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**INTEGRATED MANAGEMENT OF
NEONATAL AND CHILDHOOD ILLNESS
(f-IMNCI)
PARTICIPANT'S MANUAL**

Modules 1 to 9

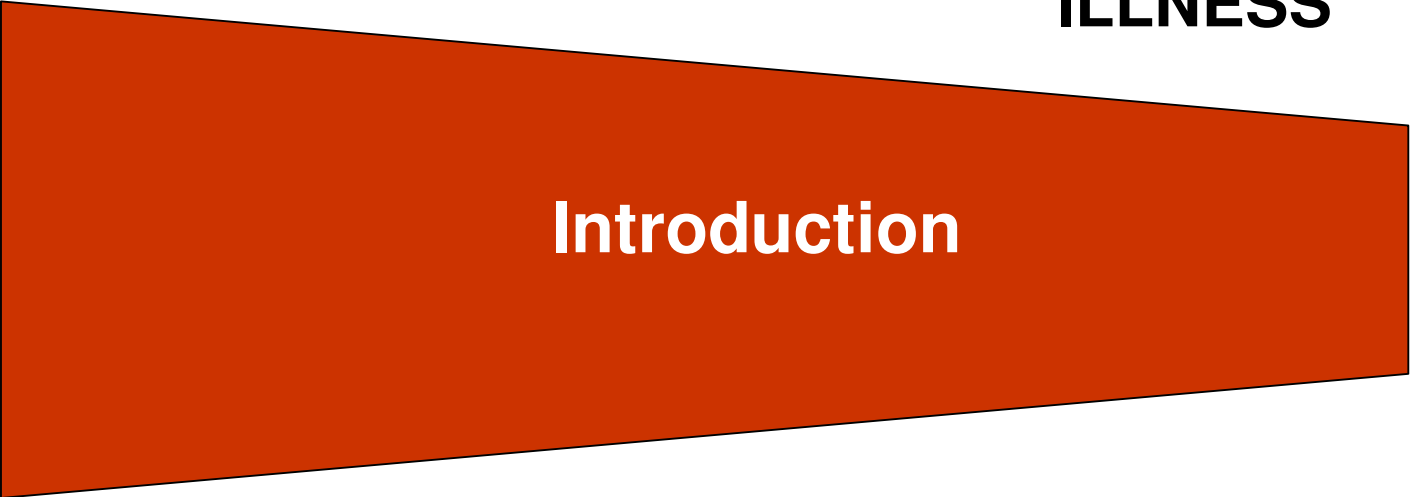


World Health Organization



Unicef

INTEGRATED MANAGEMENT OF NEONATAL AND CHILDHOOD ILLNESS



Introduction

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INTRODUCTION

Over the last 3 decades the annual number of deaths among children less than 5 years old has decreased by almost a third. However, this reduction has not been evenly distributed throughout the world. Every year more than 10 million children die in developing countries before they reach their fifth birthday (Fig.1).

The most common causes of infant and child mortality in developing countries including India are perinatal conditions, acute respiratory infections, diarrhoea, malaria, measles and malnutrition. These are also the commonest causes of morbidity in young children. In India, the common illnesses in children younger than 5 years of age according to the National Family Health Survey III (NFHS-III) data include fever (15% prevalence in the previous 2-week period), acute respiratory infections (6 %), diarrhoea (9%) and malnutrition (46%) - and often a combination of these conditions.

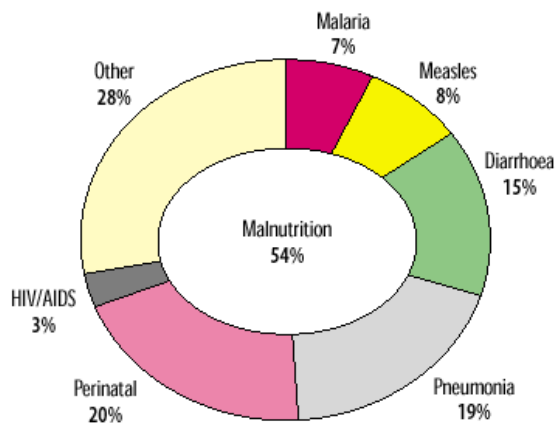


Fig. 1: Distribution of 10.5 million deaths among children less than 5 years old in all developing countries, 1999

(WHO. World Health Report 1999: Making a difference, Geneva, WHO, 1999)

Infant Mortality Rate (IMR) in India continues to be high at 57/1000 live births and Under Five Mortality Rate (U5MR) at 74/1000 live births.(NFHS-III) Neonatal mortality contributes to over 64% of infant deaths and most of these deaths occur during first week of life. Mortality rate in the second month of life is also higher than at later ages. Any health program that aims at reducing IMR needs to address mortality in the first two months of life, particularly in the first week of life.

Projections based on the 1996 analysis *The Global Burden of Disease* indicate that common childhood illnesses will continue to be major contributors to child deaths through the year 2020 unless significantly greater efforts are made to control them. This assumption makes a strong case for introducing new strategies to significantly reduce child mortality and improve child health and development.

Rationale for an Evidence-based Syndromic Approach to Case Management

Many well-known prevention and treatment strategies like UIP, Oral Rehydration and appropriate antibiotic therapy for pneumonia have already proven effective for saving young lives. Even modest improvements in breastfeeding practices have reduced childhood deaths. While each of these interventions has shown great success,

accumulating evidence suggests that a more integrated approach to managing sick children is needed to achieve better outcomes. Child health programmes need to move beyond single diseases to addressing the overall health and well being of the child. Because many children present with overlapping signs and symptoms of diseases, a single diagnosis can be difficult, and may not be feasible or appropriate. This is especially true for first-level health facilities where examinations involve few instruments, little or no laboratory tests, and no X-ray.

During the mid-1990s, the World Health Organization (WHO), in collaboration with UNICEF and many other agencies, institutions and individuals, responded to this challenge by developing a strategy known as the Integrated Management of Childhood Illness (IMCI). Although the major reason for developing the IMCI strategy stemmed from the needs of curative care, the strategy also addresses aspects of nutrition, immunization, and other important elements of disease prevention and health promotion. The objectives of the strategy are to reduce death and the frequency and severity of illness and disability, and to contribute to improved growth and development. This strategy has been adapted for India as Integrated Management of Neonatal and Childhood Illness (IMNCI).

The IMNCI clinical guidelines target children less than 5 years old — the age group that bears the highest burden of deaths from common childhood diseases. The guidelines take an evidence-based, syndromic approach to case management that supports the rational, effective and affordable use of drugs and diagnostic tools. Evidence-based medicine stresses the importance of evaluation of evidence from clinical research and cautions against the use of intuition, unsystematic clinical experience, and untested pathophysiologic reasoning for medical decision-making. In situations where laboratory support and clinical resources are limited, the syndromic approach is a more realistic and cost-effective way to manage patients. Careful and systematic assessment of common symptoms and well-selected clinical signs provides sufficient information to guide rational and effective actions.

An evidence-based syndromic approach can be used to determine the:

- Health problem(s) the child may have;
- Severity of the child's condition;
- Actions that can be taken to care for the child (e.g. refer the child immediately, manage with available resources, or manage at home).

In addition, IMNCI promotes:

- Adjustment of interventions to the capacity and functions of the health system; and
- Active involvement of family members and the community in the health care process.

Parents, if correctly informed and counselled, can play an important role in improving the health status of their children by following the advice given by a health care provider, by applying appropriate feeding practices and by bringing sick children to a health facility as soon as symptoms arise.

Components of the Integrated Approach

The IMNCI strategy includes both preventive and curative interventions that aim to improve practices in health facilities, the health system and at home. At the core of the strategy is integrated case management of the most common childhood problems with a focus on the most common causes of death.

The strategy includes three main components:

- Improvements in the case-management skills of health staff through the provision of locally-adapted guidelines on Integrated Management of Neonatal and Childhood illness and activities to promote their use;
- Improvements in the overall health system required for effective management of childhood illness;
- Improvements in family and community health care practices.

The Principles of Integrated Care

The IMNCI guidelines are based on the following principles:

- All sick young infants age up to 2 months must be examined for signs of ***“possible serious bacterial infection”*** and all children 2 months to 5 years must be examined for ***“general danger signs”*** which indicate the need for immediate referral or admission to a hospital.
- All sick children must be ***routinely assessed for major symptoms*** (for young infants up to 2 months: diarrhoea; and for children age 2 months up to 5 years: cough or difficult breathing, diarrhoea, fever and ear problem). They must also be routinely assessed for ***nutritional and immunization status, feeding problems, and other potential problems***.
- Only a ***limited number of carefully selected clinical signs*** are used, based on evidence of their sensitivity and specificity to detect disease. These signs were selected considering the conditions and realities of first-level health facilities.
- A combination of individual signs leads to a child’s ***classification(s) rather than a diagnosis***. Classification(s) indicate the severity of condition(s). They call for specific actions based on whether the young infant or the child (a) should be urgently referred to another level of care, (b) requires specific treatments (such as antibiotics or antimalarial treatment), or (c) may be safely managed at home. The ***classifications are colour coded***: “pink” suggests hospital referral or admission, “yellow” indicates initiation of treatment, and “green” calls for home treatment.
- The IMNCI guidelines address ***most, but not all, of the major reasons a sick child is brought to a clinic***. A child returning with chronic problems or less common illnesses may require special care. The guidelines do not describe the care at birth and the management of trauma or other acute emergencies due to accidents or injuries.
- IMNCI management procedures use a ***limited number of essential drugs*** and ***encourage active participation of caretakers in the treatment*** of children.

- An essential component of the IMNCI guidelines is the *counselling of caretakers* about home care, including counselling about feeding, fluids and when to return to a health facility.

THE CASE MANAGEMENT PROCESS

The case management process is presented on a series of charts, which show the sequence of steps and provide information for performing them. The charts describe the following steps:

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

These steps are probably similar to the way you care for sick children now, though you may have learned different words to describe them. The step called "Assess the Young Infant or Child" means taking a history and doing a physical examination. "Classify the Illness" means making a decision on the severity of the illness. You will select a category, or "Classification," for each of the child's major symptoms, which corresponds to the severity of the disease. Classifications are not specific disease diagnoses. Instead, they are categories that are used to determine treatment.

The charts recommend appropriate treatment for each classification. When using this process, selecting a classification on the chart is sufficient to allow you to "Identify Treatment" for a young infant or child. For example, a young infant with the classification POSSIBLE SERIOUS BACTERIAL INFECTION could have pneumonia, septicaemia or meningitis. The treatments listed for POSSIBLE SERIOUS BACTERIAL INFECTION will be appropriate because they have been chosen to cover the most important diseases included in this classification.

"Treat" means giving treatment in clinic, prescribing drugs or other treatments to be given at home, and also teaching the mother how to carry out the treatments. "Counsel the mother" includes assessing how the child is fed and telling her about the foods and fluids to give the child and when to bring the child back to the clinic.

Management of the young infant age up to 2 months is presented on two charts titled:

- * *ASSESS AND CLASSIFY THE SICK YOUNG INFANT AGE UP TO 2 MONTHS* and
- * *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER.*

The case management process for sick children age 2 months up to 5 years is somewhat different from young infants and is presented on three charts titled:

- * *ASSESS AND CLASSIFY THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS*
- * *TREAT THE CHILD*
- * *COUNSEL THE MOTHER*

The charts are designed to help you to manage young infants and children correctly and efficiently. This course trains you to use the charts and gives you clinical practice managing sick young infants and children. After the course, the charts will help you recall and apply what you have learned when you manage sick young infants and children at your clinic.

PURPOSE OF THIS TRAINING COURSE

This training course is designed to teach the case management process to doctors who see sick children and infants. It is a case management process for a first-level facility such as a clinic, a health centre or an outpatient department of a hospital. The course uses the word "clinic" throughout to mean any such setting.

You will learn to manage sick children according to the case management charts, including:

- Assessing signs and symptoms of illness, and nutritional and immunization status,
- Classifying the illness,
- Identifying treatments for the child's classifications and deciding if a child needs to be referred,
- Giving important pre-referral treatments (such as a first dose of an antibiotic, vitamin A, quinine injection, and treatment to prevent low blood sugar) and referring the young infant or child,
- Providing treatments in the clinic, such as first dose of antibiotic, oral rehydration therapy, vitamin A, and immunization, warming the young infant by skin to skin contact,
- Teaching the mother to give specific treatment at home, such as an oral antibiotic or antimalarial, and
- Counselling the mother about feeding and when to return.
- Providing treatment to sick young infants and children who have a severe classification but referral is not possible.
- When a young infant or child comes for scheduled follow-up, reassessing the problem and providing appropriate care.

COURSE METHODS AND MATERIALS

In addition to the case management chart booklets, you will be using a series of training modules, which explains each step of IMNCI guidelines. These modules are titled:

- *Assess and Classify the Sick Young Infant Age up to 2 Months*
- *Identify Treatment for the Sick Young Infant*
- *Treat the Young Infant and Counsel the Mother*
- *Assess and Classify the Sick Child Age 2 Months up to 5 Years*
- *Identify Treatment for the Sick Child*
- *Treat the Child*
- *Counsel the Mother*
- *Follow-Up*

The modules also include exercises that will help you learn the steps. Most exercises provide clinical information describing a sick young infant or child and ask questions. Some exercises use photographs or video. You will complete a module by reading it and working through the exercises.

For approximately half of each day, you will go to nearby clinics to observe and practice managing sick young infants and children. In these clinical sessions you will assess, classify and treat sick young infants and children, including teaching their mothers how to care for them at home. The clinical sessions give you opportunities to try the skills that you learn about in the modules. You may ask questions and receive guidance if difficulties arise. By the end of the course, you will have experience in managing young infants and children according to the case management process and can feel comfortable continuing at your own clinic.

A facilitator will guide you through the activities and exercises in the modules, lead group discussions and review your individual work on the modules. A facilitator will also supervise your practice during clinical sessions. You are encouraged to discuss any questions or problems with a facilitator.

HOW TO SELECT THE APPROPRIATE CASE MANAGEMENT CHARTS

Depending on the procedure for registering patients at your clinic, the child's name, age and other information such as address may have been recorded already. If not, you may begin by asking the child's name and age.

Decide which age group the child is in:

- Age up to 2 months
- Age 2 months up to 5 years

If the child not yet 2 months of age, the child is considered a young infant. Use the chart *ASSESS AND CLASSIFY THE SICK YOUNG INFANT*. “Up to 2 months” means that the child has not yet completed 2 months of age. For example, this age group includes a child who is 1 month and 29 days old but not a child who is 2 months old. If the child is age 2 months up to 5 years, select the chart *ASSESS AND CLASSIFY THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS*. “Up to 5 years” means that the child has not yet had his fifth birthday. For example, this age group includes a child who is 4 years and 11 months but not a child who is 5 years old.

In the next module, *Assess and Classify the Sick Young Infant*, you will learn how to assess and classify a young infant.

GLOSSARY

Active feeding: Encouraging a child to eat, for example, by sitting with him and helping to get the spoon to his mouth.

Active neurological disease of the central nervous system: Epilepsy and other current diseases of the brain or spinal cord. This does not include permanent, old neurological problems from cerebral palsy, polio, or injuries.

AIDS: Acquired Immune Deficiency Syndrome, caused by infection with the Human Immunodeficiency Virus (HIV). AIDS is the final and most severe phase of HIV infection. The immune system works poorly, and the patient may have various symptoms and diseases (such as diarrhoea, fever, wasting, pneumonia).

Amoebiasis: Amoebic dysentery; dysentery caused by the amoeba *E. histolytica*.

Allergies: Problems such as sneezing, a rash, or difficult breathing that affect certain people when specific things are breathed in, eaten, injected, or touched.

Antidiarrhoeal drugs: Drugs that are claimed to stop or decrease diarrhoea, such as antimotility drugs. These drugs are not useful for children with diarrhoea. Some are dangerous.

Antifolate drugs: Drugs that act against folate. Both cotrimoxazole (trimethoprim-sulfamethoxazole) and the antimalarial sulfadoxine-pyramethamine (Fansidar) are antifolate drugs.

Antimotility drugs: Drugs that slow the movement of contents through the bowel by reducing its muscular activity

Axillary temperature: Temperature measured in the armpit.

Cerebral malaria: Falciparum malaria affecting the brain.

Checking questions: Questions intended to find out what someone understands and what needs further explanation. After teaching a mother about feeding, a doctor/doctor might ask the checking question, "What foods will you feed your child?"

Chest indrawing: When the lower chest wall (lower ribs) goes in when a child breathes in. In a child age 2 months up to 5 years, if chest indrawing is clearly visible and present all the time during an examination, it is sign of SEVERE PNEUMONIA OR VERY SEVERE DISEASE.

Severe chest indrawing: Chest indrawing that is very deep and easy to see. In a young infant, mild chest indrawing is normal, but severe chest indrawing is a sign of serious illness.

Classify: As used in this course, to select a category of illness and severity (called a classification) based on a child's signs and symptoms.

Clinic: As used in this course, any first-level outpatient health facility such as dispensary, rural health post, health centre, or the outpatient department of a hospital.

Communication skills: As used in this course, skills used in teaching and counselling with mothers, including: ASK AND LISTEN, PRAISE, ADVISE, AND CHECK UNDERSTANDING.

Complementary foods: Foods given in addition to breastmilk, starting when a child is 6 months of age. By age 6 months, all children should be receiving a nutritious, thick complementary food, such as cereal mixed with oil and bits of meat, vegetables, or fish. Complementary foods are sometimes called "weaning foods."

Corneal rupture: Bursting of the cornea, that is, the clear outer layer of the eye.

Counsel: As used in this module, to teach or advise a mother as part of a discussion which includes: asking questions, listening to the mother's answers, praising and/or giving relevant advice, helping to solve problems, and checking understanding.

Digital watch: A watch that shows the time in digits (numerals) instead of with moving hands.

Disease: As used in this course, a specific illness or group of illnesses, classified on the basis of signs and symptoms, for example, "VERY SEVERE FEBRILE DISEASE." This classification includes several illnesses such as meningitis, cerebral malaria, and septicaemia.

DPT: Immunization to prevent diphtheria, pertussis (whooping cough), and tetanus. For full protection a child needs 3 injections: at 6 weeks, 10 weeks, and 14 weeks.

Energy-rich: Full of ingredients that give energy (or calories), such as starches or oil.

Diarrhoeal episodes: Occurrences of diarrhoea.

Essential: Necessary. Essential vitamins and minerals (such as vitamins and iron) are those necessary for good health.

Essential fatty acids: Fats that are necessary for a baby's growing eyes and brain. These fatty acids are not present in cow's milk or most brands of formula.

Exclusive breastfeeding: Giving a child only breastmilk and no additional food, water, or other fluids (with the exception of medicines and vitamins, if needed).

Falciparum malaria: Malaria caused by the parasite *Plasmodium falciparum*.

Feeding assessment: The process of asking questions to find out about a child's usual feeding and feeding during illness. (Appropriate questions are listed on the *COUNSEL* chart.)

Feeding problems: Differences between a child's actual feeding and feeding recommendations listed on the *COUNSEL* chart, and other problems such as difficulty breastfeeding, use of a feeding bottle, lack of active feeding, or not feeding well during illness.

Fever: As used in this course, fever includes:

- a history of fever (as reported by the mother)
- feeling hot to the touch
- an axillary temperature of 37.5°C (99.5°F) or higher, or a rectal temperature of 38°C (100.4°F) or higher.

First-level health facility: A facility such as a health centre, clinic, rural health post, dispensary, or outpatient department of a hospital, which is considered the first facility within the health system where people seek care. In this course, the term **clinic** is used for any first-level health facility.

Follow-up visit: A return visit requested by the doctor/doctor to see if treatment is working or if further treatment or referral is needed.

Gruel: A food made by boiling cereal meal or legumes in milk or water. Gruel may be made thick like a porridge or thin like a drink. For complementary feeding, gruel should be made thick.

Grunting: Soft, short sounds that a young infant makes when breathing out. Grunting occurs when a young infant is having trouble breathing.

Hepatitis B virus: One of several viruses that cause hepatitis; this virus also causes liver cancer. This virus is spread easily by blood, so needles and syringes must be sterile.

HIV: Human Immunodeficiency Virus. HIV is the virus that causes AIDS.

Hookworm: A small worm that may live as a parasite in a person's intestine and suck blood. This blood loss may lead to anaemia.

Hospital: As used in this course, any health facility with inpatient beds, supplies, and expertise to treat a very sick child.

Hygienically: Using clean utensils and clean hands, avoiding germs.

Hypernatremia: Too much sodium in the blood.

Hypoxia: A condition in which too little oxygen is reaching the organs of the body.

Illness: Sickness. As described in this course, the signs and symptoms of illness need to be assessed and classified in order to select treatment.

Immune suppression: Weakening of the immune system so that the body has little resistance to disease.

Immune system: The system that helps the body resist disease by producing antibodies or special cells to fight disease-causing agents.

Immunization status: A comparison of a child's past immunizations with the recommended immunization schedule. Immunization status describes whether or not a child has received all of the immunizations recommended for his age, and, if not, what immunizations are needed now.

Infant: As used in this course, a baby up to age 12 months.

Young infant: As used in this course, a baby age up to 2 months.

Initial visit: The first visit to a doctor/doctor for an episode of an illness or problem.

Inpatient: A patient who stays at a health facility and receives a bed and food as well as treatment.

Integrated case management process: A process for treating patients that includes consideration of all of their symptoms.

Koplik spots: Spots that occur in the mouth inside the cheek during the early stages of measles. They are small, irregular, bright red spots with a white spot in the center. They do not interfere with drinking or eating and do not need treatment.

Kwashiorkor: A type of protein-energy malnutrition due to lack of protein in the diet. A child with kwashiorkor has oedema, which may cause his limbs to appear swollen. The child may have sparse hair and dry scaly skin.

Local infections: Infections located only in a specific place on the body, for example, in the eye or in the mouth.

Low blood sugar: Too little sugar in the blood, also called hypoglycaemia.

Low birth weight: Low weight at birth, due either to poor growth in the womb or to prematurity (being born early). Children less than 2500 grams have low birth weight.

Malignant: Tending to spread and result in death.

Marasmus: A type of protein-energy malnutrition due to long-term lack of calories and protein. A child with marasmus appears to be just "skin and bones".

Mastoid: The skull bone behind the ear.

Measles complications: Problems or infections that occur during or after measles. Some examples of measles complications are: diarrhoea, pneumonia, stridor, mouth ulcers, ear infection, and eye infection. A less common complication is encephalitis, an inflammation of the brain.

Meningitis: A dangerous infection in which the spinal fluid and the membranes surrounding the brain and spinal cord become infected.

Midwife: A health care worker who assists women in childbirth and may also provide other health care.

Milk, Locally Appropriate: Dairy/ locally appropriate animal milk given instead of or in addition to breastmilk

Nasogastric (NG) tube: A tube inserted through a patient's nose to his stomach. An NG tube may be used to give ORS solution to severely dehydrated patients when IV therapy is not available, or to feed a severely malnourished child who cannot eat.

Nutrient-rich: Full of the essential nutrients. These include protein as well as vitamins and minerals.

Nutritional status: The degree to which a child shows or does not show certain signs of malnutrition or anaemia or low weight. In this course, a child's nutritional status may be classified as: SEVERE MALNUTRITION, VERY LOW WEIGHT, or NOT VERY LOW WEIGHT.

Oedema: Swelling from excess fluid under the skin. Oedema usually occurs in the lower legs and feet, sometimes elsewhere.

Opportunistic infections: Infections caused by microorganisms which the body's immune system is normally able to fight off. When the immune system is weakened, as in AIDS, opportunistic infections can take hold. For example, in a healthy person, there are organisms in the mouth which do not normally

cause infection; however, in a person with a weakened immune system, these same organisms may cause oral thrush.

Oral Rehydration Salts (ORS): A mixture of glucose and salts conforming to the WHO recommended formula (in mmol per litre): sodium 75; chloride 65, potassium 20, citrate 10, glucose 75 and osmolarity 245.

OPV: Oral polio vaccine. To prevent polio, it is given at birth, 6 weeks, 10 weeks, 14 weeks and 18 months.

Outpatient: A patient who does not stay overnight at a health facility.

Pathogen: An organism or microorganism that causes disease.

Pre-referral: Before referral to a hospital.

Premature: Born early, before 37 weeks of pregnancy.

Protein: A substance in food made up of amino acids needed for adequate growth. Meat, fish, eggs, milk, and beans are examples of foods containing protein.

Protein-energy malnutrition: A condition caused by lack of enough protein or energy in the diet, or by frequent illness.

Pulses: Legumes, such as peas, beans, or lentils.

Pustule: A reddish bump on the skin containing pus.

Radial pulse: The pulse felt over the radial artery, which is the main blood vessel at the wrist on the outside of the thumb.

Reassessment: As used in this course, to examine the child again for signs of specific illness to see if the child is improving.

Full reassessment: To do the entire assessment process on the *ASSESS & CLASSIFY* chart again to see if there has been improvement and also to assess and classify any new problems.

Recommendations: Advice, instructions that should be followed.

Recurrent convulsions: Spasms or fits that occur repeatedly.

Referral: As used in this course, sending a patient for further assessment and care at a hospital. It would also include shifting of a patient from outpatient department to inpatient section of the hospital where first level referral facilities are available.

Relactation: Starting breastfeeding again and producing breastmilk after stopping .

Respiratory distress: Discomfort from not getting enough air into the lungs.

Semi-solid food: Food that is part solid and part liquid. A soft, wet food such as gruel or porridge is semi-solid.

Septicaemia: An infection of the blood, also called "sepsis" in this course.

Severe classification: As used in this course, a very serious illness requiring urgent attention and usually referral or admission for inpatient care. Severe classifications are listed in pink-colored rows on the *ASSESS & CLASSIFY* chart.

Shock: a dangerous condition with severe weakness, lethargy, or unconsciousness, cold extremities, and fast, weak pulse. It is caused by diarrhoea with very severe dehydration, haemorrhage, burns, or sepsis.

Signs: As used in this course, physical evidence of a health problem which the doctor/doctor observes by looking, listening, or feeling. Examples of signs include: fast breathing, chest indrawing, sunken eyes, stiff neck, pus draining from the ear, etc.

Stable: Staying the same rather than getting worse.

Symptoms: As used in this course, health problems reported by the mother such as cough, diarrhoea, or ear pain.

Main symptoms: As used in this course, those symptoms which the doctor/doctor should ask the mother about when assessing the child. The four main symptoms listed on the *ASSESS & CLASSIFY* chart are: cough or difficult breathing, diarrhoea, fever, and ear problem.

Thrush: Ulcers or white patches on the inside of the mouth and tongue, caused by a yeast infection.

Trophozoites: Stage of a protozoan organism such as *Giardia lamblia* or *E. histolytica*; the stage which causes tissue damage.

Mouth ulcers: Sores on the inside of the mouth and lips or on the tongue. These may occur with measles and may be red or have white coating on them. They make it difficult to eat or drink.

Urgent referral: Sending a patient immediately for further care at a hospital.

**INTEGRATED
MANAGEMENT OF
NEONATAL AND
CHILDHOOD
ILLNESS**

**Assess and Classify the
Sick Young Infant Age
upto 2 months**

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INTRODUCTION

A mother brings her young infant or sick child to the clinic for a particular problem or symptom. If you only assess the young infant or child for that particular problem or symptom, you might overlook other signs of disease. The young infant might have septicaemia, pneumonia, meningitis, low weight or a feeding problem. These diseases can cause death or disability if they are not treated.

The chart *ASSESS AND CLASSIFY THE SICK YOUNG INFANT AGE UP TO 2 MONTHS* describes how to assess and classify sick young infants so that signs of disease are not overlooked. According to the chart, you should ask the mother about the young infant's problem and check all young infants for possible bacterial infection / severe jaundice. Then ask about diarrhoea. If diarrhoea is present, ask additional questions to help classify diarrhoea. Check all young infants for feeding problem or malnutrition. Also check the young infant's immunization status and assess other problems the mother has mentioned.

Young infants have special characteristics that must be considered when classifying their illness. They can become sick and die very quickly from serious bacterial infections. They frequently have only general signs such as few movements, fever, or low body temperature. Mild chest indrawing is normal in young infants because their chest wall is soft. For these reasons, assessment, classification and treatment of young infants is somewhat different from that of older infants or young children. There is a recording form for young infants, which lists signs to assess in a young infant. (A copy of this form is in the chart booklet).

The charts and modules for the sick young infant do not include resuscitation of a newborn or management of the events at the time of birth.

LEARNING OBJECTIVES

This module will describe the following tasks and allow you to practice some of them (some will be practiced in the clinic):

- * assessing and classifying a young infant for possible serious bacterial infection
- * assessing and classifying a young infant for jaundice
- * assessing and classifying a young infant with diarrhoea
- * checking for a feeding problem or malnutrition, assessing breastfeeding and classifying feeding, immunization

1.0 ASK THE MOTHER WHAT THE YOUNG INFANT'S PROBLEMS ARE

A mother (or other family member such as the father, grandmother, sister or brother) usually brings a young infant to the clinic because the infant is sick. But mothers also bring their infants for well-baby visits, immunization sessions and for other problems. The steps on the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart describe what you should do when a mother brings her young infant to the clinic because the infant is sick. The chart should not be used for an infant with an injury or burn.

When patients arrive at most clinics, clinic staff identify the reason for the infant's visit. Clinic staff obtains the infant's weight and temperature and record them on a patient chart, another written record, or on a small piece of paper. Then the mother and her infant see a doctor.

When you see the mother and her sick infant:

- * **Greet the mother appropriately** and ask her to sit with her infant.
You need to know the infant's age so you can choose the right case management chart. Look at the infant's record to find the infant's age.
 - If the infant is up to 2 months, assess and classify the young infant according to the steps on the *ASSESS AND CLASSIFY THE SICK YOUNG INFANT* chart.
 - If the child is age 2 months up to 5 years, assess and classify the child according to the steps on the *ASSESS AND CLASSIFY THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS* chart. (You will learn more about managing sick children age 2 months up to 5 years later in the course.)

Look to see if the young infant's weight and temperature have been measured and recorded. If not, weigh the infant and measure his temperature later when you assess and classify the infant's main symptoms. Do not undress or disturb the infant now.

- * **Ask the mother what the young infant's problems are.**
Record what the mother tells you about the infant's problems.

An important reason for asking this question is to open good communication with the mother. Using good communication helps to reassure the mother that her infant will receive good care. When you treat the infant's illness later in the visit, you will need to teach and advise the mother about caring for her sick infant at home. So it is important to have good communication with the mother from the beginning of the visit.

To use good communication skills:

- **Listen carefully to what the mother tells you.** This will show her that you are taking her concerns seriously.

- **Use words the mother understands.** If she does not understand the questions you ask her, she cannot give the information you need to assess and classify the infant correctly.
- **Give the mother time to answer the questions.** For example, she may need time to decide if the sign you asked about is present.
- **Ask additional questions when the mother is not sure about her answer.** When you ask about a main symptom or related sign, the mother may not be sure if it is present. Ask her additional questions to help her give clearer answers.

* **Determine if this is an initial or follow-up visit for this problem.**

If this is the infant's first visit for this episode of an illness or problem, then this is an *initial* visit.

If the young infant was seen a few days ago for the same illness, this is a *follow-up* visit. A follow-up visit has a different purpose than an initial visit. During a follow-up visit, the doctor finds out if the treatment he gave during the initial visit has helped the infant. If the young infant is not improving or is getting worse after a few days, the doctor refers the infant to a hospital or changes the infant's treatment.

How you find out if this is an initial or follow-up visit depends on how your clinic registers patients and identifies the reason for their visit. Some clinics give mothers follow-up slips that tell them when to return. In other clinics the doctor writes a follow-up note on the multi-visit card or chart. Or, when the patient registers, clinic staff asks the mother questions to find out why she has come.

You will learn how to carry out a follow-up visit later in the course. The examples and exercises in this section describe infants who have come for initial visit. If it is an initial visit, follow the sequence of steps on the chart to assess and classify a sick young infant:

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

If you find a reason that a young infant needs urgent referral, you should continue the assessment. However, skip the breastfeeding assessment because it can take some time.

1.1 CHECK THE YOUNG INFANT FOR POSSIBLE SERIOUS BACTERIAL INFECTION/ JAUNDICE

This assessment step is done for *every* sick young infant. In this step you are looking for signs of bacterial infection, especially a serious infection. A young infant can become sick and die *very quickly* from serious bacterial infections such as pneumonia, sepsis and meningitis.

It is important to assess the signs in the order on the chart, and to keep the young infant calm. The young infant *must be calm* and may be asleep while you assess the first five signs, that is, count breathing and look for chest indrawing, nasal flaring, grunting and bulging fontanelle.

To assess the next few signs, you will pick up the infant, look at the skin all over his body and measure his temperature. By this time he will probably be awake. Then you can see whether he is lethargic or unconscious and observe his movements.

ASK THE MOTHER WHAT THE YOUNG INFANT'S PROBLEMS ARE

- Determine if this is an initial or follow-up visit for this problem.
 - if follow-up visit, use the follow-up instructions on the bottom of this chart.
 - if initial visit, assess the young infant as follows:

CHECK FOR POSSIBLE BACTERIAL INFECTION/ JAUNDICE

ASK:	LOOK, LISTEN, FEEL:
• Has the infant had convulsions?	• 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 fontanelle. • 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 and soles yellow ?

} YOUNG INFANT MUST BE CALM

How to assess each sign is described below.

ASK: Has the infant had convulsions?

During a convulsion, the young infant's arms and legs stiffen because the muscles are contracting. The young infant may lose consciousness. Ask the mother if the young infant has

had convulsions during this current illness. Use words the mother understands. For example, the mother may know convulsions as "fits" or "spasms."

LOOK: Count the breaths in one minute. Repeat the count if elevated.

You must count the breaths the young infant takes in one minute to decide if the young infant has fast breathing. The young infant must be quiet and calm when you look and listen to his breathing. If the young infant is frightened, crying or angry, you will not be able to obtain an accurate count of the infant's breaths.

Tell the mother you are going to count her infant's breathing. Remind her to keep her infant calm. If the infant is sleeping, do not wake him.

To count the number of breaths in one minute:

1. Use a watch with a second hand or a digital watch.
 - a) Ask a doctor to watch the second hand and tell you when 60 seconds have passed. You look at the infant's chest and count the number of breaths.
 - b) If you cannot find a doctor to help you, put the watch where you can see the second hand. Glance at the second hand as you count the breaths the young infant takes in one minute.
2. Look for breathing movement anywhere on the infant's chest or abdomen. Usually you can see breathing movements even on an infant who is dressed. If you cannot see this movement easily, ask the mother to lift the infant's shirt. If the young infant starts to cry, ask the mother to calm the infant before you start counting.

If you are not sure about the number of breaths you counted (for example, if the young infant was actively moving and it was difficult to watch the chest, or if the young infant was upset or crying), repeat the count.

Young infants usually breathe faster than older infants and young children. The breathing rate of a healthy young infant is commonly more than 50 breaths per minute. Therefore, 60 breaths per minute or more is the cut off used to identify fast breathing in a young infant. If the first count is 60 breaths or more, repeat the count. This is important because the breathing rate of a young infant is often irregular. The young infant will occasionally stop breathing for a few seconds, followed by a period of faster breathing. If the second count is also 60 breaths or more, the young infant has fast breathing.

Before you look for chest indrawing watch the young infant to determine when the young infant is breathing IN and when the young infant is breathing OUT.

LOOK for severe chest indrawing.

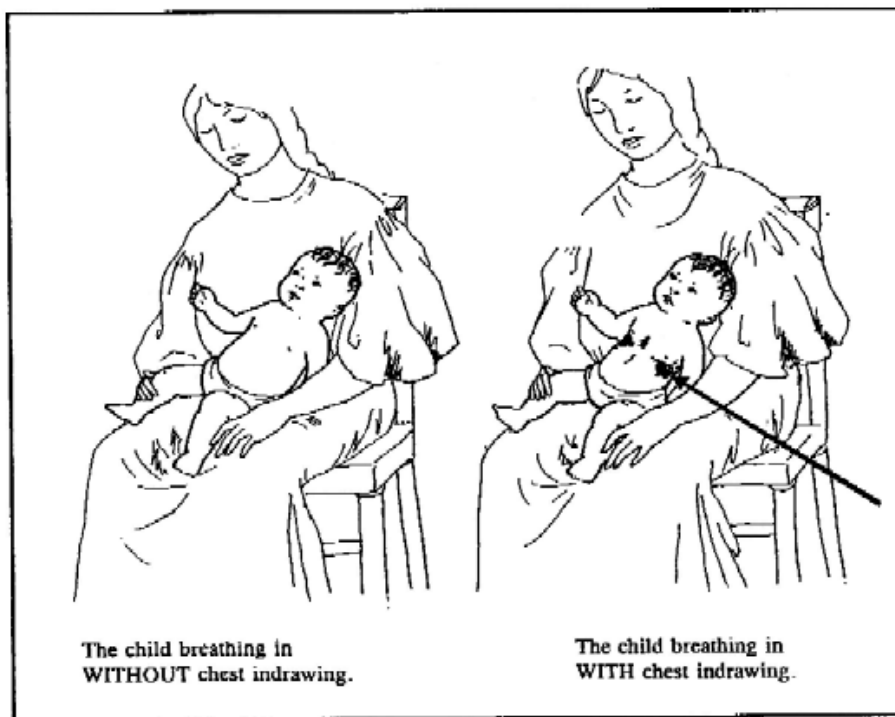
If you did not lift the young infant's shirt when you counted the infant's breaths, ask the mother to lift it now. Look for chest indrawing when the young infant breathes IN. Look at the lower

chest wall (lower ribs). The young infant has chest indrawing if ***the lower chest wall goes IN when the infant breathes IN***. Chest indrawing occurs when the effort the young infant needs to breathe in is much greater than normal. In normal breathing, the whole chest wall (upper and lower) and the abdomen move OUT when the young infant breathes IN. When chest indrawing is present, the lower chest wall goes IN when the young infant breathes IN.

If you are not sure that chest indrawing is present, look again. If the young infant's body is bent at the waist, it is hard to see the lower chest wall move. Ask the mother to change the infant's position so he is lying flat in her lap. If you still do not see the lower chest wall go IN when the infant breathes IN, the infant does not have chest indrawing. For chest indrawing to be present, it must be clearly visible and present all the time. If you only see chest indrawing when the young infant is crying or feeding, the young infant does not have chest indrawing.

If only the soft tissue between the ribs goes in when the infant breathes in (also called intercostal indrawing or intercostal retractions), the infant does not have chest indrawing. In this assessment, chest indrawing is lower chest wall indrawing. It does not include "intercostal indrawing."

Mild chest indrawing is normal in a young infant because the chest wall is soft. Severe chest indrawing is very deep and easy to see. Severe chest indrawing is a sign of pneumonia and is serious in a young infant.



LOOK for nasal flaring.

Nasal flaring is widening of the nostrils when the young infant breathes in.



Normal position of nostrils



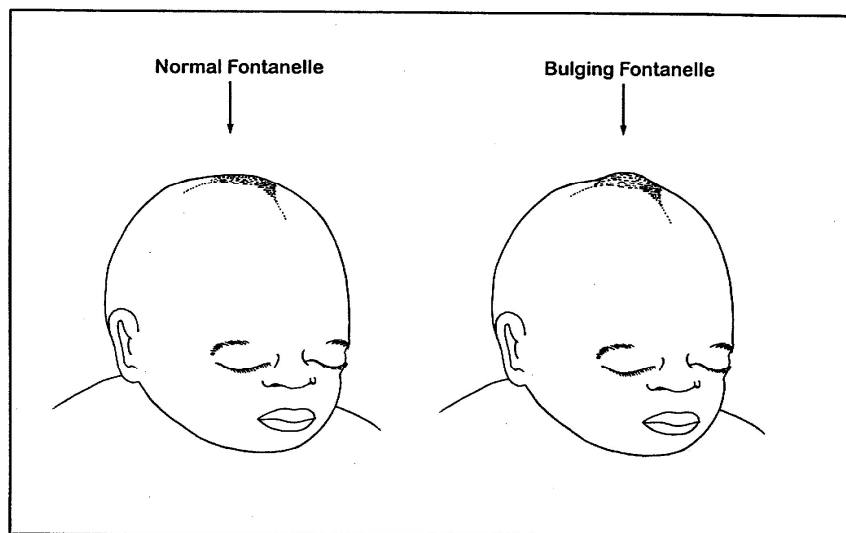
Nostrils flare when infant breathes in

LOOK and LISTEN for grunting.

Grunting is the soft, short sounds a young infant makes when breathing out. Grunting occurs when an infant is having trouble breathing.

LOOK and FEEL for bulging fontanelle.

The fontanelle is the soft spot on the top of the young infant's head, where the bones of the head have not formed completely. Hold the young infant in an upright position. The infant must not be crying. Then look at and feel the fontanelle. If the fontanelle is bulging rather than flat, this may mean the young infant has meningitis

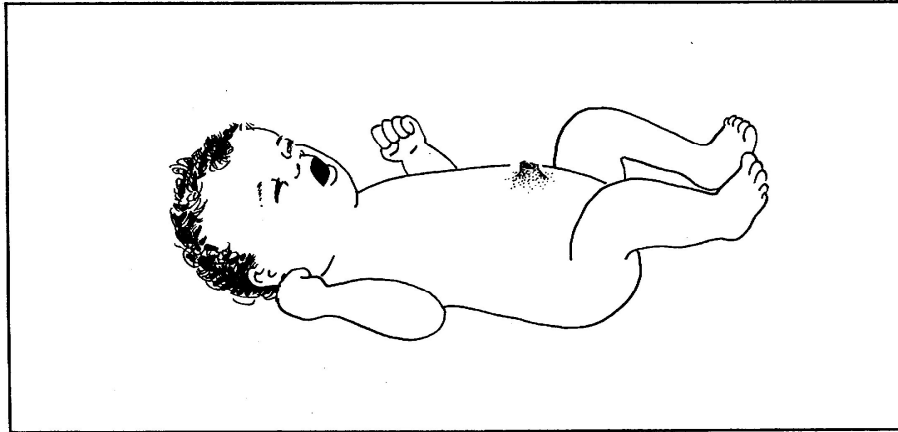


LOOK for pus draining from the ear.

A young infant with pus draining from the ear has an ear infection. Ear infections are the most common cause of deafness among developing country children.

LOOK at the umbilicus - is it red or draining pus?

There may be some redness of the end of the umbilicus or the umbilicus may be draining pus (The cord usually drops from the umbilicus by one week of age).



LOOK for skin pustules. Are there 10 or more pustules or a big boil?

Examine the skin on the entire body. Skin pustules are red spots or blisters, which contain pus. If you see pustules, how many pustules are there? 10 or more pustules or a big boil indicate a serious infection.

FEEL: Measure axillary temperature (or feel for fever or low body temperature).

Fever (axillary temperature 37.5°C or more) is uncommon in the first two months of life. If a young infant has fever, this may mean the infant has a serious bacterial infection. In addition, fever may be the only sign of a serious bacterial infection. Young infants can also respond to infection by dropping their body temperature to below 35.5°C (36°C rectal temperature).

A thermometer that measures to a minimum of 35°C can be used to measure temperature. Keep the thermometer high in the axilla and then hold the young infant's arm against his body for 5 minutes before reading the temperature. If you do not have a thermometer, feel the infant's abdomen or axilla (armpit) and determine if it feels hot or cold to touch.

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 doctor/doctor while they talk, as an older infant or young child would.

A lethargic young infant is not awake and alert when he should be. He may be drowsy and may not stay awake after a disturbance. If a young infant does not wake up during the assessment, flick the soles of 2-3 times. Look to see if the infant awakens and if he

stays awake. If the young infant shows no response or does not stay awake after some response, he is lethargic or unconscious.

LOOK at the young infant's movements. Are they less than normal?

An awake young infant will normally move his arms or legs or turn his head several times in a minute if you watch him closely. If the infant is not awake ask if he has just been fed. An infant may be asleep after a feed and therefore may have less than normal movements, which may be normal. To label the sign 'less than normal movements' ask the mother if the young infant's movements are less than normal. Observe the infant's movements while you do the assessment.

LOOK for jaundice

Jaundice is the visible manifestation of chemical bilirubinemia. Yellow discolouration of skin is visible in a neonate when serum bilirubin is more than 5 mg/dl. Almost all neonates may have 'physiological jaundice' during the first week of life due to several physiological changes taking place after birth. Physiological jaundice usually appears between 48-72 hours of age, maximum intensity is seen on 4-5th day in term and 7th day in preterm neonates and disappears by 14 days. Physiological jaundice does not extend to palms and soles, and does not need any treatment. However, if jaundice appears on first day, persists for 14 days or more and extends to palms and soles it is severe jaundice and requires urgent attention.

To look for jaundice, press the infant's skin over the forehead with your fingers to blanch, remove your fingers and look for yellow discolouration under natural light. If there is yellow discoloration, the infant has jaundice. To assess for severity, repeat the process over the palms and soles too.

Using the Young Infant Recording Form

Your facilitator will now show you a Young Infant Recording form.

Below is part of a Young Infant Recording Form.

The top lines are for recording name, age, sex, weight, temperature, the infant's problems and whether this is an initial or follow up visit.

The next sections are for assessing and classifying POSSIBLE BACTERIAL INFECTION / JAUNDICE, DIARRHOEA and FEEDING PROBLEM AND MALNUTRITION. Study the example below. It has been completed to show part of the assessment results and classifications for the infant Swati.

MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS

Name: Swati Age: 3 weeks Sex: M ☐ F ☒ Weight: 3.0 kg Temperature: 37.0 °C

ASK: What are the infant's problems? Skin rash Initial visit? ☒ Follow-up Visit? ☐

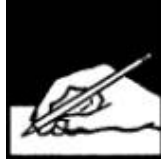
ASSESS (Circle all signs present)

CLASSIFY

CHECK FOR POSSIBLE BACTERIAL INFECTION / JAUNDICE

- Has the infant had convulsions?
- Count the breaths in one minute. 55 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 fontanelle.
- Look for pus draining from the ear.
- Look at 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 above 35.4°C (or feels cold to touch)?
- See if young infant is lethargic or unconscious.
- Look at young infant's movements. Less than normal?
- Look for jaundice. Are the palms and soles yellow?

*Local
Bacterial
Infection*



EXERCISE A

Part 1. Read the following case study and answer the questions about the case.

Case: Vidya

Vidya is 1 month old. She weighs 3.5 kg. The doctor/nurse measured her axillary temperature for 5 minutes using a clinical thermometer and found it to be 36.5°C.

The doctor asked, "What are the infant's problems?" The mother said, "Vidya has cough since 2 days and is not breastfeeding well since yesterday." This is Vidya's initial visit for this problem.

The doctor first checks the young infant for signs of possible bacterial infection/ jaundice. His mother says that Vidya has not had convulsions. The doctor counts 64 breaths per minute. He repeats the count. The second count is 66 breaths per minute. He finds that Vidya has mild chest indrawing and no nasal flaring. She has no grunting. The fontanelle does not bulge. There is no pus in her ears, the umbilicus is normal, and there are no skin pustules. Vidya is calm and awake, and her movements are normal. She has no jaundice.

Now answer the following questions:

- a. Write Vidya's name, age, sex, weight and temperature in the spaces provided on the top line of the form below.
- b. Write Vidya's problem on the line after the question "Ask -- What are the infant's problems?"
- c. Tick (✓) whether this is the initial or follow-up visit for this problem.
- d. Does Vidya have a sign of possible serious bacterial infection?

MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS

Name: _____ Age _____ Sex: M ___ F ___ Weight: _____ kg Temperature: _____ °C

ASK: What are the infant's problems? _____ Initial visit? _____ Follow-up Visit? _____

ASSESS (Circle all signs present)

CLASSIFY

CHECK FOR POSSIBLE BACTERIAL INFECTION / JAUNDICE

- | | |
|---|--|
| <ul style="list-style-type: none"> • 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 fontanelle. • Look for pus draining from the ear. • Look at 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):
 <div style="margin-left: 40px;">37.5°C or more (or feels hot)?</div> <div style="margin-left: 40px;">Less than 35.5°C?</div> <div style="margin-left: 40px;">Less than 36.5°C but above 35.4°C (or feels cold to touch)?</div> • See if young infant is lethargic or unconscious. • Look at young infant's movements. Less than normal? • Look for jaundice. Are the palms and soles yellow? | |
|---|--|



Part 2-- Video

You will watch a video of young infants. This will demonstrate how to assess a young infant for possible bacterial infection and show examples of the signs.

Review exercise

Count the breaths in one minute

Infant number	Breaths in one minute
1	
2	

Look for severe chest indrawing

Infant number	Severe chest indrawing
1	
2	
3	
4	
5	

Part 3 -- Photographs

- Study the photographs numbered 1 and 2 in the booklet. Read the explanation below for each photo.

Photograph 1: Normal umbilicus in a newborn

Photograph 2: An umbilicus with redness extending to the skin of the abdomen

Study the photographs numbered 3 through 5. Tick your assessment of the umbilicus of each of these young infants.

Umbilicus	Normal	Redness or draining pus
Photograph 3		
Photograph 4		
Photograph 5		

- Study the photographs numbered 6 through 9 in the booklet. Read the explanation below for each photo.

Photograph 6: Many skin pustules

Photograph 7: A big boil

Photograph 8: Jaundice (Palms and soles not yellow)

Photograph 9: Jaundice (Yellow palms and soles)

Study the photographs numbered 10 through 12. Tick your assessment of each of these young infants.

Skin	Normal	Many pustules	A big boil	Jaundice	Yellow palms and soles
Photograph 10					
Photograph 11					
Photograph 12					

The group will now discuss the photographs.

1.2 CLASSIFICATION TABLES:

Signs of illness and their classifications are listed on the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart in classification tables. Most classification tables have three rows. Classifications are colour coded into Red, yellow or green. The colour of the rows tells you quickly if the young infant or the child has a serious illness. You can also quickly choose the appropriate treatment.

- A classification in a *Red* row needs urgent attention and referral or admission for inpatient care. This is a severe classification.
- A classification in a *yellow* row means that the young infant or the child needs an appropriate antibiotic or other treatment. The treatment includes teaching the mother how to give the oral drugs or to treat local infections at home. The doctor advises her about caring for the young infant or child at home and when she should return.
- A classification in a *green* row means the young infant or child does not need specific medical treatment such as antibiotics. The doctor teaches the mother how to care for her young infant or child at home. For example, you might advise her on feeding her sick young infant or child or giving fluid for diarrhoea.

Example: Look at the classification table for dehydration in infants with diarrhea on page 25. The red row is SEVERE DEHYDRATION, the yellow row is SOME DEHYDRATION and the green row is NO DEHYDRATION.

Depending on the combination of the young infant's signs and symptoms, the young infant is classified in either the red, yellow, or green row. The infant is classified only once in each classification table.

* * *

CLASSIFY ALL SICK YOUNG INFANTS FOR POSSIBLE BACTERIAL INFECTION/JAUNDICE

Classification in the young infant is slightly different from what has been described above. Classify all sick young infants for possible bacterial infection. Compare the infant's signs to signs listed and choose the appropriate classification. If the infant has any sign in the top row, select POSSIBLE SERIOUS BACTERIAL INFECTION. If the infant has none of the signs in the red row, but has any of the signs in the yellow row, classify him as LOCAL BACTERIAL INFECTION. Note that the classification table for bacterial infection does not have a green row.

If the infant has jaundice, choose an additional classification from the jaundice classification table. If the infant has signs in the red row classify as SEVERE JAUNDICE. If the infant has none of the signs in the red row, but has the sign in the yellow row, classify him as JAUNDICE.

If the infant has no signs of **SERIOUS BACTERIAL INFECTION** and temperature is between 35.5-36.4°C, choose the classification of **LOW BODY TEMPERATURE** (note that there is only one yellow classification for **LOW BODY TEMPERATURE** without signs of **SERIOUS BACTERIAL INFECTION**)

Here is the classification table for possible bacterial infection / jaundice.

SIGNS	CLASSIFY AS	IDENTIFY TREATMENT (Urgent pre-referral treatments are in bold print)
• Convulsions or • Fast breathing (60 breaths per minute or more) or • Severe chest indrawing or • Nasal flaring or • Grunting or • Bulging fontanelle or • 10 or more skin pustules or a big boil or • If axillary temperature 37.5°C or above (or feels hot to touch) or temperature less than 35.5°C (or feels cold to touch) or • Lethargic or unconscious or • Less than normal movements	POSSIBLE SERIOUS BACTERIAL INFECTION	➤ Give first dose of intramuscular 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 mother how to keep the young infant warm on the way to the hospital ➤ Refer URGENTLY to hospital[#]
• Umbilicus red or draining pus or • Pus discharge from ear or • < 10 skin pustules	LOCAL BACTERIAL INFECTION	➤ Give amoxycillin for 5 days. ➤ Teach mother to treat local infections at home. ➤ Follow up in 2 days
• Palms and soles yellow or • Age < 24 hours or • Age 14 days or more	SEVERE JAUNDICE	➤ 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 mother how to keep the young infant warm on the way to the hospital ➤ Refer URGENTLY to hospital[#]
• Palms and soles not yellow	JAUNDICE	➤ Advise mother to give home care for the young infant ➤ Advise mother when to return immediately ➤ Follow up in 2 days
• Temperature between 35.5-36.4°C	LOW BODY TEMPERATURE	➤ Warm the young infant using Skin to Skin contact for one hour and REASSESS ➤ Treat to prevent low blood sugar

How to use the classification table: After you have completed the assessment of the young infant for possible bacterial infection / jaundice, classify all Young infants for bacterial infection:

1. Look at the red (or top) rows.

Does the young infant have any of the signs of possible serious bacterial infection?

If the young infant has any of the signs of possible serious bacterial infection, select the severe classification, POSSIBLE SERIOUS BACTERIAL INFECTION.

EXAMPLE: If the young infant has fast breathing, a sign in the red row, select the classification, POSSIBLE SERIOUS BACTERIAL INFECTION.

SIGNS	CLASSIFY AS
• Convulsions or • Fast breathing (60 breaths per minute or more) or • Severe chest indrawing or • Nasal flaring or • Grunting or • Bulging fontanelle or • 10 or more skin pustules or a big boil or • If axillary temperature 37.5°C or above (or feels hot to touch) or temperature less than 35.5°C (or feels cold to touch) or • Lethargic or unconscious or • Less than normal movements	POSSIBLE SERIOUS BACTERIAL INFECTION
• Umbilicus red or draining pus or • Pus discharge from ear or • < 10 skin pustules	
• Palms and soles yellow or • Age < 24 hours or • Age 14 days or more • Palms and soles not yellow	
• Temperature between 35.5-36.4 ° C	

2. If the young infant does not have the severe classifications, look at the yellow rows.

This young infant does not have a severe classification. Is the umbilicus red or draining pus? Is there pus discharge from ear? Does the young infant have < 10 skin pustules?

EXAMPLE: If the young infant has an umbilicus that is red and draining pus, a sign in the yellow row, and the young infant does not have a severe classification, select the classification, LOCAL BACTERIAL INFECTION.

SIGNS	CLASSIFY AS
• Convulsions or • Fast breathing (60 breaths per minute or more) or • Severe chest indrawing or • Nasal flaring or • Grunting or • Bulging fontanelle or • 10 or more skin pustules or a big boil or • If axillary temperature 37.5°C or above (or feels hot to touch) or temperature less than 35.5°C (or feels cold to touch) or • Lethargic or unconscious or • Less than normal movements	
• Umbilicus red or draining pus or • Pus discharge from ear or • < 10 skin pustules	LOCAL BACTERIAL INFECTION
• Palms and soles yellow or • Age < 24 hours or • Age 14 days or more	
• Palms and soles not yellow	
• Temperature between 35.5-36.4°C	

3. 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.

EXAMPLE: This young infant had convulsions immediately prior to being brought to the health facility and has umbilicus draining pus.

Classify this young infant with the more serious classifications -- POSSIBLE SERIOUS BACTERIAL INFECTION and not LOCAL BACTERIAL INFECTION.

SIGNS	CLASSIFY AS
• Convulsions or • Fast breathing (60 breaths per minute or more) or • Severe chest indrawing or • Nasal flaring or • Grunting or • Bulging fontanelle or • 10 or more skin pustules or a big boil or • If axillary temperature 37.5°C or above (or feels hot to touch) or temperature less than 35.5°C (or feels cold to touch) or • Lethargic or unconscious or • Less than normal movements	POSSIBLE SERIOUS BACTERIAL INFECTION
• Umbilicus red or draining pus or • Pus discharge from ear or • < 10 skin pustules	
• Palms and soles yellow or • Age < 24 hours or • Age 14 days or more	
• Palms and soles not yellow	
• Temperature between 35.5-36.4°C	

4. Young infants have also to be classified for jaundice or Low Body temperature if present. You have to select an appropriate classification for these conditions too.

EXAMPLE: This 7 day old young infant has less than 10 skin pustules and jaundice not involving palms and soles

Classify this young infant as – LOCAL BACTERIAL INFECTION and JAUNDICE

SIGNS	CLASSIFY AS
• Convulsions or • Fast breathing (60 breaths per minute or more) or • Severe chest indrawing or • Nasal flaring or • Grunting or • Bulging fontanelle or • 10 or more skin pustules or a big boil or • If axillary temperature 37.5°C or above (or feels hot to touch) or temperature less than 35.5°C (or feels cold to touch) or • Lethargic or unconscious or • Less than normal movements	
• Umbilicus red or draining pus or • Pus discharge from ear or • < 10 skin pustules	LOCAL BACTERIAL INFECTION
• Palms and soles yellow or • Age < 24 hours or • Age 14 days or more • Palms and soles not yellow	JAUNDICE
• Temperature between 35.5-36.4°C	

Your facilitator will answer any questions you have about classifying illness according to the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart.

Here is a description of each classification for POSSIBLE BACTERIAL INFECTION / JAUNDICE:

POSSIBLE SERIOUS BACTERIAL INFECTION

A young infant with signs in this classification may have a serious disease and be at high risk of dying. The infant may have pneumonia, sepsis or meningitis. It is difficult to distinguish between these infections in a young infant. Fortunately, it is not necessary to make this distinction for immediate management of these young infants.

A young infant with any sign of POSSIBLE SERIOUS BACTERIAL INFECTION needs urgent referral to hospital. Before referral, give a first dose of intramuscular antibiotics and treat to prevent low blood sugar.

Advising the mother to keep her sick young infant warm while referral is being arranged and on the way to the hospital is very important. Young infants have difficulty maintaining their body temperature. Low temperature alone can kill young infants.

LOCAL BACTERIAL INFECTION

A sick young infant classified as LOCAL BACTERIAL INFECTION has infection of umbilicus, ear or skin. This necessitates administration of an oral antibiotic, which can be given at home. The mother is taught how to treat local infection at home and she should return for follow-up in 2 days to be sure the infection is improving. Bacterial infections can progress rapidly in young infants.

SEVERE JAUNDICE

A sick young infant with SEVERE JAUNDICE is at risk of suffering from bilirubin encephalopathy (kernicterus), or might need surgical intervention for neonatal cholestasis. Therefore, such an infant needs to be referred to appropriate health facility where the young infant can be investigated and appropriately treated. Such infants also need to be treated to prevent low blood sugar, to be kept warm while referral is being arranged and on the way to the hospital.

JAUNDICE

A sick young infant with JAUNDICE may be having physiological jaundice. However jaundice in such infants can increase and need to be followed up. The mother is given advice on home care for the young infant, told when to return immediately and followed up in 2 days to assess level of jaundice.

LOW BODY TEMPERATURE

In the absence of signs of possible serious bacterial infection and severe jaundice, if the axillary temperature of a young infant is between 35.5-36.4°C (both values inclusive), the baby may not be sick enough to be referred. Low body temperature in such a case may be due to environmental factors and may not be a manifestation of infection. Such an infant should be warmed using Skin-to-Skin Contact (Kangaroo Mother Care) for 1 hour. The young infant should be reassessed after 1 hour for signs of possible serious bacterial infection and the temperature should be recorded again.

2.0 ASSESS AND CLASSIFY DIARRHOEA

Diarrhoea occurs when stools contain more water than normal. Diarrhoea is also called **loose** or **watery** stools. It is more common in babies under 6 months who are drinking cow's milk or infant feeding formulas. Frequent passing of normal stools is not diarrhoea. In many regions diarrhoea is defined as three or more loose or watery stools in a 24-hour period.

Mothers may say that the infant's stools are **loose or watery**. Mothers may use a local word for diarrhoea. Babies who are exclusively breastfed often have stools that are soft; this is not diarrhoea. The mother of a breastfed baby can recognize diarrhoea because the consistency or frequency of the stools is different than normal.

What are the Types of Diarrhoea?

Most diarrhoeas which cause dehydration are **loose or watery**. If an episode of diarrhoea lasts less than 14 days, it is **acute** diarrhoea. Acute watery diarrhoea causes dehydration and contributes to malnutrition. The death of an infant with acute diarrhoea is usually due to dehydration.

If the diarrhoea lasts 14 days or more, it is **persistent** diarrhoea. Up to 20% of episodes of diarrhoea become persistent. Persistent diarrhoea often causes nutritional problems and contributes to deaths in children.

Diarrhoea with blood in the stool, with or without mucus, is called **dysentery**.

2.1 ASSESS DIARRHOEA

If the mother says that the young infant has diarrhoea, assess and classify for diarrhoea. The normally frequent or loose stools of a breastfed baby are not diarrhoea. The mother of a breastfed baby can recognize diarrhoea because the consistency or frequency of the stools is different than normal

A young infant with diarrhoea is assessed for:

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

Ask about diarrhoea in ALL young infants. Look at the following steps for assessing a young infant with diarrhoea:

Does the young infant have diarrhoea?

IF YES, ASK: LOOK AND FEEL:

- For how long?
- 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?

ASK: Does the young infant have diarrhoea?

Use words for diarrhoea the mother understands.

If the mother answers NO, assess the young infant for feeding problem or malnutrition. You do not need to assess the young infant further for signs related to diarrhoea.

If the mother answers YES, or if the mother said earlier that diarrhoea was the reason for coming to the clinic, record her answer. Then assess the young infant for signs of dehydration, severe persistent diarrhoea and dysentery.

ASK: For how long?

Diarrhoea which lasts **14 days or more** is severe persistent diarrhoea.

Give the mother time to answer the question. She may need time to recall the exact number of days.

ASK: Is there blood in the stool?

Ask the mother if she has seen blood in the stools each time the young infant passed a loose stool. A sick young infant may pass blood in stools without diarrhea.

* * *

Next, check for signs of **dehydration**. When a young infant becomes dehydrated, he is at first restless and irritable. If dehydration continues, the young infant becomes lethargic or unconscious. As the young infant's body loses fluids, the eyes may look sunken. When pinched, the skin will go back slowly or very slowly.

* * *

LOOK and **FEEL** for the following signs:

LOOK at the young infant's general condition. Is the young infant lethargic or unconscious? Restless and irritable?

When you checked for signs of possible bacterial infection / severe jaundice, you checked to see if the young infant was *lethargic or unconscious*.

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

LOOK for sunken eyes.

The eyes of a young infant or child who is dehydrated may look sunken. Decide if you think the eyes are sunken. (If in doubt?) 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. Does it go back: Very slowly (longer than 2 seconds)? Slowly?

Ask the mother to place the young infant or child on the examining table so that the young infant or child is flat on his back with his arms at his sides (not over his head) and his legs straight. Or, ask the mother to hold the young infant or child so he is lying flat in her lap.



Locate the area on the young infant's or child's abdomen halfway between the umbilicus and the side of the abdomen. To do the skin pinch, use your thumb and first finger. Do not use your fingertips because this will cause pain. Place your hand so that when you pinch the skin, the fold of skin will be in a line up and down the child's body and not across the child's body. Firmly pick up all of the layers of skin and the tissue under them. Pinch the skin for one second and then release it. When you release the skin, look to see if the skin pinch goes back:

- very slowly (longer than 2 seconds)
- slowly
- immediately

If the skin stays up for even a brief time after you release it, decide that the skin pinch goes back slowly.

2.2 CLASSIFY DIARRHOEA

Compare the infant's signs to the signs listed and choose one classification for dehydration. Choose an additional classification if the infant has diarrhoea for 14 days or more, or blood in the stool.

Sick young infants less than 2 months age with severe dysentery have a red classification because a young infant with dysentery has a high risk of death and should be referred to a hospital. Also, blood in the stool in a young infant may be a sign of a surgical problem.

Two of the following signs: • Lethargic or unconscious • Sunken eyes • Skin goes back very slowly	SEVERE DEHYDRATION	➤ <i>If infant has low weight or another severe classification:</i> ➤ <i>Give first dose of intramuscular ampicillin and gentamicin</i> - <i>Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way</i> - <i>Advise mother to continue breast feeding</i> - <i>Advise mother to keep the young infant warm on the way to the hospital</i> 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 goes back slowly	SOME DEHYDRATION	➤ <i>If infant has low weight or another severe classification:</i> - <i>Give first dose of intramuscular ampicillin and gentamicin</i> - <i>Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way</i> - <i>Advise mother to continue breast feeding</i> - <i>Advise mother to keep the young infant warm on the way to the hospital</i> ➤ If infant does not have low weight or another severe classification: - Give fluids for some dehydration (Plan B) - Advise mother when to return immediately - Follow up in 2 days
• Not enough signs to classify as some or severe dehydration	NO DEHYDRATION	➤ Give fluids to treat diarrhea at home (Plan A) ➤ Advise mother when to return immediately ➤ Follow up in 5 days if not improving
• Diarrhea lasting 14 days or more	SEVERE PERSISTENT DIARRHEA	➤ <i>Give first dose of intramuscular ampicillin and gentamicin if the young infant has low weight, dehydration or another severe classification.</i> ➤ <i>Treat to prevent low blood sugar.</i> ➤ <i>Advise how to keep infant warm on the way to the hospital.</i> ➤ <i>Refer to hospital. #</i>
• Blood in the stools	SEVERE DYSENTERY	➤ <i>Give first dose of intramuscular ampicillin and gentamicin if the young infant has low weight, dehydration or another severe classification.</i> ➤ <i>Treat to prevent low blood sugar.</i> ➤ <i>Advise how to keep infant warm on the way to the hospital.</i> ➤ <i>Refer to hospital. #</i>



EXERCISE B

In this exercise you will practice recording assessment results on a Young Infant Recording Form. You will classify the infants for possible bacterial infection/ jaundice and diarrhoea.

Get 5 blank Young Infant Recording Forms from a facilitator. Also, turn to the *YOUNG INFANT* chart in your chart booklet.

To do each case:

1. Label a recording form with the young infant's name.
2. Read the case information. Write the infant's age, weight, temperature and problem. Check "Initial Visit". (All the infants in this exercise are coming for an initial visit.)
3. Record the assessment results on the form.
4. Classify the infant for possible bacterial infection / severe jaundice and diarrhoea.
5. Then go to the next case.

Case 1: Harish

Harish is a 3-week-old infant. His weight is 3.6 kg. His axillary temperature is 36.5°C. He is brought to the clinic because he is having difficulty breathing. The doctor first checks the young infant for signs of possible bacterial infection/jaundice. His mother says that Harish has not had convulsions. The doctor counts 74 breaths per minute. He repeats the count. The second count is 70 breaths per minute. He finds that Harish has mild chest indrawing and nasal flaring. He has no grunting. The fontanelle does not bulge. There is no pus in his ears, the umbilicus is normal, and there are no skin pustules. Harish is calm and awake, and his movements are normal. He has no jaundice. He does not have diarrhoea.

Case 2: Baby of Shashi

Baby of Shashi is 4 days old. Her weight is 2.7 kg. Her axillary temperature is 37° C. Her mother brought her to the clinic because she has become yellow and has a rash. The doctor assesses for signs of possible bacterial infection/jaundice. The mother says that there were no convulsions. The baby's breathing rate is 55 per

minute. She has no chest indrawing, no nasal flaring, and no grunting. Her fontanelle is not bulging. There is no pus in her ears and her umbilicus is normal. The doctor examines her entire body and finds a red rash with 3-4 skin pustules on her buttocks. She is awake, not lethargic, and her movements are normal. She is jaundiced and her palms and soles are yellow. She does not have diarrhoea.

Case 3: Ankit

Ankit is a tiny baby who was born exactly 2 weeks ago. His weight is 2.5 kg. His axillary temperature is 35.7° C. 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 doctor counts his breathing and finds he is breathing 55 breaths per minute. He has no chest indrawing, no nasal flaring and no grunting. His fontanelle is not bulging. There is no pus draining from his ears. His umbilicus has some pus on the tip and a little redness at the tip only. The doctor looks over his entire body and finds no skin pustules. He is awake and content. He is moving a normal amount. He has no jaundice. He does not have diarrhoea.

Case 4: Neera

Neera is 7 weeks old. Her weight is 3.0 kg. Her axillary temperature is 36.8°C. Her mother has brought her because she has diarrhoea. The doctor first assesses her for signs of possible bacterial infection / jaundice. The mother says that Neera has not had convulsions. The doctor counts his 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, no nasal flaring and no grunting. Her fontanelle is not bulging. There is no pus draining from her ears. Her umbilicus is not red or draining pus. She has a rash in the area of her diaper but there are no pustules. She is crying and moving her arms and legs. Her palms and soles are not yellow.

When the doctor asks the mother about Neera's diarrhoea, the mother replies that it began 3 days ago and there is blood in the stool. Neera is still crying. She stopped once 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.

When you have completed this exercise, please discuss your answers with a facilitator.
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Note: Keep the recording forms for these 4 young infants. You will continue to assess, classify and identify treatment for them later in the course.



EXERCISE C

You will watch a video of young infants. This will demonstrate how to assess a young infant for diarrhoea.

Then you will see a video case study of a young infant. You will practice assessing and classifying the young infant for possible bacterial infection/ jaundice and diarrhoea. Write your assessment results on the recording form provided to you. Then record the infant's classifications.

3.0 THEN CHECK FOR FEEDING PROBLEM AND MALNUTRITION

Adequate feeding is essential for growth and development. Poor feeding during infancy can have lifelong effects. Growth is assessed by determining weight for age. It is important to assess a young infant's feeding and weight so that feeding can be improved if necessary.

A young infant who is severely underweight has SEVERE MALNUTRITION. Infants born with low birth weight can have very low weight for age, particularly when they have further weight loss due to illness or feeding problems.

The best way to feed a young infant is to breastfeed exclusively. Exclusive breastfeeding means that the infant takes only breastmilk, and no additional food, water or other fluids. (Medicines and vitamins are exceptions.)

Exclusive breastfeeding gives a young infant the best nutrition and protection from disease possible. If mothers understand that exclusive breastfeeding gives the best chances of good growth and development, they may be more willing to breastfeed. They may be motivated to breastfeed to give their infants a good start in spite of social or personal reasons that make exclusive breastfeeding difficult or undesirable.

The assessment has two parts. In the first part, you ask the mother questions. You determine if she is having difficulty feeding the infant, what the young infant is fed and how often. Also determine weight for age. Young infants with SEVERE MALNUTRITION are at a high risk of death in the next few weeks. Refer such infants to a hospital.

In the second part, if the infant has any problems with breastfeeding or is low weight for age, you assess how the infant breastfeeds.

3.1 ASK ABOUT FEEDING AND DETERMINE WEIGHT FOR AGE

The first part of the assessment is above the dotted line.

THEN CHECK FOR FEEDING PROBLEM & MALNUTRITION • Is there any difficulty feeding? Yes ___ No ___ • Is the infant breastfed? Yes ___ No ___ If Yes, how many times in 24 hours? ___ times • Does the infant usually receive any other foods or drinks? Yes ___ No ___ If Yes, how often? _____ - What do you use to feed the infant? _____	• Determine weight for age. Severely underweight _____ Moderately underweight ___ Not Low ___
---	---

ASK: Is there any difficulty feeding?

Any difficulty mentioned by the mother is important. This mother may need counselling or specific help with a difficulty. Breastfeeding difficulties mentioned by a mother may include: her infant feeds too frequently, or not frequently enough; she does

not have enough milk; her nipples are sore; she has flat or inverted nipples; or the infant does not want to take the breast. If a mother says that the infant is **not able to feed**, watch her try to feed the infant to see what she means by this. An infant who is **not able to feed** may have a serious infection or other life-threatening problem and should be referred urgently to hospital.

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

The recommendation is that the young infant be breastfed as often and for as long as the infant wants, day and night. This should be 8 or more times in 24 hours.

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

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

ASK: What do you use to feed the infant?

If an infant takes other foods or drinks, find out if the mother uses a feeding bottle or cup.

Determine weight for age.

Weight for age compares the young infant's weight with the weight of other infants who are the same age. You will identify young infants whose weight for age is below the line of $-3SD$ which indicates that the young infant is "*severely underweight*" or between the line for $-2SD$ and $-3SD$ which indicates that the infant is "*moderately underweight*". If the infant's weight is above the line $-2SD$, he is considered *not low weight for age*.

Infants who are severely underweight for age need referral care and should be referred to a hospital. Infants who are moderately underweight for age need special attention to how they are fed.

Look now at the WHO weight for age chart on the next page which is labelled in months. The age of a young infant is usually stated in weeks; therefore an inset weight for age chart for young infants up to 2 months has also been given in weeks. Remember to use separate charts for boys and girls. Some young infants who are moderately underweight for age were born with low birth weight. Some did not gain weight well after birth.

To determine weight for age:

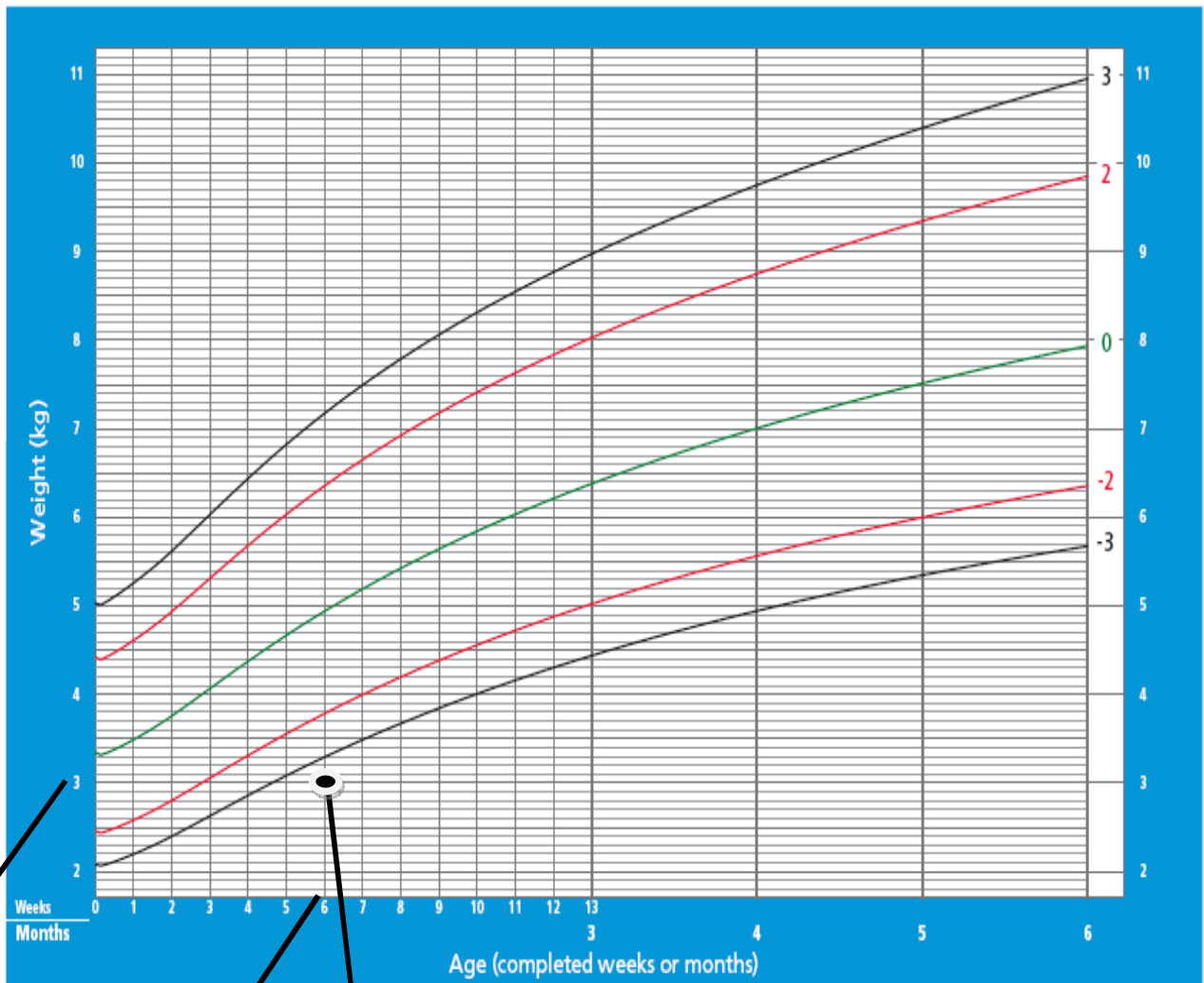
1. Calculate the infant's age in weeks.
2. Weigh the young infant if he has not already been weighed today. Use a scale which you know gives accurate weights. The infant should wear light clothing when he is weighed. Ask the mother to help remove any sweater or shoes.

3. Use the weight for age chart to determine weight for age. Remember to use separate charts for boys and girls.
 - Look at the left-hand axis to locate the line that shows the young infant's weight.
 - Look at the bottom axis of the chart to locate the line that shows the young infant's age in weeks.
 - Find the point on the chart where the line for the young infant's weight meets the line for the infant's age.
4. Decide if the point is below the -3 SD for age line, between the -3SD and -2 SD for age lines or above the -2SD for age line.
 - If the point is below the -3SD for age line, the young infant has severe malnutrition.
 - If the point is above or on the -3SD for age line and below the -2SD for age line, the young infant is low weight for age.
- If the point is above or on the -2SD for age line, the young infant is not low weight for age.

EXAMPLE: A young infant is 6 weeks old male and weighs 3 kg. Here is how the doctor checked the infant's weight for age.

Weight-for-age BOYS

Birth to 6 months (z-scores)



WHO Child Growth Standards

This line shows the infant weight is 3 kg.

This line shows the infant is 6 weeks of age

This is the point where the line for age and weight meet. Because the point is below the -3SD line, the child has severe malnutrition.

3.2 ASSESS BREASTFEEDING

First decide whether to assess the infant's breastfeeding:

- * If the infant is exclusively breastfed without difficulty and is not low weight for age, there is no need to assess breastfeeding.
- * 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.

In these situations, classify the feeding based on the information that you have already. If the mother's answers or the infant's weight indicates a difficulty, observe a breastfeed as described below. Low weight for age is often due to low birthweight. Low birthweight infants are particularly likely to have a problem with breastfeeding.

**IF AN INFANT: Has any difficulty feeding, or
Is breast feeding less than 8 times in 24 hours, or
Is taking any other foods or drinks, or
Is moderately underweight,
AND
Has no indications for refer urgently to hospital**

ASSESS BREASTFEEDING:

- Has the infant breastfed in the previous hour?
 - If the infant has not fed in the previous hour, ask the mother to put her infant to the breast. Observe her breastfeed for 4 minutes.
(If the infant was fed during the last hour, ask the mother if she can wait and tell you when the infant is willing to feed again.)
 - Is the infant able to attach?
no attachment at all not well attached good attachment

TO CHECK ATTACHMENT, LOOK FOR:

- Chin touching breast
- Mouth wide open
- Lower lip turned outward
- More areola visible above than below the mouth

(All of these signs should be present if the attachment is good)

- Is the infant suckling effectively (that is, 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:

- Flat or inverted nipples, or sore nipples
- Enlarged breasts or breast abscess

- Dose the mother have pain while breastfeeding?

Assessing breastfeeding requires careful observation.

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

If so, ask the mother to wait and tell you when the infant is willing to feed again. In the meantime, complete the assessment by assessing the infant's immunization status. You may also decide to begin any treatment that the infant needs, such as giving an antibiotic for LOCAL BACTERIAL INFECTION or ORS solution for SOME DEHYDRATION.

If the infant has not fed in the previous hour, he may be willing to breastfeed. Ask the mother to put her infant to the breast. Observe a whole breastfeed if possible, or observe for at least 4 minutes. Sit quietly and watch the infant breastfeed.

LOOK: Is the infant able to attach?

The four signs of good attachment are:

- 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:

- chin not touching breast
- mouth not wide open, lips pushed forward
- lower lip turned in, or
- more areola (or equal amount) visible below infant's mouth than above it

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

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

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

*A baby well attached
to his mother's breast*



*A baby poorly attached
to his mother's breast*



LOOK: Is the infant suckling effectively? (that is, 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 breastfeed finishes, look for signs that the infant is satisfied. If satisfied, the infant releases the breast spontaneously (that is, the mother does not cause the infant to stop breastfeeding in any way). The infant appears relaxed, sleepy, and loses interest in the breast.

An infant is **not suckling effectively** if he is taking only rapid, shallow sucks. You may also see 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.

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. Try to wipe the white off. The white patches of thrush will remain.

ASK: Does the mother have pain while breastfeeding?

Pain while breastfeeding may indicate sore nipples, breast engorgement or breast abscess. Look at both the breasts and nipples carefully.

LOOK: Flat or inverted or sore nipples? Engorged breasts or breast abscess?

Flat or inverted nipples make it difficult for the baby to breastfeed. The baby may bite on the nipple and the nipples may get cracked and sore. Engorged breasts are swollen, hard and tender. Presence of a breast abscess is indicated additionally by localized redness and warmth.



EXERCISE D

In this exercise you will practice recognizing signs of good and poor attachment during breastfeeding as shown on video and in photographs.

Part 1 -- Video

This video will show how to check for a feeding problem and assess breastfeeding. It will show the signs of good and poor attachment and effective and ineffective suckling.

Part 2 -- Photographs

1. Study photographs numbered 13 through 17 of young infants at the breast. Look for each of the **signs** of good attachment. Compare your observations about each photograph with the answers in the chart below to help you learn what each sign looks like. Notice the **overall** assessment of attachment.

Photo	Signs of Good Attachment				Assessment	Comments
	Chin Touching Breast	Mouth Wide Open	Lower Lip Turned Outward	More Areola Showing Above		
13	yes (almost)	yes	Yes	yes	Good attachment	
14	no	no	yes	no (equal above and below)	Not well attached	
15	yes	no	No	yes	Not well attached	Lower lip turned in
16	no	no	No	no	Not well attached	Cheeks pulled in
17	yes	yes	yes	cannot see	Good attachment	

2. Now study photographs 18 through 23. In each photograph, look for each of the **signs** of good attachment and mark on the chart whether each is present. Also write your overall assessment of attachment.

Photo	Signs of Good Attachment				Assessment	Comments
	Chin Touching Breast	Mouth Wide Open	Lower Lip Turned Outward	More Areola Showing Above		
18						
19						
20						
21						

3. Study photographs 22 and 23. These photographs show white patches (thrush) in the mouth of an infant.

When you have finished assessing the photographs, discuss your answers with a facilitator.

3.3 CLASSIFY FEEDING

Compare the young infant's signs to the signs listed in each row and choose the appropriate classification.

• Not able to feed or • No attachment at all or • Not suckling at all or • Severely underweight (< -3SD)	NOT ABLE TO FEED – POSSIBLE SERIOUS BACTERIAL INFECTION Or SEVERE MALNUTRITION	➤ <i>Give first dose of intramuscular ampicillin and gentamicin</i> ➤ <i>Treat to prevent low blood sugar</i> ➤ <i>Warm the young infant by skin to skin contact if temperature less than 36.5oC (or feels cold to touch) while arranging referral</i> ➤ <i>Advise mother how to keep the young infant warm on the way to the hospital</i> ➤ <i>Refer URGENTLY to hospital</i>
• Not well attached to breast or • Not suckling effectively or • Less than 8 breastfeeds in 24 hours or • Receives other foods or drinks or • Moderately underweight (<2SD to -3SD) or • Thrush (ulcers or white patches in mouth) or • Breast or nipple problems	FEEDING PROBLEM OR LOW WEIGHT	➤ If not well attached or not suckling effectively, teach correct positioning and attachment ➤ If breastfeeding 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 not breastfeeding at all advise mother about giving locally appropriate animal milk and teach the mother to feed with a cup and spoon. ➤ If thrush, teach the mother to treat thrush at home. ➤ If breast or nipple problem, teach the mother to treat breast or nipple problems. ➤ If low weight for age, teach the mother how to keep the young infant with low weight warm at home ➤ Advise the mother to give home care for the young infant ➤ Advise mother when to return immediately ➤ Follow up any feeding problem or thrush in 2 days ➤ Follow up low weight for age in 14 days
• Not low weight for age (≥ -2SD) and no other signs of inadequate feeding	NO FEEDING PROBLEM	➤ Advise the mother to give home care for the young infant ➤ Advise mother when to return immediately ➤ Praise the mother for feeding the infant well

NOT ABLE TO FEED - POSSIBLE SERIOUS BACTERIAL INFECTION OR SEVERE MALNUTRITION

The young infant is not able to feed or is who are severely underweight for age has a life-threatening problem. This could be due to a bacterial infection or another severe illness.¹ The infant requires immediate attention.

Treatment is the same as for the classification POSSIBLE SERIOUS BACTERIAL INFECTION at the top of the chart. Refer the young infant urgently to hospital. Before departure give a first dose of intramuscular antibiotics. Also treat the infant to prevent low blood sugar by giving breastmilk, other milk or sugar water by nasogastric tube. Warm the young infant using skin-to-skin contact if temperature is less than 36.5°C or the young infant feels cold to touch while referral is being arranged. Advise mother how to keep the young infant warm on the way to the hospital.

Sick young infants brought to the health facility detected to have very low weight for age are at high risk of death. They need urgent treatment and referral to hospital. Provide the same pre-referral treatment as for POSSIBLE SERIOUS BACTERIAL INFECTION before referring the young infant urgently to hospital because in this group of infants it is very difficult to distinguish if they have infection or not clinically.

FEEDING PROBLEM OR LOW WEIGHT

This classification includes infants who are moderately under weight for age or infants who have some sign that their feeding needs improvement. They are likely to have more than one of these signs.

Advise the mother of any young infant in this classification to breastfeed as often and for as long as the infant wants, day and night. Short breastfeeds are an important reason why an infant may not get enough breastmilk. The infant should breastfeed until he has finished. Teach each mother about any specific help her infant needs, such as better positioning and attachment for breastfeeding, or treating thrush. Teach the mother how to express breastmilk and feed with a cup and spoon if the young infant is not able to suckle effectively even after correcting positioning and attachment. Advise the mother how to keep the young infant with low weight warm at home. Also advise the mother how to give home care for the young infant.

¹ An infant with neonatal tetanus who is not able to feed and has stiffness would be referred based on this classification.

An infant in this classification needs to return to the doctor for follow-up. The doctor will check that the feeding is improving and give additional advice as needed.

NO FEEDING PROBLEM

A young infant in this classification is exclusively and frequently breastfed. "Not low" weight for age means that the infant's weight for age is not below the line for "Low Weight for Age" i.e. -2SD. It is not necessarily normal or good weight for age, but the infant is not in the high-risk category that we are most concerned with.

4.0 THEN CHECK THE YOUNG INFANT'S IMMUNIZATION STATUS

Check the immunization status for ALL young infants. Have they received all the immunizations recommended for their age? Do they need any immunizations today?

Use your National Recommended Immunization Schedule when you check the young infant's immunization status. Look at the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart and locate the recommended immunization schedule. Refer to it as you read how to check a young infant's immunization status.

THEN CHECK THE YOUNG INFANT'S IMMUNIZATION STATUS

IMMUNIZATION SCHEDULE *:	AGE	VACCINE		
	Birth	BCG	OPV 0	
	6 weeks	DPT 1	OPV 1	HEP-B 1

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

Give the recommended vaccine when the infant is the appropriate age for each dose. If the infant does not come for an immunization at the recommended age, give the necessary immunizations any time after the infant reaches that age. Give the remaining doses at least 4 weeks apart. You do not need to repeat the whole schedule. Remember that you should not give OPV 0 to an infant who is more than 14 days old. Therefore, if an infant has not received OPV 0 by the time he is 15 days old, you should wait to give OPV until he is 6 weeks old. Then give OPV 1 together with DPT 1. Also give BCG if not already given.

If an infant is going to be referred, do not immunize the infant before referral. The hospital staff at the referral site should make the decision about immunizing the infant when the infant is admitted. This will avoid delaying referral.

Advise the mother to be sure the other children in the family are immunized. Give the mother tetanus toxoid, if required.

To decide if the young infant needs an immunization today:

LOOK at the infant's age on the clinical record.

If you do not already know the infant's age, ask about the infant's age.

ASK the mother if the infant has an immunization card.

If the mother answers YES, ask her if she has brought the card to the clinic today.

- * If she has brought the card with her, ask to see the card.
- * Compare the infant's immunization record with the recommended immunization schedule. Decide whether the infant has had all the immunizations recommended for the infant's age.
- * On the Recording Form, check all immunizations the infant has already received. Write the date of the immunization the infant received most recently. Circle any immunizations the young infant needs today.
- * If the young infant is not being referred, explain to the mother that the child needs to receive an immunization (or immunizations) today.

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

- * Ask the mother to tell you what immunizations the infant has received.
- * Use your judgement to decide if the mother has given a reliable report. If you have any doubt, immunize the infant.
- * Give an immunization card to the mother and ask her to please bring it with her each time she brings the infant to the clinic.



EXERCISE E

Part 1: Review the information about contraindications to immunizations. Then decide if a contraindication is present for each of the following infants:

If the infant:	Immunize this infant today if due for immunization	Do not immunize today
will be treated at home with antibiotics		
has a local skin infection		
has a congenital heart problem		
is being referred for severe classification		
is exclusively breastfed		
older brother had convulsion last year		
was jaundiced at birth		
is LOW WEIGHT for age		
has DIARRHOEA: NO DEHYDRATION		

5.0 ASSESS OTHER PROBLEMS

Assess any other problems mentioned by the mother or observed by you. Refer to any guidelines on treatment of the problems. If you think the infant has a serious problem, or you do not know how to help the infant, refer the infant to a hospital.

Below is the bottom half of a Young Infant Recording Form. This is where you record the assessment and classification of feeding and weight. This may include an assessment of breastfeeding. At the bottom are sections for recording immunizations and any other problems. Study the example below. It has been completed to show the rest of the assessment of the infant Swati, 15 days old and weighing 2.4 kg.

THEN CHECK FOR FEEDING PROBLEM & MALNUTRITION - Is there any difficulty feeding? Yes ☐ No ☒ - Is the infant breastfed? Yes ☒ No ☐ - If Yes, how many times in 24 hours? <u>5</u> times - Does the infant usually receive any other foods or drinks? Yes ☒ No ☐ - If Yes, how often? <u>Cow's milk once, sometimes water also</u> - What do you use to feed the infant? <u>Feeding bottle</u> If the infant has any difficulty feeding, is feeding less than 8 times in 24 hours, is taking any other food or drinks, or is moderately underweight AND has no indications to refer urgently to hospital: ASSESS BREASTFEEDING: - Has the infant breastfed in the previous hour? If infant has not fed in the previous hour, ask the mother to put her infant to the breast. Observe the breastfeed for 4 minutes. - Is the infant able to attach? To check attachment, look for: - Chin touching breast Yes ☒ No ☐ - Mouth wide open Yes ☒ No ☐ - Lower lip turned outward Yes ☒ No ☐ - More areola above than below the mouth Yes ☒ No ☐	<i>Feeding problem or low weight</i>
ASSESS BREASTFEEDING: - Has the infant breastfed in the previous hour? If infant has not fed in the previous hour, ask the mother to put her infant to the breast. Observe the breastfeed for 4 minutes. - Is the infant able to attach? To check attachment, look for: - Chin touching breast Yes ☒ No ☐ - Mouth wide open Yes ☒ No ☐ - Lower lip turned outward Yes ☒ No ☐ - More areola above than below the mouth Yes ☒ No ☐ <i>no attachment at all not well attached <u>good attachment</u></i> - Is the infant suckling effectively (that is, slow deep sucks, sometimes pausing)? <i>not suckling at all not suckling effectively <u>suckling effectively</u></i> - Look for ulcers or white patches in the mouth (thrush). - Does mother have pain while breastfeeding? If yes, look and feel for: - Flat or inverted nipples, or sore nipples - Engorged breasts or breast abscess	Return for next immunization on: <u>in 4 weeks</u> (Date)
CHECK THE YOUNG INFANT'S IMMUNIZATION STATUS Circle immunizations needed today. ☒ BCG ☐ DPT1 ☐ OPV 0 ☐ OPV 1 ☐ HEP-B 1	Return for next immunization on: <u>in 4 weeks</u> (Date)
ASSESS OTHER PROBLEMS:	



EXERCISE F

This exercise will continue the 4 cases begun in Exercise B. Get out the four Young Infant Recording Forms that you used in Exercise B. Refer to the *ASSESS AND CLASSIFY THE SICK YOUNG INFANT* chart and the Weight for Age chart as needed.

For each case:

1. Read the description of the rest of the assessment of the infant. Record the additional assessment results on the infant's form.
2. Use the Weight for Age chart to determine if the infant is low weight for age.
3. Classify feeding.
4. Check the infant's immunizations status. Record immunizations needed today and when the infant should return for the next immunization.

Case 1: Harish

Harish's mother says that she has no difficulty feeding him. He breastfeeds about 8 times in 24 hours. She gives him no other foods or drinks. The doctor uses the Weight for Age chart and determines that Harish's weight (3.6 kg) is not low for his age (3 weeks).

The doctor decides not to assess breastfeeding. When asked about immunizations, Harish's mother says that he was born at home and had no immunizations. There are no other problems.

Case 2: Baby of Shashi

When asked if she has any difficulty feeding, the mother says no. She says that the baby breastfeeds 9 or 10 times in 24 hours and drinks no other fluids. Then the doctor refers to the baby's weight and age recorded at the top of the recording form. He uses the Weight for Age chart to check the baby's weight for age. The doctor decides that there is no need to assess breastfeeding.

The baby was delivered at home and has not been given any immunization.

When the doctor asks the mother if the baby has any other problems, she says no.

Case 3: Ankit

Ankit's mother says that she has had no problem breastfeeding him and that he breastfeeds 6 or 7 times in 24 hours. She has not given him any other milk or drinks. The doctor checks his weight for age.

Since Ankit is moderately underweight for age, the doctor decides to assess breastfeeding. His mother says that he is probably hungry now, and puts him to the breast. The doctor observes that Ankit's chin touches the breast, his mouth is wide open and his lower lip is turned outward. More areola is visible above than below the mouth. He is suckling with slow deep sucks, sometimes pausing. His mother continues feeding him until he has finished. The doctor sees no ulcers or white patches in his mouth.

Ankit has had no immunizations.

When you have completed this exercise, please discuss your answers with a facilitator.

**INTEGRATED
MANAGEMENT OF
NEONATAL AND
CHILDHOOD
ILLNESS**

**Identify Treatment for
the Sick Young Infant**

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INTRODUCTION

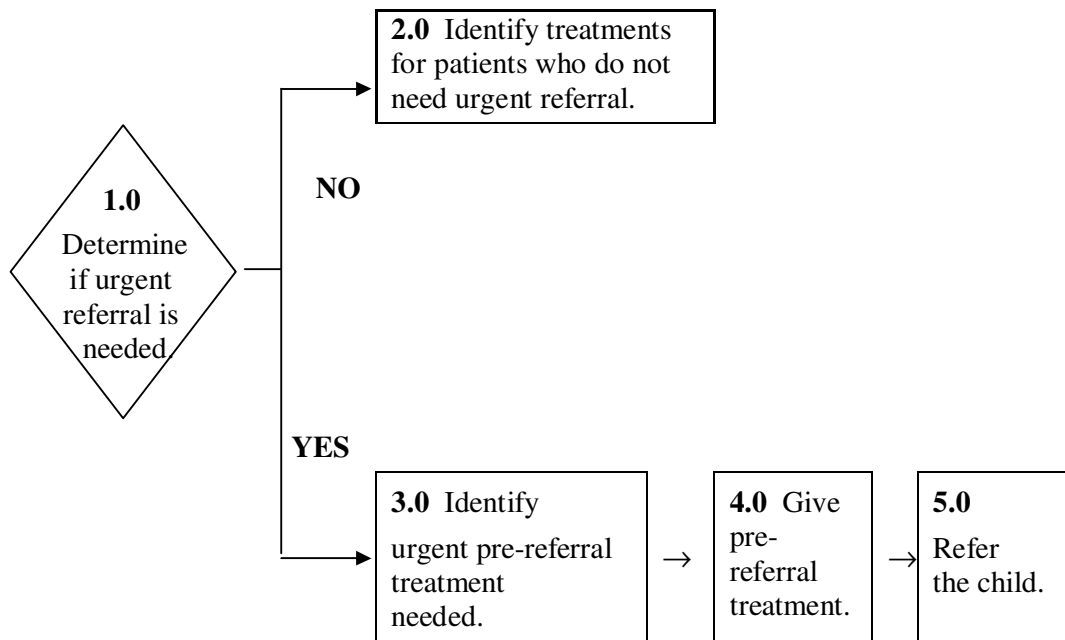
You have already learned to assess the sick young infant age up to 2 months and to classify the young infant's illness or illnesses. The next step is to identify the necessary treatments. In some instances, the very sick young infant will need referral to a hospital for additional care. If so, you will begin urgent treatments before the infant's departure.

LEARNING OBJECTIVES

This module will describe and allow you to practice the following skills:

- * determining if urgent referral is needed
- * identifying treatments needed
- * for patients who need urgent referral:
 - identifying the urgent pre-referral treatments
 - explaining the need for referral to the mother
 - writing the referral note

This module will focus on **identifying which treatments are needed**. The next module, *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER*, will teach how to give the treatments. This flowchart shows the steps involved in identifying treatment. Each step corresponds to a section in the module. Most patients will not need urgent referral and will be covered in step 2.0. However, for those patients who do need urgent referral, you will go straight to step 3.0.



In this section of the module you will use the "Identify Treatment" column of the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart. If a young infant has only one classification, it is easy to see what to do for the infant. However, many sick young infants have more than one classification. For example, a young infant may have both LOCAL BACTERIAL INFECTION and FEEDING PROBLEM OR LOW WEIGHT.

When a young infant has more than one classification, you must look in more than one place on the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart to see the treatments listed.

For some young infants, the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart says "Refer URGENTLY to hospital." By hospital, we mean a health facility with inpatient beds, supplies and expertise to treat a very sick young infant or child. If you work in a health facility with inpatient beds, referral may mean admission to the inpatient department of your own facility.

If the young infant must be referred urgently, you must decide which treatments to do before referral. Some treatments are not necessary before referral. This module will help you identify urgent pre-referral treatments.

If there is no hospital in your area, you may make some decisions differently than described in this module. You should only refer a young infant or a child if you expect that he will actually receive better care. In some cases, giving your very best care is better than sending a young infant or a child on a long trip to a hospital that may not have the supplies or expertise to care for young infants and children.

If referral is not possible, or if the parents refuse to take the young infant or child, the doctor should help the family care for the infant or child. The patient may stay near the clinic to be seen several times a day. Or a doctor may visit the home to help give drugs on schedule and to help give fluids and food. There is a section *Where Referral is not Possible* in the module *Treat the Young Infant and Counsel the Mother*, which explains what to do when referral is needed but not possible.

1.0 DETERMINE IF URGENT REFERRAL IS NEEDED

REFERRAL FOR SEVERE CLASSIFICATIONS

Look at the severe classifications on the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart. These are coloured red and include:

- POSSIBLE SERIOUS BACTERIAL INFECTION
- SEVERE JAUNDICE
- SEVERE DEHYDRATION
- SEVERE PERSISTENT DIARRHOEA
- SEVERE DYSENTERY
- NOT ABLE TO FEED - POSSIBLE SERIOUS BACTERIAL INFECTION or SEVERE MALNUTRITION

Notice the instruction **"Refer URGENTLY to hospital"** in the lists of treatments for the classifications POSSIBLE SERIOUS BACTERIAL INFECTION, SEVERE JAUNDICE, NOT ABLE TO FEED - POSSIBLE SERIOUS BACTERIAL INFECTION OR SEVERE MALNUTRITION. This instruction means to refer the young infant immediately after giving any necessary pre-referral treatments. Do not give treatments that would unnecessarily delay referral.

Notice the instruction **"Refer to hospital"** in the lists of treatments for the classifications SEVERE PERSISTENT DIARRHOEA and SEVERE DYSENTERY. This means that referral is needed, but not as urgently. There is time to identify treatments as described in this module and give all of the treatments.

THE YOUNG INFANT WITH DIARRHOEA WITH SEVERE DEHYDRATION

If the young infant with diarrhoea has SEVERE DEHYDRATION (and does not have low weight or any other severe classification), the infant needs rehydration with IV fluids according to Plan C. If you can give IV therapy, you can treat the infant in the clinic. Otherwise urgently refer the infant for IV therapy with pre-referral antibiotics.

If a young infant has SEVERE DEHYDRATION and low weight or any another severe classification, give first dose of intramuscular ampicillin and gentamicin and refer the infant urgently to hospital. The mother should give frequent sips of ORS on the way and continue breastfeeding.

THE YOUNG INFANT WITH DIARRHEA WITH SOME DEHYDRATION

If a young infant has SOME DEHYDRATION and low weight or any another severe classification, give first dose of intramuscular ampicillin and gentamicin and refer the infant urgently to hospital. The mother should give frequent sips of ORS on the way and continue breastfeeding.

THE YOUNG INFANT WITH SEVERE PERSISTENT DIA RRHEA

If the young infant has SEVERE PERSISTENT DIARRHEA, give first dose of intramuscular ampicillin and gentamicin if the young infant has low weight, dehydration or another severe classification, and refer the infant urgently to hospital. The mother should give frequent sips of ORS on the way and continue breastfeeding.

THE YOUNG INFANT WITH SEVERE DYSENTERY

If the young infant has SEVERE DYSENTERY, give first dose of intramuscular ampicillin and gentamicin if the young infant has low weight, dehydration or another severe classification, refer the infant urgently to hospital. The mother should give frequent sips of ORS on the way and continue breastfeeding.

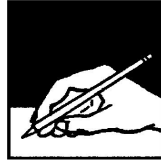
REFERRAL FOR OTHER SEVERE PROBLEMS

The *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart does not include all problems that infants may have. You must ask yourself:

Does the infant have any other severe problem that cannot be treated at this clinic?

For example, the infant may have a severe problem that is not covered on the chart, such as a major congenital malformation. If you cannot treat a severe problem, you will need to refer the young infant.

Remember: Most young infants will have none of the severe classifications or other severe problems. **If the infant has none of these, the infant does not need urgent referral to a hospital.** You will identify treatments needed as described in this module.



EXERCISE A

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

1. Sarla is an 11-day-old girl. She has no signs of possible serious bacterial infection. She has:
LOCAL BACTERIAL INFECTION
NO FEEDING PROBLEM
no other classifications

Does Sarla need urgent referral? ☐ YES ☐ NO

2. Neena is a 6-week-old girl. She has no signs of jaundice, low body temperature, or local bacterial infection. She has the classification:
NOT ABLE TO FEED – POSSIBLE SERIOUS BACTERIAL INFECTION or
SEVERE MALNUTRITION
no other classifications

Does Neena need urgent referral? ☐ YES ☐ NO

3. Hanif is a 7-day-old boy. He has no signs of possible serious bacterial infection, jaundice, low body temperature, or local bacterial infection. He has:
Diarrhoea with NO DEHYDRATION
FEEDING PROBLEM OR LOW WEIGHT
No other classifications

Does Hanif need urgent referral? ☐ YES ☐ NO

4. Habib is a 19-day-old boy. He has:
POSSIBLE SERIOUS BACTERIAL INFECTION
NOT ABLE TO FEED - POSSIBLE SERIOUS BACTERIAL INFECTION or SEVERE
MALNUTRITION
No other classifications

Does Habib need urgent referral? ☐ YES ☐ NO

2.0 IDENTIFY TREATMENTS FOR YOUNG INFANTS WHO DO NOT NEED URGENT REFERRAL

Your facilitator will present the examples in this section and will show you how to use the back of the Sick Young Infant Recording Form. The facilitator will show you how to:

- * Fold the "Classify" column of the Sick Young Infant Recording Form so that you can see it while looking at the back of the form.
- * Look at the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart to find the treatments needed for each of the infant's classifications.
- * List each treatment needed on the back of the Sick Young Infant Recording Form.

For each classification listed on the front of the Sick Young Infant Recording Form, you will write the treatments needed on the back of the form. The treatments that may be needed are in the "Identify Treatment" column of the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart. You will list only the treatments that apply to the specific young infant being treated.

Be sure to include items that begin with the words "Follow-up." These mean to tell the mother to return in a certain number of days. The follow-up visit is very important to see if the treatment is working, and to give other treatment if needed. You may abbreviate follow-up as "F/up." If several different times are specified for follow-up, you will look for the earliest definite time. (A definite time is one that is not followed by the word "if"). For example:

"Follow-up in 2 days" gives a definite time for follow-up.

"Follow-up in 5 days if not improving" in a young infant who has diarrhoea is not definite. The child only needs to come back if the diarrhoea does not improve.

Record the earliest definite time for follow-up in the appropriate space on the back of the Sick Young Infant Recording Form. (Also tell her about any earlier follow-up that may be needed if a condition such as diarrhoea does not improve) Later, when the mother returns for follow-up, you can tell her about any additional visits needed.

Follow-up visits are especially important for a young infant. If you find at the follow-up visit that the infant is worse, you will refer the infant to the hospital. A young infant who receives antibiotics for local bacterial infection should return for follow-up in 2 days. A young infant who has diarrhoea with some dehydration, a feeding problem or thrush should return in 2 days. An infant with low weight for age should return for follow-up in 14 days.

Notice that the Sick Young Infant Recording Form already lists the item, "Advise mother when to return immediately." You do not need to list this again. You will need to teach each mother the signs that mean she should return immediately for more care for her infant. You will learn these signs later in this module.

Your facilitator will now demonstrate the process on the case recording form.



EXERCISE B

In this exercise you will identify treatments for 4 young infants: Harish, Baby of Shashi, Ankit and Neera, for whom you had completed the assessment and classification (Exercise B in the *ASSESS AND CLASSIFY THE SICK YOUNG INFANT* module).

Decide which of the 4 sick young infants need to be referred **URGENTLY** to the hospital. For the others, identify treatments and list them on the back of the Young Infant Recording Forms. Refer to the "Identify Treatment" column of the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart as you list treatments needed.

When you have completed this exercise, please discuss your answers with a facilitator.

WHEN TO RETURN IMMEDIATELY

For all young infants going home, you will advise the mother when to return immediately. This means to **teach** the mother certain signs that mean to return immediately for further care. These signs are listed on the *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER* chart in the section WHEN TO RETURN. Use local terms that the mother will understand.

When to Return Immediately:

Advise the mother to return immediately if the young infant has any of these signs:
Breastfeeding or drinking poorly Becomes sicker Develops a fever or feels cold to touch Fast breathing Difficult breathing Yellow palms and soles (if infant has jaundice) Diarrhoea with blood in stools

This is an extremely important section of WHEN TO RETURN. Tell every mother to return immediately if her infant is:

- **breastfeeding or drinking poorly,**
- **becomes sicker, or**
- **develops a fever or feels cold to touch**
- **fast breathing**
- **difficult breathing.**

Advise mothers of children with **jaundice** to watch for:

- **yellow palms and soles**

Advise mothers of children with **diarrhoea** to watch for:

- **blood in the stool**

3.0 IDENTIFY URGENT PRE-REFERRAL TREATMENT NEEDED

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 & CLASSIFY THE SICK YOUNG INFANT* chart. You will give just 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 breast feeding 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, septicaemia 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.

4.0 REFER THE YOUNG INFANT



Do four steps to refer a young infant to the hospital:

- 1. Explain to the mother the need for referral, and get her agreement to take the young infant. In addition, explain that young infants are particularly vulnerable. When they are seriously ill, they need hospital care and need to receive it promptly. If you suspect that she does not want to take the infant, find out why.***

Possible reasons are:

- * She thinks that hospitals are places where people often die, and she fears that her infant will die there too.
- * She does not think that the hospital will help the infant.
- * She cannot leave home and tend to her young infant during a hospital stay because:
 - there is no one to take care of her other children, or
 - she is needed for farming or other work, or
 - she may lose a job.
- She does not have money to pay for transportation, hospital bills, medicines, or food for herself during the hospital stay.

2. *Calm the mother's fears and help her resolve any problems.*

For example:

- * If the mother fears that her infant will die at the hospital, reassure her that the hospital has doctors, supplies, and equipment that can help cure her infant.
- * Explain what will happen at the hospital and how that will help her infant.
- * If the mother needs help at home while she is at the hospital, ask questions and make suggestions about who could help. For example, ask whether her husband, sister or mother could help with the other children or with meals while she is away.
- * Discuss with the mother how she can travel to the hospital. Help arrange transportation if necessary.

You may not be able to help the mother solve her problems and be sure that she goes to the hospital. However, it is important to do everything you can to help. If referral is not possible, there are some things you can do for the child from your clinic. These are described in the module *Where Referral is Not Possible*.

3. *Write a referral note for the mother to take with her to the hospital. Tell her to give it to the doctor there.*

Write:

- * the name and age of the patient,
 - * the date and time of referral,
 - * description of the patient's problems,
 - * the reason for referral (symptoms and signs leading to severe classification),
 - * treatment that you have given,
 - * any other information that the doctor at the hospital needs to know in order to care for the infant, such as earlier treatment of the illness or immunizations needed,
- your name and the name of your clinic.

4. Give the mother any supplies and instructions needed to care for her infant on the way to the hospital:

- * Tell the mother how to keep the young child warm during the trip.
- * Advise the mother to continue breastfeeding.
- * If the infant has some or severe dehydration and can drink, give the mother some ORS solution for the infant to sip frequently on the way.

EXAMPLE OF REFERRAL NOTE

2 - 8 - 2002 11:00 am
<i>Urgent referral to Safdarjung Hospital</i>
<i>Baby of Shashi, age 4 days</i>
<i>Referred for: SEVERE JAUNDICE</i> <i>Also has a few skin pustules on her buttocks</i>
<i>Treatment given at the PHC:</i> <i>First dose of amoxycillin</i> <i>Mother advised to breastfeed the baby and keep her warm</i> <i>on the way to the hospital</i>
<i>Needs BCG and OPV 0 dose - not given</i>
<i>Dr. Ramesh Gupta</i> <i>Medical Officer</i> <i>Mehrauli PHC</i>



EXERCISE C

In this exercise you will review the steps related to referral through a case study. You will use this same case study in a role play.

Part 1.

First, study the Sick Child Recording Form for Harish. He is 3 weeks of age and has the classifications POSSIBLE SERIOUS BACTERIAL INFECTION and NO FEEDING PROBLEM.

1. Should Harish be referred? Why or why not?
2. What urgent, pre-referral treatments are needed? Record these on the back of the Sick Young Infant Recording Form.
3. Write a referral note for Harish to a hospital. Use today's date and the current time. Use your own name.

REFERRAL NOTE FOR HARISH



When you have finished this part of the exercise, tell the facilitator that you are ready for the group discussion and role play.

Part 2. Role play

Role Play Instructions

DOCTOR: Explain the need for referral to Harish's mother and give her instructions. Discuss any problems she may have about going to the hospital. Assume that the hospital is about an hour away and that transportation is similar to what is available in your own area. If you have a telephone in your own clinic, assume that one is available in the role play.

MOTHER: You will be given a write up that describes your attitude and situation. Try to act as a real mother might act if her child needed referral.

OBSERVERS: Watch the role play. Be prepared to comment on what was done well and what could be improved. Be prepared to answer the questions:

Is this mother likely to go to the hospital? Why or why not?

Has she been given all the necessary instructions? If not, what information was missing?

**INTEGRATED
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**Treat the Young Infant
and Counsel the Mother**

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INTRODUCTION

In the previous module, you learned to identify the treatment needed for sick young infants age up to 2 months. Treatment for sick young infants often begins at the clinic and needs to be continued at home. The chart *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER* describes the treatments. Exceptions are the fluid plans for treating diarrhoea that is located on the *TREAT THE CHILD* chart. Plans A, B, and C on the *TREAT THE CHILD* chart are used for young infants as well as older infants and young children.

In this module you will use the chart to learn *how to give* each treatment. You will also learn *how to teach the mother* to continue giving treatment at home.

LEARNING OBJECTIVES

This module will describe and allow you to practice the following skills:

- * Determining appropriate oral drugs and dosages for a sick young infant
- * Giving oral antibiotics and teaching the mother how and when to give them at home
- * Treating local infections (such as umbilical or skin infections, ear drainage and thrush), and teaching the mother how and when to give the treatments at home
- * Checking a mother's understanding
- * Giving drugs administered in the clinic only (intramuscular injections of ampicillin and gentamicin)
- * Warming the young infant who has temperature less than 36.5°C or feels cold to touch
- * Preventing low blood sugar
- * Treating different classifications of dehydration, and teaching the mother about extra fluid to give at home
- * Teaching the mother to treat breast and nipple problems and correct positioning and attachment
- * Immunizing infants

- * For local bacterial infection, give amoxicillin orally, if amoxicillin not available give cotrimoxazole.
- * Management of a sick young infant who needs referral but referral is not possible.
- * Counselling the mother on exclusive breastfeeding, how to keep the young infant warm at home, provide home care and when to return to the doctor.
- * Giving follow up care to sick young infants.

1.0 TREAT THE SICK YOUNG INFANT

Use the *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER* chart to select the appropriate drug and to determine the dose and schedule.

1.1 SELECT APPROPRIATE ORAL DRUGS AND DETERMINE THE DOSE AND SCHEDULE

Refer to the box on the *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER* chart for the recommended antibiotic for local bacterial infection. Then determine the dose based on the young infant's weight.

- **Give an appropriate oral antibiotic**
For local bacterial infection:

➤ Give an Appropriate Oral Antibiotic				
For local bacterial infection:				
➤ Give Oral AMOXYCILLIN OR COTRIMOXAZOLE				
	AMOXYCILLIN ➤ Give three times daily for 5 days		COTRIMOXAZOLE (trimethoprim + sulphamethoxazole) ➤ Give two times daily for 5 days	
AGE or WEIGHT	Tablet 250 mg	Syrup 125 mg in 5 ml	Adult Tablet single strength (80 mg trimethoprim + 400 mg sulphameth- oxazole)	Pediatric Tablet (20 mg trimethoprim +100 mg sulphamethoxazole)
Birth up to 1 month (< 3 kg)		1.25 ml		1/2*
1 month up to 2 months (3-4 kg)	1/4	2.5 ml	1/4	1

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

TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER chart indicates the **schedule** for giving the antibiotic and the **correct dose** of the antibiotic to give to the young infant.

The **schedule** tells you *how many days* and *how many times each day* to give the antibiotic.

To determine the **correct dose** of the antibiotic:

- * Refer to the column that lists the concentration of tablets or syrup available in your clinic.
- * Choose the row for the infant's weight or age. The weight is better than the age when choosing the correct dose. The correct dose is listed at the intersection of the column and row.

Follow the steps on the *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER* chart for teaching a mother how to give an oral antibiotic at home. That is, teach her how to measure a single dose. Show her how to crush a tablet and mix it with breastmilk. Guide her as needed to give the first dose, and teach her the schedule. Watch the mother and ask checking questions to be sure she knows how to give the antibiotic.

Note: Avoid giving cotrimoxazole to a young infant less than 1 month of age who is premature or jaundiced. Give this infant amoxycillin instead.

1.2 USE GOOD COMMUNICATION SKILLS

An infant who is treated at a clinic needs to continue treatment at home. The success of home treatment depends on how well you communicate with the infant's mother. She needs to know how to give the treatment. She also needs to understand the importance of the treatment.

Good communication is important when teaching a mother to give treatment at home.

Ask questions to find out what the mother is already doing for her infant.

* **Praise** the mother for what she has done well.

* **Advise** her how to treat her infant at home.

* **Check** the mother's understanding.

}

These skills are described below.

1.2.1 ADVISE THE MOTHER HOW TO TREAT HER INFANT AT HOME

Some advice is simple. For example, you may only need to tell the mother to return with the infant for follow-up in 2 days. Other advice requires that you teach the mother **how to do** a task. Teaching how to do a task requires several steps.

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

When you teach a mother how to treat an infant, use 3 basic teaching steps:

1. Give **information**.
2. Show an **example**.
3. Let her **practice**.

GIVE INFORMATION: Explain to the mother how to do the task. For example, explain to the mother how to:

- * apply gentian violet paint,
- * prepare ORS, or
- * wick the ear dry.

SHOW AN EXAMPLE: Show how to do the task. For example, show the mother:

- * how to hold the infant still and apply gentian violet,
- * a packet of ORS and how to mix the right amount of water with ORS, or
- * how to hold the infant still and wick the ear dry.

LET HER PRACTICE: Ask the mother to do the task while you watch. For example, have the mother:

- * apply gentian violet paint on the infant's umbilicus,
- * mix ORS solution, or

- * wick the infant's ear dry.

It may not be enough to ask the mother to describe how she will do the task at home.

Letting a mother *practice* is the most important part of teaching a task. If a mother **does** a task while you observe, you will know what she understands and what is difficult. You can then help her do it better. The mother is more likely to remember something that she has **practiced** than something she has heard.

WHEN TEACHING THE MOTHER:

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

1.2.2 CHECK THE MOTHER'S UNDERSTANDING

After you teach a mother how to treat her infant, you want to be sure that she understands how to give the treatment correctly. Checking questions find out what a mother has learned. An important communication skill is knowing how to ask good checking questions. A checking question must be phrased so that the mother answers more than "yes" or "no". Good checking questions require that she describe **why**, **how** or **when** she will give a treatment. Let us take the following example.



Doctor asks the mother "When will you give your baby his medicine?"

The mother answers "I will give him the medicine in the morning and night for the next 5 days!"

From her answer you can tell if she has understood you and learned what you taught her about the treatment. If she cannot answer correctly, give more information or clarify your instructions. For example, you taught a mother how to give an antibiotic. Then you ask:

"Do you know how to give your infant his medicine?"

The mother would probably answer "yes" whether she understands or not. She may be embarrassed to say she does not understand. However, if you ask a few good checking questions, such as:

"When will you give your infant the medicine?"

"How many tablets will you give each time?"

"For how many days will you give the tablets?"

You are asking the mother to repeat back to you instructions that you have given her. Asking good checking questions helps you make sure that the mother learns and remembers how to treat her infant.

The following questions check a mother's understanding. "Good checking questions" require the mother to describe **how** she will treat her infant. They begin with question words, such as **why**, **what**, **how**, **when**, **how many**, and **how much**. The "poor questions", answered with a "yes" or "no", do not show you how much a mother knows.

GOOD CHECKING QUESTIONS	POOR QUESTIONS
How will you prepare the ORS solution?	Do you remember how to mix the ORS?
How often should you breastfeed your infant?	Should you breastfeed your infant?
How much extra fluid will you give after each loose stool?	Do you know how to give extra fluids?
Why is it important for you to wash your hands?	Will you remember to wash your hands?

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

Asking checking questions requires patience. The mother may know the answer, but she may be slow to speak. She may be surprised that you really expect her to answer. She may fear her answer will be wrong. She may feel shy to talk to an authority figure. Wait for her to answer. Give her encouragement.

If the mother answers incorrectly or says she does not remember, be careful not to make her feel uncomfortable. Teach her to give the treatment again. Give more **information**, **examples** or **practice** to make sure she understands. Then ask her good checking questions again.

A mother may understand but may say that she cannot do as you ask. She may have a problem or objection. Common problems are lack of time or resources to give the treatment. A mother may object that her sick infant was given an oral drug rather than an injection, or a home remedy rather than a drug.

Help the mother think of possible solutions to her problems and respond to her objections. For example:

If you ask,

"When will you wick your infant's ear dry?"

The mother may answer that she is not at home during the day. She may tell you that she can only treat her infant in the morning and in the night.

Ask her if she can identify someone (a grandparent, an older sibling) who will be at home during the day and can give the mid-day treatment. Help her plan how she will teach that person to give the treatment correctly.

If you ask,

"What container will you use to measure 1 litre of water for mixing ORS?"

The mother may answer that she does not have a 1-litre container at home.

Ask her what containers she does have at home. Show her how to measure 1 litre of water in her container. Explain how to mark the container at 1 litre with an appropriate tool or how to measure 1 litre using several smaller containers.

If you ask,

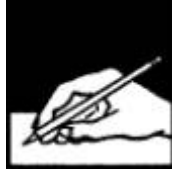
"How will you apply gentian violet paint on the infant's umbilicus at home?"

A mother may answer that she does not like the remedy that you recommended. She expected her infant to get an injection instead.

Convince her of the importance of the local treatment along with the oral drug. Make the explanation clear. She may have to explain the reason for applying gentian violet to other family members also.

WHEN CHECKING THE MOTHER'S UNDERSTANDING:

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



EXERCISE A

In this exercise you will review good communication skills. Answer the questions in the space provided.

1. Nurse Kanta must teach a mother to wick her infant's ear dry.

First she explains how drying the ear will help the infant, and how to do it. Then she shows the mother how to make a wick and dry the infant's ear. Then, Nurse Kanta asks the mother to practice wicking the infant's ear while she observes and offers feedback. Before the mother and the infant leave the clinic, Nurse Kanta asks the mother several questions. She wants to make sure the mother understands why, how and when to give the treatment at home.

- a. What information did Nurse Kanta give the mother about the treatment?
- b. In the paragraph above, underline the sentence that describes how the nurse gave examples.
- c. What did the nurse do while the mother practiced?

2. Doctor Basaka must teach a mother to prepare ORS solution for her infant with diarrhoea. First he explains how to mix the ORS, and then he shows her how to do it. He asks the mother, "Do you understand?" The mother answers "yes". So Basaka gives her 2 ORS packets and says good-bye.

- a. What information did Basaka give the mother about the task?
- b. Did he show her an example?
- c. Did he ask her to practice?
- d. How did Basaka check the mother's understanding?
- e. Did Basaka check the mother's understanding correctly?
- f. How would you have checked the mother's understanding?

3. Nurse Anjali gives some oral antibiotics to a mother for her infant. Before she explains how to give them, Anjali asks the mother if she knows how to give her infant the medicine. The mother nods her head yes. So Anjali gives her the antibiotics and says good-bye.

If a mother tells you that she already knows how to give a treatment, what should you do?

4. Which of the following is the best checking question after advice about increasing fluids during diarrhoea? (*Tick one.*)

- ☐ a. Do you remember some good fluids to give your infant?
- ☐ b. Will you be sure to give your infant extra fluid?
- ☐ c. How much fluid will you give your infant?

5. The following questions can be answered "yes" or "no". Rewrite the questions as good checking questions.
- a. Do you remember when to give the antibiotic?
 - b. Do you understand how much syrup to give your infant?
 - c. Did the nurse explain to you how to apply the paint?
 - d. Can you wick your infant's ears?
 - e. Do you know how to get to the hospital?

When you finish this exercise, discuss your answers with a facilitator.

Your facilitator will lead a drill
to give you more practice asking checking questions.

1.3 TEACH THE MOTHER TO GIVE ORAL DRUGS AT HOME

This section will teach you the basic steps of teaching mothers to give oral drugs. If a mother learns how to give a drug correctly, then the infant will be treated properly. Follow the instructions below for every oral drug you give to the mother.

- **Determine the appropriate antibiotics and dosage for the infant's age or weight.**
Use the *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER* chart to determine the appropriate antibiotic and dosage to give the infant.
- **Tell the mother the reason for giving the drug to the infant.**
- **Demonstrate how to measure a dose.**
Collect a container of the drug and check its expiry date. Do not use expired drugs. Count out the amount needed for the infant. Close the container.

If you are giving the mother **tablets**:

Show the mother the amount to give per dose. If needed, show her how to divide a tablet.

If a tablet has to be crushed before it is given to an infant, add a few drops of clean water and wait a minute or so. The water will soften the tablet and make it easier to crush.

If you are giving the mother **syrup**:

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

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

MILLILITRES (ml)	TEASPOONS (tsp)
1.25 ml	¼ tsp
2.5 ml	½ tsp
5.0 ml	1 tsp
7.5 ml	1½ tsp
10.0 ml	2 tsp
15. ml	3 tsp

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

- **Watch the mother practice measuring a dose by herself.**
Ask the mother to measure a dose by herself. If the dose is in tablet form, tell the mother to crush the tablet. Watch her as she practices. Tell her what she has done correctly. If she measured the dose incorrectly, show her again how to measure it.
- **Ask the mother to give the first dose to her infant.**
Explain that if an infant is vomiting, give the drug even though the infant may vomit it up. Tell the mother to watch the infant for 30 minutes. If the infant vomits within the 30 minutes (the tablet or syrup may be seen in the vomit), give another dose. If the infant is dehydrated and vomiting, wait until the child is rehydrated before giving the dose again.
- **Explain carefully how to give the drug, then label and package the drug.**
Tell the mother how much of the drug to give her infant. Tell her how many times per day to give the dose. Tell her when to give it (such as early morning, lunch, dinner, before going to bed) and for how many days.

Write the information on a drug label. This is an example:

NAME		DATE	
DRUG		QUANTITY	
			
DOSE			

To write information on a drug label:

- a. Write the full name of the drug and the total amount of tablets or syrup to complete the course of treatment.
- b. Write the correct dose for the patient to take (number of tablets or spoonfuls, that is, $\frac{1}{2}$, 1, $1\frac{1}{2}$...). Write when to give the dose (early morning, afternoon, evening, before going to bed).
- c. Write the daily dose and schedule, such as

½ tablet twice daily for 5 days

Write the instructions clearly so that a literate person is able to read and understand them.

Put the total amount of each drug into its own labelled drug container (an envelope, paper, tube or bottle). Keep drugs clean. Use clean containers.

After you have labelled and packaged the drug, give it to the mother. Ask checking questions to make sure she understands how to treat her infant.

- **Explain that all the oral drug tablets or syrups must be used to finish the course of treatment, even if the infant gets better.**

Explain to the mother that if the infant seems better, she should continue to treat the infant. This is important because the bacteria may still be present even though the signs of disease are gone.

Advise the mother to keep all medicines out of the reach of children. Also tell her to store drugs in a dry and dark place that is free of mice and insects.

- **Check the mother's understanding before she leaves the clinic.**

Ask the mother checking questions, such as:

"How much will you give each time?"

"When will you give it?" "For how many days?"

"How will you prepare this tablet?"

"Which drug will you give 2 times per day?"

If you feel that the mother is likely to have problems when she gives her infant the drug(s) at home, offer more **information, examples and practice**. An infant needs to be treated correctly to get better.

In some clinics, a drug dispenser has the task of teaching the mother to give treatment and checking the mother's understanding. If this is your situation, teach the skills you are learning here to that dispenser. Teach the Mother to Give Oral Drugs at Home. Give information, examples and practice, as needed. Check that the dispenser is doing this important task well. Ask mothers a few checking questions before they leave the clinic. You will know from their answers if the dispenser has taught them how to give the treatment correctly.

1.4 TEACH THE MOTHER TO TREAT LOCAL INFECTIONS AT HOME

This section of the module will teach you how to treat local infections. There are four types of local infection in a young infant that a mother can treat at home: an umbilicus which is red or draining pus, skin pustules, ear discharge or thrush.

You will also learn how to teach a mother to treat a local infection at home. When teaching a mother:

- Explain to the mother what the treatment is and why it should be given.
- Describe the treatment steps listed in the appropriate box below.
- Watch the mother as she does the first treatment in the clinic.
- Tell her how often to do the treatment at home.
- Give mother a small bottle of gentian 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 gentian violet twice each day. 0.25% gentian violet must be used in the mouth.

To Treat Skin Pustules or Umbilical Infection

- Apply gentian violet paint twice daily.
- The mother should:
- Wash hands.
 - Gently wash off pus and crusts with soap and water.
 - Dry the area.
 - Paint with gentian violet 0.5%.
 - Wash hands

To Treat Thrush (ulcers or white patches in mouth)

- 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.
 - Paint the mouth with gentian violet 0.25%.
 - Wash hands.

Explain and demonstrate the treatment to the mother. Then watch her and guide her as needed while she gives the treatment. She should return for follow-up in 2 days, or sooner if the infection worsens. She should stop using gentian violet after 5 days. Ask

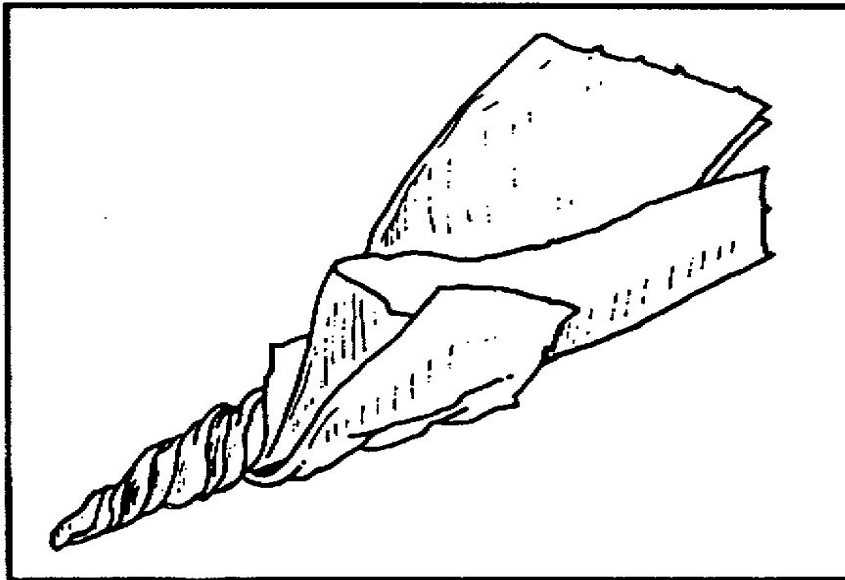
her checking questions to be sure that she knows to give the treatment twice daily and when to return.

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

If the young infant has an ear discharge, dry the ear by wicking

Dry the Ear by Wicking

- Dry the ear at least 3 times daily.
 - Roll clean absorbent cloth or soft, 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.



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

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

- Use clean, absorbent cotton cloth or soft strong tissue paper for making a wick.
- Do **not** use a cotton-tipped applicator, a stick or flimsy paper that will fall apart in the ear.
- Place the wick in the infant's ear until the wick is wet.
- Replace the wet wick with a clean one.
- Repeat these steps until the wick stays dry. Then the ear is dry.

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

- * Wick the ear 3 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.

1.5 GIVE THESE TREATMENTS IN THE 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

- * Intramuscular 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 according to the gentamicin and ampicillin tables.**
- **Use a sterile needle and sterile syringe. Measure the dose accurately.**
- **Give the drug as intramuscular injection.**
- **If child cannot be referred, follow the instructions given in the section WHERE REFERRAL IS NOT POSSIBLE.**

1.5.1 GIVE FIRST DOSE OF INTRAMUSCULAR ANTIBIOTICS

Give the first dose of two intramuscular antibiotics, 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.

➤ Give First Dose of Intramuscular Antibiotics

➤ Give first dose of both ampicillin and gentamicin intramuscularly.

WEIGHT	GENTAMICIN Dose: 5 mg per kg		AMPICILLIN Dose: 100 mg per kg (Vial of 500 mg mixed with 2.1 ml of sterile water for injection to give 500mg/2.5 ml or 200mg/1 ml)
	Undiluted 2 ml vial containing 20 mg = 2 ml at 10 mg/ml	OR Add 6 ml sterile water to 2 ml containing 80 mg* = 8 ml at 10 mg/ml	
1 kg		0.5 ml*	0.5 ml
2 kg		1.0 ml*	1.0 ml
3 kg		1.5 ml*	1.5 ml
4 kg		2.0 ml*	2.0 ml
5 kg		2.5 ml*	2.5 ml

**Avoid using undiluted 40 mg/ml gentamicin.*

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

Using Gentamicin

Read the vial of gentamicin to determine its strength. Check whether it should be used undiluted or should be diluted with sterile water. When ready to use, the strength should be 10 mg/ml.

Choose the dose from the row of the table, which is closest to the infant's weight.

Using Ampicillin

Read the vial of ampicillin to determine its strength. Ampicillin will need to be mixed with sterile water. Mix a vial of 500mg of powder in 2.1ml of sterile water to give 200mg/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 dosing 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 sterile water and recalculate the doses.

If an infant with POSSIBLE SERIOUS BACTERIAL INFECTION cannot go to a hospital, it is possible to continue treatment using these intramuscular antibiotics. Instructions are in the section *Where Referral is Not Possible*.

1.5.2 TREAT THE YOUNG INFANT TO PREVENT LOW BLOOD SUGAR

Preventing low blood sugar is an ***urgent pre-referral treatment*** for children with POSSIBLE SERIOUS BACTERIAL INFECTION, SEVERE JAUNDICE OR SEVERE MALNUTRITION.

Low blood sugar occurs in serious infections such as septicaemia 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. This treatment is given once, before the infant is referred to the hospital.

➤ ***Treat the Young Infant to Prevent Low Blood Sugar***

➤ ***If the child is able to breastfeed:***

Ask the mother to breastfeed the child.

➤ ***If the child is not able to breastfeed but is able to swallow:***

Give 20-50 ml (10 ml/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 (20 grams) in a 200-ml cup of clean water.

➤ ***If the child 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 child 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.

1.5.3 WARM THE SICK YOUNG INFANT WITH LOW BODY TEMPERATURE

It is important to maintain the temperature of the newborn between 36.5 and 37.4°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 adult body will transfer heat to the newborn.

➤ ***Warm the young infant using Skin to Skin contact (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 breasts, 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.

• **REASSESS after 1 hour:**

- Look, listen and feel for signs of Possible Serious Bacterial Infection and
- Measure axillary temperature by placing the thermometer in the axilla for 5 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 or hot brick to warm the baby because of danger of accidental burns).

Provide privacy to the mother and request her to sit or recline comfortably. Ask her to undress the young infant gently, except for cap, nappy and socks. □ Place the young infant prone on mother's chest in an upright and extended posture, between her breasts, in skin to skin contact. Turn young infant's head to one side to keep airways clear. □ Cover the young infant with mother's blouse, 'pallu' or gown and then wrap the baby-mother duo with an added blanket or shawl. □ Ask the mother to breastfeed the baby frequently. □ If possible, warm the room (>25°C) with a heating device like an electrical room heater or angeeethi.

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 28-30°C. Alternatively, if an overhead radiant warmer is available, place the baby under the warmer.

CAUTION: 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.

Skin to skin contact can also be used to keep a baby warm during transport.

It is important to monitor and REASSESS sick young infants with low body temperature who are being provided skin-to-skin contact for rewarming during the first hour. Persistent low body temperature may be the only sign of a POSSIBLE SERIOUS BACTERIAL INFECTION in a young infant.

After 1 hour of rewarming the infant should be ASSESSED for temperature by measuring axillary temperature (or feeling the body for low temperature) and also assessed for signs of POSSIBLE BACTERIAL INFECTION.

If temperature is still below 36.5°C or the young infant has any signs of POSSIBLE SERIOUS BACTERIAL INFECTION *refer urgently* to hospital.

If temperature is more than 36.5°C and no signs of POSSIBLE SERIOUS BACTERIAL INFECTION, advise the mother how to keep the baby warm at home, give home care and when to return immediately.

1.6 TO TREAT DIARRHOEA, SEE '*TREAT THE CHILD*' CHART (2 months upto 5 years)

The *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER* chart refers you to the *TREAT THE CHILD* chart for instructions on treating diarrhoea. You will learn Plan A to treat diarrhoea at home and Plans B and C to rehydrate an older infant or young child with diarrhoea later in the course. Young infants with diarrhoea are treated in a similar manner and you will practice treating some young infants with diarrhoea after learning to treat older infants and young children, later in the course. However, there are some special points to remember about giving these treatments to a young infant.

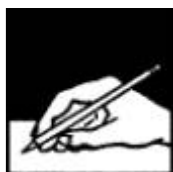
Plan A: Treat Diarrhoea at Home

All infants and children who have diarrhoea need extra fluid and continued feeding to prevent dehydration and give nourishment. The best way to give a young infant extra fluid and to continue feeding is to breastfeed more often and for longer at each breastfeed. Additional fluids that may be given to a young infant are ORS solution and clean water. In all young infants it is important **not** to introduce a food-based fluid.

If a young infant will be given ORS solution at home, you will show the mother how much ORS to give the infant after each loose stool. She should first offer a breastfeed, then give the ORS solution. Remind the mother to stop giving ORS solution after the diarrhoea has stopped.

Plan B: Treat Some Dehydration

A young infant who has SOME DEHYDRATION needs ORS solution as described in Plan B. During the first 4 hours of rehydration, encourage the mother to pause to breastfeed the infant whenever the infant wants, then resume giving ORS. Give a young infant who does not breastfeed an additional 100-200 ml clean water during this period.



EXERCISE B

In this exercise you will identify all the treatments needed, and specify the appropriate antibiotics and doses for infants. Refer to the *ASSESS AND CLASSIFY THE SICK YOUNG INFANT* chart as needed.

Take out the Young Infant Recording Forms that you used in Exercises B and E of module *ASSESS AND CLASSIFY THE SICK YOUNG INFANT UPTO 2 MONTHS*.

For each case:

1. Review the infant's assessment results and classifications which you have written on the recording form, to remind you of the infant's condition. Note that one of the young infants is premature.

2. Write the pre-referral treatments needed for the young infants who need to be urgently referred on the back of the recording form.
3. If the infant needs an antibiotic, also write the name of the antibiotic that should be given and the dose and schedule.

When you have completed this exercise, please discuss your answers with a facilitator.

1.7 TEACH CORRECT POSITIONING AND ATTACHMENT FOR BREASTFEEDING

Reasons for Poor Attachment and Ineffective Suckling

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

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

Good positioning is recognized by the following signs:

- Infant's neck is straight or bent slightly back,
- Infant's body is turned towards the mother,
- Infant's body is close to the mother, and
- Infant's whole body is supported.

Poor positioning is recognized by any of the following signs:

- Infant's neck is twisted or bent forward,
- Infant's body is turned away from mother,
- Infant's body is not close to mother, or
- Only the infant's head and neck are supported

Baby's body close, facing breast



Baby's body away from mother, neck twisted



Improving Positioning and Attachment

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

➤ Teach Correct Positioning and Attachment for Breastfeeding

- Show the mother how to hold her infant
 - with the infant's head and body straight
 - facing her breast, with infant's nose opposite her nipple
 - with infant's body close to her body
 - supporting infant's whole body, not just neck and shoulders.
- Show her how to help the infant to attach. She should:
 - touch her infant's lips with her nipple
 - wait until her infant's mouth is opening wide
 - move her infant quickly onto her breast, aiming the infant's lower lip well below the nipple.
- Look for signs of good attachment and effective suckling. If the attachment or suckling is not good, try again.
- If still not suckling effectively, ask the mother to express breast milk and feed with a cup and spoon in the clinic. To express breast milk:
 - The mother should wash hands, sit comfortably and hold a cup or 'katori' under the nipple
 - Place finger and thumb each side of areola and press inwards towards chest wall (Fig a)
 - Do not squeeze the nipple
 - Press behind the nipple and areola between finger and thumb to empty milk from inside the areola (Fig b); press and release repeatedly
 - Repeat the process from all sides of areola to empty breast completely (Fig c)
 - Express one breast for at least 3-5 minutes until flow stops; then express from the other side
- If able to take with a cup and spoon advise mother to keep breastfeeding the young infant and at the end of each feed express breast milk and feed with a cup and spoon.
- If not able to feed with a cup and spoon, refer to hospital.

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

"She really wants your breastmilk, doesn't she?"

Then explain what might help and ask if she would like you to show her. For example, say something like,

"Breastfeeding might be more comfortable for you if your baby took a larger mouthful of breast. Would you like me to show you how?"

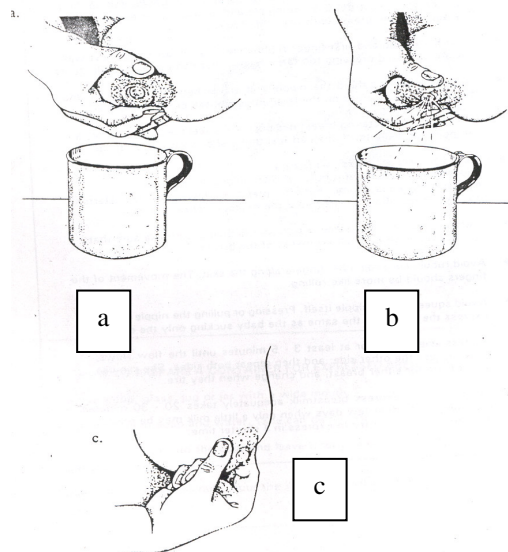
If she agrees, you can start to help her.

As you show the mother how to position and attach the infant, be careful not to take over from her. Explain and demonstrate what you want her to do. Then let the mother position and attach the infant herself. Then look for signs of good attachment and effective suckling again. If the attachment or suckling is not good, ask the mother to remove the infant from her breast and to try again. When the infant is suckling well, explain to the mother that it is important to breastfeed long enough at each feed. She should not stop the breastfeeding before the infant wants to.

Teach the mother to express breast milk

Expression of breast milk is usually required for feeding infants who do not suck effectively but are able to swallow effectively (as in the case of low birth weight babies) or when there are breast or nipple problems. The expressed breast milk is usually fed with a cup and spoon.

The mother is made to sit comfortably and hold the cup near her breast with one hand. With the other hand, the mother is asked to place her thumb above and her first finger below the nipple and areola. Then she is asked to push her thumb and finger slightly



inwards towards the chest wall and then press the nipple between the thumb and finger. She must repeatedly press and release. This repeated action would allow milk to drip out. She must repeat this action also from the sides of the areola to make sure that milk is expressed from all quadrants.

Expression must be continued for 3-5 minutes until the milk flow slows down. The mother must perform the expression form both breasts and it may take her about 15-20 minutes to express both breasts completely.

Counselling about Other Feeding Problems

- If a mother is breastfeeding her infant less than 8 times in 24 hours, advise her to increase the frequency of breastfeeding. Breastfeed as often and for as long as the infant wants, day and night.
 - If the infant receives other foods or drinks, counsel the mother about breastfeeding more, reducing the amount of the other foods or drinks, and if possible, stopping altogether. Advise her to feed the infant any other drinks from a cup, and not from a feeding bottle.
 - Advise mothers not to discard colostrum.
 - If mothers complain of inadequate milk output, encourage mothers to increase breast-feeding 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 mothers of adequacy of their lactation.
- * If the mother does not breastfeed at all, a breastfeeding counsellor may be able to help her to overcome difficulties and begin breastfeeding again.

Advise a mother who does not breastfeed about choosing and correctly preparing dairy/locally appropriate animal milk (discussed later in this module). Also advise her to feed the young infant with a cup, and not from a feeding bottle.

1.8 TEACH THE MOTHER TO TREAT NIPPLE AND BREAST PROBLEMS

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

Flat or inverted nipples: If the mother has flat or inverted nipples, the baby can have difficulty in attaching to the breast, which can result in decreased lactation and poor weight gain in the infant. The nipple should be everted with fingers before the infant is put to breast during a feed. This will help the infant to attach well onto the breast. After a few days the nipples will remain everted.

➤ ***Teach the mother to treat breast and nipple problems***

- If the nipple is flat or inverted, evert the nipple several times with fingers before each feed and put the baby to the breast.
- If nipple is sore, apply breast milk for soothing effect and ensure correct positioning and attachment of the baby. If mother continues to have discomfort, feed expressed breast milk with katori and spoon.
- If 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 breast abscess, advise mother 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.

Sore nipples: Sore nipples are almost always due to faulty attachment of the infant onto the mother's breast. The mother should be helped to ensure that attachment and position are correct. To alleviate the discomfort due to soreness, the mother should be advised to apply breast milk on the affected nipple. If the baby's sucking causes a lot of discomfort to the mother inspite of correct positioning, the mother should be advised to express the breast milk and feed it with a cup and spoon to the infant, till she is able once again able to breast feed the infant without much discomfort (this would usually take about 1-2 days).

Breast abscess: Breast abscess is often due to breast engorgement and rarely due to primary infection of the breast. The mother should be encouraged to feed from the unaffected breast and referred to a surgeon for treatment of the abscess. If the amount of milk from a single breast is inadequate, then undiluted animal milk with added sugar can be fed with cup and spoon.

Follow-up any young infant with a feeding problem in 2 days. This is especially important if you are recommending a significant change in the way the infant is fed.



EXERCISE C

Part 1 - Video

You will watch a video demonstration of the steps to help a mother improve her baby's positioning and attachment for breastfeeding.

Part 2 - Photographs

In this exercise you will study photographs to practice recognizing signs of good or poor positioning and attachment for breastfeeding. When everyone is ready, there will be a group discussion of each of the photographs. You will discuss what the doctor could do to help the mother improve the positioning and attachment for breastfeeding.

1. Study photographs numbered 24 through 26 of young infants at the breast. Look for each of the signs of good positioning. Compare your observations about each photograph with the answers in the chart below to help you learn what good or poor positioning looks like.
2. Now study photographs 27 through 29. In these photographs, look for each of the signs of good positioning and mark on the chart whether each is present. Also decide if the attachment is good.

Photo	Signs of Good Positioning				Comments on Attachment
	Infant's Head and Body Straight	Head and Body Facing Breast	Infant's Body Close to Mother's	Supporting Infant's Whole Body	
24	yes	yes	yes	yes	
25	yes	yes	yes	yes	
26	no - neck turned so not straight with body	no	no - turned away from mother's body	no	Not well attached: mouth not wide open, lower lip not turned out, areola equal above and below
27					
28					
29					

Tell a facilitator when you have completed this exercise.
 When everyone is ready, there will be a group discussion.

1.9 IMMUNIZE EVERY SICK YOUNG INFANT, AS NEEDED

Administer any immunizations that the young infant needs today. Tell the mother when to bring the infant for the next immunizations.

This module assumes that you have already been trained to give immunizations. You can receive more detailed descriptions of how to give immunizations from the Expanded Programme on Immunizations, World Health Organization. The course, *Immunization in Practice: A Guide for Doctors Who Give Vaccines*, trains doctors to give 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 the immunization status of every infant you treat at your 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 child'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 2 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 are possible side effects of DPT. They are usually not serious and need no special treatment. Fever means that the vaccine is working.

Tell the mother that if the child feels very hot or is in pain, she should give paracetamol (15 mg/kg/dose). She should **not** wrap the child up in more clothes than usual. She should **not** give hot fomentation for pain.

- * **Hepatitis B:** No side effects.

Tell the mother to give paracetamol if the fever is high

2.0 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 child. 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 infants 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 2 parts: “Essential Care” and “Treatment Instructions - Recommendations on How to give Specific Treatment for Severely Ill Young Infants”.

To use this chapter, first find the young infant’s classifications 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 MALNUTRITION

2.1 ESSENTIAL CARE

2.1.1 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 unconscious or convulsions) give antibiotics for total of 14 days.

If meningitis is not suspected, treat for at least 5 days. Continue the treatment until the infant has been well for at least 3 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 (100 mg/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 fluids 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 8 times per day. Give 15 ml of breastmilk per kilogram of body weight at each feed. Give a total of 120 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.

2.1.2 Essential Care for SEVERE DEHYDRATION

1. **If you can give intravenous (iv) treatment**

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

The section below gives Plan C for IV rehydrating of 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:

First, give 30 ml/kg in:	Then, give 70 ml/kg in:
1 hour (repeat again if the radial pulse is still weak or absent)	5 hours

- 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 ATLEAST 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

2.1.3 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 amoxycillin) and intramuscular gentamicin

3. Keep the young infant warm

2.1.4 Essential Care for SEVERE PERSISTENT DIARRHEA

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 infants with persistent diarrhea

- Encourage exclusive breast-feeding. Help mothers who are not exclusively breast feeding 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 10mg elemental zinc/day for 14 days

2.1.5 Essential Care for SEVERE DYSENTERY

In all young infants, examine for surgical causes for blood in stool (e.g. necrotizing enterocolitis or intussusception). Refer immediately if surgical cause suspected.

1. Treat dehydration

Give fluids according to diarrhoea classification and choose appropriate plan- A, B or C.

2. Give antibiotics

If the young infant does not have the classification POSSIBLE SERIOUS BACTERIAL INFECTION or SEVERE MALNUTRITION, or DEHYDRATION or LOW WEIGHT, give oral cotrimoxazole. In young infants who are younger than 1 month, premature or jaundiced, use oral cefixime (5 mg/kg/dose twice a day) or nalidixic acid (15 mg/kg per dose, three times a day) or norfloxacin (10 mg/kg/dose, twice a day) instead.

In young infants with POSSIBLE SERIOUS BACTERIAL INFECTION or SEVERE MALNUTRITION or DEHYDRATION or LOW WEIGHT, give IM Ampicillin and IM Gentamicin.

If there is no response in 2 days, REFER immediately.

3. Treat the Young infant to Prevent Low Blood Sugar

4. Keep the young infant warm

2.1.6 Essential Care for SEVERE MALNUTRITION

1. Give oral amoxycillin and im gentamicin

Treat for at least 5 days. Continue the treatment until the infant has been well for at least 3 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 suckling 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 7 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

2.2 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.

➤ **Give Intramuscular Antibiotics**

➤ Give first dose of both ampicillin and gentamicin intramuscularly.

WEIGHT	GENTAMICIN Dose: 5 mg per kg		AMPICILLIN Dose: 100 mg per kg (Vial of 500 mg mixed with 2.1 ml of sterile water for injection to give 500mg/2.5 ml or 200mg/1 ml)
	Undiluted 2 ml vial containing 20 mg = 2 ml at 10 mg/ml	OR Add 6 ml sterile water to 2 ml containing 80 mg* = 8 ml at 10 mg/ml	
1 kg		0.5 ml*	0.5 ml
2 kg		1.0 ml*	1.0 ml
3 kg		1.5 ml*	1.5 ml
4 kg		2.0 ml*	2.0 ml
5 kg		2.5 ml*	2.5 ml

**Avoid using undiluted 40 mg/ml gentamicin.*

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

Diazepam (anticonvulsant)

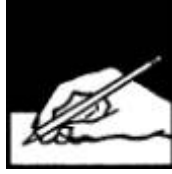
1. Give diazepam per rectally. Use a plastic syringe (the smallest available) without a needle. Put the diazepam in the syringe. Gently insert the syringe into the rectum. Inject the drug and keep the buttocks squeezed tight to prevent loss of the drug.
2. Dose of diazepam – 0.25 ml (1.25 mg)
3. In 10 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

Keep young infant warm

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



EXERCISE D

Manisha is 3 weeks old and weighs 2.5 kg. She became sick 2 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, severe chest indrawing, nasal flaring or grunting. She does not have a bulging fontanelle. Her temperature is 35.7°C. 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 2 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 husband is away and she must 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 (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 treatments that Manisha should get and the doses of the drugs:

3.0 COUNSEL THE MOTHER

After providing treatment to the sick young infant for any illness (s)he might have, you will need to counsel many mothers for feeding problems.

3.1 FEEDING RECOMMENDATIONS

This section of the module will explain the feeding recommendations for the young infant. The recommendations are listed in columns for 4 age groups. You need to understand all of the feeding recommendations, but you will not need to explain them all to any one mother. You will first ask questions to find out how her young infant is already being fed. Then you will give **only the advice that is needed**.

These feeding recommendations are appropriate both when the infant is sick and when the infant is healthy. Sick child visits are a good opportunity to counsel the mother on how to feed the young infant both during illness and when the young infant is well.

The best way to feed a child from birth up to 6 months of age is to breastfeed exclusively. Exclusive breastfeeding means that the child takes only breastmilk and no additional food, water, or other fluids (with the exception of medicines and vitamins, if needed). *Note: If other fluids and foods are already being given, counselling is needed.*

Breastfeed children at this age as often as they want, day and night. This will be at least 8 times in 24 hours.

The advantages of breastfeeding are:

Breastmilk contains exactly the nutrients needed by an infant. It contains: Protein, Fat, Lactose, Vitamins A and C, Iron

These nutrients are more easily absorbed from breastmilk than from other milk.

Breastmilk also contains essential fatty acids needed for the infant's growing brain, eyes, and blood vessels. These fatty acids are not available in other milks.

Breastmilk provides all the water an infant needs, even in a hot, dry climate.

Breastmilk protects an infant against infection. An infant cannot fight infection as well as an older child or an adult. Through breastmilk, an infant can share his mother's ability to fight infection. Exclusively breastfed infants are less likely to get diarrhoea, and less likely to die from diarrhoea or other infections. Breastfed infants are less likely to develop pneumonia, meningitis, and ear infections than non-breastfed infants.

Up to 6 Months of Age



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

Remember:

- Continue breastfeeding if the child is sick

Breastfeeding helps a mother and baby to develop a close, loving relationship.

Breastfeeding protects a mother's health. After delivery, breastfeeding helps the uterus return to its previous size. This helps reduce bleeding and prevent anaemia. Breastfeeding also reduces the mother's risk of ovarian cancer and breast cancer.

It is best not to give an infant below the age of 6 months any milk or food other than breastmilk. For example, do not give cow's milk, goat's milk, formula, cereal, or extra drinks such as tea, juices, or water. Reasons:

- Giving other food or fluid reduces the amount of breastmilk taken.
- Other food or fluid may contain germs from water or on feeding bottles or utensils. These germs can cause infection.
- Other food or fluid may be too dilute, so that the infant becomes malnourished.
- Other food or fluid may not contain enough Vitamin A.
- Iron is poorly absorbed from cow's and goat's milk.
- The infant may develop allergies.
- The infant may have difficulty digesting animal milk, so that the milk causes diarrhoea, rashes, or other symptoms. Diarrhoea may become persistent.

Exclusive breastfeeding will give an infant the best chance to grow and stay healthy

3.2 COUNSEL THE MOTHER ABOUT FEEDING PROBLEMS

3.2.1 IDENTIFY FEEDING PROBLEMS

It is important to complete the assessment of feeding and identify all the feeding problems *before* giving advice.

Based on the mother's answers to the feeding questions, identify any differences between the child's actual feeding and the recommendations. These differences are problems. Some examples of feeding problems are listed below.

EXAMPLES OF FEEDING PROBLEMS

<i>CHILD'S ACTUAL FEEDING</i>	<i>RECOMMENDED FEEDING</i>
A 1-month-old is given sugar water as well as breastmilk.	A 1-month-old should be given only breastmilk and no other food or fluid.
A 3 week old infant is breastfed 5 times a day	A 3 week old infant should be breastfed at least 8 times in 24 hours

In addition to differences from the feeding recommendations, some other problems may become apparent from the mother's answers. Examples of such problems are:

*** Difficulty breastfeeding**

The mother may mention that breastfeeding is uncomfortable for her, or that her child seems to have difficulty breastfeeding. If so, you will need to assess breastfeeding as described on the *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER* chart. The mother may have nipple or breast problems that need to be treated. You may find that the infant's positioning and attachment could be improved.

*** Use of feeding bottle**

Feeding bottles should not be used. They are often dirty, and germs easily grow in them. Fluids tend to be left in them and soon become spoiled or sour. The child may drink the spoiled fluid and become ill. Also, sucking on a bottle may interfere with the child's desire to breastfeed.

3.2.2 COUNSEL THE MOTHER ABOUT FEEDING

Since you have identified feeding problems, you will be able to limit your advice to what is most relevant to the mother.

GIVE RELEVANT ADVICE

If the feeding recommendations are being followed and there are no problems, praise the mother for her good feeding practices. Encourage her to keep feeding the child the same way during illness and health.

If you have found any of the feeding problems, give the mother the recommended advice.

If the mother has a breast problem, such as engorgement, sore nipples, or a breast abscess, advise her according to instructions in section 1.7 of this module.

If a young infant is receiving food or fluids other than breastmilk, the goal is to gradually change back to more or exclusive breastfeeding. Suggest giving more frequent, longer breastfeeds, day and night. As breastfeeding increases, the mother should gradually reduce other milk or food. Since this is an important change in the infant's feeding, be sure to ask the mother to return for follow-up in 2 days.

In some cases, changing to more or exclusive breastfeeding may be impossible (for example, if the mother never breastfed, if she must be away from her infant for long periods, or if she will not breastfeed for personal reasons). In such cases, the mother should be sure to correctly prepare cow's milk or other dairy/locally appropriate animal milk and use them within an hour to avoid spoilage.

To prepare cow's milk for young infants, mix 1 level teaspoon of sugar in 1 cup boiled whole cow's milk. Give plain water (preferably boiled and cooled/ filtered, if possible) to the infant between feeds.

A cup and spoon are better than a bottle. A cup is easier to keep clean and does not interfere with breastfeeding. To feed a baby by cup and spoon:

- Hold the baby sitting upright or semi-upright on your lap.
- Hold a spoonful of milk to the baby's lips. Tip the spoon so the liquid just reaches the baby's lips.
- The baby becomes alert and opens his mouth and eyes.
 - A low-birthweight baby takes the milk into his mouth with the tongue.
 - A full-term or older baby sucks the milk, spilling some of it.
- ***Do not pour the milk into the baby's mouth. Just hold the spoon to his lips and let him take it himself.***
- When the baby has had enough, he closes his mouth and will not take more.

3.3 USE GOOD COMMUNICATION SKILLS

When counselling mothers, it is important to use the following skills:

ASK and LISTEN: You have already learned the importance of asking questions to assess the infant's feeding. Listen carefully to find out what the mother is already doing for her infant. Then you will know what she is doing well, and what practices need to be changed.

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

ADVISE: Limit your advice to what is relevant to the mother at this time. Use language that the mother will understand. If possible, use pictures or real objects to help explain.

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

CHECK UNDERSTANDING: Ask questions to find out what the mother understands and what needs further explanation. Avoid asking leading questions (that is, questions which suggest the right answer) and questions that can be answered with a simple yes or no.

Examples of good checking questions are: "What will you feed your child?" "How often will you breastfeed her?" If you get an unclear response, ask another checking question. Praise the mother for correct understanding or clarify your advice as necessary.

3.4 USE A MOTHER'S CARD

A Mother's Card can be given to each mother to help her remember appropriate feeding recommendations, and when to return to the doctor. The Mother's Card has words and pictures that illustrate the main points of advice. This card is given as an annexure of the chart booklet. The card shows advice about foods, fluid, and signs to return immediately to the doctor. There is also a place to tick appropriate fluids for diarrhoea and record when to return for the next immunization.

There are many reasons a Mother's Card can be helpful:

- It will remind you or your staff of important points to cover when counselling mothers about foods, fluid, and when to return.
- It will remind the mother what to do when she gets home.
- The mother may show the card to other family members or neighbours, so more people will learn the messages it contains.
- The mother will appreciate being given something during the visit.
- Multivisit cards can be used as a record of treatments and immunizations given.

When reviewing a Mother's Card with a mother:

1. Hold the card so the mother can easily see the pictures, or allow her to hold it herself.
2. Explain each picture. Point to the pictures as you talk. This will help the mother remember what the pictures represent.
3. Circle or record information that is relevant to the mother. For example, circle the feeding advice for the infant's age. Circle the signs to return immediately. If the child has diarrhoea, tick the appropriate fluid(s) to give. Record the date of the next immunization needed.
4. Watch to see if the mother seems worried or puzzled. If so, encourage questions.
5. Ask the mother to tell you in her own words what she should do at home. Encourage her to use the card to help her remember.
6. Give her the card to take home. Suggest that she show it to others in her family.

If you cannot obtain a large enough supply of cards to give to every mother, keep several in the clinic to show to mothers.

3.5 ADVISE MOTHER HOW TO KEEP THE YOUNG INFANT WITH LOW WEIGHT OR LOW BODY TEMPERATURE WARM

➤ *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

3.6 ADVISE MOTHER TO GIVE HOME CARE

These are basic home care steps for ALL sick young infants. Teach each mother these steps.

➤ *Advise Mother to Give Home Care for the Young Infant*

➤FOOD



➤FLUIDS

Breastfeed frequently, as often and for as long as the infant wants, day and night, during sickness and health.

➤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.

3.7 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).

It is especially important to teach the mother the signs to return immediately. You learned these signs in the module *Identify Treatment*, and they are repeated in this section of this module. These signs mean that additional care is needed for serious illness.

FOLLOW-UP VISITS

In the module *Identify Treatment*, you learned that 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 child visit, tell the mother when to return for follow-up. Sometimes an infant may need follow-up for more than one problem. In such cases, 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.

FOLLOW-UP VISIT

Advise the mother to come for follow up at the earliest time listed for the child's problems

<i>Follow-up Visit</i>	
If the infant has:	Return for follow-up in:
LOCAL BACTERIAL INFECTION JAUNDICE DIARRHEA ANY FEEDING PROBLEM THRUSH	2 days
LOW WEIGHT FOR AGE	14 days

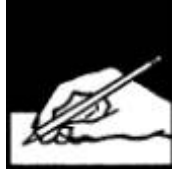
WHEN TO RETURN IMMEDIATELY

Also teach the mother *when to return immediately*. The signs mentioned below are particularly important signs to watch for. Teach the mother these signs. 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.

<i>When to Return Immediately:</i>
Advise the mother to return immediately if the young infant has any of these signs:
Breastfeeding or drinking poorly Becomes sicker Develops a fever or feels cold to touch Fast breathing Difficult breathing Palms and soles become yellow (if young infant has jaundice) Diarrhoea with blood in stool

NEXT WELL-CHILD VISIT

Remind the mother of the next visit 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 2 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.



EXERCISE E

In this exercise you will review the steps of some treatments for sick young infants.

Case : Vinod

1. In addition to treatment with antibiotics, Vinod needs treatment at home for his local infection, that is, the pustules on her buttocks. List below the steps that her mother should take to treat the skin pustules at home.

*

*

*

*

*
2. How often should his mother treat the skin pustules?
3. Vinod also needs "home care for the young infant." What are the 2 main points to advise the mother about home care?

*

*
4. What would you tell Vinod's mother about when to return?

When you have completed this exercise, please discuss your answers with a facilitator.

3.8 COUNSEL THE MOTHER ABOUT HER OWN HEALTH

During a sick infant visit, listen for any problems that the mother herself may be having. The mother may need treatment or referral for her own health problems.

- ***Counsel the Mother About Her Own Health***
 - If the mother is sick, provide care for her, or refer her for help.
 - If she has a breast problem (such as engorgement, sore nipples, breast infection), provide care for her or refer her for help.
 - Advise her to eat well to keep up her own strength and health.
 - Give iron folic acid tablets for a total of 100 days.
 - Make sure she has access to:
 - Family planning
 - Counselling on STD and AIDS prevention

4.0 FOLLOW UP

Some sick young infants need to return to the doctor for follow-up. Their mothers are told when to come for a follow-up visit (such as in 2 days, or 14 days). At a follow-up visit the doctor can see if the infant is improving on the drug or other treatment that was prescribed. Some young infants may not respond to a particular antibiotic and you may need to try a second drug. Follow-up is especially important for young infants with a feeding problem, to be sure they are being fed adequately and are gaining weight.

Because follow-up is important, your clinic should make special arrangements so that follow-up visits are convenient for mothers. If possible, mothers should not have to wait in the queue for a follow-up visit. ***Not charging for follow-up visits is another way to make follow-up convenient and acceptable for mothers.*** Some clinics use a system that makes it easy to find the records of children scheduled for follow-up.

At a follow-up visit, you should do different steps than at a child's initial visit for a problem. Treatments given at the follow-up visit are often different than those given at an initial visit.

Where is Follow-up Discussed on the Case Management Charts?

Follow-up instructions for young infants are on the *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER* chart.

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 see the slip. If your clinic keeps a chart on each patient, you may see that the child 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 child 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 child requires a full assessment. Check for possible bacterial infection / jaundice and feeding problem or malnutrition. Classify and treat the child 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.

* 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 a young infant who comes for follow-up has several problems and is getting worse, REFER THE YOUNG INFANT TO HOSPITAL.

Remember:
If a young infant has any new problem, you should assess the young infant as at an initial visit.

4.1 GIVE FOLLOW-UP CARE FOR THE SICK YOUNG INFANT

Follow-up visits are recommended for young infants who are classified as LOCAL BACTERIAL INFECTION, JAUNDICE, DIARRHOEA, FEEDING PROBLEM OR LOW WEIGHT (including thrush). Instructions for carrying out follow-up visits for the sick young infant age up to 2 months are on the *YOUNG INFANT* chart.

As with the sick child who comes for follow-up, a sick young infant is assessed differently at a follow-up visit than at an initial visit. Once you know that the young infant has been brought to the clinic for follow-up, ask whether there are any **new** problems. An infant who has a new problem should receive a full assessment as if it were an initial visit.

If the infant does not have a new problem, locate the section of the *YOUNG INFANT* chart with the heading "Give Follow-Up Care for the Sick Young Infant." Use the box that matches the infant's previous classification.

The instructions in the follow-up box (for the previous classification) tell how to assess the young infant. These instructions also tell the appropriate follow-up treatment to give. Do not use the classification tables for the young infant to classify the signs or determine treatment. There is one exception: If the young infant has diarrhoea, classify and treat dehydration as you would at an initial assessment.

4.1.1 LOCAL BACTERIAL INFECTION

When a young infant classified as having LOCAL BACTERIAL INFECTION returns for follow-up in 2 days, follow these instructions:

➤ **LOCAL BACTERIAL INFECTION**

After 2 days:

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

Look at the skin pustules. Are there 10 or more pustules or a big boil?

Look at the ear. Is it still discharging pus?

Treatment:

- If **umbilical pus or redness remains or is worse**, refer to hospital.
- If **umbilical pus and redness are improved**, tell the mother to continue giving the 5 days of antibiotic and continue treating the local infection at home.
- If there are 10 or more **skin pustules or a big boil**, refer to hospital
- If **skin pustules are improved**, tell the mother to continue giving the 5 days of antibiotic and continue treating the local infection at home.
- If **ear discharge persists**, continue wicking to dry the ear. Continue to give antibiotics to complete 5 days of treatment even if ear discharge has stopped.

To assess the young infant, look at the umbilicus or skin pustules. Then select the appropriate treatment.

- If **pus or redness remains or is worse**, refer the infant to hospital. Also refer if there are more pustules than before.
- If **pus and redness are improved**, tell the mother to complete the 5 days of antibiotic that she was given during the initial visit. Improved means there is less pus and it has dried. There is also less redness. Emphasize that it is important to continue giving the antibiotic even when the infant is improving. She should also continue treating the local infection at home for 5 days (cleaning and applying gentian violet to the skin pustules or umbilicus).

4.1.2 JAUNDICE

When a young infant classified as having JAUNDICE returns for follow-up in 2 days, follow these instructions:

➤ **JAUNDICE**

After 2 days:

Look for jaundice

- Are the palms and soles yellow?

➤ If palms and soles are yellow or age 14 days or more, refer to hospital

➤ If palms and soles are not yellow and age less than 14 days, advise home care and when to return immediately

4.1.3 DIARRHOEA

When a young infant classified as having DIARRHOEA returns for follow-up in 2 days, follow these instructions:

➤ **DIARRHOEA WITH SOME DEHYDRATION**

After 2 days:

Ask:

- Has the diarrhoea stopped ?

➤ If diarrhea persists, Assess the young infant for diarrhea (> See *ASSESS & CLASSIFY chart*) and manage as per initial visit.

➤ If diarrhoea stopped – reinforce exclusive breast feeding

Reassess the young infant for diarrhea as during the initial visit. Also, ask the mother the additional questions listed to determine whether the infant is improving.

- If the infant is **dehydrated**, use the classification table on the *YOUNG INFANT* chart to classify the dehydration and select a fluid plan.
- If the signs are the same or worse or new signs appear, refer the infant to hospital. If the infant has started passing blood in the stool, refer to hospital. If the young infant has developed fever, give intramuscular antibiotics before referral, as for POSSIBLE SERIOUS BACTERIAL INFECTION.

- If the infant's signs are improving, use the classification table on the *YOUNG INFANT* chart to classify the dehydration and select a fluid plan for home treatment.

4.1.4 FEEDING PROBLEM

When a young infant who had a feeding problem returns for follow-up in 2 days, follow these instructions:

➤ **FEEDING PROBLEM**

After 2 days:

Reassess feeding. ➤ See "Then Check for Feeding Problem or Low Weight" above.
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 young infant back again in 2 days.

Exception:

If you do not think that feeding will improve, or if the young infant has **lost weight**, refer the child.

Reassess the feeding by asking the questions in the young infant assessment box, "Then Check for Feeding Problem or Low Weight." Assess breastfeeding if the infant is breastfed.

Refer to the young infant's chart or follow-up note for a description of the feeding problem found at the initial visit and previous recommendations. Ask the mother how successful she has been carrying out these recommendations and ask about any problems she encountered in doing so.

- Counsel the mother about new or continuing feeding problems. Refer to the recommendations in the box "Counsel the Mother About Feeding Problems" on the *COUNSEL* chart and the box "Teach Correct Positioning and Attachment for Breastfeeding" on the *YOUNG INFANT* chart.

For example, you may have asked a mother to stop giving an infant drinks of water or juice in a bottle, and to breastfeed more frequently and for longer. You will assess how many times she is now breastfeeding in 24 hours and whether she has stopped giving the bottle. Then advise and encourage her as needed.

4.1.5 LOW WEIGHT

When a young infant who was classified as LOW WEIGHT returns for follow-up in 14 days, follow these instructions:

➤ **LOW WEIGHT**

After 14 days:

Weigh the young infant and determine if the infant is still low weight for age.

Reassess feeding. ➤ See "Then Check for Feeding Problem or Low Weight" above.

- If the infant is **no longer low weight for age**, praise the mother and encourage her to continue.
- If the infant is **still low weight for age, but is feeding well**, praise the mother. Ask her to have her infant weighed again within a month or when she returns for immunization.
- If the infant is **still low weight for age and still has a feeding problem**, counsel the mother about the feeding problem. Ask the mother to return again in **2** days.

Exception:

If you do not think that feeding will improve, or if the young infant has **lost weight**, refer to hospital.

Determine if the young infant is still low weight for age. Also reassess his feeding by asking the questions in the assessment box, "Then Check for Feeding Problem or Low Weight." Assess breastfeeding if the young infant is breastfed.

- If the young infant is **no longer low weight for age**, praise the mother for feeding the infant well. Encourage her to continue feeding the infant as she has been or with any additional improvements you have suggested.
- If the young infant is **still low weight for age, but is feeding well**, praise the mother. Ask her to have her infant weighed again within a month or when she returns for immunization. You will want to check that the infant continues to feed well and continues gaining weight. Many young infants who were low birthweight will still be low weight for age, but will be feeding and gaining weight well.
- If the young infant is **still low weight for age and still has a feeding problem**, counsel the mother about the problem. Ask the mother to return with her infant again in 2 days.

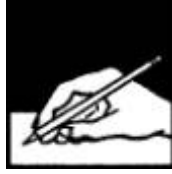
4.1.6 THRUSH

When a young infant who had thrush returns for follow-up in 2 days, follow these instructions:

- **THRUSH**
After 2 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 suckling**, refer to hospital.
- If **thrush is the same or better**, and if the infant is **feeding well**, continue gentian violet 0.25% for a total of 5 days.

Check the thrush and reassess the infant's feeding.

- If the **thrush is worse** or the infant has **problems with attachment or suckling**, 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 gentian violet. Stop using gentian violet after 5 days.



EXERCISE F

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 amoxicillin/cotrimoxazole.

1. Sashie is 5 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 amoxycillin to give at home, and learned how to clean the skin and apply gentian violet at home. She has returned for a follow-up visit after 2 days. Sashie 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 5-week-old infant, was brought to the clinic 2 days ago. During that visit he was classified with a **FEEDING PROBLEM** because he was not able to attach well to the breast. He weighed 3.25 kg (not low weight for age). He was breastfeeding 5 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 8 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 2 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 8 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 suckling effectively. You look in 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 a facilitator.
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**INTEGRATED
MANAGEMENT OF
NEONATAL AND
CHILDHOOD
ILLNESS**

Assess and Classify
the Sick Child
Age 2 Months up to 5 Years

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INTRODUCTION

The chart *ASSESS AND CLASSIFY THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS* describes how to assess and classify sick children so that signs of disease are not overlooked. According to the chart, you should ask the mother about the child's problem and check the child for general danger signs. Then ask about the four main symptoms: cough or difficult breathing, diarrhoea, fever and ear problem. A child who has one or more of the main symptoms could have a serious illness. When a main symptom is present, ask additional questions to help classify the illness. Check the child for malnutrition and anaemia. Also check the child's immunization status and assess other problems the mother has mentioned.

LEARNING OBJECTIVES

This section of the module will describe and allow you to practice the following skills:

- * Asking the mother about the child's problem.
- * Checking for general danger signs.
- * Asking the mother about the four main symptoms:
 - cough or difficult breathing
 - diarrhoea
 - fever
 - ear problem.
- * When a main symptom is present:
 - assessing the child further for signs related to the main symptom
 - classifying the illness according to the signs which are present or absent.
- * Checking for signs of malnutrition and anaemia and classifying the child's nutritional status.
- * Checking the child's immunization status and deciding if the child needs any immunizations today.
- * Assessing any other problems.

Your facilitator will tell you more about the *ASSESS & CLASSIFY* chart.

1.0 ASK THE MOTHER WHAT THE CHILD'S PROBLEMS ARE

Record what the mother tells you about the child's problems. Use good communication skills as you have learnt earlier.

2.0 CHECK FOR GENERAL DANGER SIGNS

Check ALL sick children for general danger signs.

A general danger sign is present if:

- the child is not able to drink or breastfeed
- the child vomits everything
- the child has had convulsions
- the child is lethargic or unconscious.

A child with a general danger sign has a serious problem. Most children with a general danger sign need URGENT referral to hospital. They may need lifesaving treatment with injectable antibiotics, oxygen or other treatments which may not be available in your clinic. Complete the rest of the assessment immediately. How to provide urgent treatment is described in the module *Identify Treatment*.

Here is the first box in the "Assess" column. It tells you how to check for general danger signs.

ASK THE MOTHER WHAT THE CHILD'S PROBLEMS ARE	
• Determine if this is an initial or follow-up visit for this problem - if follow-up visit, use the follow-up instructions on <i>TREAT THE CHILD</i> chart - if initial visit, assess the child as follows:	
CHECK FOR GENERAL DANGER SIGNS	
ASK: • Is the child able to drink or breastfeed? • Does the child vomit everything? • Has the child had convulsions?	LOOK: • See if the child is lethargic or unconscious.
A child with any general danger sign needs URGENT attention; complete the assessment and any pre-referral treatment immediately so referral is not delayed.	

When you check for general danger signs:

ASK: Is the child able to drink or breastfeed?

A child has the sign "not able to drink or breastfeed" if the child is not able to suck or swallow when offered a drink or breastmilk.

When you ask the mother if the child is able to drink, make sure that she understands the question. If she says that the child is not able to drink or breastfeed, ask her to describe what happens when she offers the child something to drink. For example, is the child able to take fluid into his mouth and swallow it? If you are not sure about the mother's answer, ask her to offer the child a drink of clean water or breastmilk. Look to see if the child is swallowing the water or breastmilk.

A child who is breastfed may have difficulty sucking when his nose is blocked. If the child's nose is blocked, clear it. If the child can breastfeed after his nose is cleared, the child does not have the danger sign, "not able to drink or breastfeed."

ASK: Does the child vomit everything?

A child who is not able to hold anything down at all has the sign "vomits everything." What goes down comes back up. A child who vomits everything will not be able to hold down food, fluids or oral drugs. A child who vomits several times but can hold down some fluids does not have this general danger sign.

When you ask the question, use words the mother understands. Give her time to answer. If the mother is not sure if the child is vomiting everything, help her to make her answer clear. For example, ask the mother how often the child vomits. Also ask if each time the child swallows food or fluids, does the child vomit? If you are not sure of the mother's answers, ask her to offer the child a drink. See if the child vomits.

ASK: Has the child had convulsions?

Ask the mother if the child has had convulsions during this current illness.

LOOK: See if the child is lethargic or unconscious.

A lethargic child is not awake and alert when he should be. He is drowsy and does not show interest in what is happening around him. Often the lethargic child does not look at his mother or watch your face when you talk. The child may stare blankly and appear not to notice what is going on around him.

An unconscious child cannot be wakened. He does not respond when he is touched, shaken or spoken to.

Ask the mother if the child seems unusually sleepy or if she cannot wake the child. Look to see if the child awakens when the mother talks or shakes the child or when you clap your hands.

Note: If the child is sleeping and has cough or difficult breathing, count the number of breaths first before you try to wake the child.

If the child has a general danger sign, complete the rest of the assessment immediately. This child has a severe problem. There must be no delay in his treatment.

* * *

Your facilitator will now show you the **Recording Form** for the sick child age 2 months up to 5 years.

* * *

3.0 ASSESS AND CLASSIFY COUGH OR DIFFICULT BREATHING

Respiratory infections can occur in any part of the respiratory tract such as the nose, throat, larynx, trachea, air passages or lungs. A child with cough or difficult breathing may have pneumonia or another severe respiratory infection. Pneumonia is an infection of the lungs. Both bacteria and viruses can cause pneumonia. In developing countries, pneumonia is often due to bacteria. The most common are *Streptococcus pneumoniae* and *Hemophilus influenzae*. Children with bacterial pneumonia may die from hypoxia (too little oxygen) or sepsis (generalized infection).

There are many children who come to the clinic with less serious respiratory infections. Most children with cough or difficult breathing have only a mild infection. For example, a child who has a cold may cough because nasal discharge drips down the back of the throat. Or, the child may have a viral infection of the bronchi called bronchitis. These children are not seriously ill. They do not need treatment with antibiotics. Their families can treat them at home.

Doctors need to identify the few, very sick children with cough or difficult breathing who need treatment with antibiotics. Fortunately, doctors can identify almost all cases of pneumonia by checking for these two clinical signs: fast breathing and chest indrawing.

When children develop pneumonia, their lungs become stiff. One of the body's responses to stiff lungs and hypoxia (too little oxygen) is fast breathing.

When the pneumonia becomes more severe, the lungs become even stiffer. Chest indrawing may develop. Chest indrawing is a sign of severe pneumonia.

3.1 ASSESS COUGH OR DIFFICULT BREATHING

A child with cough or difficult breathing is assessed for:

- How long the child has had cough or difficult breathing
- Fast breathing
- Chest indrawing
- Stridor in a calm child.

Here is the box in the "Assess" column that lists the steps for assessing a child for cough or difficult breathing:

THEN ASK ABOUT MAIN SYMPTOMS: Does the child have cough or difficult breathing?	
IF YES, ASK:	LOOK, LISTEN, FEEL:
• For how long?	• Count the breaths in one minute. • Look for chest indrawing. • Look and listen for stridor.
	CHILD MUST BE CALM

For ALL sick children, ask about cough or difficult breathing.

ASK: Does the child have cough or difficult breathing?

"Difficult breathing" is any unusual pattern of breathing. Mothers describe this in different ways. They may say that their child's breathing is "fast" or "noisy" or "interrupted."

If the mother answers NO, look to see if you think the child has cough or difficult breathing. If the child does not have cough or difficult breathing, ask about the next main symptom, diarrhoea. Do not assess the child further for signs related to cough or difficult breathing.

If the mother answers YES, ask the next question.

ASK: For how long?

A child who has had cough or difficult breathing for more than 30 days has a chronic cough. This may be a sign of tuberculosis, asthma, whooping cough or another problem.

COUNT the breaths in one minute.

Normal breathing rates are higher in children age 2 months up to 12 months than in children age 12 months up to 5 years. For this reason, the cut-off for identifying fast breathing is higher in children 2 months up to 12 months than in children age 12 months up to 5 years.

If the child is:	The child has fast breathing if you count:
2 months up to 12 months:	50 breaths per minute or more
12 months up to 5 years:	40 breaths per minute or more

Note: The child who is exactly 12 months old has fast breathing if you count 40 breaths per minute or more.

LOOK for chest indrawing.

For chest indrawing to be present, it must be clearly visible and present all the time. If you only see chest indrawing when the child is crying or feeding, the child does not have chest indrawing. Any chest indrawing, even if it is not severe, is an indicator of severe pneumonia in a child age 2 months up to 5 years.

LOOK and LISTEN for stridor.

Stridor is a harsh noise made when the child breathes IN. Stridor happens when there is a swelling of the larynx, trachea or epiglottis. This swelling interferes with air entering the lungs. It can be life-threatening when the swelling causes the child's airway to be blocked. A child who has stridor when calm has a dangerous condition.

To look and listen for stridor, look to see when the child breathes IN. Then listen for stridor. Put your ear near the child's mouth because stridor can be difficult to hear.

Sometimes you will hear a wet noise if the nose is blocked. Clear the nose, and listen again. A child who is not very ill may have stridor only when he is crying or upset. Be sure to look and listen for stridor when the child is calm.

You may hear a wheezing noise when the child breathes OUT. This is not stridor.

3.2 CLASSIFY COUGH OR DIFFICULT BREATHING

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

- SEVERE PNEUMONIA OR VERY SEVERE DISEASE or
- PNEUMONIA or
- NO PNEUMONIA: COUGH OR COLD

Here is the classification table for cough or difficult breathing.

SIGNS	CLASSIFY	TREATMENT
- Any general danger sign or - Chest indrawing or - Stridor in calm child	SEVERE PNEUMONIA OR VERY SEVERE DISEASE	➤ Give first dose of injectable chloramphenicol (if not possible give oral amoxycillin) ➤ Refer URGENTLY to hospital.
Fast breathing	PNEUMONIA	➤ Give Amoxycillin for 5 days. ➤ Soothe the throat and relieve the cough with a safe remedy if child is 6 months or older. ➤ Advise mother when to return immediately ➤ Follow up in 2 days.
No signs of pneumonia or very severe disease	NO PNEUMONIA: COUGH OR COLD	➤ If coughing more than 30 days, refer for assessment ➤ Soothe the throat and relieve the cough with a safe home remedy if child is 6 months or older ➤ Advise mother when to return immediately ➤ Follow up in 5 days if not improving

Here is a description of each classification for cough or difficult breathing.

SEVERE PNEUMONIA OR VERY SEVERE DISEASE

A child with cough or difficult breathing and with any of the following signs -- any general danger sign, chest indrawing or stridor in a calm child -- is classified as having SEVERE PNEUMONIA OR VERY SEVERE DISEASE.

A child with chest indrawing usually has severe pneumonia. Or the child may have another serious acute lower respiratory infection such as bronchiolitis, pertussis, or a wheezing problem.

Chest indrawing develops when the lungs become stiff. The effort the child needs to breathe in is much greater than normal.

A child with chest indrawing has a higher risk of death from pneumonia than the child who has fast breathing and no chest indrawing. If the child is tired, and if the effort the child needs to expand the stiff lungs is too great, the child's breathing slows down. Therefore, a child with chest indrawing may not have fast breathing. Chest indrawing may be the child's only sign of severe pneumonia.

Treatment

In developing countries, bacteria cause most cases of pneumonia. These cases need treatment with antibiotics. Viruses also cause pneumonia. But there is no reliable way to find out if the child has bacterial pneumonia or viral pneumonia. Therefore, whenever a child shows signs of pneumonia, give the child an appropriate antibiotic.

A child classified as having SEVERE PNEUMONIA OR VERY SEVERE DISEASE is seriously ill. He needs urgent referral to a hospital for treatments such as oxygen, a bronchodilator or injectable antibiotics. Before the child leaves your clinic, give the first dose of injectable chloramphenicol (if not possible give oral amoxicillin). The antibiotic helps prevent severe pneumonia from becoming worse. It also helps treat other serious bacterial infections such as sepsis or meningitis.

PNEUMONIA

A child with cough or difficult breathing who has fast breathing and no general danger signs, no chest indrawing and no stridor when calm is classified as having PNEUMONIA.

Treatment

Treat PNEUMONIA with oral amoxycillin. If amoxycillin is not available give oral cotrimoxazole. Show the mother how to give the antibiotic. Advise her when to return for follow-up and when to return immediately.

NO PNEUMONIA: COUGH OR COLD

A child with cough or difficult breathing who has no general danger signs, no chest indrawing, no stridor when calm and no fast breathing is classified as having NO PNEUMONIA: COUGH OR COLD.

Treatment

A child with NO PNEUMONIA: COUGH OR COLD does not need an antibiotic. The antibiotic will not relieve the child's symptoms. It will not prevent the cold from developing into pneumonia. But the mother brought her child to the clinic because she is concerned about her child's illness. Give the mother advice about good home care. Teach her to soothe the throat and relieve the cough with a safe remedy such as warm tea with sugar. Advise the mother to watch for fast or difficult breathing and to return if either one develops.

A child with a cold normally improves in one to two weeks. However, a child who has a chronic cough (a cough lasting more than 30 days) may have tuberculosis, asthma, whooping cough or another problem. Refer the child with a chronic cough to hospital for further assessment.

* * *



EXERCISE A

In this video exercise you will practice identifying general danger signs. You will also practice assessing cough or difficult breathing.

- For each of the children shown, answer the question:

	Is the child lethargic or unconscious?	
	YES	NO
Child 1		
Child 2		
Child 3		
Child 4		

Video Case Study: Watch the case study. Record the child's signs and symptoms on the Recording Form excerpt below. Then classify the child's illness.

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

Name: _____ Age: _____ Sex: M _____ F _____ Weight: _____ kg

Temperature: _____ °C

ASK: What are the child's problems? _____ Initial visit? ____ Follow-up Visit? ____

ASSESS (Circle all signs present)

CLASSIFY

CHECK FOR GENERAL DANGER SIGNS NOT ABLE TO DRINK OR BREASTFEED VOMITS EVERYTHING CONVULSIONS	LETHARGIC OR UNCONSCIOUS	General danger sign present? Yes___ No___ Remember to use danger sign when selecting classifications
DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? Yes___ No___ • For how long ? _____ Days • Count the breaths in one minute _____ breaths per minute. Fast breathing? • Look for chest indrawing. • Look and listen for stridor.		

4.0 ASSESS AND CLASSIFY DIARRHOEA

Diarrhoea is passage of frequent loose or watery stools. Mothers usually know when their children have diarrhoea. Diarrhoea is common in children especially in those between 6 months and 2 years of age. It is more common in children under 6 months who are drinking cow's milk or infant feeding formulas more so if they are bottle-fed.

Frequent passing of normal stool is not diarrhoea. The number of stool normally passed in a day varies with the diet and age of the child. In many regions diarrhoea is defined as 3 or more loose or watery stools in a 24 hrs period.

What are the Types of Diarrhoea?

Most diarrhoeas which cause dehydration are **loose or watery**. If an episode of diarrhoea lasts less than 14 days, it is **acute** diarrhoea. Acute watery diarrhoea causes dehydration and contributes to malnutrition. The death of a infant with acute diarrhoea is usually due to dehydration.

If the diarrhoea lasts 14 days ore more, it is **persistent** diarrhoea. Up to 20% of episodes of diarrhoea become persistent. Persistent diarrhoea often causes nutritional problems and contributes to deaths in children.

Diarrhoea with blood in the stool, with or without mucus, is called **dysentery**. The most common cause of dysentery is *Shigella* bacteria. Amoebic dysentery is not common in young children.

4.1 ASSESS DIARRHOEA

A child with diarrhoea is assessed for:

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

Look at the following steps for assessing a child with diarrhoea:

Does the child have diarrhoea?	
IF YES, ASK:	LOOK AND FEEL:
• For how long ? • Is there any blood in the stool?	• Look at the child's general condition. Is the child: - Lethargic or unconscious? - Restless and irritable? • Look for sunken eyes. • Offer the child fluid. Is the child: - Not able to drink or drinking poorly? - Drinking eagerly, thirsty? • Pinch the skin of the abdomen. - Does it go back: - Very slowly (longer than 2 seconds)? - Slowly?

Ask about diarrhoea in ALL children:

ASK: Does the child have diarrhoea?

If the mother answers NO, ask about the next main symptom, fever. You do not need to assess the child further for signs related to diarrhoea.

If the mother answers YES, or if the mother said earlier that diarrhoea was the reason for coming to the clinic, record her answer. Then assess the child for signs of dehydration, persistent diarrhoea and dysentery.

ASK: For how long?

Diarrhoea which lasts **14 days or more** is persistent diarrhoea.

Give the mother time to answer the question. She may need time to recall the exact number of days.

ASK: Is there blood in the stool?

Ask the mother if she has seen blood in the stools at any time during this episode of diarrhoea.

Next, check for signs of **dehydration**.

LOOK and **FEEL** for the following signs:

LOOK at the child's general condition. Is the child lethargic or unconscious? restless and irritable?

When you checked for general danger signs, you checked to see if the child was **Lethargic or unconscious**. If the child is lethargic or unconscious, he has a general danger sign. Remember to use this general danger sign when you classify the child's diarrhoea. Look to see if the child is restless and irritable.

LOOK for sunken eyes.

Note: In a severely malnourished child who is visibly wasted (that is, who has marasmus), the eyes may always look sunken, even if the child is not dehydrated. Even though sunken eyes is less reliable in a visibly wasted child, still use the sign to classify the child's dehydration.

OFFER the child fluid. Is the child not able to drink or drinking poorly? drinking eagerly, thirsty?

Ask the mother to offer the child some water in a cup or spoon. Watch the child drink.

A child is **not able to drink** if he is not able to suck or swallow when offered a drink.

A child may not be able to drink because he is lethargic or unconscious.

A child is *drinking poorly* if the child is weak and cannot drink without help. He may be able to swallow only if fluid is put in his mouth.

A child has the sign *drinking eagerly, thirsty* if it is clear that the child wants to drink. Look to see if the child reaches out for the cup or spoon when you offer him water. When the water is taken away, see if the child is unhappy because he wants to drink more.

If the child takes a drink only with encouragement and does not want to drink more, he does not have the sign "drinking eagerly, thirsty."

PINCH the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly?

Note: In a child with marasmus (severe malnutrition), the skin may go back slowly even if the child is not dehydrated. In an overweight child, or a child with oedema, the skin may go back immediately even if the child is dehydrated. Even though skin pinch is less reliable in these children, still use it to classify the child's dehydration.

EXERCISE B

In this exercise you will look at photographs of children with diarrhoea and identify signs of dehydration.

Part 1: Look at photographs 30 and 31 in the photograph booklet. Read the explanation for each photograph:

Photograph 30: This child's eyes are sunken.

Photograph 31: The skin pinch for this child goes back very slowly.

Part 2: Study photographs 32 through 36. Then write your answers to these questions:

Photograph 32: Look at the child's eyes. Are they sunken?

Photograph 33: Look at the child's eyes. Are they sunken?

Photograph 34-35: Look at the child's eyes. Are they sunken?

Photograph 36: Look at this photo of a skin pinch. Does the skin go back slowly or very slowly?

When you have identified the signs of dehydration in these photographs, discuss your answers with the facilitator.

4.2 CLASSIFY DIARRHOEA

There are three classification tables for classifying diarrhoea.

- * All children with diarrhoea are classified for dehydration.
- * If the child has had diarrhoea for 14 days or more, classify the child for persistent diarrhoea.
- * If the child has blood in the stool, classify the child for dysentery.

4.2.1 CLASSIFY DEHYDRATION

There are three possible classifications of dehydration in a child with diarrhoea:

- SEVERE DEHYDRATION
- SOME DEHYDRATION
- NO DEHYDRATION

Two of the following signs: • Lethargic or unconscious • Sunken eyes • Not able to drink or drinking poorly • Skin pinch goes back very slowly.	SEVERE DEHYDRATION	➤ If child has no other severe classification: - Give fluid for severe dehydration (Plan C). ➤ <i>If child also has another severe classification: Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way. Advise the mother to continue breastfeeding.</i> ➤ <i>If child is 2 years or older and there is cholera in your area, give doxycycline for cholera.</i>
Two of the following signs: • Restless, irritable • Sunken eyes • Drinks eagerly, thirsty • Skin pinch goes back slowly.	SOME DEHYDRATION	➤ Give fluid, zinc supplement and food for some dehydration (Plan B). ➤ <i>If child also has a severe classification: Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way. Advise the mother to continue breastfeeding.</i> ➤ Advise mother when to return immediately. ➤ Follow-up in 5 days if not improving.
Not enough signs to classify as some or severe dehydration.	NO DEHYDRATION	➤ Give fluid, zinc supplement and food to treat diarrhoea at home (Plan A). ➤ Advise mother when to return immediately. ➤ Follow-up in 5 days if not improving

To classify the child's dehydration, begin with the red (or top) row.

- If **two** or more of the signs in the red row are present, classify the child as having **SEVERE DEHYDRATION**.
- If **two** or more of the signs are not present in the red row, look at the yellow (or middle) row. If two or more of the signs are present in the yellow row, classify the child as having **SOME DEHYDRATION**.

- If **two** or more of the signs are not present in the red row or yellow row, classify the child as having NO DEHYDRATION. This child does not have enough signs to be classified as having SEVERE/ SOME DEHYDRATION. Some of these children may have one sign of dehydration or have lost fluids without showing signs.

* * *

Here is a description of each classification for dehydration:

SEVERE DEHYDRATION

If the child has two of the following signs -- lethargic or unconscious, sunken eyes, not able to drink or drinking poorly, skin pinch goes back very slowly -- classify the dehydration as SEVERE DEHYDRATION.

Treatment

Any child with dehydration needs extra fluids. A child classified with SEVERE DEHYDRATION needs fluids quickly. Treat with IV (intravenous) fluids. The box "Plan C: Treat Severe Dehydration Quickly" on the *TREAT* chart describes how to give fluids to severely dehydrated children. You will learn more about Plan C in the module *Treat The Child*.

SOME DEHYDRATION

If the child does not have signs of SEVERE DEHYDRATION, look at the next row. Does the child have signs of SOME DEHYDRATION?

If the child has two or more of the following signs – restless/ irritable, sunken eyes, drinks eagerly, thirsty, skin pinch goes back slowly -- classify the child's dehydration as SOME DEHYDRATION.

Treatment

A child who has SOME DEHYDRATION needs fluid and foods. Treat the child with ORS solution. In addition to fluid, the child with SOME DEHYDRATION needs food. Breastfed children should continue breastfeeding. Other children should receive their usual milk or some nutritious food after 4 hours of treatment with ORS. Children with some dehydration are also given daily dose of zinc supplement for 14 days. Zinc should be given as soon as the child can eat and has successfully completed 4 hours of rehydration.

This treatment is described in the box "Plan B: Treat Some Dehydration With ORS" on the *TREAT* chart.

NO DEHYDRATION

A child who does not have two or more signs in either the red or yellow row is classified as having NO DEHYDRATION.

Treatment

This child needs extra fluid to prevent dehydration. A child who has NO DEHYDRATION needs home treatment. The 3 rules of home treatment are:

1. Give extra fluid
2. Give zinc supplement daily for 14 days. The first tablet should be given in the health centre, demonstrating to the mother how to dissolve it in water or breastmilk, if necessary.
3. Continue feeding
4. When to return.

"Plan A: Treat Diarrhoea At Home" describes what fluids to teach the mother to use and how much she should give. A child with NO DEHYDRATION also needs zinc supplement, food and the mother needs advice about when to return to the clinic. Feeding recommendations and information about when to return are on the chart *COUNSEL THE MOTHER*.



EXERCISE C

In this exercise, you will practice assessing and classifying dehydration in a child with diarrhoea. Read the following case study. Use the dehydration classification table in the chart.

Case: Pano has had diarrhoea for five days. He has no blood in the stool. He is irritable. His eyes are sunken. His father and mother also think that Pano's eyes are sunken. The doctor offers Pano some water, and the child drinks eagerly. When the doctor pinches the skin on the child's abdomen, it goes back slowly. Record the child's signs and classification for dehydration on the Recording Form.

DOES THE CHILD HAVE DIARRHOEA ?		Yes ____ No ____
• For how long ? _____ Days • Is there any blood in the stool ?	• Look at the child's general condition. Is the child: Lethargic or unconscious? Restless and irritable? • Look for sunken eyes. • Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? • Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly?	

Circle the child's signs on the classification table below to show how you selected the child's classification.

Two of the following signs: • Lethargic or unconscious • Sunken eyes • Not able to drink or drinking poorly • Skin pinch goes back very slowly.	SEVERE DEHYDRATION
Two of the following signs: • Restless, irritable • Sunken eyes • Drinks eagerly, thirsty • Skin pinch goes back slowly.	SOME DEHYDRATION
Not enough signs to classify as some or severe dehydration	NO DEHYDRATION

4.2.2 CLASSIFY PERSISTENT DIARRHOEA

After you classify the child's dehydration, classify the child for persistent diarrhoea if the child has had diarrhoea for 14 days or more. There are two classifications for persistent diarrhoea:

- SEVERE PERSISTENT DIARRHOEA
- PERSISTENT DIARRHOEA

• Dehydration present	SEVERE PERSISTENT DIARRHOEA	➤ <i>Treat dehydration before referral unless the child has another severe classification.</i> ➤ <i>Refer to hospital</i>
• ☐ No Dehydration	PERSISTENT DIARRHOEA	➤ Advise the mother on feeding a child who has PERSISTENT DIARRHOEA ➤ Give single dose of vitamin A ➤ Give zinc sulphate daily for 14 days. ➤ Follow-up in 5 days.

SEVERE PERSISTENT DIARRHOEA

If a child has had diarrhoea for 14 days or more and also has some or severe dehydration, classify the child's illness as SEVERE PERSISTENT DIARRHOEA.

Treatment

Children with diarrhoea lasting 14 days or more who are also dehydrated need referral to hospital. These children need special attention to help prevent loss of fluid. They may also need a change in diet. They may need laboratory tests of stool samples to identify the cause of the diarrhoea.

Treat the child's dehydration before referral unless the child has another severe classification. Treatment of dehydration in children with severe disease can be difficult. These children should be treated in a hospital.

PERSISTENT DIARRHOEA

A child who has had diarrhoea for 14 days or more and who has no signs of dehydration is classified as having PERSISTENT DIARRHOEA.

Treatment

Special feeding is the most important treatment for persistent diarrhoea. Feeding recommendations for persistent diarrhoea are explained in the module *Counsel The Mother*. Children with persistent diarrhoea are also given single dose of vitamin A and a daily dose of zinc sulphate for 14 days.

4.2.3 CLASSIFY DYSENTERY

There is only one classification for dysentery:

Classify a child with diarrhoea and blood in the stool as having DYSENTERY.

• Blood in the stool.	DYSENTERY	➤ Give ciprofloxacin for 3 days. ➤ Give zinc supplements daily for 14 days. ➤ Follow-up in 2 days
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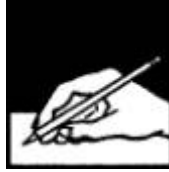
Treatment

Treat the child's dehydration. Also give ciprofloxacin for Shigella because:

- *Shigella* cause about 60% of dysentery cases seen in clinics.
 - *Shigella* cause nearly all cases of life-threatening dysentery.
- Finding the actual cause of the dysentery requires a stool culture. It can take at least 2 days to obtain the laboratory test results.

Note: A child with diarrhoea may have one or more classifications for diarrhoea. Record any diarrhoea classifications the child has in the Classify column on the Recording Form. For example, this child was classified as having NO DEHYDRATION and DYSENTERY. Here is how the doctor recorded his classifications:

DOES THE CHILD HAVE DIARRHOEA ?		Yes ☒ No ☐
• For how long ? <u>2</u> Days • Is there any blood in the stool ? ☒	• Look at the child's general condition. Is the child: Lethargic or unconscious? Restless and irritable? • Look for sunken eyes. • Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? • Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly?	No Dehydration Dysentery



EXERCISE D

In this exercise, you will practice classifying a child with diarrhoea. Read the following case study. Record the child's signs and classify them on the Recording Form. Refer to your chart.

Case: Maya

Maya is at the clinic today because she has had diarrhoea for 4 days. She is 25 months old. She weighs 9 kg. Her temperature is 37.0°C. Maya has no general danger signs. She does not have cough or difficult breathing.

The doctor said to the mother, "When Maya has diarrhoea, is there any blood in the stool?" The mother said, "No." The doctor checked for signs of dehydration. Maya is not lethargic or unconscious. She is not restless or irritable. Her eyes are not sunken. Maya drinks eagerly when offered some water. Her skin pinch goes back immediately. Record Maya's signs on the Recording Form and classify them.

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

Name: _____ Age: _____ Sex: M _____ F _____ Weight: _____ kg

Temperature: _____ °C

ASK: What are the child's problems? _____ Initial visit? _____ Follow-up Visit? _____

ASSESS (Circle all signs present)

CLASSIFY

CHECK FOR GENERAL DANGER SIGNS NOT ABLE TO DRINK OR BREASTFEED LETHARGIC OR UNCONSCIOUS VOMITS EVERYTHING CONVULSIONS	General danger sign present? Yes _____ No _____ Remember to use danger sign when selecting classifications
DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? Yes _____ No _____ • For how long ? _____ Days • Count the breaths in one minute _____ breaths per minute. Fast breathing? • Look for chest indrawing. • Look and listen for stridor.	
DOES THE CHILD HAVE DIARRHOEA ? Yes _____ No _____ • For how long ? _____ Days • Is there blood in the stool? • Look at the child's general condition. Is the child: Lethargic or unconscious? Restless and irritable • Look for sunken eyes. • Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? • Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly?	



EXERCISE E

In this video exercise, you will see a demonstration of how to assess and classify a child with diarrhoea. You will see examples of signs and practice identifying them. Then you will see a case study and practice assessing and classifying the child's illness.

- For each of the children shown, answer the question:

	Does the child have sunken eyes?	
	YES	NO
Child 1		
Child 2		
Child 3		
Child 4		
Child 5		
Child 6		

- For each of the children shown, answer the question:

	Does the skin pinch go back:		
	very slowly?	slowly?	immediately?
Child 1			
Child 2			
Child 3			
Child 4			
Child 5			

Video Case Study: Watch the case study and record the child's signs on this Recording Form. Then classify the illness.

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

Name: _____ Age: _____ Sex: M _____ F _____ Weight: _____ kg

Temperature: _____ °C

ASK: What are the child's problems? _____ Initial visit? ____ Follow-up Visit? ____

ASSESS (Circle all signs present)

CLASSIFY

CHECK FOR GENERAL DANGER SIGNS NOT ABLE TO DRINK OR BREASTFEED VOMITS EVERYTHING CONVULSIONS LETHARGIC OR UNCONSCIOUS	General danger sign present? Yes ____ No ____ Remember to use danger sign when selecting classifications
DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? Yes ____ No ____ • For how long ? _____ Days • Count the breaths in one minute _____ breaths per minute. Fast breathing? • Look for chest indrawing. • Look and listen for stridor.	
DOES THE CHILD HAVE DIARRHOEA ? Yes ____ No ____ • For how long ? _____ Days • Is there blood in the stool? • Look at the child's general condition. Is the child: Lethargic or unconscious? Restless and irritable • Look for sunken eyes. • Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? • Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly?	

At the end of this video exercise, there will be a group discussion.

5.0 ASSESS AND CLASSIFY FEVER

A child with fever may have malaria, measles or another severe disease. Or, a child with fever may have a simple cough or cold or other viral infection.

MALARIA: Malaria is caused by four species of plasmodia transmitted through the bite of female anopheles mosquitoes, the dangerous one being *Plasmodium falciparum*. The most common species is *Plasmodium vivax*.

Fever is the main symptom of malaria. It can be present all the time or go away and return at regular intervals. Other signs of malaria are shivering, sweating and vomiting.

Signs of malaria can overlap with signs of other illnesses. For example, a child may have malaria and cough with fast breathing, a sign of pneumonia. This child needs treatment for both falciparum malaria and pneumonia. Children with malaria may also have diarrhoea. They need an antimalarial and treatment for the diarrhoea.

In areas with very high malaria transmission, malaria is a major cause of death in children. A case of uncomplicated malaria can develop into severe malaria as soon as 24 hours after the fever first appears. Severe malaria is malaria with complications such as cerebral malaria or severe anaemia. The child can die if he does not receive urgent treatment.

Deciding Malaria Risk: To classify and treat children with fever, you must know the malaria risk in your area. The National Anti-Malaria Program classifies areas as high or low malaria risk areas.

* * *

MEASLES: Fever and a generalized rash are the main signs of measles. Measles is highly infectious. Maternal antibody protects young infants against measles for about 6 months. Then the protection gradually disappears. Most cases occur in children between 6 months and 2 years of age. Overcrowding and poor housing increase the risk of measles occurring early.

Measles is caused by a virus. It infects the skin and the layer of cells that line the lung, gut, eye, mouth and throat. The measles virus damages the immune system for many weeks after the onset of measles. This leaves the child at risk for other infections.

Complications of measles occur in about 30% of all cases. The most important are:

- diarrhoea (including dysentery and persistent diarrhoea)
- pneumonia
- stridor
- mouth ulcers
- ear infection and
- severe eye infection (which may lead to corneal ulceration and blindness).

Encephalitis occurs in about one in one thousand cases. A child with encephalitis may have a general danger sign such as convulsions or lethargic or unconscious.

Measles contributes to malnutrition because it causes diarrhoea, high fever and mouth ulcers. These problems interfere with feeding. Malnourished children are more likely to have severe complications due to measles. This is especially true for children who are deficient in vitamin A. One in ten severely malnourished children with measles may die. For this reason, it is very important to help the mother to continue to feed her child during measles.

5.1 ASSESS FEVER

A child has the main symptom fever if:

- * the child has a history of fever or
- * the child feels hot or
- * the child has an axillary temperature of 37.5°C or above.

Decide the malaria risk (high or low).

Then assess a child with fever for:

- how long the child has had fever
- history of measles
- stiff neck
- bulging fontanelle
- runny nose
- signs suggesting measles -- which are generalized rash and one of these: cough, runny nose, or red eyes.
- if the child has measles now or within the last 3 months, assess for signs of measles complications. They are: mouth ulcers, pus draining from the eye and clouding of the cornea.

The box shown below lists the steps for assessing a child for fever. There are two parts to the box. The main box describes how to assess the child for signs of malaria, measles, meningitis and other causes of fever. The extended arm of the main box is connected to another box which describes how to assess the child for signs of measles complications if the child has measles now or within the last 3 months.

IF YES:

Decide Malaria Risk: High Low
Make a smear/perform RDT

THEN ASK:

- Fever for how long?
- If more than 7 days, has fever been present every day?
- Has the child had measles within the last 3 months?

LOOK AND FEEL:

- Look or feel for stiff neck.

- Look and feel for bulging fontanelle.

- Look for runny nose.

Look for signs of MEASLES

- Generalized rash and

- One of these: cough, runny nose or red eyes.

If the child has measles now or within the last 3 months:

- Look for mouth ulcers. Are they deep and extensive?
- Look for pus draining from the eye.
- Look for clouding of the cornea.

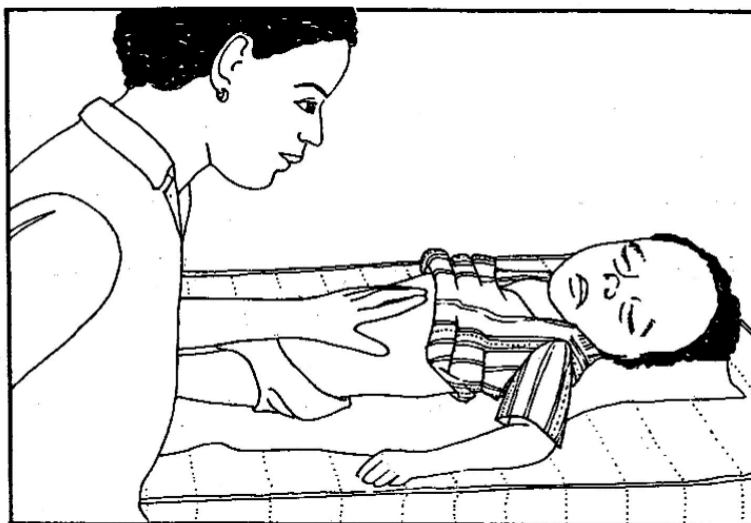
Ask about (or measure) fever in ALL sick children.

ASK: Does the child have fever?

Check to see if the child has a history of fever, feels hot or has a temperature of 37.5°C or above.

The child has a history of fever if the child has had any fever with this illness. Use words for "fever" that the mother understands. Make sure the mother understands what fever is. For example, ask the mother if the child's body has felt hot. Feel the child's abdomen or axilla and determine if the child feels hot.

Look to see if the child's temperature was measured today and recorded on the child's chart. If the child has a temperature of 37.5°C or above, the child has fever. If the child's temperature has not been measured, and you have a thermometer, measure the child's temperature.



If the child does not have fever (by history, feels hot or temperature 37.5°C or above), tick (_) NO on the Recording Form. Ask about the next main symptom, ear problem. Do not assess the child for signs related to fever.

If the child has fever (by history, feels hot or temperature 37.5°C or above), assess the child for additional signs related to fever. Assess the child's fever even if the child does not have a temperature of 37.5°C or above or does not feel hot now. History of fever is enough to assess the child for fever.

DECIDE Malaria Risk: high or low

Decide if the malaria risk is high or low. Circle the malaria risk (high or low) on the Recording Form. You will use this information when you classify the child's fever.

ASK: For how long? If more than 7 days, has fever been present every day?

Ask the mother how long the child has had fever. If the fever has been present for more than 7 days, ask if the fever has been present every day.

Most fevers due to viral illnesses go away within a few days. A fever which has been present every day for more than 7 days can mean that the child has a more severe disease such as typhoid fever. Refer this child for further assessment.

ASK: Has the child had measles within the last 3 months?

Measles damages the child's immune system and leaves the child at risk for other infections for many weeks.

A child with fever and a history of measles within the last 3 months may have an infection due to complications of measles such as an eye infection.

LOOK or FEEL for stiff neck.

A child with fever and stiff neck may have meningitis. A child with meningitis needs urgent treatment with injectable antibiotics and referral to a hospital.

While you talk with the mother during the assessment, look to see if the child moves and bends his neck easily as he looks around. If the child is moving and bending his neck, he does not have a stiff neck.



If you did not see any movement, or if you are not sure, draw the child's attention to his umbilicus or toes. For example, you can shine a flashlight on his toes or umbilicus or tickle his toes to encourage the child to look down. Look to see if the child can bend his neck when he looks down at his umbilicus or toes.

If you still have not seen the child bend his neck himself, ask the mother to help you lie the child on his back. Lean over the child, gently support his back and shoulders with one hand. With the other hand, hold his head. Then carefully bend the head forward toward his chest. If the neck bends easily, the child does not have stiff neck. If the neck feels stiff and there is resistance to bending, the child has a stiff neck. Often a child with a stiff neck will cry when you try to bend the neck.

FEEL for bulging fontanelle

The fontanelle is open for most of the period of infancy before it is closed by the growth of the surrounding bones. If the fontanelle is open, feel for bulging fontanelle just as you did for young infants.

LOOK for runny nose.

A runny nose in a child with fever may mean that the child has a common cold. If the child has a runny nose, ask the mother if the child has had a runny nose only with this illness. If she is not sure, ask questions to find out if it is an acute or chronic runny nose.

When malaria risk is low , a child with fever and a runny nose does not need an antimalarial. This child's fever is probably due to the common cold.

LOOK for signs suggesting MEASLES.

Assess a child with fever to see if there are signs suggesting measles. Look for a generalized rash and for one of the following signs: cough, runny nose, or red eyes.

Generalized rash

In measles, a red rash begins behind the ears and on the neck. It spreads to the face. During the next day, the rash spreads to the rest of the body, arms and legs. After 4 to 5 days, the rash starts to fade and the skin may peel. Some children with severe infection may have more rash spread over more of the body. The rash becomes more discoloured (dark brown or blackish), and there is more peeling of the skin.

A measles rash does not have vesicles (blisters) or pustules. The rash does not itch. Do not confuse measles with other common childhood rashes such as chicken pox, scabies or heat rash. (The chicken pox rash is a generalized rash with vesicles. Scabies occurs on the hands, feet, ankles, elbows, buttocks and axilla. It also itches. Heat rash can be a generalized rash with small bumps and vesicles which itch. A child with heat rash is not sick.) You can recognize measles more easily during times when other cases of measles are occurring in your community.

Cough, Runny Nose, or Red Eyes

To classify a child as having measles, the child with fever must have a generalized rash AND one of the following signs: cough, runny nose, or red eyes. The child has "red eyes" if there is redness in the white part of the eye. In a healthy eye, the white part of the eye is clearly white and not discoloured.

EXERCISE F

Part 1: Study the photographs numbered 37 through 40. They show examples of common childhood rashes. Read the explanation for each of these photographs.

Photograph 37: This child has the generalized rash of measles and red eyes.

Photograph 38: This example shows a child with heat rash. It is not the generalized rash of measles.

Photograph 39: This is an example of scabies. It is not the generalized rash of measles.

Photograph 40: This is an example of a rash due to chicken pox. It is not a measles rash.

Part 2: Study photographs 41 through 50 showing children with rashes. For each photograph, tick whether the child has the generalized rash of measles. Use the following answer sheet:

	Is the generalized rash of measles present?	
	YES	NO
Photograph 41		
Photograph 42		
Photograph 43		
Photograph 44		
Photograph 45		
Photograph 46		
Photograph 47		
Photograph 48		
Photograph 49		
Photograph 50		

If the child has MEASLES now or within the last 3 months: Look to see if the child has mouth or eye complications. Other complications of measles such as stridor in a calm child, pneumonia, and diarrhoea are assessed earlier; malnutrition and ear infection are assessed later.

LOOK for mouth ulcers. Are they deep and extensive?

Look inside the child's mouth for mouth ulcers. Ulcers are painful open sores on the inside of the mouth and lips or the tongue. They may be red or have white coating on them. In severe cases, they are deep and extensive. When present, mouth ulcers make it difficult for the child with measles to drink or eat.

Mouth ulcers are different than the small spots called Koplik spots. Koplik spots occur in the mouth inside the cheek during early stages of the measles infection. Koplik spots are small, irregular, bright red spots with a white spot in the center. They do not interfere with drinking or eating. They do not need treatment.

EXERCISE G

In this exercise, you will look at photographs of children with measles. You will practice identifying mouth ulcers.

Part 1: Study photographs 51 through 53, and read the explanation for each one.

Photograph 51: This is an example of a normal mouth. The child does not have mouth ulcers.

Photograph 52: This child has Koplik spots. These spots occur in the mouth inside the cheek early in a measles infection. They are not mouth ulcers.

Photograph 53: This child has a mouth ulcer.

Part 2: Study photographs 54 through 56 showing children with measles. Look at each photograph and tick if the child has mouth ulcers.

	Does the child have mouth ulcers?	
	YES	NO
Photograph 54		
Photograph 55		
Photograph 56		

Tell your facilitator when you are ready to discuss your answers to this exercise.

LOOK for pus draining from the eye.

Pus draining from the eye is a sign of conjunctivitis. Conjunctivitis is an infection of the conjunctiva, the inside surface of the eyelid and the white part of the eye. If you do not see pus draining from the eye, look for pus on the conjunctiva or on the eyelids.

Often the pus forms a crust when the child is sleeping and seals the eye shut. It can be gently opened with clean hands. Wash your hands after examining the eye of any child with pus draining from the eye.

LOOK for clouding of the cornea.

The cornea is usually clear. When clouding of the cornea is present, there is a hazy area in the cornea. Look carefully at the cornea for clouding. The cornea may appear clouded or hazy. The clouding may occur in one or both eyes.

Corneal clouding is a dangerous condition. The corneal clouding may be due to vitamin A deficiency which has been made worse by measles. If the corneal clouding is not treated, the cornea can ulcerate and cause blindness. A child with clouding of the cornea needs urgent treatment with vitamin A.

A child with corneal clouding may keep his eyes tightly shut when exposed to light. The light may cause irritation and pain to the child's eyes. To check the child's eye, wait for the child to open his eye. Or, gently pull down the lower eyelid to look for clouding.

If there is clouding of the cornea, ask the mother how long the clouding has been present. If the mother is certain that clouding has been there for some time, ask if the clouding has already been assessed and treated at the hospital. If it has, you do not need to refer this child again for corneal clouding.

EXERCISE H

In this photograph exercise, you will practice identifying eye complications of measles.

Part 1: Study photographs 57 through 59.

- Photograph 57: This is a normal eye showing the iris, pupil, conjunctiva and cornea. The child has been crying. There is no pus draining from the eye.
- Photograph 58: This child has pus draining from the eye.
- Photograph 59: This child has clouding of the cornea.

Part 2: Now look at photographs 60 through 66. For each photograph, answer each question by writing "yes" or "no" in each column. If you cannot decide if pus is draining from the eye or if clouding of the cornea is present, write "not able to decide."

	Does the child have:	
	Pus draining from the eye?	Clouding of the cornea?
Photograph 60		
Photograph 61		
Photograph 62		
Photograph 63		
Photograph 64		
Photograph 65		
Photograph 66		

Tell your facilitator when you are ready to discuss your answers to this exercise.

5.2 CLASSIFY FEVER

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

If the child has signs of both fever and measles, classify the child for fever and for measles.

There are two fever classification tables on the *ASSESS & CLASSIFY* chart. One is for classifying fever when the risk of malaria is high. The other is for classifying fever when the risk of malaria is low. To classify fever, you must know if the malaria risk is high or low. Then you select the appropriate classification table.

HIGH MALARIA RISK:

There are two possible classifications of fever when the malaria risk is high.

- VERY SEVERE FEBRILE DISEASE
- MALARIA

- Any general danger sign or - Stiff neck or - Bulging fontanelle.	VERY SEVERE FEBRILE DISEASE	➤ Give first dose of IM quinine after RDT / smear. ➤ Give first dose of IV or IM chloramphenicol (If not possible, give oral amoxycillin). ➤ Treat the child to prevent low blood sugar. ➤ Give one dose of paracetamol in clinic for high fever (temp. 38.5°C or above). ➤ Refer URGENTLY to hospital.
Fever (by history or feels hot or temperature 37.5°C or above).	MALARIA	➤ Give oral antimalarials for HIGH malaria risk area after RDT/ smear ➤ Give one dose of paracetamol in clinic for high fever (temp. 38.5°C or above) ➤ Advise mother when to return immediately. ➤ Follow-up in 2 days. ➤ If fever is present every day for more than 7 days, refer for assessment.

VERY SEVERE FEBRILE DISEASE (High Malaria Risk)

If the child with fever has any general danger sign, bulging fontanelle or a stiff neck, classify the child as having VERY SEVERE FEBRILE DISEASE.

Treatment

A child with fever and any general danger sign or stiff neck may have meningitis, severe malaria (including cerebral malaria) or sepsis. It is not possible to distinguish between these severe diseases without laboratory tests. A child classified as having VERY SEVERE FEBRILE DISEASE needs urgent treatment and referral. Before referring urgently, you will give several treatments for the possible severe diseases.

Give the child an injection of quinine for malaria after RDT/ making a blood smear. Also give first dose of injectable chloramphenicol (If not possible give oral amoxycillin) for meningitis or other severe bacterial infection. You should also treat the child to prevent low blood sugar. Also give paracetamol if there is a high fever.

MALARIA (*High Malaria Risk*)

If a general danger sign or stiff neck is not present, look at the yellow row. Because the child has a fever (by history, feels hot, or temperature 37.5°C or above) in a high malaria risk area, classify the child as having MALARIA.

When the risk of malaria is high, the chance is also high that the child's fever is due to malaria.

Treatment

Give Oral antimalarials for high malaria risk areas according to the National Anti-Malaria Program policy.

- If smear or RDT is positive for *P.falciparum* give Artesunate, Sulpha-pyrimethamine, and Primaquine on day 1; and Artesunate on Day 2 and Day 3.
- If smear is positive for *P.vivax* give chloroquine for 3 days and primaquine for 14 days.
- If both RDT and blood smear is **negative** or not available, give chloroquine for 3 days.

Give paracetamol to a child with high fever (axillary temperature of 38.5°C or above).

Most viral infections last less than a week. A fever that persists every day for more than 7 days may be a sign of typhoid fever or other severe disease. If the child's fever has persisted every day for more than 7 days, refer the child for additional assessment.

FOR LOW MALARIA RISK

If risk of malaria in your area is low, use the Low Malaria Risk classification table.

There are three possible classifications of fever in a child with low malaria risk.

- VERY SEVERE FEBRILE DISEASE
- MALARIA
- FEVER - MALARIA UNLIKELY

- Any general danger sign or - Stiff neck or - Bulging fontanelle.	VERY SEVERE FEBRILE DISEASE	➤ Give first dose of IM quinine after making smear. ➤ Give first dose of IV or IM chloramphenicol (if not possible, give oral amoxycillin). ➤ Treat the child to prevent low blood sugar. ➤ Give one dose of paracetamol in clinic for high fever (temp 38.5°C or above). ➤ Refer URGENTLY to hospital[#].
NO runny nose and NO measles and NO other cause of fever.	MALARIA	➤ Give oral antimalarials for LOW malaria risk area after making smear. ➤ Give one dose of paracetamol in clinic for high fever (temp. 38.5°C or above) . ➤ Advise mother when to return immediately. ➤ Follow-up in 2 days if fever persists. ➤ If fever is present every day for more than 7 days, refer for assessment.
- Runny nose PRESENT or - Measles PRESENT or - Other cause of fever PRESENT.	FEVER -MALARIA UNLIKELY	➤ Give one dose of paracetamol in clinic for high fever (temp. 38.5°C or above). ➤ Advise mother when to return immediately. ➤ Follow-up in 2 days if fever persists. ➤ If fever is present every day for more than 7 days, refer for assessment.

VERY SEVERE FEBRILE DISEASE (*Low Malaria Risk*)

If the child with fever has any general danger sign, bulging fontanelle or a stiff neck, classify the child as having VERY SEVERE FEBRILE DISEASE.

Treatment

Manage the child on the same lines as VERY SEVERE FEBRILE DISEASE in High Malaria Risk areas.

MALARIA (*Low Malaria Risk*)

If a general danger sign or stiff neck or bulging fontanelle is not present, look at the yellow row. If there is no NO runny nose, NO measles and NO other cause of fever (pneumonia, cough or cold, dysentery, diarrhoea, skin infection) in a low malaria risk area, classify the child as having MALARIA.

Treatment

Give oral antimalarials for low malaria risk areas according to the National Anti-Malaria Program policy.

- If smear is positive for ***P.falciparum*** with Chloroquine and Primaquine on day 1 and Chloroquine alone on Day 2 and Day 3.
- If smear is positive for ***P.vivax*** give Chloroquine for 3 days along with Primaquine for 14 days.
- If smear is ***negative*** or not available, give chloroquine for 3 days.

Give one dose of paracetamol in clinic for high fever (temperature 38.5°C or above).

FEVER-MALARIA UNLIKELY (*Low Malaria Risk*)

If a general danger sign or stiff neck or bulging fontanelle is not present, and Runny nose or Measles or Other cause of fever is PRESENT in a low malaria risk area, classify the child as having FEVER - MALARIA UNLIKELY.

Treatment

Give one dose of paracetamol in clinic for high fever (temperature 38.5°C or above), and 3 additional doses for use at home for high fever. If fever is present every day for more than 7 days, refer for assessment.

5.3 CLASSIFY MEASLES

A child who has the main symptom "fever" and measles now (or within the last 3 months) is classified both for fever and for measles. First you must classify the child's fever. Next you classify measles.

If the child has no signs suggesting measles, or has not had measles within the last three months, do not classify measles. Ask about the next main symptom, ear problem.

There are three possible classifications of measles:

- SEVERE COMPLICATED MEASLES
- MEASLES WITH EYE OR MOUTH COMPLICATIONS
- MEASLES

The table for classifying measles if present now or within the last 3 months is shown as follows:

• Any general danger sign or • Clouding of cornea or • Deep or extensive mouth ulcers.	SEVERE COMPLICATED MEASLES	➤ <i>Give first dose of Vitamin A.</i> ➤ <i>Give first dose of injectable chloramphenicol (If not possible give oral amoxycillin).</i> ➤ <i>If clouding of the cornea or pus draining from the eye, apply tetracycline eye ointment.</i> ➤ <i>Refer URGENTLY to hospital#</i>
• Pus draining from the eye or • Mouth ulcers.	MEASLES WITH EYE OR MOUTH COMPLICATIONS	➤ <i>Give first dose of Vitamin A.</i> ➤ <i>If pus draining from the eye, treat eye infection with tetracycline eye ointment.</i> ➤ <i>If mouth ulcers, treat with gentian violet.</i> ➤ <i>Follow-up in 2 days.</i>
• Measles now or within the last 3 months.	MEASLES	➤ <i>Give first dose of Vitamin A.</i>

SEVERE COMPLICATED MEASLES

If the child has any general danger sign, clouding of cornea, or deep or extensive mouth ulcers, classify the child as having SEVERE COMPLICATED MEASLES. This child needs urgent treatment and referral to hospital.

Children with measles may have other serious complications of measles. These include stridor in a calm child, severe pneumonia, severe dehydration, or severe malnutrition. You assess and classify these signs in other parts of the assessment. Their treatments are appropriate for the child with measles.

Treatment

Some complications are due to bacterial infections. Others are due to the measles virus which causes damage to the respiratory and intestinal tracts. Vitamin A deficiency contributes to some of the complications such as corneal ulcer. Any vitamin A deficiency is made worse by the measles infection. Measles complications can lead to severe disease and death.

All children with SEVERE COMPLICATED MEASLES should receive urgent treatment. Treat the child with first dose of vitamin A. Also give the first dose of injectable chloramphenicol (if not possible give oral amoxycillin) before referring the child.

If there is clouding of the cornea, or pus draining from the eye, apply tetracycline ointment. If it is not treated, corneal clouding can result in blindness. Ask the mother if the clouding has been present for some time. Find out if it was assessed and treated at the hospital. If it was, you do not need to refer the child again for this eye sign.

MEASLES WITH EYE OR MOUTH COMPLICATIONS

If the child has pus draining from the eye or mouth ulcers which are not deep or extensive, classify the child as having MEASLES WITH EYE OR MOUTH COMPLICATIONS. A child with this classification does not need referral.

You assess and classify the child for other complications of measles (pneumonia, diarrhoea, ear infection and malnutrition) in other parts of this assessment. Their treatments are appropriate for the child with measles.

Treatment

Identifying and treating measles complications early in the infection can prevent many deaths. Give two doses of Vitamin A (Give first dose in clinic and give mother one dose to give at home the next day.). It will help correct any vitamin A deficiency and decrease the severity of the complications. Teach the mother to treat the child's eye infection or mouth ulcers at home. Treating mouth ulcers helps the child to more quickly resume normal feeding.

MEASLES

A child with measles now or within the last 3 months and with none of the complications listed in the pink or yellow rows is classified as having MEASLES. Give the child vitamin A to help prevent measles complications.

All children with measles should receive two doses of Vitamin A (Give first dose in clinic and give mother one dose to give at home the next day.)

EXERCISE I

In this exercise, you will classify illness in children with signs of fever and, if present, signs suggesting measles. First, you will study an example. Then you will begin the exercise.

Read the example case study that begins on this page. Also study how the doctor classified this child's illness. When all the participants are ready, there will be a group discussion about this example.

* * *

EXAMPLE: Pawan is 10 months old. He weighs 8.2 kg. His temperature is 37.5°C. His mother says he has a rash and cough.

The doctor checked Pawan for general danger signs. Pawan was able to drink, was not vomiting, did not have convulsions and was not lethargic or unconscious.

The doctor next asked about Pawan's cough. The mother said Pawan had been coughing for 5 days. He counted 43 breaths per minute. He did not see chest indrawing. He did not hear stridor when Pawan was calm. Pawan did not have diarrhoea.

Next the doctor asked about Pawan's fever. The malaria risk is high. The mother said Pawan has felt hot for 2 days. Pawan did not have a stiff neck. He has had a runny nose with this illness, his mother said. Pawan has a rash covering his whole body. Pawan's eyes were red. The doctor checked the child for complications of measles. There were no mouth ulcers. There was no pus draining from the eye and no clouding of the cornea.

1. Here is how the doctor recorded Pawan's case information and signs of illness.

MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UP TO 5 YEARS	
Name: <u>Pawan</u> Age: <u>10</u> Sex: M ☒ F ☐ months <u>8.2</u> kg Temperature: <u>37.5</u> °C ASK: What are the child's problems? <u>Rash, cough</u> Initial visit? ☒ Follow-up Visit? ☐	
ASSESS (Circle all signs present)	CLASSIFY
CHECK FOR GENERAL DANGER SIGNS NOT ABLE TO DRINK OR BREASTFEED LETHARGIC OR UNCONSCIOUS VOMITS EVERYTHING CONVULSIONS	General danger signs present? Yes ☐ No ☒ Remember to use danger sign when selecting classifications
THEN ASK ABOUT MAIN SYMPTOMS: Does the child have cough or difficult breathing? Yes----- No----- IF YES, ASK: LOOK, LISTEN, FEEL: - For how long? <u>5</u> Days - Count the breaths in one minute <u>43</u> breaths per minute - Look for chest indrawing. - Look and listen for stridor.	NO PNEUMONIA : COUGH OR COLD
DOES THE CHILD HAVE DIARRHOEA ? Yes ☐ No ☐ - For how long? ----- Days - Is there any blood in the stool ? - Look at the child's general condition. Is the child: Lethargic or unconscious? Restless and irritable - Look for sunken eyes. - Offer the child fluid. Is the child Not able to drink or drinking poorly? ☒ Drinking eagerly, thirsty? - Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly?	
DOES THE CHILD HAVE FEVER ? Yes ☐ No ☐ (by history feels hot or temperature 37.5°C or above) Decide Malaria Risk: high or low - For how long? <u>2</u> Days - If more than 7 days, has fever been present every day? - Has the child had measles now or within the last 3 months:	MALARIA
Look for signs of MEASLES - Generalized rash - One of these: cough, runny nose, or red eyes	
If the child has MEASLES now or within the last 3 months	MEASLES

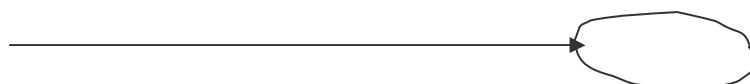
2. To classify Pawan's fever, the doctor looked at the table for classifying fever when there is a High Malaria Risk.

- a. He checked to see if Pawan had any of the signs in the pink row. He thought, "Does Pawan have any general danger signs? No, he does not. Does Pawan have a stiff neck? No, he does not. Pawan does not have any signs of **VERY SEVERE FEBRILE DISEASE**."
- b. Next, the doctor looked at the yellow row. He thought, "Pawan has a fever. His temperature measures 37.5°C. He also has a history of fever because his mother says Pawan felt hot for 2 days. He classified Pawan as having **MALARIA**."
- c. Because Pawan had a generalized rash and red eyes, Pawan has signs suggesting measles. To classify Pawan's measles, the doctor looked at the classification table for classifying measles.
- d. He checked to see if Pawan had any of the signs in the pink row. He thought, "Pawan does not have any general danger signs. The child does not have clouding of the cornea. There are no deep or extensive mouth ulcers. Pawan does not have **SEVERE COMPLICATED MEASLES**."
- e. Next the doctor looked at the yellow row. He thought, "Does Pawan have any signs in the yellow row? He does not have pus draining from the eye. There are no mouth ulcers. Pawan does not have **MEASLES WITH EYE OR MOUTH COMPLICATIONS**."
- f. Finally the doctor looked at the green row. Pawan has measles, but he has no signs in the pink or yellow row. The doctor classified Pawan as having **MEASLES**."

- Any general danger sign or - Stiff neck or - Bulging fontanelle.	VERY SEVERE FEBRILE DISEASE
Fever (by history or feels hot or temperature 37.5°C** or above).	MALARIA



- Any general danger sign or - Clouding of cornea or - Deep or extensive mouth ulcer	SEVERE COMPLICATED MEASLES
- Pus draining from the eye or - Mouth ulcers.	MEASLES WITH EYE OR MOUTH COMPLICATIONS
•Measles now or within the last 3 months	MEASLES



Now read the following case study. Record each sign and their classifications on the Recording Form. Remember to look at the chart to classify the signs.

Case : Kareem

Kareem is 5 months old. He weighs 5.2 kg. His axillary temperature is 37.5°C. His mother said he is not eating well. She said he feels hot, and she wants a doctor to help him.

Kareem is able to drink, has not vomited, does not have convulsions, and is not lethargic or unconscious.

Kareem does not have a cough, said his mother. He does not have diarrhoea.

Because Kareem's temperature is 37.5°C and he feels hot, the doctor assessed Kareem further for signs related to fever. It is the rainy season, and the risk of malaria is high. The mother said Kareem's fever began 2 days ago. He has not had measles within the last 3 months. He does not have stiff neck, his fontanelle is not bulging, his nose is not runny, and there are no signs suggesting measles.

Record Kareem's signs and classify them on the Recording Form.

MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UP TO 5 YEARS

Name: _____ Age: _____ Sex: M ___ F ___ Weight: _____ kg

Temperature: _____ °C

ASK: What are the child's problems? _____ Initial visit? _____ Follow-up Visit? _____

ASSESS (Circle all signs present)

CLASSIFY

CHECK FOR GENERAL DANGER SIGNS

NOT ABLE TO DRINK OR BREASTFEED LETHARGIC OR UNCONSCIOUS
VOMITS EVERYTHING
CONVULSIONS

General danger signs present?
Yes ___ No ___
**Remember to use danger sign
when selecting classifications**

THEN ASK ABOUT MAIN SYMPTOMS:

Does the child have cough or difficult breathing?

Yes----- No-----

IF YES, ASK: LOOK, LISTEN, FEEL:

- For how long? ___ Days
- Count the breaths in one minute
___ breaths per minute Fast breathing?
- Look for chest indrawing.
- Look and listen for stridor.

DOES THE CHILD HAVE DIARRHOEA ?

Yes ___ No ___

- For how long? ----- Days
- Is there any blood in the stool ?
- Look at the child's general condition. Is the child:
Lethargic or unconscious?
Restless and irritable
- Look for sunken eyes.
- Offer the child fluid. Is the child
Not able to drink or drinking poorly?
Drinking eagerly, thirsty?
- Pinch the skin of the abdomen. Does it go back:
Very slowly (longer than 2 seconds)?
Slowly?

DOES THE CHILD HAVE FEVER ?

Yes ___ No ___

(by history feels hot or temperature 37.5°C or above)

Decide Malaria Risk: high or low

- For how long? ___ Days
- If more than 7 days, has fever
been present every day?
- Look or feel for stiff neck.
- Look or feel for bulging fontanelle.
- Look for runny nose
- Has the child had measles now
or within the last 3 months:
- Look for signs of MEASLES
 - Generalized rash
 - One of these: cough, runny nose, or red eyes

**If the child has MEASLES
now or within the last
3 months**

- Look for mouth ulcers
If yes, are they deep and extensive
- Look for pus draining from the eye.
- Look for clouding of the cornea

Tell your facilitator when you are ready to discuss your answers.



EXERCISE J

In this exercise, you will watch a demonstration of how to assess and classify a child with fever. You will see examples of signs related to fever and measles. You will practice identifying stiff neck. Then you will watch a case study.

For each of the children shown, answer the question:

	Does the child have a stiff neck?	
	YES	NO
Child 1		
Child 2		
Child 3		
Child 4		

6.0 ASSESS AND CLASSIFY EAR PROBLEM

A child with an ear problem may have an ear infection.

When a child has an ear infection, pus collects behind the ear drum and causes pain and often fever. If the infection is not treated, the ear drum may burst. The pus discharges, and the child feels less pain. The fever and other symptoms may stop, but the child suffers from poor hearing because the ear drum has a hole in it. Usually the ear drum heals by itself. At other times the discharge continues, the ear drum does not heal, and the child becomes deaf in that ear.

Sometimes the infection can spread from the ear to the bone behind the ear (the mastoid) causing mastoiditis. Infection can also spread from the ear to the brain causing meningitis. These are severe diseases. They need urgent attention and referral.

Ear infections rarely cause death. However, they cause many days of illness in children. Ear infections are the main cause of deafness in developing countries, and deafness causes learning problems in school. The *ASSESS & CLASSIFY* chart helps you identify ear problems due to ear infection.

6.1 ASSESS EAR PROBLEM

A child with ear problem is assessed for:

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

Here is the box from the "Assess" column that tells you how to assess a child for ear problem

Does the child have an ear problem?

IF YES ASK:

- Is there ear pain?
- Is there ear discharge?
If yes, for how long?

LOOK AND FEEL:

- Look for pus draining from the ear.
- Feel for tender swelling behind the ear

Ask about ear problem in ALL sick children.

ASK: Does the child have an ear problem?

If the mother answers NO, record her answer. Do not assess the child for ear problem. Then check for malnutrition and anaemia.

If the mother answers YES, ask the next question:

ASK: Does the child have ear pain?

Ear pain can mean that the child has an ear infection. If the mother is not sure that the child has ear pain, ask if the child has been irritable and rubbing his ear.

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

Ear discharge is also a sign of infection.

When asking about ear discharge, use words the mother understands.

If the child has had ear discharge, ask for how long. Give her time to answer the question. She may need to remember when the discharge started.

You will classify and treat the ear problem depending on how long the ear discharge has been present.

- An ear discharge that has been present for 2 weeks or more is treated as a chronic ear infection.

- An ear discharge that has been present for less than 2 weeks is treated as an acute ear infection.

You do not need more accurate information about how long the discharge has been present.

LOOK for pus draining from the ear.

Pus draining from the ear is a sign of infection, even if the child no longer has any pain. Look inside the child's ear to see if pus is draining from the ear.

FEEL for tender swelling behind the ear.

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

Both tenderness and swelling must be present to classify mastoiditis, a deep infection in the mastoid bone. Do not confuse this swelling of the bone with swollen lymph nodes.

6.2 CLASSIFY EAR PROBLEM

There are four classifications for ear problem:

- MASTOIDITIS
- ACUTE EAR INFECTION
- CHRONIC EAR INFECTION
- NO EAR INFECTION

Here is the classification table for ear problem from the *ASSESS & CLASSIFY* chart.

• Tender swelling behind the ear	MASTOIDITIS	➤ Give first dose of injectable chloramphenicol (If not possible give oral amoxycillin). ➤ Give first dose of paracetamol for pain. ➤ Refer URGENTLY to hospital^f
• Pus is seen draining from the ear and discharge is reported for less than 14 days, or • Ear pain	ACUTE EAR INFECTION	➤ Give Amoxycillin for 5 days. ➤ Give paracetamol for pain. ➤ Dry the ear by wicking. ➤ Follow-up in 5 day
• Pus is seen draining from the ear and discharge is reported for 14 days or more.	CHRONIC EAR INFECTION	➤ Dry the ear by wicking. ➤ Topical ciprofloxacin ear drops for two weeks. ➤ Follow-up in 5 days
• No ear pain and • No pus seen draining from the ear	NO EAR INFECTION	No additional treatment.

MASTOIDITIS

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

Treatment

Refer urgently to hospital. This child needs treatment with injectable antibiotics. He may also need surgery. Before the child leaves for hospital, give the first dose of injectable chloramphenicol (if not possible, give oral amoxycillin). Also give one dose of paracetamol if the child is in pain.

ACUTE EAR INFECTION

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

Treatment

A child with an ACUTE EAR INFECTION should be given oral amoxycillin for 5 days. If amoxycillin is not available give cotrimoxazole for 5 days. Antibiotics for treating pneumonia are effective against the bacteria that cause most ear infections. Give paracetamol to relieve the ear pain (or high fever). If pus is draining from the ear, dry the ear by wicking.

CHRONIC EAR INFECTION

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

Treatment

Most bacteria that cause CHRONIC EAR INFECTION are different from those which cause acute ear infections. For this reason, oral antibiotics are not usually effective against chronic infections. Do not give repeated courses of antibiotics for a draining ear.

The most important and effective treatment for CHRONIC EAR INFECTION is to keep the ear dry by wicking. Teach the mother how to dry the ear by wicking. Also give topical quinolone ear drops for two weeks.

NO EAR INFECTION

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

7.0 CHECK FOR MALNUTRITION

Check all sick children for signs suggesting malnutrition.

A mother may bring her child to clinic because the child has an acute illness. The child may not have specific complaints that point to malnutrition. A sick child can be malnourished, but the doctor or the child's family may not notice the problem.

A child with malnutrition has a higher risk of many types of disease and death. Even children with mild and moderate malnutrition have an increased risk of death. Identifying children with malnutrition and treating them can help prevent many severe diseases and death. Some malnutrition cases can be treated at home. Severe cases need referral to hospital for special feeding or specific treatment of a disease contributing to malnutrition (such as tuberculosis).

Causes of Malnutrition: There are several causes of malnutrition. They may vary from country to country. One type of malnutrition is **protein-energy malnutrition**. Protein-energy malnutrition develops when the child is not getting enough energy or protein from his food to meet his nutritional needs. A child who has had frequent illnesses can also develop protein-energy malnutrition. The child's appetite decreases, and the food that the child eats is not used efficiently. When the child has protein-energy malnutrition:

- * The child may become severely wasted, a sign of marasmus.
- * The child may develop oedema, a sign of kwashiorkor.
- * The child may not grow well and become stunted (too short).

A child whose **diet lacks recommended amounts of essential vitamins and minerals** can develop malnutrition. The child may not be eating enough of the recommended amounts of specific vitamins (such as vitamin A) or minerals (such as iron). Not eating foods that contain vitamin A can result in vitamin A deficiency. A child with vitamin A deficiency is at risk of death from measles and diarrhoea. The child is also at risk of blindness.

7.1 ASSESS FOR MALNUTRITION

Here is the box from the "Assess" column on the *ASSESS & CLASSIFY* chart. It describes how to assess a child for malnutrition.

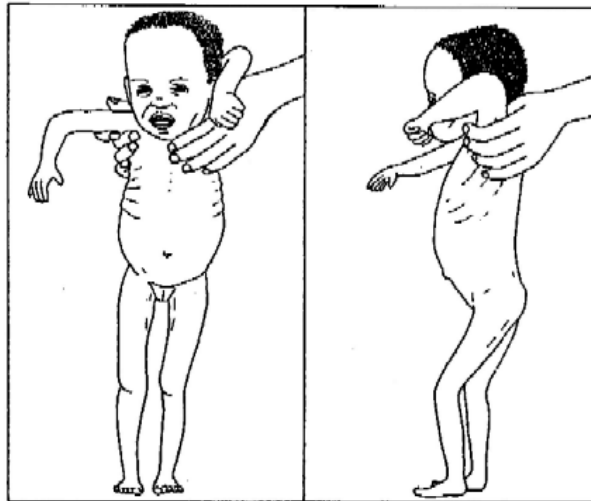
THEN CHECK FOR MALNUTRITION
LOOK AND FEEL: • Look for visible severe wasting. • Look for oedema of both feet. • Determine weight for age.

Assess ALL sick children for malnutrition:

LOOK for visible severe wasting.

A child with visible severe wasting has marasmus, a form of severe malnutrition. A child has this sign if he is very thin, has no fat, and looks like skin and bones. Some children are thin but do not have visible severe wasting.

To look for visible severe wasting, remove the child's clothes. Look for severe wasting of the muscles of the shoulders, arms, buttocks and legs. Look to see if the outline of the child's ribs is easily seen. Look at the child's hips. They may look small when you compare them with the chest and abdomen. Look at the child from the side to see if the fat of the buttocks is missing. When wasting is extreme, there are many folds of skin on the buttocks and thigh. It looks as if the child is wearing baggy pants.



The face of a child with visible severe wasting may still look normal. The child's abdomen may be large or distended.

LOOK and FEEL for oedema of both feet

A child with oedema of both feet may have kwashiorkor, another form of severe malnutrition. Oedema is when an unusually large amount of fluid gathers in the child's tissues. The tissues become filled with the fluid and look swollen or puffed up.

Look and feel to determine if the child has oedema of both feet. Use your thumb to press gently for a few seconds on the top side of each foot. The child has oedema if a dent remains in the child's foot when you lift your thumb.

EXERCISE K

In this exercise, you will look at photographs in the booklet of still photographs and practice identifying signs of severe wasting and oedema in children with malnutrition.

Part 1: Now study photographs 67 through 70.

- Photograph 67: This is an example of visible severe wasting. The child has small hips and thin legs relative to the abdomen. Notice that there is still cheek fat on the child's face.
- Photograph 68: This is the same child as in photograph 67 showing loss of buttock fat.
- Photograph 69: This is the same child as in photograph 67 showing folds of skin ("baggy pants") due to loss of buttock fat. Not all children with visible severe wasting have this sign. It is an extreme sign.
- Photograph 70: This child has oedema of both feet.

Part 2: Now look at photographs numbered 71 through 78. For each photograph, tick (✓) whether the child has visible severe wasting. Also look at photograph 79 and tick whether the child has oedema of both feet.

	Does the child have visible severe wasting?	
	YES	NO
Photograph 71		
Photograph 72		
Photograph 73		
Photograph 74		
Photograph 75		
Photograph 76		
Photograph 77		
Photograph 78		
	Does the child have oedema of both feet?	
	YES	NO
Photograph 79		

Tell your facilitator when you are ready to discuss your answers to this exercise.

Determine weight for age.

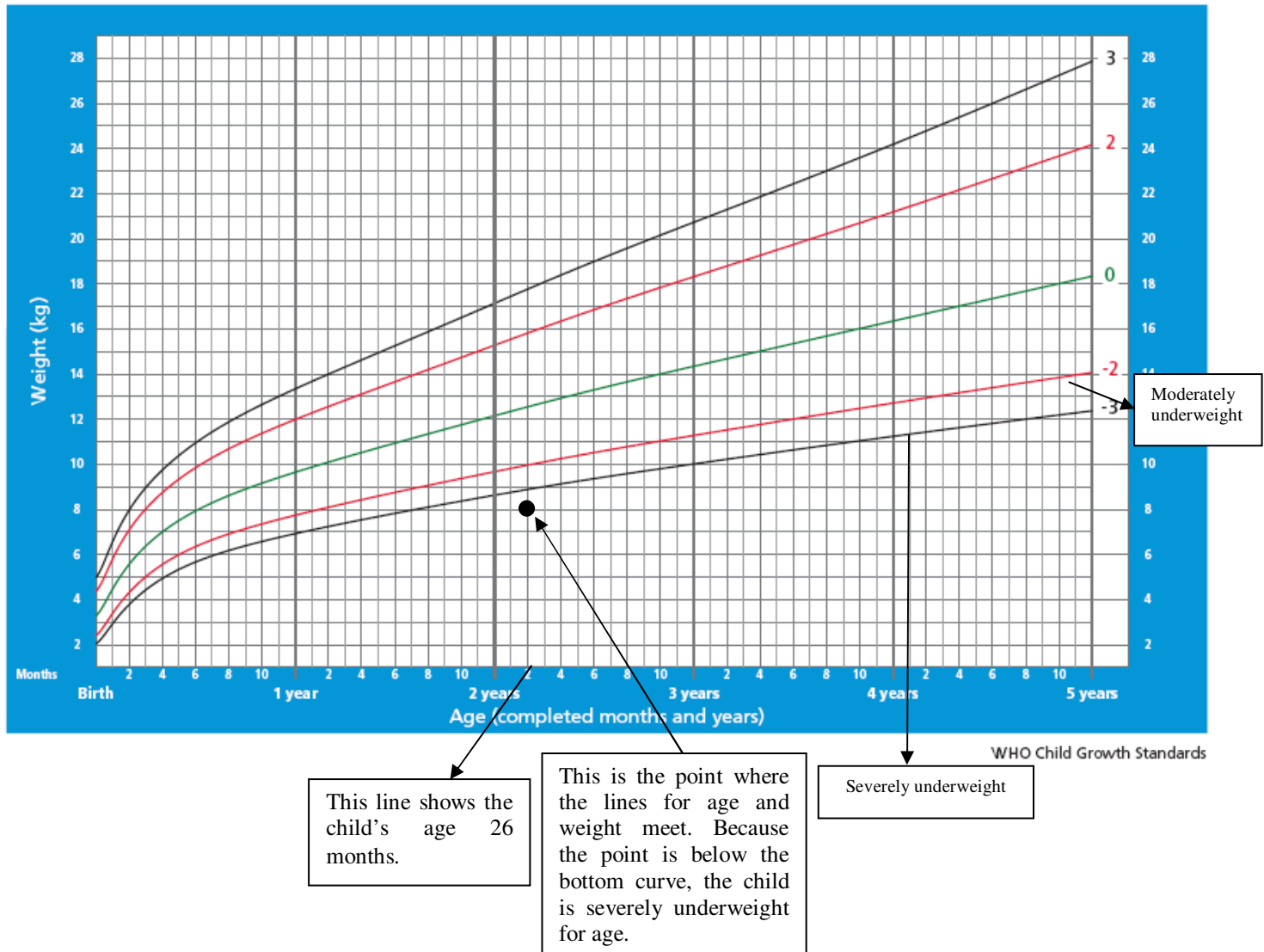
Determine the weight for age as you did for the young infant. See separate WHO growth charts for boys and girls. Decide if the point is above, on, or below the bottom curve.

- If the point is below the bottom curve, the child is severely underweight for age.
- If the point is *above or on the -3 SD line (bottom line)*, the child is not severely underweight.
- If the point is above or on the bottom curve, but below -2 SD line, the child is moderately underweight for age.
- If the point is above or on the -2 SD line, the child is not moderately underweight.

EXAMPLE: A male child is 26 months old and weighs 8.0 kilograms. Determine the child's weight for age and plot on the growth chart.

Weight-for-age BOYS

Birth to 5 years (z-scores)



7.2 CLASSIFY NUTRITIONAL STATUS

There are three classifications for a child's nutritional status. They are:

- SEVERE MALNUTRITION
- VERY LOW WEIGHT
- NOT VERY LOW WEIGHT

• Visible severe wasting or • Oedema of both feet.	SEVERE MALNUTRITION	➤ <i>Give single dose of Vitamin A.</i> ➤ <i>Prevent low blood sugar.</i> ➤ <i>Refer URGENTLY to hospital</i> ➤ <i>While referral is being organized, warm the child.</i> ➤ <i>Keep the child warm on the way to hospital.</i>
• Severely Underweight(<-3 S.D).	VERY LOW WEIGHT	➤ Assess and counsel for feeding -If feeding problem follow-up in 5 days ➤ Advise mother when to return immediately ➤ Follow-up in 30 days.
• Not Severely Underweight (≥-3 S.D).	NOT VERY LOW WEIGHT	➤ If child is less than 2 years old, assess the child's feeding and counsel the mother on feeding according to the FOOD box on the <i>COUNSEL THE MOTHER</i> chart. - If feeding problem, follow-up in 5 days. ➤ Advise mother when to return immediately.

SEVERE MALNUTRITION

If the child has visible severe wasting or oedema of both feet, classify the child as having SEVERE MALNUTRITION

Treatment

Children classified as having SEVERE MALNUTRITION are at risk of death from pneumonia, diarrhoea, measles, and other severe diseases. These children need urgent referral to hospital where their treatment can be carefully monitored. They may need special feeding and antibiotics. Before the child leaves for hospital, give the child a single dose of vitamin A. Prevent low blood sugar, while referral is being organized initiate active treatment for hypothermia and keep the child warm on the way to hospital.

VERY LOW WEIGHT

If the child is severely underweight for age, classify the child as having VERY LOW WEIGHT

Treatment

A child classified as having VERY LOW WEIGHT has a higher risk of severe disease. Assess the child's feeding and counsel the mother about feeding her child according to the recommendations in the FOOD box on the *COUNSEL THE MOTHER* chart.

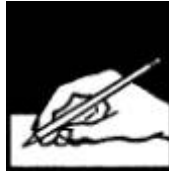
Advise the mother to return for follow-up in 1 month.

NOT VERY LOW WEIGHT

If the child is Not Severely Underweight, classify the child as having NOT VERY LOW WEIGHT.

Treatment

If the child is less than 2 years of age, assess the child's feeding. Counsel the mother about feeding her child according to the recommendations in the FOOD box on the COUNSEL THE MOTHER chart. Children less than 2 years of age have a higher risk of feeding problems and malnutrition than older children.



EXERCISE L

Read the following case study. Record the child's signs and their classifications on the Recording Form. Refer to the classification tables on the chart.

Case: Nadia

Nadia is 18 months old. She weighs 7 kg. Her temperature is 38.5°C. Her mother brought her today because the child has felt hot and has a rash. The doctor saw that Nadia looks like skin and bones.

The doctor checked for general danger signs. Nadia is able to drink, has not vomited, has not had convulsions, and is not lethargic or unconscious.

She does not have cough or difficult breathing. She does not have diarrhoea.

Because Nadia's mother said the child felt hot, and because her temperature is 38.5°C, the doctor assessed her for fever. Nadia lives where there is a high malaria risk. She has had fever for 5 days. Her rash is generalized rash, and she has red eyes. She has measles. She does not have a stiff neck. She does not have a runny nose.

The doctor assessed her for signs of measles complications. Nadia does not have mouth ulcers. There is no pus draining from the eye and no clouding of the cornea.

Nadia does not have an ear problem.

The doctor next checked her for malnutrition. Nadia has visible severe wasting. She does not have oedema of both feet. The doctor determined her weight for age. (Look at the weight for age chart in your chart booklet. Determine if this child's weight for age is very low and record this on the Recording Form.)

Record Nadia's signs and classify them on the Recording Form.

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

Name: _____ Age: _____ Sex: M _____ F _____ Weight: _____ kg

Temperature: _____ °C

ASK: What are the child's problems? _____ Initial visit? ____ Follow-up Visit? ____

ASSESS (Circle all signs present)

CLASSIFY

CHECK FOR GENERAL DANGER SIGNS NOT ABLE TO DRINK OR BREASTFEED LETHARGIC OR UNCONSCIOUS VOMITS EVERYTHING CONVULSIONS	General danger sign present? Yes____ No____ Remember to use danger sign when selecting classifications
DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? Yes____ No____ • For how long ? _____ Days • Count the breaths in one minute _____ breaths per minute. Fast breathing? • Look for chest indrawing. • Look and listen for stridor.	
DOES THE CHILD HAVE DIARRHOEA ? Yes____ No____ • For how long ? _____ Days • Is there blood in the stool? • Look at the child's general condition. Is the child: Lethargic or unconscious? Restless and irritable • Look for sunken eyes. • Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? • Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly?	
DOES THE CHILD HAVE FEVER? (by history/feels hot/ temperature 37.5°C or above) Yes____ No____ Decide Malaria Risk: High / Low • Fever for how long? ____Days • If more than 7 days, has fever been present every day? • Has the child had measles within the last 3 months? If the child has measles now or within the last 3 months:	• Look or feel for stiff neck. • Look and feel for bulging fontanelle. • Look for runny nose Look for signs of MEASLES: • Generalized rash • One of these: cough, runny nose, or red eyes • Look for mouth ulcers If Yes, are they deep and extensive • Look for pus draining from the eye.
DOES THE CHILD HAVE AN EAR PROBLEM Yes____ No____ • Is there ear pain? • Is there ear discharge? If Yes, for how long? _____ Days	• Look for pus draining from the ear. • Feel for tender swelling behind the ear.
THEN CHECK FOR MALNUTRITION • Look for visible severe wasting. • Look for oedema of both feet. • Determine weight for age. Severely underweight _____ Not Severely underweight _____	

8.0 CHECK FOR ANAEMIA

Check all sick children for signs suggesting anaemia.

A mother may bring her child to clinic because the child has an acute illness. The child may not have specific complaints that point to anaemia. Most children with anaemia can be treated at home. Severe cases need referral to hospital for blood transfusion.

Causes of Anaemia: Not eating foods rich in iron can lead to iron deficiency and anaemia. **Anaemia** is a reduced number of red cells or a reduced amount of haemoglobin in each red cell. A child can also develop anaemia as a result of:

- Infections
- Parasites such as hookworm or whipworm. They can cause blood loss from the gut and lead to anaemia.
- Malaria which can destroy red cells rapidly. Children can develop anaemia if they have had repeated episodes of malaria or if the malaria was inadequately treated. The anaemia may develop slowly. Often, anaemia in these children is due to both malnutrition and malaria.

8.1 ASSESS FOR ANAEMIA

Here is the box from the "Assess" column on the *ASSESS & CLASSIFY* chart. It describes how to assess a child for malnutrition and anaemia.

THEN CHECK FOR ANAEMIA

LOOK AND FEEL:

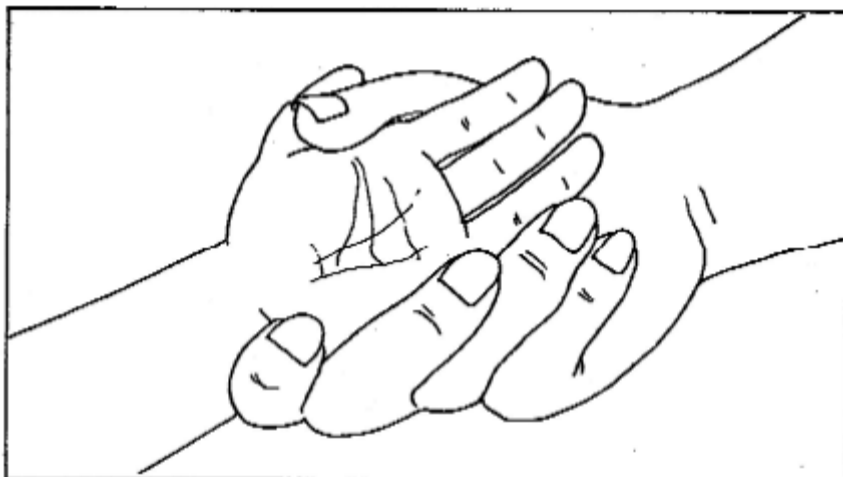
- Look for palmar pallor. Is it:
 - Severe palmar pallor?
 - Some palmar pallor?
 - No palmar pallor?

Assess **ALL** sick children for anaemia.

LOOK for palmar pallor.

Pallor is unusual paleness of the skin. It is a sign of anaemia.

To see if the child has palmar pallor, look at the skin of the child's palm. Hold the child's palm open by grasping it gently from the side. Do not stretch the fingers backwards. This may cause pallor by blocking the blood supply.



Compare the colour of the child's palm with your own palm and with the palms of other children. If the skin of the child's palm is pale, the child has some palmar pallor. If the skin of the palm is very pale or so pale that it looks white, the child has severe palmar pallor.

EXERCISE M

In this exercise, you will look at photographs in the photograph booklet and practice identifying children with palmar pallor.

Part 1: Study the photographs numbered 80 through 82b. Read the explanation below for each photograph.

- | | |
|-----------------|---|
| Photograph 80: | This child's skin is normal. There is no palmar pallor. |
| Photograph 81a: | The hands in this photograph are from two different children. The child on the left has some palmar pallor. |
| Photograph 81b: | The child on the right has no palmar pallor. |
| Photograph 82a: | The hands in this photograph are from two different children. The child on the left has no palmar pallor. |
| Photograph 82b: | The child on the right has severe palmar pallor. |

Part 2: Now look at photographs numbered 83 through 88. For each photograph, tick (✓) whether the child has severe, some or no palmar pallor.

	Does the child have:		
	Severe pallor	Some pallor	No pallor
Photograph 83			
Photograph 84			
Photograph 85a			
Photograph 85b			
Photograph 86			
Photograph 87			
Photograph 88			

Tell your facilitator when you are ready to discuss your answers to this exercise.

8.2 CLASSIFY ANAEMIA

There are three classifications for a child's anaemia. They are:

- SEVERE ANAEMIA
- ANAEMIA
- NO ANAEMIA

• Severe palmar pallor	SEVERE ANAEMIA	➤ <i>Refer URGENTLY to hospital</i>
• Some palmar pallor	ANAEMIA	➤ Assess and counsel for feeding ➤ Advise mother when to return immediately ➤ Follow-up in 14 days.
• No palmar pallor	NO ANAEMIA	➤ <i>Give prophylactic iron folic acid if child 6 months or older.</i>

SEVERE ANAEMIA

If the child has severe palmar pallor, classify the child as having SEVERE ANAEMIA

Treatment

Children classified as having SEVERE ANAEMIA are at risk of death due to chronic hypoxaemia or congestive cardiac failure. These children need urgent referral to hospital because they may need blood transfusions and their treatment can be carefully monitored.

ANAEMIA

If the child has some palmar pallor, classify the child as having ANAEMIA.

Treatment

A child with some palmar pallor may have anaemia. Treat the child with iron folic acid.

Advise the mother to return for follow-up in 14 days.

NO ANAEMIA

If the child has no palmar pallor, classify the child as having NO ANAEMIA.

Treatment

Give prophylactic iron folic acid for a total of 100 days in a year after a child has recovered from acute illness, if child is 6 months of age or older and has not received prophylactic iron folic acid for 100 days in last one year.

9.0 CHECK THE CHILD'S IMMUNIZATION, PROPHYLACTIC VITAMIN A & IRON-FOLIC ACID SUPPLEMENTATION STATUS

Immunization, prophylactic vitamin A and iron-folic acid supplementation status should be assessed in ALL sick children.

9.1 CHECK THE CHILD'S IMMUNIZATION STATUS

Check the immunization status for ALL sick children. Have they received all the immunizations recommended for their age? Do they need any immunizations today?

Use the National Recommended Immunization Schedule when you check the child's immunization status. Look at the *ASSESS & CLASSIFY* chart and locate the recommended immunization schedule. Refer to it as you read how to check a child's immunization status.

THEN CHECK THE CHILD'S IMMUNIZATION STATUS	
IMMUNIZATION SCHEDULE:	
AGE	VACCINE
Birth	BCGG + OPV-0
6 weeks	DPT-1+ OPV-1(+ HepB-1*)
10 weeks	DPT-2+ OPV-2(+ HepB-2*)
14 weeks	DPT-3+ OPV-3(+ HepB-3*)
9 months	Measles
16-18 months	DPT Booster + OPV
60 months	DT

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

Give the recommended vaccine when the child is the appropriate age for each dose. All children should receive all the recommended immunizations before their first birthday. If the child does not come for an immunization at the recommended age, give the necessary immunizations any time after the child reaches that age. Give the remaining doses at least 4 weeks apart. You do not need to repeat the whole schedule.

9.2 CHECK THE CHILD'S PROPHYLACTIC VITAMIN A SUPPLEMENTATION STATUS

Vitamin A is an essential micronutrient and is necessary for vision, integrity of membrane structures, the normal functioning of body cells, growth and development. A child with vitamin A deficiency is at a risk of death from measles and diarrhoea. The child is also at risk of blindness. The National Vitamin A Prophylaxis Programme recommends 9 doses of vitamin A at 9, 18, 24, 30, 36, 42, 48, 54 and 60 months of age.

Look at the ASSESS & CLASSIFY chart and locate the recommended schedule for vitamin A supplementation.

PROPHYLACTIC VITAMIN A	<i>Give a single dose of vitamin A : 100,000 IU at 9 months with measles immunization 200,000 IU at 16-18 months with DPT Booster 200,000 IU at 24 months, 30 months, 36 months, 42 months, 48 months, 54 months and 60 months.</i>

Give the recommended dose of vitamin A when the child is the appropriate age for each dose. In case a child more than 9 months of age has not received a dose of vitamin A in last 6 months, give a dose as per the dosage schedule according to age of the child.

9.3 CHECK THE CHILD'S PROPHYLACTIC IRON-FOLIC ACID SUPPLEMENTATION STATUS

Anaemia is a reduced number of red cells or a reduced amount of haemoglobin in each red cell. Not eating foods rich in iron can lead to iron deficiency and anaemia. A child can also develop anaemia as a result of various systemic infections, malaria, or infestation with hookworm or whipworm. Prophylactic supplementation of iron folic acid for 100 days in a year is recommended under the National Anaemia Prophylaxis Programme.

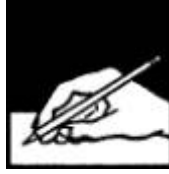
Look at the *ASSESS & CLASSIFY* chart and locate the recommended schedule for iron and folic acid supplementation.

THEN CHECK THE CHILD'S PROPHYLACTIC IRON-FOLIC ACID SUPPLEMENTATION STATUS:

PROPHYLACTIC IFA

Give 20 mg elemental iron + 100 mcg folic acid (one tablet of Pediatric IFA or f IFA syrup or IFA drops) for a total of 100 days in a year after the child has recovered from acute illness **if** :

- The child 6 months of age or older, and
- Has not received Pediatric IFA Tablet/syrup/drops for 100 days in last one year.



EXERCISE N

Read about the following children. For each one, decide if the child needs any immunizations today.

1. **Salim, 6 months old.** No general danger signs. Classified as NO PNEUMONIA: COUGH OR COLD and NO ANAEMIA AND NOT VERY LOW WEIGHT FOR AGE.

Immunization history: BCG, OPV 0, OPV 1, OPV 2, DPT 1 and DPT 2. OPV2 and DPT 2 given 6 weeks ago

- a. Is Salim up-to-date with his immunizations?
- b. What immunizations, if any, does Salim need today?
- c. When should he return for his next immunization?

2. **Chilunji, 3 months old.** No general danger signs. Classified as diarrhoea with NO DEHYDRATION and also ANAEMIA.

Immunization history: BCG, OPV 0, OPV 1, and DPT 1. OPV 1 and DPT 1 given 5 weeks ago.

- a. Is Chilunji up-to-date with her immunizations?
- b. What immunizations, if any, does Chilunji need today?
- c. What immunizations will she receive at her next visit?
- d. When should she return for her subsequent immunization?

3. **Marco, 9 months old.** No general danger signs. Classified as PNEUMONIA, MALARIA, NO ANAEMIA AND NOT VERY LOW WEIGHT

Immunization history: BCG, OPV 0, OPV 1 and DPT 1. When Marco was 7 months old, he received OPV 2 and DPT 2.

- a. Is Marco up-to-date with his immunizations?
- b. What immunizations, if any, does Marco need today?

- c. When should he return for his next immunizations?
- d. Should he be given vitamin A today?
- e. Should he be given IFA today?

Tell your facilitator when you have completed this exercise.
--

10.0 ASSESS OTHER PROBLEMS

The last box on the ASSESS side of the chart reminds you to assess any other problems that the child may have.

Since the *ASSESS & CLASSIFY* chart does not address all of a sick child's problems, you will now assess other problems the mother told you about. For example, she may have said the child has a skin infection, itching or swollen neck glands. Or you may have observed another problem during the assessment. Identify and treat any other problems according to your training, experience and clinic policy. Refer the child for any other problem you cannot manage in clinic.

* * * * *

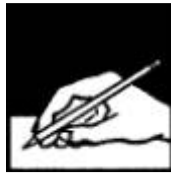
The last box on the "Classify" side of the chart has an important warning. It says:

MAKE SURE CHILD WITH ANY GENERAL DANGER SIGN IS REFERRED after first dose of an appropriate antibiotic and other urgent treatments.

EXCEPTION: Rehydration of the child according to Plan C may resolve danger signs so that referral is no longer needed.
--

This note reminds you that a child with any general danger sign needs urgent treatment and referral. It is possible, though uncommon, that a child may have a general danger sign, but may not have a severe classification for any of the main symptoms. How to decide and plan for referral of a child with a general danger sign and without any other severe classification is taught in the module *Identify Treatment*.

* * * * *



EXERCISE O

Read the case studies and practice using the entire process as described on the *ASSESS & CLASSIFY* chart. Record the child's signs and classify them on the Recording Form for each exercise. Refer to the chart as you do the exercise.

Case 1: Dan

Dan is 9 months old. He weighs 9.5 kg. His temperature is 39.5°C. His mother says he has had diarrhoea for 1 week.

Dan does not have any general danger signs. He does not have cough or difficult breathing.

The doctor assessed Dan for signs of diarrhoea. The mother said earlier that Dan has had diarrhoea for 1 week. Dan does not have blood in the stool. He is not restless or irritable; he is not lethargic or unconscious. He has sunken eyes. He is thirsty and drinks eagerly when offered a drink. His skin pinch goes back slowly.

Next, the doctor assessed for additional signs related to fever. Dan's mother says he has felt hot for about 2 days. The risk of malaria is high. He has not had measles in the last 3 months. He does not have a stiff neck, and he does not have a runny nose. He did not have signs suggesting measles.

There is no ear problem.

The doctor checked for signs of malnutrition and anaemia. Dan does not have visible severe wasting. There are no signs of palmar pallor. He does not have oedema of both feet. The doctor determined his weight for age.

Dan has had BCG, DPT 1, DPT 2, and DPT 3. He has also had OPV 0, OPV 1, OPV 2 and OPV 3.

Record Dan's signs and their classifications on the Recording Form provided to you.

Case 2: Mishu

Mishu is 4 months old. She weighs 5.5 kg. Her temperature is 38.0°C. She is in the clinic today because she has diarrhoea.

She does not have any general danger signs. She is not coughing and does not have difficult breathing.

The doctor assessed her further for signs of diarrhoea. She has had diarrhoea for 2 days and there is blood in the stool, said the mother. Mishu was not restless or irritable; she was not unconscious or lethargic. Her eyes were not sunken. She drank normally, and did not seem to be thirsty. Her skin pinch went back immediately.

The doctor next assessed her for fever. The malaria risk is high at this time of year. Mishu has had fever for 2 days, said the mother. She has not had measles in the last 3 months. She does not have a stiff neck or runny nose. There are no signs suggesting measles.

Mishu does not have an ear problem. The doctor checked for malnutrition and anaemia. She does not have visible severe wasting. There is no palmar pallor and no oedema of both feet. The doctor determined her weight for age.

At birth Mishu received BCG and OPV 0. Four weeks ago, she received DPT 1 and OPV 1.

Record Mishu's signs and their classifications on the Recording Form provided to you.

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

Name: _____ Age: _____ Sex: M _____ F _____ Weight: _____ kg

Temperature: _____ °C

ASK: What are the child's problems? _____ Initial visit? _____ Follow-up Visit? _____
ASSESS (Circle all signs present) **CLASSIFY**

CHECK FOR GENERAL DANGER SIGNS NOT ABLE TO DRINK OR BREASTFEED VOMITS EVERYTHING CONVULSIONS LETHARGIC OR UNCONSCIOUS	General danger sign present ? Yes _____ No _____ Remember to use danger sign when selecting classifications
DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? Yes _____ No _____ • For how long ? _____ Days • Count the breaths in one minute _____ breaths per minute. Fast breathing? • Look for chest indrawing. • Look and listen for stridor.	
DOES THE CHILD HAVE DIARRHOEA ? Yes _____ No _____ • For how long ? _____ Days • Is there blood in the stool? • Look at the child's general condition. Is the child: Lethargic or unconscious? Restless and irritable • Look for sunken eyes. • Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? • Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly?	
DOES THE CHILD HAVE FEVER? (by history/feels hot/ temperature 37.5°C or above) Yes _____ No _____ Decide Malaria Risk: High Low • Fever for how long? _____ Days • If more than 7 days, has fever been present every day? • Has the child had measles within the last 3 months? If the child has measles now or within the last 3 months: • Look or feel for stiff neck. • Look and feel for bulging fontanelle. • Look for runny nose Look for signs of MEASLES: • Generalized rash • One of these: cough, runny nose, or red eyes • Look for mouth ulcers If Yes, are they deep and extensive • Look for pus draining from the eye.	
DOES THE CHILD HAVE AN EAR PROBLEM Yes _____ No _____ • Is there ear pain? • Is there ear discharge? If Yes, for how long? _____ Days • Look for pus draining from the ear. • Feel for tender swelling behind the ear.	
THEN CHECK FOR MALNUTRITION • Look for visible severe wasting. • Look for oedema of both feet. • Determine weight for age. Severely underweight _____ Not Severely underweight _____	
THEN CHECK FOR ANAEMIA • Look for palmar pallor. Severe palmar pallor? Some palmar pallor? No pallor?	
CHECK THE CHILD'S IMMUNIZATION, PROPHYLACTIC VITAMIN A & IRON-FOLIC ACID STATUS Circle immunizations and Vitamin A or IFA supplements needed today. BCG _____ DPT 1 _____ DPT 2 _____ DPT 3 _____ DPT Booster _____ DT _____ OPV 0 _____ OPV 1 _____ OPV 2 _____ OPV 3 _____ OPV _____ IFA _____ HEP-B 1 _____ HEP-B 2 _____ HEP-B 3 _____ MEASLES _____ VITAMIN A _____	Return for next immunization or vitamin A or IFA supplement on: _____ (Date)
ASSESS OTHER PROBLEMS	

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

Name: _____ Age: _____ Sex: M _____ F _____ Weight: _____ kg

Temperature: _____ °C

ASK: What are the child's problems? _____ Initial visit? ____ Follow-up Visit? ____

ASSESS (Circle all signs present)

CLASSIFY

CHECK FOR GENERAL DANGER SIGNS NOT ABLE TO DRINK OR BREASTFEED VOMITS EVERYTHING CONVULSIONS LETHARGIC OR UNCONSCIOUS	General danger sign present ? Yes ____ No ____ Remember to use danger sign when selecting classifications
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THEN CHECK FOR ANAEMIA • Look for palmar pallor. Severe palmar pallor? Some palmar pallor? No pallor?	
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ASSESS OTHER PROBLEMS	



EXERCISE P

In this video exercise, you will see a demonstration of how to assess a child with an ear problem and how to look for signs of malnutrition and anaemia. Then you will see case studies. Record the children's signs and classifications on Recording Forms.

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

Name: _____ Age: _____ Sex: M _____ F _____ Weight: _____ kg

Temperature: _____ °C

ASK: What are the child's problems? _____ Initial visit? _____ Follow-up Visit? _____

ASSESS (Circle all signs present)

CLASSIFY

CHECK FOR GENERAL DANGER SIGNS NOT ABLE TO DRINK OR BREASTFEED VOMITS EVERYTHING CONVULSIONS LETHARGIC OR UNCONSCIOUS		General danger sign present ? Yes ___ No ___ Remember to use danger sign when selecting classifications
DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? Yes ___ No ___ • For how long ? _____ Days • Count the breaths in one minute _____ breaths per minute. Fast breathing? • Look for chest indrawing. • Look and listen for stridor.		
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ASSESS OTHER PROBLEMS		

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

Name: _____ Age: _____ Sex: M _____ F _____ Weight: _____ kg
 Temperature: _____ °C

ASK: What are the child's problems? _____ Initial visit? _____ Follow-up Visit? _____

ASSESS (Circle all signs present)

CLASSIFY

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ASSESS OTHER PROBLEMS																			

**INTEGRATED
MANAGEMENT OF
NEONATAL AND
CHILDHOOD
ILLNESS**

**Identify Treatment
for the Sick Child**

CONTENTS

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INTRODUCTION

In the previous module you learned to assess the sick child age 2 months up to 5 years and to classify the child's illness or illnesses. The next step is to identify the necessary treatments. In some instances, the very sick child will need referral to a hospital for additional care. If so, you will begin urgent treatments before the child's departure.

LEARNING OBJECTIVES

This module will describe and allow you to practice the following skills:

- * determining if urgent referral is needed
- * identifying treatments needed
- * for patients who need urgent referral:
 - identifying the urgent pre-referral treatments
 - explaining the need for referral to the mother
 - writing the referral note

This module will focus on **identifying which treatments are needed**. The next module, *Treat the Child*, will teach how to give the treatments.

1.0 DETERMINE IF URGENT REFERRAL IS NEEDED

REFERRAL FOR SEVERE CLASSIFICATIONS

Look at the severe classifications on the *ASSESS & CLASSIFY* chart. These are coloured pink and include:

- SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- SEVERE DEHYDRATION
- SEVERE PERSISTENT DIARRHOEA
- VERY SEVERE FEBRILE DISEASE
- SEVERE COMPLICATED MEASLES
- MASTOIDITIS
- SEVERE MALNUTRITION
- SEVERE ANAEMIA

Notice the instruction "**Refer URGENTLY to hospital**" in the lists of treatments for these classifications. This instruction means to refer the child immediately after giving any necessary pre-referral treatments. Do not give treatments that would unnecessarily delay referral.

Exception: For SEVERE PERSISTENT DIARRHOEA, the instruction is simply to "Refer to hospital." This means that referral is needed, but not as urgently. There is time to identify treatments as described in section 2.0 of this module and give all of the treatments before referral.

There is one more possible exception: You may keep and treat a child whose only severe classification is SEVERE DEHYDRATION if your clinic has the ability to treat the child. This child may have a general danger sign related to dehydration. For example, he may be lethargic, unconscious, or not able to drink because he is severely dehydrated.

THE CHILD WITH DIARRHOEA WITH SEVERE DEHYDRATION

Read the section about SEVERE DEHYDRATION from the *ASSESS & CLASSIFY* chart:

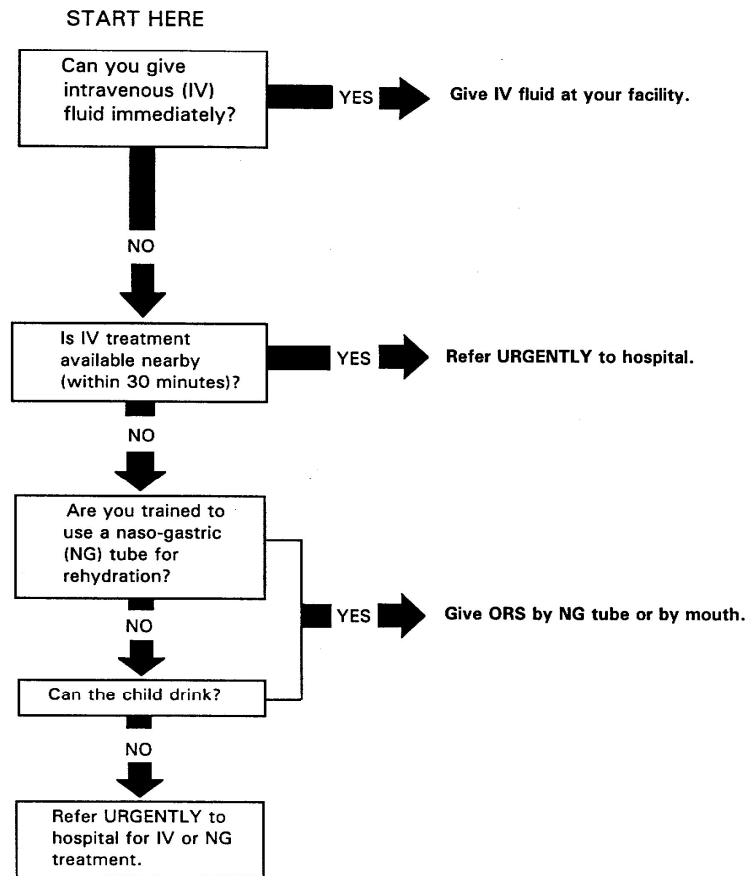
If the child's only severe classification is SEVERE DEHYDRATION, you will use Plan C to decide whether to refer the child. Plan C appears on the *TREAT* chart. It helps you decide if your clinic can treat the severely dehydrated child. The left-hand side of Plan C, showing the decisions to be made, is reprinted on the next page. The right-hand side of the chart has been simplified. You will learn how to give the fluid treatments in the module *Treat the Child*.

If the child has another severe classification in addition to SEVERE DEHYDRATION, you will refer the child. Special expertise is required to rehydrate this child, as too much fluid given too quickly could endanger his life.

Your facilitator will explain the following chart.
--

DECISIONS INVOLVED IN PLAN C

TREAT SEVERE DEHYDRATION QUICKLY



You will learn Plan C in the next module. Plan C includes reassessment for dehydration after fluid treatment. If you can successfully rehydrate the child, referral will not be necessary.

REFERRAL FOR GENERAL DANGER SIGNS

Most children who have a general danger sign also have a severe classification. They will be referred for their severe classification (or possibly treated if they have SEVERE DEHYDRATION only).

In rare instances, children may have general danger signs without a severe classification. These children should be referred urgently. There is a box at the bottom of the *ASSESS & CLASSIFY* chart to remind you:

REFERRAL FOR OTHER SEVERE PROBLEMS

The *ASSESS & CLASSIFY* chart does not include all problems that children may have. You must ask yourself:

Does the child have any other severe problem that cannot be treated at this clinic?
For example, the child may have a severe problem that is not covered on the chart, such as severe abdominal pain. If you cannot treat a severe problem, you will need to refer the child.

Remember: Most children will have none of the general danger signs, severe classifications, or other severe problems. **If the child has none of these, the child does not need urgent referral to a hospital.** You will identify treatments needed as described in section 2.0 of this module.

2.0 IDENTIFY TREATMENTS FOR PATIENTS WHO DO NOT NEED URGENT REFERRAL

For each classification listed on the front of the Sick Child Recording Form, you will write the treatments needed on the back of the form. Be sure to include items that begin with the words "Follow-up." Record the earliest definite time for follow-up. Also, be sure to list non-urgent referrals for further assessment. For example, for a cough which has lasted more than 30 days, or for fever which has lasted 7 days or more, you would record, "Refer for assessment." Although the mother should take the child for assessment promptly, these referrals are not as urgent. Any other necessary treatments may be done before referral.

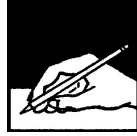
Note: You will learn to complete the feeding sections of the Sick Child Recording Form in the module *COUNSEL THE MOTHER*. When a feeding assessment is needed, it may be done at any convenient time during the visit, after the child's immediate needs are taken care of.

Some treatments are listed for more than one problem. For example, vitamin A is listed for both MEASLES and SEVERE MALNUTRITION. If a patient has both of these problems, you need only list vitamin A once on your Sick Child Recording Form.

However, if an antibiotic is needed for more than one problem, you should list it each time, for example:

antibiotic for pneumonia
antibiotic for Shigella

When the same antibiotic is appropriate for two different problems, you can give that single antibiotic, but two problems may require different antibiotics. You will learn about choosing antibiotics in the module *Treat the Child*.



EXERCISE A

Sick Child Recording Form for Saif follows. Study the front of the form; then fold over the classifications and list the treatments on the back.

When you have completed this exercise,
please discuss your answers with a facilitator.

Name: Saif Age: 8m Sex: M ☒ F Weight: 7 kg Temperature: 38.2 °C Date: _____
ASK: What are the child's problems? fever & cough Initial visit? ☒ Follow-up Visit? _____

Name: Saif Age: 8m Sex: M ☒ F Weight: 7 kg Temperature: 38.2 °C Date: _____
ASK: What are the child's problems? fever & cough Initial visit? ☒ Follow-up Visit? _____

CHECK FOR GENERAL DANGER SIGNS PRESENT? NOT ABLE TO DRINK OR BREASTFEED VOMITS EVERYTHING CONVULSIONS		GENERAL DANGER SIGN Yes___ No✓___ Remember to use danger sign when selecting classifications
LETHARGIC OR UNCONSCIOUS		

[illegible]

DOES THE CHILD HAVE DIARRHOEA ?		Yes ___ No ___
• ☐ For how long ? _____ Days • ☐ Is there blood in the stool? 	Lethargic or unconscious? Restless and irritable • ☐ Look for sunken eyes. • ☐ Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? • ☐ Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)?	Look at the child's general condition. Is the child:

DOES THE CHILD HAVE FEVER? (by history/feels hot/ temperature 37.5°C or above) Yes ☒ No ☐ Decide Malaria Risk ☒ High ☐ Low • Fever for how long? 3 Days - Look or feel for stiff neck. • If more than 7 days, has fever - Look and feel for bulging fontanelle. - been present every day? - Look for runny nose • Has the child had measles within - Look for signs of MEASLES: - the last 3 months? - ☐ Generalized rash - One of these: cough, runny nose, or red eyes If the child has measles now - Look for mouth ulcers		Malaria
---	--	---------

DOES THE CHILD HAVE AN EAR PROBLEM		Yes <u>✓</u> No <u> </u>	Acute Ear Infection
• Is there ear pain? - Look for pus draining from the ear. • Is there ear discharge? - Feel for tender swelling behind the ear. If Yes, for how long? <u> 3 </u> Days			

THEN CHECK FOR MALNUTRITION - Look for visible severe wasting. - Look for oedema of both feet. - Determine weight for age	
---	--

THEN CHECK FOR ANAEMIA		NOT VERY COMMON CASE
- Look for palmar pallor.		No ANEMIA

CHECK THE CHILD'S IMMUNIZATION, PROPHYLACTIC VITAMIN A & IRON-FOLIC ACID STATUS Circle immunizations and Vitamin A or IFA supplements needed today.						Return for next immunization or vitamin A or IFA supplement on:
BCG	DPT 1	DPT 2	DPT 3	DPT (Booster)	DT	_____ (Date)
OPV 0	OPV 1	OPV 2	OPV 3	OPV	IFA	
	HEP-B 1	HEP-B 2	HEP-B 3	MEASLES	VITAMIN A	

ASSESS CHILD'S FEEDING IF CHILD HAS VERY LOW WEIGHT OR ANAEMIA OR IS LESS THAN 2 YEARS OLD • Do you breastfeed your child? Yes___ No___ If Yes, how many times in 24 hours? ___ times. Do you breastfeed during the night? Yes___ No___ • ☐ Does the child take any other food or fluids? Yes___ No___ If Yes, what foods or fluids? _____ _____ - How many times per day? ___ times. What do you use to feed the child and how? _____ - How large are the servings? _____ - Does the child receive his own serving? _____ Who feeds the child and how? _____ ☐ During this illness, has the child's feeding changed? Yes___ No___	
---	--

TREAT

Remember to refer any child who has a general danger sign and no other severe classification.

Return for follow up in: _____

Advise mother when to return immediately.

Give any immunizations, vitamin A or IFA supplements needed today: _____

Counsel the mother about her own health.

Feeding advice: _____

WHEN TO RETURN IMMEDIATELY

For all children going home, you will advise the mother when to return immediately. This means to **teach** the mother certain signs that mean to return immediately for further care. These signs are listed on the *COUNSEL THE MOTHER* chart in the section WHEN TO RETURN. Use local terms that the mother will understand.

WHEN TO RETURN IMMEDIATELY

Advise mother to return immediately if the child has any of these signs:	
Any sick child	• Not able to drink or breastfeed • Becomes sicker • Develops a fever
If child has NO PNEUMONIA: COUGH OR COLD, also return if:	• Fast breathing • Difficult breathing
If child has Diarrhoea, also return if:	• Blood in stool • Drinking poorly

This is an extremely important section of WHEN TO RETURN. Tell every mother to return immediately if her child is:

- **not able to drink or breastfeed,**
- **becomes sicker, or**
- **develops a fever.**

Exception: If the child already has fever, you do not need to tell the mother to return immediately for fever.

In addition to these signs, tell mothers of children with a simple **cough or cold** to watch for the following signs that mean the child may have developed pneumonia:

- **fast breathing**
- **difficult breathing**

Carefully explain these signs of possible pneumonia. If mothers do not understand the importance of these signs, they may not return when the child develops pneumonia, and the child may die.

Advise mothers of children with **diarrhoea** to watch for:

- **blood in the stool**
- **drinking poorly**

Exception: If the child already has blood in the stool, you do not need to tell the mother to return immediately for blood, tell her to return just for drinking poorly.



EXERCISE B

In this exercise you will describe when to return immediately for different cases. You will list the signs that you will teach the mother to watch for.

1. A child has:
No general danger signs
ACUTE EAR INFECTION
NO ANAEMIA AND NOT VERY LOW WEIGHT
No other classifications

What are the signs to return immediately?

2. A child has:
No general danger signs
Diarrhoea with NO DEHYDRATION
PERSISTENT DIARRHOEA
NO ANAEMIA AND NOT VERY LOW WEIGHT
No other classifications

What are the signs to return immediately?

3. *A child in low malaria risk area has:*
No general danger signs
PNEUMONIA
FEVER-MALARIA UNLIKELY
NO ANAEMIA AND NOT VERY LOW WEIGHT
no other classifications

What are the signs to return immediately?

When you have completed this exercise, please discuss your answers with a facilitator.

3.0 IDENTIFY URGENT PRE-REFERRAL TREATMENT NEEDED

When a child needs urgent referral, you must quickly identify and begin the most urgent treatments for that child. The following are urgent treatments. They are in bold print on the *ASSESS & CLASSIFY* chart. You will give just the first dose of the drugs before referral.

- Give an appropriate antibiotic
- Give quinine for severe malaria
- Give vitamin A
- Treat the child to prevent low blood sugar (This involves giving breastmilk, milk, or sugar water as described on the *TREAT* chart.)
- Give paracetamol for high fever (38.5°C or above) or pain from mastoiditis
- Apply tetracycline eye ointment (if clouding of the cornea or pus draining from eye)
- Provide ORS solution so that the mother can give frequent sips on the way to the hospital

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

Do not delay referral to give non-urgent treatments such as wicking the ear or oral iron treatment. If immunizations are needed, do not give them before referral. Let hospital personnel determine when to give immunizations. This will avoid delaying referral.

EXAMPLE : Hashah is a 15-month-old girl. She has no general danger signs. She has **NO PNEUMONIA: COUGH OR COLD**. She is at high risk of malaria, and she has a fever of 39°C and stiff neck, so she is classified as having **VERY SEVERE FEBRILE DISEASE**. She is classified as **NO ANAEMIA AND NOT VERY LOW WEIGHT** and has no other classifications.

Hashah needs urgent referral. Before going to the hospital, she should be given:

Quinine (first dose)
Appropriate antibiotic (first dose)
Treatment to prevent low blood sugar
Paracetamol (first dose)

The doctor should **NOT** take time to teach how to soothe the throat and relieve the cough with a safe remedy since that is not an urgent treatment. The doctor should **NOT** take time to assess feeding and counsel the mother on feeding.

4.0 GIVE URGENT PRE-REFERRAL TREATMENT

The next module will describe how to do treatments presented on the TREAT chart. All urgent, pre-referral treatments are included on that chart. When referring a child, do the treatments quickly. Do not take time to teach the mother as you would in a non-urgent situation.

Many severe cases need the first dose of an antibiotic before referral. However, if a child cannot drink, is vomiting everything, is having convulsions, or cannot be wakened, the child will not be able to take an oral antibiotic, other oral drugs, or drinks such as ORS or breast milk. The child with these danger signs will need to be given an intramuscular injection of chloramphenicol instead of an oral antibiotic. Dosages are given in the next module. ORS or oral drugs such as paracetamol will need to be given at the hospital when the child is able to take them. If the child needs treatment to prevent low blood sugar, and you are able to insert an NG tube, give sugar water or breast milk substitute by NG tube before referral.

5.0 REFER THE CHILD

Do the four steps to refer a child to the hospital just as you learnt for a young infant:

1. *Explain to the mother the need for referral, and get her agreement to take the child. If you suspect that she does not want to take the child, find out why.*
2. *Calm the mother's fears and help her resolve any problems.*
3. *Write a referral note for the mother to take with her to the hospital. Tell her to give it to the doctor there.*
4. *Give the mother any supplies and instructions needed to care for her child on the way to the hospital.*

**INTEGRATED
MANAGEMENT OF
NEONATAL AND
CHILDHOOD
ILLNESS**

Treat the Child

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INTRODUCTION

In the previous module you learnt to identify treatment for the sick child age 2 months up to 5 years. Sick children often begin treatment at a clinic and need to continue treatment at home. The chart *TREAT THE CHILD* describes the treatments.

In this module you will learn to identify the appropriate treatments and use the *TREAT THE CHILD* chart to learn ***how to give*** each treatment. You will also learn ***how to teach the mother*** to continue giving treatment at home.

LEARNING OBJECTIVES

This module will describe and allow you to practice the following skills:

- * Treating a sick child with oral drugs at home
- * Treating local infections at home
- * Giving drugs administered in the clinic only (intramuscular injections of chloramphenicol and quinine)
- * Treating different classifications of dehydration, and teaching the mother about extra fluid to give at home
- * Immunizing children
- * Treating a sick child with a severe classification where referral is not possible.

1.0 TREAT A SICK CHILD WITH ORAL DRUGS AT HOME

In the previous module *IDENTIFY TREATMENT FOR THE SICK CHILD 2 MONTHS UP TO 5 YEARS*, you learnt the classifications for which an appropriate oral antibiotic, paracetamol, zinc, vitamin A, iron and folic acid therapy and an oral antimalarial should be given. Use the *TREAT THE CHILD* chart or your chart booklet (pages 18 and 19) to select the appropriate drug, and to determine the dose and schedule. Read these instructions for giving oral drugs at home on page 18 and 19 of the chart booklet now.

Give an oral drug only if the child is able to drink. There are some points to remember about some oral drugs:

1.1 GIVE AN ORAL ANTIBIOTIC

Give the "first-line" oral antibiotic if it is available. You should give the "second-line" antibiotic only if the first-line antibiotic is not available, or if the child's illness does not respond to the first-line antibiotic.

Some children have more than one illness that requires antibiotic treatment. Whenever possible, select one antibiotic that can treat all of the child's illnesses.

* *Sometimes one antibiotic can be given to treat the illness(es).*

For example, a child with PNEUMONIA and ACUTE EAR INFECTION can be treated with a single antibiotic. When treating a child with more than one illness requiring the same antibiotic, do **not** double the size of each dose or give the antibiotic for a longer period of time.

* *Sometimes more than one antibiotic must be given to treat the illness(es).*

For example, the antibiotics used to treat PNEUMONIA may not be effective against CHOLERA. In this situation, a child who needs treatment for CHOLERA **and** PNEUMONIA must be treated with two antibiotics.

1.2 GIVE ORAL ZINC SUPPLEMENTS

Zinc is an important micronutrient for a child's overall health and development. Zinc is lost in greater quantities during diarrhoea. Replacing the lost zinc is important to help the child recover and to keep the child healthy in the coming months.

Zinc supplement is a part of treatment of a child with diarrhoea. Give zinc supplements to the child with diarrhoea for 14 days. A child upto 6 months of age needs ½ tablet (20 mg

tablet) per day for 14 days while children 6 months or more need 1 tablet per day for 14 days. Explain and teach the mother how to give the zinc supplements to the child.

PREPARATION OF ZINC

- Take a clean spoon, place 1 tablet (child ≥ 6 months) on the spoon.
- Pour water carefully on the tablet taking care that the water does not reach the brim. Never dip the spoon with tablet into the water container.
- If the child is < 6 months and breastfed, tell mother to express milk first in the spoon and then add $\frac{1}{2}$ tablet, discard the other $\frac{1}{2}$. Be careful, while breaking the tablet into half, put pressure with your thumb on the groove in the tablet. If two halves are not equal, break off the extra bit from the larger half. Discard the remaining half.
- Shake the spoon slowly till the tablet dissolves completely. Take care that the solution does not overflow. Do not use fingertip or any other material to dissolve the tablet. Tell the mother to hold the child comfortably and ask her to feed the solution to the child.
- If there is any powder remaining in the spoon, let the child lick it or add little more water or breast milk to dissolve it and then ask the mother to give it again.

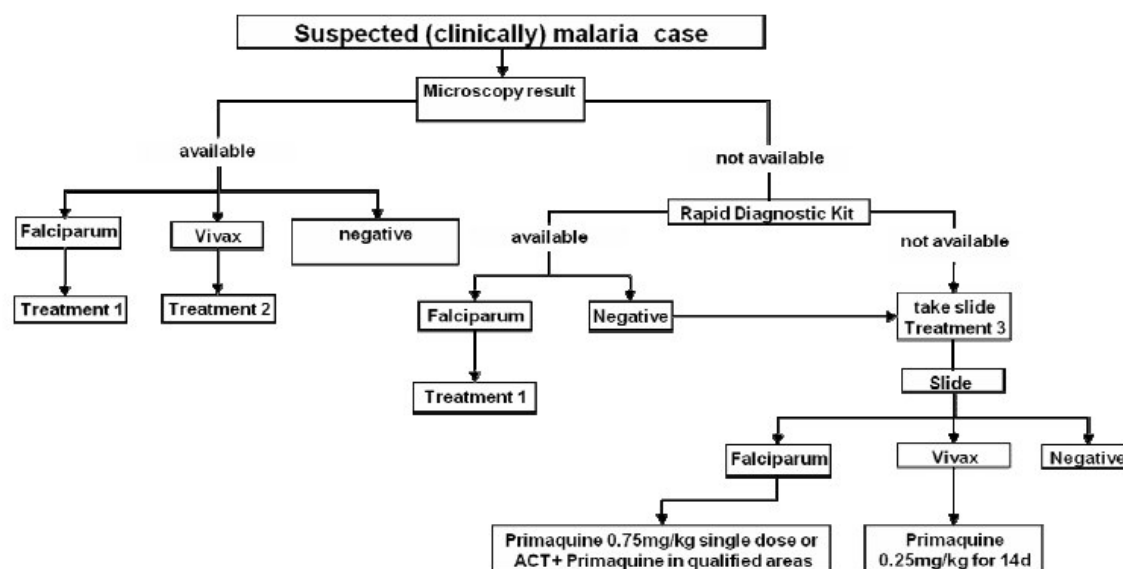
1.3 GIVE AN ORAL ANTIMALARIAL

- Treatment of malaria is guided by the malaria risk area. Smear should be made in all cases presenting with fever in high risk area. Rapid Diagnostic Test (RDT) for *P. falciparum* is also available in high risk areas which should be done to get quick report.
- **Treatment of *P. falciparum* (Pf) cases**
 - a) in high risk areas: ACT (Artesunate + Sulpha Pyrimethamine) combination is recommended as first line of treatment.
 - b) in low risk areas chloroquine in therapeutic dose of 25 mg/kg body weight divided over three days. Also give single dose of Primaquine 0.75 mg/kg to children above one year of age on first day.
- **Treatment of *P. vivax* (Pv) cases**

Microscopically positive *P. vivax* (Pv) cases should be treated with chloroquine in therapeutic dose of 25 mg/kg body weight divided over three days. Primaquine should be given in dose of 0.25 mg/kg body weight daily for 14 days. Primaquine is contraindicated in children < 1 year and in children with severe anemia.

- If both microscopy and RDT are negative, or not available, cases having fever without any other obvious cause should be considered as 'clinical malaria' and treated with chloroquine in dose of 25 mg/kg body weight over three days

Flow chart for the treatment of an uncomplicated malaria case (2008)



Treatment 1 **Chloroquine + Primaquine** (25mg/kg over 3 days + 0.75mg/kg single dose)
or

Artesunate + Sulpha Pyrimethamine + Primaquine (in areas qualified for ACT)
4 mg/kg for 3 days + 25/1.25mg/kg single dose + 0.75mg/kg single dose

Treatment 2 **Chloroquine + Primaquine** (25mg/kg over 3 days + 0.25mg/kg for 14 days)

Treatment 3 **Chloroquine** (25mg/kg over 3 days)

Note: Primaquine is contraindicated in pregnant women, G6PD deficiency, and infants, ACT is contraindicated in pregnant women

** For clinically suspected malaria cases, signs and symptoms may be referred*

1.4 GIVE PARACETAMOL FOR HIGH FEVER ($\geq 38.5^{\circ}\text{C}$) OR EAR PAIN

Paracetamol lowers a fever and reduces pain. If a child has high fever, give one dose of paracetamol in clinic. If the child has ear pain, give the mother enough paracetamol for 1 day, that is, 4 doses. Tell her to give one dose every 6 hours or until the ear pain is gone.

1.5 GIVE VITAMIN A

Vitamin A is a part of treatment of a child with PERSISTENT DIARRHOEA, MEASLES or SEVERE MALNUTRITION. Give Vitamin A to the child in the clinic. In children with MEASLES give 2 doses. Give the second dose to the mother to give her child the next day at home. Check if the child has received vitamin A in the last 30 days. Do not give vitamin A if the child has received it in the last 30 days.

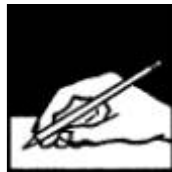
Record the date each time you give vitamin A to a child. This is important. If you give repeated doses of vitamin A in a short period of time, there is danger of an overdose.

1.6 GIVE IRON & FOLIC ACID THERAPY

Give syrup to the child under 12 months of age. If the child is 12 months or older, give iron tablets. Give the mother enough iron for 14 days and ask her to return in 14 days. Also tell her that the iron may make the child's stools black.

Tell the mother to keep the iron out of reach of the child. An overdose of iron can be fatal or make the child very ill.

If a child with some pallor has another infection do **not** give iron-folate till the child has improved. If a child with some pallor is receiving the antimalarial sulfadoxine-pyrimethamine, do **not** give iron-folate tablets until a follow-up visit in 2 weeks. The folate in the IFA formulation may interfere with the action of the sulfadoxine-pyrimethamine, which contains anti-folate drugs.



EXERCISE A

Part I

In this exercise you will practice using the *TREAT THE CHILD* chart to determine the appropriate oral drug, and the correct dose and schedule. Refer to your *TREAT THE CHILD* chart. Assume that this is the first time each child is being treated for the illness, unless otherwise indicated. Record your answer in the space provided.

1. A 2-year-old (11 kg) child needs an antibiotic for PNEUMONIA and ACUTE EAR INFECTION.
2. A 4-month-old needs an antibiotic for an ACUTE EAR INFECTION and an oral antimalarial for MALARIA. The malaria risk the area is high. Smear and RDT is negative

3. A 2 ½ year old 12-kg-child needs an oral antimalarial for MALARIA and paracetamol for high fever. The malaria risk the area is high. RDT and smear is positive for *plasmodium falciparum*.
4. A 9-month-old needs vitamin A for MEASLES.
5. A 2-year-old child (11 kg) has ANAEMIA and needs iron.
6. A one year old (7 kg) child needs zinc for persistent diarrhoea.

Part II. ROLE PLAY

You have learnt how to teach the mother to give oral drugs at home in the *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER* module. Now you will participate in a role play that teaches mothers to give oral drugs at home.

THE SITUATION -- What has happened so far:

Dasar, an 8-month-old (5 kg) boy, lives in a region where the risk of malaria is high. His mother brought him to the clinic because he has fever. The fever has been present for 4 days.

A doctor finds that Dasar has no general danger signs, no cough, no diarrhoea and no ear problem. He has a fever of 38°C, with no stiff neck, no runny nose or measles. He is very low weight for age and has some palmar pallor. The doctor classifies Dasar as MALARIA and VERY LOW WEIGHT and ANAEMIA. RDT is negative for pf and smear is positive for *plasmodium vivax*.

To treat the MALARIA, the doctor decides to give chloroquine syrup. He notes that Dasar should be given 7.5 ml on the first two days, and 5.0 ml on the third day.

To treat the ANAEMIA, the doctor notes that Dasar needs ¼ tsp of iron syrup.

(NOTE: The doctor should advise Dasar's mother about feeding, but that is not included in this role play. You will learn how to give feeding advice in the next module *Counsel the Mother*.)

DOCTOR:

To start the role play, tell the mother that Dasar needs chloroquine. Teach the mother how to give the oral drugs at home. Give the mother all necessary information, show her how to give the drugs, and observe her giving the first dose of the drugs to her child. Then advise the mother when to return to the clinic immediately and when to return for follow-up care. Check the mother's understanding.

MOTHER:

Listen carefully to the instructions that the doctor gives you. Ask questions if you do not understand the instructions. Answer any questions you are asked by the doctor.

OBSERVERS:

Watch the role play. Do not interfere. Read the following questions and answer them as you watch.

- a. Does the doctor ***give information*** to the mother about why the oral drugs are important, and how/when to give them?
- b. Does the doctor ***show*** the mother ***examples*** of how to measure a dose of each drug?
- c. Does the doctor observe the mother:
practice measuring a dose of each drug, and
practice giving the drug to her child?
- d. Does the doctor correctly label and package the drugs?
- e. Does the doctor tell the mother when to return immediately?
Does the doctor tell her when to return for follow-up care?
- f. Does the doctor check the mother's understanding?
What checking questions does the doctor ask? What other checking questions would you ask?

After the role play, discuss the above questions and your answers with the other participants and facilitator.
--

2.0 TEACH THE MOTHER TO TREAT LOCAL INFECTIONS AT HOME

Local infections include eye and ear infections, mouth ulcers and cough and cold. You have already learnt how to treat ear infections and mouth ulcers in the *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER MODULE*.

2.1 SOOTHE THE THROAT, RELIEVE THE COUGH WITH A SAFE REMEDY (Refer to page 20 of your chart booklet)

To soothe the throat or relieve a cough, use a safe remedy. Such remedies can be home made, given at the clinic, or bought at a pharmacy. It is important that they are *safe*. Home made remedies are as effective as those bought in a store.

Your *TREAT THE CHILD* chart recommends safe, soothing remedies for children with a sore throat or cough. If the child is exclusively breastfed, do *not* give other drinks or remedies. Breastmilk is the best soothing remedy for an exclusively breastfed child.

Harmful remedies may be used in your area. Never use remedies that contain harmful ingredients, such as atropine, codeine or codeine derivatives, or alcohol. These items may sedate the child. They may interfere with the child's feeding. They may also interfere with the child's ability to cough up secretions from the lungs. Medicated nose drops (that is, nose drops that contain anything other than salt) should also not be used.

When explaining how to give the safe remedy, it is not necessary to watch the mother practice giving the remedy to the child. Exact dosing is not important with this treatment.

2.2 TREAT EYE INFECTION WITH TETRACYCLINE EYE OINTMENT (Refer to page 20 of your chart booklet)

□

If the child will be referred, clean the eye gently. Pull down the lower lid. Squirt the first dose of tetracycline eye ointment onto the lower eyelid. The dose is about the size of a grain of rice.

If the child is not being referred, teach the mother to apply the tetracycline eye ointment. Give the mother the following **information**. Tell her that she should treat both eyes to prevent damage to the eyes. Tell her also that the ointment will slightly sting the child's eye.

Tell the mother to:

- * Wash her hands before and after treating the eye.
- * Clean the child's eyes immediately before applying the tetracycline eye ointment. Use a clean cloth to wipe the eye.
- * Repeat the process (cleaning the eye and applying ointment) 3 times per day, in the morning, at mid-day and in the evening.

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

- * Hold down the lower lid of your eye. Point to the lower lid. Tell the mother that this is where she should apply the ointment. Tell her to be careful that the tube does not touch the eye or lid.
- * Have someone hold the child still.
- * Wipe one of the child's eyes with the cloth. Squirt the ointment onto the lower lid. Make sure the mother sees where to apply the ointment and the amount (the size of a grain of rice).



Ask the mother to **practice** cleaning and applying the eye ointment into the child's other eye. Observe and give feedback as she practices. When she has finished, give her the following additional information.

- * **Treat both eyes until the redness is gone from the infected eye.** The infected eye is improving if there is less pus in the eye or the eyes are not stuck shut in the morning.
- * Do ***not*** put any other eye ointments, drops or alternative treatments in the child's eyes. They may be harmful and damage the child's eyes. Putting harmful substances in the eye may cause blindness.
- * After 2 days, if there is still pus in the eye, bring the child back to the clinic.

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

Before the mother leaves, ask **checking questions**. Check that she understands how to treat the eye. For example, ask:

"Will you treat one or both eyes?"

"How much ointment you will put in the eyes? Show me."

"How often will you treat the eyes?"

"When will you wash your hands?"

DETERMINE PRIORITY OF ADVICE

When a child has only one problem to be treated, give all of the relevant treatment instructions and advice listed on the charts. When a child has several problems, the instructions to mothers can be quite complex. In this case, you will have to limit the instructions to what is most important. You will have to determine:

- How much can **this** mother understand and remember?
- Is she likely to come back for follow-up treatment? If so, some advice can wait until then.
- What advice is most important to get the child well?

If a mother seems confused or you think that she will not be able to learn or remember all the treatment instructions, select only those instructions that are most essential for the child's survival. Essential treatments include giving antibiotic or antimalarial drugs **and** giving fluids to a child with diarrhoea. Teach the few treatments well and check that the mother remembers them.

If necessary, omit or delay the following:

- Feeding assessment and feeding counselling
- Soothing remedy for cough or cold
- Paracetamol*
- Second dose of vitamin A*
- Iron treatment
- Zinc treatment
- Wicking an ear

You can give the other treatment instructions when the mother returns for the follow-up visit.

*Give the first dose of paracetamol or vitamin A. Do **not** dispense the other doses. Do **not** overwhelm the mother with instruction for later doses.



EXERCISE B

In this exercise you will answer questions about how to teach a mother to treat local infections at home. You will also practice determining priority of advice.

PART 1: Teaching a mother to treat local infections at home.

1. Treat An Eye Infection
 - a. What would you tell a mother about why it is important to treat an eye infection?
 - b. What major step of how to teach a mother to treat an eye infection is missing from the list below?
 - * Explain how and why to treat the eye.
 - * Demonstrate how to clean the eye and apply tetracycline eye ointment.
 - * Tell her how often and for how many days to treat the eye and tell her to not put anything else in the child's eye.
 - * Give her one tube of eye ointment.
 - * Ask checking questions to make sure she understands the instructions.
 - c. Change these questions into checking questions.
 1. Do you know how to treat your child's eye?
 2. Can you hold your child still while you apply the ointment?

2. Soothe the Throat, Relieve the Cough with a Safe Remedy
 - a. What is meant by a "safe" remedy? Give an example.
 - b. Give at least 2 examples of remedies that are not safe.
 - c. When should a child classified as NO PNEUMONIA: COUGH OR COLD return immediately for treatment?

When you have finished Part 1, discuss your answers with a facilitator.

PART 2: Practice determining priority of advice.

The facilitator will read aloud a case description for a child named Mela.

1. Listen to the case description of Mela. Write the findings of Mela's assessment and classification on the recording form on the next page.
2. Identify all of Mela's treatments. List the treatments on the recording form.
3. The facilitator will continue reading the case description.
4. Review your list of treatments, instructions and advice that Mela needs. Which ones are the most important for the doctor to teach the grandmother?
5. Which treatments, instructions or advice could be omitted or delayed if the grandmother is clearly overwhelmed?

3.0 GIVE THESE TREATMENTS IN THE CLINIC ONLY

You have already learnt how to treat an infant to prevent low blood sugar in the *TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER MODULE*. Use the same instructions to treat a child to prevent low blood sugar.

3.1 GIVE AN INTRAMUSCULAR ANTIBIOTIC (Refer to page 17 of your chart booklet)

A child may need an antibiotic before he leaves for the hospital. If a child has: **a general danger sign, SEVERE PNEUMONIA OR VERY SEVERE DISEASE, VERY SEVERE FEBRILE DISEASE and MASTOIDITIS**. Give this child a single dose of chloramphenicol by intramuscular injection. Then refer the child urgently to the hospital.

3.2 GIVE INTRAMUSCULAR QUININE FOR SEVERE MALARIA (Refer to page 17 of your chart booklet)

A child with VERY SEVERE FEBRILE DISEASE may have severe malaria. To kill malaria parasites as quickly as possible, give a quinine injection before referral. Quinine is the preferred antimalarial because it is effective in most areas of the world and it acts rapidly. Intramuscular quinine is also safer than intramuscular chloroquine.

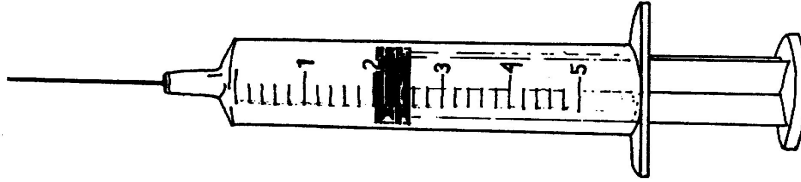
Possible side effects of a quinine injection are a sudden drop in blood pressure, dizziness, ringing of the ears, and a sterile abscess. If a child's blood pressure drops suddenly, the effect stops after 15-20 minutes. Dizziness, ringing of the ears and abscess are of minor importance in the treatment of a very severe disease.

PROCEDURES FOR GIVING CHLORAMPHENICOL AND QUININE INJECTIONS

Follow these steps when giving a quinine or chloramphenicol injection if *you are skilled* to give an intramuscular injection. If not, *ask someone who is skilled* to give the injection. (Later someone can teach you how to give the injections.)

1. Use the *TREAT THE CHILD* chart to determine the appropriate dose. Check which concentration is available in your clinic. Make sure you read the chart correctly for the concentration you are using.
2. **CHLORAMPHENICOL:** Mix the chloramphenicol. Chloramphenicol is usually packaged as a powder in a 1000 mg rubber-topped vial. Add 5 ml of sterile water to the vial of chloramphenicol. Shake the vial until the mixture is clear.
QUININE: No mixing is needed.

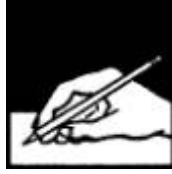
3. Use a sterile needle and syringe to give the injection. For *Chloramphenicol injections* use the common type of syringe. Measure the dose accurately.



For *Quinine injections*, use a syringe with fine gradations such as a tuberculin syringe. Measure the dose accurately.



4. Make sure the child is lying down, especially if you are giving a quinine injection. Quinine may cause a sudden drop in blood pressure.
5. Give the drug as a deep intramuscular injection in the front of the child's thigh, **not** in the buttock. NEVER give quinine as a rapid intravenous injection. This is extremely dangerous. In some hospitals, quinine may be given in a slow IV infusion over 4-8 hours with special monitoring. Intramuscular quinine is more appropriate and safer than intravenous infusion in clinics and in many hospitals.
6. Refer the child urgently. The child should be carried. Keep the child lying down for one hour after a quinine injection.



EXERCISE C

In this exercise you will determine correct doses of drugs.

Practice determining correct doses

1. What dose would you give the following children?

Child's Weight	If Chloramphenicol is needed (180 mg/ml)	If Quinine is needed (150 mg/ml)
5 kg	_____	_____
7 kg	_____	_____
13 kg	_____	_____
18 kg	_____	_____

2. What are the possible side effects of a quinine injection?
3. Sunil, a 12-month-old (10 kg) boy, was brought to the clinic this morning because he has had fever for 2 days and has been sleeping since yesterday.

A doctor assessed Sunil and found that he is unconscious. He classified Sunil as VERY SEVERE FEBRILE DISEASE, NOT VERY LOW WEIGHT and NO ANAEMIA.

The doctor will give Sunil an intramuscular antibiotic and quinine. He will also give him sugar water by nasogastric tube to prevent low blood sugar. Then the doctor will refer Sunil urgently to the nearest hospital.

Specify the dose of each treatment that Sunil will receive.

Chloramphenicol: _____

Quinine: _____

Sugar water by NG tube: _____

When you have finished, discuss your answers with the other members of your

group.

4.0 GIVE EXTRA FLUID, ZINC SUPPLEMENTS FOR DIARRHOEA AND CONTINUE FEEDING

You have learned to assess a child with diarrhoea, classify dehydration and select one of the following treatment plans:

- Plan A - Treat Diarrhoea at Home
- Plan B - Treat Some Dehydration with ORS
- Plan C - Treat Severe Dehydration Quickly

All three plans provide fluid to replace water and salts lost in diarrhoea. An excellent way to both rehydrate and prevent dehydration in a child is to give him a solution made with oral rehydration salts (ORS). IV fluid should be used only in cases of SEVERE DEHYDRATION.

The only types of diarrhoea that should be treated with antibiotics are diarrhoea with SEVERE DEHYDRATION with cholera in the area and DYSENTERY. You will now learn how to do Plans A, B and C.

4.1 PLAN A: TREAT DIARRHOEA AT HOME

This section describes PLAN A, treatment of a child who has diarrhoea with NO DEHYDRATION. Plan A is an important treatment plan. Children with diarrhoea who come to a doctor with NO DEHYDRATION will be put on Plan A. Children with dehydration need to be rehydrated on Plan B or C, then on Plan A. Eventually, all children with diarrhoea will be on Plan A.

Plan A involves counselling the child's mother about the 4 Rules of Home Treatment. :

1. GIVE EXTRA FLUID (as much as the child will take)
2. GIVE ZINC SUPPLEMENT
3. CONTINUE FEEDING
4. WHEN TO RETURN

Now study Plan A from your chart booklet (Page 22).

GIVE EXTRA FLUID

This section describes how to counsel the mother on the first rule of home treatment, give extra fluid. You will teach the mother to prevent dehydration by giving the child extra fluid. Extra fluid means more fluid than usual. Information about how to continue

feeding the child will be discussed in the module *Counsel The Mother*. You learned when a mother should return to a doctor in the previous module, *Identify Treatment*.

➤ **TELL THE MOTHER:**

Give as much fluid as the child will take. The purpose of giving extra fluid is to replace the fluid lost in diarrhoea and thus to prevent dehydration. The critical action is to give more fluid than usual, as soon as the diarrhoea starts.

Tell the mother to breastfeed frequently and for longer at each feed. Also explain that she should give other fluids. ORS solution is one of several fluids recommended for home use to prevent dehydration.

If the child is exclusively breastfed, it is important for this child to be breastfed more frequently than usual. Also give ORS solution or clean water. Breastfed children under 6 months should first be offered a breastfeed then given ORS.

If a child is not exclusively breastfed, give one or more of the following:

- * ORS solution
- * Food-based fluids
- * Clean water

In most cases a child who is not dehydrated does not really need ORS solution. Give him extra food-based fluids such as soups, rice water and yoghurt drinks, and clean water (preferably given along with food).

Plan A lists 2 situations in which the mother should give ORS solution at home.

1. The child has been treated on Plan B or C during this visit. In other words, the child has just been rehydrated. For this child, drinking ORS solution will help keep the dehydration from coming back.
2. The child cannot return to a clinic if the diarrhoea gets worse. For example, the family lives far away or the mother has a job that she cannot leave.

➤ **TEACH THE MOTHER HOW TO MIX AND GIVE ORS. GIVE THE MOTHER 2 PACKETS OF ORS TO USE AT HOME.**

When you give the mother ORS, show her how to mix the ORS solution and give it to her child. Ask the mother to practice doing it herself while you observe her.

The steps for making ORS solution are:

- * Wash your hands with soap and water.
- * Pour all the powder from one packet into a clean container. Use any available container, such as a jar, bowl or bottle.
- * Measure 1 litre of clean water (or correct amount for packet used). It is best to boil and cool the water, but if this is not possible, use the cleanest drinking water available.
- * Pour the water into the container. Mix well until the powder is completely dissolved.
- * Taste the solution so you know how it tastes.

Explain to the mother that she should mix fresh ORS solution each day in a clean container, keep the container covered, and throw away any solution remaining from the day before.

Give the mother 2 packets of ORS to use at home. (Give 2 one-litre packets or the equivalent.)

➤ **SHOW THE MOTHER HOW MUCH FLUID TO GIVE IN ADDITION TO THE USUAL FLUID INTAKE:**

Explain to the mother that her child should drink the usual fluids that the child drinks each day **and** extra fluid. Show the mother how much extra fluid to give after each loose stool:

Up to 2 years	50 to 100 ml after each loose stool
2 years or more	100 to 200 ml after each loose stool

Explain to the mother that the diarrhoea should stop soon. ORS solution will not stop diarrhoea. The benefit of ORS solution is that it replaces the fluid and salts that the child loses in the diarrhoea and prevents the child from getting sicker.

Tell the mother to:

- * Give frequent small sips from a cup or spoon. Use a spoon to give fluid to a young child.
- * If the child vomits, wait 10 minutes before giving more fluid. Then resume giving the fluid, but more slowly.
- * Continue giving extra fluid until the diarrhoea stops.

Use a Mother's Card and Check the Mother's Understanding

Some doctors have Mother's Cards to give mothers to take home. A Mother's Card helps the mother remember important information, including what kind of fluids and food to give her child.

To indicate the type of fluids a mother should give her child, tick the appropriate box or boxes in the card's "Fluid" section. (Use a pencil to mark the card so that the instructions can be changed, if needed, at a later visit.)

- * Tick the box for ORS if you give the child ORS.
- * Tick the other two boxes for water and for other fluids ***unless the child is exclusively breastfed***. Exclusively breastfed children should be breastfed more frequently and can drink clean water or ORS solution. Exclusively breastfed children should not be given food-based fluids such as soup, rice water or yoghurt drinks.

Below are examples of how to tick the "Fluid" section of the Mother's Card for a child who will receive ORS on Plan A:

- ☐ ***Advise the Mother to Increase Fluid During Illness***

FOR ANY SICK CHILD:

- ☐ Breastfeed more frequently and for longer at each feed.
- ☐☐☐☐ Increase fluid. For example, give soup, rice water, yoghurt drinks or clean water.

FOR CHILD WITH DIARRHOEA:

- ☐☐ Giving extra fluid can be lifesaving. Give fluid according to Plan A or Plan B on *TREAT THE CHILD* chart.

Before the mother leaves, check her understanding of how to give extra fluid according to Plan A. Use questions such as:

- * What kinds of fluid will you give?
- * How much fluid will you give your child?
- * How often will you give the ORS solution to your child?
- * Show me how much water you will use to mix ORS.
- * How will you give ORS to your child?
- * What will you do if the child vomits?

Ask the mother what difficulties she expects when she gives fluid to her child. For example, if she says that she does not have time, help her plan how to teach someone else to give the fluid. If she says that she does not have a one-litre container for mixing ORS, show her how to measure one litre using a smaller container. Or, show her how to measure one litre in a larger container and mark it with an appropriate tool.

The *second rule of home treatment* is **GIVE ZINC SUPPLEMENT.**

The *third rule of home treatment* is **CONTINUE FEEDING.**

In the module, *Counsel the Mother*, you will learn to counsel on feeding. If a child is classified as PERSISTENT DIARRHOEA, you will teach the mother some special feeding recommendations.

The *fourth rule of home treatment* is **WHEN TO RETURN.**

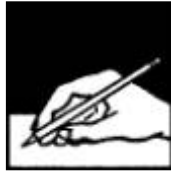
You have learned the signs when a mother should return immediately to a doctor. Tell the mother of any sick child that the signs to return are:

- * Not able to drink or breastfeed
- * Becomes sicker
- * Develops a fever

If the child has diarrhoea, also tell the mother to return if the child has:

- * Blood in stool
- * Drinking poorly

"Drinking poorly" includes "not able to drink or breastfeed." These signs are listed separately, but it may be easier to combine them. You could simply tell the mother to return if the child is "drinking or breastfeeding poorly."



EXERCISE D

1. Somi is a 4-year-old boy who has diarrhoea. He has no general danger signs. He was classified as having diarrhoea with NO DEHYDRATION, NOT VERY LOW WEIGHT and NO ANAEMIA. He will be treated according to Plan A.
 - a. What are the four rules of home treatment of diarrhoea?
--
--
--
--
 - b. What fluids should the doctor tell his mother to give?
2. Kasit is a 3-month-old boy who has diarrhoea. He has no general danger signs. He was classified as NO DEHYDRATION, NOT VERY LOW WEIGHT and NO ANAEMIA. He is exclusively breastfed. What should the doctor tell his mother about giving him extra fluids?
3. For which children with NO DEHYDRATION is it especially important to give ORS at home?
--

--

4. The following children came to the clinic because of diarrhoea. They were assessed and found to have no general danger signs. They were classified as NO DEHYDRATION, NOT VERY LOW WEIGHT and NO ANAEMIA. Write the amount of extra fluid that the mother should give after each stool.

	Name	Age	Amount of extra fluid to give after each loose stool
a)	Kala	6 months	
b)	Sam	2 years	
c)	Kara	15 months	

5. A 4-year-old boy has diarrhoea. He has no general danger signs. He was classified with NO DEHYDRATION, NOT VERY LOW WEIGHT and NO ANAEMIA. The doctor has taught his mother Plan A and given her 2 packets of ORS to use at home.

Tick all the fluids that the mother should encourage her son to drink as long as the diarrhoea continues.

- ☐ a. Tea that the child usually drinks with meals
- ☐ b. Fruit juice that the child usually drinks each day
- ☐ c. Water from the water jug. The child can get water from the jug whenever he is thirsty.
- ☐ d. ORS after each loose stool
- ☐ e. Yoghurt drink when the mother makes some for the family

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

4.2 PLAN B: TREAT SOME DEHYDRATION WITH ORS

This section describes Plan B, treatment of a child who has diarrhoea with **SOME DEHYDRATION**. Plan B includes an initial treatment period of 4 hours in the clinic. During the 4 hours, the mother slowly gives a recommended amount of ORS solution. The mother gives it by spoonfuls or sips. It is helpful to have an ORT corner in your clinic. Refer to Annex B if you need to set up an ORT corner.

A child who has a severe classification and **SOME DEHYDRATION** needs urgent referral to hospital (The exception is a child with the severe classification, **SEVERE PERSISTENT DIARRHOEA**. This child should be rehydrated then referred). Do **not** try to rehydrate the child before he leaves. Quickly give the mother some ORS solution. Show her how to give frequent sips of it to the child on the way to the hospital.

Otherwise, if a child who has **SOME DEHYDRATION** needs treatment for other problems, you should start treating the dehydration first. Then provide the other treatments.

After 4 hours, reassess and classify the child for dehydration using the **ASSESS AND CLASSIFY** chart. If the signs of dehydration are gone, the child is put on Plan A. If there is still some dehydration, the child repeats Plan B. If the child now has **SEVERE DEHYDRATION**, the child would be put on Plan C.

Now study Plan B from your chart booklet (Page 20).

Use the chart in Plan B to determine how much ORS to give. A range of amounts is given. Look below the child's weight (or age if the weight is not known) to find the recommended amount of ORS to give. For example, a 5-kg-child will usually need 200-400 ml of ORS solution in the first 4 hours.

The amounts shown in the box are to be used as guides. The age or weight of the child, the degree of dehydration and the number of stools passed during rehydration will all affect the amount of ORS solution needed. The child will usually want to drink as much as he needs. If the child wants more or less than the estimated amount, give him what he wants.

Another way to estimate the amount of ORS solution needed (in ml) is described below the box. Multiply the child's weight (in kilograms) by 75. For example, a child weighing 8 kg would need:

$$8 \text{ kg} \times 75 \text{ ml} = 600 \text{ ml of ORS solution in 4 hours}$$

Notice that this amount fits in the range given in the box. The box will save you this calculation. Giving ORS solution should not interfere with a breastfed baby's normal feeding. The mother should pause to let the baby breastfeed whenever the baby wants to, then resume the ORS solution.

➤ **SHOW THE MOTHER HOW TO GIVE ORS SOLUTION.**

Find a comfortable place in the clinic for the mother to sit with her child. Tell her how much ORS solution to give over the next 4 hours. Show her the amount in units that are used in your area. If the child is less than 2 years, show her how to give a spoonful frequently. If the child is older, show her how to give frequent sips from a cup. Sit with her while she gives the child the first few sips from a cup or spoon. Ask her if she has any questions.

If the child vomits, the mother should wait about 10 minutes before giving more ORS solution. She should then give it more slowly. Encourage the mother to pause to breastfeed whenever the child wants to. When the child finishes breastfeeding, resume giving the ORS solution again. The mother should not give the child food during the first 4 hours of treatment with ORS.

Show the mother where she can change the child's nappy or where the child can use a toilet or potty. Show her where to wash her hands and the child's hands afterwards.

Check with the mother from time to time to see if she has problems. If the child is not drinking the ORS solution well, try another method of giving the solution. You may try using a dropper or a syringe without the needle.

While the mother gives ORS solution at the clinic during the 4 hours, there is plenty of time to teach her how to care for her child. However, the first concern is to rehydrate the child. When the child is obviously improving, the mother can turn her attention to learning. Teach her about mixing and giving ORS solution and about Plan A. It is a good idea to have printed information that the mother can study while she is sitting with her child. The information can also be reinforced by posters on the wall.



➤ **AFTER 4 HOURS:**

After 4 hours of treatment on Plan B, reassess the child using the *ASSESS AND CLASSIFY* chart. Classify the dehydration. Choose the appropriate plan to continue treatment.

Note: Reassess the child *before* 4 hours if the child is not taking the ORS solution or seems to be getting worse.

If the child has improved and has NO DEHYDRATION, choose Plan A. Teach the mother Plan A if you have not already taught her during the past 4 hours. Before the mother leaves the clinic, ask good checking questions. Help the mother solve any problems she may have giving the child extra fluid at home.

Note: If the child's eyes are puffy, it is a sign of overhydration. It is not a danger sign or a sign of hypernatraemia. It is simply a sign that the child has been rehydrated and does not need any more ORS solution at this time. The child should be given clean water or breastmilk. The mother should give ORS solution according to Plan A when the puffiness is gone.

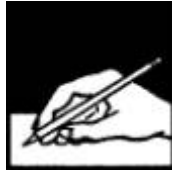
If the child still has SOME DEHYDRATION, choose Plan B again. Begin feeding the child in clinic. Offer food, milk or juice. After feeding the child, repeat the 4-hour Plan B treatment. Offer food, milk and juice every 3 or 4 hours. Breastfed children should continue to breastfeed frequently. If the clinic is closing before you finish the treatment, tell the mother to continue treatment at home.

If the child is worse and now has SEVERE DEHYDRATION, you will need to begin Plan C (discussed later in this module).

➤ **IF THE MOTHER MUST LEAVE BEFORE COMPLETING TREATMENT:**

Sometimes a mother must leave the clinic while her child is still on Plan B, that is, before the child is rehydrated. In such situations, you will need to:

- * Show the mother how to prepare ORS solution at home. Have her practice this before she leaves.
- * Show her how much ORS solution to give to complete the 4-hour treatment at home.
- * Give her enough packets to complete rehydration. Also give her 2 more packets as recommended in Plan A.
- * Show the mother how to give zinc tablets and give zinc tablets for 14 days.
- * Explain the 4 Rules of Home Treatment:
 1. GIVE EXTRA FLUID
 2. GIVE ZINC SUPPLEMENT
 3. CONTINUE FEEDING
 4. WHEN TO RETURN



EXERCISE E

1. The following children came to the clinic because of diarrhoea. They were assessed and found to have SOME DEHYDRATION and NO ANAEMIA AND NOT VERY LOW WEIGHT. Write the range of amounts of ORS solution each child is likely to need in the first 4 hours of treatment:

	Name	Age or Weight	Range of Amounts of ORS Solution
a)	Andras	3 years	
b)	Gul	10 kg	
c)	Nirveli	7.5 kg	
d)	Sami	11 months	

2. Vinita is 5 months old and has diarrhoea. She is classified as SOME DEHYDRATION, NOT VERY LOW WEIGHT and NO ANAEMIA. There is no scale for weighing Vinita at the small clinic. Vinita's mother died during childbirth, so Vinita has been taking infant formula. The grandmother has recently started giving cooked cereal as well.

- Vinita should be given _____ ml of _____ during the first _____ hours of treatment.
- What should the grandmother do if Vinita vomits during the treatment?

- c. When should the doctor reassess Vinita?
 - d. When Vinita is reassessed, she has NO DEHYDRATION. What treatment plan should Vinita be put on?
 - e. How many one-litre packets of ORS should the doctor give the grandmother?
 - f. To continue treatment at home, the grandmother should give Vinita _____ ml of _____ after each _____.
3. A mother and her child must leave the clinic before the child is fully rehydrated. What should the doctor do before the mother leaves? Complete the list below:
- * Show her how to prepare ORS solution at home.
 - *
 - *
 - * Explain the 4 Rules of Home Treatment:
 - 1.
 - 2.
 - 3.
 - 4.

Ask the facilitator to review your answers when you have finished the exercise.

EXERCISE F

In this role play a doctor will teach a mother how to care for a dehydrated child. In the first part, the child needs Plan B. In the second part, the child is ready for Plan A.

THE SITUATION -- What has happened so far:

A young mother brought 2-year-old Lura to the clinic because she has had diarrhoea for 1½ days. The doctor found no general danger signs. There was no blood in the stool. Lura was irritable. Her eyes looked sunken. When pinched, the skin of Lura's abdomen went back immediately. She drank eagerly. She had no other problems. The doctor classified Lura as **SOME DEHYDRATION**. She has no other disease classifications and **NOT VERY LOW WEIGHT** and **NO ANAEMIA**. The doctor selected Plan B treatment with ORS solution.

DOCTOR:

To start the role play, tell the mother that Lura needs treatment with ORS. Ask the mother to stay at the clinic to give Lura ORS solution. Then follow Plan B to get the mother started giving ORS solution. Show the mother how much ORS to give. Show her how to give it. Answer her questions and help with any problems.

MOTHER:

Listen to the doctor and try to do what he says. Ask questions about anything that is not clear. After you have given ORS solution for a few minutes, tell the doctor that Lura just vomited the solution.

OBSERVERS:

Look at Plan B and observe the role play. Notice what the doctor explains well and what could be done better.

The facilitator will start the role play and then stop it after a few minutes for a discussion of Plan B.

THE SITUATION 4 HOURS LATER:

After 4 hours, the doctor reassessed Lura. She had **NO DEHYDRATION**. Her diarrhoea continued, but the doctor thought that she was ready to go home on Plan A.

DOCTOR:

Teach the mother Plan A. Give her ORS packets to take home. Ask her checking questions to be sure she remembers and understands the 4 Rules of Home Treatment.

* * *

4.3 PLAN C: TREAT SEVERE DEHYDRATION QUICKLY

Severely dehydrated children need to have water and salts quickly replaced. Intravenous (IV) fluids are usually used for this purpose. Rehydration therapy using IV fluids or using a nasogastric (NG) tube is recommended *only* for children who have SEVERE DEHYDRATION.

The treatment of the severely dehydrated child depends on:

- * the type of equipment available at your clinic or at a nearby clinic or hospital,
- * the training you have received, and
- * whether the child can drink.

To learn how to treat a severely dehydrated child according to Plan C at your clinic, you will read and study an Annex that matches your situation.

1. **Annex C-1** teaches you how to treat according to Plan C if:

- * your clinic has IV equipment and acceptable fluids (See Annex D for acceptable IV fluids), and
- * you have been trained to give IV fluid.

2. **Annex C-2** teaches you how to treat according to Plan C if:

- * you cannot give IV fluid at your clinic, and
- * IV treatment is available at another clinic or hospital that can be reached within 30 minutes.

3. **Annex C-3** teaches you how to treat according to Plan C if:

- * you cannot give IV fluid at your clinic,
- * there is no clinic or hospital offering IV treatment nearby,
- * your clinic has nasogastric equipment, and
- * you are trained to use a nasogastric (NG) tube.

4. **Annex C-4** teaches you how to treat according to Plan C if:

- * you cannot give IV fluid at your clinic,
- * there is no clinic or hospital offering IV treatment nearby,
- * you cannot give NG therapy, and

- * the child can drink.

If you cannot give IV or NG fluid and the child cannot drink, refer the child urgently to the nearest clinic or hospital which can give IV or NG treatment.

To determine how you will treat a child who needs Plan C treatment, refer to the flowchart below. Read the questions in order from top to bottom and answer for the situation at your clinic. Note the first time you answer YES. Turn to the appropriate C Annex (as indicated on the flowchart) and continue reading.

4.4 TREAT PERSISTENT DIARRHOEA

The treatment for PERSISTENT DIARRHOEA requires special feeding and giving vitamin A and zinc.

The mother of a child with PERSISTENT DIARRHOEA will be advised on feeding her child. The feeding recommendations for a child with persistent diarrhoea are on the *COUNSEL THE MOTHER* chart. They are explained in the module *Counsel the Mother*.

4.5 TREAT DYSENTERY

Give oral Ciprofloxacin for *Shigella* to treat DYSENTERY. Tell the mother to return in 2 days for follow-up care to be sure the child is improving.

The box "Give an Appropriate Oral Antibiotic" on the *TREAT THE CHILD* chart tells the recommended antibiotics. Also give zinc tablets for 14 days.

5.0 IMMUNIZE EVERY SICK CHILD, AS NEEDED

This module assumes that you have already been trained to give immunizations. If you immunize children with the appropriate vaccine at the appropriate time, you prevent measles, polio, diphtheria, pertussis, tetanus and tuberculosis. Check the immunization status of every child you treat at your clinic. Immunize, as needed.

Review the following points about preparing and giving immunizations:

- * If a child 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 child at the clinic needs an immunization, open a vial of the vaccine and give him the needed immunization.
- * Discard opened vials of 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 child's immunization card. Record the date you give each dose. Also keep a record of the child's immunizations in the immunization register or the child's chart, depending on what you use at your clinic.

Tell the mother which immunizations her child 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 then an ulcer appears at the place of the immunization after about 2 weeks. The ulcer heals by itself and leaves 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.

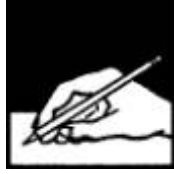
- * **OPV:** No side effects.

- * **DPT and DT:** Fever, irritability and soreness are possible side effects of DPT. They are usually not serious and need no special treatment.

Tell the mother that if the child feels very hot or is in pain, she should give paracetamol. She should **not** wrap the child up in more clothes than usual.

- * **Measles:** Fever and a mild measles rash are possible side effects of the measles vaccine. A week after you give the vaccine, a child may have a fever for 1 - 3 days.

Tell the mother to give paracetamol if the fever is high



EXERCISE G

In this exercise you will review checking the immunization status of several children. Answer the questions in the space provided.

1. Malambu is 6 months old. She is brought to the clinic by her grandmother. The doctor classifies her as PNEUMONIA, MALARIA, NOT VERY LOW WEIGHT and NO ANAEMIA. Her immunization card shows that it is time to give Malambu a dose of DPT 1 and OPV 1.
Should Malambu be given the immunizations today?

2. A mother brings her 5-month-old daughter, Joli, to the clinic because she has diarrhoea with blood in the stool. The doctor classifies Joli as NO DEHYDRATION, DYSENTERY, NOT VERY LOW WEIGHT and NO ANAEMIA. Joli's immunization card shows she had OPV 2 and DPT 2 five weeks ago.
.
 - a. Should the doctor give Joli OPV 3 and DPT 3 today?

The mother says that she does not want Joli to be immunized again. She tells the doctor that Joli had a fever and was irritable after the last time.

- b. What should the doctor tell the mother about possible side effects of OPV and DPT vaccines?

The mother agrees to let Joli be immunized. The doctor gives Joli the immunizations.

3. Doctor Ramesh wants to immunize a 1-year-old child for measles. The child has been classified as PNEUMONIA, NOT VERY LOW WEIGHT and NO ANAEMIA. The child's mother does not want her child to be immunized. She says that she will return for immunization when the child is better.

Describe what you would say to a child's mother to try to convince her to have her child immunized for measles today.

When you finish this exercise, discuss your answers with a facilitator.

6.0 WHERE REFERRAL IS NOT POSSIBLE

The best possible treatment for a child with a very severe illness is usually at a hospital.

Sometimes referral is not possible or not advisable. Distances to a hospital might be too far; the hospital might not have adequate equipment or staff to care for the child; transportation might not be available. Sometimes parents refuse to take a child to a hospital, in spite of the doctor's effort to explain the need for it.

If referral is not possible, you should do whatever you can to help the family care for the child. To help reduce deaths in severely ill children who cannot be referred, you may need to arrange to have the child stay in or near the clinic where he may be seen several times a day. If not possible, arrange for visits at home.

This section describes treatment to be given for specific severe disease classifications when the very sick child cannot be referred. It is divided into 2 parts: "Essential Care" and "Treatment Instructions: Recommendations on How to Give Specific Treatment for Severely Ill Children Who Cannot Be Referred".

To use this section, first find the child's classifications and note the essential care required. Then refer to the boxes on the *TREAT THE CHILD* chart **and** the instructions in second part of this section.

Remember that you must also give treatment for the non-severe classifications that you identified. These treatments should be marked on the Sick Child Recording Form. For example, if the child has SEVERE PNEUMONIA and MALARIA, you must treat the MALARIA **and** follow the guidelines below to treat the SEVERE PNEUMONIA.

Although only a well-equipped hospital with trained staff can provide optimal care for a child with a very severe illness, following these guidelines may reduce mortality in high risk children where referral is not possible.

6.1 ESSENTIAL CARE FOR SICK CHILD AGE 2 MONTHS UP TO 5 YEARS

6.1.1 SEVERE PNEUMONIA OR VERY SEVERE DISEASE

Give Antibiotic Treatment

- If the child has a **general danger sign or severe chest indrawing but does not have the classification VERY SEVERE FEBRILE DISEASE:**
 - Give injectable chloramphenicol (If not possible, give oral amoxycillin). If the child vomits oral amoxycillin, repeat the dose.

- Treat with IM chloramphenicol until the child has improved. Then continue with oral chloramphenicol. Treat the child with chloramphenicol/ amoxycillin for 10 days total.
- If the child also has the classification **VERY SEVERE FEBRILE DISEASE**, follow the essential care instructions for this classification below:
 - Give benzylpenicillin **and** chloramphenicol (for 10 days) **and** if the patient comes from a high malaria risk area, give **quinine** (for 7 days).

Give a Bronchodilator

If the child is wheezing and you have a bronchodilator, give it.¹

Treat Fever

If the child has an axillary temperature of 38.5°C or above, give paracetamol every 6 hours. This is especially important for children with pneumonia because fever increases consumption of oxygen.

Manage Fluids Carefully

Encourage the mother to continue breastfeeding if the child is not in respiratory distress. If the child is too ill to breastfeed but can swallow, have the mother express milk into a cup and slowly feed the child the breastmilk with a spoon.

Encourage the child to drink. If the child is not able to drink, either use a dropper to give the child fluid very slowly or drip fluid from a cup or a syringe without a needle. Avoid using a NG tube if the child is in respiratory distress. Wait until the next day if there is no other option.

Avoid giving fluids intravenously **unless** the child is in shock. A child in shock has cold extremities, a weak and rapid pulse, and is lethargic.

Manage the Airway

Clear a blocked nose. A blocked nose can interfere with feeding. Use a plastic syringe (without needle) to gently suck any secretions from the nose. Dry or thick, sticky mucous can be loosened by wiping with a soft cloth moistened with salt water. Help the child to cough up secretions.

¹ Instructions are provided in *Acute Respiratory Infection in Children: Case Management in Small Hospitals in Developing Countries, A manual for doctors and other senior doctors* (1990) WHO/ARI/90.5.

Keep the Infant Warm

Refer to page 6 of your chart booklet.

6.1.2 ESSENTIAL CARE FOR SEVERE PERSISTENT DIARRHOEA

Treat Dehydration Using the Appropriate Fluid Plan

Refer to pages 17, 20 and 22 for plans C, B and A respectively.

Advise Mother How to Feed Child with Persistent Diarrhoea

See the box on the *COUNSEL THE MOTHER* chart. For infants less than 6 months, exclusive breastfeeding is very important. If the mother has stopped breastfeeding, help her relactate (or get help from someone who knows how to counsel on relactation).

Give Vitamin A and Zinc

Refer to page 18 of your chart booklet.

Identify and Treat Infection

Some children with PERSISTENT DIARRHOEA have infections such as pneumonia, sepsis, urinary tract infection, ear infection, dysentery, and amoebiasis. These require specific antibiotic treatment. If **no** specific infection is identified, do **not** give antibiotic treatment because routine treatment with antibiotics is not effective.

Monitor the Child

See the mother and the child each day. Monitor the child's feeding and treatments and the child's response. Ask what food the child eats and how much. Ask about the number of diarrhoeal stools. Check for signs of dehydration and fever.

Once the child is feeding well and has no signs of dehydration, see the child again in 2 to 3 days. If there are any signs of dehydration or problems with the changes in feeding, continue to see the child every day. Help the mother as much as possible.

6.1.3 ESSENTIAL CARE FOR VERY SEVERE FEBRILE DISEASE

Give Antibiotic and Antimalarial Treatment

A child with VERY SEVERE FEBRILE DISEASE needs treatment for both meningitis and severe malaria (in low or high risk malaria areas). Do **not** try to decide whether the child has meningitis or severe malaria. Treat for both possibilities.

- **For meningitis**, give both IM chloramphenicol **and** benzylpenicillin. It is preferable to give an injection every 6 hours. If this is not possible, use the 8-hour or the 12-hour dosing schedule (see Treatment Instructions).

Give both antibiotics by injection for at least 3-5 days. If the child has improved by this time, switch to oral chloramphenicol. The total treatment duration should be 10 days.

- **For SEVERE MALARIA**, give quinine or artemesinins. If you do not have quinine or artemesinins, give an oral antimalarial. In low risk malaria areas, do **not** give quinine to infants less than 4 months of age. It is very unlikely that they have malaria.

Manage Fluids Carefully

The fluid plan depends on the child's signs.

- If the child also has **diarrhoea with SEVERE DEHYDRATION, but has no stiff neck and no SEVERE MALNUTRITION OR SEVERE ANAEMIA**, give fluids according to Plan C.

The general danger sign which resulted in the classification VERY SEVERE FEBRILE DISEASE may have been due only to dehydration. Rehydrate, and then completely reassess and reclassify the child. The reassessment and reclassification of the child after rehydration may lead to a change in treatment plan if the child no longer is classified as VERY SEVERE FEBRILE DISEASE. If the child rapidly loses his danger signs with rehydration, do **not** continue treatment with quinine, benzylpenicillin and chloramphenicol.

- If the child has **VERY SEVERE FEBRILE DISEASE with a stiff neck or bulging fontanelle**: There is no good evidence to support fluid restriction in children with bacterial meningitis. Give the daily fluid requirement, but not more because of the risk of cerebral oedema.

Avoid giving intravenous fluids. If the child is vomiting everything or not able to drink or breastfeed, give fluid by NG tube. If you do not know how to use an NG tube and the child is able to swallow, use a dropper to give the child fluid very slowly, or drip fluid from a cup or a syringe (without needle).

- If the child has **SEVERE MALNUTRITION**, give fluids as described under Essential Care for SEVERE MALNUTRITION.

Treat the Child to Prevent Low Blood Sugar

See Treatment Instructions on page 6 of your chart booklet.

6.1.4 ESSENTIAL CARE FOR SEVERE COMPLICATED MEASLES

Manage Measles Complications

Management depends on which complications are present.

- If the child has **mouth ulcers**, apply half-strength (0.25%) gentian violet. Help the mother feed her child. If the child cannot swallow, feed the child by NG tube. Treat with IM chloramphenicol.
- If the child has **corneal clouding**, be very gentle in examining the child's eye. Treat the eye with tetracycline eye ointment carefully. Only pull down on the lower lid and do not apply pressure to the globe of the eye. Keep the eye patched gently with clean gauze.
- Also treat **other complications of measles, such as pneumonia, diarrhoea, ear infection**.

Give two doses of Vitamin A

Refer to page 18 of your chart booklet

Feed the Child to Prevent Malnutrition

6.1.5 ESSENTIAL CARE FOR MASTOIDITIS

Give IM benzylpenicillin and IM chloramphenicol. Treat for 10 days total. Switch to oral chloramphenicol after 3-5 days.

6.1.6 ESSENTIAL CARE FOR SEVERE MALNUTRITION

Children with SEVERE MALNUTRITION need specially prepared food with mineral supplements that are usually only available at a hospital or nutrition rehabilitation centre. Try to refer the child to one of these locations.

While you are waiting to refer the child:

Give Antibiotic Treatment

Give antibiotics even if the child does not have signs of infection. In SEVERE MALNUTRITION, the usual signs of infection are often absent. For example, fever may not be present. The severely malnourished child with PNEUMONIA may not breathe as fast as a well-nourished child and may not show lower chest wall indrawing. Therefore, it is important to treat all severely malnourished children with antibiotics when you first start to give special feeding.

- If the child has **no specific signs of infection**, give oral amoxicillin ~~cotrimoxazole~~ for 5 days.
- If the child has **a low temperature (less than 35.5°C) or an elevated temperature (more than 37.5°C), ear or skin infection, general danger signs, PNEUMONIA, SEVERE PNEUMONIA OR VERY SEVERE DISEASE, or VERY SEVERE FEBRILE DISEASE**, give IM ampicillin and IM gentamicin. Also treat for malaria in high risk malaria areas. If the child does not improve within 48 hours, add IM chloramphenicol.

Continue Breastfeeding Frequently, Day and Night

Feed the Child

This child must be fed frequently, if necessary by NG tube. The choices of food depend on what is available.

First choice: Give a modified milk diet made of dried skim milk (DSM), sugar and oil. Start with a modified milk containing 25 grams (g) dried skim milk, 100 g sugar, 30 g vegetable oil and enough water to make up to 1000 ml. Mix the milk, sugar and oil to a paste. Slowly add warm boiled water to make a total volume of 1000 ml.²

These modified milk feeds have reduced lactose. They can be given to a child with SEVERE MALNUTRITION who also has PERSISTENT DIARRHOEA.

² Other alternative modified milk diets are unsweetened evaporated full-fat milk (120 ml and 100 g of sugar and 20 ml oil), fresh cow's milk (300 ml and 100 g sugar and 20 ml oil) or skimmed, unsweetened evaporated milk (120 ml and 100 g sugar and 30 ml oil). For all recipes, add warm, boiled water to make 1000 ml.

The severely malnourished child is very fragile and needs small frequent feeds. Gradually increase the volume of the feed and gradually decrease the feeding frequency. Help the mother feed the child as often as possible. It is important that the child continue to receive as many feeds as possible at night (at least twice during the night). Many severely malnourished children die during the night when they are not fed and kept warm.

The ideal feeding schedule is as follows:

DAYS	FREQUENCY	VOLUME/KG/FEED	VOLUME/KG/DAY
1 - 2	every 2 hours	11 ml	130 ml
3 - 5	every 3 hours	16 ml	130 ml
6 - 7+	every 4 hours	22 ml	130 ml

If the child has a good appetite and no oedema, you may only need to feed him for one day at each level.

Second choice: Give good complementary foods such as thick porridge with added oil. Avoid foods that contain too much lactose (that is, more than 40 ml whole milk/kg/day) or added salt. Do **not** add salt to the food.

Use the same feeding schedule as above.

Replace Essential Minerals

Add 0.5 ml/kg of potassium chloride solution to each feed.³ Give 2 ml of 50% magnesium sulfate solution⁴ once by IM injection.

Give Iron When Child's Appetite Returns

If the child has anaemia, do **not** start iron treatment until the child's appetite returns. Before this, iron can make an infection worse.

Manage Diarrhoea with Dehydration Carefully

Children with SEVERE MALNUTRITION and diarrhoea with SOME or SEVERE DEHYDRATION may not be as dehydrated as the signs indicate. The slow skin pinch, sunken eyes, lethargy or irritability may be due to SEVERE MALNUTRITION. Intravenous fluids for SEVERE DEHYDRATION should be given to such children only when signs of shock are present.

³ From stock solution containing 100 g KCl per litre.

⁴ 50% magnesium sulfate solution has 4 mEq Mg⁺⁺ per ml.

ORS solution contains too much salt and too little potassium for children with SEVERE MALNUTRITION. Mix an ORS packet with **2** litres of water (instead of 1 litre of water). Then add 50 g of sugar (or 10 level teaspoons) and 45 ml of potassium chloride solution.³ Mix carefully.

Rehydrate more slowly than normal. Monitor the child carefully. If the child's breathing rate and heart rate increase when he is being rehydrated, this may mean that too much fluid has been given too quickly. Stop giving the fluid. Resume giving fluid when the rates have slowed.

Monitor the Child's Temperature

Keep the child warm. Make sure the child is covered at all times, especially at night.

If the rectal temperature is below 35.5°C, place the infant on the mother's bare abdomen. Cover a child with a blanket or place a heater nearby. Make sure the child is clothed and wearing a hat or bonnet. It is especially important to feed this child every 2 hours until he is stable. Give IM antibiotics for possible sepsis.

6.1.7 ESSENTIAL CARE FOR SEVERE ANAEMIA

A child with severe anaemia is in danger of heart failure.

Give Iron By Mouth

Feed The Child

Give good complementary foods.

Give Paracetamol If Fever Is Present

Give paracetamol every 6 hours.

Give Fluids Carefully

Let the child drink according to his thirst. Do *not* give IV or NG fluids.

6.1.8 ESSENTIAL CARE FOR COUGH MORE THAN 30 DAYS

Give First-line Antibiotic for PNEUMONIA

If the child has not been treated recently with an effective antibiotic for PNEUMONIA, give an antibiotic for 5 days.

Give Salbutamol

If the child is wheezing or coughing at night, or there is a family history of asthma, give salbutamol for 14 days.

Weigh the Child and Inquire about Tuberculosis (TB) in the Family

See the Child in Follow-up in 2 Weeks

If there is no response to the antibiotic (with or without salbutamol) or if the child is losing weight, try again to refer to hospital. If referral is still not possible, begin TB treatment. Refer to the national TB guidelines.

6.1.9 ESSENTIAL CARE FOR CONVULSIONS (CURRENT CONVULSIONS, NOT BY HISTORY DURING THIS ILLNESS)

Manage the Airway

Turn the child on his side to reduce the risk of aspiration. Do *not* try to insert an oral airway or keep the mouth open with a spoon or spatula. Make sure that the child is able to breathe. If secretions are interfering with breathing, insert a catheter through the nose into the pharynx and clear the secretions with suction.

Give Diazepam Followed by Paraldehyde

See Treatment Instructions.

If High Fever Present, Lower the Fever

Give paracetamol and sponge the child with tepid water.

Treat the Child to Prevent Low Blood Sugar

See Treatment Instructions.

6.2 TREATMENT INSTRUCTIONS

Recommendations on How to Give Specific Treatments for Severely Ill Children Who Cannot Be Referred

Three dosing schedules for drugs are provided in this annexure. The schedules are for every 6 hours (or four times per day), every 8 hours (or three times per day), and every 12 hours (or twice per day). **Choose the most frequent schedule that you are able to provide.**

Ideally, the treatment doses should be evenly spaced. Often this is not possible due to difficulty giving a dose during the night. Compromise as needed, spreading the doses as widely as possible. Some treatments described below are impractical for a mother to give her child at home without frequent assistance from a doctor, for example, giving injections or giving frequent feedings as needed by a severely malnourished child. In some cases, a doctor may be willing to care for the child at or near his home or in the clinic to permit the frequent care necessary. In other cases, it is simply not practical to give the child the treatments that he needs.

Chloramphenicol -

Give IM chloramphenicol for 5 days. Then switch to an oral antibiotic to complete 10 days of antibiotic treatment.

If you are not able to give IM antibiotic treatment, but oral chloramphenicol is available, give oral chloramphenicol by mouth or NG tube. Give every 6 hours, if possible.

Quinine -

Give first dose of quinine. Repeat the IM quinine injection at 4 and 8 hours later. These 3 injections are the loading dose.

Then either give quinine (the same dose as above) every 12 hours or give quinine every 8 hours (using the 8-hour dosing schedule). Stop the IM quinine when the child is able to take an oral antimalarial.

The injections of quinine should not continue for more than 1 week. Too high a dosage can cause deafness and blindness, as well as irregular heartbeat (which may cause cardiac arrest).

The child should remain lying down for one hour after each injection as the child's blood pressure may drop. The effect stops after 15 - 20 minutes.

When the child can take an oral antimalarial, give a full dose according to national guidelines for completing the treatment of severe malaria. In most countries, the oral antimalarial recommended is sulfadoxine-pyrimethamine.

If the malaria risk is low, do ***not*** give quinine to a child less than 4 months of age.

DOSING SCHEDULE - INTRAMUSCULAR AND ORAL DRUGS: EVERY 6 HOURS (or 4 times per day)

AGE or WEIGHT	IM CHLORAMPHENICOL Dose: 20 mg/kg To vial containing 1000 mg, add 5.0 ml sterile water = 5.6 ml at 180 mg/ml	BENZYL PENICILLIN Dose: 50 000 units/kg To vial containing 600 mg (or 1 000 000 units), add 2.1 ml sterile water = 2.5 ml at 400 000 units/ml add 3.6 ml sterile water = 4.0 ml at 250 000 units/ml		ORAL CHLORAMPHENICOL Dose: 20 mg/kg SYRUP - 125 mg/5 ml suspension (palmitate) CAPSULE 250 mg	
4 kg	0.4 ml	0.5 ml	0.8 ml	3.0 ml (½ tsp)	¼
5 kg	0.5 ml	0.6 ml	1.0 ml	4.0 ml (¾ tsp)	½
4 months up to 9 months (6 - <8 kg)	0.8 ml	0.8 ml	1.5 ml	5.0 ml (1 tsp)	½
9 months up to 12 months (8 - <10 kg)	1.0 ml	1.2 ml	2.0 ml	7.5 ml (1½ tsp)	¾
12 months up to 3 years (10 - <14 kg)	1.2 ml	1.5 ml	2.5 ml	10.0 ml (2 tsp)	1
3 years up to 5 years (14 - 19 kg)	1.8 ml	2.0 ml	3.5 ml	12.5 ml (2½ tsp)	1

DOSING SCHEDULE - INTRAMUSCULAR DRUGS: EVERY 8 HOURS (or 3 times per day)

AGE or WEIGHT	CHLORAMPHENICOL Dose: 30 mg/kg	BENZYL PENICILLIN Dose: 70 000 units/kg To vial containing 600 mg (or 1 000 000 units),		GENTAMICIN (10 mg/ml solution) Dose: 2.5 mg/kg	QUININE Dose: 10 mg/kg	
	To vial containing 1000 mg, add 5.0 ml sterile water = 5.6 ml at 180 mg/ml	add 2.1 ml sterile water = 2.5 ml at 400 000 units/ml	add 3.6 ml sterile water = 4.0 ml at 250 000 units/ml		150 mg/ml	300 mg/ml
4 kg	0.7 ml	0.7 ml	1.1 ml	1.0 ml	0.3 ml	0.13 ml
5 kg	0.8 ml	0.9 ml	1.4 ml	1.25 ml	0.3 ml	0.17 ml
4 months up to 9 months (6 - <8 kg)	1.2 ml	1.2 ml	2.0 ml	1.8 ml	0.4 ml	0.2 ml
9 months up to 12 months (8 - <10 kg)	1.5 ml	1.6 ml	2.5 ml	2.2 ml	0.6 ml	0.3 ml
12 months up to 3 years (10 - <14 kg)	2.0 ml	2.0 ml	3.5 ml	3.0 ml	0.8 ml	0.4 ml
3 years up to 5 years (14 - 19 kg)	2.5 ml	3.0 ml	4.5 ml	4.0 ml	1.2 ml	0.6 ml

NOTE:

GENTAMICIN CAN BE SAFELY AND EFFECTIVELY GIVEN AS A SINGLE DAILY DOSE OF 7.5 MG/KG.

IF NOT POSSIBLE TO GIVE 8 HOURLY CHLORAMPHENICOL INJECTIONS, GIVE TWO INJECTIONS IN THE DOSES ABOVE AND GIVE A THIRD 30 MG/KG DOSE OF ORAL CHLORAMPHENICOL

DOSING SCHEDULE - INTRAMUSCULAR and ORAL DRUGS: EVERY 12 HOURS
(or 2 times per day)

AGE or WEIGHT	BENZYL PENICILLIN Dose: 100 000 units/kg To vial containing 600 mg (or 1 000 000 units), add 2.1 ml sterile water = 2.5 ml at 400 000 units/ml add 3.6 ml sterile water = 4.0 ml at 250 000 units/ml		GENTAMICIN (10 mg/ml solution) Dose: 3.0 mg/kg
4 kg	1.0 ml	1.6 ml	1.2 ml
5 kg	1.2 ml	2.0 ml	1.5 ml
4 months up to 9 months (6 - <8 kg)	1.8 ml	3.0 ml	2.0 ml
9 months up to 12 months (8 - <10 kg)	2.5 ml	4.0 ml	2.8 ml
12 months up to 3 years (10 - <14 kg)	3.0 ml	5.0 ml	3.5 ml
3 years up to 5 years (14 - 19 kg)	4.0 ml	6.0 ml	5.0 ml

NOTE:

SEE THE QUININE BOX FOR THE QUININE DOSE TO GIVE EVERY 12 HOURS.

GENTAMICIN CAN BE SAFELY AND EFFECTIVELY GIVEN AS A SINGLE DAILY DOSE OF 7.5 MG/KG.

Treat the Child to Prevent Low Blood Sugar -

If the child is conscious, follow the instructions on the *TREAT* chart. Feed the child frequently, every 2 hours, if possible.

If the child is unconscious and you have dextrose solution and facilities for an intravenous (IV) infusion, start the IV infusion. Once you are sure that the IV is running well, give 5 ml/kg of 10 % dextrose solution (D10) over a few minutes, or give 1 ml/kg of 50% dextrose solution (D50) by very slow push. Then insert an NG tube and begin feeding every 2 hours.

Potassium Chloride Solution (100 grams KCl per litre) -

Give 0.5 ml (or 10 drops from a dropper) per kilogram of body weight with each feed. Mix well into the feed.

Diazepam and Paraldehyde (anticonvulsants) -

Give by rectum.

Use a plastic syringe (the smallest available) without a needle. Put the diazepam or paraldehyde in the syringe. Gently insert the syringe into the rectum. Squirt the diazepam or paraldehyde. Keep the buttocks squeezed tight to prevent loss of the drug.

If both diazepam and paraldehyde are available, use the following schedule:

1. Give **diazepam**.
2. In 10 minutes, if convulsions continue, give **diazepam** again.
3. In 10 more minutes (that is, 20 minutes after the first dose), if convulsions continue, give **paraldehyde**.
4. In 10 more minutes (that is, 30 minutes after the first dose), if convulsions continue, give **paraldehyde** again.

This is the preferred treatment. It is safer than giving 3 doses of diazepam in a row due to the danger of respiratory depression.

If only diazepam is available, use the following schedule:

1. Give **diazepam**.
2. In 10 minutes, if convulsions continue, give **diazepam** again.
3. In 10 more minutes (that is, 20 minutes after the first dose), if convulsions continue and the child is breathing well, give **diazepam** again. Watch closely for respiratory depression.

If only paraldehyde is available, use the following schedule:

1. Give **paraldehyde**.
2. In 10 minutes, if convulsions continue, give **paraldehyde** again.
3. In 10 more minutes (that is, 20 minutes after the first dose), if convulsions continue, give **paraldehyde** again.

DOSAGE TABLE - DIAZEPAM and PARALDEHYDE

AGE or WEIGHT	DIAZEPAM (10 mg/2 ml solution) Dose: 0.2 - 0.4 mg/kg Give rectally.	PARALDEHYDE (1 g/ml solution) Dose: 0.15 - 0.3 ml/kg Give rectally.
1 month up to 4 months (3 - <6 kg)	0.5 ml (2.5 mg)	1.0 ml
4 months up to 12 months (6 - 10 kg)	1.0 ml (5 mg)	1.5 ml
12 months up to 3 years (10 - <14 kg)	1.25 ml (6.25 mg)	2.0 ml
3 years up to 5 years (14 - 19 kg)	1.5 ml (7.5 mg)	3.0 ml

EXAMPLE

Margaret is 18 months old. She became sick a week ago. She developed fever, lost her appetite and began to cough. This is the rainy season, and the risk of malaria is high.

Margaret's mother bought some chloroquine 3 days ago and has given Margaret a whole tablet each day. Still Margaret has a fever and now is very sleepy. When her mother makes her eat, Margaret cries weakly. For the last few days, the mother has been afraid to feed Margaret because she is so sleepy and seems to have trouble swallowing. The mother is afraid the child will choke on the food. Margaret stopped breastfeeding 4 months ago when her mother became pregnant.

Margaret's assessment shows the following:

Her axillary temperature is 39°C. She weighs 8 kg. She is very lethargic, waking only for a few seconds before falling asleep again. She has not had convulsions. She is not able to drink now because she is so lethargic. Her breathing rate is 52 beats per minute. She has intercostal indrawing but no lower chest wall indrawing and no stridor. She does not have diarrhoea.

The doctor does not think Margaret's neck is stiff. She has no runny nose and no rash. Margaret does not have an ear problem.

Margaret is thin but does not have visible wasting. She has some palmar pallor. When you press on her feet, there is no oedema. Margaret is up to date on her immunizations.

The doctor classifies Margaret as SEVERE PNEUMONIA OR VERY SEVERE DISEASE, VERY SEVERE FEBRILE DISEASE and ANAEMIA.

The nearest hospital is a day's journey away and the mother cannot go there. Her husband is away and she must care for her other children. She also does not think that there are drugs at the hospital and she has no money to pay for her food there.

Margaret cannot be referred. She can stay with her mother at the house of an aunt who lives near the clinic. The mother will bring the child for injections. One of the nurses in the clinic is willing to come to the aunt's house to help care for Margaret in the evening.

It is now 9 am and the clinic is open until lunch. The doctor will conduct a special session for follow-up and nutrition counselling from 3 pm to 4 pm today. The clinic is open during the same hours tomorrow.

The doctor decides that it will be possible to give injections approximately every 8 hours. He will give the first injection now (9 am) and the second at 4 pm as the clinic is closing. The third injection will be given to Margaret in the late evening when the nurse visits Margaret at the aunt's house.

The doctor immediately gives the following treatments:

1. **Benzympenicillin** : 1 000 000 units with 2.1 ml of sterile water added to get 2.5 ml at 400 000 units/ml:

The doctor gives Margaret 1.6 ml by intramuscular injection, based on the 8-hour dosing schedule. This same dose will be given to Margaret approximately every 8 hours.

2. **Chloramphenicol** : 1000 mg vial with 5 ml of sterile water added to get 5.6 ml at 180 mg/ml:

The doctor gives Margaret 1.5 ml by intramuscular injection, based on the 8-hour dosing schedule. This same dose will be given to Margaret approximately every 8 hours.

3. **Quinine:** The doctor gives Margaret the initial dose of 0.6 ml of 150 mg/ml. The same dose is given 4 and 8 hours later. Then the doctor will continue to give Margaret 0.6 ml every 8 hours until she is able to take oral antimalarials.
4. **Sugar Water:** The doctor gives Margaret 50 ml of sugar water by NG tube.

The doctor sends for whole, undiluted cow's milk. He crushes a $\frac{1}{4}$ 500 mg paracetamol tablet to mix with the milk. He gives Margaret 30 ml of the milk by NG tube every hour during the rest of clinic. To the first 30 ml, he adds the paracetamol. He repeats the dose in 6 hours.

The doctor asks the mother to hold Margaret to keep her warm. The mother also adjusts Margaret's hat and blanket so she is covered.

When the nurse visits Margaret at her aunt's home in the evening, she slowly gives her 100 ml of the milk by NG tube. The nurse does not give more than 100 ml because she is worried that Margaret may vomit if given more. The same amount is given when the clinic opens the next morning. At that time, Margaret is more alert and able to swallow the fluids that are dripped into her mouth. The doctor gives the mother a 10 ml syringe so that she can feed her child this way. The doctor tells the mother to try to give Margaret 3 syringe-fulls of milk every hour.

After 4 days of treatment, Margaret is alert and her fever is gone. She is able to take sips from a cup. Because she was already treated with chloroquine, the doctor decides to give sulfadoxine-pyrimethamine ($\frac{1}{2}$ tablet, crushed) when stopping the quinine injections.

Because the doctor is uncertain whether the VERY SEVERE FEBRILE DISEASE was meningitis or severe malaria, he wants to be sure that all possibilities are adequately treated but needs to stop giving these frequent injections. Therefore, he stops the IM chloramphenicol and benzylpenicillin and gives oral chloramphenicol every 6 hours. He gives this for 6 more days to complete 10 days of treatment.

The doctor continues to see Margaret every day for a few more days. He wants to make sure that she continues to improve and begins eating, and that the mother is able to give the chloramphenicol 4 times per day.

The doctor now reviews with the mother how Margaret was fed before this illness. He advises the mother that the child should receive good complementary foods or family foods at least 5 times per day. Because he does not want to confuse the mother with too many pills, the doctor decides not to start the iron treatment until Margaret finishes the full 10 days of antibiotic treatment.

When Margaret and her mother return, the doctor gives the mother a bottle of iron syrup and shows her how to measure $\frac{1}{4}$ teaspoon. He also shows her how to give it to Margaret. He tells the mother to give $\frac{1}{4}$ teaspoon to Margaret every morning. He also tells the mother to make sure the syrup is kept out of reach of Margaret and her siblings. Then he arranges to see Margaret again in 2 weeks when he will check on her pallor and give the mother more iron syrup.

ANNEXES

ANNEX A: Nasogastric Rehydration

ANNEX B: ORT Corner

ANNEX C-1: If You Can Give Intravenous Treatment

ANNEX C-2: If IV Treatment Is Available Nearby

**ANNEX C-3: If You Are Trained To Use
 A Nasogastric (NG) Tube**

**ANNEX C-4: If You Can Only Give
 Plan C Treatment by Mouth**

**ANNEX D: Intravenous Treatment
 For Severe Dehydration**

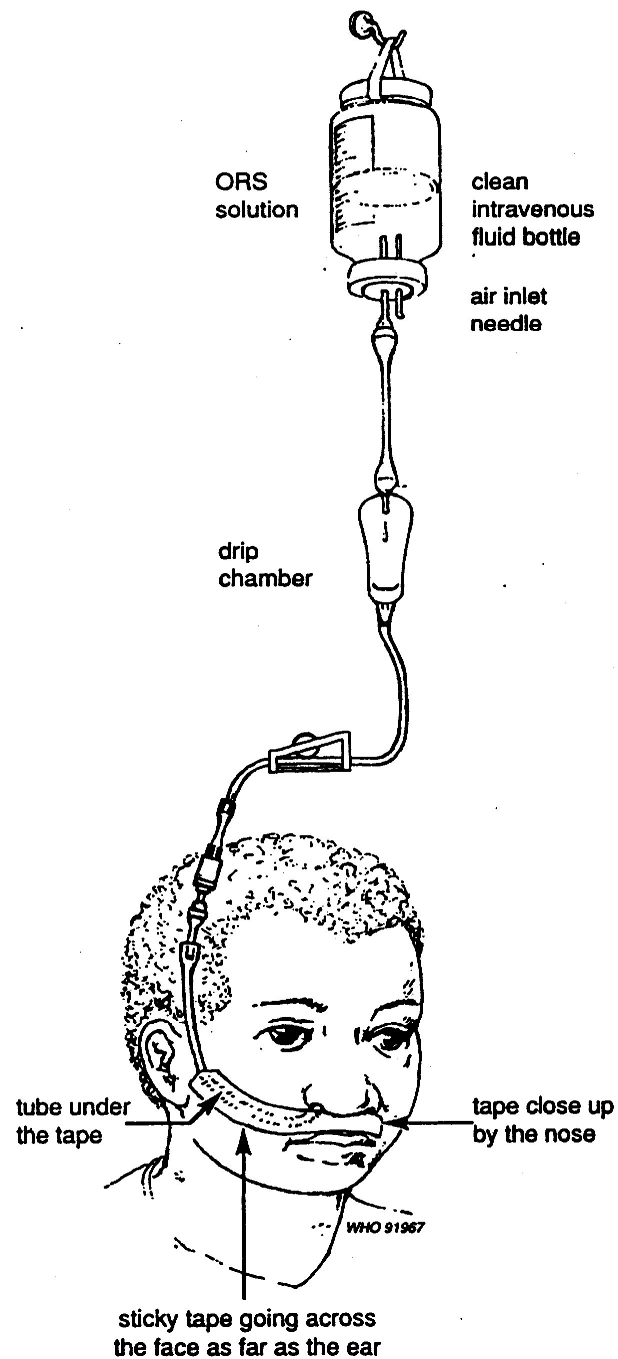
ANNEX A

NASOGASTRIC REHYDRATION

1. Use a clean rubber or plastic nasogastric (NG) tube. Use a tube that is 2.0mm - 2.7mm in diameter for a child, or 4.0mm - 6.9mm for an adult.
2. Place the patient on his or her back, with the head slightly raised. Older children and adults may prefer to sit up.
3. Measure the length of tube to be swallowed by placing the tip just above the navel. Then stretch the tubing over the back of the ear and forward to the tip of the nose. Mark the tube with a piece of tape where it touches the end of the nose. This mark shows the length of tubing needed to reach from the tip of the nose to the stomach.
4. Moisten the tube with a water-soluble lubricant or plain water; do **not** use oil.
5. Pass the tube through the nostril with the largest opening. Gently advance it until the tip is in the back of the throat. Each time the patient swallows, advance the tube another 3.5cm. If the patient is awake, ask him or her to drink a little water.
6. If the patient chokes, coughs repeatedly or has trouble breathing, the tube has probably passed into the trachea. Pull it back 2cm - 4cm until the coughing stops and the patient is comfortable. Wait a minute, and then try to insert the tube again.
7. Advance the tube each time the patient swallows until the tape marker reaches the nose. If the patient is comfortable and not coughing, the tube should be in the stomach.
8. Look into the patient's mouth to be certain that the tube is not coiled in the back of the throat. Confirm that the tube is in the stomach by attaching a syringe and withdrawing a little stomach fluid. You could also do this by placing a stethoscope just above the navel. Inject air into the tube with an empty syringe. Listen for the air entering the stomach.
9. Fasten the tube to the face with tape and attach IV tubing that is connected to a clean IV bottle containing ORS solution. Regulate the infusion to a rate of 20 ml/kg per hour, or less.

10. If an IV bottle is not available, a syringe (with the barrel removed) can be attached to the tube and used as a funnel. Hold the syringe above the patient's head and pour ORS solution into it at regular intervals.

TECHNIQUE FOR NASOGASTRIC REHYDRATION



Source: King, M. et al. *Primary child care: a manual for health workers*. Book One. Oxford University Press, 1978

ANNEX B

ORT CORNER

An ORT corner is an area in a health facility available for oral rehydration therapy (ORT). This area is needed because mothers and their children who need ORS solution will have to stay at the clinic for several hours.

When there are no diarrhoea patients using the ORT corner, the area can be used for treating other problems. Then the space is not wasted. When there are dehydrated patients, this conveniently located and adequately equipped ORT corner will help the staff to manage the patients easily.

The ORT corner should be:

- * Located in an area where staff frequently pass by but not in a passageway. The staff can observe the child's progress and encourage the mother.
- * Near a water source
- * Near a toilet and washing facilities
- * Pleasant and well-ventilated

The ORT corner should have the following furniture.

- * Table for mixing ORS solution and holding supplies
- * Shelves to hold supplies
- * Bench or chairs with a back where the mother can sit comfortably while holding the child
- * Small table where the mother can conveniently rest the cup of ORS solution

The ORT corner should have the following supplies. These supplies are for a clinic that receives 25-30 diarrhoea cases in a week.

- * ORS packets (a supply of at least 300 packets per month)
- * 6 bottles that will hold the correct amount of water for mixing the ORS packet, including some containers like those that mother will have at home
- * 6 cups
- * 6 spoons
- * 2 droppers (may be easier to use than spoons for small infants)
- * cards or pamphlets (such as a Mother's Card) that remind mothers how to care for a child with diarrhoea. A card is given to each mother to take home.
- * Soap (for handwashing)
- * Wastebasket

- * Food available (so that children may be offered food or eat at regular meal times)

The ORT corner is a good place to display informative posters. Since mothers sit in the ORT corner for a long time, they will have a good opportunity to learn about health prevention from the posters.

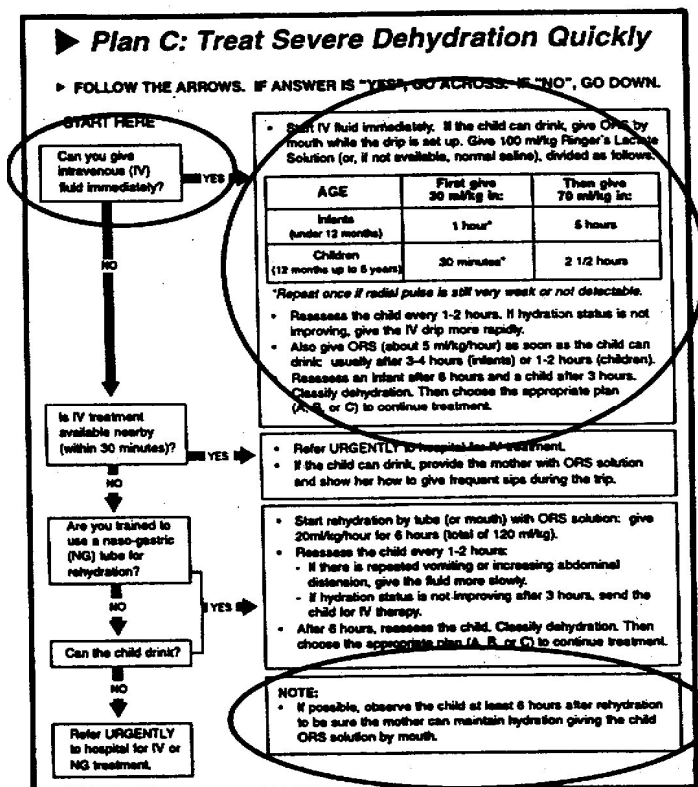
Mothers are interested in posters about the treatment and prevention of diarrhoea and dehydration. The posters should contain information about ORT, use of clean water, breastfeeding, weaning foods, handwashing, the use of latrines, and when to take the child to the clinic. Other health messages should include information on immunizations.

Posters alone are not adequate for informing mothers. Doctors should also counsel mothers in person, using a Mother's Card if there is one available.

ANNEX C-1

IF YOU CAN GIVE INTRAVENOUS (IV) TREATMENT

If you can give IV treatment and you have acceptable solutions such as Ringer's Lactate or Normal Saline at your clinic, give the solution intravenously to the severely dehydrated child.



The sections of Plan C below describe the steps to rehydrate a child intravenously. It includes the amounts of IV fluid that should be given according to the age and weight of the child. Study the sections carefully.

- Start IV fluid immediately. If the child can drink, give ORS by mouth while the drip is set up. Give 100 ml/kg Ringer's Lactate Solution (or, if not available, normal saline), divided as follows:

AGE	First give 30 ml/kg in:	Then give 70 ml/kg in:
Infants (under 12 months)	1 hour*	5 hours
Children (12 months up to 5 years)	30 minutes*	2 1/2 hours

**Repeat once if radial pulse is still very weak or not detectable.*

- Reassess the child every 1-2 hours. If hydration status is not improving, give the IV drip more rapidly.
- Also give ORS (about 5 ml/kg/hour) as soon as the child can drink: usually after 3-4 hours (infants) or 1-2 hours (children).
- Reassess an infant after 6 hours and a child after 3 hours. Classify dehydration. Then choose the appropriate plan (A, B, or C) to continue treatment.

NOTE:

- If possible, observe the child at least 6 hours after rehydration to be sure the mother can maintain hydration giving the child ORS solution by mouth.

Provide IV Treatment for Severe Dehydration

When you provide IV therapy for SEVERE DEHYDRATION, you give the child a large quantity of fluids quickly. The fluids replace the body's very large fluid loss.

Begin IV treatment quickly in the amount specified in Plan C. If the child can drink, give ORS by mouth until the drip is running. Then give the first portion of the IV fluid (30 ml/kg) very rapidly (within 60 minutes for infants, within 30 minutes for children). This will restore the blood volume and prevent death from shock. Then give 70 ml/kg more slowly to complete rehydration.

During the IV treatment, assess the child every 1 - 2 hours. Determine if the child is receiving an adequate amount of IV fluid.

EXAMPLE

The following example describes how to treat a child with SEVERE DEHYDRATION if you can give IV treatment.

A 6-month-old (9 kg) girl, Ellen, was classified as SEVERE DEHYDRATION and NO ANAEMIA AND NOT VERY LOW WEIGHT. She was not able to drink but had no other disease classifications. IV treatment was available in the clinic. Therefore, the doctor decided to treat the infant with IV fluid according to Plan C.

The doctor gave Ellen 270 ml (30 ml x 9 kg) of Ringer's Lactate by IV during the first hour. Over the following five hours, he gave her 630 ml of IV fluid (70 ml x 9 kg), approximately 125 ml per hour. The doctor assessed the infant's hydration status every 1-2 hours (that is, he assessed for dehydration). Her hydration status was improving, so the doctor continued giving Ellen the fluid at a steady rate.

After 4 hours of IV treatment, Ellen was able to drink. The doctor continued giving her IV fluid and began giving her approximately 45 ml of ORS solution to drink per hour.

After Ellen had been on IV fluid for 6 hours, the doctor reassessed her dehydration. She had improved and was reclassified as SOME DEHYDRATION. The doctor chose Plan B to continue treatment. The doctor stopped the IV fluid. He began giving Ellen ORS solution as indicated on Plan B.

Monitor Amount of IV Fluid and the Child's Hydration Status

When rehydrating a child who has SEVERE DEHYDRATION, you have to monitor the amount of IV fluid that you give. You may use a form, similar to the following sample form.

Time (hr)	Volume (ml) Set-up*		Estimated Volume (ml) Remaining	Volume (ml) Received
_____	_____		_____	_____
_____	_____		_____	_____
_____	_____		_____	_____
_____	_____		_____	_____
_____	_____		_____	_____
_____	_____		_____	_____
_____	_____		_____	_____

* For each new bottle/pack, initial or added

The form has 4 columns to record the amount of fluids given to a patient over a period of time.

1. **Time:** Record the times that you will check the IV fluid.

For an Infant:

(under 12 months)

- * After the first hour
- * Every hour over the next 5 hours

For a Child:

(12 months up to 5 years)

- * After the first half hour (30 minutes)
- * Every half hour over next 2½ hours

2. **Volume Set-up:** As you start the IV fluid, record the amount of fluid in the bottle or pack. The amount should be listed on the container. Each time you replace the IV fluid with another container, be sure to record the amount on the appropriate line on the form at the time of replacement.
3. **Estimated Volume Remaining:** Check the IV fluid remaining in the container at the times listed. The remaining volume cannot be read precisely. Estimate it to the nearest 10 ml (for example - 220 ml, 230 ml, 240 ml, etc). Record the estimated amount on the form.
4. **Volume Received:** Calculate the amount of IV fluid received by the child at the times listed. To calculate, subtract the "Volume remaining" amount from the "Volume set-up" amount. The answer is the amount of IV fluid the child has received up to the time you are checking. Record that amount on the form.

It is helpful to mark the IV fluid container with a pen or tape to show the level that should be reached at a certain time. For example, mark the desired level to reach after the first 30 or 60 minutes, each hour, or at the end of 3 or 6 hours. This will help you adjust the rate of the drip correctly. Regulate the number of drops per minute to give the correct amount of fluid per hour.

The sample form below shows the amounts of IV fluid given to a 16-month-old (10 kg) child who is classified as having SEVERE DEHYDRATION. The doctor followed Plan C. He gave the child 300 ml (30 ml $\times$ 10 kg) in the first 30 minutes. He gave 700 ml (70 ml $\times$ 10 kg) over the next 2.5 hours (about 300 ml per hour).

Sample Fluid Form

Time (hr)	Volume (ml) Set-up*		Estimated Volume (ml) Remaining	Volume Received
<u>12:00 pm</u>	<u>1000 ml</u>			
<u>12:30 pm</u>	<u> </u>		<u>700 ml</u>	<u>300 ml</u>
<u>1:30 pm</u>	<u> </u>		<u>400 ml</u>	<u>600 ml</u>
<u>2:30 pm</u>	<u> </u>		<u>100 ml</u>	<u>900 ml</u>
<u>3:00 pm</u>	<u> </u>		<u>0 ml</u>	<u>1000 ml</u>
<u> </u>	<u> </u>		<u> </u>	<u> </u>
<u> </u>	<u> </u>		<u> </u>	<u> </u>

* For each new bottle/pack, initial or added

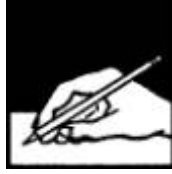
Make sure the IV fluid is given correctly and in adequate amounts. To monitor whether the fluid rate is adequate, reassess the child's dehydration every 1-2 hours. If the signs of dehydration and the diarrhoea are worse or not improved, increase both the rate you give the fluid and the amount of fluid that you give. Also increase the fluid rate if the child is vomiting. If the signs are improving, continue giving IV fluid at the same rate.

While giving IV fluid, remember to also give small sips of ORS solution to the child as soon as he can drink. Give the child approximately 5 ml of ORS solution per kilogram of body weight per hour.

Reassess Dehydration and Choose the Appropriate Treatment Plan

Assess the signs of dehydration in an infant after 6 hours and a child after 3 hours. Classify dehydration. Select the appropriate treatment plan (Plan A, B or C) to continue treatment.

After a child has been fully rehydrated and is classified as NO DEHYDRATION, keep the child at the clinic for 6 more hours if possible. During this time, the mother should give extra fluid according to Plan A. Watch to be sure that the mother can give enough fluid to fully replace all fluid lost while the diarrhoea continues. The child should also be fed. Check the child periodically to make sure that signs of dehydration do not return.



EXERCISE: ANNEX C-1

1. Barec is 3 years old and weighs 15 kg. His mother told the doctor that his diarrhoea started yesterday. The doctor assessed Barec and found that he is not able to drink and a skin pinch goes back very slowly. Barec is classified as diarrhoea with SEVERE DEHYDRATION and NOT VERY LOW WEIGHT and NO ANAEMIA. The doctor can give IV treatment.
 - a. How should the doctor treat Barec's dehydration?
 - b. What amount of fluid should Barec be given?
 - c. The doctor monitors the IV fluid each half hour to be sure it is given at the rate he calculated. He also assesses Barec's dehydration each hour. After about 2 hours, Barec is more alert and can drink. What should be done now?
 - d. After Barec has completed 3 hours of IV treatment, what should the doctor do?
2. Amaru is 2 years old, weighs 8 kg. He has diarrhoea. A doctor determines that Amaru is lethargic, but able to drink. His eyes are sunken, and a skin pinch goes back very slowly. The doctor classifies Amaru as diarrhoea with SEVERE DEHYDRATION.

He has a fever of 38.5°C and a runny nose. His risk of malaria is high. The doctor also classifies him as VERY SEVERE FEBRILE DISEASE. He has VERY LOW WEIGHT and NO ANAEMIA.

The doctor can give IV fluid for Plan C. Should Amaru be urgently referred to a hospital? Why or why not?

3. Dano is 8 months old and weighs 6 kg. He is no longer breastfed. His mother brings him to a clinic because he has had diarrhoea for a week. The mother tells the doctor that there has been no blood in Dano's stools. The doctor sees that Dano's eyes are sunken. When encouraged, Dano is able to take a sip of water, but drinks poorly. A skin pinch goes back very slowly. The doctor, who can give IV treatment, finds Dano has diarrhoea with SEVERE DEHYDRATION, NOT VERY LOW WEIGHT and NO ANAEMIA.

- How much IV fluid should be given to Dano in the first hour? How much over the next 5 hours?
- Should the doctor give Dano ORS solution?
If so, how much?
- Dano started receiving IV treatment at 1:00 pm from a 1000 ml bottle of IV fluid. The doctor checked Dano every hour. She recorded the amounts remaining in the bottle. See the fluid form. Calculate the amounts of IV fluid that Dano received and record them on the form.

Time (hr)	Volume (ml) Set-up*		Estimated Volume (ml) Remaining	Volume Received
<u>1:00 pm</u>	<u>1000 ml</u>			
<u>2:00 pm</u>			<u>820 ml</u>	
<u>3:00 pm</u>			<u>730 ml</u>	
<u>4:00 pm</u>			<u>640 ml</u>	
<u>5:00 pm</u>			<u>550 ml</u>	
<u>6:00 pm</u>			<u>470 ml</u>	
<u>7:00 pm</u>			<u>400 ml</u>	

* For each new bottle/pack, initial or added

- At 7:00 pm, the doctor reassesses Dano for dehydration. He had slept some. He is now awake, alert and drinking well though he does not seem thirsty. His eyes are sunken. The doctor pinched his skin and the pinch goes back immediately. How should the doctor classify Dano's dehydration?

What plan should be followed to continue treating Dano?

Is Dano ready to go home? Why or why not?

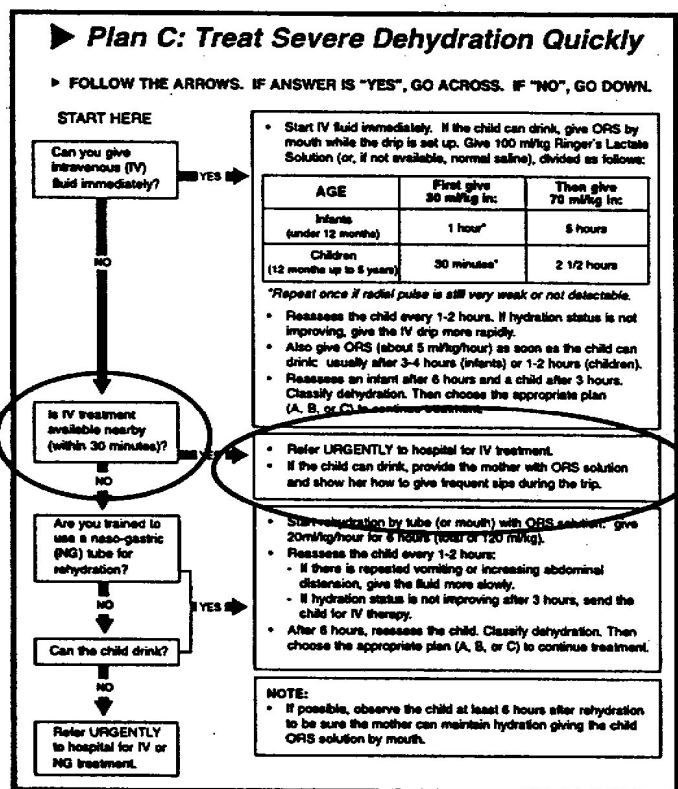
Ask a facilitator to check your answers.
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ANNEX C-2

IF IV TREATMENT IS AVAILABLE NEARBY

You are not able to provide IV treatment at your clinic. However, IV treatment is available at a clinic or hospital nearby (within 30 minutes).

Read the Plan C section below that describes this situation.



Refer the severely dehydrated child immediately to the nearby facility. If the child can drink, show the mother how to give sips of ORS solution to the child. She should encourage her child to drink on the way to the facility.

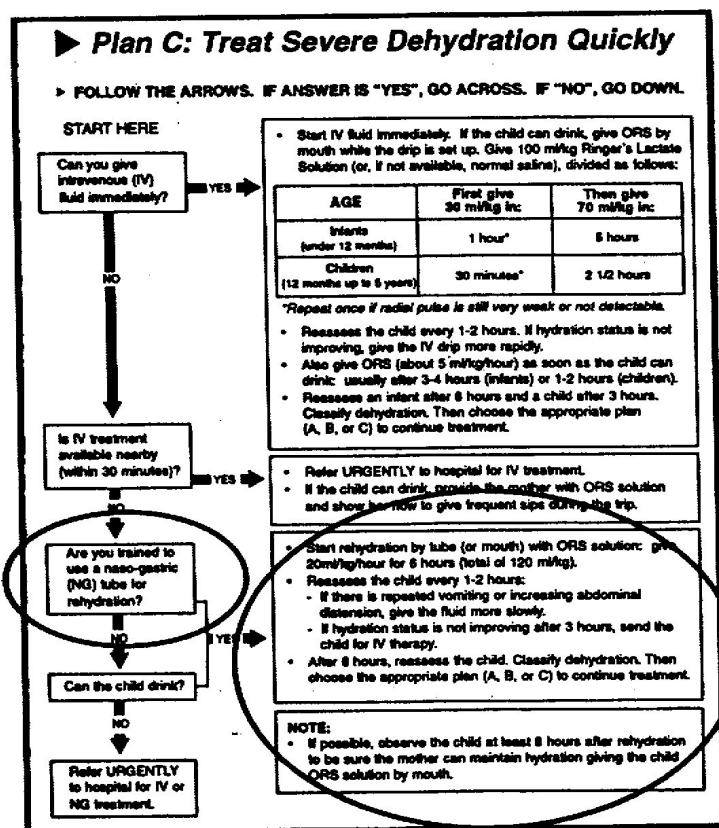
- Refer URGENTLY to hospital for IV treatment.
- If the child can drink, provide the mother with ORS solution and show her how to give frequent sips during the trip.

ANNEX C-3

IF YOU ARE TRAINED TO USE A NASOGASTRIC (NG) TUBE

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

Read the sections of Plan C below. They describe the steps to rehydrate a child by NG tube.



- Start rehydration by tube (or mouth) with ORS solution: give 20 ml/kg/hour for 6 hours (total of 120 ml/kg).
- Reassess the child every 1-2 hours:
 - If there is repeated vomiting or increasing abdominal distension, give the fluid more slowly
 - If hydration status is not improving after 3 hours, send the child for IV therapy
- After 6 hours, reassess the child. Classify dehydration. Then choose the appropriate plan (A, B, or C) to continue treatment.

NOTE: NOTE: If possible, observe the child at least 6 hours after rehydration to be sure the mother can maintain hydration giving the child ORS solution by mouth.

To assess a child's hydration status, refer to the signs on the *ASSESS & CLASSIFY* chart.

EXAMPLE

The following example describes how to treat a severely dehydrated child if you can give ORS solution by NG tube.

A 4-year-old (10 kg) boy, Sa, was brought to a clinic with diarrhoea. The clinic did not offer IV treatment and no clinic nearby had IV treatment. NG treatment was available. Sa was not able to drink. He had no other signs of disease. He was classified as diarrhoea with SEVERE DEHYDRATION and NO ANAEMIA AND NOT VERY LOW WEIGHT.

Following Plan C, the doctor decided to give ORS solution to Sa by NG tube. The doctor gave him 200 ml (20 ml $\times$ 10 kg) over the next hour. The doctor checked Sa every hour to make sure that he received 200 ml of ORS per hour. She also checked to make sure that the boy was not vomiting and that he did not have abdominal distension.

After 6 hours, Sa had received 1200 ml of ORS solution by NG tube.

Monitor the Amount of NG Fluid and the Child's Hydration Status

When rehydrating a child who has SEVERE DEHYDRATION, you have to monitor the amount of NG fluid that you give over the 6-hour period. You may use a form, similar to the following sample fluid form.

Time (hr)	Volume (ml) Set-up*		Estimated Volume (ml) Remaining	Volume (ml) Received
_____	_____		_____	_____
_____	_____		_____	_____
_____	_____		_____	_____
_____	_____		_____	_____
_____	_____		_____	_____
_____	_____		_____	_____

* For each new bottle/pack, initial or added

The form has columns to record the amount of NG fluid given.

1. **Time:** Record the times that you will check the NG fluid. You will want to monitor the fluid every hour for 6 hours.
2. **Volume set-up:** When you begin to give NG fluids, record the amount of fluid in the container. Each time you replace the NG fluid container, record the amount on the appropriate line on the form at the time of replacement.
3. **Estimated Volume Remaining:** Check the IV fluid remaining in the container at the times listed. The remaining volume cannot be read precisely. Estimate it to the nearest 10 ml (for example - 220 ml, 230 ml, 240 ml, etc). Record the estimated amount on the form.
4. **Volume received:** Calculate the amount of NG fluid received by the child at the times listed. To calculate, subtract the "Volume remaining" amount from the "Volume set-up" amount. The answer is the amount of NG fluid the child has received up to the time you are checking. Record that amount on the form.

It is helpful to mark the container with a pen or tape to show the level that should be reached at a certain time. For example, mark the desired level to reach after the first 30 or 60 minutes, each hour, or at the end of 3 or 6 hours. This will help you adjust the rate of the drip correctly. Regulate the number of drops per minute to give the correct amount of fluid per hour.

EXAMPLE

The sample form below shows the amounts of NG fluid that Sa received during the 6 hours he was treated at the clinic. The doctor gave him 200 ml of ORS solution by NG tube (that is, 20 ml $\times$ 10 kg) beginning at 11:00 am.

Sample Fluid Form

Time (hr)	Volume (ml) Set-up *		Estimated Volume (ml) Remaining	Volume Received
11:00 am	1000 ml			
12:00 pm	---		800 ml	200 ml
1:00 pm	---		600 ml	400 ml
2:00 pm	---		400 ml	600 ml
3:00 pm	---		200 ml	800 ml
4:00 pm	1000 ml		0 ml	1000 ml
5:00 pm			800 ml	1200 ml

* For each new bottle/pack, initial or added

Reassess the child every 1-2 hours:

- * If the child is vomiting repeatedly or has increased abdominal distension, give the NG fluid more slowly.
- * If the child's dehydration is ***not*** improving after 3 hours, refer the child for IV treatment.
- * If the child is improving, continue to give the NG fluid for a total of 6 hours.

Reassess Dehydration and Choose the Appropriate Treatment Plan

After 6 hours of NG fluid, reassess the child for dehydration. Classify dehydration. Select the appropriate treatment plan (Plan A, B or C) to continue treatment.

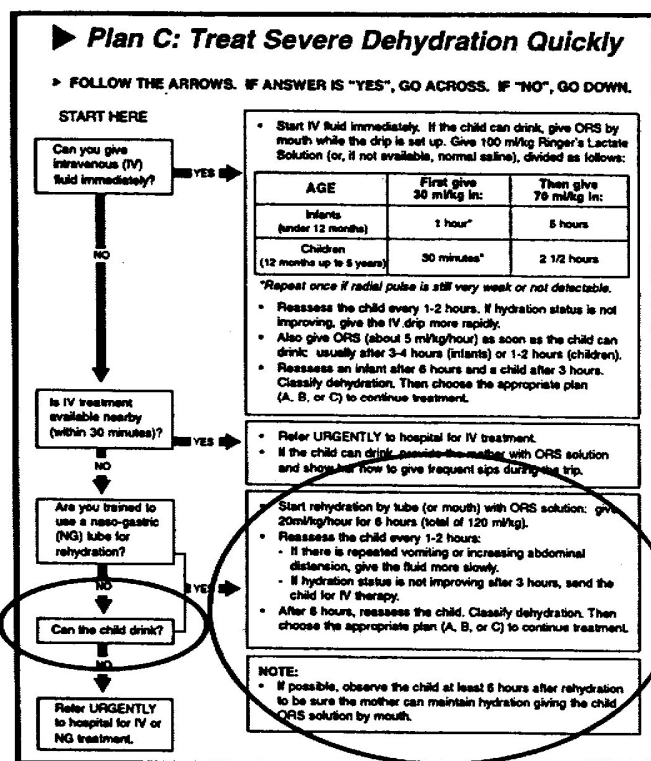
After a child has been fully rehydrated and is classified as NO DEHYDRATION, keep the child at the clinic for 6 more hours if possible. During this time, the mother should give extra fluid according to Plan A. Watch to be sure that the mother can give enough fluid to fully replace all fluid lost while the diarrhoea continues. The child should also be fed. Check the child periodically to make sure that signs of dehydration do not return.

ANNEX C-4

IF YOU CAN ONLY GIVE PLAN C TREATMENT BY MOUTH

You cannot give IV fluids at your clinic. There is no clinic or hospital nearby that can give IV treatment. You are not able to use an NG tube for rehydration.

To learn how to give Plan C treatment by mouth, read the sections of Plan C below.
Study the sections carefully



- Start rehydration by tube (or mouth) with ORS solution: give 20 ml/kg/hour for 6 hours (total of 120 ml/kg).
- Reassess the child every 1-2 hours:
 - If there is repeated vomiting or increasing abdominal distension, give the fluid more slowly
 - If hydration status is not improving after 3 hours, send the child for IV therapy
- After 6 hours, reassess the child. Classify dehydration. Then choose the appropriate plan (A, B, or C) to continue treatment.

NOTE: *NOTE: If possible, observe the child at least 6 hours after rehydration to be sure the mother can maintain hydration giving the child ORS solution by mouth.*

If a child with SEVERE DEHYDRATION comes to your clinic and you cannot give IV or NG treatment, find out if the child is able to drink.

- **If he is able to drink, you can try to rehydrate the child orally.**
- **If the child is not able to drink, you must refer him urgently to the nearest clinic or hospital where IV or NG treatment is available. If this child does not receive fluids, he will die.**

To assess a child's hydration status, refer to the signs on the *ASSESS & CLASSIFY* chart.

Monitor the Amount of ORS

If you will rehydrate the child orally, you will have to monitor the amount of ORS solution you give him. Give 20 ml per kilogram of body weight per hour for a 6-hour period. After 6 hours, you will have given the child a total of 120 ml of ORS solution per kilogram of the child's weight.

Reassess the child's hydration status every 1-2 hours.

- * If there is repeated vomiting or increasing abdominal distension, give the fluid more slowly.
- * If the child's hydration status is **not** improving after 3 hours, refer the child for IV treatment.

EXAMPLE

Lulutown Health Clinic does not give IV or NG therapy. The nearest hospital that can give IV or NG treatment is more than 2 hours away.

A 15-month-old (7 kg) girl, Eleli, was brought to Lulutown Clinic by her mother. Eleli appeared to be sleeping but was able to take small sips of a drink when aroused. The doctor found that she had sunken eyes. A skin pinch went back very slowly. She was classified as diarrhoea with SEVERE DEHYDRATION and NO ANAEMIA AND NOT VERY LOW WEIGHT.

The doctor decided to rehydrate Eleli by mouth according to Plan C. Since Eleli weighed 7 kg, the doctor calculated that she needed 140 ml of ORS solution per hour. The doctor showed Eleli's mother how much ORS to give in one hour.

Each hour during the next 6 hours, the doctor checked Eleli to make sure she was not vomiting and that her abdomen was not distended. The doctor also checked her hydration status. As Eleli began to improve, the doctor encouraged the mother to continue rehydrating Eleli.

Reassess Dehydration and Choose the Appropriate Treatment Plan

After 6 hours of taking ORS solution by mouth, reassess the child for dehydration. Classify dehydration. Select the appropriate treatment plan (Plan A, B or C), and continue treatment.

After the child is rehydrated, keep the child at the clinic for 6 more hours if possible. During this time, encourage the mother to give extra fluid according to Plan A. Watch to be sure that the mother can give enough fluid to fully replace all fluid lost while the diarrhoea continues. Check the child periodically to make sure that signs of dehydration do not return.

Remember:

If the child cannot drink, refer the child urgently to the nearest clinic or hospital for IV or NG treatment.

If this child does not receive fluids, he will die.

ANNEX D

INTRAVENOUS TREATMENT FOR SEVERE DEHYDRATION

1. Technique of Administration

The technique of administration of intravenous (IV) fluids can only be taught through practical demonstration by someone with experience. Only trained persons should give IV treatment. Several general points are:

- * The needles, tubing, bottles and fluid used for IV treatment must be **sterile**.
- * IV treatment can be given into any convenient vein. The most accessible veins are generally those in front of the elbow or on the back of the hand. In infants, the most accessible veins are on the side of the scalp.

Use of neck veins or incision to locate a vein are usually not necessary and should be avoided if possible.

In cases requiring rapid resuscitation, a needle may be introduced into the femoral vein. The needle must be held firmly in place and removed as soon as possible.

In some cases of SEVERE DEHYDRATION, particularly in adults, infusion into two veins may be necessary. One infusion can be removed when the patient is becoming rehydrated.

- * It is useful to mark IV bottles at various levels to show the times at which the fluid should fall to those levels. Regulate the number of drops per minute to give the correct amount of fluid per hour.

2. Solutions for Intravenous Infusion

Although a number of IV solutions are available, they all lack some of the electrolytes in the concentration needed by severely dehydrated patients. To ensure adequate electrolyte replacement, some ORS solution should be given as soon as the patient is able to drink, even while IV treatment is being given. The following is a brief discussion of the relative suitability of several IV solutions.

Preferred Solution

Ringer's Lactate Solution, also called Hartmann's Solution for Injection, is the best commercially available solution. It supplies an adequate concentration of sodium and sufficient lactate, which is metabolised to bicarbonate, for the correction of acidosis.

Ringer's Lactate Solution can be used in all age groups for dehydration due to acute diarrhoea of all causes. Early provision of ORS solution and early resumption of feeding will provide the required amounts of potassium and glucose.

Acceptable Solutions

The following acceptable solutions may not provide adequate potassium, bicarbonate, and sodium to the patient. Therefore, give ORS solution by mouth as soon as the patient can drink.

Normal Saline, also called Isotonic or Physiological Saline, is often readily available. It will not correct the acidosis. It will not replace potassium losses. Sodium bicarbonate or sodium lactate and potassium chloride can be given at the same time. This requires careful calculations of amounts and monitoring is difficult.

Half-strength Darrow's Solution, also called Lactated Potassic Saline, contains less sodium chloride than is needed to efficiently correct the sodium deficit from severe dehydration.

Half Normal Saline in 5% Dextrose contains less sodium chloride than is needed for efficient correction of dehydration. Like Normal Saline, this will not correct acidosis nor replace potassium losses.

Unsuitable Solution

Plain Glucose and Dextrose Solutions should not be used. They provide only water and sugar. They do not contain electrolytes. They do not correct the electrolyte losses or the acidosis.

**INTEGRATED
MANAGEMENT OF
NEONATAL AND
CHILDHOOD
ILLNESS**

Counsel the Mother

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INTRODUCTION

You have learned how to treat the sick child and how to teach the mother to continue treatment at home. For many sick children, you will also need to assess feeding and counsel the mother about feeding.

For all sick children going home, you will also advise the mother when to return for follow-up visits and teach her signs that mean to return immediately for further care.

Recommendations on FOOD, FLUID, and WHEN TO RETURN are given on the chart titled "Counsel the Mother" (called the *COUNSEL* chart in this module).

LEARNING OBJECTIVES

This module will describe and allow you to practice the following tasks:

- * assessing the child's feeding
- * identifying feeding problems
- * counselling the mother about feeding problems
- * advising the mother to increase fluid during illness
- * advising the mother:
 - when to return for follow-up visits,
 - when to return immediately for further care,
 - when to return for immunizations.

In practicing these tasks, you will focus on:

- * giving relevant advice to each mother
- * using good communication skills
- * using a Mother's Card as a communications tool

Even though you may feel hurried, it is important to take time to counsel the mother carefully and completely. You have been learning communication skills throughout this course. When counselling a mother, you will use some of the same communication skills that you have already practiced when assessing and treating the child.

For example, you will **ask the mother questions** to determine how she is feeding her child. You will then **listen carefully to the mother's answers** so that you can make your advice relevant to her.

You will **praise** the mother for appropriate practices and **advise** her about any practices that need to be changed. You will **use simple language** that the mother can understand. Finally, you will **ask checking questions** to ensure that the mother knows how to care for her child at home.

FEEDING RECOMMENDATIONS

This section of the module will explain the feeding recommendations on the *COUNSEL* chart and any local adaptations. The recommendations are listed in columns for 4 age groups. You need to understand all of the feeding recommendations, but you will not need to explain them all to any one mother. You will first ask questions to find out how her child is already being fed. Then you will give **only the advice that is needed** for the child's age and situation.

These feeding recommendations are appropriate both when the child is sick and when the child is healthy. During illness, children may not want to eat much. However, they should be offered the types of food recommended for their age, as often as recommended, even though they may not take much at each feeding. After illness, good feeding helps make up for weight loss and helps prevent malnutrition. When the child is well, good feeding helps prevent future illness.

Sick child visits are a good opportunity to counsel the mother on how to feed the child both during illness and when the child is well.

RECOMMENDATIONS FOR AGES UP TO 6 MONTHS

The best way to feed a child from birth up to 6 months of age is to breastfeed exclusively. Exclusive breastfeeding means that the child takes only breastmilk and no additional food, water, or other fluids (with the exception of medicines and vitamins, if needed).

Note: If other fluids and foods are already being given, counselling is needed.

Breastfeed children at this age as often as they want, day and night. This will be at least 8 times in 24 hours.

The advantages of breastfeeding are:

Breastmilk contains exactly the nutrients needed by an infant.

It contains: Protein, Fat, Lactose, Vitamins A and C, Iron and other nutrients.

These nutrients are more easily absorbed from breastmilk than from other milk. Breastmilk also contains essential fatty acids needed for the infant's growing brain, eyes, and blood vessels. These fatty acids are not available in other milks.

Breastmilk provides all the water an infant needs, even in a hot, dry climate.

Up to 6 Months of Age

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

Remember:

- Continue breastfeeding if the child is sick

Breastmilk protects an infant against infection. An infant cannot fight infection as well as an older child or an adult. Through breastmilk, an infant can share his mother's ability to fight infection. Exclusively breastfed infants are less likely to get diarrhoea, and less likely to die from diarrhoea or other infections. Breastfed infants are less likely to develop pneumonia, meningitis, and ear infections than non-breastfed infants.

Breastfeeding helps a mother and baby to develop a close, loving relationship.

Breastfeeding protects a mother's health. After delivery, breastfeeding helps the uterus return to its previous size. This helps reduce bleeding and prevent anaemia. Breastfeeding also reduces the mother's risk of ovarian cancer and breast cancer.

It is best not to give an infant below the age of 6 months any milk or food other than breastmilk. For example, do not give cow's milk, goat's milk, formula, cereal, or extra drinks such as teas, juices, or water. Reasons:

- Giving other food or fluid reduces the amount of breastmilk taken.
- Other food or fluid may contain germs from water or on feeding bottles or utensils. These germs can cause infection.
- Other food or fluid may be too dilute, so that the infant becomes malnourished.
- Other food or fluid may not contain enough Vitamin A.
- Iron is poorly absorbed from cow's and goat's milk.
- The infant may develop allergies.
- The infant may have difficulty digesting animal milk, so that the milk causes diarrhoea, rashes, or other symptoms. Diarrhoea may become persistent.

Exclusive breastfeeding will give an infant the best chance to grow and stay healthy

RECOMMENDATIONS FOR AGES 6 MONTHS UP TO 12 MONTHS

The mother should continue to breastfeed as often as the child wants. However, after 6 months of age, breastmilk cannot meet all of the child's energy needs. From age 6 months up to 12 months, gradually increase the amount of complementary foods given. Foods that are appropriate are listed on the *COUNSEL* chart. By the age of 12 months, complementary foods are the main source of energy.

If the child is breastfed, give complementary foods 3 times daily. If the child is not breastfed, give complementary foods 5 times daily. (If possible, include feedings of milk by cup. However, cow's milk and other dairy/locally appropriate animal milk are not as good for babies as breastmilk.)

It is important to actively feed the child. Active feeding means encouraging the child to eat. The child should not have to compete with older brothers and sisters for food from a common plate. He should have his own serving. Until the child can feed himself, the mother or another caretaker (such as an older sibling, father, or grandmother) should sit with the child during meals and help get the spoon into his mouth.

6 Months up to 12 Months



Breastfeed as often as the child wants.

- Give at least one katori serving* at a time :
 - 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
 - banana/biscuit/ cheeko/ mango/ papaya

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

Remember:

- Keep the child in your lap and feed with your own hands
- Wash your own and child's hands with soap and water every time before feeding

An “adequate serving” means that the child does not want any more food after active feeding and some food is left on the plate after the child has finished.

GOOD COMPLEMENTARY FOODS

Good complementary foods are energy-rich, nutrient-rich, and locally affordable. Examples in some areas are thick cereal with added oil or milk; fruits, vegetables, pulses, meat, eggs, fish, and milk products. If the child receives cow's milk or any other breastmilk substitute, these and any other drinks should be given by cup, not by bottle. Foods that are appropriate in your area are listed in the feeding recommendations on the *COUNSEL* chart.

RECOMMENDATIONS FOR AGES 12 MONTHS UP TO 2 YEARS

During this period the mother should continue to breastfeed as often as the child wants and also give nutritious complementary foods. The variety and quantity of food should be increased. Family foods should become an important part of the child's diet. Family foods should be chopped so that they are easy for the child to eat.

Give nutritious complementary foods or family foods 5 times a day. Adequate servings and active feeding (encouraging the child to eat) continue to be important.

12 Months up to 2 Years



- Breastfeed as often as the child wants.
- Offer food from the family pot
- Give at least 1 1/2 katori serving* at a time of :
 - 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
 - Mashed roti/ rice /bread/biscuit mixed in sweetened undiluted milk OR
 - Sevian/dalia/halwa/kheer prepared in milk or any cereal porridge cooked in milk OR
 - Mashed boiled/fried potatoes
 - banana/biscuit/ cheeko/ mango/ papaya

* 5 times per day.

Remember:

- Sit by the side of child and help him to finish the serving
- Wash your child's hands with soap and water every time before feeding

RECOMMENDATIONS FOR AGES 2 YEARS AND OLDER

At this age the child should be taking a variety of family foods in 3 meals per day. The child should also be given 2 extra feedings per day. These may be family foods or other nutritious foods which are convenient to give between meals. Examples are listed on the *COUNSEL* chart and below.

2 Years and Older



- Give family foods at 3 meals each day.
- Also, twice daily, give nutritious food between meals, such as:
 - banana/biscuit/ cheeko/
 - mango/ papaya as snacks

Remember:

- Ensure that the child finishes the serving
- Teach your child wash his hands with soap and water every time before feeding

SPECIAL RECOMMENDATIONS FOR CHILDREN WITH PERSISTENT DIARRHOEA

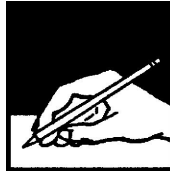
Children with persistent diarrhoea may have difficulty digesting milk other than breastmilk. They need to temporarily reduce the amount of other milk in their diet. They must take more breastmilk or other foods to make up for this reduction.

Feeding Recommendations For a Child 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 OR
 - replace half the milk with nutrient-rich semisolid food
 - add cereals (rice, wheat, semolina) to milk
- ☐ • For other foods, follow feeding recommendations for the child's age.

Continue other foods appropriate for the child's age.

The child with persistent diarrhoea should be seen again in 5 days for follow-up. Further feeding instructions will be described in the module *Follow-Up*.



EXERCISE A

In this exercise you will answer questions about the feeding recommendations.

1. Write a "T" by the statements that are True. Write an "F" by the statements that are False.
 - a. ____ Children should be given fewer feedings during illness.
 - b. ____ A 3-month-old child should be exclusively breastfed.
 - c. ____ A very thin cereal gruel is a nutritious complementary food.
 - d. ____ A 3-year-old child needs 5 feedings each day of family foods or other nutritious foods.
 - e. ____ A 5-month-old child should be breastfed as often as he wants, day and night.

2. When should complementary foods be added to the child's diet?

3. List 2 locally available, nutritious complementary foods:

4. Kiran is 9 months old. She is classified as NOT VERY LOW WEIGHT and NO ANAEMIA. She is still breastfed. Her diet also includes fruit juice, water, and a thick cereal gruel mixed with oil or mashed banana. How many times per day should Kiran be given these foods?

5. Samuel is 15 months old. He is classified as NOT VERY LOW WEIGHT and NO ANAEMIA. He still breastfeeds, but he also takes a variety of foods, including rice and bits of meat, vegetables, fruits, and yoghurt. How can the mother judge whether she is giving an adequate serving to Samuel?

6. Ramon is 15 months old. He has PERSISTENT DIARRHOEA and NO DEHYDRATION. He is classified as NOT VERY LOW WEIGHT and NO ANAEMIA. He stopped breastfeeding 3 months ago and has been taking cow's milk since then. He also eats a variety of family foods about 5 times a day. What recommendations should the doctor make for feeding Ramon during persistent diarrhoea?

When should Ramon return for a follow-up visit?

When you have completed this exercise, please discuss your answers with a facilitator.

Your facilitator will lead a drill on the feeding recommendations.
--

1.0 ASSESS THE CHILD'S FEEDING

You will assess feeding of children who:

- * are classified as having VERY LOW WEIGHT, or
- * are classified as having ANAEMIA, or
- * are less than 2 years old.

However, if the mother has already received many treatment instructions and is overwhelmed, you may delay assessing feeding and counselling the mother about feeding until a later visit.

To assess feeding, ask the mother the following questions. These questions are at the top of the *COUNSEL* chart and also at the bottom of the Sick Child Recording Form. These questions will help you find out about the child's usual feeding and feeding during this illness:

FOOD

➤ ***Assess the Child's Feeding***

Ask questions about the child's usual feeding and feeding during this illness.
Compare the mother's answers to the ***Feeding Recommendations*** for the child's age in the box below.

ASK -

- Do you breastfeed your child?
 - How many times during the day?
 - Do you also breastfeed during the night?
- Does the child take any other food or fluids?
 - What food or fluids?
 - How many times per day?
 - What do you use to feed the child?
 - How large are servings? Does the child receive his own serving?
 - Who feeds the child and how?
- During this illness, has the child's feeding changed? If yes, how?

Listen for correct feeding practices as well as those that need to be changed. You may look at the feeding recommendations for the child's age on the *COUNSEL* chart as you listen to the mother. If an answer is unclear, ask another question. For example, if the mother of a very-low-weight child says that servings are "large enough," you could ask, "When the child has eaten, does he still want more?"

A horizontal rectangular box with a black border. Inside the box, on the left, is a small black square representing an eraser. To its right is a long white rectangle representing the body of a pencil. In the center of this white rectangle, the words "SHORT ANSWER EXERCISE" are written in a bold, black, sans-serif font. On the far right of the box is a black triangle representing the pencil's tip.

SHORT ANSWER EXERCISE

1. Which children need a feeding assessment?

2. Which of the questions in the box titled "Assess the Child's Feeding" are intended to find out about active feeding?

3. Which of the questions is intended to find out whether a feeding bottle is being used?

Check your own answers to this exercise
by comparing them to the answers given at the end of this module.

2.0 IDENTIFY FEEDING PROBLEMS

It is important to complete the assessment of feeding and identify all the feeding problems *before* giving advice.

Based on the mother's answers to the feeding questions, identify any differences between the child's actual feeding and the recommendations. These differences are problems. Some examples of feeding problems are listed below.

Insert examples of local feeding problems and corresponding recommendations in blank spaces.

EXAMPLES OF FEEDING PROBLEMS

<i>CHILD'S ACTUAL FEEDING</i>	<i>RECOMMENDED FEEDING</i>
A 3-month-old is given sugar water as well as breastmilk.	A 3-month-old should be given only breastmilk and no other food or fluid.
A 2-year-old is fed only 3 times each day.	A 2-year-old should receive 2 extra feedings between meals, as well as 3 meals a day.
An 8-month-old is still exclusively breastfed.	A breastfed 8-month-old should also be given adequate servings of a nutritious complementary food 3 times a day.

In addition to differences from the feeding recommendations, some other problems may become apparent from the mother's answers. Examples of such problems are:

* **Difficulty breastfeeding**

The mother may mention that breastfeeding is uncomfortable for her, or that her child seems to have difficulty breastfeeding. If so, you will need to assess breastfeeding as described on the *YOUNG INFANT* chart. You may find that the infant's positioning and attachment could be improved.

* **Use of feeding bottle**

Feeding bottles should not be used. They are often dirty, and germs easily grow in them. Fluids tend to be left in them and soon become spoiled or sour. The child may drink the spoiled fluid and become ill. Also, sucking on a bottle may interfere with the child's desire to breastfeed.

* **Lack of active feeding**

Young children often need to be encouraged and assisted to eat. This is especially true if a child has very low weight. If a young child is left to feed himself, or if he has to compete with siblings for food, he may not get enough to eat. By asking, "Who feeds the child and how?" you should be able to find out if the child is actively being encouraged to eat.

* **Not feeding well during illness**

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

On the Sick Child Recording Form, next to the feeding questions, there is a box labelled "Feeding Problems." Use that space to record any feeding problem found. You will counsel the mother about these feeding problems.

EXAMPLE : Here is part of the Sick Child Recording Form for a 4-month-old child with the classification NO ANAEMIA AND NOT VERY LOW WEIGHT.

ASSESS CHILD'S FEEDING if child has VERY LOW WEIGHT or ANAEMIA or is less than 2 years old. • Do you breastfeed your child? Yes _____ No _____ If Yes, how many times in 24 hours? <u>5</u> times. Do you breastfeed during the night? Yes _____ No _____ • Does the child take any other food or fluids? Yes _____ No _____ If Yes, what food or fluids? <u>Cow's milk</u> ✓ How many times per day? <u>3</u> times. What do you use to feed the child? <u>Feeding bottle</u> How large are servings? _____ Does the child receive his own serving? _____ Who feeds the child and how? _____ • During the illness, has the child's feeding changed? Yes _____ No _____ If Yes, how? _____ ✓	FEEDING PROBLEMS <i>Not breastfed often enough</i> <i>Giving Cow's milk</i> <i>Using Feeding bottle</i>
--	---



EXERCISE B

In this exercise, there will be a role play of a feeding assessment.

ROLE PLAY SITUATION

The child's name is Durga and she is 6 months old. Durga has no general danger signs. She has:

NO PNEUMONIA: COUGH OR COLD
NOT VERY LOW WEIGHT
NO ANAEMIA
no other classifications

The doctor has already told the mother about a soothing remedy for cough.

DOCTOR: Use the questions at the bottom of the Sick Child Recording Form (reprinted below) to assess feeding. Record the mother's answers and any feeding problems. Below the form, also record correct feeding practices.

MOTHER: You will be given a card that describes your attitude and situation.

OBSERVERS: Listen carefully and record the mother's answers on the form below. Also record feeding problems and correct feeding practices.

ASSESS CHILD'S FEEDING IF CHILD HAS VERY LOW WEIGHT OR ANAEMIA OR IS LESS THAN 2 YEARS OLD • Do you breastfeed your child? Yes___ No___ If Yes, how many times in 24 hours? ___ times. Do you breastfeed during the night? Yes___ No___ • Does the child take any other food or fluids? Yes___ No___ If Yes, what foods or fluids? _____ _____ - How many times per day? ___ times. What do you use to feed the child and how? _____ - How large are the servings? _____ - Does the child receive his own serving? _____ Who feeds the child and how? _____ • During this illness, has the child's feeding changed? Yes___ No___ If Yes, how? _____	FEEDING PROBLEMS:
---	---------------------------------

Record any CORRECT feeding practices.

3.0 COUNSEL THE MOTHER ABOUT FEEDING PROBLEMS

This section of the module covers the third section of the *COUNSEL* chart. Since you have identified feeding problems, you will be able to limit your advice to what is most relevant to the mother.

3.1 GIVE RELEVANT ADVICE

If the feeding recommendations are being followed and there are no problems, praise the mother for her good feeding practices. Encourage her to keep feeding the child the same way during illness and health! If the child is about to enter a new age group with different feeding recommendations, explain these new recommendations to her. For example, if the child is almost 6 months old, explain about good complementary foods and when to start them.

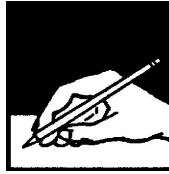
If the feeding recommendations for the child's age are not being followed, explain those recommendations.

In addition, if you have found any of the problems listed on the chart in the section "Counsel the Mother About Feeding Problems," give the mother the recommended advice.

You have already learnt to check and improve positioning and attachment in the module *Treat the Young Infant and Counsel the Mother*. If the mother has a breast problem, such as engorgement, sore nipples, or a breast infection, then she may need referral to a specially trained breastfeeding counsellor (such as a doctor who has taken *Breastfeeding Counselling: A Training Course*) or to someone experienced in managing breastfeeding problems, such as a midwife.

If a child under 6 months of age is receiving food or fluids other than breastmilk, the goal is to gradually change back to more or exclusive breastfeeding. Suggest giving more frequent, longer breastfeeds, day and night. As breastfeeding increases, the mother should gradually reduce other milk or food. Since this is an important change in the child's feeding, be sure to ask the mother to return for follow-up in 5 days.

In some cases, changing to more or exclusive breastfeeding may be impossible (for example, if the mother never breastfed, if she must be away from her child for long periods, or if she will not breastfeed for personal reasons). In such cases, the mother should be sure to correctly prepare cow's milk or other dairy/locally appropriate animal milk and use them within an hour to avoid spoilage.



EXERCISE C

In this exercise you will identify feeding problems and relevant advice for written cases.

None of these cases needs referral. The doctor has asked the questions to assess feeding. Read the information about feeding on the recording form. Then describe the correct feeding practices, feeding problem(s) and relevant feeding advice.

- The child is 2 months old and is classified as NOT VERY LOW WEIGHT and NO ANAEMIA. The mother has started giving cow's milk and is thinking of stopping breastfeeding soon. She thinks that her child may gain more weight on cow's milk than breastmilk.

Briefly describe the feeding problems in the box on the right of the form.

ASSESS CHILD'S FEEDING if child has VERY LOW WEIGHT or ANAEMIA or is less than 2 years old. - Do you breastfeed your child? Yes _____ No _____ If Yes, how many times in 24 hours? <u>5</u> times. Do you breastfeed during the night? Yes _____ No _____ - Does the child take any other food or fluids? Yes _____ No _____ If Yes, what food or fluids? <u>Cow's milk</u> _____ How many times per day? <u>3</u> times. What do you use to feed the child? <u>Feeding bottle</u> - How large are servings? _____ Does the child receive how own serving? _____ Who feeds the child and how? _____ - During the illness, has the child's feeding changed? Yes _____ No _____ If Yes, how? _____	FEEDING PROBLEMS;
---	---------------------------------

What is this mother doing correctly to feed her child?

What feeding advice is needed?

2. The child is 15 months old and has VERY LOW WEIGHT. The child shares a plate with 3 brothers and sisters and sometimes does not get much food.

Briefly describe the feeding problems in the box on the right of the form.

ASSESS CHILD'S FEEDING if child has VERY LOW WEIGHT or ANAEMIA or is less than 2 years old. - Do you breastfeed your child? Yes ____ No ____ If Yes, how many times in 24 hours? ____ times. Do you breastfeed during the night? Yes ____ No ____ - Does the child take any other food or fluids? Yes <u>✓</u> No ____ If Yes, what food or fluids? <u>family food, usually rice and thin soup</u> How many times per day? <u>2 times</u>. What do you use to feed the child? <u>Plate, no bottle</u> How large are servings? <u>A few bites</u> Does the child receive how own serving? <u>No</u> Who feeds the child and how? <u>Child feeds himself, shares with siblings</u> - During the illness, has the child's feeding changed? Yes ____ No ____ If Yes, how?	FEEDING PROBLEMS
---	--------------------------------

✓

What is this mother doing correctly to feed her child?

What feeding advice is needed?

3. The child is 2 years old and has ANAEMIA. He has some palmar pallor but is not very low weight for age. The child has PERSISTENT DIARRHOEA, NO DEHYDRATION, and MALARIA.

Briefly describe the feeding problems in the box on the right of the form.

ASSESS CHILD'S FEEDING if child has VERY LOW WEIGHT or ANAEMIA or is less than 2 years old. - Do you breastfeed your child? Yes _____ No _____ If Yes, how many times in 24 hours? _____ times. Do you breastfeed during the night? Yes _____ No _____ - Does the child take any other food or fluids? Yes ☒ No _____ If Yes, what food or fluids? <u>Cow's milk, 3 meals family foods</u> How many times per day? <u>5</u> times. What do you use to feed the child? <u>Plate, no bottle</u> How large are servings? <u>Half katori at each meal</u> Does the child receive how own serving? <u>Yes</u> Who feeds the child and how? <u>Child feeds himself</u> - During the illness, has the child's feeding changed? Yes _____ No _____ If Yes, how?	FEEDING PROBLEMS
---	-------------------------

What is this mother doing correctly to feed her child?

What feeding advice is needed?

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

3.2 USE GOOD COMMUNICATION SKILLS

When counselling mothers, it is important to use the following skills:

- ASK and LISTEN:** You have already learned the importance of asking questions to assess the child's feeding. Listen carefully to find out what the mother is already doing for her child. Then you will know what she is doing well, and what practices need to be changed.
- PRAISE:** It is likely that the mother is doing something helpful for the child, for example, breastfeeding. Praise the mother for something helpful she has done. Be sure that the praise is genuine, and only praise actions that are indeed helpful to the child.
- ADVISE:** Limit your advice to what is relevant to the mother at this time. Use language that the mother will understand. If possible, use pictures or real objects to help explain. For example, show amounts of fluid in a cup or container.
- Advise against any harmful practices that the mother may have used. When correcting a harmful practice, be clear, but also be careful not to make the mother feel guilty or incompetent. Explain why the practice is harmful.
- CHECK UNDERSTANDING:** Ask questions to find out what the mother understands and what needs further explanation. Avoid asking leading questions (that is, questions which suggest the right answer) and questions that can be answered with a simple yes or no.
- Examples of good checking questions are: "What foods will you give your child?" "How often will you give them?" If you get an unclear response, ask another checking question. Praise the mother for correct understanding or clarify your advice as necessary.



SHORT ANSWER EXERCISE

1. How could you restate the following advice in simpler words?

Give foods that are high in energy and nutrient content in relation to volume.

2. The mother of an 8-month-old girl says that her child usually takes infant formula by cup about 5 times a day and plain cereal 3 times per day. The mother stopped breastfeeding about 1 month ago when she had to return to work, which requires that she be away from the child for 10 hours each work day. The child has taken the same amount of food during the illness. Which of the following comments are appropriate when counselling this mother? (*Tick appropriate comments.*)

- ☐ a. You should still be breastfeeding this child.
- ☐ b. It is good that your child is still eating as usual during the illness.
- ☐ c. It is good that you are using a cup instead of a feeding bottle.
- ☐ d. Your child needs food more often. Try to increase the number of times you give the cereal gruel to 5 times a day.
- ☐ e. The cereal is good for your child. Add a little oil and some mashed vegetables or peas, or bits of meat to the cereal gruel. Then it will be even better for your child.

3. You are talking with the mother of a 15-month-old child who is no longer breastfed. The child has PERSISTENT DIARRHOEA. He normally takes 2 feedings of cow's milk and 1 meal of family foods each day. His diet has not changed during the diarrhoea. Which of the following are appropriate to say when counselling this mother? (*Tick appropriate comments.*)

- ☐ a. You were right to keep feeding your child during the diarrhoea. He needs food to stay strong.
- ☐ b. Your child needs more food each day. Try to give him 3 family meals plus 2 feedings between meals.
- ☐ c. Cow's milk is very bad for your child.
- ☐ d. Your child may be having trouble digesting the cow's milk, and that may be the reason that the diarrhoea has lasted so long.
- ☐ e. Give your child yoghurt instead of milk (until follow-up visit in 5 days). Or give only half the usual milk and increase the amount of family foods to make up for this.

Check your own answers to this exercise
by comparing them to the answers given at the end of the module.

3.3 USE A MOTHER'S CARD

A Mother's Card can be given to each mother to help her remember appropriate food and fluids, and when to return to the doctor. The Mother's Card has words and pictures that illustrate the main points of advice.

An example of a Mother's Card was given to you with your course materials. This card is reprinted in the Annex of this module.

Take a moment to study the Mother's Card given in this course. The card shows advice about foods, fluid, and signs to return immediately to the doctor. There is also a place to tick appropriate fluids for diarrhoea and record when to return for the next immunization.

There are many reasons a Mother's Card can be helpful:

- It will remind you or your staff of important points to cover when counselling mothers about foods, fluid, and when to return.
- It will remind the mother what to do when she gets home.
- The mother may show the card to other family members or neighbours, so more people will learn the messages it contains.
- The mother will appreciate being given something during the visit.
- Multivisit cards can be used as a record of treatments and immunizations given.

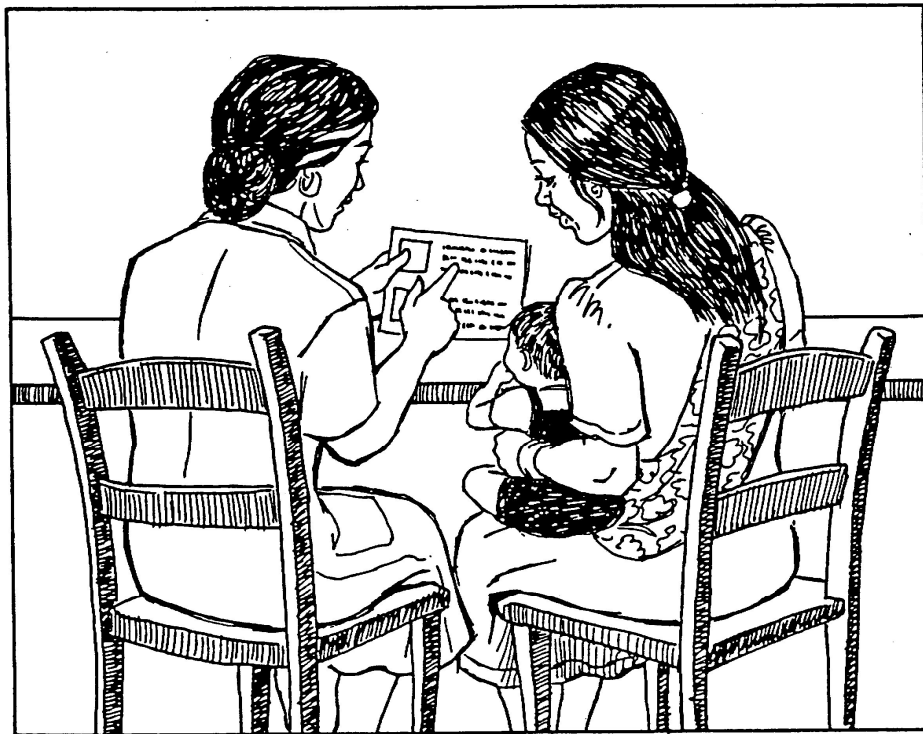
When reviewing a Mother's Card with a mother:

1. Hold the card so the mother can easily see the pictures, or allow her to hold it herself.
2. Explain each picture. Point to the pictures as you talk. This will help the mother remember what the pictures represent.
3. Circle or record information that is relevant to the mother. For example, circle the feeding advice for the child's age. Circle the signs to return immediately. If the child has diarrhoea, tick the appropriate fluid(s) to give. Record the date of the next immunization needed.
4. Watch to see if the mother seems worried or puzzled. If so, encourage questions.

5. Ask the mother to tell you in her own words what she should do at home. Encourage her to use the card to help her remember.

6. Give her the card to take home. Suggest that she show it to others in her family.

If you cannot obtain a large enough supply of cards to give to every mother, keep several in the clinic to show to mothers.





EXAMPLE

In this example, your facilitator will counsel a mother about feeding. He will demonstrate communication skills and use of a Mother's Card. The child in this example is named Akash. He is 8 months old, has no general danger signs, and has:

NO PNEUMONIA: COUGH OR COLD
 MALARIA
 NOT VERY LOW WEIGHT
 NO ANAEMIA

Tell the facilitator when you are ready for the demonstration to begin. During the demonstration, record information on the form below. Record any feeding problems that the "doctor" uncovers. Below the form, record feeding advice given.

Notice use of the following communication skills as your facilitator points them out:

ASK and LISTEN
 PRAISE, when appropriate
 ADVISE, using simple language and giving only relevant advice
 CHECK UNDERSTANDING

ASSESS CHILD'S FEEDING if child has VERY LOW WEIGHT or ANAEMIA or is less than 2 years old. - Do you breastfeed your child? Yes____ No ____ If Yes, how many times in 24 hours? ____ times. Do you breastfeed during the night? Yes____ No____ - Does the child take any other food or fluids? Yes____ No ____ If Yes, what food or fluids?_____ - How many times per day? ____times. What do you use to feed the child? _____ - How large are servings? _____ - Does the child receive how own serving? ____ Who feeds the child and how? _____ - During the illness, has the child's feeding changed? Yes ____ No ____ If Yes, how?	FEEDING PROBLEMS
--	-------------------------

Feeding Advice Given:



EXERCISE D

In this exercise, there will be two role plays of feeding assessment and counselling.

DOCTOR: Ask the questions on the recording form to assess feeding. Identify and record feeding problems. Record the feeding advice to be given. Then counsel the mother about feeding, using good communication skills. Use the FOOD section of the Mother's Card. Feel free to refer to the *COUNSEL* chart as necessary.

MOTHER: Try to behave as a real mother might behave. For example, you may be confused, timid, worried, or anxious to leave the clinic. You will be given a card with details about your child's feeding and age and suggestions about your attitude.

OBSERVERS: Watch the role play and record information on the form given. Be prepared to answer the questions in the module.

Role Play 1

Suman is a 7-month-old boy with a cough and runny nose. He has no general danger signs and has been classified as NO PNEUMONIA: COUGH OR COLD, NO NOT VERY LOW WEIGHT and ANAEMIA. He has no other classifications. The mother has been taught to soothe the throat and relieve the cough. In the role play the doctor will assess feeding and counsel the mother about feeding.

ASSESS CHILD'S FEEDING if child has VERY LOW WEIGHT or ANAEMIA or is less than 2 years old. - Do you breastfeed your child? Yes____ No ____ If Yes, how many times in 24 hours? ____ times. Do you breastfeed during the night? Yes____ No____ - Does the child take any other food or fluids? Yes____ No ____ If Yes, what food or fluids? _____ How many times per day? ____times. What do you use to feed the child? _____ How large are servings? _____ Does the child receive how own serving? ____ Who feeds the child and how? _____ - During the illness, has the child's feeding changed? Yes ____ No ____ If Yes, how?	FEEDING PROBLEMS
--	-------------------------

Feeding advice: _____

After the role play you will discuss the following questions:

- a. Did the doctor ask all of the necessary questions to assess Suman's feeding? Did the doctor finish the feeding assessment before identifying the feeding problems and giving advice?
- b. What feeding problems did the doctor find?
- c. Did the doctor give appropriate praise for something the mother had done?
- d. Did the doctor give advice relevant to this child's situation?

Was any advice given that was **not** relevant? If so, what?

- e. Was the advice correct and complete for the child's age and any problems identified?
- f. Did the doctor use clear, simple language?

- g. What checking questions were asked? Were they good checking questions? If they were answered incompletely or incorrectly, did the doctor clarify the advice?

Role Play 2

Jatin is a 15-month-old boy with no general danger signs, diarrhoea with NO DEHYDRATION, PERSISTENT DIARRHOEA, and VERY LOW WEIGHT (no pallor). Jatin has no other classifications. His mother has been taught how to give fluids on Plan A for diarrhoea. In the role play the doctor will assess feeding and counsel the mother about feeding.

ASSESS CHILD'S FEEDING if child has VERY LOW WEIGHT or ANAEMIA or is less than 2 years old. - Do you breastfeed your child? Yes ____ No ____ If Yes, how many times in 24 hours? ____ times. Do you breastfeed during the night? Yes ____ No ____ - Does the child take any other food or fluids? Yes ____ No ____ If Yes, what food or fluids? _____ How many times per day? ____ times. What do you use to feed the child? _____ How large are servings? _____ Does the child receive how own serving? ____ Who feeds the child and how? _____ - During the illness, has the child's feeding changed? Yes ____ No ____ If Yes, how?	FEEDING PROBLEMS
---	-------------------------

Feeding advice: _____ _____ _____ _____ _____ _____ _____

After the role play you will discuss the following questions:

- a. Did the doctor ask all the necessary questions to assess Jatin's feeding? Did the doctor finish the feeding assessment before identifying the feeding problems and giving advice?
- b. What feeding problems did the doctor find?
- c. Did the doctor give appropriate praise for something the mother had done?
- d. Did the doctor give advice relevant to this child's situation?

Was any advice given that was **not** relevant? If so, what?

- e. Was the advice correct and complete for the child's age and any problems identified?
- f. Did the doctor use clear, simple language?
- g. What checking questions were asked? Were they good checking questions? If they were answered incompletely or incorrectly, did the doctor clarify the advice?

4.0 ADVISE THE MOTHER TO INCREASE FLUID DURING ILLNESS

During illness a child loses fluid due to fever, fast breathing, or diarrhoea. The child will feel better and stay stronger if he drinks extra fluid to prevent dehydration. Extra fluid is especially important for children with diarrhoea; these children should be given fluid according to Plan A or B as described on the *TREAT* chart.

Mothers of breastfeeding children should offer the breast frequently.

Advice about fluid is summarized in the chart section below. Give this advice to every mother who is taking her child home UNLESS she has already received many instructions and may be overwhelmed by more advice, or has already been taught Plan A.

FLUIDS

➤ ***Advise the Mother to Increase Fluid During Illness***

FOR ANY SICK CHILD:

- Breastfeed more frequently and for longer at each feed
- Increase fluid. For example, give soup, rice water, yoghurt drinks or clean water

FOR CHILD WITH DIARRHOEA:

- Giving extra fluid can be life saving. Give fluid according to Plan A or Plan B on *TREAT THE CHILD* chart.

5.0 ADVISE THE MOTHER WHEN TO RETURN TO A DOCTOR

EVERY mother who is taking her child 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 child's next immunization (the next WELL-CHILD VISIT).

It is especially important to teach the mother the signs to return immediately. You learned these signs in the module *Identify Treatment*, and they are repeated in this section of this module. These signs mean that additional care is needed for serious illness.

FOLLOW-UP VISITS

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

At the end of the sick child visit, tell the mother when to return for follow-up. Sometimes a child may need follow-up for more than one problem. In such cases, 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.

The *COUNSEL* chart has a summary of follow-up times for different problems.

FOLLOW-UP VISIT

Advise the mother to come for follow up at the earliest time listed for the child's problems

If the child has:	Return for follow-up in:
PNEUMONIA DYSENTERY MALARIA FEVER-MALARIA UNLIKELY, if fever persists MEASLES WITH EYE OR MOUTH COMPLICATIONS	2 days
DIARRHOEA, if not improving PERSISTENT DIARRHOEA ACUTE EAR INFECTION CHRONIC EAR INFECTION FEEDING PROBLEM ANY OTHER ILLNESS, if not improving	5 days
ANAEMIA	14 days
VERY LOW WEIGHT FOR AGE	30 days

Notice that there are several different follow-up times related to nutrition:

- If a child has a feeding problem and you have recommended changes in feeding, follow-up in 5 days to see if the mother has made the changes. You will give more counselling if needed.
- If a child has pallor, follow-up in 14 days to give more iron.
- If the child has VERY LOW WEIGHT, additional follow-up is needed in 30 days. This follow-up would involve weighing the child, re-assessing feeding practices, and giving any further advice needed from the *COUNSEL* chart.

If your clinic has a regular session reserved for counselling about feeding, schedule follow-up visits for that time. If such sessions are not offered, schedule an individual visit for feeding counselling at a time when a doctor will be available to discuss feeding with the mother. This doctor will need to know about the child's feeding problems, changes recommended, and the child's weight. This information can be recorded in the patient chart, or in a special follow-up note.

WHEN TO RETURN IMMEDIATELY

Remember that this is an extremely important section of WHEN TO RETURN.

Advise mother to return immediately if the child has any of these signs:	
Any sick child	• Not able to drink or breastfeed • Becomes sicker • Develops a fever
If child has NO PNEUMONIA:COUGH OR COLD, also return if:	• Fast breathing • Difficult breathing
If child has Diarrhoea, also return if:	• Blood in stool • Drinking poorly

Use the Mother's Card when teaching the signs to return immediately. Use local terms that the mother can understand. The Mother's Card presents the signs in both words and drawings. Circle the signs that the mother must remember. Be sure to check the mother's understanding.

NEXT WELL-CHILD VISIT

Remind the mother of the next visit her child 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 2 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.

SHORT ANSWER EXERCISE

1. A 3-year-old is being treated with an antibiotic for PNEUMONIA. The child has no other problems that require follow-up. She has no fever.

When should you ask the mother to return for follow-up?

What are the signs that this child should return immediately?

2. A 6-month-old child is being treated for DYSENTERY and an ACUTE EAR INFECTION. He has a fever.

When should you ask the mother to return for follow-up?

What are the signs that this child should return immediately?

After the first follow-up visit, what additional follow-up will be needed?

3. A 3-month-old child has a feeding problem. She is taking cow's milk in addition to breastmilk. You have advised the mother to increase breastfeeding and gradually decrease the cow's milk. The child also has NO PNEUMONIA; COUGH OR COLD. She has no fever.

When should you ask the mother to return for follow-up?

What are the signs that this child should return immediately?

4. A 5-month-old child has diarrhoea with NO DEHYDRATION, VERY LOW WEIGHT and ANAEMIA. She has no fever. She has some palmar pallor as well as very low weight. You have found a feeding problem. The child's main food is dairy/locally appropriate animal milk which is made with too much water and given in a feeding bottle. You have counselled the mother on how to prepare r dairy/locally appropriate animal milk correctly and give it with a cup. You have also counselled the mother about complementary feeding.

When should you ask the mother to return for follow-up?

What are the signs that this child should return immediately?

After the first follow-up visit, what additional follow-up will be needed?

Check your own answers to this exercise by comparing them to the answers given at the end of this module.



EXAMPLE

In this example, your facilitator will continue the demonstration of communication skills begun earlier in this module. He or she will continue to advise the mother of Akash, the 8-month-old child who has:

NO PNEUMONIA: COUGH OR COLD
MALARIA
NOT VERY LOW WEIGHT
NO ANAEMIA

The doctor has already counselled the mother about feeding. This demonstration will include advice on increasing fluid and when to return.

Tell the facilitator when you are ready for the demonstration to begin.



EXERCISE E

In this exercise, there will be a role play of the entire process covered by the *COUNSEL* chart: assessing feeding, identifying feeding problems, counselling about feeding, advising about fluid, and advising about when to return.

DOCTOR: Assess feeding, identify feeding problems, and counsel the mother on feeding, fluid, and when to return. Use good communication skills. Use the Sick Child Recording Form given in this exercise. Also use the Mother's Card.

MOTHER: Try to behave as a real mother might behave. For example, you may be worried, timid, confused, or anxious to leave the clinic. You will be given a card with details about your child's illness, age, and diet, and other information.

OBSERVERS: Listen and watch carefully. On the recording form given in this exercise, write the answers to the feeding questions and any feeding problems. Notice whether the feeding questions are used, advice is correct and complete, and good communication skills are used. Be prepared to discuss the questions given on the next page.

Role Play:

Fatima is 2 years and 2 months old. She has **VERY LOW WEIGHT** (but no palmar pallor) and an **ACUTE EAR INFECTION**.

The doctor has already given the mother instructions on wicking the ear and giving an antibiotic for the ear infection. Now the doctor will assess feeding and counsel the mother about **FOOD, FLUID, and WHEN TO RETURN**.

Questions for Discussion after Role Play:

1. Were all the necessary questions asked about the child's feeding? Did the doctor finish the feeding assessment before identifying the feeding problems and giving advice?
2. What feeding problems were identified, if any?

3. Was the mother praised for something she has been doing correctly?
4. Was counselling about FOOD complete and correct for the child's age and feeding problems?
5. Was advice on FLUID complete and correct?
6. Was advice on WHEN TO RETURN complete and correct? Did it include signs to return immediately?
7. Did the doctor ask appropriate checking questions?
8. If no to any of the above, what could have been done better? Be prepared to make suggestions.

6.0 COUNSEL THE MOTHER ABOUT HER OWN HEALTH

During a sick child visit, listen for any problems that the mother herself may be having. The mother may need treatment or referral for her own health problems.

- ***Counsel the Mother About Her Own Health***
 - If the mother is sick, provide care for her, or refer her for help.
 - If she has a breast problem (such as engorgement, sore nipples, breast infection), provide care for her or refer her for help.
 - Advise her to eat well to keep up her own strength and health.
 - Give iron folic acid tablets for a total of 100 days.
 - Make sure she has access to:
 - Family planning
 - Counselling on STD and AIDS prevention

EXERCISE F

Your course facilitator will lead a group discussion of common local feeding problems observed during the previous clinical session.

You will discuss the following questions:

- Have the major local feeding problems been described in this module? If not, what are additional or different problems that you have observed?
- Is the recommended advice for local feeding problems practical? Are mothers likely to follow the advice? If not, can you think of alternative suggestions that would improve feeding, be practical, and be followed by mothers?

ANNEX:

MOTHER'S CARD



WHEN TO RETURN IMMEDIATELY



BRING ANY SICK CHILD



If not able to drink



If becomes sicker

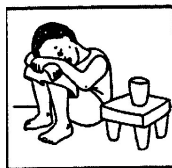


If develops a fever

BRING CHILD with DIARRHOEA



If blood in stool



If drinking poorly

BRING CHILD with COUGH



If difficult breathing



If fast breathing

BRING YOUNG INFANT (<2 months)

Breastfeeding or drinking poorly
Becomes sicker
Develops a fever or feels cold to touch
Fast breathing
Difficult breathing
Yellow palms and soles (if infant has jaundice)
Diarrhoea with blood in stool

Name: _____ M F Date of Birth: _____

Address: _____

Always bring this card with you to the clinic.

FLUIDS

FOR ANY SICK CHILD

- Breastfeed frequently.
- Increase fluid. Give soup, rice water, yoghurt drinks, or clean water.



FOR CHILD WITH DIARRHOEA

Giving more fluid can be lifesaving !

- Give these extra fluids, as much as the child will take:
 - ORS Solution
 - Food based fluids, such as:
 - soup,
 - rice water,
 - yoghurt drinks
 - Clean water
- Breastfeed more frequently and longer at each feeding.
- Continue giving extra fluids until diarrhoea stops.

IMMUNIZATIONS , VITAMIN A & IFA SUPPLEMENTATION

(Record Date Given)

BCG	DPT 1	DPT 2	DPT 3	DPT (Booster)	DT
OPV 0	OPV 1	OPV 2	OPV 3	OPV 4	IFA
HEP B-1	HEP B-2	HEP B-3	MEASLES	VITAMIN A	

Return for next immunization or vitamin A or IFA supplementation on:

ANSWERS TO SHORT ANSWER EXERCISES:

COUNSEL THE MOTHER

Answers to Short Answer Exercise, Page 10

1. These children need a feeding assessment:

children who have VERY LOW WEIGHT or ANAEMIA
children who are less than 2 years old
2. Does the child receive his own serving?
Who feeds the child and how?
3. What do you use to feed the child?

Answers to Short Answer Exercise, Page 23

1. Possible answer:

Give foods that will make your child strong and healthy, not just fill him up. Instead of giving just plain rice or gruel, mix it with some oil for energy and some foods like mashed vegetables, meat, eggs, or fish.

(You may have included examples of good complementary foods in your local area.)
2.
 - a. No tick. This comment would make the mother feel guilty. You might find out if she would be interested in resuming breastfeeding at night, and if so, refer her to a breastfeeding counsellor.
 - b. —
 - c. —
 - d. No tick. The feeding recommendations say that a non-breastfed 8-month-old child should be given complementary foods 5 times per day. This child is being given 5 formula feedings plus 3 cereal feedings per day, which is a total of 8 feedings and is plenty for her age.
 - e. —

3.
 - a. —
 - b. —
 - c. No tick. This comment may make the mother feel guilty. It is better to state this as in "d" below.
 - d. —
 - e. —

Answers to Short Answer Questions, Page 34, 35

1.
 - F/up: 2 days
 - Return immediately if:
 - Not able to drink (since child is 3 years old, there is no need to say "or breastfeed")
 - Becomes sicker
 - Develops a fever

2.
 - F/up: 2 days for dysentery
 - Return immediately if:
 - Not able to drink or breastfeed
 - Becomes sicker
 - Drinking poorly

Since the child already has a fever and blood in the stool, these signs are not listed. You may have combined the signs, "not able to drink or breastfeed" and "drinking poorly."

- Additional follow-up: 5 days for ear infection
3.
 - F/up: 5 days for feeding problem
 - Return immediately if:
 - Not able to drink or breastfeed
 - Becomes sicker
 - Develops a fever
 - Fast breathing
 - Difficult breathing

4.
 - F/up: 5 days for feeding problem
 - Return immediately if:
 - Not able to drink or breastfeed
 - Becomes sicker
 - Develops a fever
 - Blood in stool
 - Drinking poorly

You may have combined the signs, "not able to drink or breastfeed" and "drinking poorly."

- Additional follow-up: 14 days for pallor, 30 days for very low weight.

**INTEGRATED
MANAGEMENT OF
NEONATAL AND
CHILDHOOD
ILLNESS**

Follow-Up

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LEARNING OBJECTIVES

This module will describe what to do when a child returns to the clinic for a follow-up visit. This module does not address those children who have returned immediately to the clinic because they became sicker. These children should be assessed as at an initial visit. In the exercises in this module you will practice the steps for conducting a follow-up visit:

- * Deciding if the child's visit is for follow-up.
- * If the child has been brought for follow-up, assessing the signs specified in the follow-up box for the child's previous classification.
- * Selecting treatment based on the child's signs.
- * If the child has any new problems, assessing and classifying them as you would in an initial visit.

Where is Follow-up Discussed on the Case Management Charts?

In the "Identify Treatment" column of the *ASSESS & CLASSIFY* charts, some classifications have instructions to tell the mother to return for follow-up. The "When to Return" box on the *COUNSEL* chart summarizes the schedules for follow-up visits.

Specific instructions for conducting each follow-up visit are in the "Give Follow-Up Care" section of the *TREAT THE CHILD* chart. The boxes have headings that correspond to the classifications on the *ASSESS & CLASSIFY* chart. Each box tells how to reassess and treat the child. Instructions for giving treatments, such as drug dosages for a second-line antibiotic or antimalarial, are on the *TREAT THE CHILD* chart.

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

As always, ask the mother about the child'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.

Once you know that the child has come to the clinic for follow-up of an illness, ask the mother if the child has, in addition, developed any **new** problems. For example, if the child has come for follow-up of pneumonia, but now he has developed diarrhoea, he has a new problem. This child requires a full assessment. Check for general danger signs and assess all the main symptoms and the child's nutritional status. Classify and treat the child for diarrhoea (the new problem) as you would at an initial visit. Reassess and treat the pneumonia according to the follow-up box.

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

- * Assess the child according to the instructions in the follow-up box. The instructions may tell you to assess a major symptom as on the *ASSESS & CLASSIFY* chart. They may also tell you to assess additional signs.

Note: Do not use the classification table to classify a main symptom. Skip the "Classify" and "Identify Treatment" columns on the *ASSESS & CLASSIFY* chart. This will avoid giving the child repeated treatments that do not make sense. There is one exception: If the child has any kind of diarrhoea, classify and treat the dehydration as you would at an initial assessment.

- * Use the information about the child's signs to select the appropriate treatment.
- * Give the treatment.
- * If a mother returns with her child who had a cough or cold, or diarrhoea (without dysentery or persistent diarrhoea on the previous visit), because after 5 days the child is not better, do a full assessment of the child.

Some children will return repeatedly with chronic problems that do not respond to the treatment that you can give. For example, some children with AIDS may have persistent diarrhoea or repeated episodes of pneumonia. Children with AIDS may respond poorly to treatment for pneumonia and may have opportunistic infections. These children should be referred to hospital when they do not improve. Children with HIV infection who have not developed AIDS cannot be clinically distinguished from those without HIV infection. When they develop pneumonia, they respond well to standard treatment.

Important: If a child who comes for follow-up has several problems and is getting worse, **REFER THE CHILD TO HOSPITAL**. Also refer the child to hospital if a second-line drug is not available, or if you are worried about the child or do not know what to do for the child. If a child has not improved with treatment, the child may have a different illness than suggested by the chart. He may need other treatment.

Remember:

If a child has any new problem, you should assess the child as at an initial visit.

1.0 CONDUCT A FOLLOW-UP VISIT FOR PNEUMONIA

When a child receiving an antibiotic for PNEUMONIA returns to the clinic after 2 days for follow-up, follow these instructions:

➤ **PNEUMONIA**

After 2 days:

Check the child for general danger signs.
Assess the child for cough or difficult breathing

}

See *ASSESS & CLASSIFY* chart

Ask:

- Is the child breathing slower?
- Is there less fever?
- Is the child eating better?

Treatment:

- If **chest indrawing or a general danger sign**, give intramuscular chloramphenicol. Then refer URGENTLY to hospital
- If **breathing rate, fever and eating are the same**, refer to hospital
- If **breathing slower, less fever, or eating better**, complete the 5 days of antibiotic

The box first describes how to assess the child. It says to check the child for general danger signs and reassess the child for cough and difficult breathing. Next to these instructions, it says to see the *ASSESS & CLASSIFY* chart. This means that you should assess general danger signs and the main symptom cough exactly as described on the *ASSESS & CLASSIFY* chart. Then it lists some additional items to check:

Ask:

- Is the child breathing slower?
- Is there less fever?
- Is the child eating better?

When you have assessed the child, use the information about the child's signs to select the correct treatment.

- If the child has **chest indrawing or a general danger sign** (not able to drink or breastfeed, vomits everything, convulsions, lethargic or unconscious) the child is getting **worse**. This child needs urgent referral to a hospital give intramuscular chloramphenicol before referral.
- If **breathing rate, fever, and eating are the same**, refer the child. (The signs may not be exactly the same as 2 days before, but the child is not worse and not improving. The child still has fast breathing, fever and poor eating.) However, before you refer the, ask the mother if the child took the antibiotic for the previous 2 days.

- There may have been a problem so that the child did not receive the antibiotic, or received too low or too infrequent a dose. If so, this child can be treated again with the same antibiotic. Give a dose in clinic, and check that the mother knows how to give the drug at home. Help her to solve any problems such as how to encourage the child to take the drug when the child refuses it.

- If the child is **breathing slower, has less fever** (that is, the fever is lower or is completely gone) and is **eating better**, the child is **improving**. The child may cough, but most children who are improving will no longer have fast breathing. Tell the mother that the child should finish taking the 5 days of the antibiotic. Review with her the importance of finishing the entire 5 days.



EXERCISE A

Read about each child who came for follow-up of pneumonia. Then answer the questions about how you would manage each child. Refer to any of the case management charts as needed.

At this clinic, cotrimoxazole pediatric tablets (the first-line antibiotic) and amoxicillin tablets (the second-line antibiotic) are both available for pneumonia.

1. Puneet's mother has brought him back for follow-up. He is one year old. Two days ago he was classified as having PNEUMONIA and you gave him amoxicillin. You ask how he is doing and if he has developed any new problems. His mother says that he is much better.
 - a) How would you reassess Puneet today? List all the signs you would look at and write the questions you would ask his mother.

When you assess Puneet, you find that he has no general danger signs. He is still coughing and he has now been coughing for about 10 days. He is breathing 38 breaths per minute and has no chest indrawing and no stridor. His mother said that he does not have fever. He is breastfeeding well and eating some food (he was refusing all food before). He was playing with his brother this morning.

- b) Based on Puneet's signs today, how should he be treated?
2. Ahmed has been brought for a follow-up visit for pneumonia. He is three years old and weighs 12.5 kg. His axillary temperature is 37°C. He has been taking amoxicillin. His mother says he is still sick and has vomited twice today.
 - a) How would you reassess Ahmed today? List the signs you would look at and the questions you would ask his mother.

When you reassess Ahmed, you find that he is able to drink and does not always vomit after drinking. He has not had convulsions. He is not lethargic or unconscious. He is

still coughing, so he has been coughing now for about 2 weeks. He is breathing 55 breaths per minute. He has chest indrawing. He does not have stridor. His mother says that sometimes he feels hot. She is very worried because he is not better. He has hardly eaten for two days.

b) Is Ahmed getting worse, the same, or better?

c) How should you treat Ahmed?

3. Two-year-old Flora has been brought by her mother to the clinic for follow-up. Two days ago you classified Flora as having PNEUMONIA and gave her amoxycillin. Flora's mother says that she has no new problems, but she is still coughing a lot.

When you reassess Flora, you find that she has no general danger signs. She is breathing 45 breaths per minute, has no chest indrawing, and no stridor. She has no fever. Flora is not interested in eating.

a) Is Flora getting worse, the same, or better?

b) When you talk with this mother, she tells you she has given Flora the pills mixed with some cereal in the morning and at night. You are sure that Flora has been receiving the antibiotic, but her condition is the same. What treatment would you give Flora now?

When you have completed this exercise, discuss your work with a facilitator.
--

2.0 CONDUCT A FOLLOW-UP VISIT FOR DIARRHOEA (if not improving)

If a child with diarrhoea is not improving after 5 days, follow these instructions:

➤ DIARRHOEA

After 5 days:

Ask:

- Has the diarrhoea stopped?
- How many loose stools is the child having per day?

Treatment

- If **diarrhoea persists**, Assess the child for diarrhoea (> *See ASSESS & CLASSIFY chart*) and manage as on initial visit.
- If **diarrhoea has stopped** (*child having less than 3 loose stools per day*), tell the mother to follow the usual feeding recommendations for the child's age.

3.0 CONDUCT A FOLLOW-UP VISIT FOR PERSISTENT DIARRHOEA

When a child with PERSISTENT DIARRHOEA returns for a follow-up visit after 5 days, follow these instructions:

➤ PERSISTENT DIARRHOEA

After 5 days :

Ask:

- Has the diarrhoea stopped?
- How many loose stools is the child having per day?

Treatment:

- If **the diarrhoea has not stopped** (*child is still having 3 or more loose stools per day*), do a full reassessment of the child. Give any treatment needed. Then refer to hospital.
- If **the diarrhoea has stopped** (*child having less than 3 loose stools per day*), tell the mother to follow the usual feeding recommendations for the child's age.

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

- If **the diarrhoea has not stopped** (**the child is still having 3 or more loose stools per day**), do a full reassessment. This should include assessing the child completely as described on the *ASSESS & CLASSIFY* chart. Identify and manage any problems that require immediate attention such as dehydration. Then refer the child to hospital.
- If **the diarrhoea has stopped** (**child having less than 3 loose stools per day**), instruct the mother to follow the feeding recommendations for the child's age. If the child is not normally fed in this way, you will need to teach her the feeding recommendations on the *COUNSEL* chart.

4.0 CONDUCT A FOLLOW-UP VISIT FOR DYSENTERY

When a child classified as having DYSENTERY returns for a follow-up visit after 2 days, follow these instructions:

➤ **DYSENTERY**

After 2 days:

Assess the child for diarrhoea. ➤ See *ASSESS & CLASSIFY* chart.

Ask:

- Are there fewer stools?
- Is there less blood in the stool?
- Is there less fever?
- Is there less abdominal pain?
- Is the child eating better?

Treatment:

➤ If the child is **dehydrated**, treat dehydration.

➤ If ***fewer stools, less blood in the stools, less fever, less abdominal pain, and eating better***, continue giving the same antibiotic until finished.

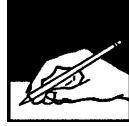
➤ If ***number of stools, amount of blood in stools, fever, abdominal pain, or eating is the same or worse*** : Refer to hospital

Reassess the child for diarrhoea as described in the box, "Does the child have diarrhoea?" on the *ASSESS & CLASSIFY* chart. Ask the mother the additional questions to find out if the child is improving.

Then use the information about the child's signs to decide if the child is the same, worse, or better. Select the appropriate treatment:

- If the child is **dehydrated** at the follow-up visit, use the classification table to classify the child's dehydration. Select the appropriate fluid plan and treat the dehydration.
- If ***fewer stools, less blood in the stools, less fever, less abdominal pain, and eating better***, continue giving the same antibiotic until finished.

- If *number of stools, amount of blood in stools, fever, abdominal pain, or eating is the same or worse* : The lack of improvement may be caused by antibiotic resistance of *Shigella*. Refer to hospital.



EXERCISE B

Read about each child who came for follow-up of DYSENTERY or PERSISTENT DIARRHOEA and answer the questions. Refer to any of the case management charts as needed.

This clinic refers children with severe dehydration because doctors cannot give IV or NG therapy. A hospital nearby can give IV therapy.

* For dysentery, give ciprofloxacin

1. Suresh was brought for follow-up of PERSISTENT DIARRHOEA after 5 days. He is 9 months old and weighs 6.5 kg. His temperature is 36.5°C today. He is no longer breastfed. His mother feeds him cereal twice a day and gives him a milk formula 4 times each day. When you saw him last week, you advised his mother to give him only half his usual amount of milk. You also advised the mother to replace half the milk by giving extra servings of cereal with oil and vegetables or meat or fish added to it.
 - a) What is your first step for reassessing Suresh?
 - b) Suresh's mother tells you that his diarrhoea has not stopped. What would you do next?

You do a complete reassessment of Suresh, as on the *ASSESS & CLASSIFY* chart. You find that Suresh has no general danger signs. He has no cough. When you reassess his diarrhoea, his mother says that now he has had diarrhoea for about 3 weeks. There is no blood in the stool. Suresh is restless and irritable. His eyes are not sunken. When you offer him some water, he takes a sip but does not seem thirsty. A skin pinch goes back immediately. He has no fever, no ear problem, and is classified as NOT VERY LOW WEIGHT and NO ANAEMIA. Suresh's mother tells you that he has no other problems.

- c) Is Suresh dehydrated?

- d) How will you treat Suresh?
- e) If your reassessment found that Suresh had some dehydration, what would you have done before referral?

2. Mary was brought to the clinic for a follow-up visit. She is 11 months old and weighs 9 kg. Two days ago a doctor classified Mary as having DYSENTERY, NO DEHYDRATION, and NOT VERY LOW WEIGHT and NO ANAEMIA. The doctor gave Mary's mother ciprofloxacin and ORS to use at home and asked her to bring Mary back in 2 days. The mother says that Mary has no new problems.

- a) How will you assess Mary?

When you assess Mary's diarrhoea, her mother tells you that she still has several stools each day. There is still about the same amount of blood in the stool. She has now had diarrhoea for about a week. Mary is restless and irritable. Her eyes are not sunken. She drinks eagerly when her mother offers her a cup of ORS. A skin pinch goes back slowly. The mother says that Mary has not had fever. She thinks Mary is having abdominal pain because she is irritable and seems uncomfortable. Mary is not eating better.

- b) Is Mary dehydrated? If so, what will you do?

- c) What else will you do to treat Mary?

3. Fazal is 18 months old boy and weighs 9 kg. His temperature is 36.5°C today. His chart shows that 2 days ago he was classified as having diarrhoea with NO DEHYDRATION, DYSENTERY and NOT VERY LOW WEIGHT and NO ANAEMIA. Fazal's mother has brought him back after two days of treatment for DYSENTERY. When you ask if he has any new problems, the mother says that Fazal now has a cold and is coughing.

- a) How would you assess Fazal?

When you assess Fazal, you find he has no general danger signs. His breathing rate is 35 breaths per minute. He has no chest indrawing and no stridor. When you ask about the diarrhoea, his mother tells you that he still has some diarrhoea, but much less. There is less blood in the stools. You find that he has no signs of dehydration. He has no fever. He has less abdominal pain. He is eating better. His mother says that he feels much better, except for the cold.

- b) What would you do for Fazal's diarrhoea?
- c) How would you classify his cough?
- d) List the treatments for Fazal's cough and cold.

4. Masud is 1 year old and weighs 8 kg. Five days ago, he was classified as having PERSISTENT DIARRHOEA. His young mother has brought him back for follow-up. Masud is no longer breastfeeding. The mother tells you that she has replaced Masud's usual milk feeds with yoghurt. She has also been giving him rice with bits of vegetables and fish, and some family foods. The mother tells you that Masud's diarrhoea has stopped and he had only 1 stool yesterday. She is very relieved. There are no new problems.

- a) Do you need to assess Masud further? If so, describe what you would assess.
- b) What instructions will you give the mother about feeding Masud?

When you have completed this exercise, discuss your work with a facilitator.
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5.0 CONDUCT A FOLLOW-UP VISIT FOR MALARIA (Low or High Malaria Risk)

Any child classified as having MALARIA (regardless of the risk of malaria) should return for a follow-up visit after 2 days. Review the test report which may be available now.

If the child also had MEASLES at the initial visit, the fever may be due to measles. It is very common for the fever from measles to continue for several days. Therefore, the persistent fever may be due to the measles rather than to resistant malaria.

The instructions for conducting a follow-up visit for a child classified as having MALARIA are the same for low or high malaria risk:

- **MALARIA**

After two days:

Do a full reassessment of the child. > See *ASSESS & CLASSIFY* chart.
Assess for other causes of fever.

Treatment:

 - If the child has **any general danger sign or stiff neck**, treat as VERY SEVERE FEBRILE DISEASE.
 - If the child has any **cause of fever other than malaria**, provide treatment.
 - If **malaria is the only apparent cause of fever**:
 - Advise the mother to return again in 2 days if the fever persists.
 - Continue Primaquine if *P. vivax* was positive for a total of 14 days.
 - If fever has been present for 7 days, refer for assessment.

Do a full reassessment of the child as on the *ASSESS & CLASSIFY* chart. As you reassess the child, look for the cause of the fever, possibly pneumonia, meningitis, measles, ear infection, or dysentery. Also consider whether the child has any other problem that could cause the fever, such as tuberculosis, urinary tract infection, osteomyelitis or abscess. Do not use the classification table of the *ASSESS & CLASSIFY* chart to classify the child's fever. Instead, choose the appropriate treatment shown in the follow-up box. If you suspect a cause of fever other than malaria, assess the problem further if needed and refer to any guidelines on treatment of the problem.

- If the child has **any general danger signs or stiff neck**, treat as described on the *ASSESS & CLASSIFY* chart for VERY SEVERE FEBRILE DISEASE. This includes giving quinine, a first dose of an antibiotic and a dose of paracetamol. Also treat to prevent low blood sugar and refer urgently to hospital. If the child has already been on an antibiotic, worsening of the illness to very severe febrile disease means he may have a bacterial infection which is not responsive to this antibiotic. Give a first dose of the second-line antibiotic or intramuscular chloramphenicol. If the child cannot take an oral antibiotic because he has repeated vomiting, is lethargic or unconscious, or is not able to drink, give intramuscular chloramphenicol. Also give intramuscular chloramphenicol if he has a stiff neck.
- If the child has **any cause of fever other than malaria**, provide treatment for that cause. For example, give treatment for the ear infection or refer for other problems such as urinary tract infection or abscess.
- If **malaria is the only apparent cause of fever**:
 - Treat with the first-line oral antimalarial. Advise the mother to return again in 2 days if the fever persists.
 - If fever has been present for 7 days, refer for assessment. This child may have typhoid fever or another serious infection requiring additional diagnostic testing and special treatment

6.0 CONDUCT A FOLLOW-UP VISIT FOR FEVER -- MALARIA UNLIKELY (Low Malaria Risk)

When a child whose fever was classified as FEVER - MALARIA UNLIKELY returns for follow-up after 2 days because the fever persists, follow these instructions:

- **FEVER-MALARIA UNLIKELY (Low Malaria Risk)**
- If fever persists after 2 days:
- Do a full reassessment of the child. > See *ASSESS & CLASSIFY* chart.
- Assess for other causes of fever.
- Treatment:**
- If the child has **any general danger sign or stiff neck**, treat as VERY SEVERE FEBRILE DISEASE.
 - If the child has any **cause of fever other than malaria**, provide treatment.
 - If **malaria is the only apparent cause of fever**:
 - Treat with the oral antimalarial. Advise the mother to return again in 2 days if the fever persists.
 - If fever has been present for 7 days, refer for assessment.

When a child has a low malaria risk, and fever persists after 2 days, there may be some cause of fever that was not apparent at the first visit. Do a full reassessment of the child as on the *ASSESS & CLASSIFY* chart. Look for the cause of fever. Also consider whether the child has any other problem that caused the fever, such as tuberculosis, urinary tract infection, osteomyelitis or abscess. Then select the appropriate treatment in the follow-up boxes.

- If the child has **any general danger sign or stiff neck**, treat as VERY SEVERE FEBRILE DISEASE.
- If the child has **any cause of fever other than malaria**, provide treatment or refer for care of that cause.
- If **malaria is the only apparent cause of fever**, treat the child with the first-line oral antimalarial recommended by national policy to cover the possibility of malaria after making smear. Advise the mother to return again in 2 days if the fever persists.

If the fever has been present every day for 7 days, refer the child. Further diagnostic tests are needed to determine the cause of this child's persistent fever.



EXERCISE C

Read about each child who returns for follow-up of **MALARIA** and answer the questions. Refer to any of the case management charts as needed.

1. Rakesh's mother has brought him back to the clinic because he still has fever. The risk of malaria is high. Two days ago he was given artesunate, Sulpha-Pyramethamine and primaquine for *Plasmodium falciparum* **MALARIA**. He was also given a dose of paracetamol. His mother says that he has no new problems, just the fever. He is 3 years old and weighs 14 kg. His axillary temperature is 38.5°C.
 - a) How would you reassess Rakesh?

When you reassess Rakesh, he has no general danger signs. He has no cough and no diarrhoea. He has now had fever for 4 days. He does not have stiff neck. There is no runny nose or generalized rash. He has no ear problem. He is classified as having **NOT VERY LOW WEIGHT** and **NO ANAEMIA**. There is no other apparent cause of fever.

- b) How would you treat Rakesh? If you would give a drug, specify the dose and schedule.

2. Sarla's mother has come back to the clinic because Sarla still has a fever. Two days ago she was given chloroquine for MALARIA after making smear. Her mother says that she is sicker now, vomiting and very hot. Sarla is 18 months old and weighs 11 kg. Her axillary temperature is 39°C today.

When you assess Sarla, her mother says that yesterday she could drink, but she vomited after eating. She did not always vomit after drinking a small amount. She has not had convulsions. She will not wake up when her mother tries to wake her. She is unconscious. Her mother says that she does not have a cough or diarrhoea. She has now had fever for 5 days. She does not have stiff neck, runny nose or generalized rash. She does not have an ear problem. She is classified as having NOT VERY LOW WEIGHT and NO ANAEMIA.

You checked report which is positive for *Plasmodium falciparum*
How would you treat Sarla? .

3. Two days ago Mohammed's mother took him to the City Clinic because he had fever. The risk of malaria is low. His axillary temperature was 37.5°C. He had no general danger signs or other main symptoms. He had no stiff neck, no runny nose, and no generalized rash. The doctor classified Mohammed as MALARIA UNLIKELY.

Mohammed's mother has brought him back because he still has fever. The doctor asks if Mohammed has developed any other illness. She says that he is just very irritable. He is 11 months old and weighs 7 kg. His axillary temperature is 38.5°C today.

- a) How should the doctor assess Mohammed?

When the doctor assesses Mohammed, he finds no general danger signs. His mother says he has no cough and no diarrhoea. He has now had fever for 3 days. Mohammed bends his neck easily. He has no runny nose and no generalized rash. His mother says he has no ear problem. He is classified as having NOT VERY LOW WEIGHT and NO ANAEMIA.

The doctor is concerned and continues to look at Mohammed and think about what could cause the fever. Then he notices some pus in Mohammed's right ear.

- b) What should the doctor do next?

The doctor assesses the child for the ear problem. The mother is not sure how long there has been pus in the ear. She says he might be irritable because his ear hurts. There is no tender swelling behind the ear.

- c) How should the doctor classify the ear problem?
- d) How should the doctor treat Mohammed? If he should give a drug, specify the dose and schedule.

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

7.0 CONDUCT A FOLLOW-UP VISIT FOR MEASLES WITH EYE OR MOUTH COMPLICATIONS

When a child who was classified as having MEASLES WITH EYE OR MOUTH COMPLICATIONS returns for follow-up in 2 days, follow these instructions:

MEASLES WITH EYE OR MOUTH COMPLICATIONS

After 2 days:

Look for red eyes and pus draining from the eyes.
Look at mouth ulcers.
Smell the mouth.

Treatment for Eye Infection:

- If ***pus is draining from the eye***, ask the mother to describe how she has treated the eye infection. If treatment has been correct, refer to hospital. If treatment has not been correct, teach mother correct treatment.
- If ***the pus is gone but redness remains***, continue the treatment.
- If ***no pus or redness***, stop the treatment.

Treatment for Mouth Ulcers:

- If ***mouth ulcers are worse, or there is a very foul smell from the mouth***, refer to hospital.
- If ***mouth ulcers are the same or better***, continue using half-strength gentian violet for a total of 5 days.

To assess the child, check the eyes and mouth. Select treatment based on the child's signs.

Treatment for Eye Infection:

- If **pus is still draining from the eye**, ask the mother to describe or show you how she has been treating the eye infection. If she has brought the tube of ointment with her, you can see whether it has been used. There may have been problems so that the mother did not do the treatment correctly. For example, she may not have treated the eye three times a day, or she may not have cleaned the eye before applying the ointment, or the child may have struggled so that she could not put the ointment in the eye.
 - If the mother has correctly treated the eye infection for 2 days and there is still pus draining from the eye, refer the child to a hospital.
 - If the mother has not correctly treated the eye, ask her what problems she had in trying to give the treatment. Teach her any parts of the treatment that she does not seem to know. Discuss with her how to overcome difficulties she is having. Finally, explain to her the importance of the treatment. Ask her to return again if the eye does not improve. However, if you think that the mother still will not be able to treat the eye correctly, arrange to treat the eye each day in clinic or refer the child to a hospital.
- If **pus is gone but redness remains**, continue the treatment. Tell the mother that the treatments are helping. Encourage her to continue giving the correct treatment until the redness is gone.
- If **no pus or redness**, stop the treatment. Praise the mother for treating the eye well. Tell her the infection is gone.

Treat for Mouth Ulcers:

- If **mouth ulcers are worse, or there is a very foul smell from the mouth**, refer to hospital. The mouth problem may prevent the child from eating or drinking and may become severe. A very foul smell may mean a serious infection. Mouth problems of measles could be complicated by thrush or herpes (the virus which causes cold sores).
- If **mouth ulcers are the same or better**, ask the mother to continue treating the mouth with half-strength gentian violet for a total of 5 days.

She should continue to feed the child appropriately to make up for weight lost during the acute illness and to prevent malnutrition. Review with the mother when to seek care and how to feed her child as described on the *COUNSEL THE MOTHER* chart. Tell her that attention to feeding is especially important for children who have measles because they are at risk of developing malnutrition.

Because the child with measles continues to have increased risk of illness for months, it is important that the mother know the signs to bring the child back for care. Children who have measles are at increased risk of developing complications or a new problem, due to immune suppression which occurs during and following measles.

8.0 CONDUCT A FOLLOW-UP VISIT FOR EAR INFECTION

When a child classified as EAR INFECTION returns for a follow-up visit after 5 days, follow the instructions below. These instructions apply to an acute or a chronic ear infection.

➤ **EAR INFECTION**

After 5 days:

Reassess for ear problem. > See *ASSESS & CLASSIFY* chart.
Measure the child's temperature.

Treatment:

- If there is **tender swelling behind the ear or high fever (38.5°C or above)**, refer URGENTLY to hospital.
- **Acute ear infection:** if **ear pain or discharge** persists, treat with 3 more days of the same antibiotic. Continue wicking to dry the ear. Follow-up in 3 days.
- **Chronic ear infection:** Check that the mother is wicking the ear correctly and putting ear drops. If ear discharge getting better encourage her to continue. If no improvement, refer to hospital for assessment
- If **no ear pain or discharge**, praise the mother for her careful treatment. If she has not yet finished the 3 days of antibiotic, tell her to use all of it before stopping.

Reassess the child for ear problem and measure the child's temperature (or feel the child for fever). Then select treatment based on the child's signs.

- If you feel a **tender swelling behind the ear** when compared to the other side, the child may have developed mastoiditis. If there is a **high fever** (an axillary temperature of 38.5°C or above), the child may have a serious infection. A child with tender swelling behind the ear or high fever has gotten worse, and should be referred to a hospital.
- **Acute ear infection:** If **ear pain or ear discharge persists** after taking an antibiotic for 5 days, treat with 3 additional days of the same antibiotic. Ask the mother to return in 3 more days so that you can check whether the ear infection is improving.

If the ear is still draining or has begun draining since the initial visit, show the mother how to wick the ear dry. Discuss with her the importance of keeping the ear dry so that it will heal.

- **Chronic ear infection:** Check that the mother is wicking the ear and putting topical quilonone ear drops correctly. To do this, ask her to describe or show you how she wicks the ear. Ask her how frequently she is able to wick the ear. Ask her what problems she has in trying to wick the ear and discuss with her how to overcome them. Encourage her to continue wicking the ear. Explain that drying and putting topical quilonone ear drops correctly is the only effective therapy for a draining ear. Not wicking the ear could leave the child with reduced hearing. If no improvement in ear discharge, refer to hospital for assessment.
- If **no ear pain or discharge**, praise the mother for her careful treatment. Ask her if she has given the child the 5 days of antibiotic. If not, tell her to use all of it before stopping.

9.0 CONDUCT A FOLLOW-UP VISIT FOR FEEDING PROBLEM

When a child who had a feeding problem returns for follow-up in 5 days, follow these instructions:

➤ FEEDING PROBLEM

After 5 days:

Reassess feeding. > See questions at the top of the *COUNSEL* chart.
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 child back again.
- If the child is very low weight for age, ask the mother to return 30 days after the initial visit to measure the child's weight gain.

Reassess the child's feeding by asking the questions in the top box on the *COUNSEL THE MOTHER* chart. Refer to the child'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 more active feeding was recommended, ask the mother to describe how and by whom the child is fed at each meal.

- Counsel the mother about any new or continuing feeding problems. If she encountered problems when trying to feed the child, discuss ways to solve them.

For example, if the mother is having difficulty changing to more active feeding because it requires more time with the child, discuss some ways to reorganize the meal time.

- If the child is very low weight for age, ask the mother to return 30 days after the initial visit. At that visit a doctor will measure the child's weight gain to determine if the changes in feeding are helping the child.

Example: On the initial visit the mother of a 2-month-old infant said that she was giving the infant 2 or 3 bottles of milk and breastfeeding several times each day. The doctor advised the mother to give more frequent, longer breastfeeds and gradually reduce other milk or foods.

At the follow-up visit, the doctor asks the mother questions to find out how often she is giving the other feeds and how often and for how long she is breastfeeding. The mother says that she now gives the infant only 1 bottle of milk each day and breastfeeds 6 or more times in 24 hours. The doctor tells the mother that she is doing well. The doctor then asks the mother to completely stop the other milk and breastfeed 8 or more times in 24 hours. Since this is a significant change in feeding, the doctor also asks the mother to come back again. At that visit the doctor will check that the infant is feeding frequently enough and encourage the mother.

10.0 CONDUCT A FOLLOW-UP VISIT FOR VERY LOW WEIGHT

A child who was classified with VERY LOW WEIGHT should return for follow-up after 30 days. (The child would also return earlier if there was a feeding problem.).

Some clinics have specially scheduled sessions for nutritional counselling, and malnourished children are asked to come for follow-up at this time. A special session allows the doctor to devote the necessary time to discuss feeding with several mothers and perhaps demonstrate some good foods for young children.

Follow these instructions for a follow-up visit for a child with VERY LOW WEIGHT:

➤ **VERY LOW WEIGHT**

After 30 days:

Weigh the child and determine if the child is still very low weight for age.
Reassess feeding. ➤ See questions at the top of the *COUNSEL* chart.

Treatment:

- If the child is **no longer very low weight for age**, praise the mother and encourage her to continue.
- If the child is still **very low weight for age**, counsel the mother about any feeding problem found. Ask the mother to return again in one month. Continue to see the child monthly until the child is feeding well and gaining weight regularly or is no longer very low weight for age.

Exception:

If you do not think that feeding will improve, or if the child has **lost weight**, refer the child.

To assess the child, weigh him and determine if the child is still very low weight for age. Also reassess feeding by asking the questions in the top box of the *COUNSEL* chart.

- If the child is **no longer very low weight for age**, praise the mother. The changes in the child's feeding are helping. Encourage her to continue feeding the child according to the recommendation for his age.
- If the child is still **very low weight for age**, counsel the mother about any feeding problem found. This nutritional counselling should include teaching the mother to feed the child the foods appropriate for his age and to give them frequently enough. It should also include teaching her how to feed him actively. It may also include suggesting solutions to feeding problems as described in the module *Counsel the Mother*.

Ask the mother to bring the child back again in one month. It is important to continue seeing the child every month to advise and encourage the mother until he is feeding well and gaining weight regularly or is no longer very low weight. If the child is continuing to lose weight and no change in feeding seems likely, refer the child to hospital or to a feeding programme.

11.0 CONDUCT A FOLLOW-UP VISIT FOR ANAEMIA

When a child who had palmar pallor returns for a follow-up visit after 14 days, follow these instructions:

➤ ANAEMIA

After 14 days:

- Give iron folic acid. Advise mother to return in 14 days for more iron folic acid.
- Continue giving iron folic acid every 14 days for 2 months.

If the child has palmar pallor after 2 months, refer for assessment.

- Give the mother additional iron for the child and advise her to return in 14 days for more iron.
- Continue to give the mother iron when she returns every 14 days for up to 2 months.
- If after 2 months the child still has palmar pallor, refer the child for assessment.



EXERCISE D

Read about each child who came for follow-up and answer the questions. Refer to the case management charts as needed.

1. Ashok is an 18-month-old child. Five days ago he was in clinic. You see on his chart that he had diarrhoea. He was classified as having NO DEHYDRATION and VERY LOW WEIGHT FOR AGE. His weight was 6.8 kg. He was treated according to Plan A and his mother received counselling about feeding. The following notes were on his chart:

3 meals/day – roti with dal or vegetables. Nothing between meals. No milk. Stopped breastfeeding 3 months ago.

Advised to add 2 extra feeds per day: Milk with roti/rice/biscuits and give bananas or eggs when available.

Ashok has been brought back to clinic for follow-up of the feeding problem. He still weighs 6.8 kg and looks unhappy but not visibly wasted.

a) Tick the items appropriate to do during this visit:

- ☐ Ask about any new problems. If there is a new problem, assess, classify and treat as at an initial visit.
- ☐ Ask the questions in the top box of the COUNSEL chart. Identify any new feeding problems.
- ☐ Ask the mother if she has been able to give extra meals each day. Ask what she fed Ashok and the number of meals.
- ☐ Since Ashok has not gained weight, immediately refer him to hospital.
- ☐ Advise the mother to resume breastfeeding.
- ☐ Give vitamin A.
- ☐ Since Ashok has had no weight gain, repeat the advice given to the mother before. Behaviour change takes a long time.
- ☐ Ask the mother questions to identify additional feeding problems.
- ☐ Make recommendations for any feeding problems that you find.
- ☐ Ask if Ashok is still having diarrhoea.

You ask Ashok 's mother questions to find out whether she has given the extra feeds, and what foods she has given. You also ask how large is each serving, whether Ashok has been eating each serving, and whether he has his own plate.

You find that Ashok 's mother has been giving Ashok milk with rice/roti/biscuits 2 times per day, as advised. He just eats a bite or ignores it completely. She puts it on a plate in front of him while she goes to do other work. She has not gotten any eggs or bananas yet but intends to do so. She prepared *khichri* last week for dinner on three nights but his siblings ate it all.

b) What advice would you give Ashok 's mother now?

c) Should you ask the mother to bring Ashok back to see you? If so, when should she come back? Why?

2. Mamta is 10 months old. Her chart shows that she was seen 6 days ago.

RECORD OF CLINIC VISITS		
27/6/95	T 39 °C	5.5 kg
MALARIA; NO PNEUMONIA: COUGH OR COLD;		
VERY LOW WEIGHT FOR AGE		
Rx: Chloroquine, return 5 days, 30 days, 2 days if fever persists		
Feeding: breastfed once in evening; diluted milk in morning bottle; lunch is rice + thin dal; dinner is usually roti + vegetables. Advised to replace morning bottle with breastfeeding before mother goes to work. Give cereal gruel with animal milk mid-morning. Mash vegetables and mix with rice + spoonful oil for lunch. Dinner - add spoonful oil or butter.		

Mamta returns today weighing 5.6 kg. She has no fever and no new problems.

- a) Write below 3 or more questions that you could ask Mamta's mother to find out whether Mamta's feeding has improved.

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Mamta's mother answers that she is making mashed vegetables with rice and oil for lunch. She does not like waking Mamta to breastfeed in the morning before work because it means 10-year-old Sita also has to get up before sunrise to watch the baby. But she has done so and Mamta is now getting a morning and evening breastfeed. Sita is doing her job making *dalia* with cow's milk mid-morning. At lunch Mamta is eating a little bit of the vegetable mashed with rice.

- b) What would you advise the mother today? Also write something to praise.

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