सत्यमेव जयते

NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

INTEGRATED MANAGEMENT OF NEONATAL AND CHILDHOOD ILLNESS (IMNCI)

PARTICIPANT MODULE FOR MEDICAL OFFICERS

Child Health Division
Ministry of Health & Family Welfare
Government of India

2023

सत्यमेव जयते

NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

Ministry of Health and Family Welfare
Government of India

INTEGRATED MANAGEMENT OF NEONATAL AND CHILDHOOD ILLNESS (IMNCI)

PARTICIPANT MODULE FOR MEDICAL OFFICERS

2023

डॉ. विनोद कुमार पॉल
सदस्य
Dr. Vinod K. Paul
MEMBER

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

भारत सरकार
नीति आयोग
संसद मार्ग, नई दिल्ली-110 001
Government of India
NATIONAL INSTITUTION FOR TRANSFORMING INDIA
NITI Aayog
Sansad Marg, New Delhi-110 001
Tele. : 23096809, 23096820, Fax : 23096810
E-mail : vinodk.paul@gov.in

13th November, 2023

MESSAGE

I am pleased to note that the Ministry of Health and Family Welfare has developed the revised version of Integrated Management of Neonatal and Childhood Illness (IMNCI) and developed Facility Based Care of Sick Children as an update of "Facility Based Integrated Management of Neonatal and Childhood Illness (F-IMNCI)" training package which are being released.

National Health Policy (NHP) 2017 provides a framework to strengthen healthcare system for attaining Universal Health Coverage (UHC) and work on Government's philosophy of 'Sabka Sath Sabka Vikas'. Our flagship programme 'Ayushman Bharat' is working towards attainment of UHC as one of the key targets under Sustainable Development Goals. Under this UHC, we are committed to provide appropriate healthcare to newborns and children across the country. Our progress has been steady, despite the COVID-19 pandemic and we are making all efforts to improve children's survival.

There's a continuous need for upskilling and revising training packages, based on recent challenges and new evidence. The training packages developed by the Ministry of Health and Family Welfare are a right step in this direction towards addressing comprehensive management of newborns and sick children in outpatient as well as in-patient settings. These will be helpful in setting up better standards of care in public health facilities for our newborns and children and will help us ensure that each child gets a better start to life and is provided an equal opportunity to survive and thrive.

I extend my best wishes to everyone.

(Vinod Paul)

स्वच्छ भारत
एक कदम स्वच्छता की ओर

सुधांश पंत
सचिव
Sudhansh Pant
Secretary

सत्यमेव जयते

आज़ादी का अमृत महोत्सव

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare

MESSAGE

Health systems strengthening over the last decade brought a considerable improvement in the infrastructure, availability of human resources, drugs and equipment along with supportive services all across India. Effective sick newborn and child care is a crucial challenge that is faced by every health care system in low resource settings. While efforts are being made to improve the availability of specialists dealing with sick newborns and children, training of doctors, nurses and peripheral health workers remains key to equip the staff with appropriate knowledge and skills to provide evidence based healthcare to children.

With advances in critical care and based on evidence, the Integrated Management of Neonatal and Childhood Illness (IMNCI) training package has now been revised by the Child Health Division, with updated algorithm and improved training methodology. The revised training package also includes recommendations of the technical expert group on paediatric management of common illness. The package has been bifurcated and rebranded into OPD based Integrated Management of Neonatal and Childhood Illness Modules and Facility Based Care for Sick Children Package for inpatient management.

This revised package provides latest, evidence-based knowledge in improving newborn and child at facilities to provide required care for a newborn and child to identify and manage common conditions, complications, and emergency management of children, including pre-referral management, thereby saving many precious lives.

I hope that these training modules will be rolled out expeditiously across the States and UTs to ensure essential care to the children as a first step towards healthy childhood and adult life.

Date: 15.11.2023
Place: New Delhi

Sudhansh Pant
(Sudhansh Pant)

Room No. 156, A-Wing, Nirman Bhawan, New Delhi-110 011
Tele : (O) 011-23061863, 23063221, E-mail : secyhfw@nic.in

एल. एस. चाँगसन, भा.प्र.से.
अपर सचिव एवं मिशन निदेशक (रा.स्वा.मि.)
L. S. Changsan, IAS
Additional Secretary & Mission Director (NHM)

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110011
Government of India
Ministry of Health & Family Welfare
Nirman Bhawan, New Delhi - 110011

FOREWORD

The Ministry of Health and Family Welfare, Government of India has implemented a number of policies and programmes aimed at ensuring universal access to health coverage and reducing child and neonatal mortality. Our country has made sizeable gains in last one decade in Child Mortality and reach to 32 per 1000 Live births in the year 2020. Under National Health Policy (NHP) 2017, the country has set-up ambitious targets of Under 5 Mortality i.e. 23 per 1000 Live births by 2025 and our team is closely working with States/ UTs to achieve these targets in given time frame.

To fulfill the role of providing quality healthcare services for newborns and children, Ministry of Health and Family Welfare, Government of India has developed training package for comprehensive management of illness in newborns and under-five children with distinct outpatient and inpatient components. These target the capacity building needs of pediatricians, medical officers, nurses and peripheral health workers and provide knowledge and skills of high order required for management of common conditions that lead to maximum morbidity and mortality among children in our country.

I would like to express my heartfelt appreciation to all those who contributed to the preparation of these documents. I am sure that these packages will help in equipping our healthcare providers with knowledge and skill to deliver newborn and child health services with quality, all across the country.

With best wishes!

(Ms. L S Changsan)

'A' Wing, Nirman Bhawan, New Delhi-110011
Tel. : 011-23061723, 23061773, e-mail : lschangsan@nic.in

राष्ट्रीय स्वास्थ्य मिशन

डॉ. पी. अशोक बाबू, भा.प्र.से.
संयुक्त सचिव
Dr. P. Ashok Babu, IAS
Joint Secretary

सत्यमेव जयते

भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली-११००११
GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
NIRMAN BHAVAN, NEW DELHI-110011

PREFACE

The Government of India is committed to achieve goals under National Population Policy (2017) and bring down Neonatal Mortality Rate to 16 and Under Five Mortality Rate to 23 by 2025, which are well beyond the Sustainable Development Goals (SDGs) set for 2030. Newborn and Child health are the central pillars in the Reproductive, Maternal, Newborn, Child, Adolescent Health and Nutrition (RMNCAH+N) strategy. Inter-linkages between various RMNCAH+N life cycle stages have a significant impact on the mortality and morbidity of children.

The Child Health Division of the Ministry, with support from technical experts and development partners has revised Facility Based Integrated Neonatal and Childhood Illness (F-IMNCI) developed in the year 2009, with updated algorithms and improved training methodology and presented it in a pictorial format which also serves as a job-aid. The F-IMNCI training package has been divided into two packages of "Integrated Management of Newborn and Child Illnesses (IMNCI)" – for outpatient management of both young infants (0-2 months) and children up to five years of age and new package titled, "Facility Based Care of Sick Children" – focusing on appropriate inpatient management of major causes of childhood mortality beyond neonatal age from one month to 59 months old children with common illnesses, like pneumonia, diarrhoea, malaria, meningitis, and severe malnutrition. The training duration has been reduced to make it more practical.

The package emphasizes on the skill imparting techniques by the facilitators and ensures uniform messaging across all the levels. With this revised training package, we hope that the training will be more hands-on and the entire training experience will be enhanced, leading to better learning outcomes. I urge the States and UTs to take this package up to scale and universalize it by the end of 2024-25.

I am hopeful that by adopting this revised training package, the trainers along with service providers will feel more confident in carrying on with their roles and responsibilities. I would also like to place on record my appreciation for the hard work and untiring efforts put in by the Child Health Division in revising and developing the training package. I assure the States and UTs full support, of my team, in taking this important initiative forward.

(Dr. P. Ashok Babu)

Room No. 243 (A), 'A' Wing, Nirman Bhawan, New Delhi - 110011
Tel. : 011-23061447 E-mail : jsrch-mohfw@gov.in

DR. SHOBHNA GUPTA
Deputy Commissioner Incharge
Child Health & RBSK
Telefax : 011-23061218
E-mail : shobhna.gupta@gov.in
drshobhna.mohfw@gmail.com

GOVERNMENT OF INDIA
MINISTRY OF HEALTH & FAMILY WELFARE
NIRMAN BHAVAN, MAULANA AZAD ROAD
NEW DELHI - 110011

ACKNOWLEDGEMENT

India has witnessed a huge transformation in the scenario of children's health evident by faster reduction in child mortality over the last decade as compared to global rates. This has been made possible by India's continued investments in health systems which are being strengthened further in the wake of threats posed by COVID-19 pandemic through improvement of physical infrastructure and training of health care providers to equip them with suitable skill sets at different levels of care, to deliver quality newborn and child health services.

The Facility Based Integrated Neonatal and Childhood Illness (FIMNCI) package was first launched in India in the year 2009 guiding appropriate inpatient management of major causes of childhood mortality, which has now been bifurcated into two packages based on outpatient and inpatient management:

1. Integrated Management of Newborn and Child Illnesses (IMNCI)- for outpatient management of both young infants (0-2 months) and children up to five years of age with two separate chart booklets for healthcare workers (ANM) and Physicians to be covered over five days.

Cont'd on next page

2. New package titled, "Facility Based Care of Sick Children" - focuses on providing appropriate inpatient management of major causes of childhood mortality beyond neonatal age i.e. one month to 59 months old children with common illnesses, like- pneumonia, diarrhoea, malaria, meningitis, and severe malnutrition also taught over five days.

Other major differences are:

I. Facility based approach dissociated from IMNCI; management is now linked to Emergency signs
II. New chapters added on management of children with shock, management of children presenting with lethargy, unconsciousness or convulsions, supportive care
III. National Guidelines for pediatric management of COVID-19, Malaria, Dengue and Tuberculosis included
IV. Training videos developed by KSCH, Lady Hardinge Medical College

These training packages are a culmination of the work initiated by my previous colleagues Dr Ajay Khera, Ex-Commissioner (MCH); Dr P K Prabhakar, Ex Joint Commissioner (CH) and Dr. Sumita Ghosh, Ex- Additional Commissioner (Child Health), I convey my sincere gratitude for their vision. I would also like to thank Prof. (Dr) Praveen Kumar, Kalawati Saran Children's Hospital (KSCH), New Delhi and his team who worked very hard to develop and revise this package. I also want to acknowledge the contribution of Dr. Ashfaq Bhat (NIPI), Dr. Deepti Agarwal (WHO-India), Vishal Kataria (MoHFW) and Vaibhav Rastogi (MoHFW) who had worked together with KSCH to refine this package further with the support of Academicians, Experts, State Child Health Officers, Development Partners (NIPI, WHO, UNICEF, USAID, IPE Global, PATH) and also supported the pilot testing.

The Child Health Division will provide all the necessary support to the States and UTs to roll out these training packages at the earliest and contribute towards further improving children's health and survival. I wish you the very best for your efforts and look forward to your continued support as we move together on the mission to improve the quality of life of children and attain the national health goals.

(Dr. Shobhna Gupta)

LIST OF CONTRIBUTORS

MOHFW

- Ms L S Changsan, Additional Secretary & Mission Director (NHM), MoHFW
- Dr P Ashok Babu, Joint Secretary (RCH), MoHFW
- Dr Shobhna Gupta, Deputy Commissioner & In-charge (Child Health), MoHFW
- Vishal Kataria, National Technical Consultant (CH), MoHFW
- Dr Vaibhav Rastogi, Lead Consultant (CH), MoHFW
- Dr Kapil Joshi, Senior Consultant (CH), MoHFW
- Sharad Singh, Lead Consultant (CH), MoHFW
- Sumitra Dhal Samanta, Senior Consultant (CH), MoHFW

Experts

- Dr A K Jaiswal, Patna Medical College, Bihar
- Dr Anju Seth, Lady Hardinge Medical College, New Delhi
- Dr Dipangkar Hazarika, NHM Assam
- Dr Harish Chellani, VMMC & Safdarjung Hospital, New Delhi
- Dr Inderdeep Kaur, NHM Punjab
- Dr Jagdish Chandra, ESI Hospital, Basaidarapur , Delhi
- Dr Jyotsna Shrivastava, Gandhi Medical College, Bhopal, MP
- Dr Kamal Kumar Singhal, Lady Hardinge Medical College, New Delhi
- Dr Mala Kumar, King George's Medical College, Lucknow, UP
- Dr Mallesh Kariyappa, Vanivilas Hospital & BMC, Bangalore
- Dr Praveen Kumar, Lady Hardinge Medical College, New Delhi
- Dr Rani Gera, VMMC & Safdarjung Hospital, New Delhi
- Dr Rajesh Mehta, Delhi
- Dr Satinder Aneja, Sharda University, UP
- Dr Shalu Gupta, Lady Hardinge Medical College, New Delhi
- Ms Shivani Rohatgi, Lady Hardinge Medical College & KSCH, Delhi University, New Delhi
- Dr Soumya Tiwari, Lady Hardinge Medical College, New Delhi
- Dr Sumita Ghosh, Ex-Additional Commissioner & In-charge (Child Health), MoHFW
- Dr Varinder Singh, Lady Hardinge Medical College, New Delhi
- Dr Virendra Kumar, Maulana Azad Medical College, New Delhi
- Dr Viswas Chhapola, Lady Hardinge Medical College, New Delhi
- Dr Younis Mushtaq, NHM Jammu & Kashmir

Development Partners

- Dr Ashfaq Bhat, NIPI
- Dr Deepti Agrawal, WHO – India
- Dr Harish Kumar, IPE Global
- Dr Nimisha Goel, NIPI
- Dr Rajat Khanna, NIPI
- Dr Sachin Gupta, USAID – India
- Dr V K Anand, Save the Children
- Dr Vandana Bhatia, UNICEF - India
- Dr Vivek Singh, UNICEF – India

CONTENTS

CHAPTER 1

CHAPTER 2

CHAPTER 3

CHAPTER 1

INTEGRATED MANAGEMENT OF NEONATAL AND CHILDHOOD ILLNESS

1.1 THE INEQUITIES OF CHILD HEALTH AND INDIAN SITUATION

Child mortality rates have decreased to less than half of what they were in 1990. However, this reduction has not been evenly distributed throughout the world. Still, every year more than 5 million children die across the world before they reach their fifth birthday. The most common causes of infant and child mortality are prematurity & low birth weight, acute respiratory infections, diarrhoea, malaria, HIV and congenital anomalies. Neonatal deaths accounted for 45% of under-five deaths in 2015. Severely ill and those who are most likely to die of their illness belong to the most vulnerable and underprivileged populations of low-income countries.

In India, Infant Mortality Rate continues to be high at 28/1000 live births (SRS 2020) and Under Five Mortality Rate at 32/1000 live births per year (SRS 2020). Neonatal mortality contributes to over 73% of infant deaths and most of these deaths occur during the first week of life. Mortality rate in the second month of life is also higher than at later ages. Common illnesses causing deaths in children under 5 years of age include perinatal complications, neonatal sepsis, acute respiratory infections, diarrhoea and underlying malnutrition and often in combination (Figure-1). Any health program that aims at reducing Infant Mortality Rate needs to address mortality in the first two months of life, particularly in the first week of life.

Many children and infants suffer from more than one illness at a time. Malnutrition increases the risk of death and is associated with over two thirds of these deaths. Many of these deaths may be prevented by early referral of sick children to health facility and providing appropriate treatment to them. **This module describes assessment and management of sick neonates and children below 5 years.**

Integrated Management of Neonates & Children is an integrated approach that includes the assessment, classification and management of the major problems a sick infant or a child aged less than 5 years may have. It also includes assessment of nutritional and immunization status of all sick infants and children.

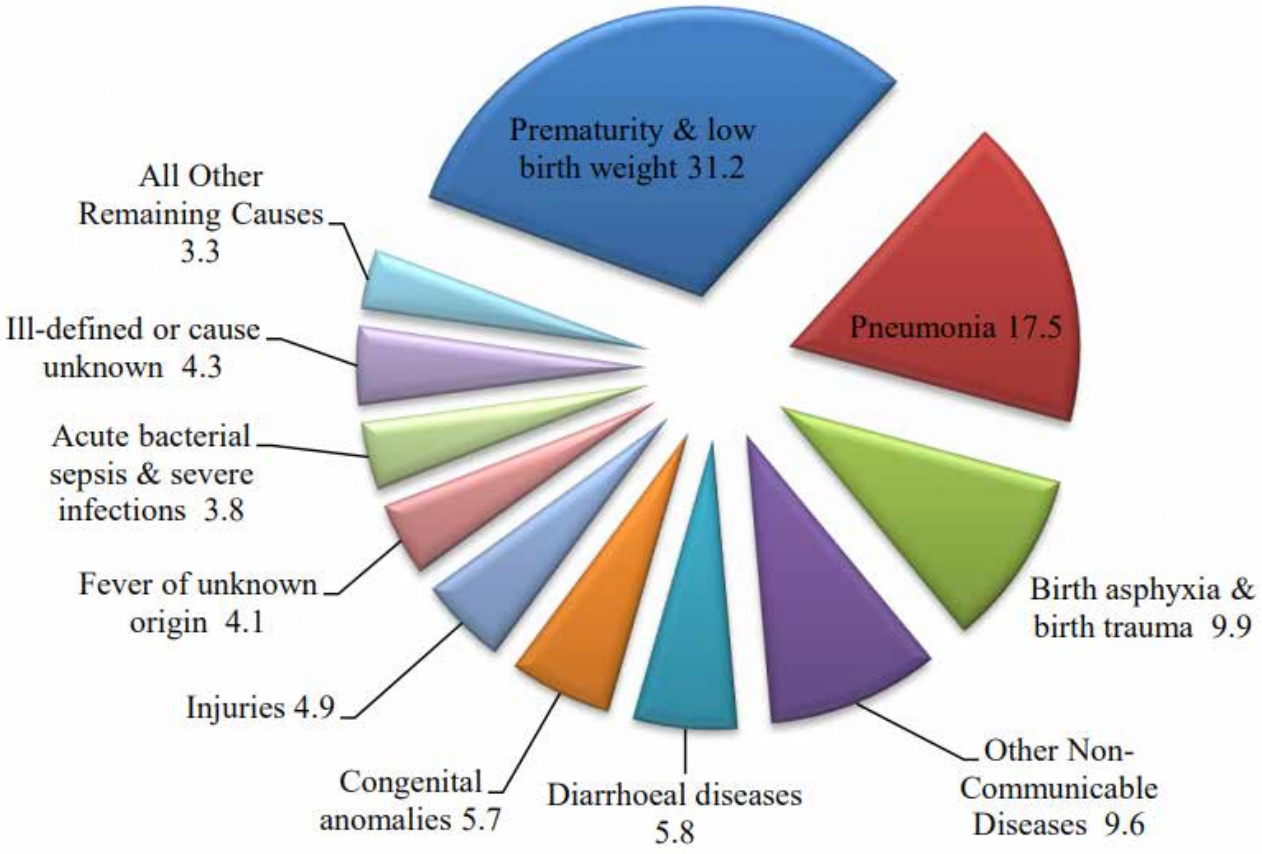


Figure 1: Causes of child death in India (Source: SRS 2017-19)

Quality of care is another important indicator of inequities in child health. Every day, millions of parents seek health care for their sick children, taking them to hospitals, health centres, pharmacists, doctors and traditional healers. Surveys reveal that many sick children are not properly assessed and treated by our health providers and that their parents are poorly advised.

At first-level health facilities in low-income countries, diagnostic supports such as radiology and laboratory services are minimal or non-existent drugs and equipments are often scarce. Limited supplies and equipment, combined with an irregular flow of patients, leave doctors at this level with few opportunities to practice complicated clinical procedures. Instead, they often rely on history and clinical signs to determine a course of management that makes the best use of available resources.

Providing quality care to sick children in these conditions is a serious challenge. Experience and scientific evidence show that improvements in child health are not necessarily dependent on the use of sophisticated and expensive technologies, but rather on effective strategies which are based on a holistic approach, are available to the majority of those in need, and which take into account the capacity and structure of health systems, as well as traditions and beliefs in the community.

Improvement in child health are not necessarily dependent on the use of sophisticated and expensive technologies.

1.2 RATIONALE FOR AN INTEGRATED EVIDENCE-BASED SYNDROMIC APPROACH TO CASE MANAGEMENT

Many well-known prevention and treatment strategies have already proven effective for saving young lives. Exclusive breastfeeding for six months is effective in reducing deaths due to sepsis, pneumonia, diarrhoea etc. Childhood vaccinations have successfully reduced deaths due to polio, measles. Oral rehydration therapy has contributed to a major reduction in diarrhoeal deaths.

Effective antibiotics have saved millions of children with pneumonia. Prompt treatment of malaria has allowed more children to recover and lead healthy lives.

While each of these interventions has been successful, accumulating evidence suggests that an integrated approach is needed to manage sick children to achieve better outcomes. Child health programs need to move beyond single disease to addressing the overall health and well-being of the child.

An integrated approach is needed to manage sick children to achieve better outcomes.

Child health programmes need to move beyond tackling single disease in order to address 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, negligible 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, the frequency & severity of illness, disability and to contribute to improved growth & development. This strategy has been expanded in India to include all neonates and renamed as 'Integrated Management of Neonatal and Childhood Illness (IMNCI)'.

The IMNCI clinical guidelines target children less than 5 years old and the highest burden of deaths from common childhood diseases. The guidelines represent an evidence-based syndromic approach to case management that includes rationale, 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 provide 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; and
- Actions that can be taken to care for the child (e.g. refer the child immediately, manage with available resources, or manage at home).

Careful and systematic assessment of common symptoms and well-selected specific clinical signs provide sufficient information to guide rational and effective actions.

In addition, IMNCI promotes:

- Adjustment of interventions to the capacity 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 advise 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.

1.3 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 neonatal and childhood problems with a focus on the most common causes of death.

The strategy includes three main components:

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

This document is focused on achieving these components.

1.4 THE PRINCIPLES OF INTEGRATED CARE

Depending on a child's age, various clinical signs and symptoms differ in their degree of reliability and diagnostic value and importance. Therefore, the IMNCI guidelines recommend case management procedures based on two age categories:

- Young infants age upto 2 months
- Children age 2 months upto 5 years

The IMNCI guidelines are based on the following principles:

For young infants

- Check young infants for possible serious bacterial infection/Jaundice,
- Assess for diarrhoea,
- Check for Very Low Weight & Feeding problems,
- Check the immunization status,
- Assess other problems,
- Provide treatment and refer when required,
- Advise the mother on home care for the sick young infant,
- Counsel for feeding, development supportive care,
- Follow up care.

Children age 2 months upto 5 years

- All sick children age 2 months upto 5 years must be assessed for "***general danger signs***" which indicate the need for immediate referral or admission to a hospital. They must then be ***routinely assessed for major symptoms:*** (Cough/Diarrhoea/Fever/Ear problems).
- All sick young infants and children 2 months upto 5 years should also be routinely assessed for ***nutritional status/feeding problems, immunization status and caregiver's development supportive practices***
- 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 an infant's or 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 infant or child (a) should be urgently referred to a higher level of care, (b) require 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 specific treatment, and "green" calls for home management.
- The IMNCI guidelines address ***most, but not all, of the major reasons a sick infant or child is brought to a clinic***. An infant or child with chronic problems or less common illnesses may require special care. The guidelines do not describe the management of trauma or other acute emergencies due to accidents or injuries. **They also do not cover care at birth.**
- IMNCI management procedures use a ***limited number of essential drugs and encourage active participation of caregivers in the treatment*** of infants and children.

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

1.5 THE IMNCI CASE MANAGEMENT PROCESS

Decide which age group the child is in:

- Age upto 2 months
- Age 2 months upto 5 years

If the infant is not yet 2 months of age, the child is considered as a young infant. Use the chart ASSESS AND CLASSIFY THE SICK YOUNG INFANT. "Upto 2 months" means that the child has not yet completed 2 months of age. For example, this age group includes a infant who is 1 month and 29 days old but not a infant who is 2 months old. If the child is aged 2 months upto 5 years, select the chart ASSESS AND CLASSIFY THE SICK CHILD AGED 2 MONTHS UPTO 5 YEARS.

"UPTO 5 YEARS" means that child has not yet had his fifth birthday. For example, this age group includes a child who is four years and 11 months but not a child who is five years old.

The overall case management process is summarized in figure-2.

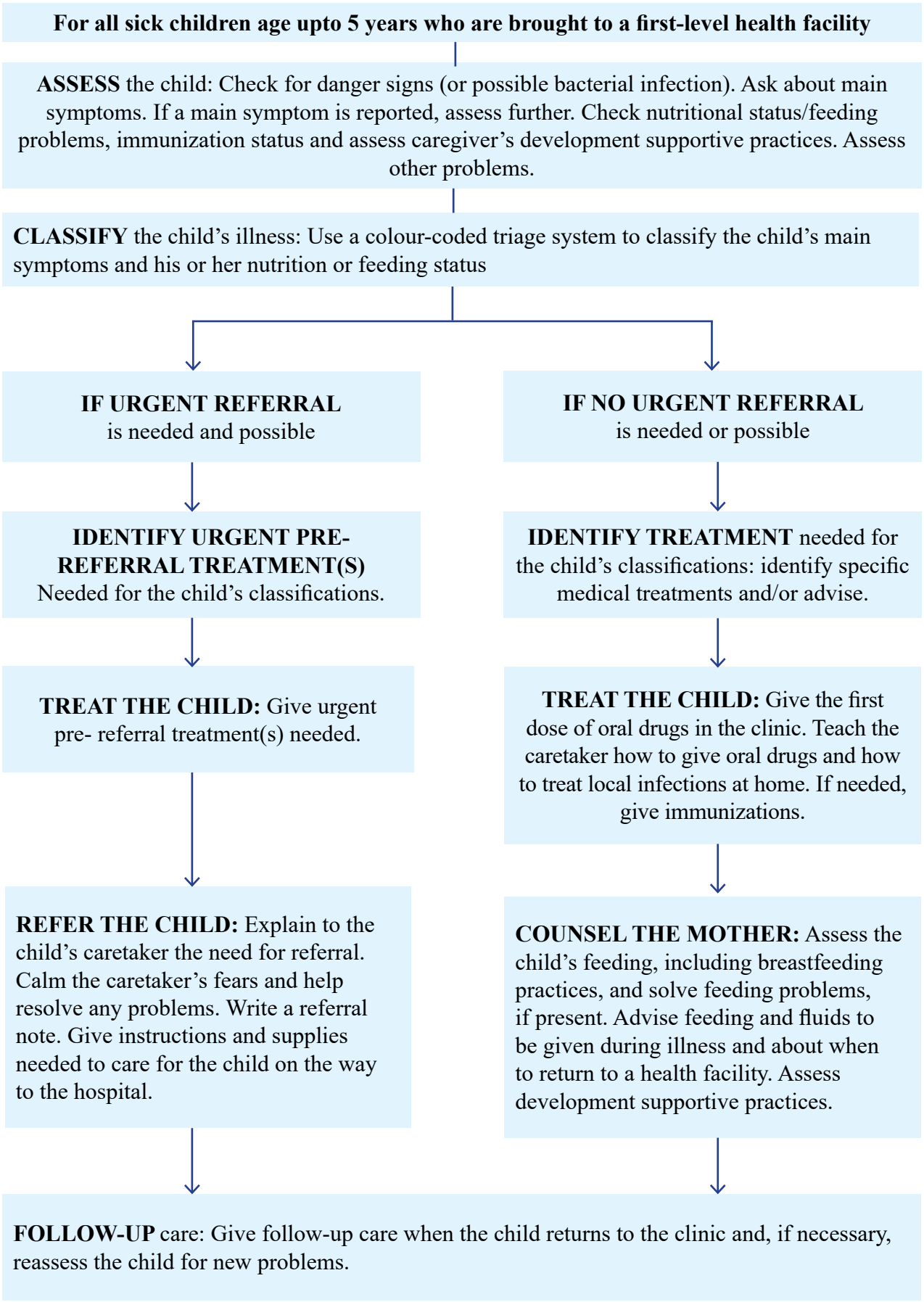


Figure-2. Summary of the Integrated Case Management Process

The case management of a sick child brought to a first-level health facility includes a number of important elements, Figures 3 and 4 illustrate the case management process in young infants upto 2 months of age and children 2 months upto 5 years respectively.

Outpatient Health Facility

- Assessment;
- Classification and identification of treatment;
- Referral, treatment or counselling of the child's caregiver (depending on the classification(s) identified);
- Follow-up care.

Referral to a Health Facility

- Emergency triage assessment and treatment (ETAT);
- Diagnosis, treatment and monitoring of patient progress.

Appropriate Home Management

- Teaching mothers or other caregivers how to give oral drugs and treat local infections at home;
- Counselling mothers or other caregivers about food (feeding recommendations, feeding problems); fluids; development supportive practices; when to return to the health facility; and the counselling mother about her own health.

Course method and materials

In addition to this module, you will receive a chart booklet that summarizes the steps in case management.

If the child is <u>not yet</u> two months of age, the child is considered a young infant.

Children who are 5 years of age or older, i.e. have had their fifth birthday, should not be managed according to IMNCI chart booklet.

THE INTEGRATED CASE MANAGEMENT PROCESS

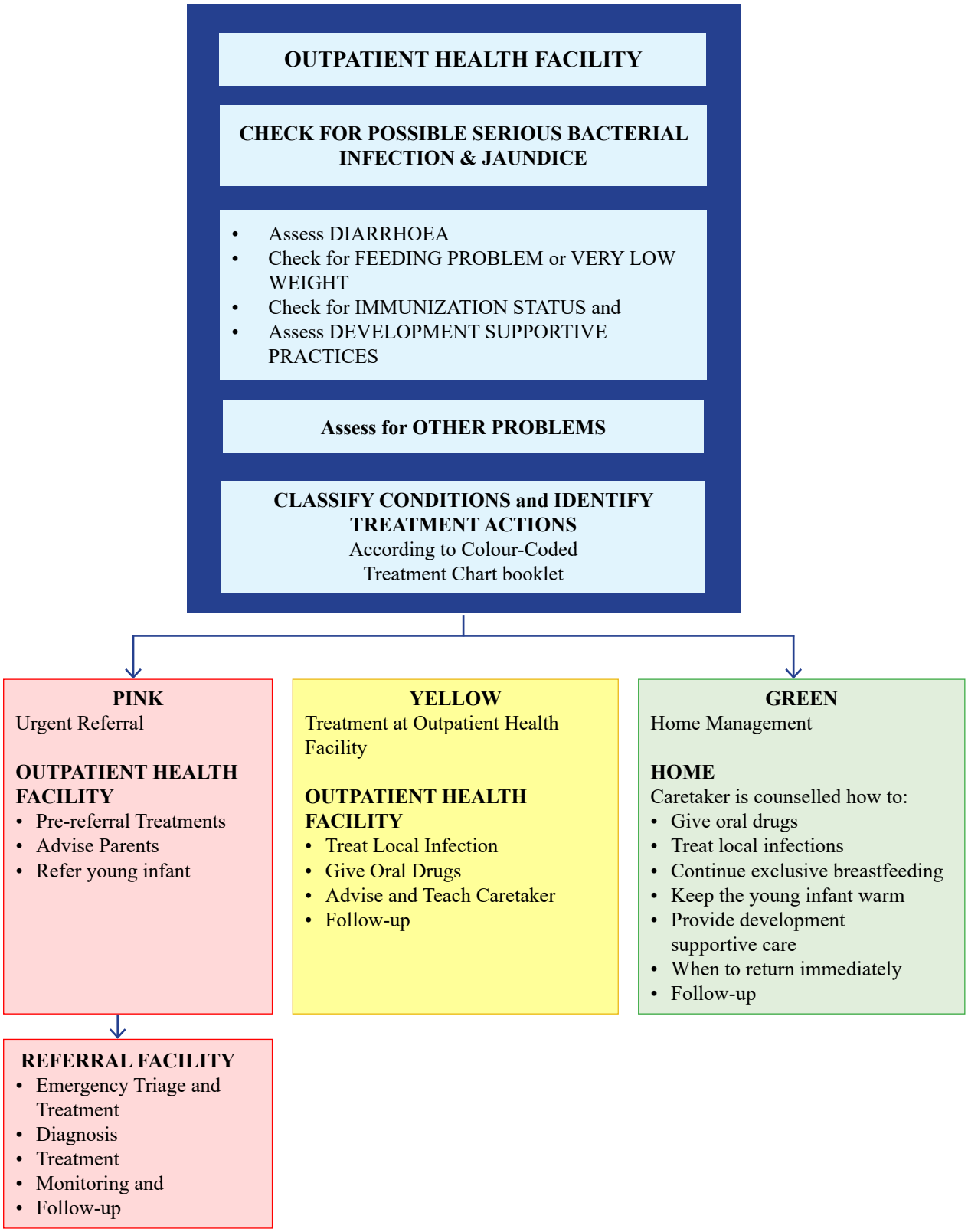


Figure-3. IMNCI Case Management in the Outpatient Health Facility, First-level Referral Facility and at Home For the Sick Young Infant upto 2 Months of Age

THE INTEGRATED CASE MANAGEMENT PROCESS

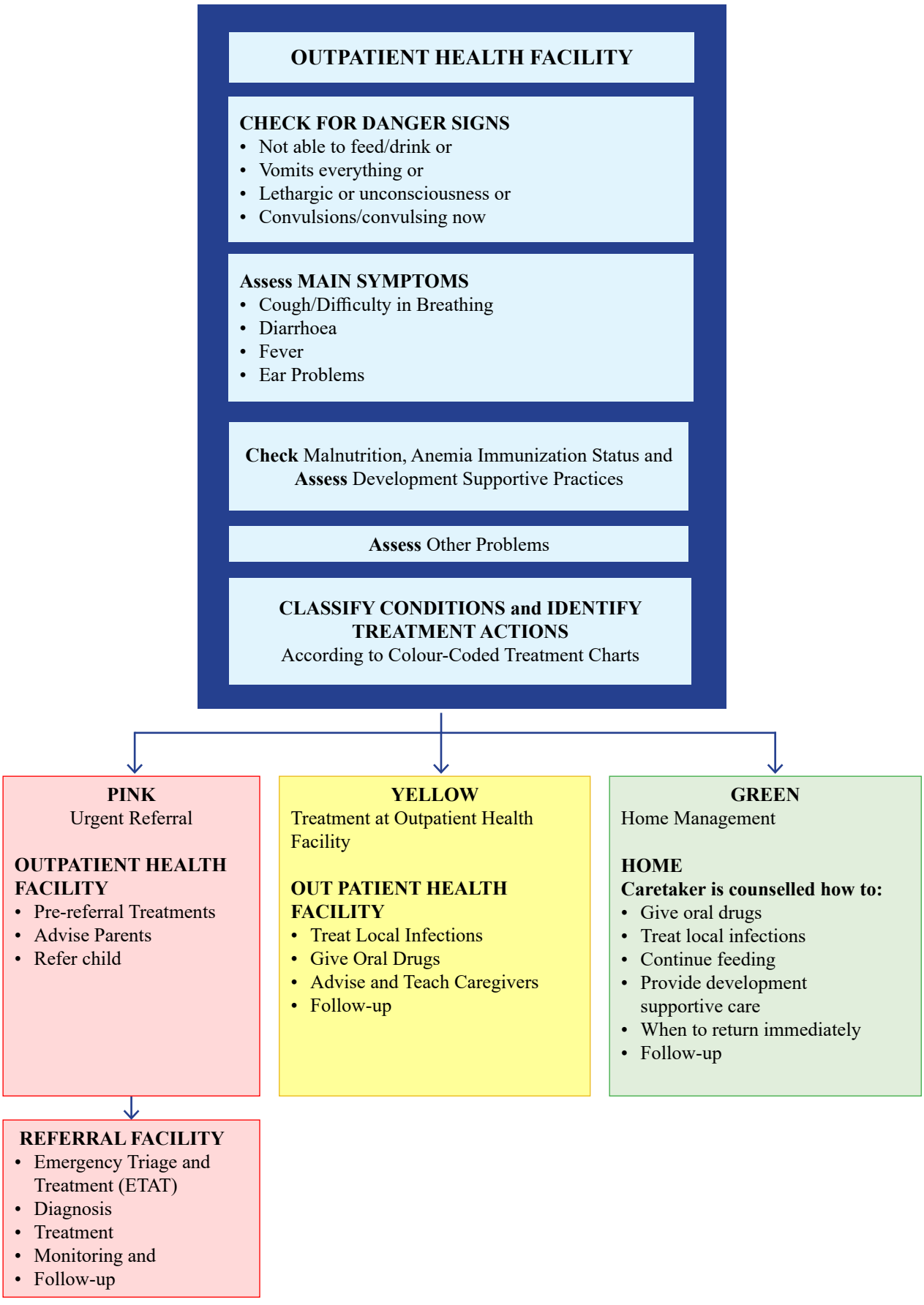


Figure-4. IMNCI Case Management in the Outpatient Health Facility, First-level Referral Facility and at Home For the Sick Child from Age 2 Months upto 5 Years

CHAPTER 2

OUTPATIENT MANAGEMENT OF YOUNG INFANTS UPTO 2 MONTHS OF AGE

2.1 LEARNING OBJECTIVES

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

- checking for and classifying a young infant for possible bacterial infection
- checking for and classifying a young infant for jaundice
- assessing and classifying a young infant with diarrhoea
- checking for a very low weight or feeding problem, assessing breastfeeding and immunization

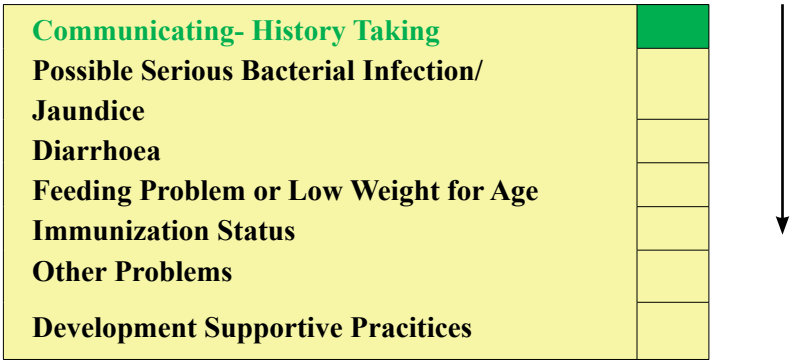
2.2 ASSESSMENT OF SICK YOUNG INFANTS

Young infants have special characteristics that must be considered when classifying their illnesses. 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, you will assess, classify and treat the young infant somewhat differently than an older infant or young child.

The assessment procedure for this age group includes a number of important steps that must be taken by the health care provider, including:

1. history taking and communicating with the caretaker about the young infant's problem;
2. checking for possible serious bacterial infection / jaundice
3. assessing for diarrhoea
4. checking for feeding problem or low weight for age
5. checking immunization status
6. assessing other problems; and
7. development supportive practices

2.2.1 COMMUNICATING WITH THE CARETAKER



Sick young infants **are somewhat different** from older children.

Select the case management section for the young infant age upto 2 months.

- **Greet the mother and give a** friendly smile
- **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.

- **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.
- **Give the mother time to answer the questions.** For example, she may need time to decide if a symptom you asked about is present.
- **Ask additional questions when the mother is not sure about her answer.** When you ask about a symptom, the mother may not be sure if it is present. Ask her additional questions to help her give clearer answers.

Communicating - History taking

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 a well infant brought for immunization or for an infant with an injury or burn. This chart also should not be used for taking care of the newborn at birth.

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 upto 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 has age 2 months upto 5 years, assess and classify the child according to the steps on the *ASSESS AND CLASSIFY THE SICK CHILD.*

AGE 2 MONTHS Upto 5 YEARS chart. (You will learn more about managing sick children age 2 months upto 5 years later in the module).

Look to see if the young infant's weight and temperature have been measured and recorded. If not, weigh the infant and measure his/her 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. Good communication helps to reassure the mother that her infant will receive good care.

*** 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.

You will learn how to carry out a follow-up visit later in the module. The examples 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 booklet to assess and classify a sick young infant:

- Check for signs of possible serious 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.
- Check for very low weight or feeding problem. This may include assessing breastfeeding. Then classify feeding.
- Check the young infant's immunization status.
- Assess development supportive practices
- 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.

*** Using the Young Infant Recording Form**

Record the information on Young Infant Recording Form.

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

Below is part of a Young Infant Recording Form.
An example of completing the top of the Recording Form for Jatin is shown as follows:

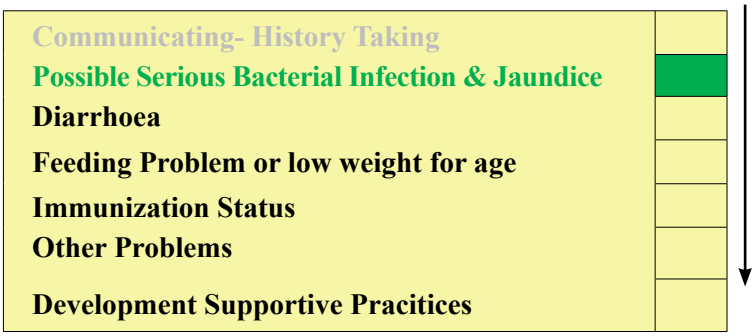
CASE: *Jatin is 6 weeks old male. He weighs 4.5 kg. His temperature is 37°C. The physician asked "What are the infant's problem?" The mother said "Jatin has diarrhoea and a skin rash for the last 3 days". This is the initial visit for this illness.*

MANAGEMENT OF THE SICK YOUNG INFANT AGE Upto 2 MONTHS

Name: *Jatin* Age: *6 weeks* *Gender*: *Male* Weight: *4.5* kg Temperature: *37° C*

ASK: What are the infant's problems? *diarrhoea and skin rash* Initial visit? √ Follow-up Visit?_____

2.2.2 CHECKING FOR POSSIBLE SERIOUS BACTERIAL INFECTION / JAUNDICE



While the signs of pneumonia and other serious bacterial infections cannot be easily distinguished in this age group, it is recommended that ***all*** sick young infants be assessed first for signs of possible bacterial infection and jaundice.

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 booklet and to keep the young infant calm. The young infant ***must be calm*** and may be asleep while you count breathing and look for severe chest indrawing.

To assess the next few signs, ask mother/caregiver to undress him, look at the skin all over his body and measure his temperature. By this time, infant will probably be awake. Then you can see whether infant is lethargic or unconscious and observe his movements.

Clinical Assessment

Many clinical signs point to possible serious bacterial infection in sick young infants. The most informative and easy to check signs are:

Difficulty in feeding. a young infant who was feeding well earlier but is not feeding well now may have a serious infection.

Convulsions (as part of the current illness). Convulsions may be associated with meningitis or other life-threatening conditions. All young infants who have had convulsions during the present illness should be considered seriously ill. Convulsion in young infants may not be characterized by tonic-clonic movements and up rolling of eyeballs, they may instead present as repetitive jerky movements of the eyes, lip smacking or a staring look.

Fast breathing. Count the breaths 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, use a watch with a second hand or a digital watch. Put the watch where you can see the second hand and glance at the second hand as you count the breaths the young infant takes in one minute. 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 children do. **The cut-off rate to identify fast breathing in this age group is 60 breaths per minute or more.** If the count is 60 breaths or more, the count should be repeated, because the breathing rate of a young infant is often irregular. The young infant may 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.

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.

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

Skin pustules. Examine the skin on the entire body. Skin pustules are red spots or blisters that contain pus.

Temperature. A thermometer that measures to a minimum of 35^0C can be used to measure temperature. Keep the bulb of the thermometer high in the axilla and then hold the young infant's arms against his body until there is a beep in case of digital thermometer or for 5 minutes in case you are using mercury bulb thermometer. If you do not have a thermometer, feel the infant's abdomen or axilla (underarm) and determine if it feels hot or cold to touch.

Fever or hypothermia may both indicate bacterial infection. Fever (axillary temperature more than 37.5°C) is uncommon in the first two months of life. Fever in a young infant may indicate a serious bacterial infection and may be the *only* sign of a serious bacterial infection. Young infants can also respond to infection by dropping their axillary temperature to below 35.5 °C.

Lethargy or unconsciousness. 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 physician/ health worker 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 sole 2-3 times. Look to see if the child wakens and whether he stays awake. If the young infant shows no response or does not stay awake after some response, he is lethargic or unconscious.

Less than normal movement also indicates a serious condition. Observe the infant's movements. 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.

Jaundice is the visible manifestation of 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. Physiological jaundice does not extend to palms and soles, and does not need any treatment.

To look for jaundice, press the infant's skin over the forehead with your fingers to blanch, remove your fingers and immediately look for yellow discoloration under natural light. If there is yellow discoloration, the infant has jaundice.

Yellow palms and soles. Press the infant's palms with your fingers to blanch, remove your fingers and look for yellow discoloration under natural light. Repeat the process to look for yellow soles. Occurrence of jaundice in the first 24 hours of life and yellow discoloration of palms and soles at

any time is always pathological and requires urgent referral. Severe jaundice beyond the first week may be a result of cholestasis.

CLASSIFICATION OF POSSIBLE SERIOUS BACTERIAL INFECTION & JAUNDICE

All sick young infants are classified for Possible Serious Bacterial Infection as follows:

A sick young infant with **POSSIBLE SERIOUS BACTERIAL INFECTION** is one with any of the following signs: not able to feed/not feeding well, convulsions, fast breathing, severe chest indrawing, fever, hypothermia, lethargy or unconsciousness, or less than normal movements. **This infant should be referred urgently to the hospital after being given the first dose of intramuscular ampicillin plus gentamicin injection, treatment to prevent hypoglycemia and advise to the mother on keeping the young infant warm while arranging referral and on the way to the hospital**.

• Not able to feed at all or not feeding well or • Convulsions or • Fast breathing (60 breaths per minute or more in infants less than 7 days) or • Severe chest indrawing or • Axillary temperature 37.5^{0}C or above (or feels hot to touch) or • Axillary temperature less than 35.5^{0}C (or feels cold to touch) or • Movement only when stimulated or no movement at all	**POSSIBLE SERIOUS BACTERIAL INFECTION OR VERY SEVERE DISEASE**

A sick young infant aged 7-59 days are classified as PNEUMONIA if s/he has only one sign fast breathing present. Research has shown that babies aged 7-59 days old can be treated with oral antibiotics if they present with fast breathing alone and they likely do not need hospital treatment. If the infant also has low weight for age or any other severe classification, give first dose of intramuscular ampicillin and gentamicin as pre-referral treatment and refer URGENTLY to hospital. If the infant does not have low weight or any other severe classification, give oral amoxicillin and should be called for follow up after 2 days & advise mother to give home care for the young infants. The total duration of the treatment should be for 7 days.

• Fast breathing (60 breaths per minute or more) in infants 7-59 days old	**PNEUMONIA**

A sick young infant with **LOCAL BACTERIAL INFECTION** is the one with umbilicus red or draining pus or skin pustules. This infant may be treated at home with oral antibiotics but should be seen in follow-up after two days.

• Umbilicus red or draining pus or • Skin pustules	**LOCAL BACTERIAL INFECTION**

A sick young infant with no signs of POSSIBLE SERIOUS BACTERIAL INFECTION and no signs of Local Bacterial Infection has no classification for Possible Bacterial Infection. In this case, the classification should be **Infection Unlikely**.

• No Signs of bacterial infections or very severe disease	**INFECTION UNLIKELY**

Additionally, check sick infant for jaundice and classify as follows:

It is important to look for jaundice in natural light.

- A sick young infant with SEVERE JAUNDICE is one who has yellow palms and soles or has jaundice at age < 24 hours. This infant should be referred urgently to the hospital after being given treatment to prevent hypoglycemia and advise to the mother on keeping the young infant warm on the way to hospital.

• Any jaundice in an infant aged less than 24 hours or • Yellow palms and soles at any age	**SEVERE JAUNDICE**

- A sick young infant with JAUNDICE is one who has jaundice but the palms and soles are not yellow. This infant should be given home care, but mother should be advised when to return immediately and should be seen in follow-up in two days. If jaundice persists beyond 2 weeks, the infant should be referred to a hospital for evaluation.

• Jaundice appearing after 24 hours of age and • Palms and soles not yellow	**JAUNDICE**

- If there is no jaundice, then infant is classified as No Jaundice.

• No jaundice	**No JAUNDICE**

***How to use the classification table*:** Whenever you use a classification table, start with the pink rows, if the young infant does not have the severe classifications, look at the yellow rows. For the classification tables that have a green row, if the young infant does not have any of the signs in the pink or yellow rows, select the classification in the green row.

In the classification table, a young infant receives classifications in one colour only. If the young infant has signs from more than one row, always select the most severe (pink) classifications. However, if the classification table has more than one arm, e.g. Possible Bacterial Infection and Jaundice, a young infant can have one classification under Possible Bacterial Infection and another under Jaundice (if he has jaundice).

Classify Young Infant for Possible Bacterial Infection & Jaundice:

For all Young Infants:

1. Look at the pink row:
   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.

2. If the young infant does not have the severe classifications, look at the yellow row. If the young infant has any of the signs in yellow row, select the classification PNEUMONIA/ LOCAL BACTERIAL INFECTION.

3. If the young infant has clinical signs of both Possible serious bacterial infection and local bacterial infection, the child will be classified as POSSIBLE SERIOUS BACTERIAL INFECTION only.

4. If the child has no signs of bacterial infections or very severe disease, classify as INFECTION UNLIKELY.

For Young Infant with Jaundice:

1. Look at the pink row:

   If the young infant has any signs of severe jaundice, select the severe classification, SEVERE JAUNDICE.

2. If the young infant does not have any signs of severe classifications, look at the yellow row. If the young infant has any of the signs in yellow row, select the classification JAUNDICE.

3. If there is no Jaundice, select NO JAUNDICE classification

Example of the Top Section of the Young Infant Case Recording Form

Jatin is 6 weeks old male. He weighs 4.5 kg. His temperature is 37°C. The physician asked "What are the infant's problem?" The mother said "Jatin has diarrhoea and a skin rash for the last 3 days". This is the initial visit for this illness.

The physician checks the young infant for signs of possible bacterial infection & jaundice. His mother says that Jatin is feeding well, has not had convulsions. The physician counts 55 breaths per minute. He finds no chest indrawing. Measured axillary temperature is 37°C. His movements are normal. The umbilicus is normal. There are 6 skin pustules. He does not have jaundice.

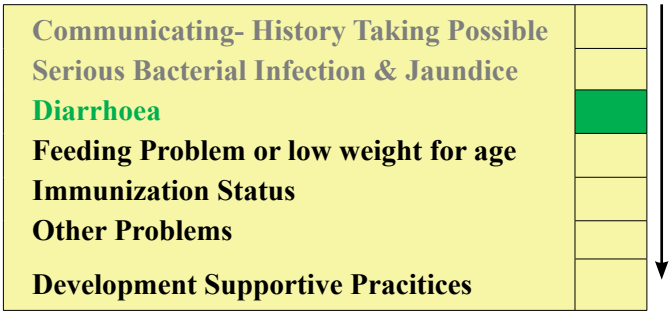
MANAGEMENT OF THE SICK YOUNG INFANT AGE UPTO 2 MONTHS

Name: *Jatin* Age: *6 weeks* Gender: *Male* Weight: *4.5* kg Temperature: *37* °C Date: *10/02/23*

ASK: What are the infant's problems? *Diarrhoea and skin rash* Initial visit? *√* Follow up visit?_____

ASSESS (Circle all signs present)		**CLASSIFY**
CHECK FOR POSSIBLE SERIOUS BACTERIAL INFECTION • Is the infant having difficulty in feeding? • 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 • Measure axillary temperature (if not possible, feel for fever or low body temperature)- Is it < 35.5°C / 37.5 °C or above? • Look at young infant's movements. If infant is sleeping, ask the mother to wake him/her ⇨ Does the infant move only when stimulated but then stops? ⇨ Does the infant not move at all? • Look at the umbilicus. Is it red or draining pus? • Look for skin pustules?	*Local Bacterial Infection*
CHECK FOR JAUNDICE • If present - Ask when did jaundice appeared – First 24 hours / After 24 hours	• Look for jaundice (yellow skin) • Is the young infant's palms and soles yellow?	*No Jaundice*

2.2.3 CHECKING FOR DIARRHOEA



A young infant is considered to have diarrhoea if the stools have changed from usual pattern and are many and watery (more water than faecal matter). The normally frequent or loose stools of a breastfed baby are not diarrhoea.

All young infants with diarrhoea should be assessed for: (a) signs of dehydration; (b) duration of diarrhoea; and (c) blood in the stool.

Clinical Assessment

A number of clinical signs are used to determine the level of dehydration.

Infant's general condition. You have already checked if the young infant has **Movement only when stimulated or No movement at all** while checking for severe disease. 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" due to dehydration.

Sunken eyes. The eyes of a dehydrated infant may look *sunken*. In a severely malnourished infant who is visibly wasted, the eyes may always look sunken, even if the infant is not dehydrated. When doubt, ask mother whether the infant eyes are more sunken after onset of diarhhoea. Even though the sign "sunken eyes" is less reliable in a visibly wasted infant, it can still be used to classify the infant's dehydration.

Elasticity of skin. Check elasticity of skin using the skin pinch test. When released, the skin pinch goes back either *very slowly* (longer than 2 seconds), or *slowly* (skin stays up even for a brief instant), or *immediately*. In an infant with severe malnutrition, the skin may go back slowly even if the infant is not dehydrated. In an overweight infant, or an infant with oedema, the skin may go back immediately even if the infant is dehydrated.

Standard Procedures for Skin Pinch Test

- Locate the area on the child's abdomen halfway between the umbilicus and the side of the abdomen; then pinch the skin using the thumb and first finger.
- Place your hand in such a way that when the skin is pinched, the fold of skin will be in a line up and down the child's body and not across the child's body.
- It is important to firmly pick up all of the layers of skin and the tissue under them for one second and then release it.

Classification of Dehydration

Based on a combination of the above clinical signs, infants presenting with diarrhoea are classified into three categories:

- A young infant with **SEVERE DEHYDRATION** has any two of the following signs: Movement only when stimulated or no movement at all, has sunken eyes, or a skin pinch goes back very slowly.

Two of the following signs: • Movement only when stimulated or no movement at all • Sunken eyes • Skin pinch goes back very slowly	**SEVERE DEHYDRATION**

Patients have severe dehydration if they have a fluid deficit equaling greater than 10 percent of their body weight. Young infants with severe dehydration require immediate IV infusion according to WHO treatment guidelines described in Plan C.

- Those with **SOME DEHYDRATION** have any combination of two of the following signs: restless/irritable, sunken eyes, skin pinch goes back slowly.

Two of the following signs: • Restless, irritable • Sunken eyes • Skin pinch goes back slowly	**SOME DEHYDRATION**

Infants with some dehydration have a fluid deficit equaling 5 to 10 percent of their body weight and require active oral rehydration with ORS solution according to WHO treatment guidelines described in Plan B. This classification includes both "mild" and "moderate" dehydration, which are descriptive terms used in some paediatric textbooks.

- Those infant with diarrhoea who do not have enough signs to classify as severe or some dehydration is classified as **NO DEHYDRATION.**

• Not enough signs to classify as some or severe dehydration	**NO DEHYDRATION**

Patients with diarrhoea but no signs of dehydration usually have a fluid deficit less than 5 percent of their body weight. Although these children lack distinct signs of dehydration, they should be given more fluid than usual to prevent dehydration from developing as specified in WHO Treatment Plan A.

Note: Anti-diarrhoeal drugs - including anti-motility agents (e.g., loperamide, diphenoxylate, codeine, tincture of opium), adsorbents (e.g., kaolin), etc. — ***do not*** provide practical benefits for infants and children with acute diarrhoea, and some may have dangerous side effects. These drugs should never be given to children less than 5 years old.

Example of the Top Section of the Young Infant Case Recording Form

CASE: *Jatin is 6 weeks old male. He weighs 4.5 kg. His temperature is 37°C. The physician asked "What are the infant's problem?" The mother said "Jatin has diarrhoea and a skin rash for the last 3 days" This is the initial visit for this illness.*

The physician checks the young infant for signs of possible bacterial infection & jaundice. His mother says that Jatin is feeding well, has not had convulsions. The physician counts 55 breaths per minute. He finds no chest indrawing. Measured axillary temperature is 37°C. His movements are normal. The umbilicus is normal. There are 6 skin pustules. He does not have jaundice.

When the physician asks the mother about Jatin's diarrhoea, the mother replies that it began 3 days ago, and there is no blood in the stool. Jatin is crying. He stopped crying once when his mother put him to the breast. He began crying again when she stopped breastfeeding. His eyes look normal, not sunken. When the skin of his abdomen is pinched, it goes back slowly.

MANAGEMENT OF THE SICK YOUNG INFANT AGE UPTO 2 MONTHS

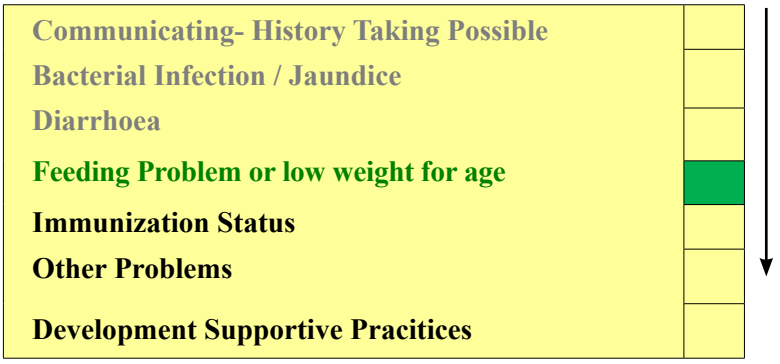
Name: _____*Jatin*_____ Age: _*6 weeks*_____ Gender: __*Male*_ Weight: __*4.5*_ kg Temperature: _*37*_ ºC Date: __*10/02/23*___

ASK: What are the infant's problems? _*Diarrhoea and skin rash*_ Initial visit?____*√*_____ Follow up visit?_____

ASSESS (Circle all signs present) **CLASSIFY**

CHECK FOR POSSIBLE SERIOUS BACTERIAL INFECTION • Is the infant having difficulty in feeding? • 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 • Measure axillary temperature (if not possible, feel for fever or low body temperature)- Is it < 35.5°C / 37.5 °C or above? • Look at young infant's movements. If infant is sleeping, ask the mother to wake him/her ⇨ Does the infant move only when stimulated but then stops? ⇨ Does the infant not move at all? • Look at the umbilicus. Is it red or draining pus? • Look for skin pustules?	*Local Bacterial Infection*
CHECK FOR JAUNDICE • If present - Ask when did jaundice appeared – First 24 hours / After 24 hours	• Look for jaundice (yellow skin) • Is the young infant's palms and soles yellow?	*No Jaundice*
DOES THE YOUNG INFANT HAS DIARRHOEA? Yes _✓__ No ___.	• Look at the young infant's general condition. ⇨ Does the infant move only when stimulated? ⇨ Does the infant not move at all? ⇨ Is the infant restless and irritable? • Look for sunken eyes. • Pinch the skin of the abdomen. Does it go back: ⇨ Very slowly (longer than 2 seconds)? ⇨ Slowly	*Some Dehydration*

2.2.4. CHECKING FOR FEEDING PROBLEMS OR LOW WEIGHT FOR AGE



All sick young infants seen in outpatient health facilities should be assessed for low weight and adequate feeding, as well as for breast-feeding technique.

Clinical Assessment

Assessment of Very Low Weight or feeding problems. Assessment of feeding in young infants has two parts. In the first part, you ask the mother questions to determine if she is having difficulty feeding the infant, what the young infant is fed and how often. You also determine weight for age.

In the second part, if an infant has any difficulty in feeding or is breastfeeding less than 8 times in 24 hours or is taking any other foods or drinks or is low weight for age and has no indication for referrals, then breastfeeding should be assessed. Assessment of breastfeeding in young infants includes checking if the infant is able to attach well, if the infant is suckling effectively (slow, deep sucks, with some pausing), and if there are ulcers or white patches in the mouth (thrush).

Part I

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. Low birth weight babies should be breastfed more frequently (10-12 times) initially.

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 fed on other foods.

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 feed by cup.

Determine weight for age. The VERY LOW WEIGHT FOR AGE identifies children whose weight is **less than 1800 gm in infants less than 7 days or weight for age is less than -3SD in infants 7-59 days old**. The LOW WEIGHT FOR AGE identifies children whose **weight for age is <-2 SD to -3SD**.

Infants who are Very Low Weight should be referred to a hospital. Infants who are Low Weight need special attention to how they are fed and on keeping them warm.

The age of a young infant is usually stated in weeks, therefore an weight for age chart for young infants upto 2 months has also been given in weeks. To determine weight for age:

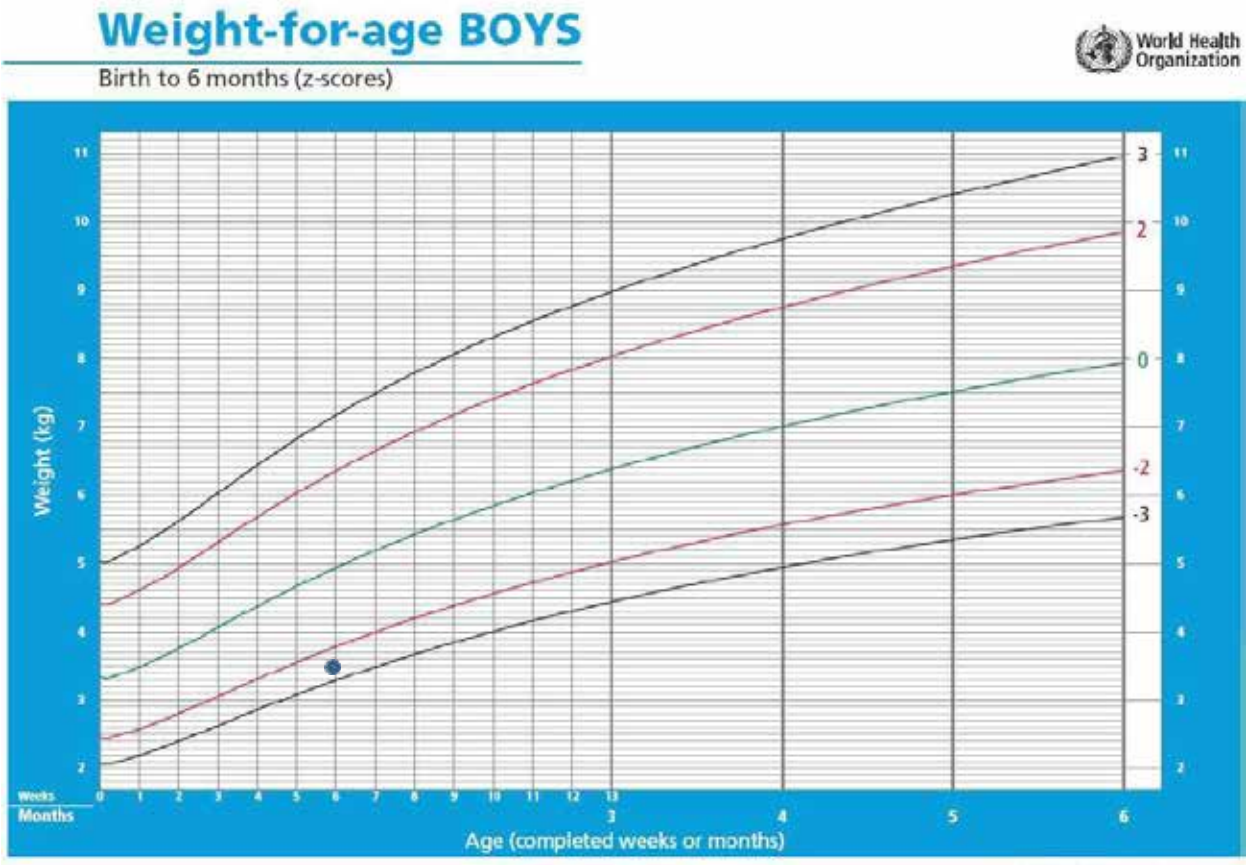
1. Calculate the infant's age in weeks.
2. Weigh the young infant if he has not already been weighed today. Use a scale which you know gives accurate weights. The infant should wear light clothing when he is weighed. Ask the mother to help and remove any sweater or shoes.
3. Use the weight for age chart to determine weight for age.
   - 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 Very Low Weight for Age line, between the Very Low and Low Weight for Age lines or above the Low Weight for Age line.

   If the point is below the -3SD Weight for Age line, the young infant is very low weight for age.

   - If the point is above or on the -3SD Weight for Age line and below the -2SD Weight for Age line, the young infant is low weight for age.
   - If the point is above or on the Low Weight for Age line i.e -2SD line, the young infant is not low weight for age.

EXAMPLE: A young male infant is 6 weeks old and weighs 3.4 kg. Here is how the doctor checked the infant's weight for age. He will be classified as low weight for age



You can also check WFA by checking it in the table below.

For 6 weeks old infant, weight of baby is between -2 SD and -3 SD rows so his weight for age will be classified as low weight for age.

Weight for age Birth to 6 months

Boy's (wt-for-age)				Age*	Girl's (wt-for-age)			
-3 SD	-2 SD	-1 SD	Median		Median	-1 SD	-2 SD	-3 SD
2.1	2.5	2.9	3.3	**0 weeks**	3.2	2.8	2.4	2.0
2.2	2.6	3.0	3.5	**1 weeks**	3.3	2.9	2.5	2.1
2.4	2.8	3.2	3.8	**2 weeks**	3.6	3.1	2.7	2.3
2.6	3.1	3.5	4.1	**3 weeks**	3.8	3.3	2.9	2.5
2.9	3.3	3.8	4.4	**4 weeks**	4.1	3.6	3.1	2.7
3.1	3.5	4.1	4.7	**5 weeks**	4.3	3.8	3.3	2.9
3.3	3.8	4.3	4.9	**6 weeks**	4.6	4.0	3.5	3.0
3.5	4.0	4.6	5.2	**7 weeks**	4.8	4.2	3.7	3.2
3.7	4.2	4.8	5.4	**8 weeks**	5.0	4.4	3.8	3.3
3.8	4.4	5.0	5.6	**9 weeks**	5.2	4.6	4.0	3.5
4.0	4.5	5.2	5.8	**10 weeks**	5.4	4.7	4.1	3.6
4.2	4.7	5.3	6.0	**11 weeks**	5.5	4.9	4.3	3.8
4.3	4.9	5.5	6.2	**12 weeks**	5.7	5.0	4.4	3.9
4.4	5.0	5.7	6.4	**13 weeks/ 3 months**	5.8	5.1	4.5	4.0
4.9	5.6	6.2	7.0	**4 months**	6.4	5.7	5.0	4.4
5.3	6.0	6.7	7.5	**5 months**	6.9	6.1	5.4	4.8
5.7	6.4	7.1	7.9	**6 months**	7.3	6.5	5.7	5.1

** Age (in completed weeks and months)*

Part 2

Is there any feeding difficulty? Any difficulty mentioned by the mother is important. This mother may need counselling or specific help if s/he has difficulty. If a mother says that the infant is not able to feed, assess breastfeeding or watch her try to feed the infant with a cup to see what she means by this. An infant who is not able to feed may have a serious infection or other life-threatening problem and should be referred urgently to hospital as described in section PSBI.

How to assess breastfeeding

First decide whether there is a need to assess the infant's breastfeeding. **Do not assess breastfeeding, if the young infant has a serious problem requiring urgent referral to a hospital.**

In this situation, classify that feeding based on the information that you already have.

If the mother's answers that there is any difficulty in feeding or is breastfeeding less than 8 times in 24 hours or is taking any other foods or drinks or is low weight for age observe breastfeed as described below. Low weight for age is often due to low birth weight. Low birth weight infants are likely to have a problem with breastfeeding so it is important to assess breastfeeding in these infants. Assessing breastfeeding requires careful observation so that problems are identified and corrected.

Has the infant breastfed in the previous hour?

If yes, 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. 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.

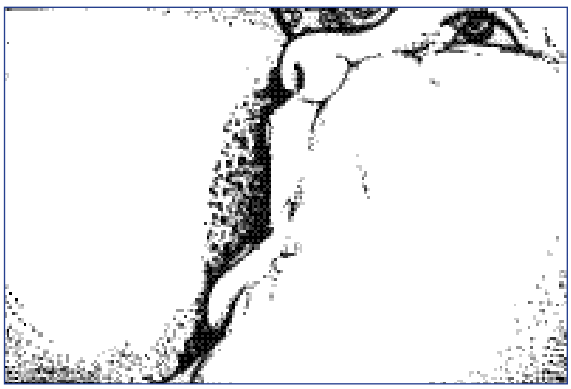
Is the infant able to attach?

The four signs of good attachment are (If all of these four signs are present, the infant has good attachment).

Breastfeeding: Signs of Good Attachment

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

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 breast milk effectively, which may cause engorgement of the breast. These infant may be unsatisfied after breastfeeds and want to feed very often and for a very long time. The infant may get too little milk and not gain weight, or the breast milk may dry up. All these problems may improve if attachment can be improved.



Good attachment

Poor attachment

Is the infant suckling effectively? (low 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 in these infants. 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 breast milk 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 and reassess. Then check whether the infant can suckle more effectively.

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 with a clean gauge or cloth. The white patches of thrush will remain at the tongue.

Does the mother have pain while breastfeeding?

Look for Sore nipples? Engorged breasts or breast abscess?

The nipples may be sore and cracked. Engorged breasts are swollen, hard and tender. Presence of a breast abscess is indicated additionally by localized redness and warmth.

Classification of Feeding Problems and Malnutrition

Based on an assessment of feeding and weight, a sick young infant may be classified into three categories:

- **VERY LOW WEIGHT.** A young infant who is very low weight is at a high risk of death. The infants who are very low weight should be referred to a hospital after receiving the same pre-referral treatment as given in PSBI.

• Weight less than 1800 gm in infants less than 7 days • Weight for age less than -3SD in infants 7-59 days old	**Very low weight**

- Infants with FEEDING PROBLEMS OR LOW WEIGHT are those infants who are not attaching well to the breast, not suckling effectively, getting breast milk fewer than eight times in 24 hours, receiving other foods or drinks than breast milk, or thrush (ulcers/white patches in mouth) or those who have low weight for age or where the mother has breast or nipple problems.

• Not well attached to breast or • Not suckling effectively or • Less than 8 breastfeeds in 24 hours or • Receiving other foods or drinks or • Thrush (ulcers or white patches in mouth) or • Low weight for age (weight for age <-2 SD) or • Breast or nipple problems	**FEEDING PROBLEM OR LOW WEIGHT**

Appropriate counselling of the mother should be based on the identified feeding problem. Ensure follow-up for any feeding problem or thrush in two days and follow-up low weight for age in 14 days.

Infants with **NO FEEDING PROBLEM** are those who are breastfed exclusively at least eight times in 24 hours and whose weight is not classified as low weight for age. The young infant's weight is not necessarily normal for age but the infant is not in the high risk category.

• Not low weight for age (≥ -2SD) and no other signs of inadequate feeding.	**NO FEEDING PROBLEM**

2.2.5 CHECKING IMMUNIZATION STATUS

Immunization helps to protect young infants from infections that can be especially dangerous at young age. Immunization status should be checked in all sick young infants. A young infant who is not sick enough to be referred to a hospital should be given the necessary immunizations before s/he is sent home.

IMMUNIZATION SCHEDULE:			
AGE	**VACCINE**		
At Birth	BCG	OPV 0	HEP-B 0
6 weeks	PENTA 1	OPV 1	Rotavirus, fIPV-1, PCV-1

Note: Do not give OPV 0 to an infant who is more than 14 days old. If an infant has not received OPV 0 by the time s/he is 15 days old, OPV should be given at age 6 weeks old as OPV 1. HEP-B 0 should be given at birth or as early as possible within 24 hours of birth.

2.2.6 ASSESSING OTHER PROBLEMS

All sick young infants need to be assessed for other potential problems mentioned by the mother or observed during the examination. If a potentially serious problem is found or there is no means in the clinic to help the infant, s/he should be referred to hospital.

2.2.7 ASSESS THE MOTHER/CAREGIVER'S DEVELOPMENT SUPPORTIVE PRACTICES & COUNSEL FOR PRACTICES TO SUPPORT CHILD'S DEVELOPMENT

The child care practices should be assessed for all the mothers/caregivers.

ASK -

- How do you play with your baby?
- How do you talk to your baby?

LOOK -

- How does caregiver show he or she is aware of child's movements?
- How does caregiver comfort the child and show love?

These practices are the feasible approaches to improve developmental outcomes in children. The mothers/caregivers should be counselled to follow the practices to support child's growth and development.

A recording form for sick young infants age upto 2 months is shown on the next page.

CASE: *Jatin is 6 weeks old male. He weighs 4.5 kg. His temperature is 37°C. The physician asked "What are the infant's problem?" The mother said "Jatin has diarhhoea and a skin rash for the last 3 days." This is the initial visit for this illness.*

The physician checks the young infant for signs of possible bacterial infection & jaundice. His mother says that Jatin is feeding well, has not had convulsions. The physician counts 55 breaths per minute. He finds no chest indrawing. Measured axillary temperature is 37°C. His movements are normal. The umbilicus is normal. There are 6 skin pustules. He does not have jaundice.

When the physician asks the mother about Jatin's diarrhoea, the mother replies that it began 3 days ago, and there is no blood in the stool. Jatin is crying. He stopped crying once when his mother put him to the breast. He began crying again when she stopped breastfeeding. His eyes look normal, not sunken. When the skin of his abdomen is pinched, it goes back slowly.

Jatin's mother says that she has no difficulty feeding him. He breastfeeds about 5 times in 24 hours. She gives him cow's milk 3 times by bottle for last 10 days. The physician uses the Weight for Age chart and determines that Jatin's weight (4.5 kg) is not low for his age (6 weeks).

Since Jatin is feeding less than 8 times in 24 hours and is taking other foods or drinks, the physician decides to assess breastfeeding. Jatin's mother agrees to breastfeed now. The physician observes that Jatin's chin is touching the breast. His mouth is wide open and his lower lip is also turned outward. More areola is visible above than below the mouth. His sucks are deep and slow. When Jatin stops breastfeeding, the physician looks in his mouth. He sees no ulcers or white patches in his mouth.

He is immunized with birth vaccine BCG, OPV 0 and Hep B-0.

EXAMPLE OF THE TOP THREE SECTIONS OF THE YOUNG INFANT CASE RECORDING FORM

MANAGEMENT OF THE SICK YOUNG INFANT AGE UPTO 2 MONTHS

Name: _____*Jatin*_____ Age: _*6 weeks*_____ Gender: __*Male*_ Weight: __*4.5*_ kg Temperature: _*37*_ °C Date: __*10/02/23*___

ASK: What are the infant's problems? _*Diarrhoea and skin rash*_ Initial visit?____*v*_____ Follow up visit?_____

ASSESS (Circle all signs present) **CLASSIFY**

CHECK FOR POSSIBLE SERIOUS BACTERIAL INFECTION

- Is the infant having difficulty in feeding?
- 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
- Measure axillary temperature (if not possible, feel for fever or low body temperature)- Is it < 35.5°C / 37.5 °C or above?
- Look at young infant's movements.
  If infant is sleeping, ask the mother to wake him/her
  ⇨ Does the infant move only when stimulated but then stops?
  ⇨ Does the infant not move at all?
- Look at the umbilicus. Is it red or draining pus?
- Look for skin pustules?

Local Bacterial Infection

CHECK FOR JAUNDICE

- If present - Ask when did jaundice appeared – First 24 hours / After 24 hours
- Look for jaundice (yellow skin)
- Is the young infant's palms and soles yellow?

No Jaundice

DOES THE YOUNG INFANT HAS DIARRHOEA? Yes __✓__ No ___.

- Look at the young infant's general condition.
  ⇨ Does the infant move only when stimulated?
  ⇨ Does the infant not move at all?
  ⇨ Is the infant restless and irritable?
- Look for sunken eyes.
- Pinch the skin of the abdomen. Does it go back:
  ⇨ Very slowly (longer than 2 seconds)?
  ⇨ Slowly

Some Dehydration

THEN CHECK FOR FEEDING PROBLEM & VERY LOW WEIGHT

- Is there any difficulty in feeding? **Yes _____ No__✓**
- Is the infant breastfed?
  Yes __✓__ No _____
  If yes, how many times in 24 hours?
  ____5_____times
- Does the infant usually receive any other foods or drinks?
  Yes __✓__ No _____
  If yes, how many times in 24 hours? ___**3 times**__
  If yes, what do you use to feed the infant _**cow's milk , bottle**___
- Determine weight for age
  ⇨ Weight for Age (<- 3 SD)
  ⇨ Weight for Age (<- 2 SD)
  ⇨ Weight for Age (≥ -2SD)
- Look for ulcers or white patches in the mouth (thrush)

If the infant has any difficulty in feeding, is feeding <8 times in 24 hours, is taking any other food or drink, or is low weight for age (Weight for age <-2SD) , AND has no indications to refer urgently to hospital: ASSESS BREASTFEEDING

Feeding Problem

ASSESS BREASTFEEDING:

- If infant has not breastfed in the previous hour, ask the mother to put her infant to the breast.
  Observe the breastfed for 4 minutes.
- 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_____
- Is the infant able to attach?
  ⇨ no attachment at all
  ⇨ not well attached
  ⇨ good attachment
- Is the infant suckling effectively (that is, slow deep sucks, something pausing)?
  ⇨ not suckling at all
  ⇨ not suckling effectively
  ⇨ suckling effectively
- Does the mother have pain while breastfeeding? If yes, then look for:
  ⇨ Flat or inverted nipples or sore nipples
  ⇨ Engorged breast or breast abscess

CHECK THE YOUNG INFANT'S IMMUNIZATION STATUS
Circle immunization needed today

Birth	✓ BCG	✓ OPV 0	✓ HEP-B 0		
6 weeks	Penta-1	OPV-1	Rotavirus-1	fIPV-1	PCV-1

Circle immunization needed today Return for next immunization on: _*After 4 Weeks*__(Date)

2.3 TREATMENT OF SICK YOUNG INFANTS

The first step is to **IDENTIFY TREATMENT** required for the young infant according to the classification. All the treatments required are listed in the "Identify Treatment" column of the *ASSESS & CLASSIFY THE SICK YOUNG INFANT* chart. If a sick young infant has more than one classification, treatment required for all the classifications must be identified.

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. Referral may mean admission to the inpatient department of the same facility where the young infant has been examined as an outpatient.

2.3.1 REFERRAL OF YOUNG INFANTS AGE UPTO 2 MONTHS

All infants and children with a severe classification (pink) are referred to a hospital as soon as assessment is completed and necessary pre-referral treatment is administered.

Note: If an infant only has severe dehydration and no other severe classification, and IV infusion is available in the outpatient clinic, an attempt should be made to rehydrate the sick infant.

Successful referral of severely ill infants to the hospital depends on effective counselling of the caretaker. If s/he does not accept referral, available options (to treat the infant by repeated clinic or home visits) should be considered. If the caretaker accepts referral, s/he should be given a short, clear referral note, and should get information on what to do during referral transport, particularly if the hospital is distant.

The first step is to give **urgent pre-referral treatment(s)**. Possible pre-referral treatments include:

- First dose of intramuscular or oral antibiotics
- Keeping the infant warm on the way to the hospital
- Prevention of hypoglycemia with breastmilk or sugar water
- Frequent sips of ORS solution on the way to the hospital

The Referral Note Should Include:

- Name and age of the infant;
- Date and time of referral; Description of the child's problems;
- Reason for referral (symptoms and signs leading to severe classification); Treatment that has been given;
- Any other information that the referral health facility needs to know in order to care for the infant, such as earlier treatment of the illness or any immunizations needed.

Non-urgent treatments, e.g., applying gentian violet paint on skin pustules, should be deferred to avoid delaying referral or confusing the caretaker.

If an infant does not need ***urgent*** referral, check to see if the infant needs non-urgent referral for further assessment. These referrals are not as urgent. Other necessary treatments may be done before referral.

URGENT PRE-REFERRAL TREATMENTS FOR SICK YOUNG INFANTS UPTO 2 MONTHS OF AGE	
CLASSIFICATION	**TREATMENT**
For all young infants before referral	Prevent low blood sugar by giving breastmilk. If the child is not able to breastfeed but is able to swallow, give 20-50 ml (10 ml/kg) of 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) of sugar 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. Warm the young infant by skin to skin contact if temperature is less than 36.5°C (or feels cold to touch) while arranging referral. Advise mother how to keep the young infant warm on the way to the hospital.
CONVULSIONS	If the infant is convulsing, give diazepam (10 mg/2 ml solution) in dose 0.25 mg/kg (0.05 ml/kg) IV or 0.5 mg/ kg (0.1 ml/ kg) rectally; if convulsions continue after 10 minutes, give a second dose of of diazepam. Use Phenobarbital (200 mg/ml solution) in a dose of 20 mg/kg IM to control convulsions in infants less than 2 weeks of age.
POSSIBLE SERIOUS BACTERIAL INFECTION AND/OR SEVERE DEHYDRATION OR SOME DEHYDRATION WITH LOW WEIGHT	Give first dose of intramuscular antibiotics. The recommended choices are gentamicin (7.5 mg/kg) and ampicillin (50 mg per kg) / oral amoxicillin (25-30 mg /kg twice) . Provide oxygen to all infants with fast breathing/ chest indrawing.
SEVERE DEHYDRATION	Treat according to Plan C (see page 23 in the chart booklet).

The treatment instructions for a young infant who need referral are given below:

- Explain to the mother why the drug is given.
- Determine the dose appropriate for the infant's weight (or age).
- Use a sterile needle and sterile syringe. Measure the dose accurately.
- Give the drug as an intramuscular injection.

IF REFERRAL IS NOT POSSIBLE

- Referral is the best option for a young infant classification with POSSIBLE SERIOUS BACTERIAL INFECTION, DIARRHOEA WITH SEVERE DEHYDRATION, SOME DEHYDRATION AND LOW WEIGHT / VERY LOW WEIGHT FOR AGE.
- If referral is not possible or refused, give oral amoxicillin (25-30 mg/kg) every 12 hours and intramuscular gentamicin once daily.
  - At each contact for injection of antibiotics, explain again to the caregiver that the infant is very sick and should urgently be referred for hospital care.
  - If referral is still not possible, continue giving once-daily intramuscular gentamicin and twice –daily intramuscular ampicillin until referral is feasible or for 7 days.

- Give First Dose of Intramuscular Antibiotics
  - Give first dose of both ampicillin and gentamicin intramuscularly.

Weight (kg)	**Ampicillin** Dose: 50 mg/ kg	**Gentamicin** Dose: 5 - 7.5 mg /kg /day	
	Add 1.3 ml sterile water = 250 mg/1.5 ml or 166mg/ml	Strength 80 mg/ 2 ml vial (40 mg / ml)	Strength 20 mg/ ml
<1.5 kg	0.4 ml	0.2 ml	0.4 ml
1.5 kg upto 2.0 kg	0.5 ml	0.2 ml	0.4 ml
2 kg upto 3.0 kg	0.8 ml	0.3 ml	0.6 ml
3 kg upto 4.0 kg	1.0 ml	0.4 ml	0.8 ml
4 kg upto 5.0 kg	1.3 ml	0.5 ml	1.0 ml

Prefer to use 20 mg/ ml strength (may be prepared by adding 2 ml sterile water in 80 mg/ 2 ml vial i.e. total volume 4 ml giving strength of 20 mg/ml).

2.3.2 TREATMENT IN OUTPATIENT CLINICS

2.3.2.1 ORAL DRUGS

The first dose of oral drugs wherever indicated for a young infant should always be given in the clinic. In addition, the mother or caretaker should be taught how to give an oral antibiotic at home. That is, teaching how to measure a single dose, showing how to crush a tablet and mix it with breastmilk, and teaching the treatment schedule.

2.3.2.2 TREATMENT OF LOCAL INFECTIONS

There are three types of local infections in a ***sick young infant*** that a caretaker can treat at home: an umbilicus that is red or draining pus, skin pustules, or thrush.

TREATMENT IN THE OUTPATIENT CLINIC FOR SICK YOUNG INFANTS UPTO 2 MONTHS OF AGE	
CLASSIFICATION	**TREATMENT**
PNEUMONIA	• If infant also has low weight for age or another severe classification: → Give first dose of intramuscular ampicillin and gentamicin → Refer URGENTLY to hospital • If infant does not have low weight for age or another severe classification: → Give oral amoxicillin for 7 days → Advise the mother to give home care for the young infants → Advise mother when to return immediately → Follow up after 2 days
LOCAL BACTERIAL INFECTION	• Give oral amoxicillin for 5 days. • Treat local infections by applying gentian violet or antibiotic ointments and teach the mother to do it at home • Advise mother when to return immediately • Follow up after 2 days
SOME DEHYDRATION (WITHOUT LOW WEIGHT)	Treat according to Plan B (see page 25 of chart booklet).
NO DEHYDRATION	Treat according to Plan A (see page 29 of chart booklet).
FEEDING PROBLEM OR LOW WEIGHT FOR AGE	Give appropriate feeding advise (See page 13 of the chart booklet). If thrush, teach the mother to treat thrush at home.

2.3.2.3 COUNSELLING A MOTHER OR CARETAKER

USE GOOD COMMUNICATION SKILLS

It is important to have good communication with the infant's mother or caretaker from the beginning of the visit.

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

ASK AND LISTEN TO FIND OUT WHAT THE INFANT'S PROBLEMS ARE AND WHAT THE MOTHER IS ALREADY DOING FOR HER CHILD

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

PRAISE THE MOTHER FOR WHAT SHE HAS DONE WELL

It is likely that the mother is doing something helpful for the infant, 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 infant.

ADVISE THE MOTHER HOW TO CARE FOR HER CHILD AT HOME

Limit your advise to what is relevant to the mother at this time. Use language that mother will understand. If possible, use pictures or real objects to help explain. For example, show amount of fluid in a cup or container.

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

Some advise is simple. For example, you may only need to tell the mother to return with the infant for follow-up in 2 days. Other advise 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 involves 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 prepare **ORS**
Show an example: Show how to do the task. For example, show the mother a packet of **ORS** and how to mix the right amount of water with **ORS**

Let her practice: Ask the mother to do the task while you watch. For example, have the mother mix **ORS** solution. It may 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 that 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.

CHECK THE MOTHER'S 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 advise as necessary.

After you teach a mother how to treat her child, 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. 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 your 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 child. 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.

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.

GOOD CHECKING QUESTIONS	POOR QUESTIONS
How will you prepare the ORS solution?	Will you be able to prepare the ORS solution?
How often should you breastfeed your child?	Should you breastfeed your child?
On what part of the eye do you apply the ointment?	Have you used ointment on your child before?
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?

If the mother answers incorrectly or says she does not remember, be careful not to make her feel uncomfortable. Teach her how 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:

"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.

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**

Counselling the mother or caretaker of a sick young infant includes the following essential elements:

- Teach how to give oral drugs
- Teach how to treat local infection.
- Teach how to manage breast or nipple problem
- Teach correct positioning and attachment for breastfeeding.
- Counsel on other feeding problems.
- Advise when to return.
- Counsel the mother about her own health.

Teach how to give oral drugs

Oral drugs are given for different reasons, in different doses and on different schedules. However, the way to give each drug is similar. This section will give you the basic steps for teaching mothers to give oral drugs. If a mother learns how to give a drug correctly, then the child will be treated properly. Follow the instructions below for every oral drug you give to the mother.

DETERMINE THE APPROPRIATE DRUGS AND DOSAGE FOR THE CHILD'S AGE OR WEIGHT

Use the *TREAT THE YOUNG INFANT* pages of the chart booklet to determine the appropriate drug and dosage to give the infant.

TELL THE MOTHER THE REASON FOR GIVING THE DRUG TO THE CHILD, INCLUDING

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

DEMONSTRATE HOW TO MEASURE A DOSE

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

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

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 milliliters (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 and the infant cannot swallow a tablet, 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 PACK 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. Follow the steps below:

a. Write the full name of the drug and the total amount of tablets, capsules or syrupto complete the course of treatment.
b. Write the correct dose for the patient to take (number of tablets, capsules, squirts or spoonfuls, that is, ½, 1, 1 ½…). Write when to give the dose (early morning, lunch, dinner, 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.

IF MORE THAN ONE DRUG WILL BE GIVEN, COLLECT, COUNT AND PACK EACH DRUG

Collect one drug at a time. Write the instructions on the label. Count out the amount needed. Put enough of the drug into its own, labelled, package. Finish packaging the drug before you open another drug container.

Explain to the mother that her child is getting more than one drug because he had more than one illness. Show the mother the different drugs. Explain how to give each drug. If necessary, draw a summary of the drugs and times to give each drug during the day.

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 3 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. A child 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 in this section to that dispenser.

Teach the caretaker to treat local infections at home

Local infections include thrush, an umbilicus that is red or draining pus and skin pustules

When teaching a mother or caretaker, explain what the treatment is and why it should be given and describe the treatment steps. Watch the mother as she does the first treatment in the clinic and tell her how often to do the treatment at home. If needed for treatment at home, give mother a small bottle of gentian violet. Check the mother's understanding before she leaves the clinic.

Treat Skin Pustules or Umbilical Infection

For umbilical or skin infection, use 0.5% gentian violet twice each day. Explain and demonstrate the treatment to the mother. Then watch her and guide her as needed while she gives the treatment. Ask her checking questions to be sure that she knows to give the treatment twice daily and when to return.

Teach correct positioning and attachment for breastfeeding

There are several reasons that an infant may be poorly attached or not able to suckle effectively. She/He may have had bottle feeds, especially in the first few days after delivery. His/her mother may be inexperienced. Mother may have had some difficulty and nobody was available 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 in starting 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 the 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

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 treatment box.

Box: Treat the young infant for feeding problem

- 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.

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/he really wants your breastmilk, doesn't she/he?"

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

"Breastfeeding might be more comfortable for you if 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.

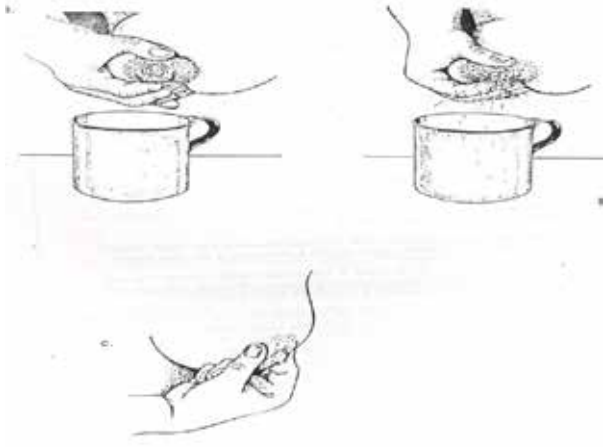
As you show the mother how to position and attach the infant, be careful not to take over from her. Explain and demonstrate what you want her to do. Then let the mother position and attach the infant herself.

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 and feed with a cup and spoon

The mother should wash hands, sit comfortably and hold a cup or 'katori' under the nipple and areola. Place her finger on the top of the breast and the first finger on the underside of the breast so that they are opposite each other (at least 4 cm from the tip of the nipple). Compress and release the breast tissue between her finger and thumb a few times. If the milk does not appear, she should re-position her thumb and finger closer to the nipple and compress and release the breast as before compress and release all the way round the breast, keeping her fingers the same distance from the nipple. She should be careful not to squeeze the nipple, to rub the skin or move her thumb or finger on the skin. Express one breast until the milk just drips, and then express the other breast until the milk just drips. Alternate 5 –6 times between breasts for at least 20-30 minutes to express both breasts completely.



Method to express breast milk

For feeding the baby small amounts of the expressed breast milk are taken into the spoon or paladai and directly poured from the angle of the mouth. One must wait for the baby to swallow the milk before more milk is poured into the mouth.

Teach the mother to feed with a cup and spoon

- Place the young infant in upright posture (feeding him in lying position can cause aspiration)
- Keep a soft cloth napkin or cotton on the neck and upper trunk to mop the spilled milk.
- Gently stimulate the young infant to wake him up
- Put a measured amount of milk in the cup
- Hold the cup so that it rests lightly on young infant's lower lip
- Tilt the cup so that the milk just reaches the infant's lips
- Allow the infant to take the milk himself and swallows it. DO NOT pour the milk into the infant's mouth.

Treat thrush with gentian violet. Teach the mother to treat thrush with half-strength gentian violet (0.25%) or clotrimazole mouth paint on white patches. Tell the mother that her infant will start feeding normally sooner if she paints the mouth ulcers in her infant's mouth. Ask her to use a clean cloth or a cotton-tipped stick to point gentian violet on the mouth ulcers and put a small amount of gentian violet on the cloth or stick. Tell the mother the frequency and duration of treatment.

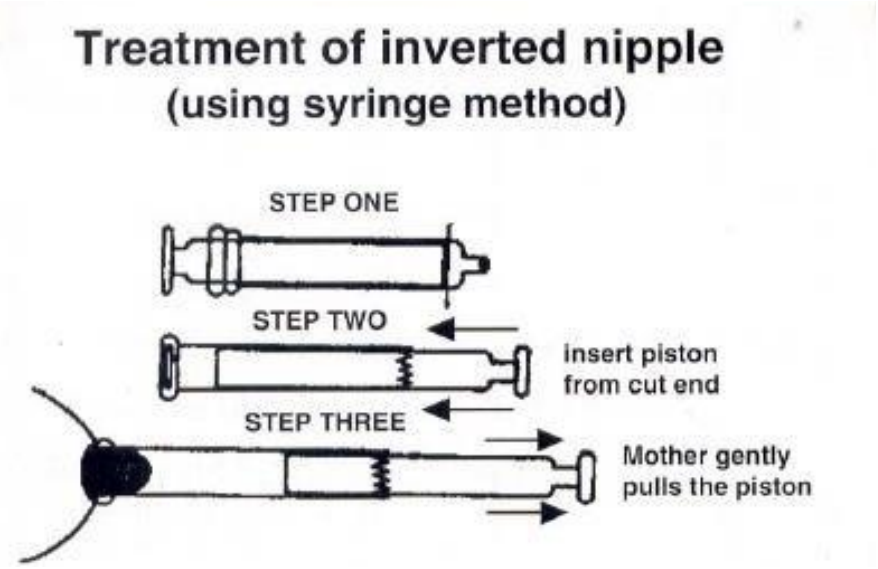
Show the mother how to paint half of the infant's mouth with half-strength gentian violet. Ask the mother to practice. Watch her paint the rest of the mouth with gentianl violet. Comment on the steps she did well and those that need to be improved.

Give the mother a bottle of half-strength gentian violet (0.25%) to take home. Before the mother leaves, ask checking questions. If she anticipates any problems providing the treatment, help her to solve them.

Teach the mother to manage breast and nipple 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.



Demonstrate to the mother how to use syringe pump

- Show the mother the syringe, and explain how you cut off the adaptor end of the barrel.
- Put the plunger into the cut end of the barrel (that is, the reverse of its usual position).
- Use a model breast, and put the smooth end of the barrel over the nipple.
  - Gently pull the plunger to maintain steady but gentle pressure.
  - Do this for 30 seconds to 1 minute, several times a day.
  - Push the plunger back to decrease the suction, if she feels pain. (this prevents damaging the skin of the nipple and areola.)
  - Push the plunger back, to reduce suction, when she wants to remove the syringe from her breast.
  - When nipple stands out put the baby on to the breast.

Sore nipples: Sore nipples are almost always due to poor 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 in spite 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 once again able to breastfeed the infant without much discomfort (this would usually take about 1-2 days).

Engorged breasts and Breast abscess: Engorged breasts are swollen, hard and tender. 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 health facility 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.

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.
- If the mother does not breastfeed at all, consider referring her for breastfeeding counselling and possible re-lactation. If the mother is interested, 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. Also advise her to feed the young infant with a cup, and not from a feeding bottle.

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.

Teach the mother how to keep the young infant with low weight 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) as much as possible, 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 FEET OF THE BABY PERIODICALLY– BABY'S FEET SHOULD BE ALWAYS WARM TO TOUCH

Advise Mother to Give Home Care & When to Return

Home care advise includes the following:

- Immediately after birth, baby should be put on the mother's abdomen for skin to skin contact
- Initiate breastfeeding within one hour of birth.
- Breastfeed day and night as often as your baby wants, at least 8 times in 24 hours. Frequent feeding produces more milk.
- If your baby is small (low birth weight), feed him or her at least every 2-3 hours. Wake the baby for feeding after 3 hours, if she or he does not wake self.
- Breastfeed as often as your child wants.
- Look for signs of hunger, such as beginning to fuss, sucking fingers, or moving lips.
- DO NOT give other foods or fluids. Breast milk is all your baby needs.

- 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.
- To breastfeed the infant frequently, as often and as long as the infant wants, day and night, during sickness and health.
- Advise mother to wash hands with soap and water before feeding, after defecation and after cleaning the bottom of the baby.
- Advise the mother not to apply anything on the cord and keep the cord and umbilicus dry.
- Also teach the mother ***when to return immediately***. Teach the mother these signs. Use local terms that the mother can understand. Circle the signs that the mother must remember. Ask her checking questions to be sure she knows when to return immediately.

2.3.2.4 FOLLOW-UP CARE

A. 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 young infant has jaundice)
- Diarrhoea with blood in stool

A. For follow-up visit

If the infant has	Return for follow-up not later than:
• Pneumonia	2 days
• Local bacterial infection	2 days
• Jaundice	2 days
• Diarrhoea	2 days
• Any Feeding problem	2 days
• Thrush	2 days
• Low weight	14 days

Advise when to return for the next immunization according to immunization schedule

If the child ***does not have a new*** problem, use the IMNCI follow-up instructions for each specific problem:

- Assess the child according to the instructions;
- Use the information about the child's signs to select the appropriate treatment;
- Give the treatment.

IMNCI chart booklet contains detailed instructions on how to conduct follow-up visits for different diseases. Follow-up visits are recommended for young infants who are classified as:

- Pneumonia
- Local bacterial infection
- Jaundice
- Diarrhoea with some dehydration
- Feeding problem or Low weight

2.3.2.5 COUNSEL THE MOTHER ABOUT HER OWN HEALTH

After the assessment, classification and treatment of the young infant has already been performed listen for any problems that the mother herself may be having. The mother may need treatment or referral for her own health problem.

- Follow-up visit and regular postnatal visits should be coordinated. Try and schedule the visit of the young infant and mother together.
- Emphasize that postnatal visit is a good opportunity to provide advise and care to the mother and young infant.
- If the mother is sick, provide care for her, or refer her for help. Also, if the sick young infant is still breastfed, help the mother to breastfeed her young infant. If mother looks depressed or stressed, advise her to take help from health & wellness center or any other hospital providing counseling/psychiatric services.
- Advise her to eat well to keep up her health. Counsel the breastfeeding mother to have at least three meals per day of balanced diet rich in protein, vegetables and fruits
- Give iron folic acid (1 tab 60 mg elemental iron daily + 500 microgram folic acid) & Calcium tablets (500 mg elemental calcium with 250 IU Vitamin D twice daily). Advise her to continue it for a total of 180 days.
- Make sure she has access to:
  - Family planning services – advise her to avoid the next pregnancy for at least 2-3 years.
  - Counselling on STD and HIV prevention.

2.3.2.6 ASSESS THE MOTHER/ CAREGIVER FOR PRACTICES TO SUPPORT CHILD'S DEVELOPMENT

First thousand days are period of rapid brain growth. Stimulation and development supportive practices are important for achieving child full development potential.

If the mother does not breastfeed, counsel the mother to:

- Hold the child close when feeding, look at the child, and talk or sing to the child.

If caregivers do not know what the child does to play or communicate:

- Remind caregivers that children play and communicate from birth.
- Demonstrate how the child responds to activities.

If caregivers feel too burdened or stressed to play and communicate with the child:

- Listen to the caregiver's feelings, and help them identify a key person who can share their feelings and help them with their child.
- Build their confidence by demonstrating their ability to carry out a simple activity.
- Refer caregivers to a local service, if needed and available.

If caregivers feel that they do not have time to play and communicate with the child:

- Encourage them to combine play and communication activities with other care for the child.
- Ask other family members to help care for the child or help with chores.

If caregivers have no toys for the child to play with, counsel them to:

- Use any household objects that are clean and safe.
- Make simple toys.
- Play with the child. The child will learn by playing with the caregivers and other people.

If the child is not responding, or seems slow:

- Encourage the family to do extra play and communication activities with the child.
- Check to see whether the child is able to see and to hear.
- Refer the child with difficulties for special services like DEIC.
- Encourage the family to play and communicate with the child through touch and movement, as well as through language.

If the mother or father has to leave the child with someone else for a period of time:

- Identify at least one person who can care for the child regularly, and give the child love and attention.
- Get the child used to being with the new person gradually.
- Encourage the mother and father to spend time with the child when possible.

Counsel the mother /caregiver for practices to support child's development:

If the mother reports she does not play with baby: Discuss ways to help baby see, hear, feel and move, appropriate for baby's age and Ask caregiver to do play or communication activity, appropriate for age.

If the mother reports she does not talk to child or talks harshly to child: Ask caregiver to looks into baby's eye, gently hold and talk to the baby.

CHAPTER 3

OUTPATIENT MANAGEMENT OF CHILDREN AGE 2 MONTHS UPTO 5 YEARS

3.1 LEARNING OBJECTIVES

This section of the handbook 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 anemia 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.
- Assessing development supportive practices

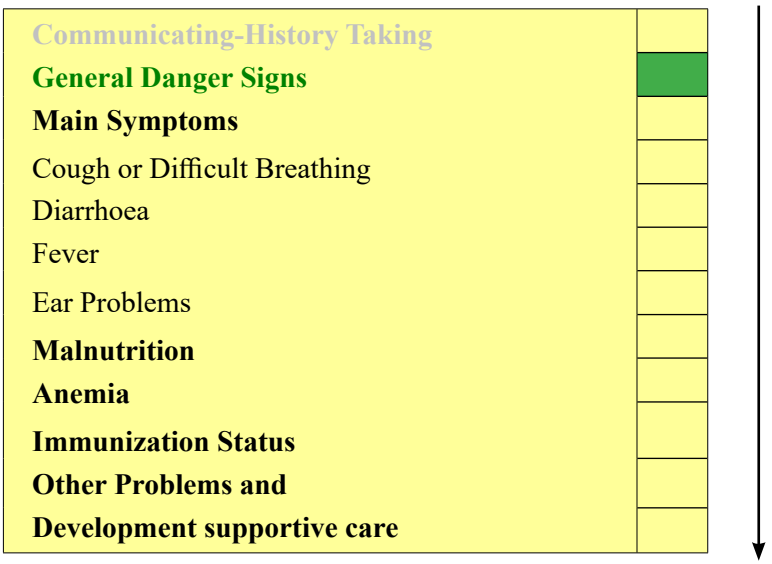
3.2 ASSESSMENT OF SICK CHILDREN

The assessment procedure for this age group includes a number of important steps that must be taken by the health care provider, including: (1) history taking and communicating with the caretaker about the child's problem; (2) checking for general danger signs; (3) checking main symptoms; (4) checking for malnutrition; (5) checking for anemia; (6) assessing the child's feeding; (7) checking immunization status; (8) assessing other problems and (9) checking development supportive care.

3.2.1 COMMUNICATING – HISTORY TAKING

The importance of good communication with the mother or caretaker of a young infant has already been discussed under 2.2.1. Good communication techniques and an integrated assessment are required to ensure that common problems or signs of disease or malnutrition are not overlooked. Proper communication helps to reassure the mother or caretaker that the infant will receive appropriate care. In addition, the success of home treatment depends on how well the mother or caretaker knows about giving the treatment and understands its importance. The steps to good communication have also been discussed under 2.2.1.

3.2.2 CHECKING FOR GENERAL DANGER SIGNS



Danger signs indicate serious illness. These can occur in many illnesses. Some danger signs may occur without any relationship to the type of illness. For example, fever, diarrhoea, pneumonia, meningitis or malaria can all produce lethargy or unconsciousness. These illnesses can also make the child so sick that the child is not able to drink any fluids. These are called **general danger signs.** The presence of even one general danger sign is enough to indicate a severe disease.

The following danger signs should be routinely checked in all children:

- Not able to feed/drink or
- Vomits everything or
- Lethargic or unconscious or
- Convulsions/Convulsing now

Is the child able to drink or feed?

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

If the mother says that the child is not able to drink or feed, 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 milk. Look to see if the child is swallowing the water or milk.

A child who is breastfed may have difficulty in suckling 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."

Does the child vomit everything?

The vomiting itself may be a sign of serious illness but it is important to note because such a child will not be able take fluids for rehydration or oral drugs. A child who vomits several times but can hold down some fluids does not have this general danger sign.

Has the child convulsions or is convulsing now?

Ask the mother questions on whether the child has suffered from convulsions (local terms like-fits/spasms) or not. A child may present in the clinic with ongoing seizures. Such a child requires urgent treatment before referral/admission with anticonvulsants and maintenance of the airway and prevention of hypoglycaemia. Similarly history of convulsion in current illness indicates serious illness and need urgent referral. Past history of convulsion (not in current illness) is not a general danger sign.

Is the child lethargic or unconscious?

An unconscious child is likely to be seriously ill. The unconscious child does not waken at all. This child does not respond to touch, loud noise or pain. A lethargic child is sleepy when the child should be awake. A child who stares blankly and does not appear to notice what is happening around is also lethargic and may also be very sick. These signs may be associated with many conditions.

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.

Remember:

- *All sick children must be assessed for general danger signs.*
- *A child who has even one general danger sign has a severe problem. Refer this child urgently to hospital.*
- *Complete the rest of the assessment and any pre-referral treatment immediately so that referral is not delayed.*

Example: Top part of a recording form with general danger signs.

CASE: *Fatima is 18 months old girl. She weighs 11.5 kg. Her temperature is 37.5^{0}C. The physician asked, "What are the child's problems?" The mother said "Fatima has been coughing for 6 days, and she is having difficulty in breathing." This is the initial visit for this illness.*

The physician checked Fatima for general danger signs. The mother said that Fatima is able to drink. She has not been vomiting. She has not had convulsions during this illness. The physician asked, "Does Fatima seem unusually sleepy?" The mother said, "Yes". The physician clapped his hands. He asked the mother to shake the child. Fatima opened her eyes, but did not look around. The physician talked to Fatima, but she did not watch his face. She stared blankly and appeared not to notice what was going on around her.

MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UPTO 5 YEARS

Name: *Fatima* Age: *18 months* Gender: *Female* Weight: *11.5* kg Temperature: *37.5*°C Date: *10.02.2023*

ASK: What are the infant's problems? *Cough, difficulty in breathing* Initial visit? ✓ Follow up visit?_____

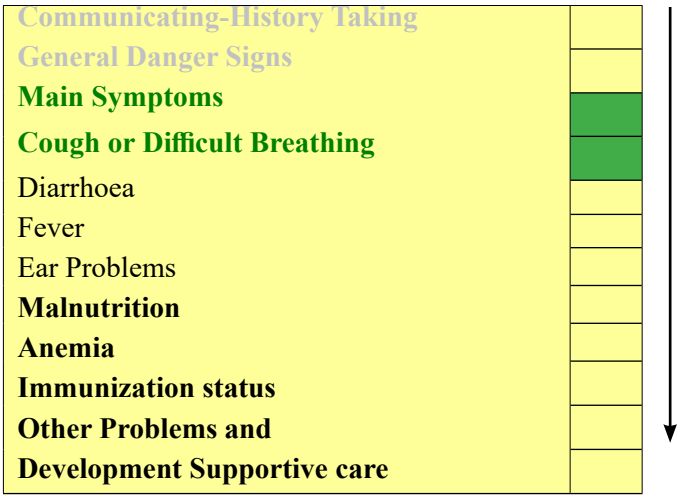
ASSESS (Circle all signs present)		CLASSIFY
CHECK FOR GENERAL DANGER SIGNS • NOT ABLE TO DRINK OR FEED • CONVULSIONS /CONVULSING NOW	• LETHARGIC OR UNCONSCIOUS • VOMITS EVERYTHING	General danger sign present? Yes ✓ No_____ **Remember to use danger sign when selecting classifications**

3.2.3 CHECKING MAIN SYMPTOMS

After checking for general danger signs, the health care provider must check for the following main symptoms: (1) cough or difficult breathing; (2) diarrhoea; (3) fever; and (4) ear problems.

The first three symptoms are included because they are common causes of mortality in children less than five years. Ear problems are included because they are considered one of the main causes of childhood disability.

3.2.3.1 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) if treatment is delayed.

Many children are brought 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. These children are not seriously ill. They do not need treatment with antibiotics. Their families can manage them at home.

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. A child presenting with cough or difficult breathing should first be assessed for general danger signs, oxygen saturation, looking for fast breathing and chest indrawing.

Children with general danger signs, oxygen saturation less than 90% have severe pneumonia or another severe respiratory infection and need urgent referral.

You also need to identify the few, sick children with cough or difficult breathing who need treatment with antibiotics. Fortunately, you can identify almost all cases of pneumonia by checking for two clinical signs: fast breathing, chest in drawing and ruling out hypoxia by checking oxygen saturation.

A child who has had cough for more than 14 days needs to be referred to hospital for further assessment.

Clinical Assessment

Five key clinical signs are used to assess a sick child with cough or difficult breathing:

- Fast Breathing,
- Chest indrawing,
- Stridor,
- Wheeze,
- Check oxygen saturation

Fast breathing

No single clinical sign has a better combination of sensitivity and specificity to detect pneumonia in children under 5 years than ***respiratory rate, specifically fast breathing***. Even auscultation by an expert is less sensitive as a single sign. Checking oxygen saturation is another sign which helps in identifying severe pneumonia requiring oxygen supplementation.

Cut-off rates for fast breathing (the point at which fast breathing is considered to be fast) depend on the child's age. Normal breathing rates are higher in children age 2 months upto 12 months than in children age 12 months upto 5 years.

Child's Age	Cut-off Rate for Fast Breathing
2 months upto 12 months	50 breaths per minute or more
12 months upto 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.

The specificity of respiratory rate for detecting pneumonia depends on the prevalence of bacterial pneumonia among the population. In areas with high levels of viral pneumonia, respiratory rate has relatively modest specificity. Nevertheless, even if the use of respiratory rate leads to some overtreatment, this will still be small compared with the current use of antibiotics for all children with an ARI, as occurs in many clinics.

Chest indrawing, defined as the inward movement of the bony structure of the chest wall with inspiration, is a useful indicator of severe pneumonia. It is more specific than isolated "intercostal indrawing." Chest indrawing should only be considered present if it is *consistently present in a calm child*. Agitation, a blocked nose or breastfeeding can all cause temporary chest indrawing. Chest in drawing is a sign of pneumonia in children.

Stridor is a harsh noise made when the child breathes IN. Stridor happens when there is a swelling of the larynx, trachea or epiglottis. These conditions are often called croup. 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 by putting your ear near the child's mouth because stridor can be difficult to hear. Sometimes you will hear a wet noise if the child's 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.

Wheezing is a high-pitched whistling or musical sound heard at the end of the breathing OUT. The child's small air passages narrow to cause wheezing. To hear a wheeze, even in mild cases, place your ear next to the child's mouth and listen to the breathing while the child is calm. You can **use a stethoscope as wheezing is better heard with a stethoscope.**

If the child has wheezing and either fast breathing or chest indrawing: you need to perform an additional assessment. Give a trial of rapid acting inhaled bronchodilator for upto three times 15- 20 minutes apart. Count the breaths and look for chest indrawing again. Then classify the illness.

Give 3 doses of nebulized Salbutamol {0.15mg/kg (minimum 1.25mg) diluted in normal saline to make total volume 3-4ml } OR 2-4 puffs (100 µgm/puff) of Salbutamol MDI with spacer at 15-20 minutes interval

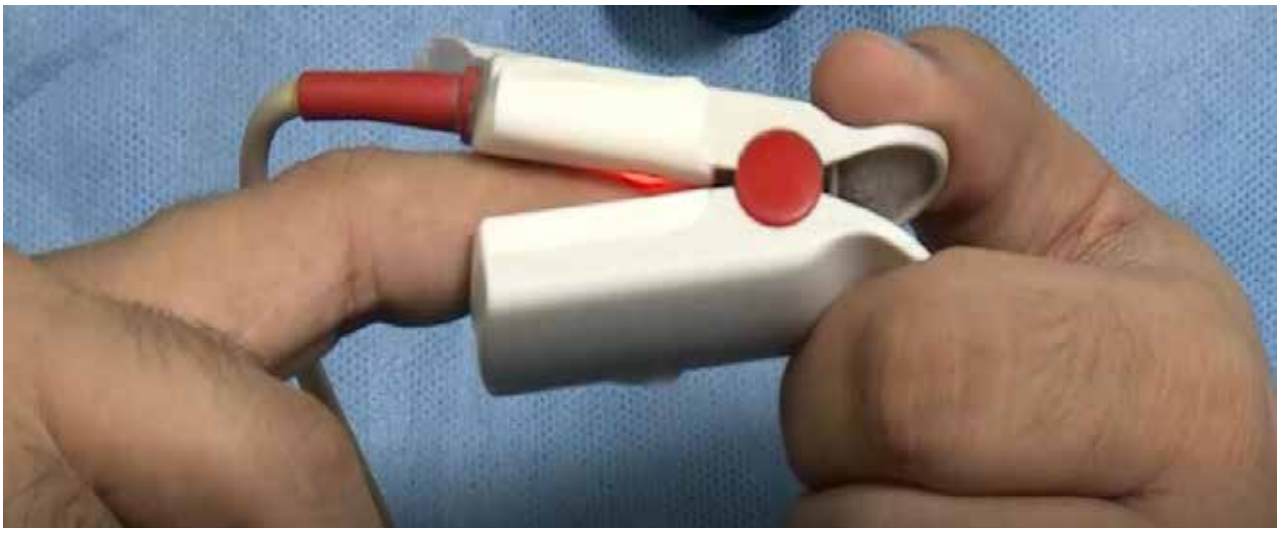
To use an inhaler with a spacer

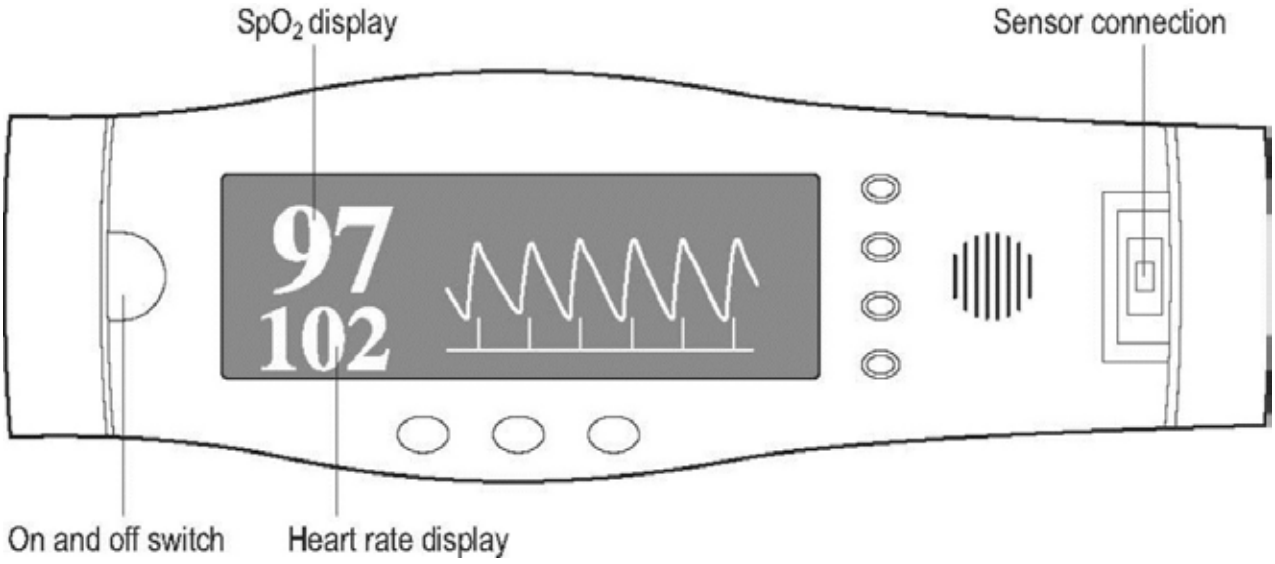
- Remove the inhaler cap. Shake the inhaler well.
- Insert mouthpiece of the inhaler through the hole in the spacer/bottle.
- The child should put the opening of the spacer/bottle into his mouth and breath in and out through the mouth.
- A carer then passes down the inhaler and sprays into the spacer/bottle while the child continues to breath normally.
- Wait for three to four breaths and repeat.
- For younger children place the mask over the child's mouth and use as a spacer in the same way.

** If a spacer is being used for the first time, it should be primed by 4-5 extra puffs from the inhaler*

Check oxygen saturation (SpO2)

Oxygen saturation of blood is checked with a device called pulse oximeter. There are several types of pulse oximeter – finger probe type is most commonly used. Use whichever is supplied to you after cleaning probe with alcohol swab. A normal child has oxygen saturation between 95-100%. If oxygen saturation is less than 90% in a child with cough or difficult breathing, this is sign of severe pneumonia and child will need oxygen supplementation. **Reading should be taken when child is not moving and there is proper wave formation on the display**.





Classification of Cough or Difficult Breathing

Based on a combination of the above clinical signs, children presenting with cough or difficult breathing can be classified into three categories:

- Those who require urgent referral for possible **SEVERE PNEUMONIA OR VERY SEVERE DISEASE**

This group includes children with any general danger sign or stridor when calm or SpO2 less than 90%. Children with **SEVERE PNEUMONIA OR VERY SEVERE DISEASE** most likely will have invasive bacterial or viral organisms and diseases that may be life-threatening. The child needs urgent referral to a hospital for treatments such as oxygen, a bronchodilator, or injectable antibiotics.

• Any general danger sign or • Stridor in calm child or • SpO2 < 90%	**SEVERE PNEUMONIA OR VERY SEVERE DISEASE**

Note: Use Pulse Oximeter in all pneumonia cases, determine oxygen saturation and refer the child if SpO2 < 90%.

A child with cough or difficult breathing who has **fast breathing**, and/or **chest indrawing** is classified as having **PNEUMONIA**. This child should not have a general danger sign, or stridor and oxygen saturation ≥90%.

• Chest indrawing or • Fast breathing	**PNEUMONIA**

- Those who simply have a **NO PNEUMONIA: COUGH OR COLD** do not require antibiotics.

• No signs of severe pneumonia/pneumonia	**NO PNEUMONIA: COUGH OR COLD**

Such children may require a safe remedy to relieve cough. A child with cough and cold normally improves in one or two weeks. However, a child with chronic cough (more than 14 days) needs to be further assessed (and, if needed, referred) to exclude tuberculosis, asthma, whooping cough or another problem.

Example: Top part of recording form with the main symptom cough or difficult breathing.

CASE: *Fatima is 18 months old girl. She weighs 11.5 kg. Her temperature is 37.5 ̊C. The physician asked, "What are the child's problems?" The mother said "Fatima has been coughing for 6 days, and she is having difficulty in breathing." This is the initial visit for this illness.*

The physician checked Fatima for general danger signs. The mother said that Fatima is able to drink. She has not been vomiting. She has not had convulsions during this illness. The physician asked, "Does Fatima seem unusually sleepy?" The mother said, "Yes." The physician clapped his hands. He asked the mother to shake the child. Fatima opened her eyes, but did not look around. The physician talked to Fatima, but she did not watch his face. She stared blankly and appeared not to notice what was going on around her.

The physician asked the mother to lift Fatima's shirt. He then counted the number of breaths the child took in a minute. He counted 41 breaths per minute. The physician did not see any chest indrawing. He did not hear stridor. Oxygen saturation was 91%.

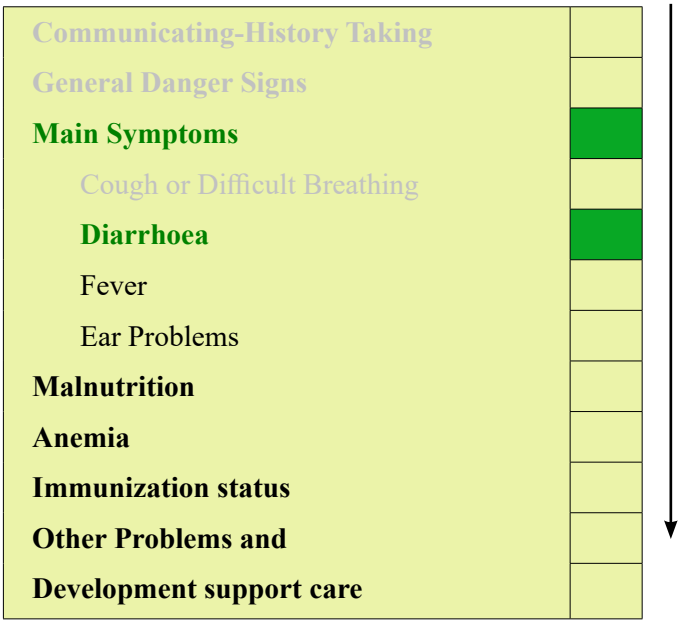
MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UPTO 5 YEARS

Name: *Fatima* Age: *18 months* Gender: *Female* Weight: *11.5* kg Temperature: *37.5*°C Date: *10.02.2023*

ASK: What are the infant's problems? *Cough, difficulty in breathing* Initial visit? ✓ Follow up visit?_____

ASSESS (Circle all signs present)	CLASSIFY
CHECK FOR GENERAL DANGER SIGNS • NOT ABLE TO DRINK OR FEED • CONVULSIONS /CONVULSING NOW • LETHARGIC OR UNCONSCIOUS • VOMITS EVERYTHING	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? 6 Days • Count the breath in one minute 41 breaths. Fast breathing? • Look for chest indrawing • Look and listen for stridor • Look and listen for wheeze • Check oxygen saturation- <90% ≥90%	*Severe Pneumonia or Very Severe Disease*

3.2.3.2 DIARRHOEA



Diarrhoea is the next symptom that should be routinely checked in ***every child*** brought to the clinic. Diarrhoea is defined as three or more loose or watery stools in a 24-hour period with recent change in consistency. Diarrhoea occurs when stools contain more water than normal. It is common in children, especially those between 6 months and 2 years of age. It is more common in babies under 6 months who are drinking cow's milk or infant formulas.

Mothers usually know when their children have diarrhoea. They may say that the child'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.

A child presenting with diarrhoea should first be assessed for general danger signs and then child's

caretaker should be asked if the child has cough or difficult breathing. A child with diarrhoea may have three potentially lethal conditions: (1) acute watery diarrhoea (including cholera); (2) dysentery (bloody diarrhoea); and (3) persistent diarrhoea (diarrhoea that lasts 14 days or more).

Clinical Assessment

All children with diarrhoea should be checked to determine the duration of diarrhoea, if blood is present in the stool and if dehydration is present. A number of clinical signs are used to determine the level of dehydration:

Child's general condition. Assess if the child is lethargic or unconscious or is restless /irritable.

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

Child's reaction when offered to drink. A child is *not able to drink* if s/he is not able to take fluid in his/her mouth and swallow it. For example, a child may not be able to drink because s/he is lethargic or unconscious. A child is *drinking poorly* if the child is weak and cannot drink without help. S/he may be able to swallow only if fluid is put in his/her mouth. A child has the sign *drinking eagerly, thirsty* if it is clear that the child wants to drink. Notice if the child reaches out for the cup or spoon when you offer him/her water. When the water is taken away, see if the child is unhappy because s/he wants to drink more. If the child takes a drink only with encouragement and does not want to drink more, s/he does not have the sign "drinking eagerly, thirsty."

Elasticity of skin. Check elasticity of skin using the skin pinch test. When released, the skin pinch goes back either *very slowly* (longer than 2 seconds), or *slowly* (skin stays up even for a brief instant), or *immediately*. However, in a child with wasting (acute 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.

After the child is assessed for dehydration, the caretaker of a child with diarrhoea should be asked how long the child has had diarrhoea and if there is blood in the stool. This will allow identification of children with persistent diarrhoea and dysentery.

Classification of Dehydration

Based on a combination of the above clinical signs, children presenting with diarrhoea are classified into three categories:

SEVERE DEHYDRATION: A child is severely dehydrated if he/she has any combination of two of the following signs: is lethargic or unconscious, is not able to drink or is drinking poorly, has sunken eyes, or a skin pinch goes back very slowly. Patients have severe dehydration if they have a fluid deficit greater than 10 percent of their body weight.

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**

Children who have **SEVERE DEHYDRATION** require immediate IV infusion according to the WHO treatment guidelines described in Plan C (see chart booklet page 23).

- **SOME DEHYDRATION:** Children who have any combination of the following two signs are included in this group: restless/irritable, sunken eyes, drinks eagerly/thirsty, skin pinch goes back slowly. Children with some dehydration have a fluid deficit equaling 5 to 10 percent of their body weight.

  This classification includes both "mild" and "moderate" dehydration, which are descriptive terms used in several paediatric textbooks.

Two of the following signs: • Restless, irritable • Sunken eyes • Drinks eagerly, thirsty • Skin pinch goes back slowly	**SOME DEHYDRATION**

Children who have **SOME DEHYDRATION** require active oral treatment with ORS solution according to WHO treatment guidelines described in Plan B (see Chart booklet page 25).

Not enough signs to classify as some or severe dehydration	**NO DEHYDRATION**

Patients with diarrhoea but no signs of dehydration may have a fluid deficit but less than 5 percent of their body weight. Although these children lack distinct signs of dehydration, they should be given more fluid than usual to prevent dehydration from developing as specified in Treatment Plan A (see chart booklet page 29).

Note: Antibiotics should not be used routinely for treatment of diarrhoea. Most diarrhoeal episodes are caused by agents for which antimicrobials are not effective, e.g., viruses.

Anti-diarrhoeal drugs - including anti-motility agents (e.g., loperamide, diphenoxylate, codeine, tincture of opium), adsorbents (e.g., kaolin), live bacterial cultures (e.g., *Lactobacillus, Streptococcus faecium*), and charcoal — ***do not*** provide practical benefits for children with acute diarrhoea, and some may have dangerous side effects. These drugs should never be given to children less than 5 years old.

Classification of Persistent Diarrhoea

Persistent diarrhoea is an episode of diarrhoea, with or without blood, which begins **acutely and lasts at least 14 days.** It accounts for upto 15 percent of all episodes of diarrhoea but is associated with 30 to 50 percent of deaths due to diarrhoea. Persistent diarrhoea is usually associated with weight loss and often with serious non-intestinal infections. Many children who develop persistent diarrhoea are malnourished, greatly increasing the risk of death. Persistent diarrhoea is uncommon in infants who are exclusively breast-fed and usually seen in top-fed babies.

Persistent diarrhoea accounts for upto 15 percent of all episodes of diarrhoea but is associated with 30 to 50 percent of deaths.

All children with diarrhoea for 14 days or more should be further classified based on the presence or absence of any dehydration:

Children with **SEVERE PERSISTENT DIARRHOEA** who also have any degree of dehydration require special treatment.

• Dehydration present	**SEVERE PERSISTENT DIARRHOEA**

Referral to a hospital for severe persistent diarrhoea is required.

PERSISTENT DIARRHOEA: Children with and no signs of dehydration can be safely managed in the outpatient clinic, at least initially.

• No dehydration	**PERSISTENT DIARRHOEA**

Proper feeding is the most important aspect of treatment for most children with persistent diarrhoea. The goals of nutritional therapy are to: (a) temporarily reduce the amount of animal milk /formula (or lactose) in the diet; (b) provide a sufficient intake of energy, protein, vitamins and minerals to facilitate the repair process in the damaged gut mucosa and improve nutritional status; (c) avoid giving foods or drinks that may aggravate the diarrhoea; and (d) ensure adequate food intake during convalescence to correct any malnutrition.

Routine treatment of persistent diarrhoea with antimicrobials is not effective. Some children, however, have non-intestinal (or intestinal) infections that require specific antimicrobial therapy. The persistent diarrhoea of such children will not improve until these infections are diagnosed and treated correctly.

Classification of Dysentery

The mother or caretaker of a child with diarrhoea should be asked if there is blood in the stool.
A child is classified as having **DYSENTERY** if the mother or caretaker reports visible blood in the child's stool.

• Blood in the stool	**DYSENTERY**

It is not necessary to examine the stool or perform laboratory tests to diagnose dysentery. Stool culture to detect pathogenic bacteria is rarely possible. Moreover, at least two days are required to obtain the results of a culture. Although "dysentery" is often described as a syndrome of bloody diarrhoea with fever, abdominal cramps, rectal pain and mucoid stools, these features do not always accompany bloody diarrhoea, nor do they necessarily define its etiology or determine appropriate treatment.

About 10 percent of all diarrhoea episodes in children under 5-year-old are dysenteric, but these cause upto 15 percent of all diarrhoeal deaths.

Bloody diarrhoea in young children is usually a sign of invasive enteric infection that carries a substantial risk of serious morbidity and death. About 10 percent of all diarrhoea episodes in children under 5 years old are dysenteric, but these cause upto 15 percent of all diarrhoeal deaths.

Dysentery is especially severe in infants and in children who are undernourished, who develop clinically evident dehydration during their illness, or who are not breast-fed. It also has a more harmful effect on nutritional status than acute watery diarrhoea. Dysentery occurs with increased frequency and severity in children who have measles or have had measles in the preceding month, and diarrhoeal episodes that begin with dysentery are more likely to become persistent than those that start without blood in the stool.

All children with dysentery (bloody diarrhoea) should be treated promptly with an antibiotic effective against *Shigella* because: (a) bloody diarrhoea in children under 5 is caused much more frequently by *Shigella* than by any other pathogen; (b) shigellosis is more likely than other causes of diarrhoea to result in complications and death if effective antimicrobial therapy is not begun promptly; and (c) early treatment of shigellosis with an effective antibiotic substantially reduces the risk of severe morbidity or death.

Example: Top part of the recording form with the main symptom diarrhoea

CASE: *Fatima is 18 months old girl. She weighs 11.5 kg. Her temperature is 37.5 ̊C. The physician asked, "What are the child's problems?" The mother said "Fatima has been coughing for 6 days, and she is having difficulty in breathing." This is the initial visit for this illness.*

The physician checked Fatima for general danger signs. The mother said that Fatima is able to drink. She has not been vomiting. She has not had convulsions during this illness.

The physician asked, "Does Fatima seem unusually sleepy?" The mother said, "Yes." The physician clapped his hands. He asked the mother to shake the child. Fatima opened her eyes, but did not look around. The physician talked to Fatima, but she did not watch his face. She stared blankly and appeared not to notice what was going on around her.

The physician asked the mother to lift Fatima's shirt. He then counted the number of breaths the child took in a minute. He counted 41 breaths per minute. The physician did not see any chest indrawing. He did not hear stridor. Oxygen saturation is 91%.

The physician asked, "Does the child have diarrhoea?" The mother said, "Yes, for 3 days." There was no blood in the stool. Fatima's eyes looked sunken. The physician asked, "Do you notice anything different about Fatima's eyes?" The mother said, "Yes." He gave mother some clean water in a cup and asked her to offer it to Fatima. When offered, Fatima could not drink the water. When the skin of Fatima's abdomen pinched, it went back slowly.

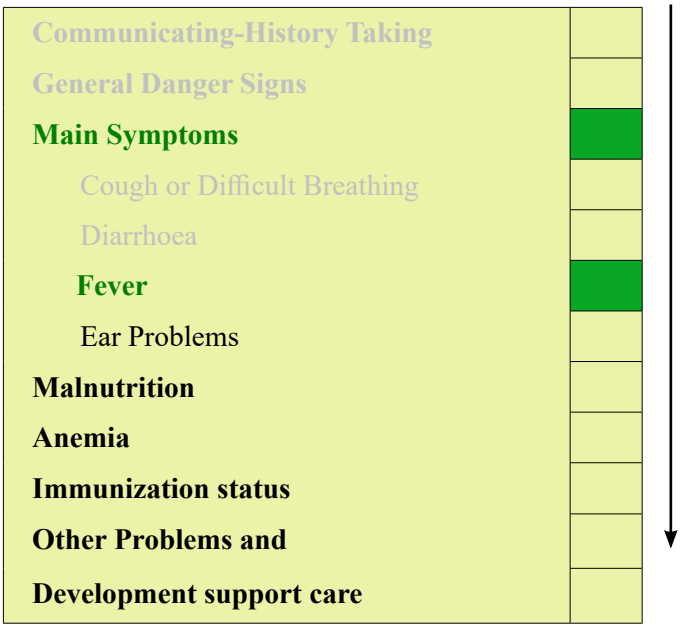
MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UPTO 5 YEARS

Name: *Fatima* Age: *18 months* Gender: *Female* Weight: *11.5* kg Temperature: *37.5*°C Date:_____

ASK: What are the infant's problems? *Cough, trouble breathing* Initial visit? ✓ Follow up visit?_____

ASSESS (Circle all signs present)	**CLASSIFY**
CHECK FOR GENERAL DANGER SIGNS • NOT ABLE TO DRINK OR FEED • CONVULSIONS /CONVULSING NOW • LETHARGIC OR UNCONSCIOUS • VOMITS EVERYTHING	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? 6 Days • Count the breath in one minute_____breaths. Fast breathing? • Look for chest indrawing • Look and listen for stridor • Look and listen for wheeze • Check oxygen saturation- <90% ≥90%	*Severe Pneumonia or Very Severe Disease*
DOES THE CHILD HAVE DIARRHOEA? Yes ✓ No____ • For how long? 3 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: ⇨ Slowly? ⇨ Very slowly (longer than 2 seconds)?	*Severe Dehydration*

3.2.3.3 FEVER



All sick children should be checked for fever. Fever is a very common condition and is often the main reason for bringing children to the health centre. It may be caused by minor infections, but may also be the most obvious sign of a life-threatening illness, particularly malaria (especially lethal malaria *P. falciparum*), or other severe infections, including meningitis, typhoid fever, or measles. When diagnostic capacity is limited, it is important first to identify those children who need urgent referral with appropriate pre-referral treatment (antimalarial or antibacterial).

Clinical Assessment

Body temperature should be checked in all sick children brought to an outpatient clinic. Children are considered to have fever if their axillary body temperature is above 37.5^{0}C. In the absence of a thermometer, children are considered to have fever if they feel hot. Fever also may be recognized based on a history of fever.

A child presenting with fever should be assessed for:

Duration of fever. Most fevers due to viral illnesses go away within a few days. A fever that has been present every day for more than seven days can mean that the child has a more severe disease such as typhoid fever. If the fever has been present for more than seven days, it is important to check whether the fever has been present every day.

Stiff neck. A stiff neck may be a sign of meningitis or another very severe febrile disease. If the child is conscious and alert, check stiffness by tickling the feet, asking the child to bend his/her neck to look down or by very gently bending the child's head forward. It should move freely.

Runny nose. When, a child with fever and a runny nose then child's fever is probably due to a common cold.

Measles. Considering the high risk of complications and death due to measles, children with fever should be assessed for signs of current or previous measles (within the last three months). Measles deaths occur from pneumonia and laryngotracheitis, diarrhoea, and a few from encephalitis. Other complications (usually non-fatal) include conjunctivitis, otitis media, and mouth ulcers. Significant disability can result from measles including blindness, severe malnutrition, chronic lung disease (bronchiectasis and recurrent infection), and neurologic dysfunction.

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 discolored (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 that 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 the community.

Detection of acute (current) measles is based on fever with a generalized rash, plus at least one of the following signs: red eyes, runny nose, or cough. The mother should be asked about the occurrence of measles within the last three months (recent measles).

If the child has measles currently or within the last three months, s/he should be assessed for possible complications. Measles damages the epithelial surfaces and the immune system, and lowers vitamin A levels. This results in increased susceptibility to infections caused by pneumococcus, gram-negative bacteria, and adenovirus. Recrudescence of herpes virus, Candida, and malaria can also occur during measles infection. It is important to check every child with recent or current measles for possible mouth or eye complications. Clouding of the cornea is a dangerous eye complication. It may be due to vitamin A deficiency that has been made worse by measles. If not treated, cornea can ulcerate and cause blindness. An infant with corneal clouding needs urgent treatment with vitamin A. Other possible complications such as pneumonia, stridor in a calm child, diarrhoea, malnutrition and ear infection are assessed in relevant sections of these guidelines.

Before classifying fever, also check for other obvious causes of fever (e.g. ear pain, burn, abscess, etc.).

Classification of Fever

All children with fever and any general danger sign or stiff neck are classified as having VERY SEVERE FEBRILE DISEASE and should be urgently referred to a hospital after pre-referral treatment with antibiotics.

• Any general danger sign or • Stiff neck	**VERY SEVERE FEBRILE DISEASE**

Note: In areas where malaria *P. falciparum* is present, such children should also receive a pre-referral dose of artesunate or quinine if Rapid Diagnostic Test (RDT) for P. falciparum is positive or RDT is not available.

- Children with fever and no general danger sign or stiff neck and positive **Rapid Diagnostic Test (RDT)** should be classified as having MALARIA.

• Positive RDT or • RDT not available / RDT negative and no other obvious causes of fever*	**MALARIA/SUSPECTED MALARIA**

** If malaria is not reported in your area make a diagnosis of fever - malaria unlikely.*

- In a child with fever (or history of fever) and no general danger sign or stiff neck and when RDT is not available should be classified as having **SUSPECTED MALARIA.** These children are given antimalarial only if they have no runny nose, no measles and no other obvious cause of fever (pneumonia, sore throat, etc). Evidence of another infection lowers the probability that the child's illness is due to malaria. Therefore, children who have evidence of another infection, should not be given an antimalarial.
- When RDT is negative and other cause/s of fever is/are present like *runny* nose, measles or clinical signs of other possible infection are classified as having FEVER - MALARIA UNLIKELY.

• Negative RDT and/or other causes of fever PRESENT**	**FEVER-MALARIA UNLIKELY**

***Other causes of fever include no pneumonia: cough or cold, pneumonia, diarrhoea, dysentery, tonsillitis, skin infections, dengue, measles.*

Note: Children with high fever, defined as an axillary temperature greater than 38.5°C, given a single dose of paracetamol.

- In dengue season, children with continuous fever of more than 2 days also should be assessed for dengue fever. High fever with presence of general danger signs or cold extremities or severe abdominal pain or bleeding from any site or Positive Tourniquet test should be classified as SEVERE DENGUE OR DENGUE WITH WARNING SIGNS.

• Any general danger sign or • Cold extremities or • Severe abdominal pain or • Bleeding from any site or • Positive Tourniquet test	**SEVERE DENGUE/DENGUE WITH WARNING SIGNS**

Tourniquet test: *The tourniquet test is performed by inflating a blood pressure cuff to a midpoint between the systolic and diastolic pressure and maintaining for five minutes. The test is considered positive when 10 or more petechiae per one square inch area over forearm are observed. In DHF, the test usually gives a definite positive test with 20 petechiae or more. The test may be negative or only mildly positive during the phase of profound shock (DSS)*

All Severe dengue/ dengue with warning signs should be referred *URGENTLY*. Mothers should be advised to give frequent sips of ORS / fluids on the way to the hospital. Give one dose of paracetamol in clinic for high fever (temp. 38.5°C or above).

- Suspect dengue fever in an area of dengue risk if a child has fever lasting more than 2 days and less than 7 days. Headache, pain behind the eyes, joint and muscle pains, abdominal pain, vomiting and/or a rash may occur but are not always present. If in a sick child with suspected dengue fever, there is no warning signs, classify DENGUE FEVER.

• No warning signs	**DENGUE FEVER**

Classification of Measles

All children with fever should also be checked for signs of current or recent measles (within the last three months) and measles complications.

SEVERE COMPLICATED MEASLES is present when a child with measles displays any general danger sign, or has severe stomatitis with deep and extensive mouth ulcers or severe eye complications, such as clouding of the cornea. These children should be urgently referred to a hospital.

• Any general danger sign or • Clouding of cornea or • Deep or extensive mouth ulcers	**SEVERE COMPLICATED MEASLES*** **

*** Other important complications of measles - pneumonia, stridor, diarrhoea, ear infection, and malnutrition -are classified in other tables.

Children with less severe measles complications, such as pus draining from the eye (a sign of conjunctivitis) or non-deep and non-extensive mouth ulcers, are classified as MEASLES WITH EYE OR MOUTH COMPLICATIONS. These children can be safely treated at the outpatient facility. This treatment includes oral vitamin A, tetracycline/ antibiotic ointment for children with pus draining from the eye, and gentian violet for children with mouth ulcers.

• Pus draining from the eye or • Mouth ulcers	**MEASLES WITH EYE OR MOUTH COMPLICATIONS**

Children classified with pneumonia, diarrhoea or ear infection AND measles should be treated for the other classification(s) AND given a vitamin A treatment regimen.

If no signs of measles complications have been found after a complete examination, a child is classified as having **MEASLES.** These children can be effectively and safely managed at home with vitamin A to prevent complications.

• Measles now or within the last three months	**MEASLES**

Example: Case recording form with the main symptom fever

CASE: *Fatima is 18 months old girl. She weighs 11.5 kg. Her temperature is 37.5 ̊C. The physician asked, "What are the child's problems?" The mother said "Fatima has been coughing for 6 days, and she is having difficulty in breathing." This is the initial visit for this illness.*

The physician checked Fatima for general danger signs. The mother said that Fatima is able to drink. She has not been vomiting. She has not had convulsions during this illness.

The physician asked, "Does Fatima seem unusually sleepy?" The mother said, "Yes." The physician clapped his hands. He asked the mother to shake the child. Fatima opened her eyes, but did not look around. The physician talked to Fatima, but she did not watch his face. She stared blankly and appeared not to notice what was going on around her.

The physician asked the mother to lift Fatima's shirt. He then counted the number of breaths the child took in a minute. He counted 41 breaths per minute. The physician did not see any chest indrawing. He did not hear stridor. Oxygen saturation is 91%.

The physician asked, "Does the child have diarrhoea?" The mother said, "Yes, for 3 days." There was no blood in the stool. Fatima's eyes looked sunken. The physician asked, "Do you notice anything different about Fatima's eyes?" The mother said, "Yes." He gave mother some clean water in a cup and asked her to offer it to Fatima. When offered, Fatima could not drink the water. When the skin of Fatima's abdomen pinched, it went back slowly.

Because Fatima's temperature is 37.5^{0}C and she feels hot, the physician assessed Fatima further for signs related to fever. The mother said Fatima's fever began 2 days ago. This is not Pf predominant area. RDT for P falciparum/ P vivax is negative. This is not a dengue season. Fatima has not had measles within the last 3 months, and there are no signs suggesting measles. She does not have stiff neck.

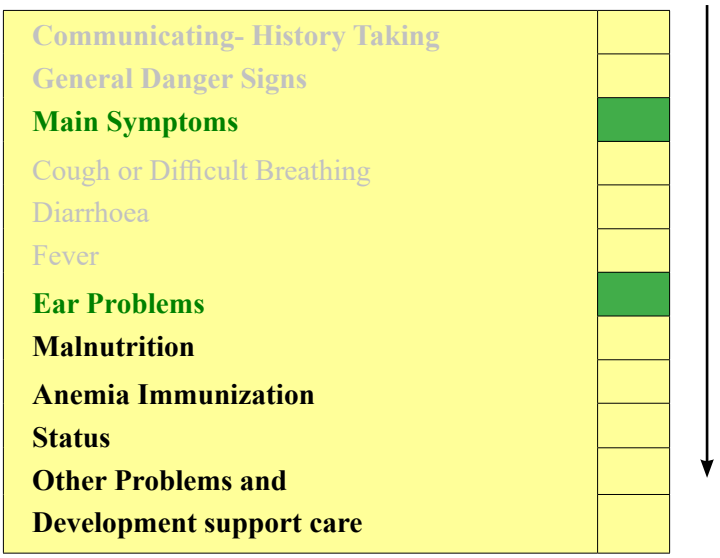
MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UPTO 5 YEARS

Name: *Fatima* Age: *18 months* Gender: *Female* Weight: *11.5* kg Temperature: *37.5*°C Date: *10.02.2023*

ASK: What are the infant's problems? *Cough, difficulty in breathing* Initial visit? ✓ Follow up visit?_____

ASSESS (Circle all signs present)		**CLASSIFY**
CHECK FOR GENERAL DANGER SIGNS • NOT ABLE TO DRINK OR FEED • CONVULSIONS /CONVULSING NOW	• LETHARGIC OR UNCONSCIOUS • VOMITS EVERYTHING	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? *6* Days	• Count the breath in one minute *41* breaths. Fast breathing? • Look for chest indrawing • Look and listen for stridor • Look and listen for wheeze • Check oxygen saturation- <90% / ≥90%	*Severe Pneumonia or Very Severe Disease*
DOES THE CHILD HAVE DIARRHOEA? Yes ✓ No____ • For how long? *3* 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: ⇨ Slowly? ⇨ Very slowly (longer than 2 seconds)?	*Severe Dehydration*
DOES THE CHILD HAVE FEVER? (by history/feels hot/temperature 37.5 °C or above) Yes ✓ No____ Is it a PF (P. falciparum) predominant area Yes/No • Fever for how long? *2* Days? • If more than 7 days, has fever been present every day? Do RDT for PF/PV if PF predominant area or no obvious cause of fever present –Positive Negative • **Is this a dengue season? (Yes/No)** If Yes-Is there is continuous fever of 2-7 days?	• Look or feel for stiff neck • Look for any bacterial focus of fever • Look for signs of MEASLES ⇨Generalized rash ⇨One of these: cough/ runny nose/ or red eyes	*Very severe febrile disease*
• If this is a dengue season and there is continuous fever of 2-7 days? ⇨ Is there any rash/ bleeding from any site? ⇨ Are extremities cold? ⇨ Is there severe abdominal pain?	Positive Tourniquet test	
• If 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 eye • Look for clouding of cornea	

3.2.3.4 EAR PROBLEMS



Ear problems are the next condition that should be checked in ***all*** children brought to the outpatient health facility. A child with an ear problem may have an ear infection. When a child has an ear infection, pus collects behind the eardrum and causes pain and often fever. If the infection is not treated, the eardrum 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 eardrum has a hole in it. Usually, the eardrum heals by itself. At other times the discharge continues, the eardrum 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.

A child presenting with an ear problem should first be assessed for general danger signs, cough or difficult breathing, diarrhoea and fever. A child with an ear problem may have an ear infection.

Although ear infections rarely cause death, they are the main cause of deafness in low-income areas, which in turn leads to learning problems.

Clinical Assessment

Look for the following simple clinical signs:

Tender swelling behind the ear. The most serious complication of an ear infection is a deep infection in the mastoid bone. It usually manifests with tender swelling behind one of the child's ears. In infants, this tender swelling also may be above the ear. When both tenderness and swelling are present, the sign is considered positive and should not be mistaken for swollen lymph nodes.

Ear pain. In the early stages of acute otitis, a child may have ear pain, which usually causes the child to become irritable and rub the ear frequently.

Ear discharge or pus. This is another important sign of an ear infection. When a mother reports an ear discharge, the health care provider should check for pus drainage from the ears and find out how long the discharge has been present.

Additionally, you may examine ears with using an otoscope, if available.

Classification of Ear Problems

Based on the simple clinical signs above, the child's condition can be classified in the following ways:

- Children presenting with tenderness and swelling behind the ear (mastoid bone) are classified as having mastoiditis and should be referred to the hospital for treatment. Before referral, these children first should receive a dose of antibiotic and a single dose of paracetamol for pain.

• Tender swelling behind the ear	**MASTOIDITIS**

- Children with ear pain or ear discharge (or pus) for less than 14 days are classified as having acute ear infection and should be treated for five days of oral amoxicillin.

• Pus is seen draining from the ear and discharge is reported for less than 14 days, or • Ear pain	**ACUTE EAR INFECTION**

If there is ear discharge (or pus) for more than 14 days, the child's classification is **CHRONIC EAR INFECTION.** Dry the ear by wicking. Give topical antibiotics for two weeks.

• Pus is seen draining from the ear and discharge is reported for 14 days or more	**CHRONIC EAR INFECTION**

If no signs of ear infection are found, children are classified as having **NO EAR INFECTION** and do not require any specific treatment.

• NO ear pain and • NO pus seen draining from the ear	**NO EAR INFECTION**

Example: Ear problem section of the case recording form

CASE: *Meera is 3 years old girl. She weighs 13 kg. Her temperature is 37.5^{0}C. Her mother came to the clinic because Meera has felt hot for 2 days. She was crying last night and complained that her ear was hurting. The physician checked and found no general danger signs. Meera does not have cough or difficult breathing. She does not have diarrhoea. She is not residing in P. falciparum predominant area. There is no stiff neck or any identified bacterial cause of fever. RDT for malaria is pf /pv is negative. Her fever was classified as FEVER MALARIA UNLIKELY.*
Next the physician asked about Meera's ear problem. The mother said she is sure Meera has ear pain. The child cried most of the night because her ear hurt. There has not been ear discharge. The physician did not see any pus draining from the child's ear. She felt behind the child's ears and found no tender swelling.

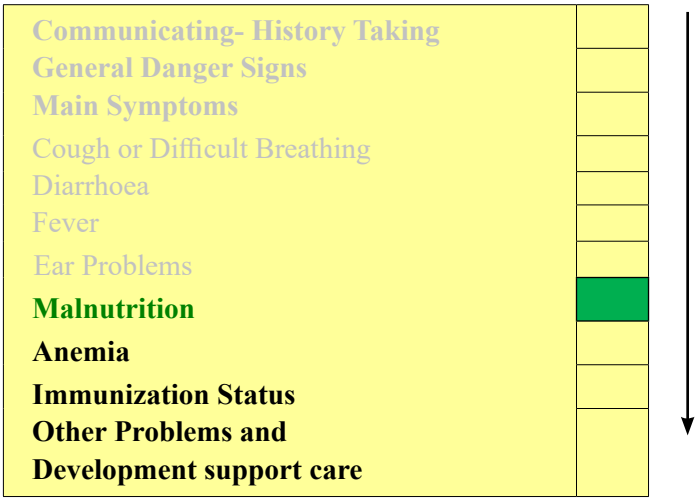
MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UPTO 5 YEARS

Name: *Meera* Age: *3 years* Gender: *Female* Weight: *13* kg Temperature: *37.5*°C Date: *10.02.2023*

ASK: What are the infant's problems? *Fever and ear pain* Initial visit? ✓ Follow up visit?_____

ASSESS (Circle all signs present)		CLASSIFY
DOES THE CHILD HAVE EAR PROBLEM • Is there ear pain? • Is there ear discharge? If yes, for how long _____Days	Yes ✓ No • Look for pus draining from the ear • Feel for tender swelling behind the ear	*Acute Ear Infection*

3.2.4 CHECKING FOR MALNUTRITION



A mother may bring her child to clinic because the child has an acute illness but child may also be malnourished. The child may not have specific complaints that point to malnutrition. A sick child can be malnourished, but you or the child's family may not notice the problem unless they are assessed for malnutrition. 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 in preventing many severe diseases and death. Some malnutrition cases can be treated at home while children with medical complications and /or poor appetite need to be managed in a hospital. Children with severe acute malnutrition and medical complications and/ or poor appetite need referral to hospital for systemic

antibiotic therapy, treatment and prevention of complications, special feeding or specific treatment of a disease contributing to malnutrition (such as tuberculosis).

Hence, after assessing for general danger signs and the four main symptoms, ***all*** children should be assessed for malnutrition. There are two main reasons for routine assessment of nutritional status in sick children: (1) to identify children with severe acute malnutrition who are at increased risk of mortality and need urgent referral to provide active treatment; and (2) to identify children with moderate acute malnutrition resulting from deficits in dietary intake or repeated episodes of infection and who may benefit from nutritional counseling and resolution of feeding problems.

Clinical Assessment

Nutritional status should be assessed by measuring weight, length /height and determine weight-for-length standard deviation (WFL SD) score and looking for bilateral pitting oedema.

Weight Measurement

- Weight is vital anthropometric measurement and should be recorded for all children during all health contacts.
- Infants and children should be weighed at least once every month during first 5 years of life.

Measurement of weight by digital weighing machine

- Remove the child's clothes to minimal clothes, but keep the child warm with a blanket or cloth while carrying to the scale.
- Turn on the scale by pressing the START button (or follow instructions for that scale).
- Adjust the scale to zero.
- Place the child gently in the center of pan.
- Wait for the child to settle and the weight to stabilize.
- Measure weight to the nearest 0.01 kg (10g) or as precisely as possible & Record immediately.
- Wrap the child immediately to re-warm and prevent hypothermia.

Weighing measurement through digital weighing scale

Measurement of length/height

Depending on a child's age and ability to stand, measure the child's length or height. A child's length is measured lying down (recumbent). Height is measured standing upright.
You have to keep the following points into consideration while deciding whether to measure child's height or length:

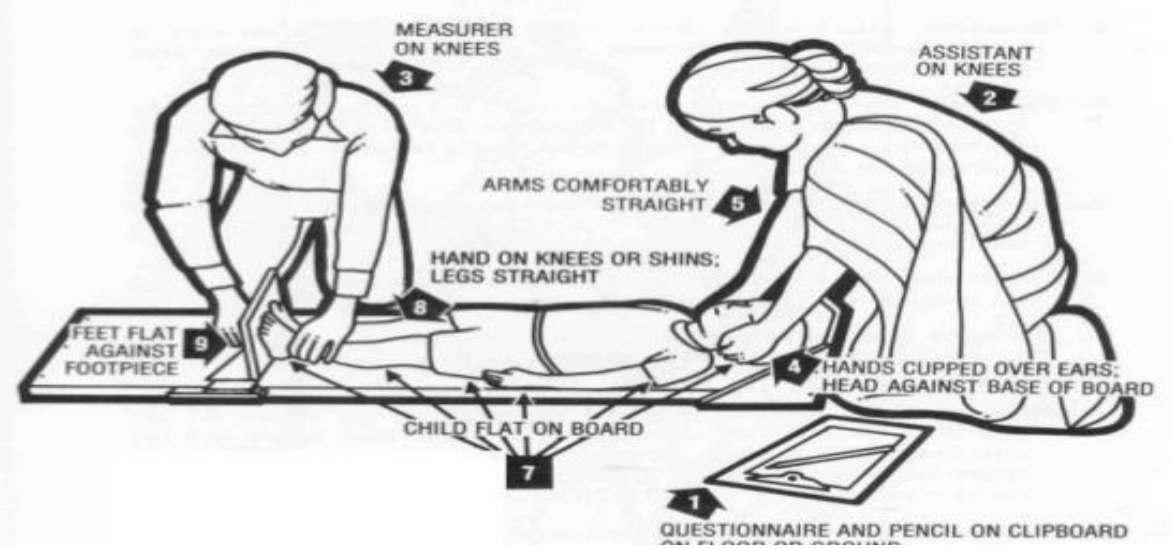
- If a child is less than 2 years old (less than 87 cm), measure recumbent length.
- If the child is aged 2 years (more than 87cm) or older and able to stand, measure standing height.

If height is measured for a child less than 2 years old in place of length, add 0.7 cm to convert it to length. If a child aged 2 years or older cannot stand, measure recumbent length and subtract 0.7 cm.

Measure the length (if child is less than 2 years of age)

Infantometer (with a fixed head piece and horizontal backboard, and an adjustable foot piece.)

- Place the Infantometer on a hard, flat, level surface, such as the floor or a solid table.
- Remove child shoes, socks, hair braids that may interfere with length measurement.

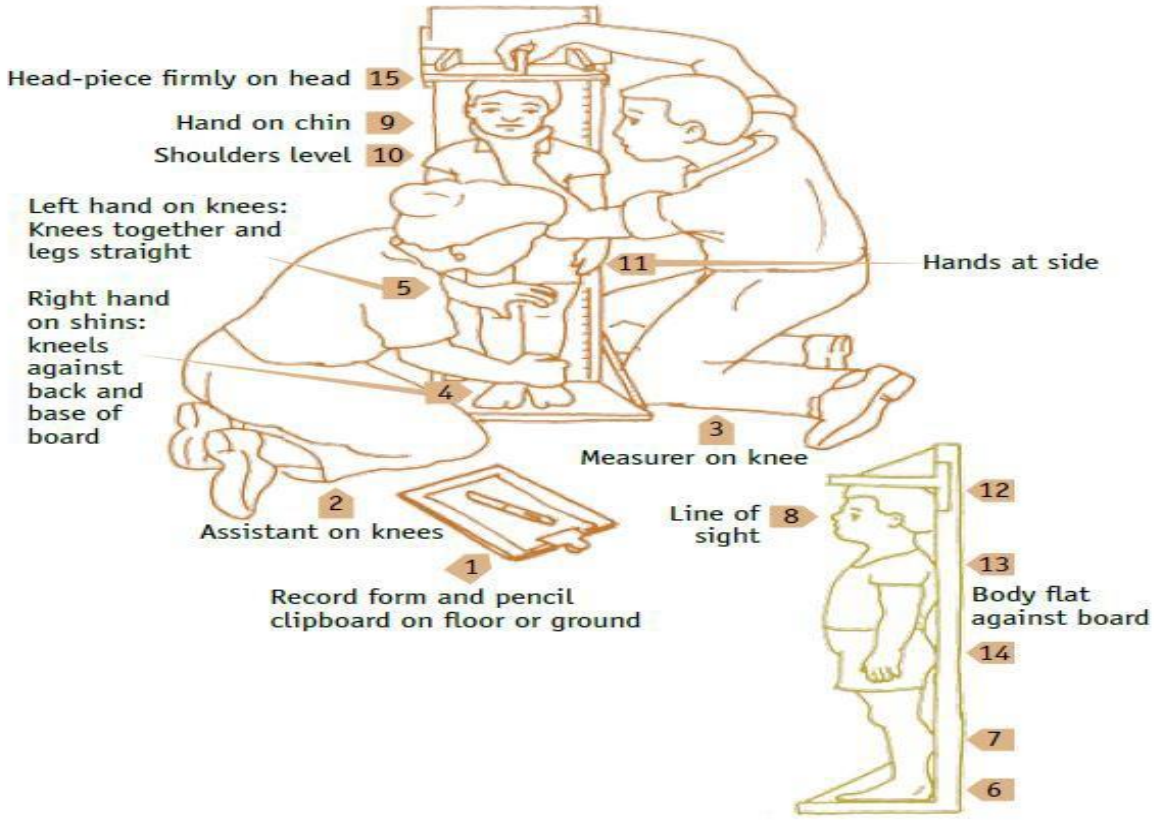


Length Measurement

- One health care worker (HCW) or mother should stand or kneel behind the headboard and position the child lying on his back on the measuring board, supporting the head and placing it against the headboard.
- Position the crown of the head against the headboard, compressing the hair.
- Hold the head with two hands and tilt upwards until the eyes look straight up, and the line of sight is perpendicular to the measuring board.
- Check that the child lies straight along the centre line of the measuring board and does not change position.
- The HCW should stand alongside the measuring board and with the help of mother/caretaker, support the child's trunk as the child is positioned on the board.
- Place one hand on the shins or knees and press gently but firmly. Straighten the knees as much as possible without hurting the child with the other hand; place the foot piece firmly against the feet.

- Soles of the feet should be flat on the foot piece, toes pointing up. If the child curls the toes and prevents the foot piece from touching the soles, scratch the soles gently and slide in the foot piece, when child straightens the toes.
- Measure length to the last completed 0.1 cm and record it immediately on MCP card or recording form.
- Child should be lifted off the board.

Measure the Height (if child is 2 years or more of age or more than 87 cm)



Height Measurement

- Place stadiometer on a hard, flat level surface against a wall. Make sure it is stable.
- Remove child shoes, socks, hair braids that may interfare with height measurement.
- Ask the mother/caretaker to bring the child on the stadiometer and to kneel in front of the child so that the child will look forward at the mother.
- Make sure the child's arms hang down at his/her sides and the shoulders are level.
- Mother or HCW should kneel or crouch near the child's feet and help the child stand with back of the head, shoulder blades, buttocks, calves and heels touching the vertical board.
- Prevent children from standing on their toes.
- If necessary, gently push the child's tummy to help him stand straight to full height.
- The HCW should bend to level of the child's face and position the head so that the child is looking straight ahead (line of sight is parallel to the base of the board).
- Place thumb and forefinger over the child's chin to help keep the head in an upright position.
- With the other hand, pull down the head board to rest firmly on top of the head and compress hair.

- Measure height to the last completed 0.1 cm and record it immediately on MCP card or recording form.
- Help child to get off the board.

After measurement of the child's weight, height/length, the next step is to compute z-score or SD score using the measured values.

Determination of WFH SD score using weight and height/length (Wasting) measurements

- First locate the child's length/height in the middle of the WFH SD table (See chart booklet, Pg-45-46).
- To identify SD score of weight for length/height of a girl, refer to the right side of the table and to identify SD score of weight for length/height of a boy, refer to the left side of the table.
- Look at the top row to identify the child's SD score. The child's weight may be between two SD scores. If so, indicate that the weight is between these scores by writing less than (<). If length/height is lying in between the values given in the **reference Table,** (see chart booklet page no. 45-46 then check for the following:
- If the measured value of length/height is 0.5 cm or more than the given value in the table, then it should round upto the next given value. E.g. If a boy with length 88.6 cm, then his length will be rounded upto 87 cm. If the measured value is 0.4 cm or less than the given value in the table, then it should round down. E.g. If a boy with length 89.2 cm, then his length will be rounded down to 89 cm.

Oedema of both feet

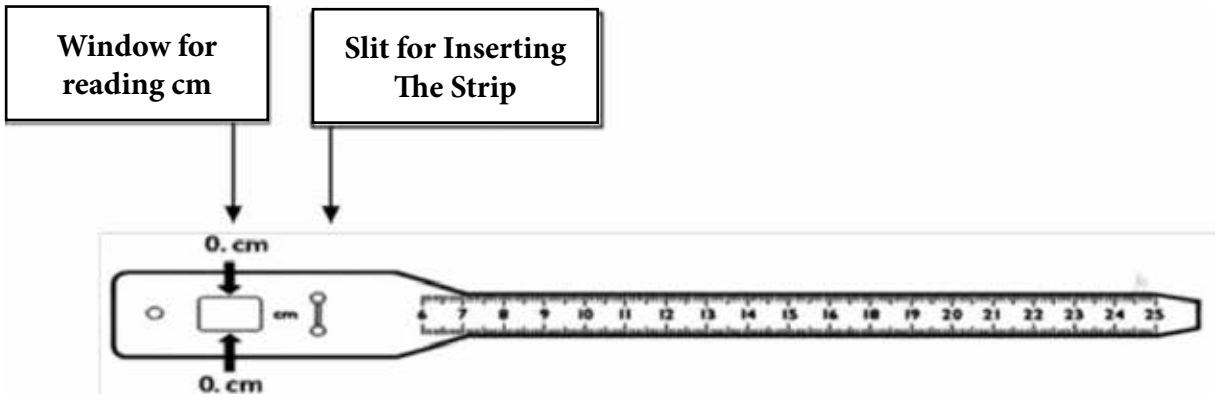
The presence of oedema (accumulation of fluid) in both feet may signal oedematous malnutrition when there is no other known cause. Children with oedema of both feet may have other diseases like nephrotic syndrome, heart diseases etc. However, referral is required in all cases to establish a diagnosis.

Oedema of both feet

Measure MUAC (For children 6–59 months)

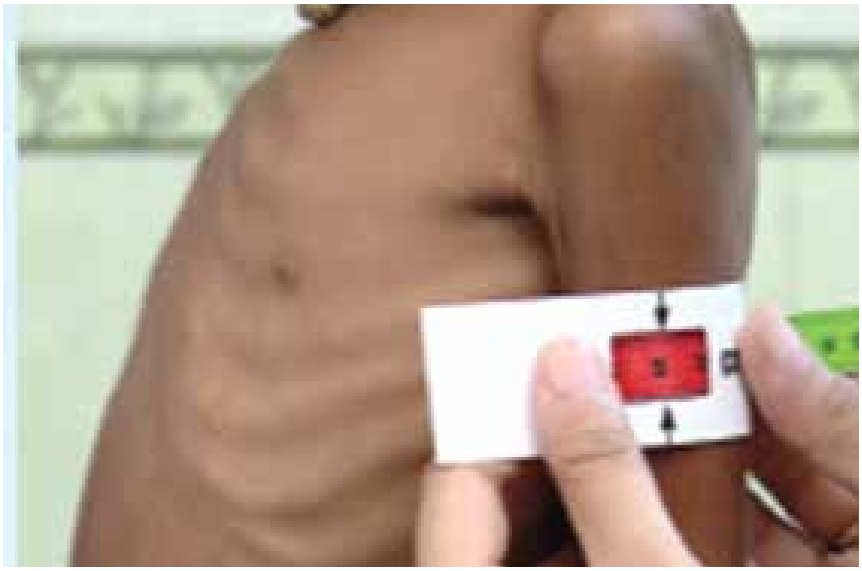
Mid Upper Arm Circumference (MUAC) is the measurement around the middle of the child's left upper arm. It is an important indicator of acute malnutrition in children aged 6-59 months.

Few MUAC strip are color coded (green, yellow, and red) and has a window and a slit as shown in the picture below.



The first is the slit where you will insert the MUAC strip. The next is the window where you will read the child's MUAC in cm. Children with a MUAC less than 11.5 cm have severe acute malnutrition. This measurement is red on the color coded MUAC tape.

The steps to measure the child's MUAC.



- Place tip of MUAC tape (corresponding to 0 mark on → ← MUAC tape) at the upper mark i.e. top of the shoulder and stretch tape upto tip behind the bent elbow (olecranon process) .
- Decide total distance from upper mark to lower mark.
- Now decide and mark the mid-point of upper arm by a sketch pen.
- Now tell the child to drop elbow to the side of the body and then take the measurement.
- After wrapping the tape, insert the end of the tape from the slit given.
- Tape tension should not be too tight or loose.
- Immediately record the reading.

CLASSIFICATION OF NUTRITIONAL STATUS

Using a combination of anthropometric measurements and the clinical sign oedema, children can be classified in one of the following categories:

Severe acute malnutrition – If child has weight-for-height/length less than -3 SD score and/or MUAC less than 11.5 cm (115mm) and/ or has oedema of both feet.

SAM children are further classified as **SEVERE ACUTE MALNUTRITION WITH MEDICAL COMPLICATION** when s/he has severe acute malnutrition with one of the following complications: any general danger sign, any severe classification, pneumonia, diarrhoea with dehydration or poor appetite*, oedema of both the feet

• WFL <-3 SD score and /or • MUAC <11.5 cm and / or • Oedema of both feet and • Medical complications	**SEVERE ACUTE MALNUTRITION WITH MEDICAL COMPLICATION**

Children classified as having SEVERE ACUTE MALNUTRITION WITH MEDICAL COMPLICATION are at high 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. Before the child leaves for hospital you should give the first dose of **ampicillin and gentamycin,** 50 ml of 10% **glucose or sucrose solution;** and keep the child warm.

In the hospital, they receive special feeding, antibiotics, micronutrient supplementation.

- The child is classified as **SEVERE ACUTE MALNUTRITION WITHOUT MEDICAL COMPLICATION** if the child has severe acute malnutrition, but does not have any medical complications.

• WFL <-3 SD score and /or • MUAC <11.5 cm and • No medical complications	**SEVERE ACUTE MALNUTRITION WITHOUT MEDICAL COMPLICATION**

- The Child is classified as **MODERATE ACUTE MALNUTRTION** if the child's weight-for-length/height is between -3 and -2 SD score and/ or MUAC between 11.5 - 12.4 cm and there is no edema.

• WFL <-2SD score and /or • MUAC 11.5 –12.4 cm and • No oedema	**MODERATE ACUTE MALNUTRITION**

- The child is classified as **NO ACUTE MALNUTRITION** if the child has a weight-for- height/ length over -2 SD score, MUAC 12.5 cm or more and no edema. If the child is less than 2 years of age or has malnutrition, asses the child's feeding. Children less than 2 years of age have a higher risk of feeding problems and malnutrition than older children. Counsel the caregiver about feeding and development supportive care for her child according to the FOOD box in the COUNSEL section.

• WFL ≥ -2SD score and • MUAC ≥12.5 cm and • No oedema	**NO ACUTE MALNUTRITION**

COUNSEL THE MOTHER

• Feeding Recommendations During Sickness and Health

Birth upto 6 Months	6 upto 9 Months	9 upto 12 Months	12 Months upto 2 Years	2 Years and Older
• Immediately after birth , put your baby in skin to skin contact with you. • 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 • If baby is small (low birth weight), feed at least every 2 to 3 hours. Wake the baby for feeding after 3 hours, if the baby does not wake by him/her self. Remember: • Continue breastfeeding if the child is sick	• Breastfeed as often as the child wants. • **Start by giving 2 to 3 tablespoons of food. Gradually increase to 1/2 cups (1 cup = 250 ml)** ➢ Mashed roti/ rice mixed in undiluted milk OR 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. ➢ *Give 2 to 3 meals each day. Offer 1 or 2 snacks each day in between 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	• Breastfeed as often as the child wants. • Give at least 1/2 cup serving^ at a time of: ➢ Mashed roti/ rice mixed in undiluted milk OR 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. ➢ ^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	• Breastfeed as often as the child wants. • Offer food from the family pot • Give at least 3/4 cup serving^ at a time of: Mashed roti/rice 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 mixed in undiluted milk OR ➢ Sevian/dalia/halwa/kheer prepared in milk or any cereal porridge cooked in milk OR ➢ Mashed boiled/fried potatoes ➢ Offer banana/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	• Give a variety of family foods to your child, including animal source and vitamin-A rich foods and vegetables • Give at least 1 cup (250ml) serving at a time • Give family foods at 3 –4 meals each day. • Also, twice daily, give nutritious food between meals, such as: banana/cheeko/mango/ papaya as snacks • If child refuses a new food, offer "tastes" several times. Be patient. Remember: • Ensure that the child finishes the serving • Teach your child wash his hands with soap and water every time before feeding

^A good daily diet should be adequate in quantity and include an energy-rich food (for example, thick cereal porridge with added oil); meat, fish, eggs, or pulses; and fruits and vegetables

* Poor Appetite:- Offer some food item (milk, khichri, THR etc) and look whether the child is accepting it or not.

If the child refuses to feed or accepting <80% of the amount s/he should accept (a normal amount for his age as mentioned above). S/he is said to have poor appetite.

Example: Malnutrition section of the case recording form

CASE: *Amit is 9 months old male. He weighs 7 kg. His temperature is 36.8 C. He is at the clinic today because his mother and father are concerned about his diarrhoea. He does not have any general danger signs. He does not have cough or difficult breathing. He has had diarrhoea for 5 days, and is classified as diarrhoea with SOME DEHYDRATION. He does not have fever. He does not have an ear problem.*

Next, the physician checked for signs of malnutrition. His measured weight is 7 kg and length 68cm. He does not have oedema of both feet. The physician uses the Weight for length chart to determine Weight for Length SD score and found it >-2SD. His measured MUAC is 13.0 cm.

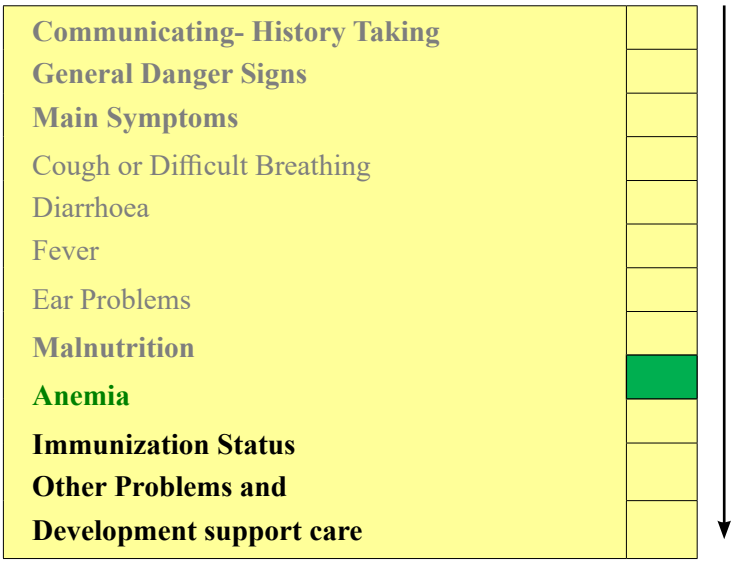
MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UPTO 5 YEARS

Name: *Amit* Age: *9 months* Gender: *Male* Weight: *7* kg Temperature: *36.8*°C Date: *10.02.2023*

ASK: What are the infant's problems? *Diarrhoea* Initial visit? ✓ Follow up visit?_____

ASSESS (Circle all signs present)		CLASSIFY
THEN CHECK FOR MALNUTRITION Weight *7* (kg) Length/Height *68* (cm) • If child is 6 months or older, measure MUAC *13* cm	• Determine WFH/L SD score: ⇨ Red (<-3SD) ⇨ Yellow (<-2 SD to -3SD) ⇨ Green (>-2SD) • Look for oedema of both feet	*No Acute Malnutrition*

3.2.5 CHECKING FOR ANEMIA



All children also should be checked for anemia. The most common cause of anemia in young children in developing countries is nutritional or because of parasitic or helminthic infections. However, there may be other more serious causes of anemia such as haemolytic anemia, aplastic anemia or leukaemia.

Clinical assessment

Palmar pallor. 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.

Although this clinical sign is less specific than many other clinical signs included in the IMNCI guidelines, it can allow health care providers to identify sick children with severe anemia. Where feasible, Hb estimation should also be done if there is palmar pallor.

CLASSIFICATION OF ANEMIA

Children can be classified in one of the following categories:

Children with **SEVERE ANEMIA** who have severe palmar pallor need urgent referral to a hospital for blood transfusion.

• Severe palmar pallor (Hb <7g/dl)	**SEVERE ANEMIA**

Children with some palmar pallor have **ANEMIA** and should be assessed for feeding problems. This assessment should identify common, important problems with feeding that can be corrected if the caretaker is provided effective counselling and acceptable feeding recommendations based on the child's age.

• Some palmar pallor (Hb 7-10.9 g/dl)	**ANEMIA**

When children are classified as having **ANEMIA** they should be treated with oral iron. During treatment, the child should be seen every two weeks (follow-up), at which time an additional 14 days of iron treatment is given. If there is no improvement in pallor after two weeks, the child should be referred to the hospital for further assessment. Iron is not given to children with severe malnutrition with medical complication till they are stabilized.

Children who have no palmar pallor are classified as having **NO ANEMIA.** Give prophylactic iron folic acid.

• No palmar pallor (Hb ≥ 11g/dl)	**NO ANEMIA**

Example: Anemia section of the case recording form

CASE: *Amit is 9 months old male. He weighs 7 kg. His temperature is 36.8^{0}C. He is at the clinic today because his mother and father are concerned about his diarrhoea. He does not have any general danger signs. He does not have cough or difficult breathing. He has had diarrhoea for 5 days, and is classified as diarrhoea with SOME DEHYDRATION. He does not have fever. He does not have an ear problem. Amit does not have signs of severe acute malnutrition or very low weight for age.*

Next, the physician checked for signs of anemia and found to have some pallor. Estimated haemoglobin was 7.5 gm / dl.

MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UPTO 5 YEARS

Name: *Amit* Age: *9 months* Gender: *Male* Weight: *7* kg Temperature: *36.8*°C Date: *10.02.2023*

ASK: What are the infant's problems? *Diarrhoea* Initial visit? ✓ Follow up visit?_____

ASSESS (Circle all signs present)		CLASSIFY
THEN CHECK FOR MALNUTRITION Weight *7* (kg) Length/Height *68* (cm) • If child is 6 months or older, measure MUAC *13* cm	• Determine WFH/L SD score: ⇨ Red (<-3SD) ⇨ Yellow (<-2 SD to -3SD) ⇨ Green (>-2SD) • Look for oedema of both feet	*No Acute Malnutrition*
THEN CHECK FOR ANEMIA	• Look for palmar pallor – severe / some / no • Check haemoglobin: *7.6* gm/dl (if possible)	*Anemia*

ASSESSING THE CHILD'S FEEDING

All children ***less than 2 years old*** and all children classified as **ANEMIA OR VERY LOW WEIGHT** need to be assessed for feeding.

All children under age 2 should have a feeding assessment, even if they have a normal Z-score.

Feeding assessment includes questioning the mother or caretaker about: (1) breastfeeding frequency and night feeds; (2) types of complementary foods or fluids, frequency of feeding and whether feeding is active; and (3) feeding patterns during the current illness. The mother or caretaker should be given appropriate advise to overcome any feeding problems found (for more details, refer to the section on counseling the mother or caretaker).

However, if the mother has already received many treatment instructions and is overwhelmed, you may delay assessing feeding and counseling the mother about feeding until a later visit. Even though you may feel hurried, it is important to take time to counsel the mother carefully and completely. When counseling a mother about feeding, you will use same communication skills described earlier.

For example, you will ask the mother questions to determine how she is feeding the child. You will listen carefully to the mother's answers so that you can make your advise 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.

To assess feeding, ask the mother the following questions. These questions are at the bottom of the sick child case recording form. These questions will help you find out about the child's usual feeding and feeding during this illness:

- Do you breastfeed your child?
  If yes: how many times during the day?
- Do you also breastfeed during the night?
- Does the child take any other food or fluids?
  If yes: 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. As you listen to the mother, you may look at the Feeding Recommendations During Sickness and Health that are appropriate for the child's age (see page 31 of the chart book). If the 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?"

Identify feeding problems

It is important to complete the assessment of feeding and identify all the feeding problems before giving advise. Based on the mother's answers to the feeding questions, identify any differences between the child's actual feeding and the feeding recommendations. These differences are problems. Some examples of feeding problems are listed below.

Examples of Feeding Problems

CHILD'S ACTUAL FEEDING	RECOMMENDED FEEDING
A 3-month-old is given sugar water as well as breast milk.	A 3-month-old should be given only breast milk and no other food or fluid.
A 2-year-old 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. Other common feeding 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 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 favorite nutritious foods, if possible, to encourage eating.

Example: Part of the case recording form for a 4-month old child with the classification No Anemia and Not Very Low Weight

MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UPTO 5 YEARS

ASSESS CHILD'S FEEDING, if child has UNCOMPLICATED SEVERE ACUTE MALNUTRITION/MODERATE ACUTE NUTRITION OR ANEMIA OR age is less than 2 year's old • Do you breastfeed your child? Yes__✓__ No_____ If Yes, how many times in 24 hours? __*5*____ 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? ***Cow's milk*** How many times per day? ___*3*__ time. What do you use to feed the child and how? ***Feeding bottle*** How large are the servings? _____***100ml***_____ 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?	*Being breastfed less than 8 times per day / Giving Cow's milk / Using feeding bottle*

3.2.6 CHECKING IMMUNIZATION, VITAMIN A AND FOLIC ACID SUPPLEMENTATION STATUS

Age	Vaccine
At Birth	BCG + OPV-0 + Hep B 0
6 weeks	OPV-1 + Penta-1 +Rota Virus-1* + fIPV –1 + PCV –1
10 weeks	OPV-2+ Penta-2+ Rota Virus –2*
14 weeks	OPV-3+ Penta-3 +fIPV-2 + RVV-3* + PCV-2
9-12 months	Measles-rubella (MR-1) + JE–1#+ PCV booster + fIPV-3
16-24 months	MR-2, JE-2#, DPT booster-1, OPV booster
60 months	DPT booster-2

*A child who needs to be immunized should be advised to go for immunization the day vaccines are available at AW/SC/PHC; #JE in States where it is included in their immunization schedule

The immunization status of ***every sick child*** brought to a health facility should be checked. Minor illness is not a contraindication to immunization. In practice, sick children may be even more in need of protection provided by immunization than well children. A vaccine's ability to protect is not diminished in sick children.

As a rule, there are only four common situations where immunization should be delayed or contraindicated:

- Children who are ***being referred*** urgently to the hospital. There is no medical contraindication, but if the child dies, the vaccine may be incorrectly blamed for the death.
- ***Live vaccines*** (BCG, measles, polio) should not be given to children with immunodeficiency diseases, or to children who are immunosuppressed due to malignant disease, therapy with immunosuppressive agents or irradiation. However, all the vaccines, including BCG can be given to children who have, or are suspected of having, HIV infection but are not yet symptomatic.
- ***DPT2/ DPT3*** should not be given to children who have had convulsions or shock within three days of a previous dose of DPT. DT can be administered instead of DPT.

Illness is not a contraindication to immunization. A vaccine's ability to protect is not diminished in sick children.

- ***DPT*** should not be given to children with recurrent convulsions or another active neurological disease of the central nervous system. DT can be administered instead of DPT.
- ***B*CG,** if not given at birth, can be given in the next visit

Example: Immunization status section of the case recording form

CASE: *Salim is 4 months old male. He has no general danger signs. He is classified as diarrhoea with NO DEHYDRATION. His immunization record shows that he has received BCG, OPV0, OPV1, OPV2, Penta 1and 2, Rotavirus 1 and 2, fIPV, PCV-1.*

MANAGEMENT OF THE SICK YOUNG INFANT AGE 2 MONTHS UPTO 5 YEARS

Name: *Salim* Age: *4 months* Gender: *Male* Weight: *7* kg Temperature: *36* °C Date: *10.02.2023*

ASK: What are the infant's problems? *Cough* Initial visit? ✓ Follow up visit?_____

ASSESS (Circle all signs present)	CLASSIFY
CHECK THE CHILD'S IMMUNIZATION, PROPHYLACTIC VITAMIN A & IRON-FOLIC ACID STATUS Circle immunizations and Vitamin A or IFA supplements needed today. ✓ BCG; ✓ PENTA 1; ✓ PENTA 2; PENTA 3; MR-1; MR-2 ✓ OPV 0; ✓ OPV 1; ✓ OPV 2; OPV 3; VITAMIN A+ IFA; OPV- Booster Hep B 0; ✓ Rota-1; ✓ Rota-2; Rota-3; JE-1; JE-2 ✓ PCV-1; PCV-2; PCV Booster; DPT Booster-1; DPT Booster-2 ✓ fIPV-1; fIPV-2; fIPV-3; Deworming	Return for next immunization or Vitamin A or IFA supplement or Deworming: *At 9 months* (Date)

After checking immunization status, determine if the child needs vitamin A supplementation and/or prophylactic iron folic acid supplementation.

PROPHYLACTIC VITAMIN A

Give a single dose of vitamin A:

100,000 IU/1ml at 9 months with measles immunization 200,000 IU /2ml at 16-18 months with DPT Booster

200,000 IU/2ml at 24 months, 30 months, 36 months, 42 months, 48 months, 54 months and 60 months

Ask; has the child (> one year) received vitamin A. If not given in 6 months, give vitamin A supplementation

PROPHYLACTIC IRON-FOLIC ACID SUPPLEMENTATION STATUS

Prophylactic supplementation of iron folic acid twice every week is recommended under the Anemia Mukt Bharat Program for all children above 6 months of age. You, will be the main vehicle for supply and promotion of IFA to all children and will be given a regular supply of IFA syrup for easy administration to children.

Look at the *ASSESS & CLASSIFY* section and locate the recommended schedule for iron and folic acid supplementation.

Method of giving IFA

- The cap/dispenser/dropper provided with the IFA syrup should be filled upto the mark of 1 ml and the content given to the child twice a week.
- Fix the days for giving the IFA dose so that mother can remember the days. E.g. Monday and Thursday of each week.
- A child should be given 1 ml of IFA one hour after food. Do **NOT** give IFA with milk since milk hinders the absorption of Iron in the body.

- Ensure that mother measures the dose correctly. The child must be held in the mother's lap. Encourage the child to open the mouth. If the child does not open the mouth, you may need to press the cheeks gently together for the mouth to open. Mother must pour the dose entirely into the child's mouth and watch the child swallow the entire dose.
- Child should not be given IFA on an empty stomach.
- Convey to the mother that child may get black stools after IFA and this is normal.
- If a child has high fever, omit the dose on that day and continue subsequent doses
- Keep the IFA bottle out of reach of children in a clean and safe place.

PROPHYLACTIC IFA/ DEWORMING/ Prophylactic Vitamin A

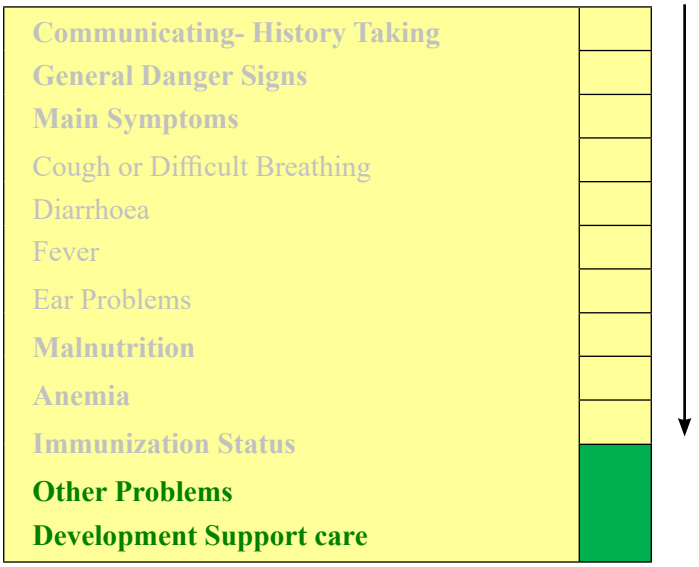
- Give IFA syrup (1ml, 2 times a week with auto dispenser) containing 20 mg of elemental iron + 100 mcg of folic acid after the child has recovered from acute illness, if the child 6 months of age or older. Supplement IFA in LBW after 6 weeks of age
- Give anthelminthic if child is one year or older and has not received deworming agents in last 6 months
- Give Vitamin A supplementation as per state guidelines

DEWORMING STATUS

If child more than 1 year and has not received de-worming (in last 6 months), give Albendazole. The tablet should be broken and crushed, then safe water/Breast Milk can be added to help administer the Albendazole table.

Drug	Doses by age		
	Below 1 year	1-2 years	2 years onwards
Albendazole (400-mg tablets)	Not to be given (safety not established)	Half tablet	One tablet

3.2.7 ASSESSING OTHER PROBLEMS



The IMNCI clinical guidelines focus on five main symptoms. In addition, the assessment steps within each main symptom take into account several other common problems. For example, conditions such as meningitis, sepsis, tuberculosis, conjunctivitis, and different causes of fever such as ear infection and sore throat are routinely assessed within the IMNCI case management process. If the guidelines are correctly applied, children with these conditions will receive presumptive treatment or urgent referral.

Nevertheless, health care providers still need to consider other causes of severe or acute illness. It is important to address the child's other complaints and to ask questions about the caretaker's health (usually, the mother's).

3.2.8 ASSESSING DEVELOPMENT SUPPORTIVE CARE

Assess for development support care:

Care that children receive has powerful effects on their survival, growth, and development. The key risk factors for development include issues like stunting, iron deficiency, iodine deficiency, frequent illness and difficulty learning new skills, understanding the world around them, solving problems and communicating with others.

Care for child's development begins with improving the skills of health workers and others who work with families.

Next, there are tools for health workers to use while counselling families on play and communication activities with their child. One such tool is feeding the child with play and communication as mentioned in the chart booklet or MCP card. This section includes recommended activities for children and caregivers for specific age groups.

Ask the following questions:

- How do you play with your baby?
- How do you talk to your baby?
- How do you get your baby to smile?

In addition, for children above 6 months

- How do you think your child's learning?

LOOK-

- How does caregiver show he or she is aware of child's movement?
- How does caregiver comfort the child and show love?

This section describes an important piece of child development, the bonding and attachment between a caregiver and child. We will begin by defining these concepts.

WHAT IS 'BONDING'?

Bonding is the process of a mother forming a relationship with her new infant. It begins during the first few hours after birth. The connection is mother-to-child.

There are two important concepts to understand about strong interactions between a caregiver and a child. These concepts are **sensitivity** and **responsiveness**.

WHAT IMPACTS BONDING?

It is important to remember that bonding occurs early in the child's life, and can have a lasting impact on his or her development. Bonding is a process that happens very quickly after birth. Therefore, some actions might affect the bonding between a mother and child. For example:

- Mother is separated from infant for a long period after birth, like many days
- Mother has poor health
  - Mother is depressed after delivery, which happens to many women. This depression often goes undetected and many mothers do not seek help.
- The mother or someone else is abusing or neglecting the child
- The infant is a low weight baby and therefore need even more attention and care
- The infant is ill

WHAT IS 'ATTACHMENT'?

Attaching is primarily a process of the infant forming a relationship with his or her mother or the primary caregiver, and reinforced by the responses. It occurs during the first two years of life, but especially between **2 and 7 months of age**. During attachment, the child develops a **personal communication system** with the primary caregiver. The connection is **child-to-caregiver**.

WHAT ARE CONSEQUENCES OF POOR ATTACHMENT?

Poor attachment between a child and caregiver can have very serious impact on development. Some of the known complications of poor attachment include:

- Child might have difficulty trusting others in their life.
- Child can experience increasing depression or rage.
- Child fails to thrive as a child that is physically and emotionally healthy, curious about the world around him/her, active, and happy.
- Child can have difficulty adapting to change. As child grows older, he or she will have more behavioral problems and worse peer relations compared to their peers.
- Older children may also have poor problem-solving abilities, and low self-esteem.

SENSITIVITY

Is the ability of the caregiver to be **aware of the infant**. This includes the infant's acts and vocalizations that communicate the infant's needs and wants. If the caregiver is sensitive, this means the caregiver:

- Is aware of the infant's signals, and interprets them accurately

- Accepts the child's interests
- Regards the child as an individual, separate person
- Sees things from the child's point of view

RESPONSIVENESS

Is the ability of the caregiver to respond appropriately to the infant's signals? The response is triggered by the child's signal. It happens quickly after the signal, and is the appropriate level of response.

A caregiver must be **sensitive** in order to be **responsive**. That means that the caregiver must be aware of the infant's signals in order to appropriately respond to them. A caregiver would for example be able to see the child's signs of discomfort, recognize that the child is hungry, and feed the child.

YOUR FACILITATOR WILL CONDUCT AN EXERCISE

Are the following actions examples of a caregiver's sensitivity or responsiveness? Tick your answer.

A mother, Deepti, takes the following actions with her son Rajat:	S	R
1. Deepti hears Rajat crying		
2. Deepti picks up Rajat to soothe his crying		
3. Deepti is giving Rajat a bath and notices a rash on his leg		
4. Deepti sees Rajat watching the tree's branches blowing in the wind		
5. Deepti asks Rajat, "Do you see the wind blowing? The leaves are blowing!"		
6. Deepti notices that Rajat is not feeding as much as usual		
7. Deepti offers Rajat a food he likes to see if he will eat		

Play and Communicate: Birth upto 6 months

From birth, babies can see and hear.
The mother's face is the favourite thing the young baby wants to look at. The baby sees her mother's face and loves to respond to her smiles and sounds.
A mother should begin to talk to her child from birth—and even before birth

Play: Infants at this age like to reach for and grab fingers and other objects. They look at their hands and feet, as if they are just discovering them. They put things into their mouths because their mouths are sensitive. The mouth helps them learn warm and cool, and soft and hard, by taste and touch.

Help the child follow an object. For example, ask the caregiver to show a colourful cup to the child, just out of reach. When she is sure the child sees the cup, ask her to move it slowly from one side to the other and up and down, in front of the child. Then, to move the cup closer. Encourage the child to reach for the cup and grab the handle.

Clean, safe, and colourful things from the household, such as a wooden spoon or plastic bowl, can be given to the child to reach for and touch. A simple, homemade toy, like a shaker rattle, can attract the child's interest by the sounds it makes. Children this age also continue to love to see people and faces. Encourage family members to hold and carry the child.

***Communicate**:* Children enjoy making new sounds, like squeals and laughs. They respond to someone's voice with more sounds, and they copy sounds they hear. They start to learn about how to make a conversation with another person before they can say words.

All family members can smile, laugh, and talk to the child. They can "coo" and copy the child's sounds. Copying the child's sounds and movements helps the persons who care for the child pay close attention to the child. They learn to understand what the child is communicating, and respond to the interests and needs of the child.

These are important caregiving skills being sensitive to the child's signs and responding appropriately to them. These caregiving skills help family members notice when the child is hungry, or sick, or unhappy, or at risk of getting hurt. They are better able to respond to the child's needs.

For the child, this practice in communicating helps the child prepare for talking later. The family will also enjoy the reactions they get from the child and the attempts at communicating.

***Play and Communicate**: For the child, from 6 months upto 9 months*

***Play**:* Children enjoy making noises by hitting or banging with a cup and other objects. They may pass things from hand to hand and to other family members, dropping them to see where they fall, what sounds they make, or if someone will pick them up.

This may be frustrating for busy mothers and fathers. Caregivers can be more patient if you help them understand that their child is learning through this play. "Your child is being a little scientist.

She is experimenting with how objects fall, how to make a noise, how the force of her arm sends the object across the table."

***Communicate**:* Even before children say words, they learn from what family members say to them, and can understand a lot. They notice when people express strong anger, and may be upset by it. Children copy the sounds and actions of older brothers and sisters and adults.

Children like other persons to respond to the sounds they are making and to show an interest in the new things they notice. A child can recognize his name before he can say it. Hearing his name helps him know that he is a special person in the family. When he hears his name, he will look to see who is saying it. He will reach out to the person who kindly calls his name.

Play and Communicate: For the child, from 9 months upto 12 months

Play*:* Play continues to be a time for the child to explore and learn about himself, the people around him, and the world. As a child discovers his toes, he may find them as interesting to touch as a toy. When a box disappears under a cloth, where does it go? Is it still there? Can he find it?

A child also enjoys playing peek-a-boo. When his father disappears behind a tree, he laughs as father reappears. He enjoys hiding under a cloth and giggles when his father "finds" him.

Communicate*:* Even though the child cannot yet speak, she shows that she understands what her family members say. She hears the name of things, and delights in knowing what they are. She begins to connect the word bird to the bird in the tree, and the word nose to her nose.

All members of the family can enjoy sharing new things with the young child. They can play simple hand games together, like "bye-bye", and clap to the beat of music.

A child may become afraid when he loses sight of a familiar caregiver. The adult helps him feel safe, responds when he cries or is hungry, and calms him by her presence and the sound of her voice. Encourage the caregiver to tell her child when she is leaving and to reassure her child that she will soon return. She can leave a safe, comfortable object with the child—one that reminds the child of the caregiver and assures the child that she will return.

Play and Communicate: 12 months upto 2 years

Play*:* If children this age are healthy and well nourished, they become more active. They move around and want to explore. They enjoy playing with simple things from the household or from nature, and do not need store-bought toys. They like to put things into cans and boxes, and then take them out. Children like to stack things up until they fall down. Families can use safe household items to play with their children.

Children need encouragement as they try to walk, play new games, and learn new skills.

Families can encourage their children to learn by watching what they do and naming it: "You are filling the boxes." Adults should play with the children and offer help: "Let's do it together. Here are more stones to put into your box."

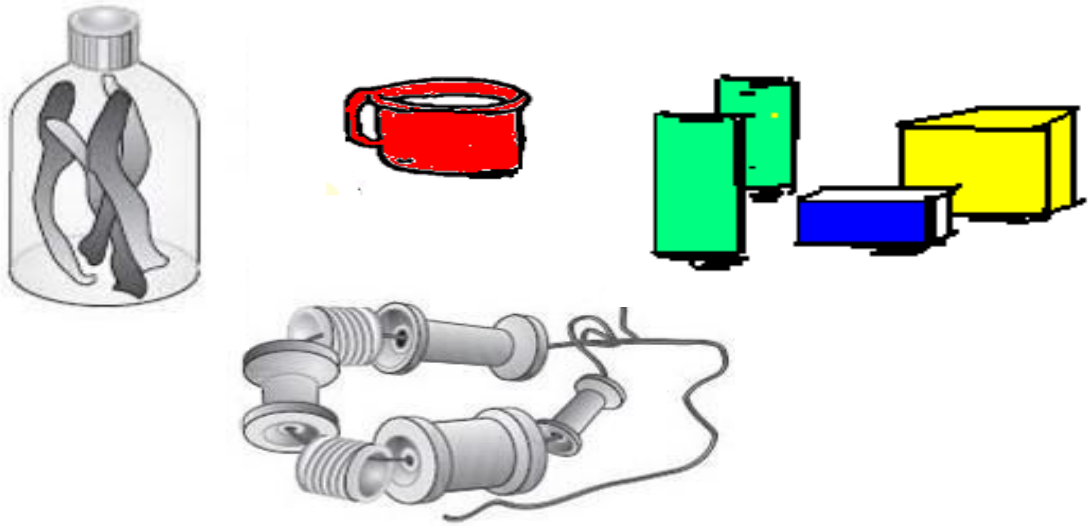
When children learn a new game or skill, they repeat it over and over again. These discoveries make them happy and more confident. They are especially happy when they see that they are making the adults around them happy, too. Encourage family members to notice and praise their young children for what they are learning to do.

Communicate*:* At this age, children learn to understand words and begin to speak. Mother and father should use every opportunity to make conversations with the child, when feeding and bathing the child, and when working near the child.

Children are beginning to understand what others are saying and can follow simple directions. They often can say some words, such as "water" or "ball." Family members should try to understand the child's words and check to see whether they understand what the child says: "Would you like some water?" "Do you want to play with the ball?"

Families can play simple word games, and ask simple questions: "Where is your toe?", or "Where is the bird?" Together they can look at pictures and talk about what they see.

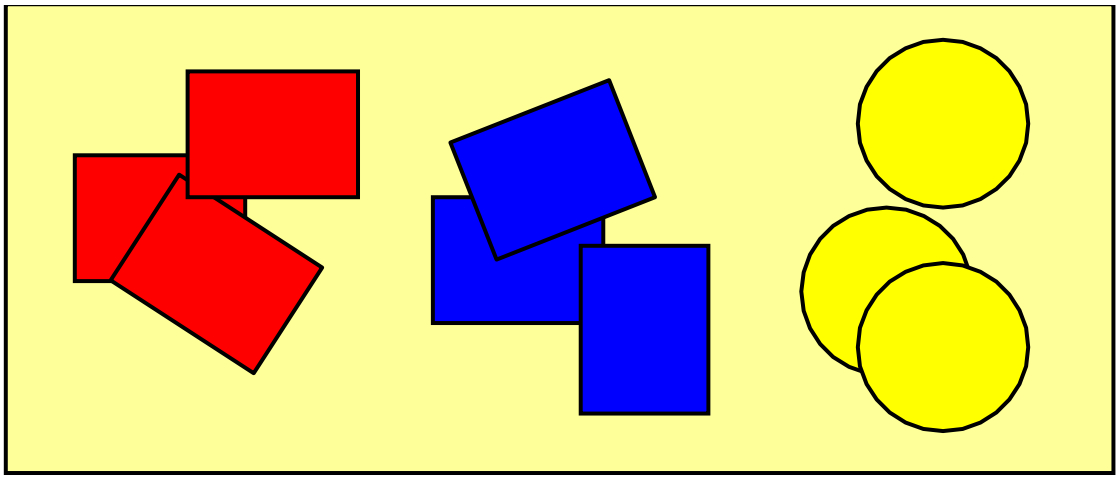
Adults should use kind words to soothe a hurt child and praise the child's efforts.



A child enjoys playing with homemade toys, and will learn by grabbing, shaking, banging, and stacking them.

Play and Communicate: 2 years and older

***Play**:* Children 2 years and older learn to name things and to count.



A child enjoys playing with home-made toys and will learn by grabbing, shaking, banging and stacking them. Children can learn to match colours, shapes, and sizes with simple objects, such as bottle caps. They can compare and sort circles and other shapes cut from coloured paper.

A caregiver can help her child to learn to count by asking "how many" and counting things together. Children make mistakes at first, but learn from repeating the games many times.

Children still enjoy playing with simple, homemade toys. They do not need store-bought toys.

They can learn to draw with chalk on a stone or with a stick in the sand. Picture puzzles can be made by cutting magazine pictures or simple drawings into large pieces.

***Communicate**:* By age 2 years, children can listen and understand. Asking simple questions and listening to the answers encourages children to talk: "What is this?" "Where is your brother?" "Which ball is bigger?" "Would you like the red cup?"

Looking at picture books and reading stories to children prepares them for reading. Stories, songs, and games also help children improve how they speak.

Answering a child's questions encourages the child to explore the world. Family members should try with patience to answer a young child's many questions.

Children who are learning to talk make many mistakes. Correcting them, however, will discourage talking. They will learn to speak correctly by copying by listening to others who speak correctly.

Children at this age can understand what is right and wrong. Traditional stories, songs, and games help in teaching children how to behave. Children also copy their older brothers and sisters and other family members as they learn what is right and wrong.

Children learn better if they see and are told what is correct first. They should be corrected gently so that they do not feel ashamed.

Group Discussion: WHAT ARE GOOD TOYS TO MAKE AT HOME?

Advise the caregiver to strengthen the skills of the persons who care for young children.

When you counsel a family you have an opportunity to strengthen the skills of the persons who care for young children.

The assessment identifies some common problems and what you can suggest to help familiesin caring for their children. You will guide the caregiver and child in practising the play and communication activities with you. For example:

To help a caregiver respond to the child.

You might find that a caregiver does not move easily with her child and does not know how to comfort her child. You do not see the close connection between what the child does and how the caregiver responds.

This connection is the basis for sensitive and responsive caregiving. Where it is missing, you can help the caregiver learn to look closely at what a young child is doing and to respond directly to it. Ask the caregiver to:

1. Look into the child's face until their eyes meet.
2. Notice the child's every movement and sound.
3. Copy the child's movements and sounds.

Soon, most young children also begin to copy the caregiver. One time is not enough. Encourage the caregiver and child to play this communication game every day. Help the caregiver see how the child enjoys it. Notice how satisfied the caregiver is with the attention the child gives her.

It is important that you do not do the activities directly with the child. Connecting with you, the counsellor, will interfere with the child making the connection with her caregiver. Instead, teach or coach the caregiver through the activity with her child.

To help a caregiver speak less harshly to a child.

Sometimes children annoy adults as they try new skills. For example, a father might think his child is misbehaving when he drops things again and again. He scolds his child and perhaps spanks him.

You can help the father see what the child might be thinking in a more positive way: "See what I can do. I can make it fall, and it makes a noise. The harder I push, the farther it goes. I am strong. When I drop it near Daddy, I am asking him to play with me, and we laugh and have fun together. He loves me very much."

To introduce a new play or communication activity.
In general, introduce a play or communication activity on the counselling card by following these steps:

Get the child's attention.

Before you start, help the caregiver get the child's attention. She can look into the child's eyes, smile, and make sounds until the child begins to respond to her. She can also move a container or other object in front of the child until the child reaches for it.

Respond to the child.

Help the caregiver follow the child's lead. She can copy the child's sounds, or respond to the child's hand or leg movements. Often the child will then repeat the activity, in order to get the caregiver to respond again. This increases the child's attempts to make sounds and move, and the caregiver's pleasure. Both are important to help the child learn.

Introduce a play or communication activity recommended on the counselling card. When the caregiver and child are responding together, it is now easier to introduce a new activity.

For example, give stones (large enough not to swallow) and a plastic jar to a caregiver who takes care of her/him 14-month-old child. Ask her to try to teach child to put the stones into the jar. Help child get started, if necessary. Point out any success, and help her find ways to show her/him that s/he is pleased.

Also, help her see how much the child seems to enjoy playing with her. Often children want to repeat this activity many times, once they have learned it.

Note again that it is important that, as the counsellor, you do not do this activity directly with the child. Instead help- or coach-the caregiver to do the activity with the child.

Then, state the recommendations on play or communication for the child.

Recommend that the caregiver continue this activity at home to help her child learn: "Give your child things to put into containers and take out, and to stack up. This will help your child learn new skills. This will help him grow and be ready for school."

If the child is almost at the end of an age group - or the child already knows how to do the activities for her age group—you may introduce the recommendations for the next, older age group.

Check understanding.

Before the caregiver and child leave, be sure you have seen them do the recommended play or communication activities. This will show you that the caregiver is able to do the activity. Encourage the caregiver to continue the activities at home.

Also, ask the caregiver questions about how he will do the activity at home. For example, "What do you have at home to use to teach your boy how to stack things?" "What would you like your child to learn to name?" "When is a good time to read to your child?"

Finally, explain to the caregiver the importance of stimulating the child's development. One of the following reasons might be important to the child's family:

- Play and communication, as well as good feeding, will help your child grow healthy and learn. These activities are especially important in the first years of life.
- Play and communication activities help the brain to grow and make your child smart and happy.
- Good care for the child's development will help your child be ready to go to school and to contribute one day to the family and community.
- Playing and communicating with your child will help in building a strong relationship with your child for life.

SELF-ASSESSMENT EXERCISE

Practice using the care for child development section.

The following children are in your Health Centre for a visit. What activities would you recommend to their caregivers for play and communication? Take quick notes on the activities below.

Age of the child	Play?	Communication?
17 days		
2 months		
7 months		
10 months		
17 months		

3.3 TREATMENT PROCEDURES FOR SICK CHILDREN

IMNCI classifications are not necessarily specific diagnosis, but they indicate what *action* needs to be taken. In the IMNCI guidelines, all classifications are colour coded: pink calls for hospital referral or admission, yellow for initiation of treatment, and green means that the child can be sent home with careful advise on when to return. After completion of the assessment and classification procedure, the next step is to identify treatment.

3.3.1 REFERRAL OF CHILDREN AGE 2 MONTHS UPTO 5 YEARS

All infants and children with a severe classification (pink) are referred to a hospital as soon as assessment is completed and necessary pre-referral treatment is administered. Conditions requiring urgent referral are listed in Figure 4.

Note: If a child only has severe dehydration and no other severe classification, and IV infusion is available in the outpatient clinic, an attempt should be made to rehydrate the sick child.

Successful referral of severely ill children to the hospital depends on effective counselling of the caretaker. If s/he does not accept referral, available options (to treat the child by repeated clinic or home visits) should be considered. If the caretaker accepts referral, s/he should be given a short, clear referral note, and should get information on what to do during referral transport, particularly if the hospital is distant.

Urgent Pre-Referral Treatments for Children Age 2 Months Upto 5 Years

- Appropriate antibiotic
- Artesunate (for severe malaria)
- Vitamin A
- Prevention of hypoglycemia with breastmilk or sugar water
- Oral antimalarial
- Paracetamol for high fever (38.5°C or above) or pain
- Antibiotic eye ointment (if clouding of the cornea or pus draining from eye)
- ORS solution so that the mother can give frequent sips on the way to the hospital
- Diazepam to stop convulsions

Note: 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.

Non-urgent treatments, e.g., wicking a draining ear or providing oral iron treatment, should be deferred to avoid delaying referral or confusing the caretaker.

If a child does not need ***urgent*** referral, check to see if the child needs ***non-urgent referral*** for further assessment; for example, for a cough that has lasted more than 30 days, or for fever that has lasted five days or more. These referrals are not as urgent, and other necessary treatments may be done before transporting for referral.

URGENT PRE-REFERRAL TREATMENTS FOR THE SICK CHILD AGE 2 MONTHS UPTO 5 YEARS	
CLASSIFICATION	**TREATMENT**
FOR ALL CHILDREN BEFORE REFERRAL	Prevent low blood sugar by giving breastmilk or sugar water. **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) of 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) of 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.
DANGER SIGN-CONVULSIONS	If the child is convulsing, give diazepam (10 mg/2 ml solution) in dose 0.25 mg per kg (0.05 ml/kg) IV or 0.5 mg/kg rectally; if convulsions continue after 10 minutes, give a second dose of diazepam Quickly complete the assessment Give any pre-referral treatment immediately for other pink classification identified Keep the child warm Refer urgently to hospital
SEVERE PNEUMONIA OR VERY SEVERE DISEASE	Give first dose of injectable ampicillin (dilute 500 mg vial with 2.1 ml of sterile water (500 mg/2.5ml). Give 50 mg/kg first dose (repeat every 6 hours if referral not possible). Give gentamicin (7.5 mg/kg/day once daily (repeat daily if referral not possible) Refer urgently to hospital Provide oxygen to all children on the way to the hospital
VERY SEVERE FEBRILE DISEASE	Give first dose of appropriate IM ceftriaxone Give first dose of artesunate or quinine if it is a PF predominant area or RDT is positve for malaria Treat the child to prevent low blood sugar Give one dose of paracetamol in clinic for high fever (38.5°C or above). Refer urgently to a hospital

SEVERE COMPLICATED MEASLES	Give Vitamin A. Give first dose of IM ampicillin and gentamicin If there is clouding of the cornea or pus draining from the eye, apply antibioitc eye ointment. Refer URGENTLY to hospital
SEVERE DEHYDRATION	• 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.*** • If there is no other severe classification, give WHO Treatment Plan C. • Give 100 ml/kg IV fluids. Ringer's lactate (R L) solution is the preferred commercially available solution (see page 23 of the chart booklet). • Normal saline does not correct acidosis or replace potassium losses, but can be used if R L is not available. Plain glucose or dextrose solutions are not acceptable for the treatment of severe dehydration. Refer to hospital • If IV infusion is not possible, urgent referral to the hospital for IV treatment is recommended. When referral takes more than 30 minutes, fluids should be given by nasogastric tube. If none of these are possible and the child can drink, ORS must be given by mouth. • *If child is 2 years or older and there is cholera in your area, give antibiotic for cholera.*
Note: In areas where cholera cannot be excluded, children more than 2 years old with severe dehydration should be given a single dose of doxycyline.	
SEVERE PERSISTENT DIARRHOEA	If there is no other severe classification, treat dehydration before referral using WHO Treatment Plan B for some dehydration and Plan C for severe dehydration. Then refer to hospital.
SEVERE DENGUE/ DENGUE WITH WARNING SIGNS	Refer the child urgently to hospital. If he is accepting the fluids orally, advise mother to give frequent sips of ORS/ fluids on the way to the hospital. Give one dose of paracetamol in clinic for high fever (temp. 38.5°C or above).
MASTOIDITIS	Give first dose of injectable ampicillin and gentamicin Give first dose of paracetamol for pain. Refer urgently to hospital
SEVERE ACUTE MALNUTRITION WITH MEDICAL COMPLICATIONS	**Give injectable ampicillin and gentamicin** **Treat the child to prevent low blood sugar** **Refer URGENTLY to hospital** While referral is being organized, warm the child. Keep the child warm on the way to hospital.

3.3.2 TREATMENT IN OUTPATIENT CLINICS

The treatment associated with each non-referral classification (***yellow and green***) is clearly spelled out in the IMNCI guidelines chart booklet. Treatment uses a minimum of affordable essential drugs.

3.3.2.1 ORAL DRUGS

Always start with a first-line drug. These are usually less expensive, more readily available and easier to administer. Give a second-line drug (which are usually more expensive and more difficult to obtain) only if a first-line drug is not available, or if the child's illness does not respond to the first-line drug. The health care provider also needs to teach the mother or caretaker how to give oral drugs at home.

- ***Oral antibiotics.*** The IMNCI chart shows *how many days* and *how many times* each day to give the antibiotic. Most antibiotics should be given for five days. The number of times to give the antibiotic each day varies (two, three or four times per day). Determine the correct dose of antibiotic based on the child's weight. If the child's weight is not available, use the child's age. Always check if the same antibiotic can be used for treatment of different classifications a child may have. For example, the same antibiotic could be used to treat both *pneumonia* and *acute ear infection.*
- ***Oral antimalarials.*** Chloroquine is the first line drug recommended by the National Anti-Malaria Program in India for P.vivax. Treatment regimens for plasmodium falciparum depend on whether the child is from high or low malaria risk area.

Paracetamol. If a child has a high fever, give one dose of paracetamol in the clinic. If the child has ear pain, handover the mother enough paracetamol for one day, that is, four doses. Tell her to administer one dose every six hours or until the ear pain is gone.

Iron. A child with *anemia* needs iron. Give syrup to the child under 12 months of age. If the child is 12 months or older, give iron tablets. Enough iron for 14 days should be handed over to the mother. Tell her to give her child one dose daily for those 14 days. Ask her to return for more iron in 14 days. Also tell her that the iron may make the child's stools black.

Note: If a child with some pallor is receiving the antimalarial sulfadoxine-pyrimethamine, do not give iron/folate tablets until a follow-up visit in two weeks. The iron/folate may interfere with the action of the sulfadoxine-pyrimethamine that contains antifolate drugs. If an iron syrup does not contain folate, a child can be given an iron syrup with sulfadoxine-pyrimethamine.

Vitamin A. Vitamin A is given to a child with *measles* or *severe malnutrition*. Vitamin A helps resist the measles virus infection in the eye as well as in the layer of cells that line the lung, gut, mouth and throat. It may also help the immune system to prevent other infections. Vitamin A is available in capsule and syrup form. Use the child's age to determine the dose.

Safe remedy for cough and cold if the infant is 6 months or older. There is no evidence that commercial cough and cold remedies/syrups are any more effective than simple home remedies in relieving a cough or soothing a sore throat. Suppression of a cough is not desirable because cough is a physiological reflex to eliminate lower respiratory tract secretion. Breastmilk alone is a good soothing remedy. Honey, tulsi, ginger, herbal teas are other safe local home remedies.

3.3.2.2 TREATMENT OF LOCAL INFECTIONS

If the child, age 2 months upto 5 years, has a local infection, the mother or caretaker should be taught how to treat the infection at home

Instructions may be given about how to:

- Treat eye infection with tetracycline or chloramphenicol eye ointment;
- Dry the ear by wicking to treat ear infection;
- Treat mouth ulcers with gentian violet (0.25%);
- Soothe the throat and relieve the cough with a safe remedy.

Eye Treatment for Children Being Referred

If the child will be referred, and the child needs treatment with tetracycline or any other antibiotic eye ointment, 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.

TREATMENT IN THE OUTPATIENT HEALTH FACILITY OF THE SICK CHILD FROM AGE 2 MONTHS UPTO 5 YEARS	
CLASSIFICATION	**TREATMENT**
PNEUMONIA	Give appropriate antibiotic for five days. The treatment of non-severe pneumonia can utilise a five-day course of oral amoxycillin. This oral antibiotic is usually effective treatment for Streptococcus pneumoniae and Haemophilus influenzae. It is relatively inexpensive, widely available, and is on the essential drug list of the Ministry of Health. Soothe the throat and relieve the cough with a safe remedy.
NO PNEUMONIA: COUGH OR COLD	If wheezing (or disappeared after rapidly acting bronchodilator) give an inhaled bronchodilator for 5 days * Soothe the throat and relieve the cough with a safe home remedy if child is 6 months or older. If coughing more than 14 days ,refer for possible TB, or asthma assessment. Advise mother when to return immediately. Follow-up after 5 days if not improving.
SOME DEHYDRATION	**WHO Treatment Plan B** Give frequent small sips of ORS from a cup. Give the recommended amount for over **4 hours** If the child vomits, wait 10 minutes. Then continue, but **more slowly** Continue breastfeeding whenever the child wants. Note: The approximate amount of ORS required (in ml) can be calculated by multiplying the child's weight (in kg) times 75. **AFTER 4 HOURS:** Reassess the child and classify the child for dehydration. Select the appropriate plan to continue treatment. Begin feeding the child in clinic. When there are no signs of dehydration, the child is put on Plan A. If there is still some dehydration, Plan B should be repeated. If the child now has severe dehydration, the child should be put on Plan C.
NO DEHYDRATION	WHO Treatment Plan A Plan A focuses on the four rules of home treatment: give extra fluids, give zinc for 14 days, continue feeding, and advise the caretaker when to return to the doctor (if the child develops blood in the stool, drinks poorly, becomes sicker, or is not better in three days). Fluids should be given as soon as diarrhoea starts; the child should take as much as s/he wants. Correct home therapy can prevent dehydration in many cases. ORS may be used at home to prevent dehydration. However, other fluids that are commonly available in the home may be less costly, more convenient and almost as effective. Most fluids that a child normally takes can also be used for home therapy especially when given with food.

	Recommended home fluid should be safe when given in large volumes (eg ORS, coconut water etc): • Sweet tea, soft drinks are not suitable, due to their high sugar content. They can cause osmotic diarrhoea, worsening dehydration and hypenatremia. Also to be avoided are fluids with purgative action and stimulants (e.g., coffee, some medicinal teas or infusions).
PERSISTENT DIARRHOEA	Encourage the mother to continue breastfeeding. If yoghurt is available, give it in place of any animal milk usually taken by the child; yoghurt contains less lactose and is better tolerated. If animal milk must be given, limit it to 50 ml/kg per day; greater amounts may aggravate the diarrhoea. If milk is given, mix it with the child's cereal and do not dilute the milk. At least half of the child's energy intake should come from foods other than milk or milk products. Foods that are hyperosmolar (these are usually foods or drinks made very sweet by the addition of sucrose, such as soft drinks or commercial fruit drinks) should be avoided they can worsen diarrhoea. Food needs to be given in frequent, small meals, at least six times a day. All children with persistent diarrhoea should receive supplementary multivitamins and minerals (copper, iron, magnesium, zinc) each day for two weeks.
DYSENTERY	The four key elements of dysentery treatment are: • Antibiotics • Fluids • Feeding • Follow-up Selection of an antibiotic is based on sensitivity patterns of strains of Shigella isolated in the area (Cefixime, 10 mg/kg in two divided doses for 5 days) Recommended duration of treatment is five days. If after two days (during follow-up) there is no improvement, the antibiotic should be stopped and a different one used. Give zinc supplements for 14 days Follow-up after 2 days.
MALARIA	For Malaria, give drugs as per State guidelines.
FEVER – MALARIA UNLIKELY	Give one dose of paracetamol for high fever (38.5°C or above). Give appropriate treatment for an identified cause of fever Advise mother when to return immediately Follow-up after 2 days if fever persists.
DENGUE FEVER	Give one dose of paracetamol in clinic for high fever (temp. 38.5°C or above). Educate caregivers about care of a child with dengue fever. Follow–up after 2 days.

MEASLES WITH EYE OR MOUTH COMPLICATIONS	Give first dose of Vitamin A, if pus draining from the eye, treat eye with antibioitc eye ointment. If mouth ulcers, treat with gentian violet. Follow-up after 2 days.
MEASLES CURRENTLY (OR WITHIN THE LAST 3 MONTHS)	Give first dose of Vitamin A.
ACUTE EAR INFECTION	Give amoxycillin for 5 days. Give paracetamol for pain. Dry the ear by wicking. Follow-up after 5 days
CHRONIC EAR INFECTION	Dry the ear by wicking. **Topical quinolone ear drops for 2 weeks Follow-up after 5 days**
SEVERE ACUTE MALNUTRITION WITHOUT MEDICAL COMPLICATIONS	Give oral amoxicilln for 5 days Give a dose of Vitamin A, if not received in last one month Assess feeding & counsel the mother on how to feed the child Give multiviamins, zinc for 14 days Advise mother when to return immediately Follow-up after 7 days
NO ACUTE MALNUTRITION	If the child is less than 2 years old, assess the child's feeding and counsel the mother accordingly on feeding.
ANEMIA	Give iron folic acid therapy for 14 days. Assess the child's feeding and counsel the mother on feeding. according to the FOOD box on the COUNSEL THE MOTHER chart. If feeding problem, follow-up after 5 days Advise mother when to return immediately. Follow-up after 14 days
NO ANEMIA	Give prophylactic iron folic acid if child is 6 months or older.

3.3.2.3. COUNSELLING A MOTHER OR CARETAKER

A child who is seen at the clinic needs to continue treatment, feeding and fluids at home. The child's mother or caretaker also needs to recognize when the child is not improving, or is becoming sicker. The success of home treatment depends on how well the mother or caretaker knows how to give treatment, understands its importance and knows when to return to a health care provider.

The steps to good communication were listed earlier. Some advise is simple; other advise requires teaching the mother or caretaker **how to do a task**. When you teach a mother how to treat a child, use three basic teaching steps: give information; show an example; let her practice.

When teaching the mother or caretaker: (1) use words that s/he understands; (2) use teaching aids that

are familiar; (3) give feedback when s/he practices, praise what was done well and make corrections; (4) allow more practice, if needed; and (5) encourage the mother or caretaker to ask questions and then answer all questions. Finally, it is important to check the mother's or caretaker's understanding.

The content of the actual advise will depend on the child's condition and classifications. Below are essential elements that should be considered when counselling a mother or caretaker:

- Advise to continue feeding and increase fluids during illness;
- Teach how to give oral drugs or to treat local infection;
- Counsel to solve feeding problems (if any);
- Advise when to return.

Advise to continue feeding and increase fluids: The IMNCI guidelines give feeding recommendations for different age groups. These feeding recommendations are appropriate both when the child is sick and when the child is healthy. During illness, children's appetite and thirst may be decreased. However, mothers and caretakers should be counselled to increase fluids and to offer the types of food recommended for the child's age, as often as recommended, even though a child may take small amounts 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.

Teach how to give oral drugs or to treat local infection at home: Simple steps should be followed when teaching a mother or caretaker how to give oral drugs or treat local infections. These steps include: (1) determine the appropriate drugs and dosage for the child's age or weight; (2) tell the mother or caretaker what the treatment is and why it should be given; (3) demonstrate how to measure a dose; (4) describe the treatment steps; (5) watch the mother or caretaker practise measuring a dose; (6) ask the mother or caretaker to give the dose to the child; (7) explain carefully how, and how often, to do the treatment at home; (8) explain that ***All*** oral drug tablets or syrups must be used to finish the course of treatment, even if the child gets better; (9) check the mother's or caretaker's understanding.

Counsel to solve feeding problems (if any): Based on the type of problems identified, it is important to give correct advise about the nutrition of the young child both during and after illness. Sound advise that promotes breastfeeding, improved weaning practices with locally appropriate energy- and nutrient-rich foods, and giving nutritious snacks to children 2 years or older, can counter the adverse effect of infections on nutritional status. Specific and appropriate complementary foods should be recommended and the frequency of feeding by age should be explained clearly. Encourage exclusive breastfeeding upto six months; discourage use of feeding bottles for children of any age; and provide guidance on how to solve important problems with breastfeeding. The latter includes assessing the adequacy of attachment and suckling. Specific feeding recommendations should be provided for children with persistent diarrhoea. Feeding counselling relevant to identified feeding problems is described in the IMNCI national feeding recommendations.

Advise when to return: Every mother or caretaker who is taking a sick child home needs to be advised about when to return to a health facility. The health care provider should (a) teach signs that mean to return immediately for further care; (b) advise when to return for a follow-up visit; and (c) schedule the next well-child or immunization visit.

The table below lists the specific times to advise a mother or caretaker to return to a health facility.

A) IMMEDIATELY	
Advise the mother to return immediately if the child has any of these signs.	
Any sick child	• Not able to drink or breastfeed • Becomes sicker • Develops 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
Dengue fever	• Bleeding from any site • Severe abdominal pain • Cold hands and feet

B) FOR FOLLOW-UP VISIT	
If the child has:	Return for follow-up not later than:
PNEUMONIA DYSENTERY MALARIA/SUSPECTED MALARIA DENGUE FEVER FEVER-MALARIA UNLIKELY (if fever persists), MEASLES WITH EYE OR MOUTH COMPLICATION	2 days
DIARRHOEA, if not improving PERSISTENT DIARRHOEA ACUTE EAR INFECTION CHRONIC EAR INFECTION FEEDING PROBLEM ANY OTHER ILLNESS , if not improving	5 days
UNCOMPLICATED SEVERE ACUTE MALNUTRITION	7 days
ANEMIA	14 days
MODERATE ACUTE MALNUTRITION	30 days

C) NEXT WELL-CHILD VISIT

Advise when to return for the next immunization according to immunization schedule.

3.3.2.4 FOLLOW-UP CARE

Some sick children will need to return for follow-up care. At a follow-up visit, see if the child is improving on the drug or other treatment that was prescribed. Some children may not respond to a particular antibiotic or antimalarial, and may need to try a second-line drug. Children with persistent diarrhoea also need follow-upto be sure that the diarrhoea has stopped. Children with fever or eye infection need to be seen if they are not improving. Follow-up is especially important for children with a feeding problem to ensure they are being fed adequately and are gaining weight.

When a child comes for follow-up of an illness, ask the mother or caretaker if the child has developed any ***new*** problems. If she answers yes, the child requires a full assessment: check for general danger signs and assess all the main symptoms and the child's nutritional status.

If the child ***does not have a new*** problem, use the IMNCI follow-up instructions for each specific problem:

- Assess the child according to the instructions;
- Use the information about the child's signs to select the appropriate treatment;
- Give the treatment.

Note: If a child who comes for follow-up has several problems and is getting worse, or returns repeatedly with chronic problems that do not respond to treatment, the child should be referred to a hospital.

The IMNCI charts contain detailed instructions on how to conduct follow-up visits for different diseases. Follow-up visits are recommended for **sick children classified as having**:

- Pneumonia
- Diarrhoea
- Persistent diarrhoea
- Dysentery
- Malaria/ suspected malaria
- Fever – malaria unlikely
- Dengue fever
- Measles with eye or mouth complications
- Ear infection
- Feeding problem
- Moderate acute malnutrition
- Anemia
- Severe acute malnutrition.

CHAPTER 4

PRINCIPLES OF MANAGEMENT OF SICK CHILDREN IN A SMALL HOSPITAL

Severely sick children who are referred to a hospital should be further assessed using the expertise and diagnostic capabilities of the hospital setting. However, the first step in assessing children referred to a hospital should be triage - the process of rapid screening to decide in which of the following groups a sick child belongs:

- ***Those with emergency signs*** who require immediate emergency treatment: obstructed breathing, severe respiratory distress, central cyanosis, signs of shock, coma, convulsions, or signs of severe dehydration.
- ***Those with priority signs*** who should be given priority while waiting in the queue so they can be assessed and treated without delay: visible severe wasting, oedema of both feet, severe palmar pallor, any sick young infant (less than 2 months), lethargy, continual irritability and restlessness, major burns, any respiratory distress, or urgent referral note from another health facility.
- ***Non-urgent cases*** that have neither emergency nor priority signs.

Then according to identified priority order, sick children must be examined fully so that no important sign will be missed. The following laboratory investigations need to be available at the small hospital in order to manage sick children:

- Haemoglobin or packed cell volume (PCV)
- Blood smear for malaria
- Blood glucose
- Microscopy of CSF and urine
- Blood grouping and cross-matching

In addition, for sick young infants (under 1 week old), the laboratory investigation for blood bilirubin should be available. Other investigations (such as chest X-ray and stool microscopy) are not considered essential, but could help in complicated cases.

When a child with a severe (pink) classification is admitted to a hospital, a list of possible diagnosis should be drawn up. Remember, a sick child often has more than one diagnosis or clinical problem requiring treatment. The diagnosis in the table on the next page should be considered first for each category.

An appropriate treatment is given to sick children based on the results of the diagnostic procedures and according to the national clinical guidelines. More detailed information about management of children at the first-level referral hospitals are in the manual

MANAGEMENT OF THE CHILD WITH A SERIOUS INFECTION OR SEVERE ACUTE MALNUTRITION: GUIDELINES FOR CARE AT THE FIRST REFERRAL LEVEL IN DEVELOPING COUNTRIES.

In addition to describing the most essential treatment procedures, this document outlines the main principles of monitoring the child's progress. The key aspects in monitoring the progress of a sick child are:

- ***Devising a monitoring plan.*** The frequency will depend on the nature and severity of the child's clinical condition.
- ***Using a standard chart to record essential information*** such as correct administration of the treatment, expected progress, possible adverse effects of the treatment, complications that may arise, possible alternative diagnosis.
- ***Bringing these problems to the attention of senior staff*** and, if necessary, changing the treatment accordingly.

Possible diagnosis of children referred to hospital with four main symptoms

MAIN SYMPTOMS AND POSSIBLE DIAGNOSIS			
Unconsciousness, Lethargy or Convulsions	**Cough or Difficult Breathing**	**Diarrhoea**	**Fever**
• Meningitis • Cerebral malaria (only in children exposed to *P. falciparum* transmission, often seasonal) • Febrile convulsions (not likely to be cause of unconsciousness) • Hypoglycaemia (always seek the cause) • Head injury • Poisoning • Shock (can cause lethargy or unconsciousness, but is unlikely to cause convulsions) • Acute glomerulonephritis with encephalopathy • Diabetic ketoacidosis The following are possible diagnosis of **young infants** referred to the hospital with lethargy: • Birth asphyxia, hypoxic ischaemic encephalopathy, birth trauma • Intracranial haemorrhage • Haemolytic disease of the newborn, kernicterus • Neonatal tetanus • Meningitis • Sepsis	• Pneumonia • Malaria • Severe anemia • Cardiac failure • Congenital heart disease • Tuberculosis • Pertussis, foreign body • Empyema • Pneumothorax • Pneumocystis pneumonia • Asthma	• Acute watery diarrhoea • Cholera • Dysentery • Persistent diarrhoea • Diarrhoea with severe acute malnutrition • Intussusception	• Malaria • Septicaemia • Typhoid • Urinary tract infection • HIV infection • Meningitis • Otitis media • Osteomyelitis • Septic arthritis • Skin and soft tissue infection • Pneumonia • Viral infections • Throat abscess • Sinusitis • Measles • Meningococcal infection • Dengue haemorrhagic fever

RECORDING FORMS

MANAGEMENT OF THE SICK YOUNG INFANT AGE UPTO 2 MONTHS BY MO

Name: _____ **Age:** _____ **Gender:** _____ **Weight:** _____ **kg** **Temperature:** _____**°C / °F** **Date:** _____

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

ASSESS (Circle all signs present) **CLASSIFY**

CHECK FOR POSSIBLE SERIOUS BACTERIAL INFECTION/JAUNDICE

- Is the infant having difficulty in feeding?
- Has the infant had convulsions?
- Count the breaths in one minute_____ breaths per minute
  Repeat if elevated _____. Fast breathing?
- Look for severe chest indrawing
- Measure axillary temperature (if not possible, feel for fever or low body temperature)- Is it < 35.5℃ / 37.5 ℃ (95.9°F/ 99.5°F) or above?
- Look at young infant's movements.
  If infant is sleeping, ask the mother to wake him/her
  - ⇨ Does the infant move only when stimulated but then stops?
  - ⇨ Does the infant not move at all?
- Look at the umbilicus. Is it red or draining pus?
- Look for skin pustules?

CHECK FOR JAUNDICE

- If present - Ask when did jaundice appeared – First 24 hours / After 24 hours
- Look for jaundice (yellow skin)
- Is the young infant's palms and soles yellow?

DOES THE YOUNG INFANT HAS DIARRHOEA? **Yes___ No___**

- Look at the young infant's general condition.
  - ⇨ Does the infant move only when stimulated?
  - ⇨ Does the infant not move at all?
  - ⇨ Is the infant restless and irritable?
- Look for sunken eyes.
- Pinch the skin of the abdomen. Does it go back:
  - ⇨ Very slowly (longer than 2 seconds)?
  - ⇨ Slowly?

THEN CHECK FOR FEEDING PROBLEM & VERY LOW WEIGHT

- Is there any difficulty in 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 many times in 24 hours? _____
  If yes, what do you use to feed the infant _____
- Determine weight for age
  - ⇨ Weight for Age (<- 3 SD)
  - ⇨ Weight for Age (<- 2 SD)
  - ⇨ Weight for Age (≥ -2SD)
- Look for ulcers or white patches in the mouth (thrush)

If the infant has any difficulty in feeding, is feeding <8 times in 24 hours, is taking any other food or drinks or is low weight for age (Weight for age <-2SD) , AND has no indications to refer urgently to hospital: ASSESS BREASTFEEDING

ASSESS BREASTFEEDING:

- If infant has not breastfed in the previous hour, ask the mother to put her infant to the breast. Observe the breastfed for 4 minutes.
- 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_____
- Is the infant able to attach?
  - ⇨ no attachment at all
  - ⇨ not well attached
  - ⇨ good attachment
- Is the infant suckling effectively (that is, slow deep sucks, something pausing)?
  - ⇨ not suckling at all
  - ⇨ not suckling effectively
  - ⇨ suckling effectively
- Does the mother have pain while breastfeeding? If yes, then look for:
  - ⇨ Flat or inverted nipples or sore nipples
  - ⇨ Engorged breast or breast abscess

CHECK THE YOUNG INFANT'S IMMUNIZATION STATUS

Circle immunization needed today

Birth	BCG	OPV 0	HEP-B 0		
6 weeks	Penta-1	OPV-1	Rotavirus-1	fIPV-1	PCV-1

Circle immunization needed today

Return for next immunization on:

_____(Date)

ASSESS CAREGIVER'S PRACTICE TO SUPPORT CHILD'S DEVELOPMENT

ASK:

How do you play with your baby?
How do you talk to your baby?
How do you get your baby smile?

- Look how does caregiver show s/he is aware of baby's movement?
- Look how does caregiver comfort the baby and show love?

ASSESS OTHER PROBLEMS

TREAT

	Counsel mother about feeding
	Counsel mother about development supportive practices
	Advise mother when to return immediately.
	Give any immunization needed today _______________
	Counsel the mother about her own health
	Return to follow up in:

MANAGEMENT OF THE SICK CHILD AGE 2 MONTHS UPTO 5 YEARS BY MO

Name: _____ **Age:** _____ **Gender:** _____ **Weight:** _____ kg **Temperature:** _____°C / °F **Date:** _____

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

ASSESS (Circle all signs present)	**CLASSIFY**
CHECK FOR GENERAL DANGER SIGNS • NOT ABLE TO DRINK OR FEED • CONVULSIONS /CONVULSING NOW • LETHARGIC OR UNCONSCIOUS • VOMITS EVERYTHING	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 breath in one minute_____breaths Fast breathing? • Look for chest indrawing • Look and listen for stridor • Look and listen for wheeze • Check oxygen saturation- <90% /≥90%	
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: ⇨ Slowly? ⇨ Very slowly (longer than 2 seconds)?	
DOES THE CHILD HAVE FEVER? (by history/feels hot/temperature 37.5 °C or above) **Yes___ No___** Is it a PF (P. falciparum) predominant area **Yes/ No** • Fever for how long? _____ Days? • If more than 7 days, has fever been present every day? Do RDT for PF/PV if PF predominant area or no obvious cause of fever present -Positive/Negative • **Is this a dengue season? (Yes/No)** If Yes-Is there is continuous fever of 2-7 days? • Look or feel for stiff neck • Look for any bacterial focus of fever • Look for cold extremities, weak & fast pulse • Tourniquet test -Positive/Negative • Look for signs of MEASLES ⇨ Generalized rash ⇨ One of these: cough/ runny nose/ or red eyes	
• If this is a dengue season and there is continuous fever of 2-7 days? ⇨ Is there any rash/ bleeding from any site? ⇨ Are extremities cold? ⇨ Is there severe abdominal pain? • Positive Tourniquet test	
• If 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 eye • Look for clouding of cornea	
DOES THE CHILD HAVE 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 Weight_____(kg) Length/Height_____(cm) • If child is 6 months or older, measure MUAC_____cm • Determine WFH/L SD score: ⇨ Red (<-3SD) ⇨ Yellow (<-2 SD) ⇨ Green (≥-2SD) • Look for oedema of both feet	
THEN CHECK FOR ANEMIA • Look for palmar pallor – severe/some/no • Check haemoglobin _____gm/dl (if possible)	
CHECK THE CHILD'S IMMUNIZATION, PROPHYLACTIC VITAMIN A & IRON-FOLIC ACID STATUS Circle immunizations and Vitamin A or IFA supplements needed today BCG, PENTA 1, PENTA 2, PENTA 3, MR-1, MR-2 OPV 0, OPV 1, OPV 2, OPV 3, VITAMIN A+ IFA, OPV- Booster Hep B 0, Rota-1, Rota-2, Rota-3, JE-1, JE-2 PCV-1, PCV-2, PCV Booster, DPT Booster-1, DPT Booster-2 fIPV-1, fIPV-2, fIPV-3, Deworming	Return for next immunization or Vitamin A or IFA supplement or Deworming _____ (Date)
ASSESS CHILD'S FEEDING, if child has UNCOMPLICATED SEVERE ACUTE MALNUTRITION/MODERATE ACUTE NUTRITION OR ANEMIA OR age is less than 2 year's 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? _____ time. 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?	
ASSESS THE CAREGIVER'S DEVELOPMENT SUPPORTIVE PRACTICES if child is less than 3 years old or has UNCOMPLICATED SEVERE ACUTE MALNUTRITION/ANEMIA ASK: • How do you play with your baby? • How do you talk to your baby? • How do you get your baby smile? • Look how does caregiver show he/she is aware of child's movement? • Look how does caregiver comfort the child and show love?	
ASSESS OTHER PROBLEMS:	

TREAT

	Remember to refer any child who has a general danger sign and/or has another severe classification.
	Give any immunization, Vitamin A or IFA supplement needed today ________________
	Counsel the mother about feeding
	Counsel the mother about development supportive practices
	Advise mother when to return immediately.
	Counsel the mother about her own health.
	Return to follow up in:


NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन