during the assessment, or the mother is unable to wake him up, look to see if the young infant wakens when the mother talks or when sole is flicked 2-3 times or when you clap your hands. See if he stays awake. An **unconscious young infant** cannot be wakened at all. He/she does not respond when touched or spoken to (Fig. 1.6).

![Fig. 1.6: Lethargic/unconscious young infant](image)
FEEL: Measure axillary temperature (feel for fever or low body temperature)
Fever (axillary temperature more than 37.5 °C) is uncommon in the first two months of life. If a young infant has fever, this may mean that the infant has a serious bacterial infection. Young infants can also respond to infection by dropping their body temperature to below 35.5 °C.

A digital thermometer is used to measure the temperature. Keep the bulb of the thermometer high in the axilla of the baby for 3-5 minutes till the beep appears (Fig. 1.7). If there is no digital thermometer, one can touch the abdomen or axilla and determine if the young infant is hot or cold to touch. Record your findings by encircling the statement in recording sheet.

![Fig. 1.7: Checking temperature by axilla](image)

LOOK: at the young infant’s movements
Are they less than normal?
Observe the young infant’s movements while you do the assessment. When you look for movements, the young infant must be awake. An awake young infant will normally move his arms or legs or turn his head several times in a minute. If you suspect that the movements are less than normal but you are not sure, confirm with the mother. If she thinks that the infant’s movements are less than usual, then this sign is present. After assessing the infant, encircle all the signs that you have identified/checked in the infant in the Recording Form/Sheet. Compare the signs that the infant has, with the signs listed in each row of the chart book. This will help you to check the appropriate classification and classify sickness of the young infant.

Check Your Progress 1
i) List the signs you will look for possible bacterial infection in a young infant.

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............................................................................................................................................................................................
............................................................................................................................................................................................
............................................................................................................................................................................................
............................................................................................................................................................................................
............................................................................................................................................................................................
............................................................................................................................................................................................
ii) Fill in the blanks:

1) Convulsions in a young infant may be a sign of .................................................
........................................................................................................

2) The fast breathing in a young infant is ........................................ per minute
........................................................................................................

3) Chest indrawing is seen when the young infant .............................
........................................................................................................

4) Severe chest indrawing is a sign of ................................................
........................................................................................................

1.2.2 Classify Possible Bacterial Infection

Once you have assessed the sick young infant, you have to classify the young infant for Possible Serious Bacterial Infection and Local Bacterial Infection according to signs and symptoms given below in Table 1.2.

Table 1.2: Classification of Possible Bacterial Infection

<table>
<thead>
<tr>
<th>SIGNS</th>
<th>Classify as</th>
</tr>
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<tbody>
<tr>
<td>• Convulsions or</td>
<td>POSSIBLE SERIOUS BACTERIAL INFECTION</td>
</tr>
<tr>
<td>• Fast breathing (60 breaths per minutes or more) or</td>
<td></td>
</tr>
<tr>
<td>• Severe chest indrawing or</td>
<td></td>
</tr>
<tr>
<td>• Nasal flaring or</td>
<td></td>
</tr>
<tr>
<td>• Grunting or</td>
<td></td>
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<tr>
<td>• Bulging Fontanel or</td>
<td></td>
</tr>
<tr>
<td>• 10 or more skin pustules or a big boil or</td>
<td></td>
</tr>
<tr>
<td>• If axillary temperature 37.5°C or above (or feels hot to touch) or</td>
<td></td>
</tr>
<tr>
<td>• temperature less than 35.5°C (or feels cold to touch) or</td>
<td></td>
</tr>
<tr>
<td>• Lethargic or unconscious or</td>
<td></td>
</tr>
<tr>
<td>• Look at the young infant’s movements. Are they less than normal movements?</td>
<td>LOCAL BACTERIAL INFECTION</td>
</tr>
<tr>
<td>• Look for Jaundice. Are the palms and soles yellow?</td>
<td></td>
</tr>
<tr>
<td>• Umbilicus red or draining pus or</td>
<td></td>
</tr>
<tr>
<td>• Pus draining from the ear or</td>
<td></td>
</tr>
<tr>
<td>• Skin pustules less than 10</td>
<td></td>
</tr>
</tbody>
</table>

Table 1.2 shows that there are two classifications for possible bacterial infections, i.e., Possible Serious Bacterial Infection and Local Bacterial Infection.
Possible Serious Bacterial Infection
You can classify a young infant as having Possible Serious Bacterial Infection, if he/she has anyone or more than one sign listed in red row of Table 1.2. A young infant with any one or more than one sign in this column may have a serious disease and may be at a high risk of dying. The infant may have Pneumonia, Sepsis or Meningitis. It is difficult to distinguish among these infections in young infants and therefore only one classification is given.

Local Bacterial Infection
You can classify young infant as having Local Bacterial Infection if he/she has anyone of the following signs:

- Red umbilicus or draining pus, or
- Pus draining from ear or
- Skin pustules less than 10.

Examples
1) Rekha is 20 days old. She has a breathing rate of 66 per minute, is grunting and lethargic. Since she has three signs present in the red classification box and none in the yellow classification box. So you will select the red classification-POSSIBLE SERIOUS BACTERIAL INFECTION (Table 1.3).

Table 1.3: Assessment of Bacterial infection for Rekha

<table>
<thead>
<tr>
<th>SIGNS</th>
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<td></td>
</tr>
<tr>
<td>• Skin pustules less than 10</td>
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</table>

2) Amit is 45 days old. He has 6 skin pustules over his skin on the abdomen. He has no signs in the red classification box. Has one sign in the yellow classification box, so you will select the yellow box classification-LOCAL BACTERIAL INFECTION (Table 1.4).
### Table 1.4: Assessment of Bacterial Infection for Amit

<table>
<thead>
<tr>
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<td>• Umbilicus red or draining pus or</td>
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<tr>
<td>• Skin pustules less than 10</td>
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</table>

3) Meena is 15 days old. She feels hot to touch, is lethargic and has pus draining from the umbilicus. She has two signs in the red classification box and one sign in the yellow classification box. She has signs in both the classification boxes but you have to choose only one classification for possible bacterial infection. Whenever you use a classification table, start with the top row. In each classification table, a young infant receives classifications in one colour only. If the infant has signs from more than one row, always select the more serious classification. So you will select the classification from the red box-POSSIBLE SERIOUS BACTERIAL INFECTION (Table 1.5).

### Table 1.5: Assessment of Bacterial Infection for Meena

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</tr>
</tbody>
</table>
Activity 1

Look at the following photographs and write your observation in the space provided.

<table>
<thead>
<tr>
<th>Umbilicus</th>
<th>Normal</th>
<th>Redness or draining pus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photograph 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photograph 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photograph 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Activity 2
Watch the video on how to assess young infant for possible bacterial infection and with the help of your counsellor answer the following questions for each of the infants shown (with fast breathing and severe chest indrawing).

**Fast Breathing**
For each infant shown, answer the question:

<table>
<thead>
<tr>
<th>Infant Number</th>
<th>Breaths in One Minute</th>
<th>Does the Infant have Fast Breathing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Severe Chest Indrawing**
For each infant shown, answer the question:

<table>
<thead>
<tr>
<th>Infant Number</th>
<th>Does the infant have severe chest indrawing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

**Exercises**

**Case 1: Harish**
Harish is a 3 week old infant. His weight is 3.6 kg. He does not feel hot or cold to touch. He is brought to the health centre because he is having difficult breathing. The health worker first checks the young infant for signs of possible bacterial infection. His mother says that Harish has not had convulsions. The health worker counts 74 breaths per minute. She repeats the count. The second count is 70 breaths per minute. She finds that Harish has mild chest indrawing and nasal flaring. The umbilicus is normal, and there are no skin pustules. Harish is calm and awake, and his movements are normal.

What is the correct classification? (Use the Recording Form given on next page.)

**Case 2: Ankit**
Ankit is a tiny baby who was born exactly 2 weeks ago. His weight is 2.5 kg. His mother says that he was born prematurely at home, and was born much smaller than her other babies. She is worried because his umbilicus is infected. She says he has had no convulsions. The health worker counts his breathing and finds he is breathing 55 breaths per minute. He has no chest indrawing. His umbilicus has some pus on the tip and a little redness at the tip only. The health worker looks over his entire body and finds no skin pustules. He is awake and content. He is moving his limbs normally.

What is the correct classification? (Use the Recording Form given on next page.)
1.3 ASSESS AND CLASSIFY YOUNG SICK INFANT FOR JAUNDICE

1.3.1 Assess Jaundice

In addition if the sick young infant has Jaundice, assess for the same.

1.3.2 Classify Jaundice (in the Manner given below)

A young infant can have two possible classifications for Jaundice as follows:

1) A sick young infant with yellow palms and soles or having Jaundice at the age < 24 hours or after the age of 14 days or more should be referred urgently to the hospital after providing pre-referral treatment (Table 1.6). The pre-referral treatment includes treatment to prevent hypoglycemia and advice to the mother /Primary caregiver to keep the young infant warm while transporting.

<table>
<thead>
<tr>
<th>Table 1.6: Assessment of Severe Jaundice in sick young infant</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Yellow palms and soles or Age &lt;24 hours or Age 14 days or more</td>
</tr>
</tbody>
</table>

2) A young infant with jaundice but palms and soles not stained yellow, and at the age of 1 to 13 days should be provided with home care with advice to the mother when to return immediately (Table 1.7). Otherwise call for follow up after 2 days.

CHECK FOR POSSIBLE BACTERIAL INFECTION

- Has the infant had convulsions?
- Count the breaths in one minute _____ breaths per minute.
  Repeat if elevated ______ Fast breathing?
- Look for severe chest indrawing.
- Look for nasal flaring.
- Look and listen for grunting.
- Look and feel for bulging fontanel.
- Look for pus draining from the ear.
- Look at the umbilicus. Is it red or draining pus?
- Look for skin pustules. Are there 10 or more skin pustules or a big boil?
- Measure axillary temperature (if not possible feel for fever or low body temperature)
  - 37.5°C or more (or feels hot)?
  - Less than 35.5°C?
  - Less than 36.5°C but more than 35.4°C (or feels cold to touch?)
- See if the young infant is lethargic or unconscious.
- Look at the young infant’s movements. Are they less than normal?
- Look for Jaundice. Are the palms and soles yellow?
Table 1.7: Assessment of Jaundice in Sick young infant

- Palms and soles not yellow and
- Age 1-13 days

Jaundice

Additionally if young infant has body temperature between 35.5 - 36.4°C (including both values), the infant should be classified as follows:

A young infant with body temperature 35.5 - 36.4°C should be classified as low body temperature. This can be at times due to inadequate clothing in cold weather or an early sign of bacterial infection. This baby should be warmed using skin to skin contact for one hour and assessed after that.

If the baby’s temperature continues to be less than 36.5°C despite re-warming, the baby should be referred to the hospital. If the body temperature becomes normal, send the young infant with the advise to the mother on how to keep the young infant warm.

Remember there is only one classification for low body temperature (Table 1.8)

Table 1.8: Assessment of Body temperature in sick young infant

- Temperature between 35.5 to 36.4°C
- Low body temperature

1.4 ASSESS AND CLASSIFY SICK YOUNG INFANT FOR DIARRHOEA

1.4.1 Assess Diarrhoea

After you have checked the young infant for possible bacterial infection, assess the young infant for diarrhoea as given in Table 1.9. Diarrhoea in young infant is present if the stools have changed from usual pattern and are many and watery (more water than fecal matter). The breastfed babies normally have frequent loose stools but are not watery. This is not diarrhoea.

Table 1.9: Assessment of Diarrhoea

THEN ASK: DOES THE YOUNG INFANT HAVE DIARRHOEA?*

<table>
<thead>
<tr>
<th>IF YES,</th>
<th>LOOK &amp; FEEL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASK:</td>
<td></td>
</tr>
<tr>
<td>• For how long? _______days</td>
<td>• Look at the young infant’s general condition. Is the infant:</td>
</tr>
<tr>
<td>• Is there blood in the stool?</td>
<td>– Lethargic or unconscious?</td>
</tr>
<tr>
<td></td>
<td>– Restless and irritable?</td>
</tr>
<tr>
<td></td>
<td>• Look for sunken eyes.</td>
</tr>
<tr>
<td></td>
<td>• Pinch the skin of the abdomen.</td>
</tr>
<tr>
<td></td>
<td>Does it go back:</td>
</tr>
<tr>
<td></td>
<td>– Very slowly (longer than 2 seconds)?</td>
</tr>
<tr>
<td></td>
<td>– Slowly?</td>
</tr>
</tbody>
</table>

*What is diarrhea in a young infant?
If the stools have changed from usual pattern and are many and watery (more water than fecal matter). The normally frequent or loose stools of a breastfed baby are not diarrhoea.
Table 1.9 shows that you have to ask following questions to the mother to assess diarrhoea:

**ASK: Does the young infant have diarrhoea?**

Ask the mother if the young infant has diarrhoea. If mother says “yes”. Ask for how long? Then you should assess and classify the infant for diarrhoea.

**ASK: Is there blood in the stool?**

The young infant who has blood in stool has severe dysentery. Such an infant should be referred to doctor.

**Check for Signs of Dehydration**

**LOOK: at the young infant’s general condition**

Is the young infant lethargic or unconscious? Restless and irritable?

You may recall that in sub-section 1.2.1 when you checked for signs of Possible Bacterial Infection, you also checked to see if the young infant was **lethargic or unconscious**. You can use that assessment.

A young infant has the sign **restless and irritable** if the young infant is restless and irritable all the time or every time he/she is touched and handled. If an infant is calm when breastfeeding but again restless and irritable when breastfeeding is stopped, he has the sign “**restless and irritable**”.

**LOOK: for sunken eyes**

The eyes of a young infant who is dehydrated may look sunken. Decide if you think the eyes are sunken. Then ask the mother if she thinks her infant’s eyes look unusual. Her opinion helps you confirm that the young infant’s eyes are sunken.

**PINCH** the skin of the abdomen with the thumb and first finger by lifting it for one second and then release it (Fig. 1.8) and observe how quickly the skin pinch goes back.

Does it go back Very slowly (longer than 2 seconds), Slowly or Immediately?

- If the skin pinch goes back **very slowly** (more than two seconds), then the young infant has **severe dehydration**.
- If the skin pinch returns to normal **slowly** (very short tenting of the skin lasting less than 2 seconds), then there is **some dehydration**.
- If the skin pinch returns to normal **immediately**, the skin pinch is **normal**.
- **Encircle all the signs that you have identified in the sick young infant in Recording Form.**

![Fig. 1.8: Skin Pinch](image)
1.4.2 Classify Diarrhoea

Once you have assessed the young infant for diarrhoea, you have to classify dehydration and dysentery as given in Table 1.10.

**Table 1.10: Classification of Diarrhoea**

<table>
<thead>
<tr>
<th>SIGNS</th>
<th>CLASSIFY AS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two of the following signs:</td>
<td>SEVERE DEHYDRATION</td>
</tr>
<tr>
<td>• Lethargic or unconscious</td>
<td></td>
</tr>
<tr>
<td>• Sunken eyes</td>
<td></td>
</tr>
<tr>
<td>• Skin pinch goes back very slowly</td>
<td></td>
</tr>
<tr>
<td>Two of the following signs:</td>
<td>SOME DEHYDRATION</td>
</tr>
<tr>
<td>• Restless, irritable</td>
<td></td>
</tr>
<tr>
<td>• Sunken eyes</td>
<td></td>
</tr>
<tr>
<td>• Skin pinch goes back slowly</td>
<td></td>
</tr>
<tr>
<td>• Not enough signs to classify as some or severe dehydration.</td>
<td>NO DEHYDRATION</td>
</tr>
<tr>
<td>• Diarrhoea lasting 14 days or more</td>
<td>SEVERE PERSISTENT DIARRHEA</td>
</tr>
<tr>
<td>• Blood in the stool</td>
<td>SEVERE DYSENTRY</td>
</tr>
</tbody>
</table>

Table 1.10 shows that there are three possible classifications for an infant with diarrhoea (dehydration) as given below:

**Severe Dehydration**

If the infant shows **any two** of the following signs then sick young infant is classified as having **Severe Dehydration:**

- Lethargic or unconscious
- Sunken eyes
- Skin pinch goes back very slowly

**Some Dehydration**

If the infant has **any two** of the following signs then sick young infant is classified as having **Some Dehydration:**

- Restless, irritable
- Sunken eyes
- Skin pinch goes back slowly

**No Dehydration**

If an infant is not showing enough signs to classify as severe or some dehydration, then classify the sick young infant as having **No Dehydration.**

Compare the signs that you have identified in young infant with the signs listed in each row and choose the classification.

**Severe Persistent Diarrhoea**

We also classify young infant based on duration of diarrhoea,

Persistent diarrhoea is an episode of diarrhoea lasting for more than 14 days with or without blood. All young infants with diarrhea should also be assessed for severe persistent diarrhoea. All young infants with severe persistent diarrhoea should be referred to the hospital. One rule that we need to keep in mind is that treatment of dehydration can be initiated first, unless there is another severe classification.
Severe Dysentery
If infant is passing stool with blood then child is classified as having Severe Dysentery.

Check Your Progress 2
i) List the signs of Severe, Some and No Dehydration in a young infant.

<table>
<thead>
<tr>
<th>Physical Signs</th>
<th>Degree of Dehydration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ii) A young infant is classified as having dysentery when there is ..... in the stool.

iii) A young infant is classified as having severe persistent diarrhea when there is diarrhea for ................. days.

Activity 3
Watch video on how to assess a young infant for diarrhoea with the help of your counsellor and fill up the following Recording Form.

Case 1: Video Exercise
MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS
Name: ............... Age: ........ Weight: ........ Temperature: ........ °C Date: ............
ASK: What are the infant’s problems? ........ Initial Visit: ........ Follow-up Visit: ........
ASSESS (Circle all signs present)

CHECK FOR POSSIBLE BACTERIAL INFECTION
- Has the infant had convulsions?
- Count the breaths in one minute ____ breaths per minute, Repeat if elevated ____ Fast breathing?
- Look for severe chest indrawing.
- Look for nasal flaring.
- Look and listen for grunting.
- Look and feel for bulging fontanel.
- Look for pus draining from the ear.
- Look at the umbilicus. Is it red or draining pus?
- Look for skin pustules. Are there 10 or more skin pustules or a big boil?
- Measure axillary temperature (if not possible feel for fever or low body temperature)
  - 37.5°C or more (or feels hot)?
  - Less than 35.5°C?
  - Less than 36.5°C but more than 35.4°C (or feels cold to touch)?
- See if the young infant is lethargic or unconscious.
- Look at the young infant’s movements. Are they less than normal?
- Look for Jaundice. Are the palms and soles yellow?

DOES THE YOUNG INFANT HAVE DIARRHOEA
- For How long? ____ days
- Is there blood in the stool?
- Look at the young infant’s general condition. Is the infant:
  - Lethargic or unconscious?
  - Restless and irritable?
- Look for sunken eyes.
- Pinch the skin of the abdomen. Does it go back?
  - Very slowly (longer than 2 seconds)?
  - Slowly?
Case 2: Neera

Neera is 7 weeks old. Her weight is 3.0 kg. Her temperature feels normal. Her mother has brought her because she has diarrhoea. The health worker first assesses her for signs of possible bacterial infection. The mother says that Neera has not had convulsions. The health worker counts her breathing and finds she is breathing 58 breaths per minute. She was sleeping in her mother’s arms but awoke when her mother unwrapped her. She has slight chest indrawing. Her umbilicus is not red or draining pus. There are no pustules. She is crying and moving her arms and legs.

When the health worker asks the mother about Neera’s diarrhoea, the mother replies that it began 3 days ago. Neera is still crying. She stopped crying when her mother put her to the breast. She began crying again when she stopped breastfeeding. Her eyes look normal, not sunken. When the skin of her abdomen is pinched, it goes back slowly.

What is her classification? (use recording form provided below)

**MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS**

**Name ............................... Age ....... Weight ........ Temperature .......ºC  Date: ..............**

**ASK: What are the infant’s problems? ......... Initial Visit ....... Follow-up Visit?.........**

**ASSESS** (Circle all signs present) 

<table>
<thead>
<tr>
<th>CHECK FOR POSSIBLE BACTERIAL INFECTION</th>
<th>CLASSIFY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Has the Infant had convulsions?</td>
<td>• Count the breaths in one minute ____ breaths per minute. Repeat if elevated _________ Fast breathing?</td>
</tr>
<tr>
<td>• Look for severe chest indrawing.</td>
<td>• Look for nasal flaring.</td>
</tr>
<tr>
<td>• Look and listen for grunting.</td>
<td>• Look and feel for bulging fontanel.</td>
</tr>
<tr>
<td>• Look for pus draining from the ear.</td>
<td>• Look at the umbilicus. Is it red or draining pus?</td>
</tr>
<tr>
<td>• Look for skin pustules. Are there 10 or more skin pustules or a big boil?</td>
<td>• Measure axillary temperature (if not possible feel for fever or low body temperature)</td>
</tr>
<tr>
<td>• Measure axillary temperature (if not possible feel for fever or low body temperature)</td>
<td></td>
</tr>
<tr>
<td>- 37.5ºC or more (or feels hot)?</td>
<td>- Less than 35.5ºC?</td>
</tr>
<tr>
<td>- Less than 35.5ºC?</td>
<td>- Less than 36.5ºC but more than 35.4ºC (or feels cold to touch)?</td>
</tr>
<tr>
<td>• See if the young infant is lethargic or unconscious.</td>
<td>• Look at the young infant’s movements. Are they less than normal?</td>
</tr>
<tr>
<td>• Look at the young infant’s movements.</td>
<td>• Look for Jaundice. Are the palms and soles yellow?</td>
</tr>
<tr>
<td>• Look for sunken eyes.</td>
<td></td>
</tr>
<tr>
<td>• Pinch the skin of the abdomen. Does it go back?</td>
<td></td>
</tr>
<tr>
<td>• For How long?__ days</td>
<td>• Look at the young infant’s general condition. Is the infant:</td>
</tr>
<tr>
<td>• Is there blood in the stool?</td>
<td>- Lethargic or unconscious?</td>
</tr>
<tr>
<td></td>
<td>- Restless and irritable?</td>
</tr>
</tbody>
</table>

**DOES THE YOUNG INFANT HAVE DIARRHOEA**  Yes___No____

• Look at the young infant’s general condition. Is the infant:  
  - Lethargic or unconscious?  
  - Restless and irritable?  
  - Look for sunken eyes.  
  - Pinch the skin of the abdomen. Does it go back?  
  - Very slowly (longer than 2 seconds)?  
  - Slowly?
1.5 ASSESS FEEDING PROBLEMS AND MALNUTRITION

You should check sick young infant for feeding problems.

In order to assess the feeding problem you have to ask mother following questions listed on the left side of the Table 1.11.

Table 1.11: Assessment for Feeding Problem

<table>
<thead>
<tr>
<th>ASK:</th>
<th>LOOK &amp; FEEL:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Is there any difficulty feeding? Yes___, No___</td>
<td><strong>ASSESS BREASTFEEDING</strong> IF THERE IS ANY DIFFICULTY IN FEEDING (feeding less than 8 times in 24 hours, taking any other food or drink or infant is low weight for age) and has NO INDICATION FOR URGENT REFERRAL.</td>
</tr>
<tr>
<td>• Is the infant breastfed?</td>
<td>– Ask the mother to put her Infant to the breast. Observe the breastfeed for 4 minutes.</td>
</tr>
<tr>
<td>• How many times in 24 hours? _____times</td>
<td>• Is the infant able to attach well?</td>
</tr>
<tr>
<td>• Does the infant usually receive any other foods or drinks? Yes <strong><strong>, No</strong></strong> If yes, how often?</td>
<td>no attachment at all</td>
</tr>
<tr>
<td>• What do you use to feed the infant?</td>
<td>not well attached</td>
</tr>
<tr>
<td>• Does the mother have pain while breastfeeding?</td>
<td>good attachment</td>
</tr>
</tbody>
</table>

TO CHECK ATTACHMENT, LOOK FOR
- Chin touching breast Yes____ No______
- Mouth wide open Yes ____ No______
- Lower lip turned outward Yes____ No______
- More areola visible above than below the mouth Yes ___ No______
(All these signs should be present if the attachment is good)

• Is the infant suckling effectively (i.e., slow deep sucks, sometimes pausing)?
  not suckling at all  
  not suckling effectively  
  suckling effectively  

Clear a blocked nose if it interferes with breastfeeding.

• Look for ulcers or white patches in the mouth (thrush).
  – If yes, look and feel for:
  • Sore nipples
  • Engorged breasts or breast abscess

As you have seen in Table 1.11 that there are four questions which will help you to assess feeding problems. These are as follows:

ASK: Is there any difficulty in feeding?

When you ask and listen to the mother, she may mention that the infant is not able to breastfeed and express some of the breastfeeding difficulties such as:
• Not enough milk or
• Sore nipples or
• Nipples are flat or
• Resistance of infant to take breast milk or
• Infrequent feeding of the young infant.

The mother may need counselling or specific help for a feeding difficulty. If the mother says that the infant is not able to feed then assess breastfeeding or watch her while she feeds the young infant with a cup and see what she is doing when feeding the baby.

A young infant who is not able to feed may have a serious condition and should be referred urgently.

After you have assessed the difficulties in feeding as expressed by the mother you have to ask the next question to the mother i.e.,

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

In any case, the infant should be fed as often and for as long as the infant wants day and night. The young infant should be breastfed at least 8 or more times in 24 hours.

When the mother answers that she is breastfeeding the young infant 8 or more times, encourage and praise her for continuing such a schedule.

ASK: Does the infant usually receive any other foods or drinks? If she says yes, then ask how often?

A young infant should be exclusively breastfed. Exclusive breastfeeding means that the infant receives only breast milk and no other liquid, not even water. Giving of Vitamin drops, or medicines is an exception. Find out if the young infant is receiving any other food or drink such as other milk, juice, tea, thin porridge, dilute cereal, or even water. Ask about how often he/she receives it and in what amount.

ASK: What do you use to feed the infant?

If a young infant takes other foods or drinks, find out if the mother uses a feeding bottle, cup spoon or any other device.

Determine weight for age

Determine weight of the young infant and compare his weight with the infant of the same age by plotting it on weight for age graph shown in Fig.1.9. Low weight for age line identifies infants whose weight is -3 standard deviations (SD) below the mean weight of infants in the reference population (Z score <-3). The low weight for age line identifies children whose weight is -2 SD below the mean weight of infants in the reference population (Z score <-2).

Infants who are very low weight for age need to be referred to the hospital for urgent management and the infants with low weight for age need special attention with regards to feeding and warmth (Refer Fig. 1.9).

ASK: Does the mother have pain while breastfeeding?

If the mother says that she has pain while breastfeeding, this indicates that she may have sore nipples, breast engorgement or breast abscess.
1.5.1 Assess Breastfeeding

You have to first decide whether to assess the infant’s breastfeeding or not.

- If the infant is not breastfed at all, do not assess breastfeeding
- If the infant has a serious problem requiring urgent referral to a hospital, do not assess breastfeeding.

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

If the mother has not fed the infant in previous hour then ask her to put her infant to breast. Observe whole breastfeeding if possible, or observe for at least for 4 minutes.

**Fig. 1.9: Weight for age graph**

**LOOK: if the infant is able to attach**

While observing the infant for **good attachment** (Fig. 1.10), you should look for following four signs:

- Chin touching breast (or very close)
- Mouth wide open
- Lower lip turned outward
- More areola visible above than below the mouth.
If all of these four signs are present, the infant has **good attachment**. If attachment is not good, you may see the following signs:

- Chin is **not** touching breast,
- Mouth is **not** wide open, lips are pushed forward,
- Lower **lip** is turned in, or
- **More areola** (or equal amount) **visible below** infant’s mouth.

If you see any of these signs of poor attachment, the infant is **not well attached**.

When an infant is very sick and cannot take nipple into his mouth and suck, he has **no attachment at all**. He is not able to breastfeed at all. **Poor attachment**, results into painful sore nipples.

Record your assessment/observation in Recording Form/Sheet by encircling the sign present - **no attachment at all**, **not well attached** or **good attachment**.

**Now LOOK:** if the infant is suckling effectively i.e. slow deep sucks, sometimes **pausing**

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 breastfeeding finishes, look for signs that the infant is satisfied. If satisfied, the infant releases the breast spontaneously i.e. 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 indrawing 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.

You may at times observe that inspite of **good positioning** and **good attachment** the infant is not suckling at all or not **able to suck** breast milk into his mouth. This means that the infant is **not able to breastfeed** at all. In such a case check the nose, and clean it, if blocked.

**If a blocked nose seems to interfere with breastfeeding, clear the infant’s nose. Then check 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. If you try to wipe the white off, the white patches of thrush will remain.

### 1.5.2 Classify Feeding Problems

The following Table 1.12 explains how to classify the feeding problems.

<table>
<thead>
<tr>
<th>SIGNS</th>
<th>CLASSIFY AS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Not able to feed or</td>
<td>NOT ABLE TO FEED - POSSIBLE SERIOUS BACTERIAL INFECTION or SEVERE MALNUTRITION</td>
</tr>
<tr>
<td>• No attachment at all or</td>
<td></td>
</tr>
<tr>
<td>• Not sucking at all or</td>
<td></td>
</tr>
<tr>
<td>• Very low weight for age</td>
<td></td>
</tr>
<tr>
<td>• Not well attached to breast or Not sucking effectively or</td>
<td>FEEDING PROBLEM OR LOW WEIGHT</td>
</tr>
<tr>
<td>• Less than 8 breast feeds in 24 hours or</td>
<td></td>
</tr>
<tr>
<td>• Receives other foods or drinks or</td>
<td></td>
</tr>
<tr>
<td>• Thrush (ulcers or white patches in mouth) or</td>
<td></td>
</tr>
<tr>
<td>• Low weight for age or</td>
<td></td>
</tr>
<tr>
<td>• Breast or nipple problems</td>
<td></td>
</tr>
<tr>
<td>• Not other signs of inadequate feeding</td>
<td>NO FEEDING PROBLEM</td>
</tr>
</tbody>
</table>

Table 1.12 shows that there are three possible classifications of feeding problems as given below:

**Not Able to Feed - Possible Serious Bacterial Infection**

If the infant is not able to feed or not attached at all, or not suckling at all, the infant may be classified as having *Not Able to Feed - Possible Serious Bacterial Infection*.

**Feeding Problem**

When the infant is not well attached or not suckling effectively or is receiving breastfeed less than 8 times in 24 hours, or is receiving other foods or drinks, or is having nose block, thrush (ulcers or white patches in mouth), or there is nipple or breast problem, then the infant is having some feeding problem. Classify the infant as having *Feeding Problem*.

**No Feeding Problem**

If a young infant has no other sign of inadequate feeding. This infant is classified as having *No Feeding Problem*. Praise the mother for feeding the infant well when infant is not showing any sign of inadequate feeding.

**Activity 4**

Watch the video on how to check feeding problems and assess breastfeeding with the help of your counsellor.
Activity 5

Look at the following Photographs 4 to 12 and assess the attachment to breast (Tick mark in appropriate column at the end of the Photographs).

Photograph 4

Photograph 5

Photograph 6
Integrated Management of Neonatal and Childhood Illness

Photograph 7

Photograph 8

Photograph 9

Photograph 10
1.6 ASSESS IMMUNIZATION STATUS

It is essential that you should assess immunization status of all infants. If any immunization is due, advise the mother to get the infant immunized at the earliest. The information on immunization status of an infant is best obtained from the Immunization Card.
When the Immunization Card is not available, ask mother about the immunization of the infant. Refer the immunization schedule given in the Table 1.13 below for assessment of immunization status. This shows that a young infant should have one dose of BCG at birth. Two doses of OPV (OPV -0 and OPV -1) and one dose of DPT -1 and Hepatitis B-l are given at the age 6 weeks.

Table 1.13: Assessment of Immunization Status

<table>
<thead>
<tr>
<th>Age</th>
<th>Vaccine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth</td>
<td>BCG</td>
</tr>
<tr>
<td>6 Weeks</td>
<td>DPT-1 OPV-1+ Hepatitis B-1*</td>
</tr>
</tbody>
</table>

*Hepatitis B to be given wherever included in the immunization schedule

Check Your Progress 3

i) What is the best source of information about the infant’s immunization status?

ii) How many doses of DPT, OPV and Hepatitis-B vaccine should be given to the young infant (birth up to 2 months)?
1.7 ASSESS OTHER PROBLEMS

Assess other problems mentioned by mother or observed by you, if you think that infant has severe problem or you don’t know how to treat the condition, refer immediately. If you know how to treat any other condition, not covered in this section, you can treat the young infant.

1.8 LET US SUM UP

In this unit you have learnt the Assessment and Classification of Sick Young Infant for possible bacterial infection, local infection, diarrhoea, dysentry and dehydration. You have also learnt, how to assess breast feeding and feeding problems and immunization status.

1.9 ANSWERS TO CHECK YOUR PROGRESS

Check Your Progress 1

i) • Count the breaths in one minute. Repeat the count if elevated.
   • Look for severe chest indrawing.
   • Look for nasal flaring.
   • Look and listen for grunting.
   • Look and feel for bulging fontanel.
   • Look for pus draining from the ear.
   • Look at the umbilicus. Is it red or draining pus?
   • Look for skin pustules. Are there 10 or more skin pustules or a big boil?
   • Measure axillary temperature (if not possible feel for fever or low body temperature).
   • See if the young infant is lethargic or unconscious.
   • Look at the young infant’s movements. Are they less than normal?
   • Look for jaundice. Are the palms & soles yellow?

ii) 1) meningitis.
  2) 60
  3) breathes in.
  4) pneumonia.

Activity 1

<table>
<thead>
<tr>
<th>Umbilicus</th>
<th>Normal</th>
<th>Redness or draining pus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photograph 1</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>Photograph 2</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Photograph 3</td>
<td></td>
<td>√</td>
</tr>
</tbody>
</table>
### Activity 2

<table>
<thead>
<tr>
<th>Infant Number</th>
<th>Breaths in one Minute</th>
<th>Does the infant have Fast Breathing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>68</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>64</td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Infant number</th>
<th>Does the infant have severe chest indrawing?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
</tr>
<tr>
<td>3</td>
<td>Yes</td>
</tr>
<tr>
<td>4</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>No</td>
</tr>
</tbody>
</table>

### Exercises

**Case 1: Harish**

**MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS**

Name ......Harish........ Age 3 weeks  Weight 3.6Kg  Temperature 37°C  Date: .........................

ASK: What are the infant’s problems? *Difficult breathing*  Initial Visit √ Follow up visit----

ASSESS (Circle all signs present)

<table>
<thead>
<tr>
<th>CLASSIFY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Possible Serious Bacterial Infection</td>
</tr>
</tbody>
</table>

**CHECK FOR POSSIBLE BACTERIAL INFECTION**

- Has the Infant had convulsions?
- Count the breaths in one minute _74_ breaths per minute. Repeat if elevated _70_ Fast breathing?
- Look for severe chest indrawing.
- Look for *nasal flaring*.
- Look and listen for grunting.
- Look and feel for bulging fontanel.
- Look for pus draining from the ear.
- Look at the umbilicus. Is it red or draining pus?
- Look for skin pustules. Are there 10 or more skin pustules or a big boil?
- Measure axillary temperature (if not possible feel for fever or low body temperature)
  - 37.5°C or more (or feels hot)?
  - Less than 35.5°C?
  - Less than 36.5°C but more than 35.4°C (or feels cold to touch)?
- See if the young infant is lethargic or unconscious.
- Look at the young infant’s movements. Are they less than normal?
- Look for Jaundice. Are the palms and soles yellow?
MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS

Name .......Ankit........ Age 2 weeks Weight 2.5Kg Temperature 37°C  Date: ..............

ASK: What are the infant’s problems? Premature, Small size, umbilicus infected
Initial Visit √ Follow up visit----

ASSESS (Circle all signs present)  CLASSIFY

<table>
<thead>
<tr>
<th>CHECK FOR POSSIBLE BACTERIAL INFECTION</th>
<th>CLASSIFY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Has the Infant had convulsions?</td>
<td>Local</td>
</tr>
<tr>
<td>• Count the breaths in one minute <em>55</em> breaths per minute.</td>
<td>Bacterial Infection</td>
</tr>
<tr>
<td>Repeat if elevated _____ Fast breathing?</td>
<td></td>
</tr>
<tr>
<td>• Look for severe chest indrawing.</td>
<td></td>
</tr>
<tr>
<td>• Look for nasal flaring.</td>
<td></td>
</tr>
<tr>
<td>• Look and listen for grunting.</td>
<td></td>
</tr>
<tr>
<td>• Look and feel for bulging fontanel.</td>
<td></td>
</tr>
<tr>
<td>• Look for pus draining from the ear.</td>
<td></td>
</tr>
<tr>
<td>• Look at the umbilicus. Is it red or draining pus?</td>
<td></td>
</tr>
<tr>
<td>• Look for skin pustules. Are there 10 or more skin pustules or a big boil?</td>
<td></td>
</tr>
<tr>
<td>• Measure axillary temperature (if not possible feel for fever or low body temperature)</td>
<td></td>
</tr>
<tr>
<td>─ 37.5°C or more (or feels hot)?</td>
<td></td>
</tr>
<tr>
<td>─ Less than 35.5°C?</td>
<td></td>
</tr>
<tr>
<td>─ Less than 36.5°C but more than 35.4°C (or feels cold to touch)?</td>
<td></td>
</tr>
<tr>
<td>• See if the young infant is lethargic or unconscious.</td>
<td></td>
</tr>
<tr>
<td>• Look at the young infant’s movements.</td>
<td></td>
</tr>
<tr>
<td>Are they less than normal?</td>
<td></td>
</tr>
<tr>
<td>• Look for Jaundice. Are the palms and soles yellow?</td>
<td></td>
</tr>
</tbody>
</table>

Check Your Progress 2

<table>
<thead>
<tr>
<th>Physical Signs</th>
<th>Degree of Dehydration</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Skin pinch goes back slowly</td>
<td>Some dehydration</td>
</tr>
<tr>
<td>• Skin pinch goes back very slowly</td>
<td>Severe dehydration</td>
</tr>
<tr>
<td>• None of the listed signs are present</td>
<td>No dehydration</td>
</tr>
</tbody>
</table>
ii) Blood

iii) Upto or more than 14

**Activity 3**

**Case 1: Video Exercise**

**MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS**

Name .................................. Age ........ Weight ........ Temperature ..........ºC Date: ..........

ASK: What are the infant’s problems? .......... Initial Visit ........ Follow-up Visit?........

ASSESS (Circle all signs present)

<table>
<thead>
<tr>
<th>CHECK FOR POSSIBLE BACTERIAL INFECTION</th>
<th>CLASSIFY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Has the Infant had convulsions?</td>
<td>• Count the breaths in one minute _____ breaths per minute. Repeat if elevated _________ Fast breathing?</td>
</tr>
<tr>
<td>• Measure axillary temperature (if not possible feel for fever or low body temperature)</td>
<td>• Look for severe chest indrawing.</td>
</tr>
<tr>
<td>– 37.5ºC or more (or feels hot)?</td>
<td>• Look for nasal flaring.</td>
</tr>
<tr>
<td>– Less than 35.5ºC?</td>
<td>• Look and listen for grunting.</td>
</tr>
<tr>
<td>– Less than 36.5ºC but more than 35.4ºC (or feels cold to touch)?</td>
<td>• Look and feel for bulging fontanel.</td>
</tr>
<tr>
<td>• See if the young infant is lethargic or unconscious.</td>
<td>• Look for pus draining from the ear.</td>
</tr>
<tr>
<td>• Look at the young infant’s movements. Are they less than normal?</td>
<td>• Look at the umbilicus. Is it red or draining pus?</td>
</tr>
<tr>
<td>• Look at the young infant’s general condition. Is the infant – Lethargic or unconscious?</td>
<td>• Look for skin pustules. Are there 10 or more skin pustules or a big boil?</td>
</tr>
<tr>
<td>– Restless and irritable?</td>
<td>• Measure axillary temperature (if not possible feel for fever or low body temperature)</td>
</tr>
<tr>
<td>• Pinch the skin of the abdomen. Does it go back?</td>
<td>– 37.5ºC or more (or feels hot)?</td>
</tr>
<tr>
<td>– Very slowly (longer than 2 seconds)?</td>
<td>– Less than 35.5ºC?</td>
</tr>
<tr>
<td>– Slowly?</td>
<td>– Less than 36.5ºC but more than 35.4ºC (or feels cold to touch)?</td>
</tr>
</tbody>
</table>

**DOES THE YOUNG INFANT HAVE DIARRHOEA**    Yes____No____

| • For How long? ___ days | • Look at the young infant’s general condition. Is the infant – Lethargic or unconscious? |
| • Is there blood in the stool? | – Restless and irritable? |
|                            | • Look for sunken eyes. |
|                            | • Pinch the skin of the abdomen. Does it go back? |
|                            | – Very slowly (longer than 2 seconds)? |
|                            | – Slowly? |
Case 2: Neera

MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS

Name ......Neera......... Age 7 weeks Weight ..3Kg... Temperature ....ºC Date: ............

ASK: What are the infant’s problems? Diarrhea Initial Visit ...√.... Follow-up Visit?........

ASSESS (Circle all signs present)  

<table>
<thead>
<tr>
<th>CHECK FOR POSSIBLE BACTERIAL INFECTION</th>
<th>CLASSIFY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Has the Infant had convulsions?</td>
<td>• Count the breaths in one minute <em><strong>58</strong></em> breaths per minute. Repeat if elevated _________ Fast breathing?</td>
</tr>
<tr>
<td></td>
<td>• Look for severe chest indrawing.</td>
</tr>
<tr>
<td></td>
<td>• Look for nasal flaring.</td>
</tr>
<tr>
<td></td>
<td>• Look and listen for grunting.</td>
</tr>
<tr>
<td></td>
<td>• Look and feel for bulging fontanel.</td>
</tr>
<tr>
<td></td>
<td>• Look for pus draining from the ear.</td>
</tr>
<tr>
<td></td>
<td>• Look at the umbilicus. Is it red or draining pus?</td>
</tr>
<tr>
<td></td>
<td>• Look for skin pustules. Are there 10 or more skin pustules or a big boil?</td>
</tr>
<tr>
<td></td>
<td>• Measure axillary temperature (if not possible feel for fever or low body temperature)</td>
</tr>
<tr>
<td></td>
<td>- 37.5ºC or more (or feels hot)?</td>
</tr>
<tr>
<td></td>
<td>- Less than 35.5ºC?</td>
</tr>
<tr>
<td></td>
<td>- Less than 36.5ºC but more than 35.4ºC (or feels cold to touch)?</td>
</tr>
<tr>
<td></td>
<td>• See if the young infant is lethargic or unconscious.</td>
</tr>
<tr>
<td></td>
<td>• Look at the young infant’s movements. Are they less than normal?</td>
</tr>
<tr>
<td></td>
<td>• Look for Jaundice. Are the palms and soles yellow?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DOES THE YOUNG INFANT HAVE DIARRHOEA</th>
<th>Yes <em>√</em> No ___</th>
</tr>
</thead>
<tbody>
<tr>
<td>• For How long? ___ days</td>
<td>• Look at the young infant’s general condition. Is the infant</td>
</tr>
<tr>
<td>• Is there blood in the stool?</td>
<td>- Lethargic or unconscious?</td>
</tr>
<tr>
<td></td>
<td>Restless and irritable?</td>
</tr>
<tr>
<td></td>
<td>• Look for sunken eyes.</td>
</tr>
<tr>
<td></td>
<td>• Pinch the skin of the abdomen. Does it go back?</td>
</tr>
<tr>
<td></td>
<td>- Very slowly (longer than 2 seconds)?</td>
</tr>
<tr>
<td></td>
<td>Slowly?</td>
</tr>
</tbody>
</table>

Some Dehydration
Activity 4

Discuss with the counsellor.

Activity 5

<table>
<thead>
<tr>
<th>Photograph</th>
<th>Signs of Good Attachment</th>
<th>Assessment</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chin Touching Breast</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Photograph 4</td>
<td>Yes (almost)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Photograph 5</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Photograph 6</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Photograph 7</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Photograph 8</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Photograph 9</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Photograph 10</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Photograph 11</td>
<td>Yes (almost)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Photograph 12</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Check Your Progress 3

i) Immunization Card is the best source of information.

ii) Two doses of OPV, one dose of DPT (DPT-1) and one dose of Hepatitis-B vaccine (Hepatitis B-1)
UNIT 2 IDENTIFY TREATMENT AND TREAT SICK YOUNG INFANT

Structure

20 Objectives
2.1 Introduction
22 Identify Treatment
  2.2.1 Identify Treatment for Possible Bacterial Infection
  2.2.2 Identify Treatment for Diarrhoea
  2.2.3 Identify Treatment for Feeding Problems
2.3 Refer Sick Young Infant
2.4 Treat Sick Young Infant
  2.4.1 Treatment in Outpatient Clinic
  2.4.2 Treat Local Infections at Home
  2.4.3 Treat Diarrhoea at Home: Plan A
  2.4.4 Treat/Counsel the Mother about Feeding Problems
2.5 Home Care
2.6 Follow-up Care
2.7 Home Visits for Young Infants
2.8 Let Us Sum Up
2.9 Answers to Check Your Progress

2.0 OBJECTIVES

After going through this unit, you should be able to:

• Identify and administer the treatment to the sick young infant;
• Refer the sick young infant;
• Determine oral drugs and dosages for treating the sick young infant;
• Give home care; and
• Advise for follow up.

2.1 INTRODUCTION

In Unit 1 you have learnt to assess and classify sick young infant up to 2 months of age. The next step is to identify and give the necessary treatment to the sick young infant. In this unit, we shall focus on how to identify treatment, refer the sick young infant and give appropriate treatment. You will also learn to give home care, counsel the mother about the treatment and follow up care.

2.2 IDENTIFY TREATMENT

Treatment of the sick young infant is based on identifying treatment for each classification. The “Identify Treatment” column in the chart will help you to decide whether the infant needs referral, treatment with medicines or home care and lists the treatments for all the classification that the young infant has.
If sick young infant has more than one classification, you should strike out wherever there are duplicate instructions in “Identify Treatment” column. For example, if the young infant has a Possible Serious Bacterial Infection i.e. classification in red box and also has another severe classification such as Severe Dehydration, strike out Refer URGENTLY to hospital from the treatments listed in one of the two boxes of “Identify Treatment” column.

If sick young infant has classification in RED Box he/she should be referred to hospital after giving appropriate pre-referral treatments listed in the “Identify Treatment” column.

If sick young infant has classification in YELLOW Box he/she should be provided all the treatments listed in the “Identify Treatment” column.

If a sick young infant has classification in GREEN Box, the mother of the infant should be advised to give home care.

If a sick young infant has more than one classification, treatment required for all classifications must be identified.

### 2.2.1 Identify Treatment for Possible Bacterial Infection

Refer Table 2.1 below to identify the treatment of the sick young infant and determine if the young infant needs urgent referral. The steps of referral are given in Section 2.3.

#### Table 2.1: Identify Treatment for Bacterial Infection

<table>
<thead>
<tr>
<th>SIGNS</th>
<th>Classify as</th>
<th>IDENTIFY TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Convulsions or</td>
<td></td>
<td>➢ Give first dose of intramuscular ampicillin (100 mg/Kg) and gentamycin (5 mg/Kg)</td>
</tr>
<tr>
<td>• Fast breathing (60 breaths per minutes or more) or</td>
<td></td>
<td>➢ Treat to prevent low blood sugar</td>
</tr>
<tr>
<td>• Severe chest indrawing or</td>
<td></td>
<td>➢ Warm the young infant by skin to skin contact if temperature is less than</td>
</tr>
<tr>
<td>• Nasal flaring or</td>
<td></td>
<td>36.5°C (or feels cold to touch) while arranging referral</td>
</tr>
<tr>
<td>• Grunting or</td>
<td></td>
<td>➢ Advise mother to keep the young infant warm on the way to the hospital.</td>
</tr>
<tr>
<td>• Bulging Fontanel or</td>
<td></td>
<td>➢ Refer urgently to the hospital.</td>
</tr>
<tr>
<td>• 10 or more skin pustules or a big boil or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• If axillary temperature 37.5°C or above (or feels hot to touch) or</td>
<td>Possible Serious Bacterial Infection</td>
<td></td>
</tr>
<tr>
<td>• Lethargic or unconscious or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Look at the young infants’ movements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are they less than normal movements?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Look for Jaundice. Are the palms and soles yellow?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contd...
Identify Treatment and Treat Sick Young Infant

**Possible Serious Bacterial Infection**

You have seen in Table 2.1 that a young infant classified as having **POSSIBLE SERIOUS BACTERIAL INFECTION** (the classification in Red Box) needs urgent referral. You should refer the infant without delay and give urgent pre-referral treatment.

You have to give first dose of intramuscular antibiotics or oral antibiotic such as cotrimoxazole if injectable antibiotics are not available. Ensure that the baby is kept warm on the way to hospital. Prevent hypoglycemia with breast milk/animal milk with added sugar/sugar water.

Remember all infants with severe classification are to be referred to the hospital after completing the assessment and administration of necessary pre-referral treatment.

**Local Bacterial Infection**

If the young infant is classified as having **LOCAL BACTERIAL INFECTION**, i.e. classification in Yellow Box (umbilical infection, skin pustules <10), you have to treat the infant by giving full course of cotrimoxazole at home. The recommended dose of cotrimoxazole according to age and weight is given in Table 2.5.
2.2.2 Identify Treatment for Diarrhoea

Treatment of diarrhea, dehydration and dysentery is given in Table 2.2

<table>
<thead>
<tr>
<th>SIGNS</th>
<th>Classify as</th>
<th>IDENTIFY TREATMENT</th>
</tr>
</thead>
</table>
| Two of the following signs:  
  - Lethargic or unconscious  
  - Sunken eyes  
  - Skin pinch goes back very slowly. | SEVERE DEHYDRATION | If the young infant has low weight, dehydration or another severe classification  
  - Give first dose of intramuscular ampicillin (100 mg/Kg) and gentamycin (5 mg/Kg) if the young infant has low weight, dehydration or another severe classification  
  - Advise mother to continue breast feeding and how to keep the young infant warm on the way to the hospital.  
  - Refer urgently to the hospital with mother giving frequent sips of ORS on the way.  
  **OR**  
  - If infant does not have low weight or any other severe classification:  
    - Give fluid for severe dehydration (Plan C) and then refer to hospital after rehydration |
| Two of the following signs:  
  - Restless, irritable  
  - Sunken eyes  
  - Skin pinch goes back slowly | SOME DEHYDRATION | If the young infant has low weight, dehydration or another severe classification:  
  - Give first dose of intramuscular ampicillin (100 mg/Kg) and gentamycin (5 mg/Kg) if the young infant has low weight, dehydration or another severe classification  
  - Advise mother to continue breast feeding and how to keep the young infant warm on the way to the hospital.  
  - Refer urgently to the hospital with mother giving frequent sips of ORS on the way.  
  If the young infant does not have low weight, dehydration or another severe classification  
  - Give fluids for some dehydration (Plan B)  
  - Advise mother when to return immediately  
  - Follow-up in 2 days. |
### Classify as

**NO DEHYDRATION**

- Give fluid to treat diarrhoea at home (Plan A)
- Advise home care
- Follow up in 2 days if not improving.

**SEVERE PERSISTENT DIARRHEA**

- Give first dose of intramuscular ampicillin (100 mg/Kg) and gentamycin (5 mg/Kg) if the young infant has low weight, dehydration or another severe classification
- Treat to prevent low blood sugar
- Warm the young infant by skin to skin contact if temperature is less than 36.5°C (or feels cold to touch) while arranging referral. Advise mother to keep the young infant warm on the way to the hospital.
- Refer URGENTLY to the hospital.

**SEVERE DYSENTRY**

- Give first dose of intramuscular ampicillin (100 mg/Kg) and gentamycin (5 mg/Kg) if the young infant has low weight, dehydration or another severe classification
- Treat to prevent low blood sugar
- Warm the young infant by skin to skin contact if temperature is less than 36.5°C (or feels cold to touch) while arranging referral. Advise mother to keep the young infant warm on the way to the hospital.
- Refer URGENTLY to the hospital.

You have seen in **Table 2.2** that young infant with **severe dehydration** and **severe dysentry** needs urgent referral.

#### 2.2.3 Identify Treatment for Feeding Problems

Treatment of feeding problems is given in **Table 2.3**

As per **Table 2.3** a young infant classified as having Not Able to Feed - Possible Serious Bacterial Infection (classification in Red Box) needs urgent referral. You should refer urgently and advice mother to give skin to skin contact if he/she feels cold to touch.
Feeding Problem

If the young infant has been classified as having feeding problem, you should teach the mother correct positioning as attachment (Refer Table 2.3 for details).

<table>
<thead>
<tr>
<th>SIGNS</th>
<th>Classify as</th>
<th>IDENTIFY TREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Not able to feed or Not suctioning at all or Not suctioning at all or Very low weight for age</td>
<td>NOT ABLE TO FEED - POSSIBLE SERIOUS BACTERIAL INFECTION or LOW WEIGHT FOR AGE</td>
<td>➢ Give first dose of intramuscular ampicillin (100 mg/Kg) and gentamycin (5 mg/Kg) if the young infant has low weight, dehydration or another severe classification. ➢ Treat to prevent low blood sugar ➢ Advise mother to continue breast feeding and how to keep the young infant warm on the way to the hospital. ➢ Refer urgently to the hospital</td>
</tr>
<tr>
<td>• Not well attached to breast or Not suctioning effectively or Less than 8 breast feeds in 24 hours or Receives other foods or drinks or Thrush (ulcers or white patches in mouth) or Low weight for age or Breast or nipple problems</td>
<td>FEEDING PROBLEM OR LOW WEIGHT</td>
<td>➢ If not well attached or not suctioning effectively, teach correct positioning and attachment ➢ If breast feeding less than 8 times in 24 hours, advise to increase frequency of feeding ➢ If receiving other foods or drinks counsel mother about breastfeeding more, reducing other foods or drinks and using a cup and spoon. ➢ If thrush, teach the mother to apply 0.25% Gention Violet paint twice daily ➢ If breast or nipple problem teach the mother to treat breast or nipple problems ➢ Advise mother to give home care (Breastfeed infant exclusively, keep infant warm, apply nothing to cord, ask mother to wash hands and explain danger signs in the infant) ➢ Follow-up in 2 days in case of any feeding problem or thrush ➢ Follow up in 14 days in case of low weight for age.</td>
</tr>
<tr>
<td>• Not other signs of inadequate feeding</td>
<td>NO FEEDING PROBLEM</td>
<td>➢ Advise mother to give home care ➢ Praise the mother for feeding the infant well ➢ Advise mother when to return immediately.</td>
</tr>
</tbody>
</table>
Also advise the mother to take care of baby and follow up in two days.

No Feeding Problem
If the young infant has been classified as having no feeding problem, advise the mother to care for her baby and help her practice feeding her infant well.

Activity 1

Exercises on Identify Treatment
In this exercise you will decide whether or not urgent referral is needed. Tick the appropriate answer.

i) Sarla is an 11-day-old baby girl. She has the following classification:
   LOCAL BACTERIAL INFECTION, NO FEEDING PROBLEM
   Does Sarla need urgent referral? YES______ No ______
   Identify the treatment she needs: ..................................................

ii) Neena is a 6-week-old girl. She has the classification:
   NOT ABLE TO FEED-POSSIBLE SERIOUS BACTERIAL INFECTION
   Does Neena need urgent referral? YES_____ NO ______
   What is the pre-referral treatment that she needs? .........................

iii) Hanif is a 7-day-old boy. He has the classification:
   Diarrhoea with NO DEHYDRATION OR FEEDING PROBLEM
   Does Hanif need urgent referral? YES_____ NO ______

iv) Habib is a 19-day-old boy. He has:
   LOCAL BACTERIAL INFECTION
   NOT ABLE TO FEED-POSSIBLE SERIOUS BACTERIAL INFECTION
   Does Habib need urgent referral? YES_____ NO ______

Identify Urgent Pre-Referral Treatment

When a young infant needs urgent referral, you must quickly identify and begin the most urgent treatments for that infant. The following are urgent treatments. Pre-referral treatments are in bold print on the ASSESS and CLASSIFY THE SICK YOUNG INFANT chart. You will give the first dose of the drugs before referral. Below are the pre-referral treatments for a young infant:

- Give first dose of intramuscular injection of Ampicillin and Gentamicin.
- Treat to prevent low blood sugar.
- Warm the young infant by Skin to Skin contact if temperature less than 36.5°C (or feels cold to touch) while arranging referral.
- Advise the mother how to keep the infant warm on the way to the hospital.
- Advise mother to give frequent sips of ORS and continue breastfeeding on the way. Advise mother to continue breastfeeding.
The first three treatments above are urgent because they can prevent serious consequences such as progression of pneumonia, septicemia or meningitis, or brain damage from low blood sugar. The other listed treatments are also important to prevent worsening of the illness. Before urgently referring a young infant to hospital give all appropriate pre-referral treatments. Pre-referral treatments are in bold print on the chart.

Some treatments should not be given before referral because they are not urgently needed and would delay referral. For example, do not teach a mother how to treat a local infection before referral. If immunizations are needed, do not give them before referral. Let hospital personnel determine when to give immunizations. This will avoid delaying referral.

2.3 REFER SICK YOUNG INFANT

In section 2.2, you have seen that a sick young infant with classification in the Red Box such as Possible Serious Bacterial Infection, Severe Dehydration, Some Dehydration and Severe Dysentery and Feeding Problems-Serious Bacterial Infection requires urgent referral. So you should take following steps for appropriate referral:

- Explain to the mother about the need for referral and get the agreement to take the young infant to hospital/health centre. If mother appears reluctant, then find out the reasons for this.
- Solve the problems and calm her fears.
- Write a Referral note for the mother to take to the hospital, tell her to give this note to the doctor in the hospital.

Write on the Referral note – the Name, Age and Sex of the young infant, the date and time of referral, including all problems that were identified, the classification, the treatment that has been given-and any other information that the staff at the referral hospital needs to know about young infant. Do not forget to write your name and the clinic. A sample referral card is shown in the following illustration (Refer Fig. 2.1).

![Fig. 2.1: Example of Referral Card](image)

- Give any urgent treatment before the mother leaves you and provide any instructions that the mother should follow while on her way to the hospital.
If it has been determined that the young infant should be given antibiotics then make sure to give the first dose of antibiotic in your presence. Give an extra dose of this medicine if it is going to take a long time before the infant reaches the hospital (if you are certain that the mother will not take the infant to the hospital then it is advisable that the entire course of antibiotics should be given).

Advise the mother to continue to breastfeed the baby while transporting the baby.

If the young infant has severe dehydration and the infant can take feed then the mother must continue to give sips of ORS once after every minute or two minutes throughout while traveling to the referral facility.

### 2.4 TREAT SICK YOUNG INFANT

In Section 2.2 you have learnt to identify treatment for sick young infant. Once you have identified the treatment from the “Identify Treatment” column of the chart, then you have to give the actual treatment including oral drugs.

#### 2.4.1 Treatments in Out Patient Clinic Only

You may have to give one or more of the following treatments in the clinic before the young infant is sent to the hospital.

- Antibiotics
- Breast milk or sugar water
- Warm the sick young infant with low body temperature by skin to skin contact and keep the young infant warm on the way to the hospital.

When giving intramuscular antibiotics:

- Explain to the mother why the drug is given.
- Determine the dose of gentamicin and ampicillin.
- Use a sterile needle and sterile syringe.
- Measure the dose accurately.
- Give the drug as intramuscular injection.
- If young infant cannot be referred, follow the instructions given in the section WHERE REFERRAL IS NOT POSSIBLE (Appendix I).

1) **Give first dose of Intramuscular Antibiotics**

If you identify/classify a young infant as having possible serious bacterial infection, you have to give the first dose of two intramuscular antibiotics such as ampicillin and gentamicin to young infants with POSSIBLE SERIOUS BACTERIAL INFECTION. Young infants with POSSIBLE SERIOUS BACTERIAL INFECTION are often infected with a broader range of bacteria than older infants and children. The combination of gentamicin and ampicillin is effective against this broader range of bacteria. See Table 2.4 for intramuscular antibiotics.

- Give first dose of intramuscular antibiotics.
  - Give first dose of both ampicillin and gentamicin intramuscularly.
Table 2.4: Intramuscular Antibiotics

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>GENTAMICIN</th>
<th>AMPICILLIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kg</td>
<td>0.5ml*</td>
<td>0.5ml</td>
</tr>
<tr>
<td>2 kg</td>
<td>1.0 ml*</td>
<td>1.0ml</td>
</tr>
<tr>
<td>3 kg</td>
<td>1.5 ml*</td>
<td>1.5ml</td>
</tr>
<tr>
<td>4 kg</td>
<td>2.0ml*</td>
<td>2.0ml</td>
</tr>
<tr>
<td>5 kg</td>
<td>2.5ml*</td>
<td>2.5ml</td>
</tr>
</tbody>
</table>

*Avoid using undiluted 40 mg/ml gentamicin
*Ampicillin and gentamicin not to be mixed.

Referal is the best option for a young infant with classification of POSSIBLE SERIOUS BACTERIAL INFECTION. If referral is not possible give oral amoxycillin every 8 hourly and intramuscular gentamicin once daily.

Remember
These drugs have to be given on advice and prescription of a doctor.

Using Gentamicin
Before giving gentamicin intramuscularly you must read the vial of gentamicin to determine its strength. Check whether it should be used undiluted or diluted with sterile water. When ready to use, the strength should be 10 mg/ml.

Using ampicillin
Before giving ampicillin intramuscularly you have to mix it with sterile water. You must read the vial of ampicillin to determine its strength and then mix with sterile water. Mix a vial of 500mg powder in 2.1 ml of sterile water to give 200 mg/ml ampicillin.

If you have a vial with a different amount of gentamicin or ampicillin or if you use a different amount of sterile water than described here, the dosage table on the TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER chart will not be correct. In that situation, carefully follow the manufacturer’s directions for adding water and recalculate the doses.

If the infant with POSSIBLE SERIOUS BACTERIAL INFECTION cannot go to a hospital, it is possible to continue treatment using these intramuscular antibiotics. Refer Appendix-I Where Referral is not Possible.

2) Treat the Young Infant to Prevent Low Blood Sugar
Preventing low blood sugar is an urgent pre-referral treatment for infant with POSSIBLE SERIOUS BACTERIAL INFECTION, SEVERE JAUNDICE OR SEVERE MALNUTRITION.

GENTAMICIN
Dose: 5 mg per kg

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>Undiluted 2 ml vial Containing 20 mg = 2 ml at 10 mg/ml</th>
<th>OR Add 6 ml sterile water to 2 ml containing 80mg* = 8 ml at 10 mg/ml</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 kg</td>
<td>0.5ml*</td>
<td></td>
</tr>
<tr>
<td>2 kg</td>
<td>1.0 ml*</td>
<td></td>
</tr>
<tr>
<td>3 kg</td>
<td>1.5 ml*</td>
<td></td>
</tr>
<tr>
<td>4 kg</td>
<td>2.0ml*</td>
<td></td>
</tr>
<tr>
<td>5 kg</td>
<td>2.5ml*</td>
<td></td>
</tr>
</tbody>
</table>

Gentamicin
Dose: 100 mg per kg

(Vial of 500 mg mixed with 2.1 ml of sterile water for injection to give 500 mg/2.5 ml or 200mg/1 ml)
Low blood sugar occurs in serious infections such as septicemia or meningitis. It also occurs when an infant has not been able to feed for many hours or has low body temperature. It is dangerous because it can cause brain damage.

Giving some breastmilk, dairy/locally appropriate animal milk, or sugar water provides some glucose to treat and prevent low blood sugar. Treatment is given once, before the infant is referred to the hospital. Refer practical 2 of Block 2 of BNSL-115 for preventing low blood sugar.

### Treat the young infant to prevent low blood sugar

- If the infant is able to breastfeed:
  - Ask the mother to breastfeed the infant.
- If the infant is not able to breastfeed but is able to swallow:
  
  Give 20-50 ml (10ml/kg) expressed breastmilk or locally appropriate animal milk (with added sugar) before departure. If neither of these is available, give 20-50 ml (10 ml/kg) sugar water.
  
  To make sugar water: dissolve 4 level teaspoons of sugar (20grams) in a 200 ml. cup of clean water.
- If the infant is not able to swallow:
  
  Give 20-50 ml (10 ml/kg) of expressed breastmilk or locally appropriate animal milk (with added sugar) or sugar water by nasogastric tube.

If the infant cannot swallow and you know how to use a nasogastric (NG) tube, give him 10 ml/kg of milk (expressed breastmilk or dairy/locally appropriate animal milk) or sugar water by NG tube. (Refer practical 2 block 2 of BNSL-115 for NG tube feeding).

### Warm the Sick Young Infant with Low Body Temperature

It is important to maintain the temperature of the newborn between 36.4°C and 37°C. Low temperature in the newborn has an adverse impact on the sick newborn and increases the risk of death.

The best way to maintain temperature or rewarm a baby with low temperature at the primary care level is by placing the baby in skin-to-skin contact with the mother (or any adult). The body will transfer heat to the newborn.

### Warm the young infant skin to skin (kangaroo mother care)

- Provide privacy to the mother. If mother is not available, skin to skin contact may be provided by the father or any other adult.
- Request the mother to sit or recline comfortably.
- Undress the baby gently, except for cap, nappy and socks.
- Place the baby prone on mother's chest in an upright and extended posture between her breast, in skin to skin contact.
- Turn baby's head to one side to keep airways clear.
- Cover the baby with mother's blouse, 'pallu' or gown; wrap the baby-mother duo with an added blanket or shawl.
- Breastfeed the baby frequently.
- If possible, warm the room (>25°C) with a heating device, like electrical room heater or angeethi.
If mother is not available, skin to skin contact may be provided by the father or any other adult. Skin to skin contact is the most practical, preferred method of warming a hypothermic young infant in a primary health care facility. If not possible, dress and wrap the young infant ensuring that head, hands and feet are also well covered. Hold the young infant close to the caregiver's body, in a room warmed by a heating device to a temperature of 30-33°C. Alternatively, if an overhead radiant warmer is available, place the baby under the warmer.

**REASSESS after 1 hour**
- Look, listen and feel for signs of possible bacterial infection and
- Measure axillary temperature by placing the thermometer in the axilla for five minutes (or feel for low body temperature).

**If any signs of possible serious bacterial infection OR temperature still below 36.5°C (or feels cold to touch):**
- Refer URGENTLY to hospital after giving pre-referral treatments for possible serious bacterial infection

**If no sign of possible serious Bacterial infection and temperature 36.5°C or more (or is not cold to touch):**
- Advise how to keep the infant warm at home.
- Advise mother to give home care.
- Advise mother when to return immediately.

Skin to skin contact is the most practical, preferred method of warming a hypothermic infant in a primary health care facility. If not possible:
- Clothe the baby in 3-4 layers, cover head with a cap and body with a blanket or a shawl; hold baby close to caregiver's body, OR
- Place the baby under overhead radiant warmer, if available.

(Avoid direct heat from a room heater and use of hot water rubber bottle hot brick to warm the baby because of danger of accidental burns).

**Remember**
Avoid direct heat from a room heater and use of hot water rubber bottle or hot brick to warm the baby because of danger of accidental burns. Do not keep an angeethi in a closed room particularly if the coal is not fully red and if it is still emitting smoke.

### 2.4.2 Treat Local Infections at Home

#### 1) Treatment with Oral Drugs

You have to give oral cotrimoxamole or amoxycillin for **LOCAL BACTERIAL INFECTION and SEVERE DEHYDRATION**.

You have to give full course of of cotrimoxazole or ampicillin to infant with **LOCAL BACTERIAL INFECTION** at home. You should give cotrimoxazole by mouth every morning and every night, (two times daily) for five days and give the accurate dose of the drug. The dosage of drugs is given in Table 2.5.

**Remember**
Give full course of cotrimoxazole/amoxycillin to infants with Local Bacterial infection at home.
Table 2.5: Dose of Oral Antibiotics

<table>
<thead>
<tr>
<th>Age and Weight</th>
<th>COTRIMOXAZOLE (trimethoprim + sulphamethoxazole)</th>
<th>AMOXYCILLIN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adult Tablet single strength (80 mg trimethoprim + 400 mg sulphamethoxazole)</td>
<td>Tablet 250 mg</td>
</tr>
<tr>
<td>Birth up to 1 month (&lt;3 Kg)</td>
<td>½*</td>
<td></td>
</tr>
<tr>
<td>1 month up to 2 months (3-4 Kg)</td>
<td>¼</td>
<td>1</td>
</tr>
</tbody>
</table>

*Avoid cotrimoxazole in infants less than 1 month of age who are premature or jaundiced.

Table 2.5 shows that the dosage of cotrimoxazole in infants (from birth to one month) is half-paediatric tablet twice a day for five days and for the infant between the age of one month up to two months, the dose of cotrimoxazole is one paediatric tablet twice a days for five days.

Remember

Do not give cotrimoxazole to infants less than one month of age and those who are premature or jaundiced.

You have to advise the mother to give tablet cotrimoxazole two times every day for five days.

Sometimes you may not have cotrimoxazole (paediatric) tablets but you may have only cotrimoxazole (adult) tablets. In such situation you should give ¼th tablet (adult tablet) of cotrimoxazole to the infant from birth up to one month in place of one paediatric tablet. Remember that ½ tablet of cotrimoxazole (adult tablet) is equal to one paediatric tablet.

If you use Amoxycillin you have to give amoxycillin three times daily for five days. Give 1.25 ml. amoxycillin syrup to an infant, birth up to one month (<3 kg weight) and ¼ tablet of amoxycillin or 2.5 ml of amoxycillin syrup to infant one month up to two months (3-4 kg weight).

- Give cotrimoxazole by mouth every morning and every evening for five days.
- Give amoxycillin by mouth three times daily for five days.
- Tell the mother the reasons for giving the drug to the infant.
- Demonstrate how to measure a dose.
- Demonstrate to the mother how to administer oral cotrimoxazole at home and take return demonstration to ensure that the mother is able to give the drug at home (Refer Practical 2 block 2 of BNSL-115 for demonstration).
- Ask the mother checking questions to make sure that she has understood all the steps of preparing the medicine for giving it to the young infant.
• Teach the mother to keep the sick young infant warm:
  – Low temperature has an adverse impact on the sick young infant and it increases the risk of death.
  – The best way to maintain temperature i.e., warming a baby having low temperature is by placing the baby in skin-to-skin contact with the mother (or any adult). Skin to skin contact can also be used to keep a baby warm during transport and at home (Refer Practical 2 block 2 of BNSL-115 for teaching the mother to keep the baby warm and skin to skin contact).

Check Your Progress 1

List the treatment required for a young infant with Severe Dehydration and Possible Serious Bacterial Infection.

......................................................................................................................
......................................................................................................................
......................................................................................................................
......................................................................................................................
......................................................................................................................
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......................................................................................................................
......................................................................................................................
......................................................................................................................

2) **Teach the Mother to Treat Local Infections at Home**

As described earlier you have to give full course of cotrimoxazole/amoxycillin to infant with Local Bacterial Infection at home.

You have to teach the mother to give local treatment for local infections at home which include skin pustules, ear discharge or oral thrush, umbilical infection & so on. When teaching mother how to treat local infections at home you should follow the following guidelines.

**Table 2.6: Treatment of Local Infection**

<table>
<thead>
<tr>
<th>Treat Skin Pustules or Umbilical Infections</th>
<th>To Treat Thrush (ulcers or white patches in month)</th>
<th>Dry the ear by wicking</th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Apply gention violet paint twice daily. The mother should:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➢ Wash hands.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➢ Gently wash off pus and crusts with soap and water.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➢ Dry the area.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➢ Apply 0.5% of Gention Violet paint on the umbilicus and the area of skin pustules and teach the mother how to apply Gention Violet paint.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>➢ Wash hands.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| ➢ Tell the mother to do the treatment twice daily. The mother should: |
| ➢ Wash hands. |
| ➢ Wash mouth with clean soft cloth wrapped around the finger and wet with salt water. |
| ➢ Apply Gention Violet paint (0.25g) in oral cavity and teach the mother how to apply it at home. |
| ➢ Explain the mother to give these local treatments twice each day. |
| ➢ Wash hands. |

| ➢ Dry the ear at least 3 times daily. |
| ➢ Roll clean cloth or a strong tissue paper into a wick. |
| ➢ Place the wick in the young infant’s ear. |
| ➢ Remove the wick when wet. |
| ➢ Replace the wick with a clean one and repeat these steps until the ear is dry. |
• Explain to the mother what the treatment is and why it should be given.
• Describe the treatment steps listed in the Table 2.6.
• Watch the mother as she gives the first treatment in the clinic.
• Tell her, how often to give the treatment at home and for how long.
• Give mother a small bottle to gention violet.
• Check the mother's understanding before she leaves the clinic.

Some treatments for local infections cause discomfort. Infants often resist having their eyes, ears or mouth treated. Therefore, it is important to hold the infant still. This will prevent the infant from interfering with the treatment.

Tilt the infant's head, back when treating mouth ulcers. Tilt the infant's head to the side when wicking the ear. Do not attempt to hold the infant still until immediately before treatment.

For umbilical or skin infection or thrush, the mother cleans the infected area and then applies gention violet twice each day. 0.25 per cent gention violet must be used in the mouth.

Explain and demonstrate the treatment to the mother. Then watch her and guide her as needed while she gives the treatment. Advise her to return for follow-up in two days, or sooner if the infection worsens. Explain that she should stop using gention violet after five days. Ask her checking questions to be sure that she knows to give the treatment twice daily and when to return.

If the mother will treat skin pustules or umbilical infection, give her a bottle of full strength (0.5 per cent) gention violet. If the mother will treat thrush, give her a bottle of half-strength (0.25 per cent) gention violet.

If the young infant has an ear discharge, dry the ear by wicking (Refer Practical 2 of Block 2 of BNSL-115)

Observe the mother as she practices. 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. No water should get in the ear.
• Ask checking questions, such as:
  "What materials will you use to make the wick at home?"
  "How many times per day will you dry the ear with a wick?"
  "What else will you put in your infant's ear?"

If the mother thinks she will have problems wicking the ear, help her solve them.

2.4.3 Treat Diarrhoea at Home: Plan A

A young infant with diarrhoea having No Dehydration does not need referral. This infant should be treated at home by taking following measures as per Plan A (Treat Diarrhoea at Home).
• Give extra fluids by way of continuing breastfeeding more frequently and for longer time at each breastfeed. If the infant is exclusively breastfed, it is
important not to introduce a food-based fluid. Additional fluids that may be given to a young infant are ORS solution and clean, preferably boiled water to the infant after each watery stool. If a young infant is given ORS solution at home, tell the mother to give five teaspoons of ORS followed by two teaspoons of clean preferably boiled water after each watery stools to the infant

- Teach the mother preparation of ORS as explained in Practical 2 block 2 of BNSL-115.
- Advise the mother to offer breastfeed, and then give the ORS solution. Remind the mother to stop giving ORS solution after the diarrhoea has stopped.

**Remember**

- Demonstrate how the treatment is given at home.
- Observe the mother for giving the first treatment in your presence.
- Instruct the mother to give treatment twice a day at home.
- Ask mother to return to the clinic in two days or sooner, if the infection worsens.

**Plan B Treat Some Dehydration:** A young infant who has some dehydration needs ORS solution as described in Plan B. During first 4 hours of rehydration encourage the mother to breastfeed the infant when ever infant wants then resume giving ORS. If a young infant is not breastfed, give additional 100-200 ml. clean water during this period.

<table>
<thead>
<tr>
<th>Age</th>
<th>Up to 4 months</th>
<th>4 months to 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight &lt; 6 Kg</td>
<td>200-400</td>
<td>400-700</td>
</tr>
<tr>
<td>6-&lt;10 kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Use the infant’s age when the weight is not known. The approximate amount of ORS for an infant can be calculated by multiplying child’s weight with 75.

- Give more ORS if infant wants more ORS
- For infants less than 6 months who are not breastfed also give 100-200mL clean water during this period.
- Give ORS in small sips. Wait for 10 minutes if infant vomits and then restart.
- **Reassess after 4 hours** and change the plan according to the condition of infant. Plan A can be started.
- Tell mother how to prepare ORS before she leaves the facility.
- Explain her 3 rules of home treatment
  1) Give extra fluid
  2) Continue feeding
  3) When to return

- Teach mother how to keep young infant warm at home with low weight or low body temperature
  - Do not bathe young infant with low weight or low body temperature; instead sponge with luke warm water to clean the infant
  - Provide day and night skin to skin contact (KMC) as much as possible
  - Maintain the room temperature between 25-28°C
  - Make baby and mother lie together in a bed
  - Cover mother and baby adequately with additional quilt, blanket or shawl especially in cold weather.
2.4.4 Treat/Counsel the Mother about Feeding Problems

If the young infant is classified as having feeding problem you have to counsel the mother.

- Teach the mother correct positioning and attachment for breastfeeding (refer Practical 3 Block 2 of BNSL-115 for details).
- Teach the mother to treat nipple and breast problems as given below in Table 2.7.
- Teach the mother to express breast milk and feed with cup and spoon (refer Practical 3 Block 2 BNSL-115 for details). Refer Unit 3 of this Block 1 for breastfeeding problems and counseling the mother in feeding.
- If mother complains of inadequate milk output, encourage mothers to increase breastfeeding frequency, drink plenty of fluids, eat a normal diet. If the infant is passing urine 5-6 times a day and weight for age is normal, assure mother of adequacy of her lactation.
- If the mother does not breastfeed at all, a breastfeeding counselor may be able to help her to overcome difficulties and begin breastfeeding again.
- Advise mother who does not breastfeed about choosing and correctly preparing diary/locally appropriate animal milk. Also advise her to feed the young infant with a cup, and not from a feeding bottle.

Table 2.7: Treating nipple and breast problems

- If the nipple is sore, apply breast milk for soothing effect and ensure correct positioning and attachment of the baby. If the mother continues to have discomfort, feed expressed breast milk with katori and spoon. (Refer Practical 3 Block 2 of BNSL-115)
- If the breasts are engorged, let the baby continue to suck if possible. If the baby cannot suckle effectively, help the mother to express milk and then put the young infant to the breast. Putting a warm compress on the breast may help.
- If mother’s breast has developed abscess, advise her to feed from the other breast and refer to a surgeon. If the young infant wants more milk, feed undiluted animal milk with added sugar by cup and spoon.

During the first few weeks after birth, breast and nipple problems can be important causes feeding problems and poor growth in young infant. Some of the common problems are flat or inverted nipples, sore nipples or breast abscess in the mother.

Teach Mother How to Keep the Young Infant with Low Weight or Low Body Temperature Warm at home.

Advise mother how to keep the young infant with low weight or low body temperature warm at home:
- Do not bathe young infant with low weight or low body temperature; instead sponge with lukewarm water to clean.
- Provide Skin to Skin contact (Kangaroo mother care) continuously, day and night.
- When Skin to Skin contact not possible:
  - Keep the room warm (>25°C) with a home heating device.
  - Clothe the baby in 3-4 layers; cover the head, hands and feet with cap, gloves and socks, respectively.
  - Let baby and mother lie together on a soft, thick bedding.
  - Cover the baby and the mother with additional quilt, blanket or shawl, especially in cold weather.

**FEEL THE BABY’s FEET PERIODICALLY - BABY’S FEET SHOULD BE ALWAYS WARM TO TOUCH**

### Immunize every sick young infant as needed

You must administer any immunizations that the young infant needs. Tell the mother when to bring the infant for the next immunizations.

If you immunize infants with the appropriate vaccine at the appropriate time you prevent measles, polio, diphtheria, pertussis, tetanus, hepatitis B and tuberculosis. Check immunization status of every infant you treat at clinic. Immunize, as needed.

Review the following points about preparing and giving immunizations:
- If an infant is well enough to go home, give him any immunizations he needs before he leaves the clinic.
- Use a sterile needle and a sterile syringe for each injection. This prevents transmission of HIV and the Hepatitis B virus.
- If only one infant at the clinic needs an immunization, open a vial of the vaccine and give him the needed immunization.
- Discard opened vials of BCG, OPV and DPT vaccines at the end of each immunization session.
- Do not give OPV 0 to an infant who is more than 14 days old.
- Record all immunizations on the infant's immunization card. Record the date you give each dose. Also keep a record of the infant's immunizations in the immunization register or the infant’s chart, depending on what you use at your clinic.

**Tell the mother** which immunizations her infant will receive today. Tell her about the possible side effects. Below is a brief description of side effects from each vaccine.

- **BCG**: A small red tender swelling appears at the place of the immunization after about two weeks. Sometimes it ulcerates and heals by itself leaving a small scar.
  
  Tell the mother a small ulcer will occur and to leave the ulcer uncovered. If necessary, cover it with a dry dressing only.

- **OPV**: No side effects.

- **DPT**: Fever, irritability and soreness. They are not usually serious and need no special treatment.
Fever indicates that vaccine is working.
Tell the mother if the infant feels very hot or has pain. She should give paracetamol (15 mg/kg/dose). Advise her not to wrap the child in more clothes than usual and not to give hot fomentation.

**Hepatitis B**: NO side effect.
Tell the mother to give paracetamol if the fever is high.

## 2.5 HOME CARE

Home care advice includes the following:

- To breastfeeding the infant frequently, as often and as long as the infant wants, day and night, during sickness and health.
- To ensure that the infant is kept warm at all times.
- Advise mother to wash hands with soap and water, after defecation and after cleaning the bottom of the baby.
- Advise the mother not to apply anything on the cord and keep the cord and umbilicus dry.
- Also teach the mother when to return immediately. There are various signs which are particularly important to watch for when advising the mother to return immediately to hospital/health centre (Refer Table 2.8). Teach the mother these signs. Use local terms that the mother can understand. Ask her checking questions to be sure that she knows when to return immediately.

There are basic home care steps for All sick young infants. Also, teach each mother these steps.

### Advise Mother to Give Home Care for the Young Infant

- **FOOD** } Breastfeed frequently, as often as and for as long as the infant wants, day night, during sickness and health.
- **FLUIDS** } Make sure the young infant stays warm at all times.
  - In cool weather, cover the infant’s head and feet and dress the infant with extra clothing.

### FOOD AND FLUIDS:

Frequent breastfeeding will give the infant nourishment and help prevent dehydration.

### MAKE SURE THE YOUNG INFANT STAYS WARM AT ALL TIMES:

Keeping a sick young infant warm (but not too warm) is very important. Low temperature alone can kill young infants.

### ADVISE MOTHER WHEN TO RETURN:

**EVERY** mother who is taking her infant home needs to be advised when to return to the doctor. She may need to return:

- for a FOLLOW-UP VISIT in a specific number of days (for example, when it is necessary to check progress on an antibiotic),
- IMMEDIATELY, if signs appear that suggest the illness is worsening, or
- for the infant’s next immunization (the next WELL-CHILD VISIT).
**FOLLOW-UP VISITS**

Certain problems require follow-up in a specific number of days. For example, local bacterial infections require follow-up to ensure that an antibiotic is working. Some other problems, such as diarrhoea, require follow up only if the problem persists.

At the end of the sick infant visit, tell the mother when to return for follow-up. Sometimes an infant may need follow-up for more than one problem. In such case tell the mother the earliest definite time to return. Also tell her about any earlier follow-up that may be needed if a problem such as fever persists (Refer Table 2.8).

**WHEN TO RETURN IMMEDIATELY**

Also teach the mother when to return immediately. Teach the mother the signs that necessitate returning immediately (Refer Table 2.8). Use local terms that the mother can understand. Use the mother's card to explain the signs and help her to remember them. Circle the signs that the mother must remember. Ask her checking questions to be sure she knows when to return immediately.

**NEXT WELL-CHILD VISIT**

Remind the mother on the next visit that her infant needs for immunization unless the mother already has a lot to remember and will return soon anyway. For example, if a mother must remember a schedule for giving an antibiotic, home care instructions for another problem, and a follow-up visit in two days, do not describe a well-child visit needed one month from now. However, do record the date of the next immunization on the Mother's Card.

**Counsel the Mother about Her Own Health**

After the assessment, classification and treatment of the young infant you should listen for any other problems that the mother herself may be having. The mother may need treatment or referral for her own health problems.

- Follow-up visit and regular postnatal visits should be coordinated. Try and schedule the visit of the young infant and mother together.
- Emphasize that postnatal visit is a good opportunity to provide advice and care to the mother and young infant.
- If the mother is sick, provide care to her, or refer her for help. Also, if the sick young infant is still breastfed, help the mother to breastfeed her young infant.
- Advice her to eat well to keep herself healthy.
- Make sure she has access to:
  - Family planning service - advice her to avoid the next pregnancy for at least 2-3 years.
  - Provide counselling on STD and AIDS prevention.

**2.6 FOLLOW-UP CARE**

Follow-up visits are specially important for a young infant. Follow-up treatment means the mother has to come back to the clinic after certain number of days. Follow-up visit tells us about the change that has occurred in the child’s illness as a result of treatment given to him / her. You should advice the mother to return for follow-up visits (as per Table 2.8).
If you find, at the follow-up visit that the condition of the infant is worse, you should refer the infant to the hospital.

**How to Manage a Child Who Comes for Follow-up:**

As always, ask the mother about the young infant's problem. You need to know if this is a follow-up or an initial visit for this illness. How you find out depends on how your clinic registers patients and how the clinic finds out why they have come.

For example, the mother may say to you or other clinic staff that she was told to return for follow-up for a specific problem. If your clinic gives mothers follow-up slips that tell them when to return, ask to show the slip. If your clinic keeps a chart on each patient, you may see that the infant came only a few days ago for the same illness.

Once you know that the young infant has come to the clinic for follow-up of an illness, ask the mother if the infant has, in addition, developed any new problems. For example, if the young infant has come for follow-up of local bacterial infection, but now he has developed diarrhoea, he has a new problem. This infant requires a full assessment. Check for possible bacterial infection / jaundice and feeding problem or malnutrition. Classify and treat the infant for diarrhoea (the new problem) as you would at an initial visit. Reassess and treat the local bacterial infection according to the follow-up box.

If the child does not have a new problem, locate the follow-up box that matches the young infant's previous classification. Then follow the instructions in that box:

<table>
<thead>
<tr>
<th>Problems</th>
<th>When to return</th>
<th>If condition remains or worsens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local bacterial infection (umbilicus redness, pus, skin pustules, ear discharge)</td>
<td>When to return 2 days</td>
<td>Refer to hospital</td>
</tr>
<tr>
<td>Jaundice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diarrhoea</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeding problem</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Thrush</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low weight</td>
<td>14 days</td>
<td></td>
</tr>
</tbody>
</table>

**When to return immediately:**

Advise mother to return immediately if the young infant has any of these signs:

- Breastfeeding or drinking poorly
- Becomes sicker
- Developing fever or feels cold to touch
- Fast breathing
- Difficult breathing
- Yellow palms and soles (if infant has Jaundice)
- Diarrhoea with blood in stool
• Assess the young infant according to the instructions in the follow-up box.
• Use the information about the young infant's signs to select the appropriate treatment.
• Give the treatment.

Important: If the young infant who comes for follow-up is getting worse, REFER TO HOSPITAL.

Check Your Progress 2
Fill in the blanks:
i) You have to teach mother for........................................ and ................................
during breastfeeding.
ii) Local infections in young infant are treated at home by applying .......... ..................................................

2.7 HOME VISITS FOR YOUNG INFANTS

In this section you will learn how to provide home care to sick young infant. This is possible only if you make regular home visits and provide guidance to the family/mother in looking after these young infants.

You must keep track of all pregnant women and their expected date of delivery in your area so that you learn about a birth within 24 hours. Perform the first home visit at the earliest, preferably on the day of birth. Before going for the home visit, ensure that you have to carry following articles with you in addition to the home visiting bag you carry normally during routine home visits.

• Weighing scale (use the one available at the Anganwadi)
• Chart Book
• Recording Form and a pen

At the first visit, you should perform the following tasks:

Greet the family and ask the mother if she and her baby are well.
When you enter the house and you see the mother and her newborn infant, introduce yourself to the family and greet them appropriately. Ask the mother if she and her newborn is well. This will help you to open a dialogue with the family.

If the mother is unable to answer because she is in pain or is tired or sleepy, ask another family member who is taking care of the baby.

Communicate the purpose of home visits to the mother and the family.
Tell the family that the purpose of your visit is to help them, provide essential newborn care to keep the baby healthy and help them to grow him well. Explain to them that they can keep the baby healthy in following ways:

• Through exclusive breastfeeding
• Keeping the baby warm
• Taking care of the cord and early recognition and treatment of any illness.
• Tell the family that you will check if the baby is well. Also inform the family that you will visit again several times over the next 4 weeks.

Once you have communicated the mother/family about the purpose of your visit then you should assess young infant as given below:

**Check for signs of Possible Bacterial Infection**

Use the **ASSESS AND CLASSIFY THE YOUNG INFANT** chart as you have learnt earlier in Section 1.2 of Unit 1 of this Block.

**Ask if the newborn has Diarrhoea**

Diarrhoea is not a problem in the first week of life. If the mother says that her baby has diarrhoea, you should reassure her. During your next home visit after one week of age of the baby you should assess and classify for diarrhoea if the mother says that the young infant has diarrhea.

**Check for Feeding Problem**

Use the **ASSESS AND CLASSIFY THE YOUNG INFANT** chart as described in Section 1.5 of Unit 1 of this block and assess feeding problem in young infant.

**Record weight and decide the schedule of subsequent home visits**

The Schedule of subsequent visits is based on birth weight. The recommended schedule for home visits is outlined below:

<table>
<thead>
<tr>
<th>All babies</th>
<th>3,7 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low birth weight babies (Weight less than 2.5 kg)</td>
<td>3, 7, 14, 21 and 28 days</td>
</tr>
</tbody>
</table>

**Advise the mother and the family on home care**

You should advise mother for following:

**Exclusive breastfeeding**

Ask the mother if she has already put the infant to the breast. If the mother has already started breastfeeding, praise the mother for starting the breastfeeding in time. If the mother has not yet started breastfeeding, prepare her to put the infant to the breast. Talk to the mother to answer questions about breastfeeding that she may have.

Emphasize the importance of exclusive breastfeeding and counsel her against giving any other food or fluids other than breast milk.

**Remember to tell mother that no extra water is required for an exclusively breastfed baby even in hot weather. There is always enough water in breast milk to protect the baby from getting dehydrated.**

**Keeping the baby warm**

You should advise and demonstrate the mother about keeping the baby warm as described earlier (Refer Practical 2, Block 2 of BNSL-115).

**When to seek care**

Refer to **TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER chart**.
Advise the mother and the family on newborn care practices

These include following:

**Umbilical cord care**

Check if the blood is oozing from the cord because it has not been tied properly. If not tied properly, tie it again with a thread that has been boiled in water for at least 15 minutes. See if anything has been applied to the cord. If nothing has been applied, praise the mother and the family. Otherwise emphasize the importance of not applying anything on the cord and keeping the cord dry.

**Bathing the infant**

You should discourage the mother from giving bath to the baby during the first day after birth. Advise the mother or the birth attendant to clean the baby by wiping with a soft moist cloth. When the baby is given a bath, bathing should be done quickly in a warm room, using warm water.

Low birth weight infants should not be given bath. Instead, clean the baby with a soft, clean cloth soaked in lukewarm water.

**Hand washing**

You should advise the mother to wash hands with soap and water after cleaning the baby every time it passes stools.

| Remember to take the opportunity at every home visit to check and advice the mother about her own health. |
| Remember: |
| Before you leave the house during your first visit, you should tell the family that you will visit again as per schedule. However, you can advice the family to contact you for help in case they think the young infant has a problem. |

You have learnt about the various tasks to be performed during your first home visit. Now we shall focus on the tasks to be accomplished during the subsequent home visits.

**Subsequent Home Visits**

Follow the instructions given above for the first home visit at the subsequent visits also.

There is no need to take weight at these visits if the infant is well and is not low birth weight.

At the last scheduled home visit, ensure that you advise the mother to continue exclusive breastfeeding up to 6 months and to immunize infant with BCG, DPT, OPV and Hepatitis B immunization at 6 weeks of age.

| Check Your Progress 3 |
| Write the recommended schedule of home visits for young infant. |
| .................................................................................................................................................. |
| .................................................................................................................................................. |
| .................................................................................................................................................. |
2.8 LET US SUM UP

In this unit, you have learnt how to identify treatment for various classifications of sick young infant, refer the sick young infant and give pre-referral treatment to sick young infant. You have also learnt about the oral drugs, ORS, home care and follow-up of sick young infant. At the end you have learnt to advice a mother when to return immediately to the health facility and care of baby during home visits for the sick young infant.

2.9 ANSWERS TO CHECK YOUR PROGRESS

Activity 1

i) No (Refer Table 2.1)

ii) Yes (Warm by skin to skin contact if feels cold to touch)

iii) No

iv) Yes

Check Your Progress 1

1) Severe Dehydration
   
   • Give one dose of injection ampicillin and gentamycin or first dose of cotrimoxazole
   • Refer urgently to hospital
   • Advise mother to give sips of ORS
   • Advise mother to continue breastfeeding

2) Possible Serious Possible Infections
   
   • Give one dose of injection ampicillin and injection gentamycin or 1st dose of cotrimoxazole
   • Refer urgently
   • Keep the young infant warm
   • Continue breastfeeding.

Check Your Progress 2

i) Correct positioning, attachment

ii) 0.5% of gention violet paint

Check Your Progress 3

All babies: 3, 7 days
LBW babies: 3, 7, 14, 21 and 28 days
WHERE REFERRAL IS NOT POSSIBLE

The best possible treatment for a young infant with severe illness is usually at a hospital. Sometimes referral is not possible or advisable. Distances to hospital might be too far, the hospital may not have adequate equipment or staff to care for the young infant or transportation may not be available. Sometimes the family may refuse to take the young infant to hospital inspite of your efforts to explain the need for it.

If referral is not possible, you should do whatever you can to help care for the infant. Although only well equipped hospital and trained staff can provide optimal care for a young infant with a severe illness, the following guidelines may reduce mortality in those who have a severe disease and where referral is not possible.

This chapter describes treatment to be given for specific severe disease classification when the sick young infant cannot be referred. This chapter is divided into two parts: “Essential Care” and “Treatment Instruction-Recommendations on How to give Specific Treatment for Severely Sick Young Infant”.

To use this chapter, first find the young infant’s classification and note the essential care required. Then refer to the boxes on TREAT THE YOUNG INFANT chart. Remember that you must also give treatment for the non-severe classifications that you identified. These treatments should also be marked on the sick young infant recording form.

This chapter will cover treatment for the following severe illness classifications:

• POSSIBLE SERIOUS BACTERIAL INFECTION
• SEVERE DEHYDRATION
• SOME DEHYDRATION WITH LOW WEIGHT FOR AGE
• SEVERE PERSISTENT DIARRHOEA
• SEVERE DYSENTERY
• SEVERE MALNURITION.

ESSENTIAL CARE

Essential Care for POSSIBLE SERIOUS BACTERIAL INFECTION

This young infant may have sepsis, pneumonia or meningitis.

1) **Give intramuscular ampicillin (or oral amoxycillin) and intramuscular gentamicin**

   If meningitis is suspected (based on bulging fontanel, lethargic or unconsciousness or convulsions) give antibiotics for total of 14 days.

   If meningitis is not suspected, treat for at least five days. Continue the treatment until the infant has been well for at least three days. (Different syringes for ampicillin and gentamicin).

   Ampicillin and gentamicin should not be mixed in the same syringe.

   If it is not possible to give IM ampicillin 2-4 times a day, give oral amoxycillin from the first day itself if the young infant is able to accept orally. If you are able to give ampicillin, substitute IM ampicillin with oral amoxycillin when the infant's condition has improved. Continue to give IM gentamicin until the minimum treatment has been given.
If there is no response to the treatment after 48 hours, or if the infant's condition deteriorates, consider REFERRAL. If referral is still not possible consider using IM cefotaxime (100mg/kg/dose 12 hourly) or ceftriaxone (50mg/kg/dose 12 hourly).

2) **Keep the young infant warm as you have already learnt earlier in this module.**

3) **Manage fluid Carefully**

   The mother should breastfeed the infant frequently. If the infant has difficulty breathing or is too sick to suckle, help the mother express breastmilk. Feed the expressed breastmilk to the infant by cup and spoon (if able to swallow) or by nasogastric tube eight times per day. Give 15-20 ml of breastmilk per kilogram of body weight at each feed. Give a total of 120-150 ml/kg/day.

   If the mother is not able to express breastmilk, give undiluted cow’s milk with added sugar.

4) **Treat the Young infant to Prevent Low Blood Sugar as you have already learnt earlier in this module.**

**Essential Care for SEVERE DEHYDRATION**

1) **If you can give intravenous (I/V) treatment**

   If you can give I/V treatment and you have acceptable solutions such as Ringer's Lactate or Normal Saline, give the solution I/V to the severely dehydrated young infant.

   The section below gives Plan C for IV rehydrating the young infant.

   - **Start IV fluids immediately. While the drip is being set up, give ORS solution if the young infant can drink. Give 100 ml/kg of Ringer's lactate solution (or if not available, normal saline) divided as follows:**

<table>
<thead>
<tr>
<th>First, give 30ml/kg in:</th>
<th>Then, give 70 ml/kg in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st hour (repeat if the radial pulse is still weak or absent)</td>
<td>5 hours</td>
</tr>
</tbody>
</table>

   - **REASSESS THE INFANT EVERY 15-30 MINUTES UNTIL A STRONG RADIAL PULSE IS PRESENT. THEREAFTER, REASSESS THE INFANT BY SKIN PINCH AND LEVEL OF CONSCIOUSNESS AT LEAST EVERY 1-HOUR.**

   - Also give ORS (about 5 ml/kg/hour) as soon as the infant can drink: usually after 3-4 hours.

   - Reassess the infant after 6 hours. Classify dehydration. Then choose the appropriate plan (A, B or C) to continue treatment.

2) **If you can use a Nasogastric (NG) tube**

   If you cannot give IV treatment at your clinic or there is no nearby hospital offering IV treatment and you are trained to use an NG tube, rehydrate the young infant by giving ORS solution with an NG tube.
• Start rehydration by nasogastric tube (NG) with ORS solution: Give 20 ml/kg/hour for 6 hours (total of 120 ml/kg)

• **REASSESS THE INFANT EVERY 1-2 HOURS:**
  - If there is repeated vomiting or increasing abdominal distention, give the fluid more slowly
  - If hydration status is not improving after 3 hours, the infant requires to be started on IV treatment

• Reassess the infant after 6 hours Classify dehydration, then choose the appropriate plan (A, B, or C) to continue treatment

3) *Keep the young infant warm*

4) **Give intramuscular ampicillin (or oral amoxicillin) and intramuscular gentamicin**

**Essential Care for SOME DEHYDRATION WITH LOW WEIGHT FOR AGE**

1) **Treat dehydration**
   Give fluids according to Plan-B

2) Give intramuscular ampicillin (or oral amoxicillin) and intramuscular gentamicin

3) Keep the young infant warm.

**Essential Care for SEVERE PERSISTENT DIARRHOEA**

1) **Treat dehydration**
   Give fluids according to diarrhoea classification and choose appropriate plan-A, B or C.

2) **Examine every infant for non-intestinal infections.**

3) **Give antibiotics**
   If the young infant has a classification of POSSIBLE SERIOUS BACTERIAL INFECTION or DEHYDRATION or LOW WEIGHT, give IM Ampicillin and IM Gentamicin.

4) **Feeding**
   Careful attention to feeding is essential for all young infant with persistent diarrhoea.
   – Encourage exclusive breastfeeding. Help mothers who are not exclusively breastfeeding to do so.
   – If the young infant is not breastfeeding, give a preparation that is low in lactose, such as yoghurt or a suitable low lactose formula. Use a cup or spoon for feeding.
   – Give zinc as 10mg elemental zinc/day for 14 days.

**Essential Care for SEVERE DYSENTERY**

In all young infants, examine for surgical causes of blood in stool (e.g., necrotizing enterocolitis or intussusception). Refer immediately if surgical cause suspected.
1) **If you can give intravenous (I/V) treatment**

- Start IV fluids immediately. While the drip is being set up, give ORS solution if the young infant can drink. Give 100 ml/kg of Ringer's lactate solution (or if not available, normal saline) divided as follows:

<table>
<thead>
<tr>
<th>First, give 30 ml/kg in:</th>
<th>Then, give 70 ml/kg in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st hour (repeat again if the radial pulse is still weak or absent)</td>
<td>5 hours</td>
</tr>
</tbody>
</table>

- **REASSESS THE INFANT EVERY 15-30 MINUTES UNTIL A STRONG RADIAL PULSE IS PRESENT. THEREAFTER, REASSESS THE INFANT BY SKIN PINCH AND LEVEL OF CONSCIOUSNESS AT LEAST EVERY 1-HOUR.**

- Also give ORS (about 5 ml/kg/hour) as soon as the infant can drink: usually after 3-4 hours.

- Reassess the infant after 6 hours. Classify dehydration. Then choose the appropriate plan (A, B, or C) to continue treatment.

2) **If you can use a Nasogastric (NG) tube**

If you cannot give IV treatment at your clinic or there is no nearby hospital offering IV treatment and you are trained to use an NG tube, rehydrate the young infant by giving ORS solution with an NG tube.

The section below gives Plan C for rehydrating a young infant by NG tube.

- Start rehydration by nasogastric tube (NG) with ORS solution: Give 20 ml/kg/hour for 6 hours (total of 120 ml/kg).

- **REASSESS THE INFANT EVERY 1-2 HOURS:**
  - If there is repeated vomiting or increasing abdominal distention, give the fluid more slowly.
  - If hydration status is not improving after 3 hours, the infant requires to be started on IV treatment.

- Reassess the infant after 6 hours. Classify dehydration. Then choose the appropriate plan (A, B, or C) to continue treatment.

3) **Keep the young infant warm**

4) **Give intramuscular ampicillin (or oral amoxycillin) and intramuscular gentamicin.**

**Essential Care for SEVERE MALNUTRITION**

1) **Give oral amoxycillin and I/M gentamicin**

   Treat for at least five days. Continue the treatment until the infant has been well for at least three days.

2) **FEEDING**

   In young infants who can breast feed, the mothers must be encouraged to breast feed as frequently as possible. If the infant is not sucking effectively, give expressed breast milk by cup and spoon or nasogastric tube. If the infant is <7 days, start with 60 ml/kg/day on first day given 2-3 hourly. The
feeds should be increased by 20 ml/kg each day till a maximum of 150 ml/kg/day is reached. For infants older than seven days, give expressed breastmilk (a total of 150 ml/kg/day) at 2-3 hourly interval.

If the mother is not able to express breastmilk, prepare a formula or give undiluted cow’s milk with added sugar.

3) **Keep the young infant warm**

**TREATMENT INSTRUCTIONS–RECOMMENDATIONS ON HOW TO GIVE SPECIFIC TREATMENT FOR SEVERELY ILL YOUNG INFANTS WHO CANNOT BE REFERRED**

**Ampicillin**

The first choice is IM Ampicillin. Give IM Ampicillin (100 mg/kg/dose) twice a day if the young infant is less than 7 days of age, and 2-3 times a day if older. If you are unable to give IM ampicillin, give oral amoxycillin.

**Gentamicin**

Give IM gentamicin once a day.

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>GENTAMICIN</th>
<th>AMPICILLIN</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Dose: 5 mg per kg</td>
<td>Dose: 100 mg per kg</td>
</tr>
<tr>
<td>1 kg</td>
<td>0.5 ml*</td>
<td>0.5 ml</td>
</tr>
<tr>
<td>2 kg</td>
<td>1.0 ml*</td>
<td>1.0 ml</td>
</tr>
<tr>
<td>3 kg</td>
<td>1.5 ml*</td>
<td>1.5 ml</td>
</tr>
<tr>
<td>4 kg</td>
<td>2.0 ml*</td>
<td>2.0 ml</td>
</tr>
<tr>
<td>5 kg</td>
<td>2.5 ml*</td>
<td>2.5 ml</td>
</tr>
</tbody>
</table>

*Avoid using undiluted 40 mg/ml gentamicin
*Ampicillin and gentamicin not to be mixed.

Referal is the best option for a young infant classification with POSSIBLE SERIOUS BACTERIAL INFECTION. If referal is not possible give oral amoxycillin every 8 hour and intramuscular gentamicin once daily.

**Diazepam (anticonvulsant)**

1) Give Diazepam per rectally. Use a plastic syringe (the smallest available) without a needle. Put the diazepam in the syringe. Gently insert the syringe into the rectum. Inject the drug and keep the buttocks squeezed tight to prevent loss of the drug.

2) Dose of diazepam - 0.25 ml (1.25 mg)

3) Monitor in 10 minutes, if convulsions continue, give diazepam again.

**Treat to prevent low blood sugar**

Follow recommendations on TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER CHART
EXERCISE

Manisha is three weeks old and weighs 2.5 kg. She became sick two days ago. She was not feeding well and was having diarrhoea.

Manisha’s mother brought her to the Primary Health Centre where the doctor examined her. She has not had convulsions. She does not have fast breathing. Her temperature is 35.7ºC. She is lethargic and her movements are less than normal. She does not have jaundice. Her skin and umbilicus are normal and her ear is not draining pus.

Manisha does not have dehydration. She has had diarrhoea for two days and there is no blood in the stool. Manisha is not accepting orally well. The mother usually gives her diluted milk with a feeding bottle in addition to breastfeeding. Since yesterday, the young infant only takes some breast milk. The doctor did not assess breastfeeding. She has low weight for age.

The doctor classifies Manisha as POSSIBLE SERIOUS BACTERIAL INFECTION, DIARRHOEA WITH NO DEHYDRATION and LOW WEIGHT FOR AGE.

The nearest hospital is 20 km away. Her father is away and her mother has to take care of her other two children. The mother says she has no money to pay for her travel and food at the hospital. She has had a bad experience at the hospital where one of her children died.

Manisha cannot be referred. She can come to the Primary Health Centre twice a day. One of the nurses in the PHC is willing to care for Manisha in the evening. The doctor decides that it is possible to give injections every 8 hours. He will give the first injection in the morning at 9 am and the second at 4 pm at the PHC. The third injection will be given to Manisha in the late evening when the nurse visits Manisha at her home.

List the treatment that Manisha should get and the doses of the drugs.
UNIT 3  COUNSEL THE MOTHER AND FOLLOWUP

Structure

3.0 Objectives
3.1 Introduction
3.2 Importance of Feeding
3.3 Feeding Recommendations
  3.3.1 Infants
  3.3.2 Infant with Persistent Diarrhoea
3.4 Assess the Feeding
3.5 Identify the Feeding Problems
3.6 Solving Feeding Problems
3.7 Counsel the Mother
  3.7.1 Ask and Listen
  3.7.2 Praise
  3.7.3 Advise
  3.7.4 Check Understanding
3.8 Follow-up Visit
  3.8.1 Managing an Infant Who Comes for Followup Visit
  3.8.2 Conducting a Followup Visit
3.9 Let Us Sum Up
3.10 Answers to Check Your Progress

3.0 OBJECTIVES

After going through this unit, you should be able to:

- List the feeding recommendations for infants;
- Classify common problems related to feeding;
- Counsel the mother about feeding problems; and
- Prepare her for followup visits.

3.1 INTRODUCTION

In Unit 2, you have learnt to treat the sick infant and teach the mother to continue treatment at home. If the infant is very low weight for age, you must assess feeding and counsel the mother about feeding. In this unit, you will review the importance of feeding, and learn about feeding recommendations for infants. You will also learn to identify the feeding problems related to feeding of infant and their solution. You will also learn about the follow-up care of the infant at the end.
3.2 IMPORTANCE OF FEEDING

Eating nutritious and adequate food is essential for healthy growth of infant’s body and mind. It also protects the infant from getting sick. Children require more calories, protein, minerals and vitamins than adults. Therefore, providing variety of food items in appropriate amount ensures good health in children. The chances of malnutrition are very high in children below two years of age because they are growing and developing. Any illness during childhood also effects feeding practices of the child. Breastfeeding the child eight times in a day in the first 6 months of life is the best way to prevent malnutrition and sickness in children. Employed mothers can be encouraged to breastfeed Expressed Breast Milk (EBM). The best way to prevent malnutrition in children is to follow the feeding recommendations appropriate to the age of child.

Check Your Progress 1
List two reasons that indicate the importance of breast feeding.

1. 
2. 
3. 
4. 
5. 
6.

3.3 FEEDING RECOMMENDATIONS

You know that feeding recommendations vary with the age of the child. Feeding recommendations will help you to assess whether the child is being fed as per the recommendations or not, identify the feeding problem if any and counsel the mother accordingly about feeding. Let us learn feeding recommendations in infants as given below.

3.3.1 Infants

The feeding recommendations of infants are given below:

Up to 6 Months

• Give exclusive breastfeeding for children up to 6 months of age. Exclusive breastfeeding means that the infant takes only breast milk and no additional food by mouth, not even water, or other fluids (with the exception of medicines and vitamins, if needed).

• No extra water is required for an exclusively breastfed baby even in hot months of summer. There is always enough water in breast milk to protect the baby from getting dehydrated.

• Breastfeed the infants as often as they want. The baby should be breastfed even at night. Most babies need to be fed at least eight times in 24 hours.

Do not give water, food or other fluids for any reason unless advised specially by a medical doctor.
Up to 6 Months of Age

- Breastfeed as often as the infant wants, day and night, at least 8 times in 24 hours (Fig. 3.1).
- Do not give any other foods or fluids not even water.

Remember:
Continue breastfeeding if the infant is sick.

6 Months up to 12 Months

- The mother should continue to breastfeed as often as the infant wants. However, after 6 months of age breast milk cannot meet all the child’s energy needs. Therefore, from age 6 months up to 12 months, mother needs to give complementary foods. The foods given to the baby in addition to breast milk are called complementary or weaning foods because they complement breast milk. Most babies do not need complementary foods before six months of age.
- If the baby is breastfed, give complementary foods 3 times in the day. If the baby is not breastfed, give complementary foods 5 times in the day.
- An infant who is not breastfed may be given undiluted animal milk by Katori, spoon or a cup. Never use a feeding bottle.
- Some common household complementary foods are Rice and Dal, mixed Khichari, mashed banana, potatoes and carrot.
- Give adequate servings of the semi solid foods 5 times a day to infant's between 6-12 months of age, if the infant is not breastfed.
- Feed the infant actively.
- The mother/care provider should sit with the infant at meal times. The infant should get food in a separate bowl to make sure she/he gets enough food and eats the correct amount. After the infant has finished eating, some food should be left over in the plate/bowl.

An “adequate serving” means that the infant does not want any more food after active feeding. After the baby has finished eating, some food should be left over in the plate/bowl.
6 Months up to 12 Months

Fig. 3.2: Adequate serving to baby

- Breastfeed as often as the infant wants.
- Give one katori serving* (Fig. 3.2) at a time of:
  - Mashed roti/rice/bread/biscuit mixed in sweetened undiluted milk
    OR
  - Mashed roti/rice/bread mixed in thick dal with added ghee/oil or khichri
    with added oil/ghee. Add cooked vegetables also in the servings
    OR
  - Sevian/dalia/halwa/kheer prepared in milk or any cereal porridge
    cooked in milk.
    OR
  - Mashed boiled/fried potatoes or give one banana/cheeko/mango.

3 times per day if breastfed;
5 times per day if not breastfed.

Remember:
- Keep the infant in your lap and feed with your own hands.
- Wash your own and infant’s hands with soap and water every time
  before feeding.

3.3.2 Infant with Persistent Diarrhoea

Infant with persistent diarrhoea may have difficulty in digesting milk other than breast milk. Replace the amount of other milk/top milk in their diet with yoghurt and rice water. Other foods can be added as tolerated by the infant. Continue other foods appropriate for the infant’s age (refer Table 3.1).

Table 3.1: Feeding Recommendations for an Infant who has Persistent Diarrhoea

- If still breastfeeding, give more frequent, longer breastfeeds day and night.
- If taking other milk:
  - replace with increased breastfeeding
  OR
  - replace with fermented milk products, such as yoghurt
Integrated Management of Neonatal and Childhood Illness

OR

- replace half the milk with nutrient-rich semisolid food.
• For other foods, follow feeding recommendations for the infant’s age.

Check Your Progress 2

i) Write “T” if the statement is True and “F” if the statement is False:
   a) Infant should be given fewer feeds during illness. (T/F)
   b) A two-month-old infant should be exclusively breastfed. (T/F)

3.4 ASSESS THE FEEDING

Before counselling mother on feeding, it is important to assess infant’s feeding practices and then identify all the feeding problems.

The assessment of the infant’s feeding is necessary if the infant is very low weight for age.

Ask following three questions listed in Table 3.2.

Table 3.2: Assess the Infant’s Feeding

<table>
<thead>
<tr>
<th>Feeding Recommendations During Sickness and Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess Feeding in all infants Below 2 months</td>
</tr>
<tr>
<td>ASK: Do you breastfeed the infant?</td>
</tr>
<tr>
<td>- How many times in a day?</td>
</tr>
<tr>
<td>- Do you breastfeed the child at night?</td>
</tr>
<tr>
<td>Does the infant take any other food or fluids?</td>
</tr>
<tr>
<td>- What food or fluids?</td>
</tr>
<tr>
<td>- How many times per day?</td>
</tr>
<tr>
<td>- Are the foods thick or thin?</td>
</tr>
<tr>
<td>- What do you use to feed the infant?</td>
</tr>
<tr>
<td>- How large are the servings (Katori/teaspoon)?</td>
</tr>
<tr>
<td>- Does the infant receive separate serving?</td>
</tr>
<tr>
<td>- Who feeds the infant and how?</td>
</tr>
<tr>
<td>Ask if the infant’s feeding has changed during this illness?</td>
</tr>
<tr>
<td>- If yes, how?</td>
</tr>
</tbody>
</table>

The Table 3.2 shows that you have to ask following questions to assess feeding of the infant:

ASK: Do you breastfeed the infant?

If the mother says, “Yes” then ask:
- How many times during the day?
- Do you also breastfeed during the night?

**ASK: Does the infant take any other food or fluids?**

You have to ask the mother about any other food or fluids that she feeds to the infant. Any other foods include complementary foods and snacks and other fluids include locally available breastmilk substitutes. If mother says “Yes” then you have to ask the other questions to the mother as given in Table 3.2 above which include:

- How many times you feed per day? e.g. once, twice, thrice.
- If the feeds are thick or thin?
- What do you use to feed the infant? cup, spoon, katori, bottle etc.
- How large are the servings? i.e. how much is served to the infant such as a katori or a teaspoon etc.
- Does the infant receive his own/separate serving and who feeds the infant that means does the infant take in a separate plate/bowl/katori and who feeds the infant (mother/care giver) and how?

**ASK: mother** if the infant’s feeding is changed during illness, if “Yes”, how?

Record the answers given by the mother regarding feeding of her infant in response to questions you have asked. Match the mother’s description on feeding practices/age specific feeding recommendations and identify the feeding problem.

---

**Check Your Progress 3**

List three questions that you will ask the mother before assessing breastfeeding.

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.......................................................................................................................
.......................................................................................................................
.......................................................................................................................
.......................................................................................................................
.......................................................................................................................

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**3.5 IDENTIFY THE FEEDING PROBLEMS**

You can identify the feeding problems by comparing the actual feeding of the infant with the recommended feeding. You have to ask the mother all the questions related to feeding as given in Table 3.3. Compare what is actually being fed to the young infant with what is recommended for that age. Based on the mother’s answers.descriptions about the feeding questions, identify any differences between the infant’s actual feeding and the feeding recommendations. These differences are problems.

Beside difference from the recommended feeding practices, also find out other problems, which may become apparent from the mother’s answers.
For example, if mother has mentioned that she is giving cow’s milk 3 times with feeding bottle. And you have come to know that infant is not being given enough breast milk and is being given cow’s milk. Here the use of feeding bottle is difference between an actual feeding and recommended feeding practice and therefore is the problem. Also use of cow’s milk and not breastfeeding enough are some other problems.

Record the problems on the Recording Form in the feeding problems box provided on the right column.

Table 3.3: Example of Identifying Feeding Problem

<table>
<thead>
<tr>
<th>Infant’s Actual Feeding</th>
<th>Infant’s Recommended Feeding</th>
<th>Feeding Problem</th>
</tr>
</thead>
</table>
| 2-month-old Shivani is given breastfeeds 5 times in 24 hours and cow’s milk 3 times with feeding bottle and her mother says that Shivani appears hungry after breastfeeding. | A 2-month-old infant is given only breastfeed as often as he/she wants at least 8 times in 24 hours. | - Giving breastfeeding less than 8 times  
- Feeding with bottle  
- Feeding cow’s milk |

Feeding problems that are observed include any of the following:

- Difficulty in breastfeeding.
- Giving sugar water or tea before 6 months age.
- Breast milk is not considered to be enough.
- Feeding bottle is used for giving milk.
- The infant does not feed well during the illness.

There may be other feeding problems that you may identify. These are summarized in the Chart Book. If there are other feeding problems which were not listed, consult your supervisor for finding solutions.

Check Your Progress 4

Name the conditions that indicate the need for feeding assessment in an infant.

...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
...........................................................................................................................................
3.6 SOLVING FEEDING PROBLEMS

After you have identified and listed all the feeding problems, you will think of the possible solutions/suggestions, which are most relevant to the problems and advise mother about them. Use of counselling steps in an organized manner and good communication skills will be very helpful to make the relevant feeding advices more effective. Table 3.4 indicates various feeding problems and solutions in a young infant.

<table>
<thead>
<tr>
<th>Feeding Problems</th>
<th>Feeding Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not breastfeeding often enough</td>
<td>1) Praise the mother for giving breastfeeds and encourage to continue the same.</td>
</tr>
<tr>
<td></td>
<td>2) Explain that she can produce all the breast milk that infant needs. This is done to build her confidence.</td>
</tr>
<tr>
<td></td>
<td>3) Suggest for giving more frequent and longer breastfeeds day and night at least 8 times in 24 hours and gradually reducing cow’s milk.</td>
</tr>
<tr>
<td>Giving cow’s milk</td>
<td>1) Increase breastfeeding to 8 times in 24 hours and gradually reduce cow’s milk.</td>
</tr>
<tr>
<td></td>
<td>2) Give household complementary food like mixed rice and dal, khichari, mashed banana or potato 1-2 times per day after breastfeeding (in infant above 6 months).</td>
</tr>
<tr>
<td>Using feeding bottle</td>
<td>1) Advise her to use cup/katori instead of bottle as cup is:</td>
</tr>
<tr>
<td></td>
<td>– Better than a bottle</td>
</tr>
<tr>
<td></td>
<td>– Easier to keep clean</td>
</tr>
<tr>
<td></td>
<td>– Does not interfere with breastfeeding.</td>
</tr>
<tr>
<td></td>
<td>2) Demonstrate her the procedure of feeding with a cup/katori as under:</td>
</tr>
<tr>
<td></td>
<td>– Hold the infant in slightly head raised position with your left arm and hand.</td>
</tr>
<tr>
<td></td>
<td>– Place napkin on infant’s chest and around the neck.</td>
</tr>
<tr>
<td></td>
<td>– With your right hand hold a small cup/katori near infant’s lips.</td>
</tr>
<tr>
<td></td>
<td>– Touch the cup/katori at the infant’s lips to allow milk just reaching baby’s lips.</td>
</tr>
<tr>
<td></td>
<td>– See that the baby sucks the milk. It may spill some of it.</td>
</tr>
<tr>
<td></td>
<td>– Avoid pouring milk into infant’s mouth but just hold the cup/katori to its lips to allow it to take milk itself.</td>
</tr>
<tr>
<td></td>
<td>– When the infant takes enough it closes its mouth and will not take more.</td>
</tr>
<tr>
<td></td>
<td>3) Ask her to bring the infant for follow-up in 5 days.</td>
</tr>
<tr>
<td>Mother is not breastfeeding exclusively</td>
<td>• Breastfeed at least 8 times during day and night.</td>
</tr>
<tr>
<td></td>
<td>• Do not give glucose water, tea, animal milk, porridge and even water. This will reduce the protection given by breast milk.</td>
</tr>
</tbody>
</table>
3.7 **COUNSEL THE MOTHER**

The purpose of counselling is to help mother solve problems related to breastfeeding and bridge the gap between actual feeding practices and the feeding recommendations of infant’s feeding. Let us review the steps of counselling in relation to breastfeeding and infant feeding. You have to follow the steps of counselling as given below.

When counselling the mother, you will use some of the skills mentioned below:

1) **Ask**: Ask feeding related, clear and short questions to mother in order to get meaningful answers. These will help you to accurately assess the infant’s feeding.

2) **Listen**: Listen carefully to mother’s answers in order to find out which feeding practices are carried on well and which are not, and need to be changed.

3) **Praise**: Praise the mother for the feeding practices that are indeed helpful to the infant.

4) **Advise**: Advise only what is relevant to the mother at this time. Do not overburden with the instruction. If possible use words and pictures or real objects to explain e.g. show amount of fluid in a cup or container. When correcting a harmful practice, be careful not to make the mother feel guilty or incompetent.

<table>
<thead>
<tr>
<th>Mother feels she does not have enough breast milk</th>
<th><strong>To increase her breast milk supply.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• She should breastfeed the infant more often and for longer period at each feed.</td>
<td></td>
</tr>
<tr>
<td>• Breastfeed during the day and at night.</td>
<td></td>
</tr>
<tr>
<td>• Mother should eat more and drink more fluids.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mother goes out to work and is not able to feed the infant.</th>
<th>• Mother should breastfeed the infant often before going to work, after returning from work and at night:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• If possible, she should take the infant to work and she must take brief breaks from work to feed the infant.</td>
<td></td>
</tr>
<tr>
<td>• Mother can express breast milk and keep that for her infant in her absence.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mother has flat or inverted nipples and cannot feed the infant</th>
<th>• Teach the mother to gently pull the nipples and massage them with oil (do not use mustard oil). This should be done 3-4 times per day.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Teach mother syringe method of treating inverted nipples.</td>
<td></td>
</tr>
<tr>
<td>• Refer the infant to a doctor if the problem does not improve in 2-3 days.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mother has very sore nipples or swelling on the breast</th>
<th>• Refer to a doctor.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Express breast milk regularly every 2 hours.</td>
<td></td>
</tr>
<tr>
<td>• If the breast is infected, throw away the expressed breast milk.</td>
<td></td>
</tr>
<tr>
<td>• Advise the mother to stop bottle feeding. This can be very harmful.</td>
<td></td>
</tr>
<tr>
<td>• Put the infant to breast every time infant is hungry, and feed for as long as the infant suckles.</td>
<td></td>
</tr>
</tbody>
</table>
5) **Language**: Use simple language that mother will understand, to ask questions and give advice.

6) **Check Understanding**: Ask checking questions to find out what the mother understands. Do not ask “Yes” or “No” or leading questions (which suggest the right answer) if you get an unclear response, ask another checking question. Praise the mother for correct understanding or clarify your advice as necessary.

Examples of good checking questions are:
- What foods will you give to your infant?
- How will you prepare them?
- How often will you give them?
- How will you give them?

Let us now help you to understand how you will use the above-mentioned skills regarding breastfeeding/feeding an infant in the coming sub-section.

### 3.7.1 Ask and Listen

Asking and listening to the mother will give you information about what mother is doing to breastfeed the young infant. You should give chance to the mother to start talking about her infant and about herself in relation to breastfeeding.

- Ask open questions to the mother such as:
  - How often you breastfeed your infant?
  - What difficulties you have in feeding the infant?

This will enable the mother to answer in few sentences rather than one word. If you ask such questions as: Do you give water to the infant or Do you bottle feed the infant? These questions will have only ‘Yes’ or ‘No’ answer. These types of questions should be avoided.

- Always give chance to the mother to respond to the question. So wait for her response.
- While talking to the mother look at her and listen carefully to her reply.
- Listen carefully to find out what the mother is already doing for her infant. This will help you to know what she is doing well, and what practices need to be changed.
- Identify the myths related to feeding prevailing in the family.
- Ask about feeding habits and cultural practices related to feeding the infants.

### 3.7.2 Praise

You should praise the mother who is breastfeeding the young infant and not feeding any other drink and also for right feeding practices.

Praise genuinely by conveying it in the tone of your talk, patting the back of the mother, commenting on the weight gain of the young infant etc.

### 3.7.3 Advise

Give only the feeding advice that is needed according to infant’s age and situation. If possible use real objects or pictures to explain, e.g. show the amount of fluid
in a cup or container. Teach her the importance of washing the hands while cooking and feeding.

If the mother is using a bottle to feed the infant:
- Advise to substitute cup/katori/spoon and paladi for bottle. It is easy to clean the cup and katori and does not interfere with breastfeeding.
- Show the mother how to feed the infant with a cup (Refer Practical 3 of Practical Block 2 of BNSL-115).

Advise against any harmful practices that the mother may be following such as eating raw vegetables without washing, cooking food in excess water and overcooking. When correcting a harmful practice, explain why the practice is harmful. Be careful not to make the mother feel guilty or incompetent. Mothers need guidance and encouragement in adopting correct feeding practices. Use chart on **Solving Feeding Problems** to advise the mother. Demonstrate to the mother the method of positioning and attachment during breast feeding and method of feeding using katori and spoon. Take return demonstration.

If the infant is not being fed actively, counsel the mother to:
- Relax and do not hurry up while feeding.
- Sit with the infant and encourage eating.
- Give the infant an adequate serving in a separate plate or bowl.
- Do not make mother to feel guilty. Support and guide her to adopt correct feeding practices.

To avoid confusion, advise not more than two changes in feeding. Try to select two most important ones which may have direct bearing on the infant’s health.

To make the changes in the infant’s diet that you have suggested, discuss and negotiate with the mother if she feels she can try these at home. In case she has problems, support her in solving these problems.

Some important things that you should avoid while advising mother on breastfeeding are:
- Do not bring too many changes in the position as long as the four points of correct positioning are followed by the mother.
- Do not rush to bring about changes in technique of breastfeeding for good attachment e.g., you can use sentences like “What you are doing is alright but you should improve on positioning and attachment of the infant in this way.” Then demonstrate the mother the technique of correct positioning and attachment.
- Do not give too many advises as the mother may get confused. Restrict your advices on breastfeeding related to the most important problem that the mother faces like:
  - Frequency of feeding
  - Breastfeeding substitutes
  - Weight of the Infant
- Do not impose your advices on the Mother.
3.7.4 Check Understanding

When you finish advising the mother it is always a good practice to ask selected and important check questions about breastfeeding to the mother. Check questions help to make sure that she has understood the advice.

- If the mother is not able to respond, reframe your question.
- Wait for the mother to respond.
- Encourage the mother for expressing her thoughts. Clarify any doubts or misconceptions that she may still have.
- Ask open questions which will require the mother to answer in short sentences.
- Praise the mother for her willingness to breastfeed.

Examples of check questions that can be asked to the mother are:

- How often will you/do you feed the infant in a day?
- Can you demonstrate the technique of correct positioning of the infant for breastfeeding?
- How will you make sure that the infant is attached well?
- What are the two important conditions that would help you to attach the infant well to breast?

Avoid asking:

- Do you breastfeed your infant?
- Why can’t you understand the technique of correct positioning for breastfeeding?

Praise the mother for correct understanding or clarify your advice as necessary.

Some of the important points that you should remember when counseling the mother are given below:

- Use simple language to explain about feeding recommendations.
- Do not give too much information, as the mother may get confused.
- Ask questions and listen to the mother.
- Ask open-ended questions. Do not ask negative or close ended questions.
- Give relevant advises.
- Praise the mother for her efforts for carrying out the recommendations.
- Check the understanding of the mother at the end of counseling by asking questions.

Feeding during Illness

Advice mother that during illness infant’s appetite and thirst may be reduced. The mother must continue feeding and give increased amount of fluids to prevent malnutrition and dehydration. Inform the mother that the appetite will improve, as infant gets better. After illness, good feeding helps to make up for weight loss and helps prevent malnutrition/low birth weight in the infant.

Some general instructions on feeding during illness include:

- Breastfeed more frequently and for longer duration.
- Clear a blocked nose if it interferes with feeding.
After illness, good feeding helps make up for any weight loss and prevent malnutrition.

**Advice on intake of fluids during illness:**

- During illness the infants may lose excessive fluids. Breast feeding will help prevent dehydration.
- Home available fluids that are recommended include dal water, rice water, vegetable soup and extra fluids for infant over age 6 months.
- Do not dilute the fluids.
- Fluids should not be given in larger than usual amounts. It is advised to give sips of fluids at the interval of every one to two minutes.
- The thirst is the best indicator to determine amount of fluid that the infant requires.
- Offer fluids liked by the infant. Encourage, but do not force the intake of fluids.

**Breastfed babies should be continued on breast milk. Ask the mother to feed for a longer duration and more often.**

**Feeding Chart/Mother’s Card**

Feeding Chart is a card that has appropriate words and pictures to illustrate the main points of advice on one side and list of feeding recommendations during health and sickness for various age groups and persistent diarrhoea on the other side. It can be given to each mother to help her remember what food and fluids to be given to the young infant, advices to follow and how to identify signs that indicate when to return immediately to the health worker.

There is also a place to tick appropriate fluids for diarrhoea and record when to return for the immunization. An example of Feeding Chart for infants is shown below (Fig. 3.3):
Purposes of Feeding Chart

- To remind you the important points to cover when counselling mother about foods, fluids and when to return.
- To help you identify the infant’s feeding problems (by matching feeding recommendations contained in the card with the actual feeding practices).
- To remind the mother what to do when she returns home.
- To give right message on infant’s feeding to more people as the mother may show the card to other family members or neighbours.
- To use as a record of treatment, feeding advice and immunization.

Check Your Progress 5

i) Neeta is 2 months old and is classified as “not very low weight”. The mother has started giving cow’s milk. She thinks that her infant may gain more weight on cow’s milk than breast milk. Briefly describe the feeding advice.

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ii) Enumerate the feeding advice to be given while counselling a mother if her infant is not feeding well during illness.

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iii) Write below ‘T’ if the statements are True and ‘F’ if the statements are False:

a) You were right to continue feeding your infant during the diarrhoea. He needs food to stay strong. (T/F)

b) Your infant may be having trouble digesting the cow’s milk, and that may be the reason that the diarrhoea has lasted so long. (T/F)

c) Give your infant yoghurt instead of milk (until follow-up visit). (T/F)
3.8 FOLLOW-UP VISIT

3.8.1 Managing an Infant Follow-up Visit

As already discussed in Unit 2, you as a nurse needs to ask the mother about the infant’s problem and you need to know if the visit is a follow-up or an initial visit for this illness. You may find about the visit from clinical register or any other record and by asking the mother.

Once you know that the infant has come to the clinic for follow-up of an illness, ask the mother if the infant has, in addition, developed any new problems. For example, if the infant has come for follow-up of infection, but now he has developed diarrhoea, he has a new problem. This infant requires a full assessment.

- Check for general danger signs and assess all the main symptoms and the infant's nutritional status.
- Classify and treat the infant for diarrhoea (the new problem) as you would do at an initial visit.
- Reassess and treat the infection as given in following subsection.

If the infant has a new problem you should assess the infant at an initial visit.

If the infant does not have a new problem, locate the follow-up box that matches the infant’s previous classification. Then follow the instruction in that box.

- Assess the infant according to the instructions in the follow-up box. The instructions may tell you to assess a major symptom as on the ASSESS and CLASSIFY chart. It may also tell you to assess additional signs.

3.8.2 Conduct a Follow-up Visit

We shall focus on follow-up visit for various illnesses of the sick infant.

a) Followup visit for Possible Local Bacterial Infection:

If an infant with possible local bacterial infection returns for followup visit after two days, you have to follow:

- POSSIBLE LOCAL BACTERIAL INFECTION

After two days

LOOK

Look at the umbilicus. Is it red or draining pus?

Look at skin pustules. Are there ten or more pustules or big boil?

Look at the ear. Is it still discharging pus?

Treatment:

- If local bacterial infection persists, assess the infant for possible local bacterial infection and give treatment.

To assess the young infant, look at the umbilicus or skin pustules. Then select the appropriate treatment.
• If pus or redness remains or get worse, refer to hospital. Also refer if there are more pustules than before.
• If pus or redness/skin pustules improves, tell the mother to continue giving antibiotics for 5 days to treat local infection at home.
• If the ear discharge persists, continue wicking the ear and give antibiotics for 5 days of treatment even if the discharge stop. If the ear has no signs of infection, praise the mother for careful treatment.

b) Followup visit for Jaundice
If an infant with Jaundice returns for follow up visit after two days, you have to follow instructions as given below:

<table>
<thead>
<tr>
<th>JAUNDICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>After two days</td>
</tr>
<tr>
<td>LOOK</td>
</tr>
<tr>
<td>Are palms and soles yellow?</td>
</tr>
<tr>
<td>Treatment:</td>
</tr>
<tr>
<td>- If palms and soles are yellow or age less than 14 days, do full assessment and refer to hospital.</td>
</tr>
<tr>
<td>- If Jaundice has reduced/doesnot persist, advise for home care to mother and when to return immediately.</td>
</tr>
</tbody>
</table>

c) Follow-up Visit for Diarrhoea
If an infant with Diarrhoea comes for follow-up visit, follow the instructions as under:

<table>
<thead>
<tr>
<th>DIARRHOEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>After two days: ASK:</td>
</tr>
<tr>
<td>- Has the diarrhoea stopped?</td>
</tr>
<tr>
<td>- How many loose stools is the infant having per day?</td>
</tr>
<tr>
<td>Treatment:</td>
</tr>
<tr>
<td>- If diarrhoea persists, Assess the infant for diarrhoea and manage as on initial visit.</td>
</tr>
<tr>
<td>- If diarrhoea has stopped (Infant having less than three loose stools per day), tell the mother to follow exclusive breastfeeding for young infant.</td>
</tr>
</tbody>
</table>

d) Follow-up Visit for Persistent Diarrhoea
When an infant with Persistent Diarrhoea returns for a follow-up visit, follow these instructions:

<table>
<thead>
<tr>
<th>PERSISTENT DIARRHOEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>After two days</td>
</tr>
<tr>
<td>ASK:</td>
</tr>
<tr>
<td>- Has the diarrhoea stopped?</td>
</tr>
<tr>
<td>- How many loose stools is the infant having per day?</td>
</tr>
</tbody>
</table>
Treatment:
- If the diarrhoea has not stopped (infant is still having three or more loose stools per day), do a full assessment of the infant. Give any treatment needed. Then refer to hospital.
- If the diarrhoea has stopped (infant having less than three loose stools per day), tell the mother to follow exclusive breastfeeding.

Ask if the diarrhoea has stopped and how many stools the infant has per day.

- If the diarrhoea has not stopped (the infant is still having three or more loose stools per day), do a full reassessment of the infant completely as described on the assess and classify chart. Identify and manage any problems that require immediate attention such as dehydration. Then refer the infant to hospital.
- If the diarrhoea has stopped (infant having less than three loose stools per day), instruct the mother to follow exclusive breastfeeding.

e) Follow-up Visit for Dysentery

When an infant classified as having Dysentery returns for a follow-up visit after two days, you have to follow these instructions:

- **DYSENTERY**
  After two days:
  Assess the infant for diarrhoea
  **ASK:**
  - Are there fewer stools?
  - Is there less blood in the stool?
  - Is there less fever?
  - Is there less abdominal pain?
  - Is the infant feeding properly?

  **Treatment:**
  - If the infant is dehydrated, treat dehydration.
  - If number of stools, amount of blood in stools, fever, abdominal pain, or eating is the same or worse, Refer to hospital.
  - If fewer stools, less blood in the stools, less fever, less abdominal pain and eating better, continue giving the prescribed antibiotic until finished.

f) Follow-up Visit for Feeding Problem

When infant who has a feeding problem returns for follow-up, follow instructions as follows:

- **FEEDING PROBLEM**
  After two days:
  Reassess feeding
Counsel the Mother and Followup

Ask about any feeding problems found on the initial visit.

- Counsel the mother about any new or continuing feeding problems. If you counsel the mother to make significant changes in feeding, ask her to bring the infant back again in two days.
- If the infant is very low weight for age, ask the mother to return 14 days after the initial visit to measure the weight gain.
- If you think that feeding will not improve or the infant has low weight refer the infant.

- Reassess the infant’s feeding. Refer to the infant’s chart or follow-up note for a description of any feeding problems found at the initial visit and previous recommendations. Ask the mother how she has been carrying out the recommendations. For example, if on the last visit breast feeding was recommended, ask the mother to describe if the same was done.
- Counsel the mother about any new or continuing feeding problems. If she encountered problems when trying to feed the infant discuss ways to solve them.
- If the infant is very low weight for age, ask the mother to return 14 days after the initial visit. At that visit a doctor will measure the infant weight gain to determine if the changes in feeding are helping the child.

Follow-up Visit for Low Weight/Very Low Weight

When a young infant has been classified as low weight or very low weight, follow these instructions:

- **LOW WEIGHT/VERY LOW WEIGHT**
  
  After 14 days:
  
  Weigh the infant and determine if the infant is still low weight/very low weight for age. Reassess feeding.

  Treatment:
  
  - If the infant is no longer low weight/very low weight for age, praise the mother and encourage her to continue.
  - If the infant is still low weight/very low weight for age, but is feeding well, praise the mother and ask her to have her infant weighted again within one month or when the infant comes for immunization.
  - If the infant is still very low weight for age, counsel the mother about any feeding problem found. Ask the mother to return again in two days.
  - If you do not think that feeding will improve, or if the infant has lost weight, refer the infant.

  - If the infant is no longer very low weight for age, praise the mother. The changes in the infant’s feeding are helping.
  - If the infant is still very low weight for age, counsel the mother about any feeding problem found. It may also include suggesting solutions to feeding problems.
Ask the mother to bring the infant back again in one month. It is important to continue seeing the infant every month to advise and encourage the mother until it is feeding well and gaining weight regularly or is no longer very low weight. If the infant is continuing to lose weight and no change in feeding seems likely refer the infant to hospital.

h) Follow-up Visit for Thrush

When a young infant who had thrush returns for follow-up in two days, follow these instructions:

**THRUSH**

After two days:

**LOOK** for ulcers or white patches in the mouth (thrush). Reassess feeding.  
> See "Then Check for Feeding Problem or Low Weight" above.

- If thrush is worse, or the infant has problems with attachment or sucking, refer to hospital.
- If thrush is the same or better, and if the infant is feeding well, continue, gention violet 0.25 per cent for a total of five days.

Check the thrush and reassess the infant's feeding:

- If the thrush is worse or the infant has problems with attachment or sucking, refer to hospital. It is very important that the infant be treated so that he can resume good feeding as soon as possible.
- If the thrush is the same or better and the infant is feeding well, continue the treatment with half-strength gention violet. Stop using gention violet after five days.

**EXERCISE**

Read about each young infant who came for follow-up and answer the questions. Refer to the YOUNG INFANT chart as needed.

Local bacterial infections are treated with cotrimoxazole/amoxycillin.

1) Sashie is five weeks old. The doctor classified her as having LOCAL BACTERIAL INFECTION because she had some skin pustules on her buttocks. Her mother got pediatric tablets of cotrimoxazole to give at home, and learned how to clean the skin and apply gention violet at home. She has returned for a follow-up visit after two days. Sashi has no new problems.

   a) How would you reassess Sashie?

      When you look at the skin of her buttocks, you see that there are fewer pustules and less redness.

   b) What treatment does Sashie need now?

2) Afiya, a five week old infant, was brought to the clinic two days ago. During that visit he was classified with a FEEDING PROBLEM because he was not able to attach well to the breast. He weighted 3.25 kg (not low weight for age). He was breastfeeding five times a day. He also had white patches of thrush in his mouth. Afiya's mother was taught how to position her infant
for breastfeeding and how to help him attach to the breast. She was advised to increase the frequency of feeding to at least eight times per 24 hours and to breastfeed as often as the infant wants, day and night. She was taught to treat thrush at home. She was also asked to return for follow-up in two days. Today, Afiya’s mother has come to see you for follow-up. She tells you that the infant has no new problems.

a) How would you reassess this infant?

Afiya’s weight today is 3.35 Kg. When you reassess the infant’s feeding, the mother tells you that he is feeding easily. She is now breastfeeding Afiya at least eight times a day, and sometimes more when he wants. He is not receiving other foods or drinks. You ask the mother to put Afiya to the breast. When you check the attachment, you note that the infant’s chin is touching the breast, the mouth is wide open with the lower lip turned outward. There is more areola visible above than below the mouth. The infant is sucking effectively. You look is his mouth. You cannot see white patches now.

b) How will you treat this infant?

When you have completed this exercise, discuss your work with counselor.

### Check Your Progress 6

What followup care needs to be given in following cases

<table>
<thead>
<tr>
<th>Case</th>
<th>Care Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Jaundice</td>
<td></td>
</tr>
<tr>
<td>b) Diarrhoea</td>
<td></td>
</tr>
<tr>
<td>c) Low birth weight</td>
<td></td>
</tr>
</tbody>
</table>

### 3.9 LET US SUM UP

In this unit you have learnt the importance of feeding, feeding recommendations, problems of feeding related to feeding of young infant. You have also learnt about counselling the mother. At the end you have learnt about feeding chart or/and follow-up visit.

### 3.10 ANSWERS TO CHECK YOUR PROGRESS

#### Check Your Progress 1

a) Prevents Malnutrition

b) Prevents sickness by providing immunity.

#### Check Your Progress 2

i) a) F

b) T

#### Check Your Progress 3

i) Do you breastfeed your infant?
Integrated Management of Neonatal and Childhood Illness

- How many times during the day?
- Do you also breastfeed during the night?

ii) Does the infant take any other food or fluids?
- What food or fluids?
- How many times per day?
- What do you use to feed the infant?
- How large are servings? Does the infant receive his own serving?
- Who feeds the infant and how?

iii) During the illness, has the infant’s feeding changed? If yes, how?

Check Your Progress 4
• Low weight for age

Check Your Progress 5
i) The feeding advice would include:
- Motivating the mother to give exclusive breastfeeding as often as the Neeta wants, day and night, at least 8 times in 24 hours.
- Informing the mother that Neeta only needs breast milk. The breast milk secreted by her is sufficient to meet the nutritional needs of Neeta.
- Teaching the mother on advantages of breastmilk.

ii) The feeding advice during illness would include:
- Breastfeed more frequently and for longer duration.
- Clear a blocked nose if it interferes with feeding.
- After illness, good feeding helps to make up for any weight loss and prevent malnutrition.

iii) a) T
    c) T
    d) T

Check Your Progress 6
i) Refer sub-section 3.8.2 (b)
ii) Refer sub-section 3.8.2(c)
ii) Refer Sub-section 3.8.3(g)