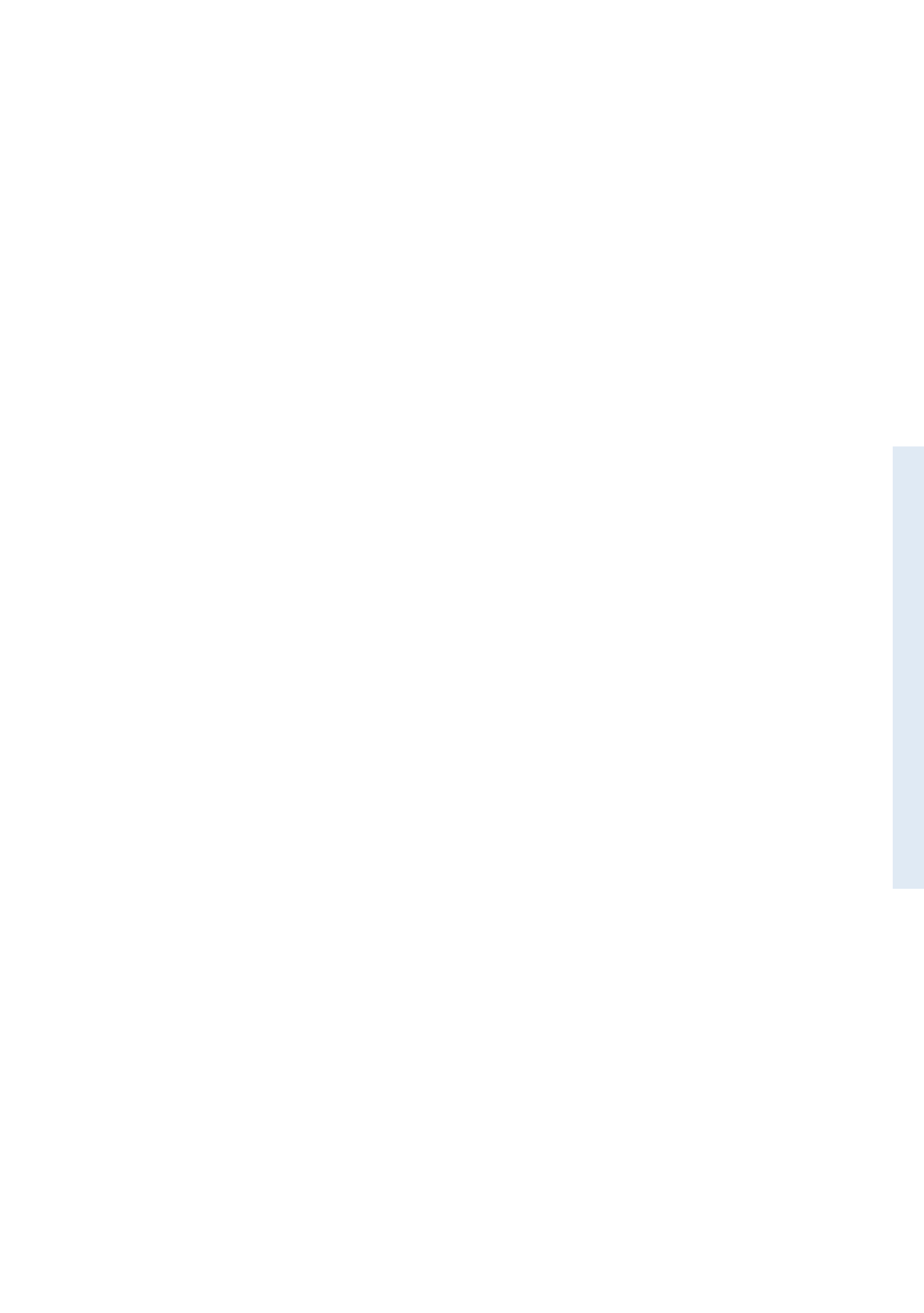
MOH/K/ASA/97.18 (HB)

TRAINING MANUAL ON APPROACH TO UNWELL CHILDREN UNDER 5 YEARS

Family Health Development Division
Ministry Of Health
In Collaboration with World Health Organization **(WHO)**



Foreword

Director General of Health Malaysia

Child mortality rate is a measurement of child wellbeing and is also recognised as one of the indicators for assessment of a country's overall development.

The target for child health under the Sustainable Development Goals (SDG) is to end all preventable deaths of newborn and children under 5 years old, by the year 2030. The Promise Renewed Progress Report 2013 by UNICEF also reported that more than 80% of all newborn deaths resulted from three preventable and treatable conditions, namely complications due to prematurity, intrapartum-related deaths (including birth asphyxia) and neonatal infections.

In Malaysia, preventable death for children under 5 years varies across states from as low as 5% to as high as 30%. Analysis of the Under 5 Mortality data in 2015 showed 30% of the mortality cases among children under 5 years of age in Malaysia are preventable. Medical factors contribute to under-5 mortality where quality of care was the main issue. Other contributing factors include facility or equipment problems and failure of transportation system.

WHO in collaboration with UNICEF, developed the Integrated Management of Childhood Illness (IMCI) strategy and it aims at reducing childhood deaths, illness, and disability, and improving growth and development. It combines improved management of childhood illness with aspects of nutrition and immunization in children below the age of five years.

In line with the SDG, Ministry of Health Malaysia aims to end all preventable deaths among newborn and children under 5 years and developed the 'Training Manual on Approach to Unwell Children under 5 years' (ATUCU5) based on the WHO IMCI strategy. ATUCU5 is meant for training of our health care providers on three main components, which includes early detection of danger signs, improvements in the case management skills and proper immediate treatment.

I would like to express my sincere appreciation to World Health organization (WHO) for giving us the permission to adapt the IMCI Program. I would also would like to congratulate the Family Health Development Division for organising and developing this module. Thank you to all the committee members involved in the development of the module.

Datuk Dr Noor Hisham bin Abdullah
Director General of Health Malaysia
Ministry of Health Malaysia

Foreword

Director of Family Health Development Division

Child health care services focus on comprehensive services towards prevention of morbidity and mortality, health promotion and curative interventions. The strategies are strengthening of infant and childcare through newborn screening, regular child health attendances, high immunization coverage, and reviews and monitoring of Under 5 Mortality and, capacity building in early identification and referral of cases.

Our analysis of the Under 5 Mortality in Malaysia showed that about 30% of death among children under 5 years are preventable. Reports from the state show that preventable factors can be classified as medical and non-medical factors. Medical factors include quality of care, facility and transport system whilst non-medical factors identified are patient/ family factors and social problems.

With these findings, Training Manual on Approach to Unwell Children under 5 years (ATUCU5) was developed. Training Manual on ATUCU5 focuses on three main components namely early detection of danger signs, improvements in the case management skills and proper immediate treatment. The manual also includes health education for caregivers to empower them in the care of an unwell child.

The development of Training Manual on Approach to Unwell Children under 5 years (ATUCU5) was to complement the existing IMCI Training Program. Ministry of Health conducts IMCI Training Program for paramedics in rural areas where clinics are manned by paramedics only. While the training manual on ATUCU5 is designed to cater for all healthcare workers including doctors, especially those in primary care and emergency departments.

My sincere gratitude to all the committee members involved in the development of the module. I hope this manual will be used by all at the clinic and hospital either private or government setting in order to reduce the morbidity and mortality of our children.

Dr. Hjh. Faridah binti Abu Bakar
Director of Family Health Development Division
Ministry of Health Malaysia

Table of CONTENT

FOREWORD BY GENERAL DIRECTOR OF HEALTH

FOREWORD BY DIRECTOR OF FAMILY HEALTH DEVELOPMENT DIVISION (PUBLIC HEALTH)

1 INTRODUCTION

2 GENERAL DANGER SIGNS

3 COUGH OR DIFFICULT BREATHING IN CHILDREN

4 DIARRHOEA

5 FEVER

6 NUTRITIONAL STATUS

7 IMMUNISATION

8 ASSESSMENT OF YOUNG INFANTS

9 LOCAL INFECTION

10 MOTHERS CARD

INTRODUCTION

1. INTRODUCTION

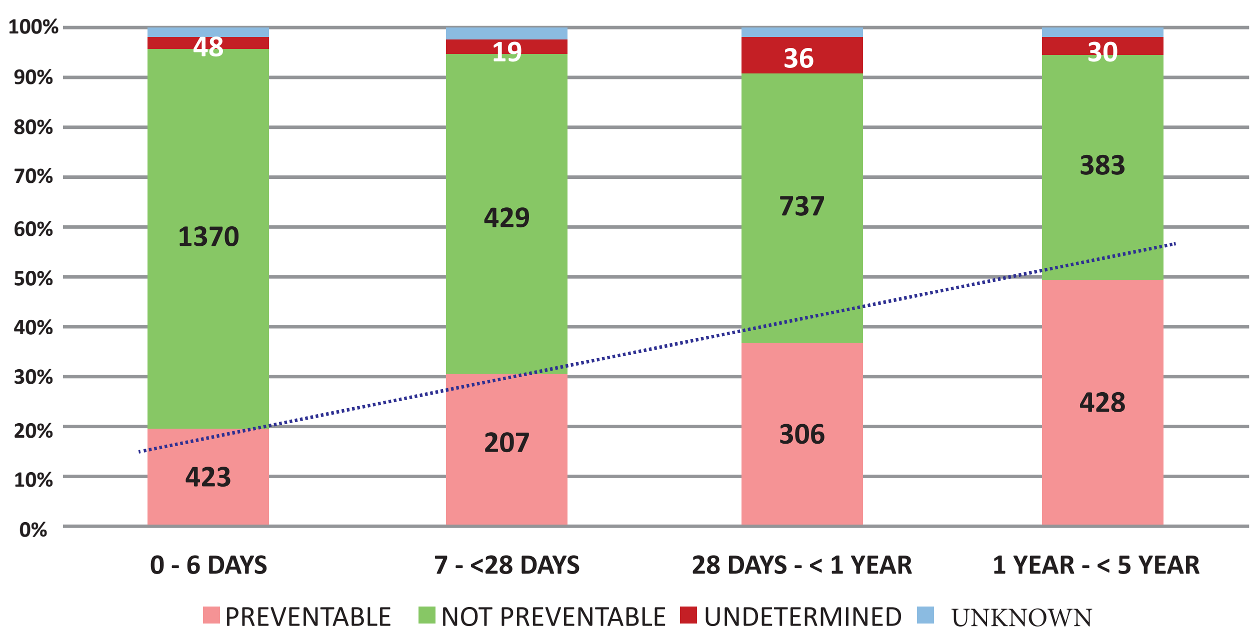
1.1 Approach to Unwell Child under 5 years

One of the goals in Sustainable Development Goals (SDG) is to end all preventable deaths among newborns and children under 5 years of age by 2030. About 30% of the mortality cases among children under 5 years old in Malaysia are preventable.

An audit of the preventable cases showed that 57% of the cases were due to medical factors. Among the medical factors that contributed to the mortality, more than half (53%) were linked to issues of quality of care, whilst only 8% was attributed to facility/equipment problems and 1% due to failure of transportation system.

Quality of care, which is one of the modifiable medical factors for preventable death includes; delay in referral, failure to appreciate severity, failure to diagnose, inadequate/inappropriate/delay therapy and inadequate resuscitation.

Analysis of under 5 mortality data in 2017 shows that preventable deaths increases with age.



Top three causes of preventable deaths among infants (28days – < 1 year) and toddlers (1- <5years) are respiratory system illnesses, infections & parasitic disease and injuries.

TOP CAUSES OF PREVENTABLE DEATHS

	EARLY NEONATAL	LATE NEONATAL	28 DAYS TO < 1 YEAR	TODDLER
1	Condition From Perinatal Period	Condition From Perinatal Period	Respiratory	Injuries & External Causes
2	Congenital Malformation	Congenital Malformation	Certain Infections & Parasitic Disease	Respiratory
3	Unknown	Respiratory	Injuries & External Causes	Certain Infections & Parasitic Disease

Thus, in order to end all preventable death and subsequently reduce under 5-mortality rate, improvement in quality of health care is needed.

The approach to unwell children under 5 years (ATUCU-5) is a guideline for frontline health staff, adapted from the Integrated Management of Childhood Illness (IMCI) programme. It incorporates IMCI contents with additional points related to diseases, which are common among children under 5 years in Malaysia.

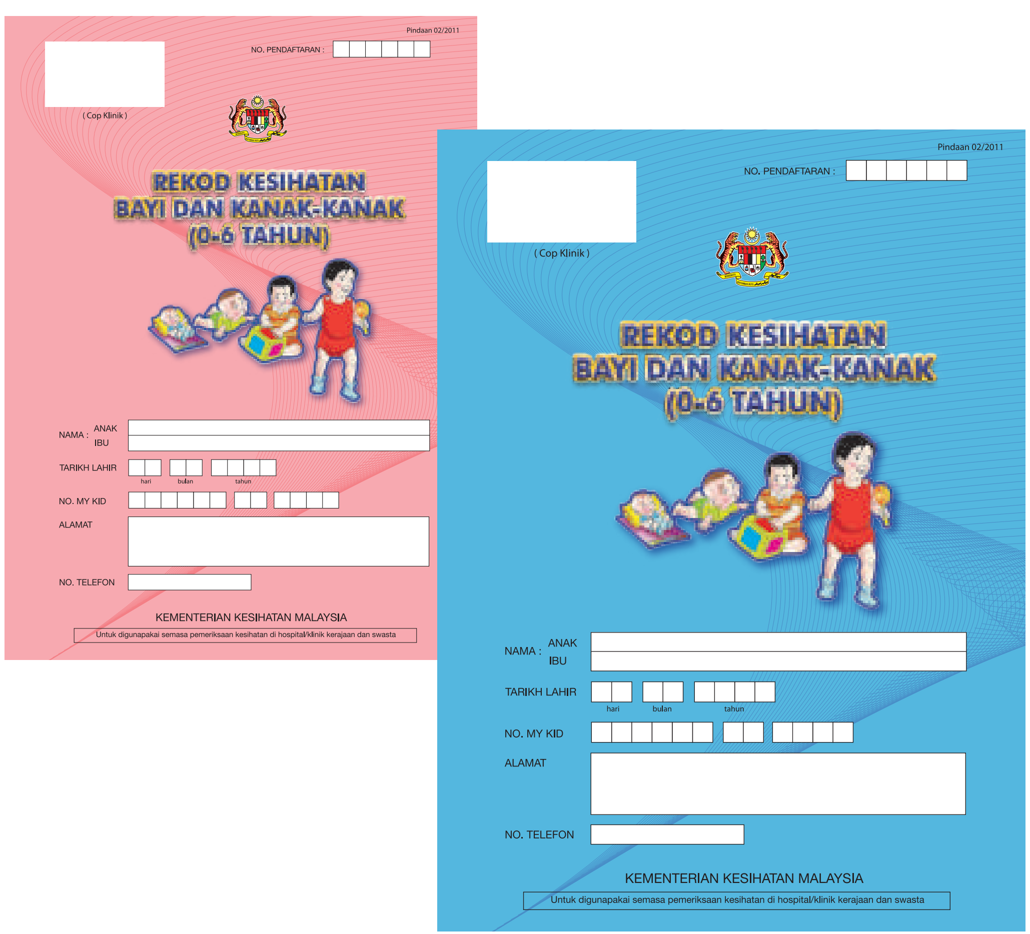
The main objective of this training manual is to improve the quality of care by addressing the modifiable medical factors. This manual is meant for training of healthcare providers in hospital and health clinics.

1.2 Importance of Child Health Record Book in Management of Unwell Child

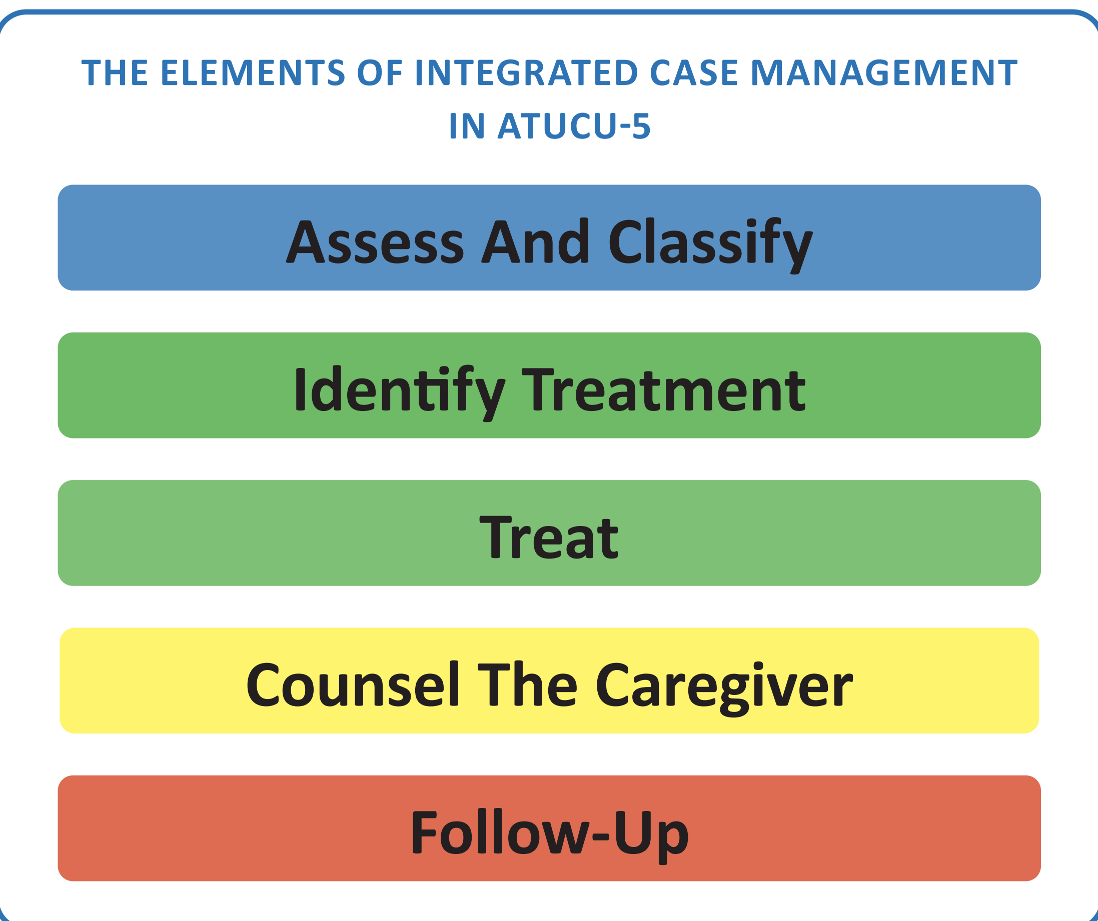
Child attendance to health clinics for regular growth and development monitoring during well baby clinic visit is recorded in the home based child health record *Buku Rekod Kesihatan Kanak-Kanak 0-6 tahun (BRKK)*. Appointments are given according to schedule visits and children are seen and assessed mainly by nurses and community nurses. In addition, there are 3 scheduled visits for examination by doctors at 1 month, 18 months and 4 years. Appointments are also given for at least 3 dental visits.

However, outside of the scheduled visits when child is not well, they are taken to outpatients clinics and seen by either the doctor or paramedics. The home based BRKK is a **necessary tool to ensure seamless care and continuity of care**. Health staff must advise parents to bring the BRKK for all visits to the clinic.

At any time when a child visits the outpatient clinic, if the **child is stable and not seriously ill, a holistic assessment child must be done for**:
(1) Presenting complain and issues,
(2) Assessment for growth and development and
(3) Check for immunisation status.



1.3 The elements of integrated case management in ATUCU-5



The elements of integrated case management in ATUCU-5 include:

- **Assess and classify:** This will guide you in deciding the severity of the illness. Health care provider (HCP) need to know how to assess a child by checking for danger signs, asking questions about common conditions examining the child, checking nutrition and immunization status (using the checklist).

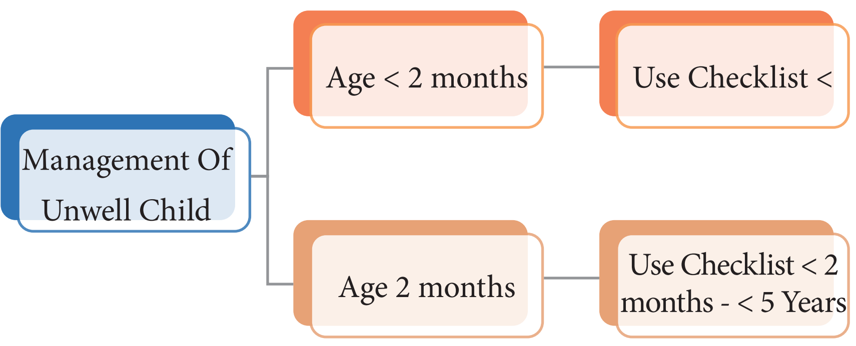
- **Identify treatment:** HCP need to know how to identify appropriate treatment for a sick child eq: essential treatment in case a child requires urgent referral or home treatment plan in case child needs treatment at home

- **Treat:** HCP need to know how to treat a sick child and give practical treatment instructions to parents

- **Counsel the mother/caregiver:** HCP need to know how to effectively counsel caregivers using the Ask, Praise, Advice (Tell, Show, Practice), Check understanding (APAC)

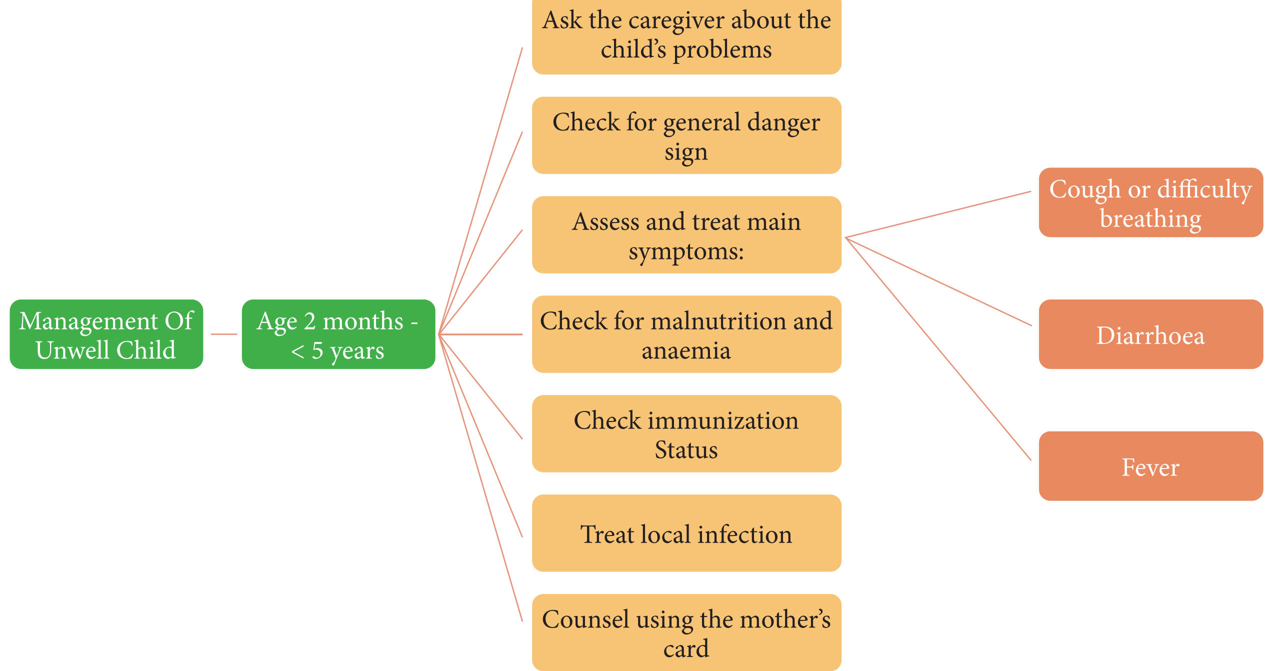
- **Follow-up:** HCP need to know how to provide follow-up care. During follow-up care if there is a new problem, a full assessment as in an initial visit must be done.

1.4 Outline of management of unwell child

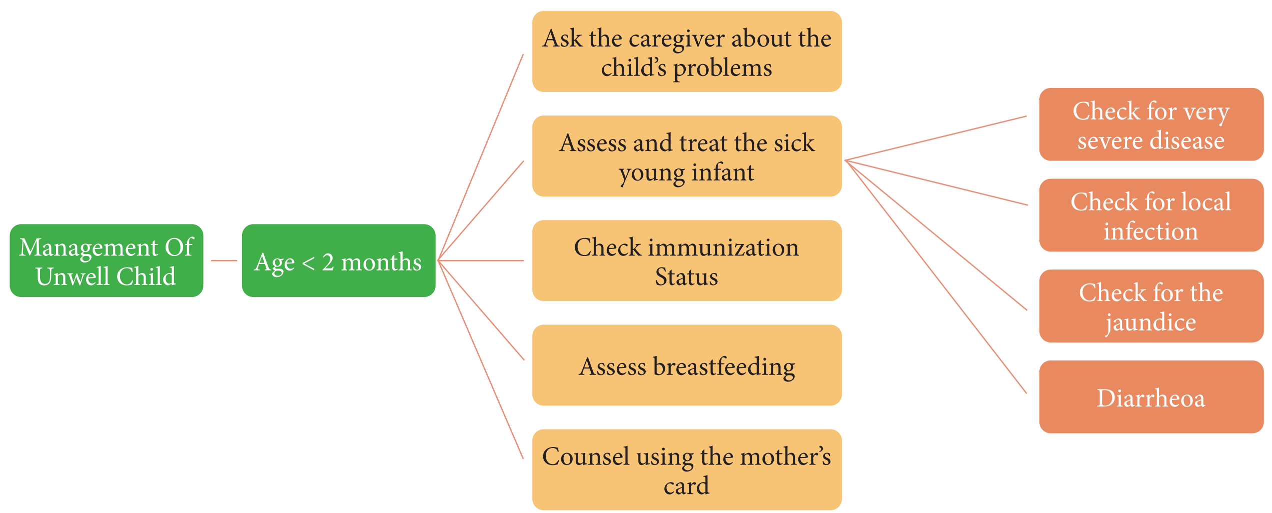


Note : Management of the young infant age up to 2 months is somewhat different from older infants and children. It is described in the ASSESS AND TREAT THE SICK YOUNG INFANT module.

Management of Unwell Child (Age 2 Months - < 5 Years)



Management of Unwell Child (Age <2 Months)



2. ASK THE MOTHER/CAREGIVER ABOUT THE CHILD'S PROBLEMS

Learning Objectives

- How to greet a caregiver and get important information

ASK THE MOTHER ABOUT THE CHILD'S PROBLEMS

- Great the mother appropriately
- Use good communication skill
- Find out the child's age
- Ask the mother what the child's problems are
- Find out if this is an initial or follow-up visit for this problem
- Make sure the child's weight and temperature is measured and recorded

3. Good Communication

Why Is Good Communication With A Caregiver Important?

1. Caring for an ill child could cause caregivers to be very stressed and emotional. It is important to communicate concern and care for the child's health, and the family's situation.
2. Good communication helps to reassure the caregiver that her child will receive good care.
3. Good communication and trust between HCP and caregiver will result in better care of the sick child at home

What Are Good Communication Skills?

Good communication skills involve the following:

- **LISTEN** – **Listen carefully to what the caregiver tells you**. This shows you are taking her concerns seriously.
- **SIMPLIFY WORDS** – Use simple language. **Use words the caregiver understands**. If she does not understand what you ask her, she cannot give the information you need to assess and classify the child correctly.
  Do Not Use Medical Terms.
- **GIVE HER TIME** – **Give the caregiver time to answer the questions**.
  She might need time to decide if a sign you are asking about is present.
- **BE CLEAR** – **Ask additional questions** when the caregiver is not sure about her answer. If she is not sure that a certain symptom or sign is present, ask additional questions. **Help her make her answers clearer.**
- **PRAISE** – **Praise the caregiver for what she is doing right.** This will reinforce good practices.
- **ADVICE** – if the caregiver practises inappropriate/wrong management, **Do Not Scold/Criticise them**. Give appropriate advice clearly

COUNSEL CAREGIVERS USING APAC
(Ask, Praise, Advice, Check)

APAC (ASK, PRAISE, ADVICE, CHECK)

Ask and Listen

- Ask and listen to find out what the child's problem are

Praise

- Praise the caregiver for what she has done well

Advice

- Advice caregiver to care for her child at home

Check

- Check the caregivers understanding

WHAT IS THE IMPORTANT INFORMATION YOU GATHER DURING A GREETING?

IMPORTANT INFORMATION

- Age
- Child's Problem
- Number of Visit
- Weight And Temperature

Definition of age

1. A sick child is 2 months up to 5 years of age : the child has not had his 5th birthday
2. A sick young infant is birth up to 2 month of age : infant has not had his 2nd month birthday.

Number of visits

- Ask if this is first visit or repeated visit for this current problem
- Repeated visit is 2 or more visits for the same problem at ANY health centre including private facilities
- For repeated visits, consider admission

Important information to ask the caregiver about the child:

•**Age**

- The child's age determines which treatment module to use – the sick child or the young infant.

•Child's problem

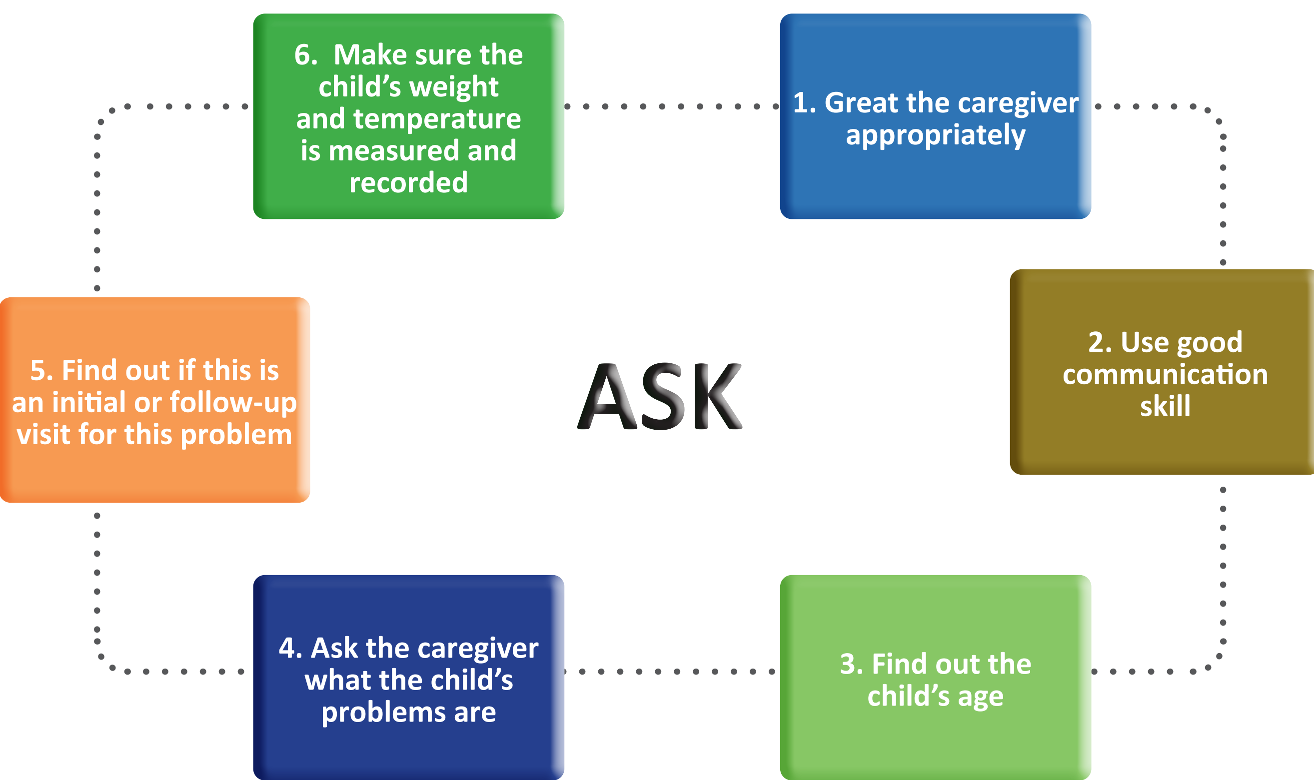
- Ask why the caregiver is bringing the child to the clinic
- By asking this you can make note of the symptoms or health problems that are worrying them
- You may also ask for further details, example, ask how long the symptom has been present, or has it been getting worse
- You can also ask the caregiver how she has been addressing the health problem thus far. This will give you a background about previous care given at home, community, or other facilities.

•Number of visits

- Ask if this is first visit or repeated visit for this current problem
- Repeated visit is 2 or more visits for the same problem at ANY health centre including private facilitiesor any private pharmacy
- For repeated visits, consider admission

•Weight and temperature

- Determine the child's weight and temperature
- Check if this is already recorded on the child's card. If not, weigh the child and measure his temperature later when you assess and classify the child's main symptoms.



YOU SHOULD ALWAYS:

- Greet the caregiver appropriately
- Use good communication skills
- Find out the child's age
- Ask the caregiver what the child's problems are
- Find out the number of visit for this problem
- Make sure the child's weight and temperature is measured and recorded

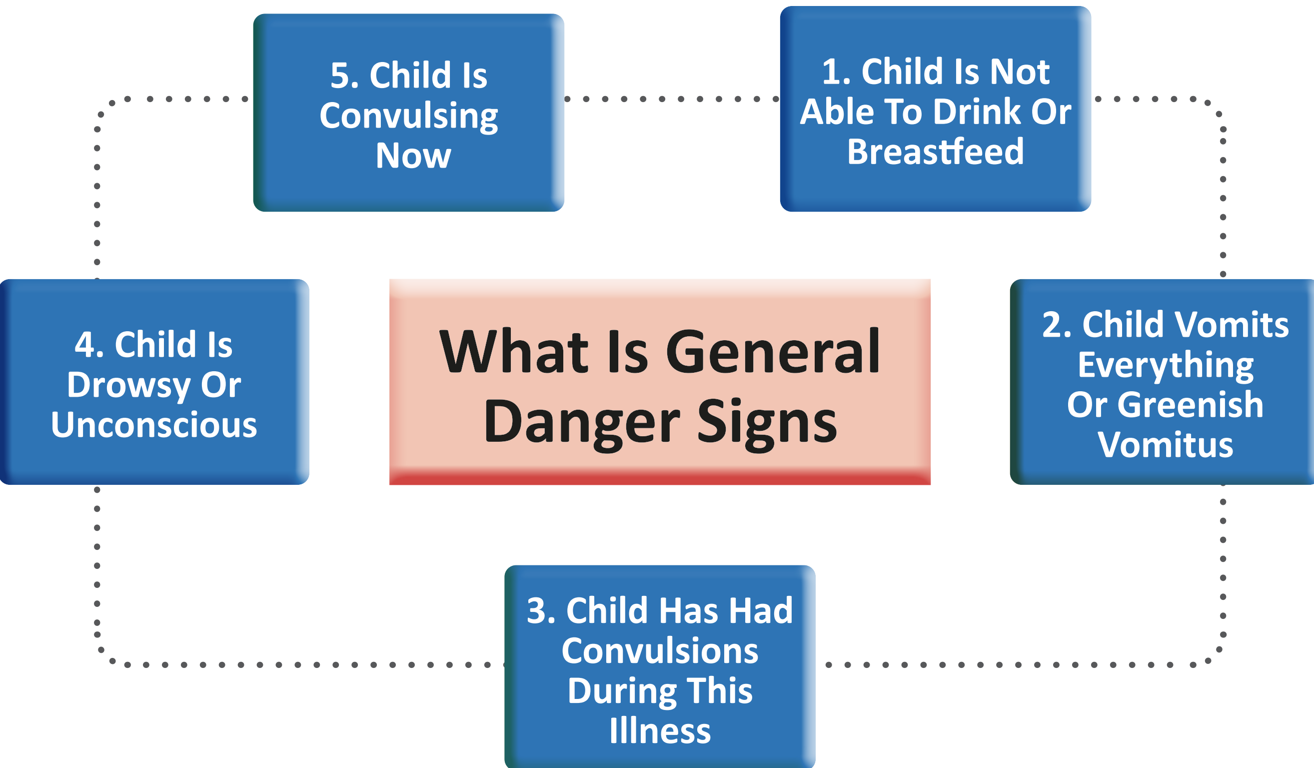
CHECK FOR GENERAL DANGER SIGNS

2. CHECK FOR GENERAL DANGER SIGNS

2.1 Learning Objectives:

- Recognize general danger signs in a sick child
- Provide urgent pre-referral treatment
- Refer a child when danger signs are present

2.2 General Danger Signs



- The following are **general danger** signs in young children:
  - The child is **not able to drink or breastfeed**
  - The child **vomits everything or greenish vomitus**
  - The child has **had convulsions during this illness or convulsing now**
  - The child is **drowsy or unconscious**

- Presence of general danger signs means a child is in a serious problem and require urgent hospital referral.
- When a general danger sign is present immediately complete the rest of the assessment and give urgent pre-referral treatment.
- A sick child may have signs that clearly point to a disease. For example, a child may present with cough and chest indrawing, which indicate severe pneumonia.
- Some children may present with serious, non-specific signs that do not point to a particular disease. For example, a child who is drowsy or unconscious may have meningitis, severe pneumonia, cerebral malaria or other severe diseases.
- Great care should be taken to ensure that these general danger signs are not overlooked. General danger signs suggest that a child is severely ill and needs urgent attention.

General Danger Signs

ALL SICK CHILDREN MUST CHECK FOR GENERAL DANGER SIGNS

Ask

- Is the child able to drink or breastfeed
- Does the child vomits everything or greenish vomitus?
- Has the child had convulsion during this illness

Look

- Is the child drowsy or unconscious?
- Is the child convulsing now?

- All sick children should be routinely checked for general danger signs
- If you have found during the assessment that the child has a general danger sign, complete the rest of the assessment IMMEDIATELY.
- Remember that a child with any general danger sign has a severe problem. There must be NO DELAY IN TREATMENT

2.3 ASK: Is the child able to drink or breastfeed?

Definition: A child who is not able to suck or swallow when offered water or breastmilk because he or she is too weak or cannot swallow

GENERAL DANGER SIGNS

ASK: Is the child able to drink or breastfeed?

Child not able to drink or breastfeed :

- **Not able to suck or swallow when offered water or breast milk**
- **Because the child is too weak to suck or swallow**

(If history is not clear - offer fluid to child and observe)

- Ask the caregiver if the child is able to drink or breastfeed. Make sure that the caregiver understands the question.
- If she says that the child is not able to drink or breastfeed, ask her to describe what happens when she offers the child water to drink. For example, ask: “Is the child able to take fluid that put into his or her mouth and swallow it?" (passive drinking)
- If you are not sure about the caregiver's answer, ask her to offer the child a drink of clean water or breastmilk. Look to see if the child is swallowing the water or breastmilk.

GENERAL DANGER SIGNS

ASK: Is the child able to drink or breastfeed?

Is the child not able to drink or breastfeed :

- **Ask the amount, frequency and duration of not able to drink or breastfeeding.**
- **Feeding less that half of the child’s usual oral intake in more than 12 hours is considered presence of the sign.**

- Ask the amount, frequency and duration of not able to drink or breastfeeding.
- Feeding less than half of the child’s usual oral intake in more than 12 hours is considered as unable to drink or breastfeed.

Remember: A child who is breastfeed may have difficulty suckling when the nose is blocked. If the nose is blocked, clear it. If the child can breastfeed after the nose is cleared, the child does not have the danger sign "not able to drink or breastfeed".

GENERAL DANGER SIGNS

ASK: Is the child able to drink or breastfeed?

- **Not able to drink or breastfeed**

Video GDS Not able to drink or breastfeed.mpg

2.4 ASK: Does the child vomit everything or greenish vomitus?

GENERAL DANGER SIGNS

ASK: Does the child vomit everything?

- **Does the child vomits all the drink / food given?**
- **Does the child vomits everytime after feeding?**
- **Ask the amount, frequency and duration**

(If history is not clear - offer fluid to child and observe)

Definition: A child who vomits every time after feeding and not able to hold anything down at all. What goes down comes back up. A child who vomits everything will not be able to hold down food, fluids or oral drugs.

Ask the amount, frequency and duration of "vomit everything". Vomit more than half of the child's usual oral intake in more than 12 hours is also considered as vomit everything.

- Ask the caregiver if the child vomits everything or greenish vomitus. When you ask the question, use words the caregiver understands.
- When you or the caregiver is not sure if the child is vomiting everything, then ask the caregiver: "How often the child vomits? Also ask: "Each time the child swallows food or fluids, does the child vomit?"
- If you are still not sure of the caregiver's answers, ask her to offer the child a drink. See if the child vomits.

GENERAL DANGER SIGNS

ASK: Does the child vomits evertyhing?

- **Greenish vomitus (Bile content) indicates intestinal obstruction in child (surgical emergency)**
- **Ask what did the child take prior to vomiting?**
  - not to confuse with greenish food particles eg: green vegetable or other food colourings, sputum

A child who "vomits greenish vomitus" has a severe illness. He may not vomit everything but greenish vomitus (bile content) may indicate intestinal obstruction and child will need to be referred urgently. Ask what did the child take prior to the vomiting? This is not to be confused with greenish food particles eg: green vegetables, other food colourings or sputum.

2.5 ASK: Has the child had convulsions during this illness?

GENERAL DANGER SIGNS

ASK: Has the child had convulsion during this illness ?

- **Ask mother to describe what is convulsion or how does the convulsion occurs?**
- **Clarify with mother on the history**

Use words the caregiver understands/local dialect. For example, the caregiver may know convulsions as “fits” or “spasms” (“tarik”, “sawan”)

GENERAL DANGER SIGNS

ASK: Has the child had convulsion during this illness ?

Description of Convulsion :

- **Unconscious**
- **Not responding to surrounding**
- **Child’s arms / legs become stiff or jerky movements, localized / generalized**
- **Up rolling eyeballs**
- **May have :**
  - Drooling of saliva
  - Urinary / bowel incontinence
  - Post-ictal drowsiness

- During a convulsion, the child's arms and legs stiffen because the muscles are contracting.
- The child will lose consciousness for a period of time or not be able to respond to spoken directions.
- Loss of consciousness with ONLY uprolling of eyeballs without tonic-clonic jerk also may be considered as convulsion.
- The child may have drooling of saliva, urinary or bowel incontinence and/or post-ictal drowsiness.

GENERAL DANGER SIGNS

ASK: Has the child had convulsion during this illness ?

Possible causes of convulsion :

- **Infection : meningitis / encephalitis / cerebral malaria**
- **Space occupying lesion : tumour / abscess**
- **Head injury : Accidental or non-accidental injuries (NAI)**
- **Fever : Febriles Fits**

- Convulsions may be the result of fever.
- Convulsions may be associated with serious infection (meningitis, encephalitis, cerebral malaria) or other life threatening conditions such as space occupying lesion or head injury.
- All children who have convulsions now or have had convulsions during this illness should be considered seriously ill.

GENERAL DANGER SIGNS

Ask :

1. **Is the child able to drink or breastfeed?**
2. **Does the child vomits everything or greenish vomitous?**
3. **Has the child had convulsion during this illness**

Look :

4. **Is the child Drowsy or Unconscious?**
5. **is the child convulsing now?**

This slide is to recheck understanding of participants

Drill 1:

- What are the questions to ask in history taking for GDS?
- What is the definition of not able to drink / breastfeed
- What does it means by vomits everything?
- Greenish vomitus means?
- Definition of vomits everything
- Describe convulsion

Next ask participants how do they assess a child for drowsiness / unconscious

2.6 LOOK: Is the child drowsy or unconscious?

GENERAL DANGER SIGNS

ASK : Has the child had convulsion during this illness?

Drowsy Child :

- **Not alert to surrounding**
- **Stare blankly and not to notice what is going on around him / her**
- **Not responding to sound / movement**
- **Not looking at the mother's / caregivers face or health worker when stimulated**

- A drowsy or unconscious child is likely to be seriously ill.
- A drowsy child is not awake and alert when he or she should be.
- The child is drowsy and does not show interest in what is happening around her. She does not respond normally to sounds or movement.
- Often the drowsy child does not look at his or her caregiver or watch your face when stimulated.
- The child may stare blankly and appear not to notice what is going on around him or her.

GENERAL DANGER SIGNS

Look : Is the child Drowsy or Unconscious ?

Unconscious Child :

- **Unconscious child cannot be awakened and does not respond when he or she is called / touched / shaken**
- **Ask mother is the child unusually sleepy or if she cannot wake up the child**

- An unconscious child cannot be awakened. The child does not respond when he or she is called, touched or shaken.
- Ask the caregiver if the child seems unusually sleepy or if she cannot wake the child.
- Look to see if the child awakens when the caregiver talks or shakes the child or when you clap your hands. (Example: call name -> clap our hands -> shake child's hand)
- Remember: If the child is sleeping and has cough or has difficulty breathing, count the number of breaths per minute first before you try to wake the child.

- To give scenarios :
  - i. What if the child is sleeping and mom says he just had his feeding & slept – What would you do?
    - ask mom to wake up child
    - Mom says no need doctor. Would you follow the mothers' wish?
- Steps to assess :
  - i. Ask caretaker to wake the child up
  - ii. Make noise eg clapping our hands
  - iii. Health worker wake up child gently by shaking the hands

GENERAL DANGER SIGNS

LOOK : Is the child Drowsy or Unconscious?

Drowsy & Unconscious.mpg

- In the video, lethargy is drowsy
- Show from the video & asks participants
  - i. Why do you say that child is not drowsy / unconscious?
  - ii. Show stare blankly
  - iii. Child not responding to sound

- Watch the video and decide if the child is drowsy or convulsion

GENERAL DANGER SIGNS

Excercise :

GDS Excercise.wmv

2.7 LOOK: Is the child convulsing now?

GENERAL DANGER SIGNS

LOOK : Is The Child Convulsing Now?

What are the clinic feature?

- Any child who has convulsions now should be considered seriously ill.
- Let the participant describe convulsion (refer point 2.5 ASK: Has the child had convulsions during this illness?)

- Watch the 3 videos and describe the convulsion

GENERAL DANGER SIGNS

LOOK : Is the Child Is Convulsing Now?

Convulsions during this illness :

Febrile convulsion.mp4-1
Infant seizures.mp4
Infant convulsive seizure.mp4

All sick children should be routinely checked for general danger signs

- If you have found during the assessment that the child has a general danger sign, complete the rest of the assessment IMMEDIATELY.
- Remember that a child with any general danger sign has a severe problem. There must be NO DELAY IN TREATMENT.

3. REFERRAL FOR GENERAL DANGER SIGNS

- A child with any general danger sign needs urgent attention and pre-referral treatment.
- You should complete the rest of assessment immediately and give urgent pre-referral treatment then **referred urgently.**
- Do not give treatments that would unnecessarily delay referral
- Most children who have a general danger sign also have a severe classification. They are referred for their severe classification.

4. URGENT PRE-REFERRAL TREATMENT FOR GENERAL DANGER SIGNS

4.1 TREAT THE CONVULSING CHILD

Managing the airway, giving diazepam, lowering the fever and preventing low blood sugar are important steps in managing a convulsing child before referral to hospital.

1. **AIRWAY MANAGEMENT**
   - o Turn the child to the side
   - o Extend the neck slightly to open the airway
   - o Clear the airway -remove secretions by suction or manually
   - o Give oxygen
   - o Do not insert anything in the mouth

GENERAL DANGER SIGNS

Urgent Pre-Referral Treatment for Convulsion

AGE OR WEIGHT	Diazepam given rectally 10mg /2ml solution (Dose 0.3-0.5 mg/kg)	Diazepam RECTAL TUBE (5mg/tube)
2 mths to < 4 mths (3kg - < 6kg)	0.5 ml	½ tube
4 mths to < 12mths (6kg - < 10kg)	0.75 ml	½ tube
12 mths to < 3 yrs (10kg - < 14kg)	1 ml	1 tube
3 yrs to < 5 yrs (14kg - < 19kg)	1 ml	1 tube

2. **RECTAL DIAZEPAM**
   - Give Diazepam rectally according to dosage
   - Dosing of medication will be based on child's weight.
     - o Eg a child who is 12 mths & weighs 9.3 kg. How much diazepam to give? Show on the table : 0.75ml.
     - o Or a child who is 10 mths & weighs 11kg. How much diazepam to give? Show on table 1 ml
   - If convulsions have not stopped after 5 minutes, give a second dose of diazepam rectally
   - Maximum 2 doses of Diazepam are allowed
   - Do not give oral medication until convulsions have stopped

3. Methods of giving Rectal Diazepam:

GENERAL DANGER SIGNS

Urgent Pre-Referral Treatment for Convulsion

Rectal Diazepam (Diazepam Vial)

- **Use tuberculin syringe (1ml) to withdraw diazepam solution - based on weight of child**
- **Removed needle**
- **Insert syringe 4-5cm into rectum and inject Diazepam solution**
- **Hold buttocks together for few minutes**

Rectal Diazepam (Diazepam Vial)

- **Insert nozzle of tube into rectum and squeeze amount according to appropriate dose**
- **Hold buttocks together for few minutes**

1. **Give Diazepam Rectally**
   - Draw up the dose from an ampoule of diazepam into a tuberculin (1ml) syringe. The dose of the diazepam will be based on the weight of the child, when possible
   - Then remove the needle
   - Insert the syringe 4-5 cm into the rectum and inject the diazepam solution
   - Hold buttocks together for a few minutes

OR

2. **Give Commercial Rectal Tube Diazepam If Available**
   - Insert the nozzle of the tube into the rectum and squeeze the amount according to the appropriate dose
   - Hold the buttocks together for a few minutes

4.2 TREAT THE CHILD TO PREVENT LOW BLOOD SUGAR

GENERAL DANGER SIGNS

Urgent Pre-Referral Treatment: to Prevent Low Blood Sugar

- **30-50 mls breast milk / breast milk substitube / Dextrose 10% if child is able to swallow**
- **If child not able to swallow may need to insert NG tube**

- Low blood sugar occurs in serious infections such as severe malaria or meningitis. It also occurs when a child has not been able to eat for many hours. It is dangerous because it can cause brain damage.
- Giving some breastmilk, breastmilk substitute, or 10% Dextrose provides some glucose to treat and prevent low blood sugar. This treatment is given once, before the child is referred to the hospital.
- Low blood sugars is when Hypocount/Dextrostix is < 2.6 mmol/L

- If the child is able to breastfeed:
  - o Ask the mother to breastfeed the child
- If the child is not able to breastfeed but is able to swallow:
  - o Give 30-50 ml of expressed breastmilk or a breastmilk substitute.
  - o If neither of these is available, give 30-50 ml of 10% dextrose orally before departure
- If the child is not able to swallow and you know how to use a nasogastric (NG) tube
  - o Give 30-50 ml of milk or 10% dextrose solution by nasogastric tube
- If not able to swallow and able to insert IV line
  - o Give IV Dextrose 10% 2-3 ml/kg

GENERAL DANGER SIGNS

SUMMARY

ALL SICK CHILDREN MUST CHECK GENERAL DANGER SIGNS

Ask :

1. **Is the child able to drink or breastfeed?**
2. **Does the child vomits everything or greenish vomitous?**
3. **Has the child had convulsion during this illness**

Look :

4. **Is the child Drowsy or Unconscious?**
5. **is the child convulsing now?**

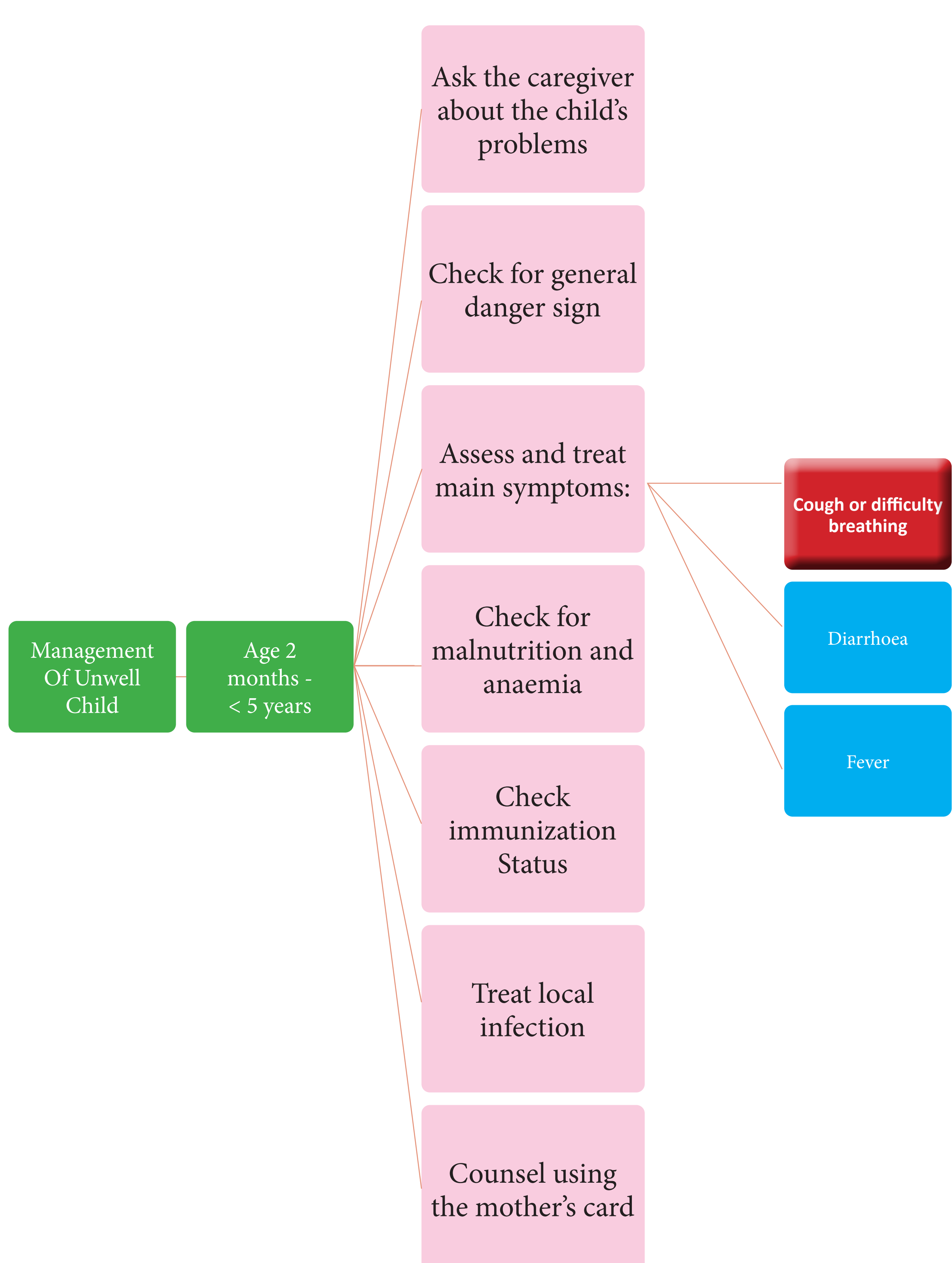
Drill 2 : Recap with the participants on:

- What are the 3 questions that we should ask ourselves when assessing the unwell child?
- What further clarifying questions to ask – child's feeding / fluid intake in terms of frequency & amount over 12-24 hrs.
- What does not able to drink or breastfeed means?
    - o Not able to suck or ability to swallow is weak OR amount / frequency of feeding will be less than half over a period of 12-24 hrs.
- What does it means by vomits everything?
    - o what goes in, goes out OR frequency / amount of vomiting is more than half from the intake over 12-24hrs
- What could greenish vomitus mean?
    - o Bile content that indicates intestinal obstruction
- History of convulsion during this illness – let participant describe convulsion & what questions need to be asked
- LOOK for:
    - o Drowsy / Unconscious – Definition?
    - o Steps on how to assess:
        1. Ask caretaker to wake up the child
        2. Make sounds eg by clapping hands
        3. Healthcare provider gently shake the child's hand
    - o Describe convulsions

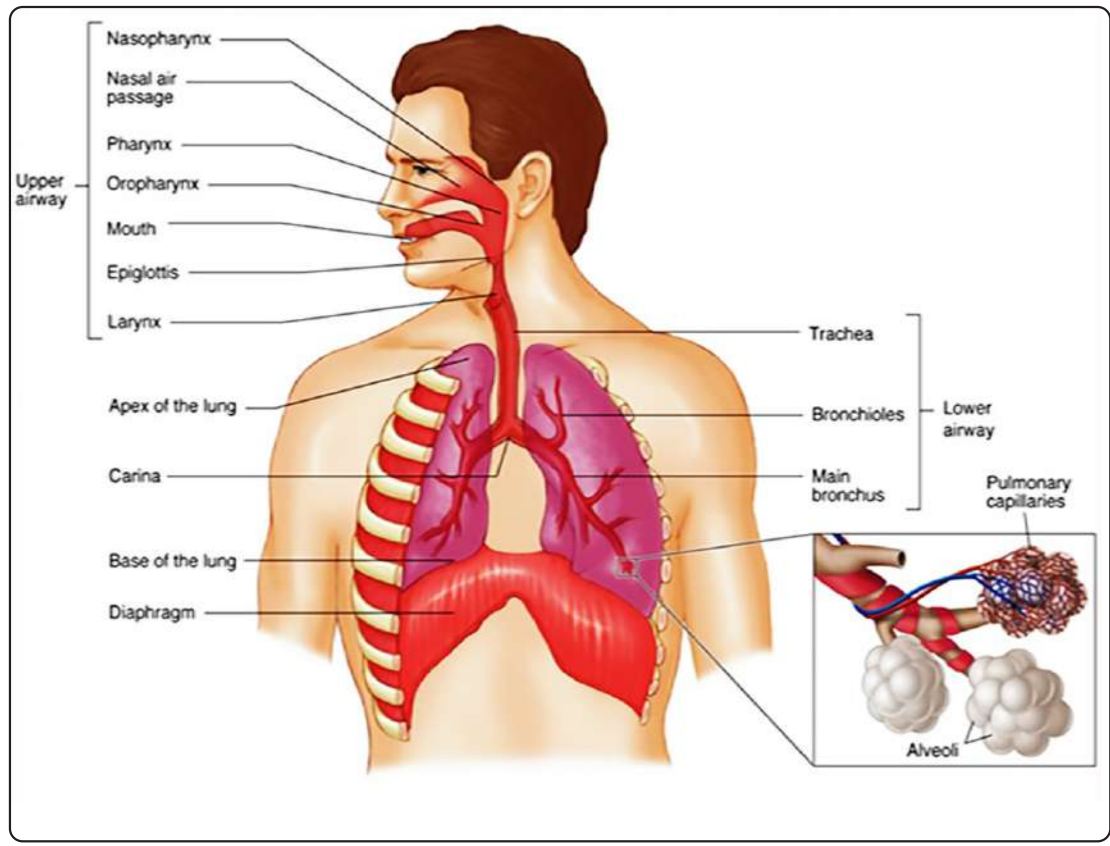
COUGH OR DIFFICULT BREATHING IN CHILDREN

4. COUGH OR DIFFICULT BREATHING IN CHILDREN

History of cough should be elicated in all children

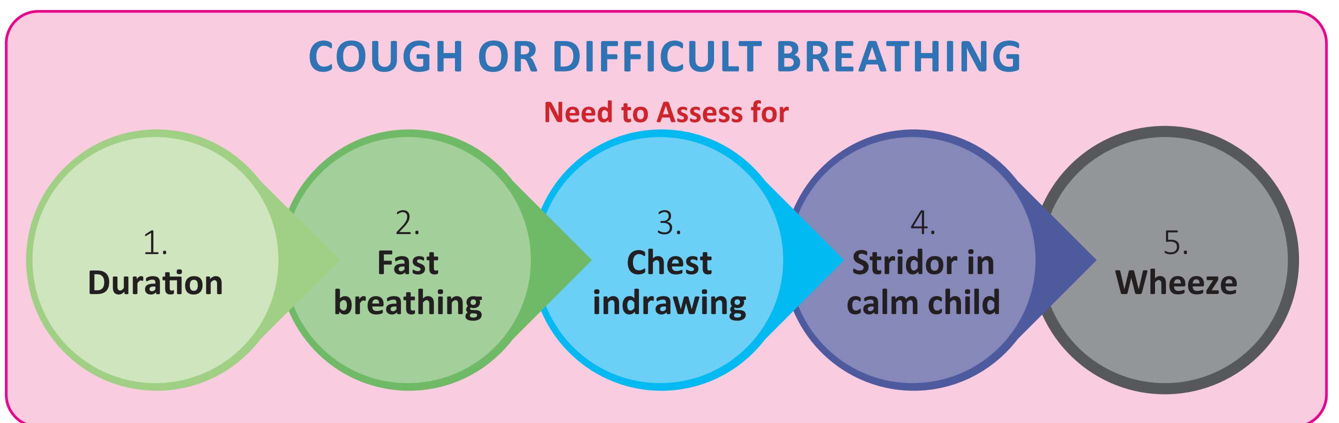


COUGH OR DIFFICULT BREATHING



Age 2 Months up to 5 Years

- Cough is the most common complaint
- Cough can be due to airway, lung or heart problems
- Respiratory infection can occur at any part of respiratory tract.
- Pneumonia can cause death due to hypoxia or sepsis and is one of the common cause of preventable death in Under 5.



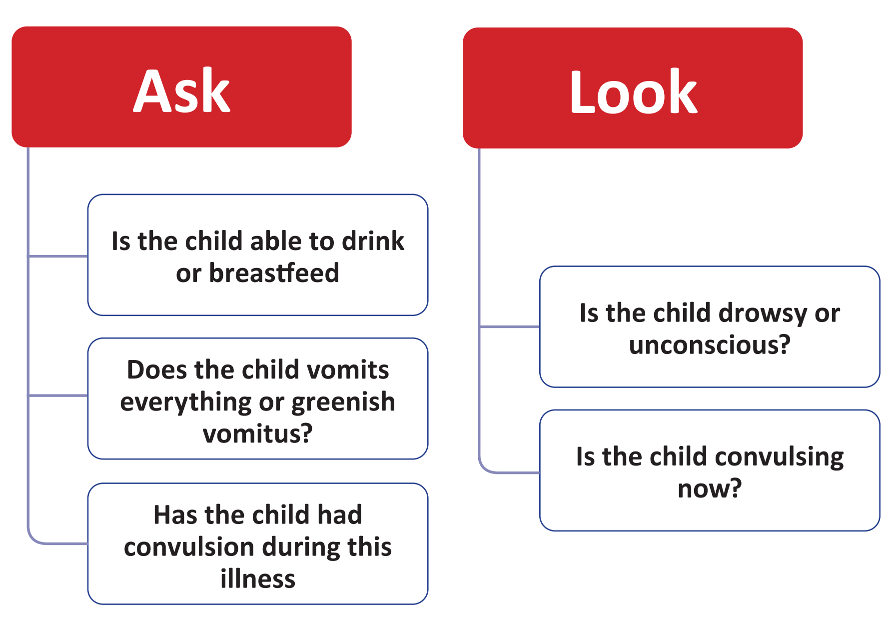
COUGH OR DIFFICULT BREATHING

What is General Danger Signs?

Drill 3:
Before assessing cough, GDS should be assess first
Ask participants about GENERAL DANGER SIGNS

1. **ASK :**
   - Is the child able to drink or breastfeed?
   - Does the child vomit everything?
   - Has the child had convulsion during this illness?
2. **LOOK :**
   - See if the child is drowsy or unconcious?
   - See if the child is convulsing now?

All unwell child should be assess for general danger signs



Drill 3:
Before assessing cough, GDS should be assess first
Ask participants about GENERAL DANGER SIGNS

COUGH OR DIFFICULT BREATHING

Assess

Does the child have cough or difficult breathing (YES / NO)

- For **how long**?........days
- Count the breaths in one minute.
- .... breath per minute fast breathing
- Look for the chest indrawing
- Look and listen for stridor
- Look and listen for wheeze
- Check spO2 (if available)

- Ask for how long? – child who has had cough or difficult breathing for more than 14 days has chronic cough.
- Ask participants what are the common causes of chronic cough > This may be a sign of PTB, Asthma , Whooping cough, foreign body

COUGH OR DIFFICULT BREATHING

Must count the breath in one minute

- Look for breathing movement anywhere on the child's chest or abdomen
- Child must be calm
- Focus point for counting
- Cut off rates for fast breathing depends on child's age

Child's age	Fast breathing
2 months up to 12 months	≥ 50 breath /minute
12 months up to 5 years	≥ 40 breath/minute

To emphasize on the need to count for 1 minute as breathing pattern in children is irregular

- Look for breathing movement in a well exposed child
- Focus point for counting > on the child's chest or abdomen
- Child must be calm
- Not to count during feeding
- Cut off rates for fast breathing depends on child's age

COUGH OR DIFFICULT BREATHING

Counting the number of breath in 1 minute:

- **Exercise 1**
- **Exercise 2**

Watch the video and count the number of breath

COUGH OR DIFFICULT BREATHING

Look for chest indrawing

- Chest indrawing – Lower chest wall goes IN when the child breathes IN (both intercostal muscle and the ribs)

1. Lift the child's shirt
2. Must be calm, not during feeding or crying
3. Adequate lighting
4. Look for **CHEST INDRAWING**
5. If unsure, examiner to change position and observe again

Look for chest indrawing

- In normal breathing, the whole chest wall upper and lower and abdomen moves out when the child breathes in
- Chest indrawing – Lower chest wall goes IN when the child breathes IN (both intercostal muscle and the ribs)
- Chest indrawing should be persistent during observation

COUGH OR DIFFICULT BREATHING

Chest in drawing

Chest wall indrawing (5 Cases).wmv

Chest wall indrawing (5 Cases ans.wmv

COUGH OR DIFFICULT BREATHING

Look and Listen for stridor

- **Stridor is a harsh noise / sound when the child breathes IN**
- Stridor happens when there is a swelling of the larynx, trachea or epiglottis. This swelling interferes with air entering the lung. 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.

Assessment (Look and listen)

1. Child must be calm
2. Look to see when the child breathes IN
3. Listen for stridor

Look and Listen for stridor

- Stridor is a harsh noise /sound when the child breathes IN
- Stridor happens when there is a swelling of the larynx, trachea or epiglottis. This swelling interferes with air entering the lung. 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.

Assessment (Look and listen)

1. Child must be calm
2. Look to see when the child breathes IN
3. Listen for stridor

If there is noisy breathing and unsure if stridor is present, clear the nose with wet cotton swab and listen again.

COUGH OR DIFFICULT BREATHING

Stridor explanation
Video\14 _ Exercise Stridor.MPG

COUGH OR DIFFICULT BREATHING

Look for chest indrawing

Look and Listen for wheeze

- **Wheeze is a musical noise heard when the child breathes OUT.**
- Wheezing occurs when the air flow from the lung is obstructed due to narrowing of the small airways.

Assessment (Look and Listen)

1. Look to see when the child breathes OUT
2. Listen for wheeze.

** Hold your ear near the child's mouth because wheezing sound can be difficult to hear. Breathing out phase requires great effort and is longer than normal. You may also use a stethoscope to listen for rhonchi

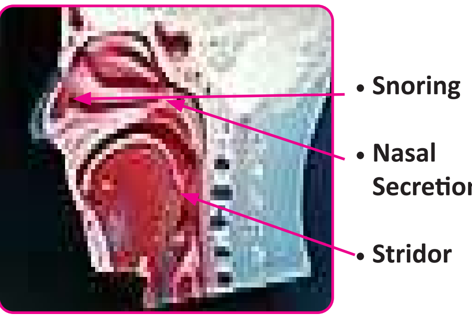
COUGH OR DIFFICULT BREATHING

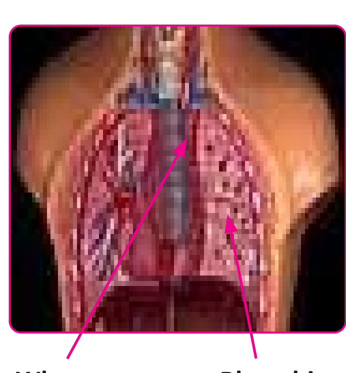
Look and Listen for wheeze.wmv

Wheeze Excercise.wmv

COUGH OR DIFFICULT BREATHING

Noisy Breathing





These location produces sounds

- Snoring is from the pharynx
- Nasal secretions from any part of the upper airways
- Stridor is from any part of the upper airway
- Wheezing if from lower airways (bronchus, bronchioles)

CHECKLIST		
APPROACH TO UNWELL CHILDREN UNDER FIVE YEARS		
THE unwell child age 2 months up to 5 years		
Name:	**Age:**....................... **Weight:**	**Temperature:** .... ˚C
Ask: What are the child's problem?..	**Visit:**	**1st /2nd/3rd/4th/5th**
ASSESS(Circle all signs present)		
ASK	**LOOK AND FEEL**	**REFER FOR ADMISSION IF PRESENT**
CHECK FOR GENERAL DANGER SIGNS		
• NOT ABLE TO DRINK OR BREASTFEED	• DROWS OR UNCONSCIUS	• General danger sign
• VOMIT EVERYTHING OR GREENISH VOMITUS	• CONVULSING NOW	
• CONVULSIONS DURING THIS ILLNESS		
DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING (YES/NO)		
	• Count the breaths in one minute	• Chest in drawing
• For how long?..................days	...........breath per minute Fast breathing?	• Stridor in calm child
	• Check SP02 (if available)	• Fast breathing
	• Look for chest indrawing	• SP02 < 96%
	• Look and listen for stridor	
	• Look and listen for wheeze	

Checklist for unwell child 2months till < 5 years

To emphasize on criteria for admission

**If pulse oximeter is available, determine oxygen saturation and refer if < 95%.*

COUGH OR DIFFICULT BREATHING

Salbutamol Neb:

0.5ml Salbutamol solution + 3.5 ml Normal Saline • Neb until liquid is used up or at least 15 minutes

- Neb with Oxgen flow 6-8 Litre / min
- Neb until liquid is used up or at least 15 minutes
- After 15 minutes have to reassess
- Neb can be given up to 3 times if rhonchi or wheeze still present

Salbutamol Neb:

0.5ml Salbutamol solution + 3.5 ml Normal Saline Neb with Oxygen flow 6-8 litre / min

- Neb until liquid is used up or at least 15 minutes
- Reassess After 15 minutes of completion of neb
- Neb can be given up to 3 times if rhonchi or wheeze still present

COUGH OR DIFFICULT BREATHING

Alternative To Nebulization (Modified Spacer/Aerochamber + MDI Salbutamol)

Treatment.mpg

Aerochamber

- The use of MDI with aerochamber device as alternative mode of treatment is easy and available.
- 2 puffs every 10-15 minutes interval up to 3 times. If not improving, refer to hospital

COUGH OR DIFFICULT BREATHING

Remember Not To Use Cough Syrup

Baecause they may cause

- Sedation to the child - **Not able to assess the true severity**
- interfere with child's feeding
- Interfere with child's ability to cough up secretions from the lungs
- Abdominal distension

COUGH OR DIFFICULT BREATHING

Adam is 6 months old and weighs 5.5 kg. His temperature is 38 ºC.
His mother said he has had cough for 2 days.
The healthcare provider checked for general danger signs/ The mother said that Adam is able to breastfeed. He has not vomited during this illness. He has not had convulsions. Adam is not lethargic or unconscious.
The healthcare said to the mother, "I want to check Adam's cough. You said he has had cough for 2 days now. I am going to count his breaths. He will need to remain calm while I do this." The HCP counted 58 breaths per minute. he didn not see chest indrawing or hear stridor.

1. What signs does Adam have?
2. Definiton of stridor, wheeze, chest indrawing and fast breathing
3. Where to refer

Drill 4

- Scenario to check on participants understanding

CHECKLIST		
APPROACH TO UNWELL CHILDREN UNDER FIVE YEARS		
THE unwell child age 2 months up to 5 years		
Name:	**Age:**...................... **Weight:**	**Temperature:** .... ˚C
Ask: What are the child's problem?..	**Visit:**	1st /2nd/3rd/4th/5th
ASSESS(Circle all signs present)		
ASK	**LOOK AND FEEL**	**REFER FOR ADMISSION IF PRESENT**
CHECK FOR GENERAL DANGER SIGNS		
• NOT ABLE TO DRINK OR BREASTFEED	• DROWS OR UNCONSCIUS	• General danger sign
• VOMIT EVERYTHING OR GREENISH VOMITUS	• CONVULSING NOW	
• CONVULSIONS DURING THIS ILLNESS		
DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING (YES/NO)		
	• Count the breaths in one minute	• Chest in drawing
• For how long?..................days	...........breath per minute Fast breathing?	• Stridor in calm child
	• Check SP02 (if available)	• Fast breathing
	• Look for chest indrawing	• SP02 < 96%
	• Look and listen for stridor	
	• Look and listen for wheeze	

- Use the checklist to discuss on the answers for the drill

COUGH OR DIFFICULT BREATHING

Need to assess for:

1. Duration

ASK: how long the child has cough

2.Fast breathing

Count the breath for 1 minute

In child 2 months – 12 months : > 50 breath/min

In child 12 months – 5 years: > 40 breath/min

3. Chest Indrawing

Lower chest wall goes IN when child breathes IN

4. Stridor

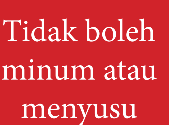
A harsh noise/ sound when the child breathes IN

Child must be calm during assessment

5. Wheeze

A musical noise heard when the child breathes OUT

ADVISE WHEN TO RETURN IMMEDIATE



Tidak boleh minum atau menyusu

Sakit semakin teruk

Mengalami demam sekarang

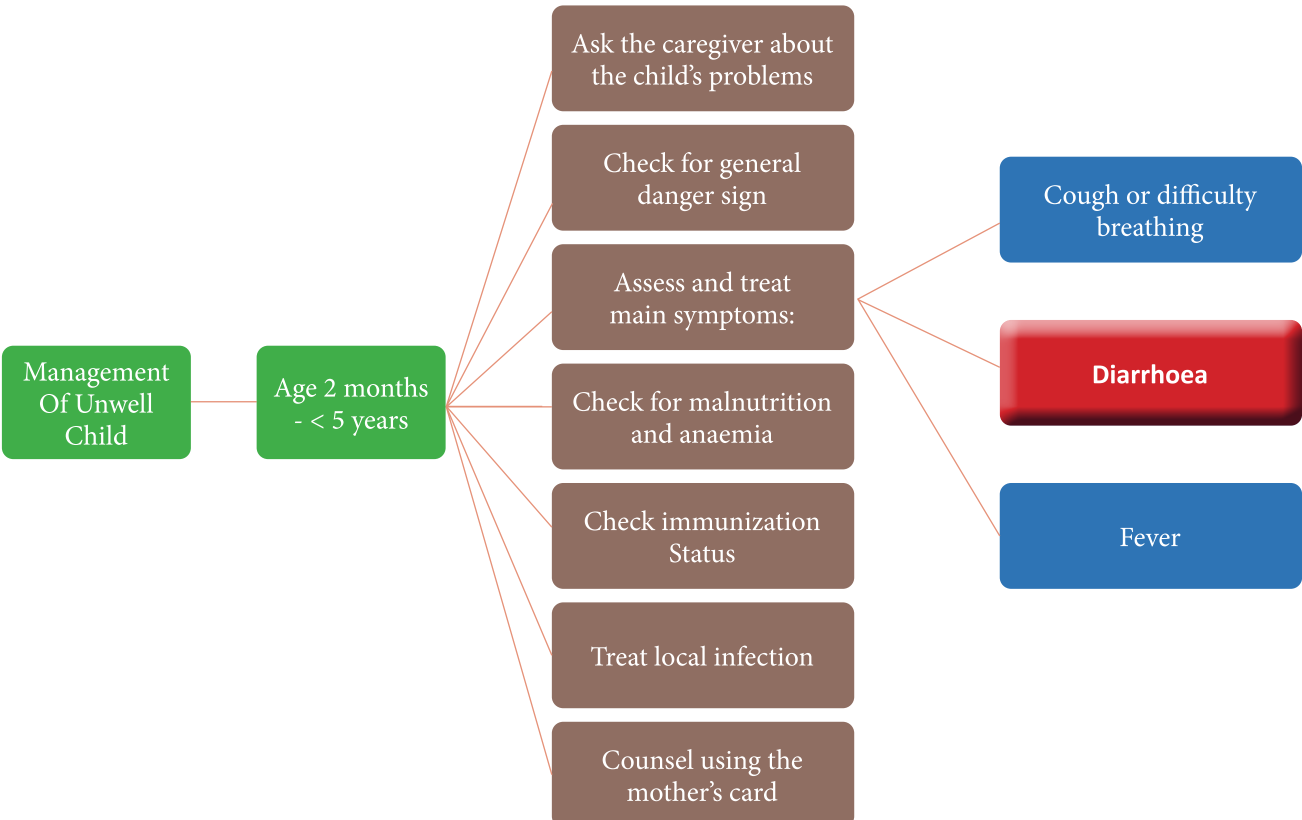
Sawan

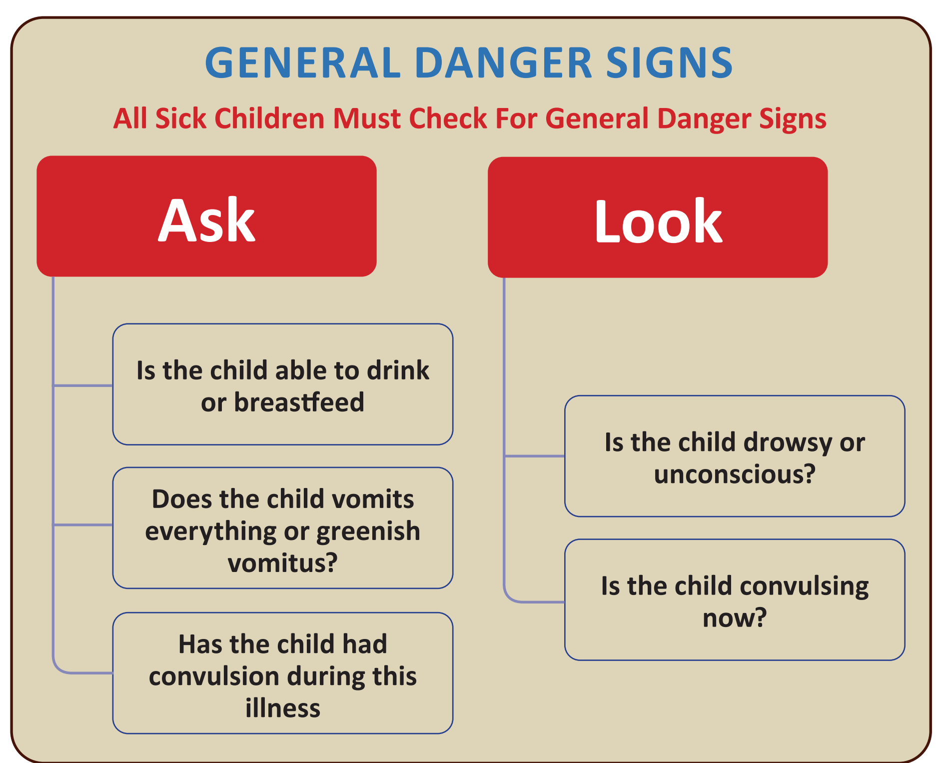
Susah bernafas

Bernafas laju

DIARRHOEA

4. DIARRHOEA





Recap on general danger signs – ask participant what is GDS?

Definition Of Diarrhoea

DIARRHOEA

Definition

- Loose or watery stools ≥ 3 x in a 24-hour period
- Common in age 6 months- 2yrs old
- More common in babies aged < 6 months who are drinking infant formulas
- Frequent passing of normal stools is not diarrhoea.
- Babies who are exclusively breast fed often have soft stools; this is not diarrhoea.

Types Of Diarrhoea

DIARRHOEA

Types Of Diarrhoea

- Diarrhoea less than 14 days is acute diarrhoea
- Diarrhoea 14 days or more is persistent diarrhoea
- Diarrhoea with blood in stool with or without mucus is called dysentery (*Shigella* bacteria)

Complications Of Dehydration

DIARRHOEA

Complications of Dehydration

- Seizures
- Shock with tachycardia, fast breathing
- Kidney failure (no urination)
- Brain oedema
- Coma and death

DIARRHOEA

Assessment

- History
- Days, Frequency, blood in stool

Physical Examination - Signs of dehydration

- General condition
- Sunken eyes
- Offer child fluid
- Skin Pinch at Abdomen

ASK	LOOK AND FEEL
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: Drowsy or unconcious? Restless or irritable? • Look for sunken eyes. • Offer thr child fliuds. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? • Pinch the skin of the abdomen. Does it go back: very slowly (longer than 2 seconds)? slowly?

Important questions to ask during assessment of diarrhoea

- Ask duration of diarrhoea
- Ask presence of blood in stool

General Condition to look for in children with diarrhoea

ASSESS DIARRHOEA

Look for General Condition

1.Drowsy or unconscious

- Severe dehydration may cause the child to become drowsy or unconscious. This is one of the general danger sign.

2.Restless or irritable.

- A child is restless or irritable all the time, or every time he or she is touched and handled.
- If the infant or child is calm when breastfeeding but again restless or irritable when he or she stops breastfeeding, he or she has the sign "restless or irritable"
- Many children are upset when in the clinic. If they can be consoled and calmed – Not "restless or irritable"

DIARRHOEA

Look For Sunken Eyes

- Decide if you think the eyes are sunken
- If unsure, ask the mother if she thinks her child's eyes look unusual
- Diarrhoea sunken eyes.mpg

DIARRHOEA

Look For Sunken Eyes

Video\19_ExerciseSunkenEyes.MPG

DIARRHOEA

Offer Child Fluid

1. Is the child not able to drink?

- A child is not able to drink if he or she is not able to suck or swallow when offered a drink
- A child may not be able to drink because he or she is drowsy or unconscious

2. Is the child drinking poorly

- A child drinking poorly if he or she is weak and cannot drink without help
- He may be able to swallow only if fluid is put in his or her mouth

Emphasize offering fluid is one of the compulsory assessment. Offer only clear fluid as to reduce risk of aspiration

DIARRHOEA

Offer Child Fluid

3. Is the child drinking eagerly, thirsty?

A child has the sign drinking eagerly, thirsty if it is clear that the child wants to drink. Look to see if the child reaches out for the cup or spoon when you offer him water. When the water is taken away, see if the child is unhappy because he or she wants to drink more.

If the child takes a drink only with encouragement and does not want to drink more, he or she does not have the sign "drinking eagerly, thirsty."

Video - Diarrhoea Assess Drinking.wmv

DIARRHOEA

Pinch The skin of the Abdomen

Method

- Lie the child flat
- Locate the area halfway between umbilicus and the side of abdomen
- Use the thumb & first finger and pick all layers of skin
- Pinch the skin for one second and then release it.

When you release the skin, see if the skin pinch goes back:

- Very slowly (> 2 seconds) or
- Slowly (skin stays up even for a brief instant)

Pinch the skin.mpg

- Ask the caregiver to place the child on the examination table so that the child is flat on his or her back with arms at sides (not over head) and legs straight. Otherwise ask the caregiver to hold the child so that he or she is lying flat on the caregiver's lap.
- Locate the area on the child's abdomen halfway between the umbilicus and the side of the abdomen.
- To do the skin pinch, use your thumb and first finger. Do not use your fingertips because this will cause pain.
- Place your hand so that when you pinch the skin, the fold of skin will be in a line up and down the child's body and not across the child's body.
- Firmly pick up all of the layers of skin and the tissue under them.
- Count 001 - 002
- May be difficult to elicit in obese child

MANAGEMENT OF DIARRHOEA

Assessment	Classification	Treatment	Aim of Treatment
≥ 2 signs **- Drowsy or unconscious** **-Sunken eyes** **-Not able to drink or drinking poorly** **-Skin pinch goes back very slowly**	Severe Dehydration	Plan C Refer Urgently IV Fluid	Fluid resuscitation
≥ 2 signs **- Restless or irritable** **-Sunken eyes** **-Drinks eagerly, thirsty** **-Skin pinch goes back slowly**	Some Dehydration	Plan B Refer hospital	To treat the dehydration
- Not enough signs to classify as some or severe dehydration.	NO Dehydration	Plan A Home care	To prevent from dehydration

- To explain to participant why each classification needs to be treated, especially for the one with no dehydration (so they can explain to the parents/caretaker as well)

IF DIARRHOEA > 14 DAYS & BLOOD IN STOOL

SIGNS	CLASSIFICATION	MANAGEMENT
With or without dehydration present	PERSISTENT DIARRHOEA (> 14 days)	> Refer for further investigation depending on local setting
• Blood in the stool	DYSENTERY	> Refer for further investigation depending on local setting

Diarrhea > 14 days & blood in stool

- Refer for further investigation depending on local setting

DIARRHOEA

Plan C For Severe Dehydration

- **REFER URGENTLY**
- **Treat with intravenous (IV) NS 0.9% quickly (Plan C)**

Age	20mls/kg	80mls/kg
Under 12 months	**1 hour**	**5 hours**
12 months - 5 years	**1/2 hour**	**2 1/2 hours**

1 Give 20mls/kg fluid
2 Check for radial pulse, if present continue with 80mls/kg
3 If radial pulse absent, repeat 20mls/kg, refer urgently and continue 80mls/kg along the way

DIARRHOEA

Plan C For Severe Dehydration

If not able to insert IV line, use naso-gastric tube (NG) or by mouth

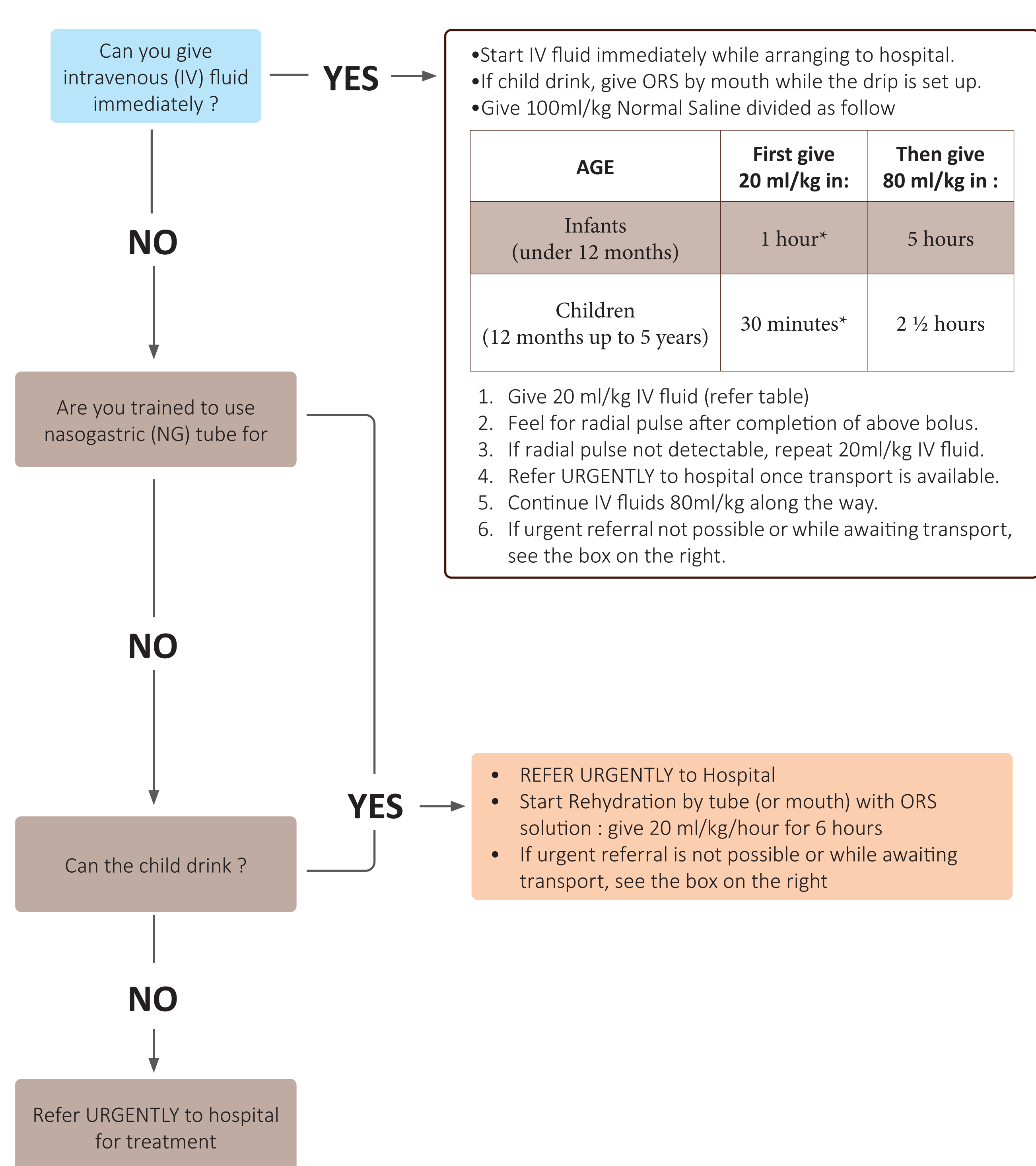
- Give ORS 20mls/kg/hr for 6 hours (total 120ml/kg)
- Reassess every 1 hour
  - If repeated vomiting or increasing abdominal distension, give the fluid more slowly
  - If hydration status is not improving after 3 hours, try to set IV line and give IV fluid if immediate referral not possible

Refer the child as soon as possible

GIVE EXTRA FLUID FOR DIARRHOEA AND CONTINUE FEEDING

PLAN C : Treat Severe Dehydration Quickly

➩FOLLOW THE ARROW. IF THE ANSWER IS “YES” , GO ACROSS. IF “NO”, GO DOWN



AGE	First give 20 ml/kg in:	Then give 80 ml/kg in :
Infants (under 12 months)	1 hour*	5 hours
Children (12 months up to 5 years)	30 minutes*	2 ½ hours

Sumber: Chart Booklet IMCI KKM National Adaption January 2011

IF Urgent Referral is NOT possible or while awaiting transport :

A. If you can give IV fluid :

- Proceed to give remaining IV fluid 80 ml/kg (refer table)
- Review the child every 1 hour.
- Also give ORS (about 5 ml/kg/hour) as soon as the child can drink : usually after 3-4 hours (infants) or 1-2 hours (children).
- Reassess an infant after 6 hours and a child after 3 hours. Classify dehydration. Then choose the appropriate plan (A, B or C) to continue treatment.
- Observe the child at least 6 hours after rehydration to be sure the caregiver can maintain hydration giving the child ORS by mouth.

B. If you are trained to use naso-gastric tube or if the child can drink :

- Give ORS 20 ml/kg/hour for 6 hours (total 120 ml/kg).
- Review the child every 1 hour.
- If there is repeated vomiting or increasing abdominal distention, give the fluid more slowly.
- After 6 hours, reassess the child. Classify dehydration. Then choose the appropriate plan (A, B, or C) to continue treatment.
- Observe the child at least 6 hours after rehydration to be sure the caregiver can maintain hydration giving the child ORS by mouth.

NOTE:
At all time, all efforts should be made to send the child to hospital as soon as possible.

Plan B : Treat Some Dehydration with ORS

In the clinic, give recommended amount of ORS over 4-hour period

→ DETERMINE AMOUNT OF ORS TO GIVE DURING FIRST 4 HOURS.

AGE*	Up to 4 months	4 months up to 12 months	12 months up to 2 years	2 years up to 5 years
WEIGHT	< 6 kg	6 - < 10 kg	10 - < 12 kg	12 - < 20 kg
AMOUNT OF FLUID (ML) OVER 4 HOURS	200 - 450	450 - 750	750 - 900	900 - 1500

* Use the child's age only when you do not know the weight. The approximate amount of ORS required (in ml) can also be calculated by multiplying the child's weight (in kg) times 75.

- If the child wants more ORS than shown, give more.

⇨ SHOW THE MOTHER/CAREGIVER HOW TO GIVE ORS SOLUTION.
- Give frequent small sips from a cup or spoon.
- If the child vomits, wait 10 minutes. Then continue, but more slowly.
- Continue breastfeeding whenever the child wants.

⇨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.

⇨IF THE MOTHER/CAREGIVER MUST LEAVE BEFORE COMPLETING TREATMENT:
- Show her how to prepare ORS solution at home.
- Show her how much ORS to give to finish 4-hour treatment at home.
- Give her enough ORS packets to complete rehydration. Also give another 8 packets to use at home (Plan A)
- Explain the 4 Rules of Home Treatment:
  1.**GIVE EXTRA FLUID**
  2.**GIVE ZINC** if available for those diarrhoes more than 5 days (age 2 months up to 5 years)
  3.**CONTINUE FEEDING** (exclusive breastfeeding if age less than 6 months)
  4.**WHEN TO RETURN**

Sumber: Chart Booklet IMCI KKM National Adaption January 2011

DIARRHOEA

Plan B : Treat Some Dehydration with ORS in the Clinic

- Treat a child who has diarrhoea and **SOME DEYHRATION** for an initial period of 4 hours in the clinic
- Heath worker to prepare the ORS amount needed in 4 hours
- Mother to focus in giving ORS (not learning how to prepare ORS)

Determine the amount of ORS to give during the first 4 hours
Child's weight (in kilograms) multiply by 75.

- No other food or fluid in the first 4 hours
- Continue breastfeeding whenever the child wants.

- Emphasize-plan B should be started in clinic while awaiting referral
- NO other fluid other than ORS & breastmilk

DIARRHOEA

Plan B : Treat Some Dehydration with ORS in the Clinic

AGE	Up to 4 months	4 months up to 12 months	12 months up to 2 years	2 years up to 5 years
WEIGHT	< 6 kg	6 - < 10 kg	10 - < 12 kg	12 - < 20 kg
AMOUNT OF FLUID (ML) OVER 4 HOURS	200 - 450	450 - 750	750 - 900	900 - 1500

- Approximate amount of ORS required (in ml) is calculated by:
  Body Weight (kg) x 75 or refer to table above if weight is not known.
- Give frequent small sips from a cup or spoon
- If the child vomit, wait 10 minutes. Then continue, but more slowly
- Continue breastfeeding whenever the child wants

- Preferably use weight rather than age

DIARRHOEA

Plan B : Treat Some Dehydration with ORS in the Clinic

- **After 4 hours, reassess hydration status**
- If no dehydration, switch to Plan A
- If there is still some dehydration, repeat Plan B. Begin feeding the child in clinic. Observe the child in clinic for another 4 hours to reassess later.
- If the child now has **SEVERE DEHYDRATION**, give Plan C and refer urgently to hospital.

- During subsequent cycle of Plan B, allow other fluids in addition to ORS

DIARRHOEA

Plan A : Treat Diarrhoea At Home

Treat child who has diarrhoea with NO DEHYDRATION
1. Give extra fluid (as much as the child will take)
- Breast feeding
- ORS solution
- Food-based fluid (such as soup)
- Cooled boiled water

2. Continue feeding
3. When to return

DIARRHOEA

Plan A : Treat Diarrhoea At Home

- **It is especially imprtant to give ORS at home when:**
  - The child has been treated with Plan B or Plan C during this visit
  - The child cannot return to the clinic if the diarrhoea get worse

- **Show the mother how much fluid to give in addition to the usual fluid intake:**
  - Up to 2 years : 50 to 100 mls after each loose stools
  - 2 years or more : 100 to 200 mls after each loose stools

- **Give frequent small sips from a cup or spoon.**
- **If the child vomit, wait 10minutes. Then continue, but more slowly**
- **Continue giving extra fluid until the diarrhoea stops.**

DIARRHOEA

Plan A : Treat Diarrhoea At Home

- **Wash your hands**
- **Pour ORS into a clean container - check ORS powder expiry date and the condition of the ORS powder**
- **Mix ORS with 250ml of cooled boiled water**
- **Mix well until the powder is completely dissolved**
- **Taste the solution so you know how it tastes.**
- **Tell mother to keep fresh ORS in a clean covered container, throw away any remaining solution after 24 hours**
- **Give the mother 8 sachets of ORS to use at home**

DIARRHOEA

Plan A : Treat Diarrhoea At Home

When to return immediately

- **Not able to drink or breastfeed**
- **Become sicker**
- **Develops a fever**
- **Has blood in stool**
- **Drinking poorly**

Use a Mother's Card and Check the Mother's Understanding

WARNING

- **Antibiotics should not be used**
- **Most diarrhoeal episodes are caused by viruses**
- **Only give antibiotics to diarrhoea cases with SEVERE DEHYDRATION with cholera and DYSENTERY**
- **Do Not Give --Maxolon, Buscopan, Stemetil, Promethazine Kaolin, Lomotil and Charcoal ---**

NO benefits and has dangerous side-effects.

Scenario on Diarrhoea

DIARRHOEA

Case study

Video\22_Excercise G Case Study Josh.MPG

Scenario 1

Mother complains her daughter Mary, 9 months old has diarrhea and this is their first time coming to the clinic for this diarrhoea.

Mary weight, 8.2 kg and temperature, 37 ºC. Mary is able to drink milk and take porridge. She does not vomit. She has not had convulsions. You watch Mary. She looks very tired in mother's arms, but she watches you as you speak. When you reach out to her to take her hand, she grabs your finger. No cough.

Mother has already reported that Mary has diarrhoea. You ask mother how many days Mary has had diarrhoea, and she tells you 3 days. You ask mother if there is blood in her daughter's stool, and she tells you no.

Now you will examine Mary's condition. She seems restless and irritable, especially when you touch her. You begin to examine Mary for signs of dehydration. You check to see if she has sunken eyes, and it appears that she does. Mother agrees that her daughter's eyes look unusual. You offer her some water to drink and notice how she responds. She drinks poorly. Next, you give Mary a pinch test to determine how dehydrated she is. You ask Mom to place Mary on the examining table so that she is flat on her back with her arms at her sides, and her legs straight. You pinch the skin of Mary's abdomen, and it goes back in 1 second.

Drill 5 .

1. Does Mary have any general danger signs?
2. Classify the hydration status
3. How would you manage

Scenario 2

Mother tells you that Ahmad is 11 months old and has diarrhoea. This is their first time coming to the clinic for this diarrhoea.

You take Adam's weight, 10.5 kg, and temperature, 37 ⁰C. Adam is able to drink milk and take porridge. He does not vomit. He has not had convulsions. You watch Adam. He looks very tired in mother's arms, but he watches you as you speak. When you reach out to him to take his hand, he grabs your finger. No cough

Mother has already reported that Adam has diarrhoea. You ask mother how many days Adam has had diarrhoea, and she tells you 3 days. You ask mother if there is blood in her son's stool, and she tells you no.

Now you will examine Adam's condition. He seems alert and calm. You begin to examine Adam for signs of dehydration. You check to see if he has sunken eyes, and it appears that he does. Mother agrees that her son's eyes look unusual. You offer him some water to drink and notice how he responds. He drinks calmly. Next, you give Adam a pinch test to determine how dehydrated he is You ask Mom to place Adam on the examining table so that he is flat on his back with his arms at his sides, and his legs straight. You pinch the skin of Adam's abdomen, and it goes back in 1 second

1. Does Adam have any general danger signs?
2. Classify the hydration status
3. How would you manage

Summary

Summary

Diarrhoea in children

- Proper history
- Correct assessment
- Hydration status
- Treatment- Plan A,B,C
- Counsel mother when to return
- **REFER if unsure**

DIARRHOEA

Advise When To Return Immediately For All Children

Tidak berupaya untuk minum atau kerap muntah, air kencing yang sedikit

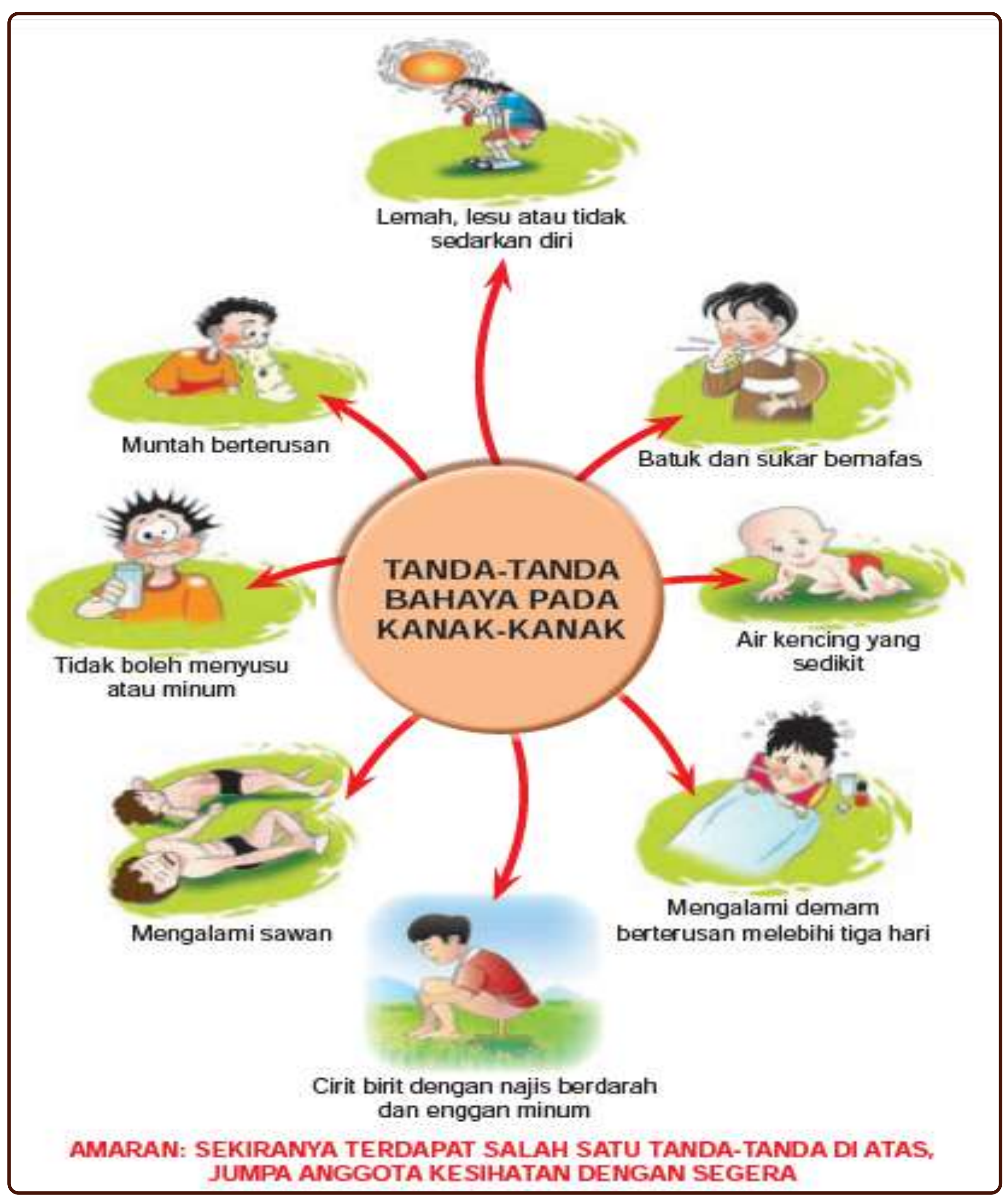
Menjadi semakin lemah atau tenat atau asyik tidur atau menangis berterusan

Mengalami deman panas (angat) atau ruam kulit

Mengalami sawan atau kejang atau mengeras (luput)

Najis bercampur dengan darah

Hanya minum sedikit atau tidak mahu minum atau air kencing yang sedikit


Lemah, lesu atau tidak sedarkan diri
Muntah berterusan
Batuk dan sukar bernafas
TANDA-TANDA BAHAYA PADA KANAK-KANAK
Tidak boleh menyusu atau minum
Air kencing yang sedikit
Mengalami sawan
Mengalami demam berterusan melebihi tiga hari
Cirit birit dengan najis berdarah dan enggan minum
AMARAN: SEKIRANYA TERDAPAT SALAH SATU TANDA-TANDA DI ATAS, JUMPA ANGGOTA KESIHATAN DENGAN SEGERA

FEVER

FEVER

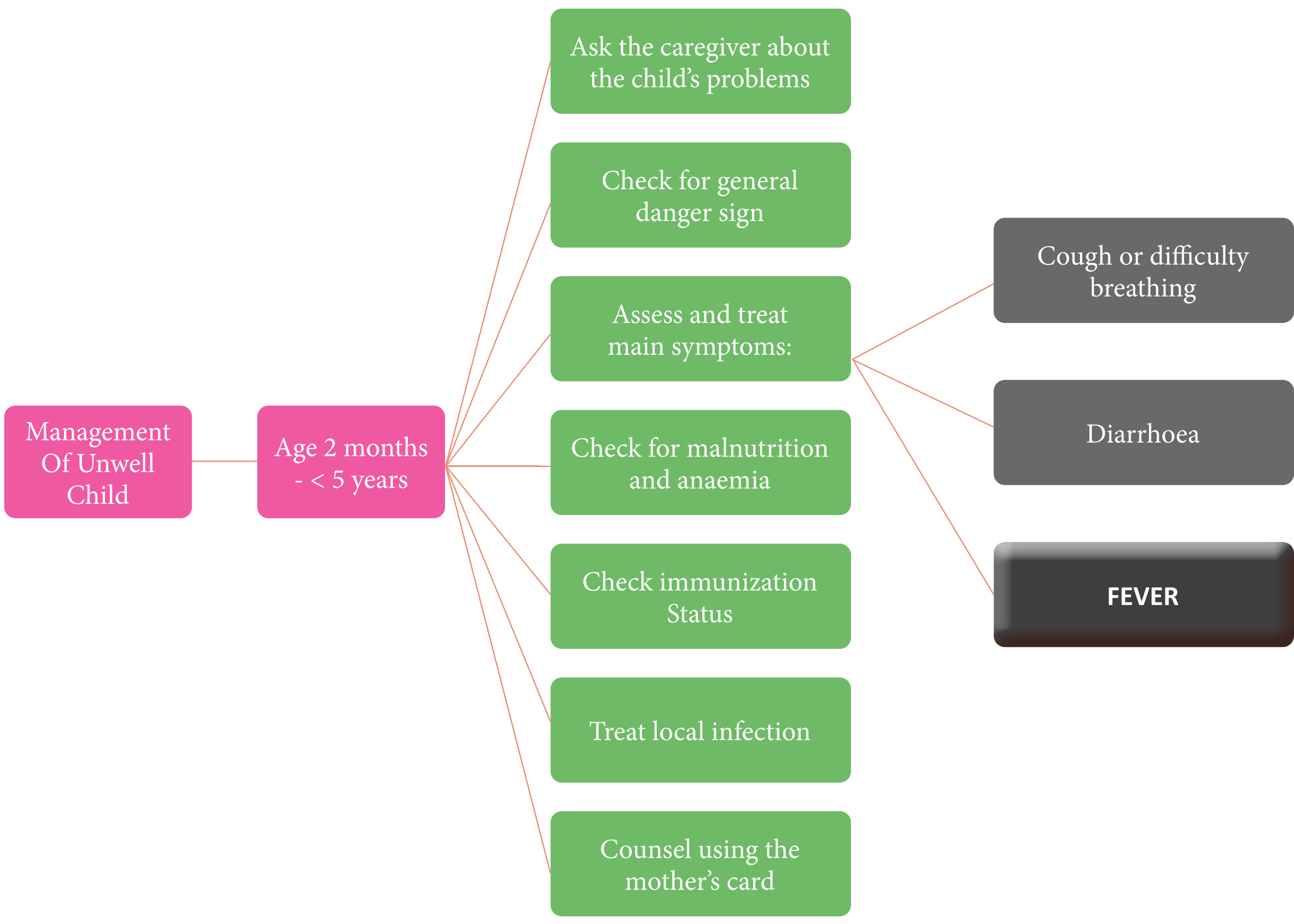
- **Fever is a very common condition**
- **Fever may be caused by:**

  ✓ Simple cough or cold or other viral infection
  ✓ Local infections
  ✓ Severe infections eg. Meningitis, Typhoid fever and Measles Dengue, Malaria

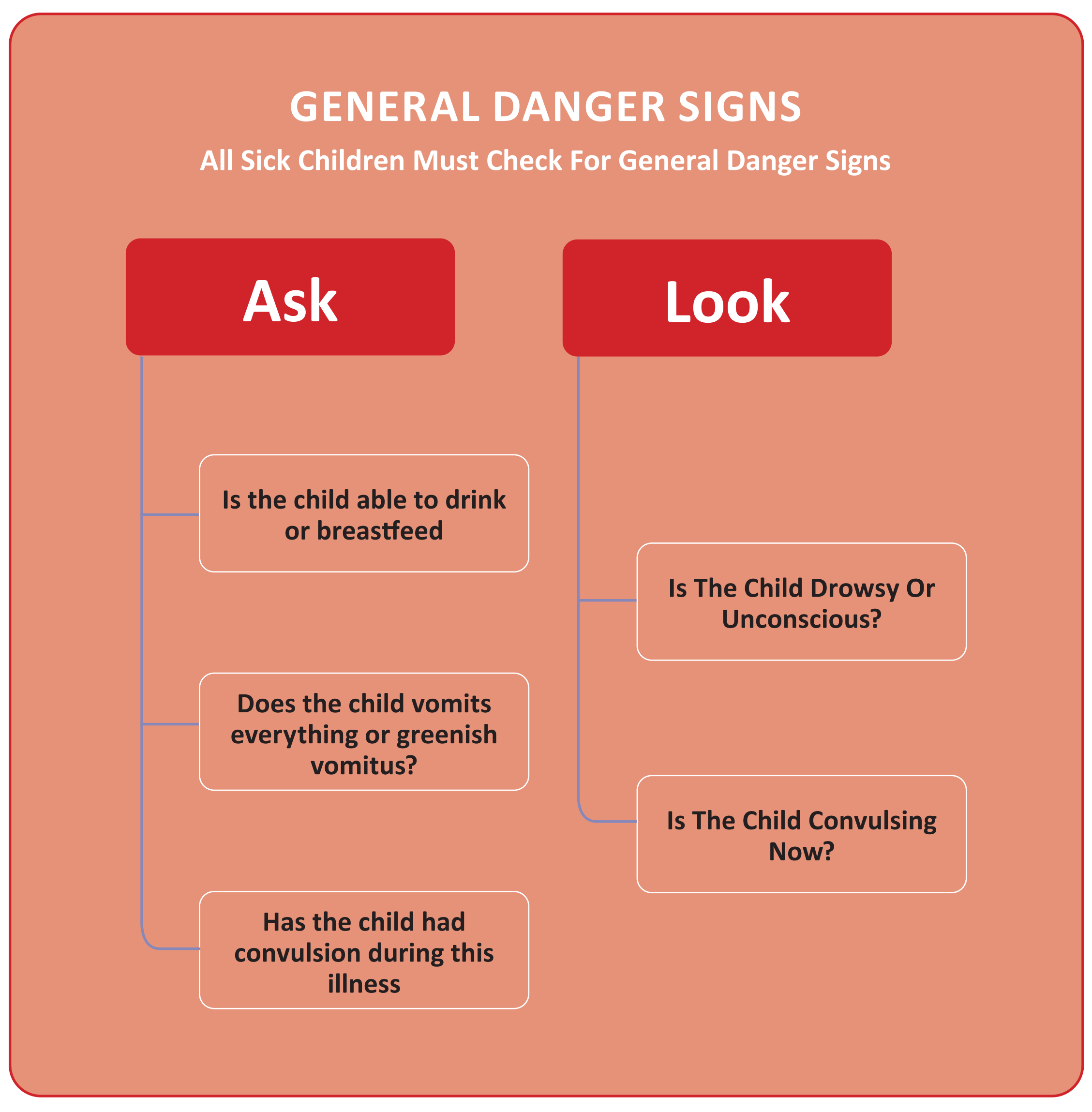
- Fever is very common presentation of an unwell child.
- Every sick child must be asked whether there is fever or not.
- Fever may be caused by local infection such as cellulitis, impetigo, lymphadenitis, otitis media etcc

ASSESSMENT OF FEVER

When a child comes with fever how would you assess?



- This is the continuation from yesterday assessment. When a child comes with fever how would you assess.
- Participant should be able to answer: assess GDS, ask about cough, diarrhea (it has to be in order)



Recap on general danger signs – ask participant what is GDS?

FEVER

A Child Has Fever If Any Of The Following Is Present

- History of fever

  OR
- Axillary/ forehead temp of $\geq 37.5°C$

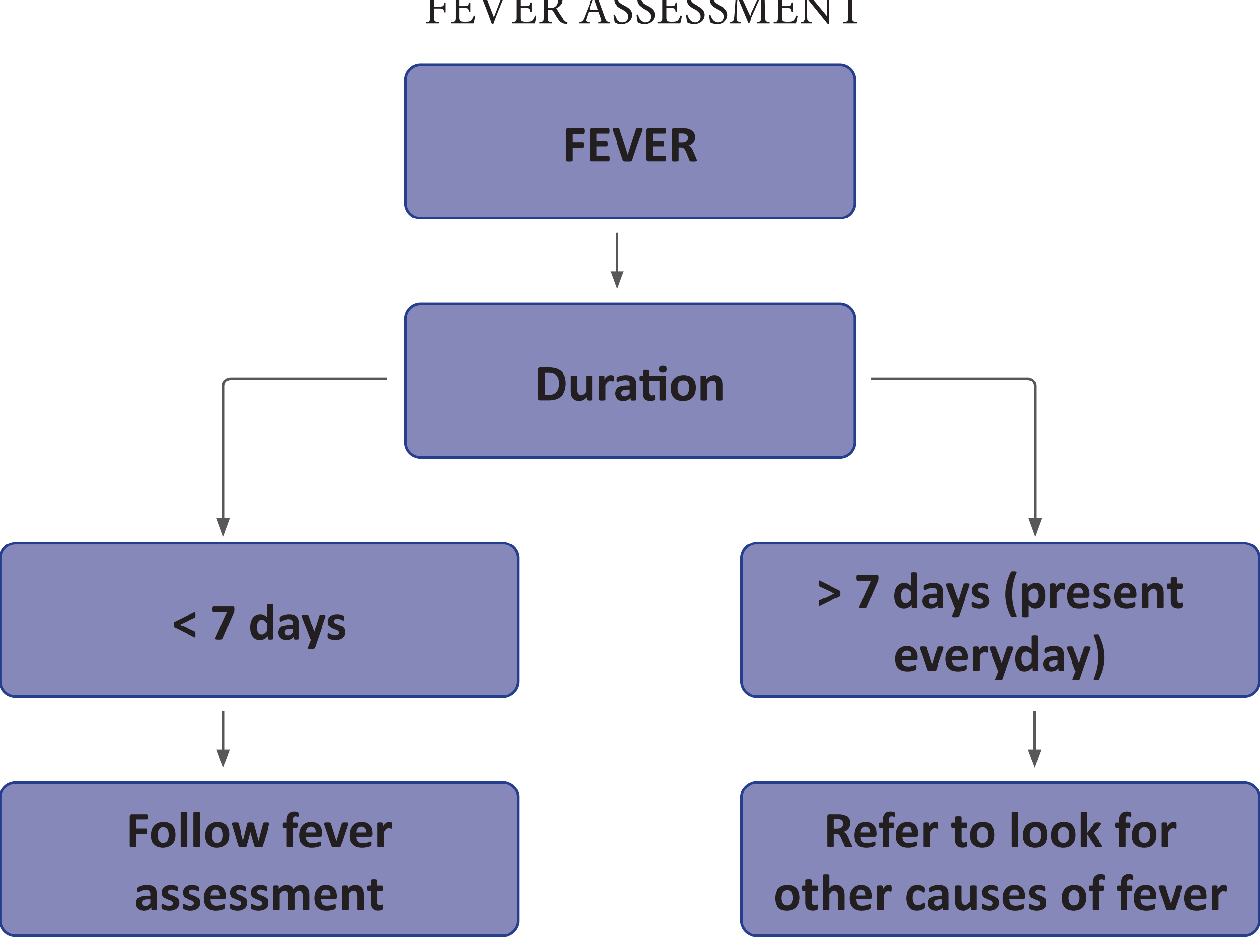
  OR

- This is the definition of fever
- To stress to participants the importance of taking history of fever during this illness, although at clinic temperature recorded is afebrile (may be after PCM)

FEVER ASSESSMENT

- Fever duration
- History of Measles within the last 3 months
- History of contact with child having HFMD
- Staying in Dengue / Malaria endemic area
- Look and feel for stiff neck
- Look for petechial or purpuric rash
- Look for maculopapular rash on palms or soles
- Look for other causes of fever
- Check nose, ear and throat
- Check CCTVR (colour,capillary refill time, temperature, pulse volume and HR)
- **Signs suggesting measles**

- This is the list of assessment that we do for a child who present with fever.
- The main objective of this Fever module is to teach HCP how to look for certain signs that indicate severe disease. Eg Dengue, Malaria, Meningitis
- Depending on the disease endemic to your area eg - Typhoid, Leptospirosis, Melioidosis



- Fever more than 7 days is define as prolonged fever and would require further assessment

FEVER ASSESSMENT

Look and feel for stiff neck

- 3 steps of assessing Neck Stiffness:

1. **Observe** : Look if the child moves and bends his/her neck easily when looking up and looking down (chin touching chest)
2. **Attraction** : Draw the child attentions to his/her umbilicus or toes E.g Shine a flashlight on child's toes or umbilicus.
3. **Manoeuvre:** Lean over the child, gently support the child's back and shoulder with one hand. Other hand to hold the child's head. Carefully bend the child's head forward towards his/her chest.

- This slide, we want our participants to understand and able to perform the three ways of assessing for Neck Stiffness.
- The aim is to assess for neck stiffness when the child is calm and not crying.
- Most important movement is looking up and looking down (chin to chest)
- Explain the 3 steps on how to assess neck stiffness (as in the slides).
  - Step 1: observe the child bending the neck (The best method).
  - Step 2: If unable to observe the child bending the neck, then proceed by using a toy/ flashlight to attract the child to move the neck up and down.
  - Step 3: If step 1 and step 2 fail, proceed to maneuver below:
    - Lean over the child
    - Gently support the child's back and shoulder with one hand
    - Other hand to hold the child's head.
    - Carefully bend the child's head forward towards his/her chest
    - Do not force the movement
- Most important movement is looking up and looking down (chin to chest).
- If there is no neck stiffness the child will be able to flex the neck with the chin touching chest.
- If the neck feels stiff, and there is resistance to flexion – means the child has a Stiff neck. The child will cry if there is neck stiffness.

- **Presence of Stiff neck means:**
  - ✓ Sign of meningitis, cerebral malaria (encephalitis) or very severe febrile disease

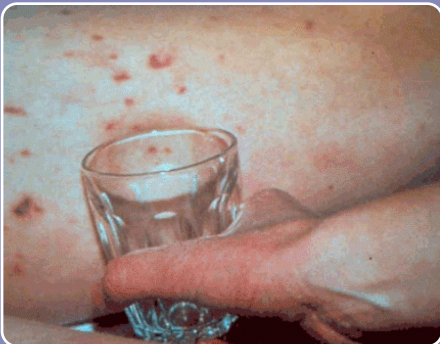
- Video-stiff neck Video\23_ASSESS NECK STIFFNESS.mpg
- Exercise-Video\24 Neck Stiffness Exercise.mpg

- Demonstration of 3 ways of neck stiffness assessment using the video
  1. Observation
  2. Attraction
  3. Maneuver
- Notes :
  - Emphasize on the correct technique

FEVER ASSESSMENT

Look for petechial or purpuric rash

- Spontaneous bleeding into the skin.
- Does not blanch on pressure (glass test)
- Petechiae- small pin point hemorrhages (1- 2 mm in diameter)
- Purpura-purplish skin lesion 2-10 mm in diameter
- On trunk or limbs
- Simple bruises-does not blanch on pressure, usually associated with history of blunt trauma



Glass Test
Petechial and Purpuric Rash NOT blanch by pressure

- Explain to participants, what is petechiae, what is purpuric rash.
- How to differentiate this rash with other types of rash eg maculopapular rash.
- Mention about bruises and hematoma, which also does not blanch on pressure.
- Glass test:
  - o Use a transparent and firm object, such as clear glass, plastic ruler/container
  - o Choose an area where rash is present
  - o Using the object press firmly against the skin until the surrounding skin turn pale
  - o If the rash does not fade(non blanching), it is petechiae/purpura

•Ask participants; what is the significance of Petechial or purpuric rash with Fever.
•Eg : Dengue, Meningococcaemia

FEVER ASSESSMENT

Examples of Petechial and Purpuric rash with fever :

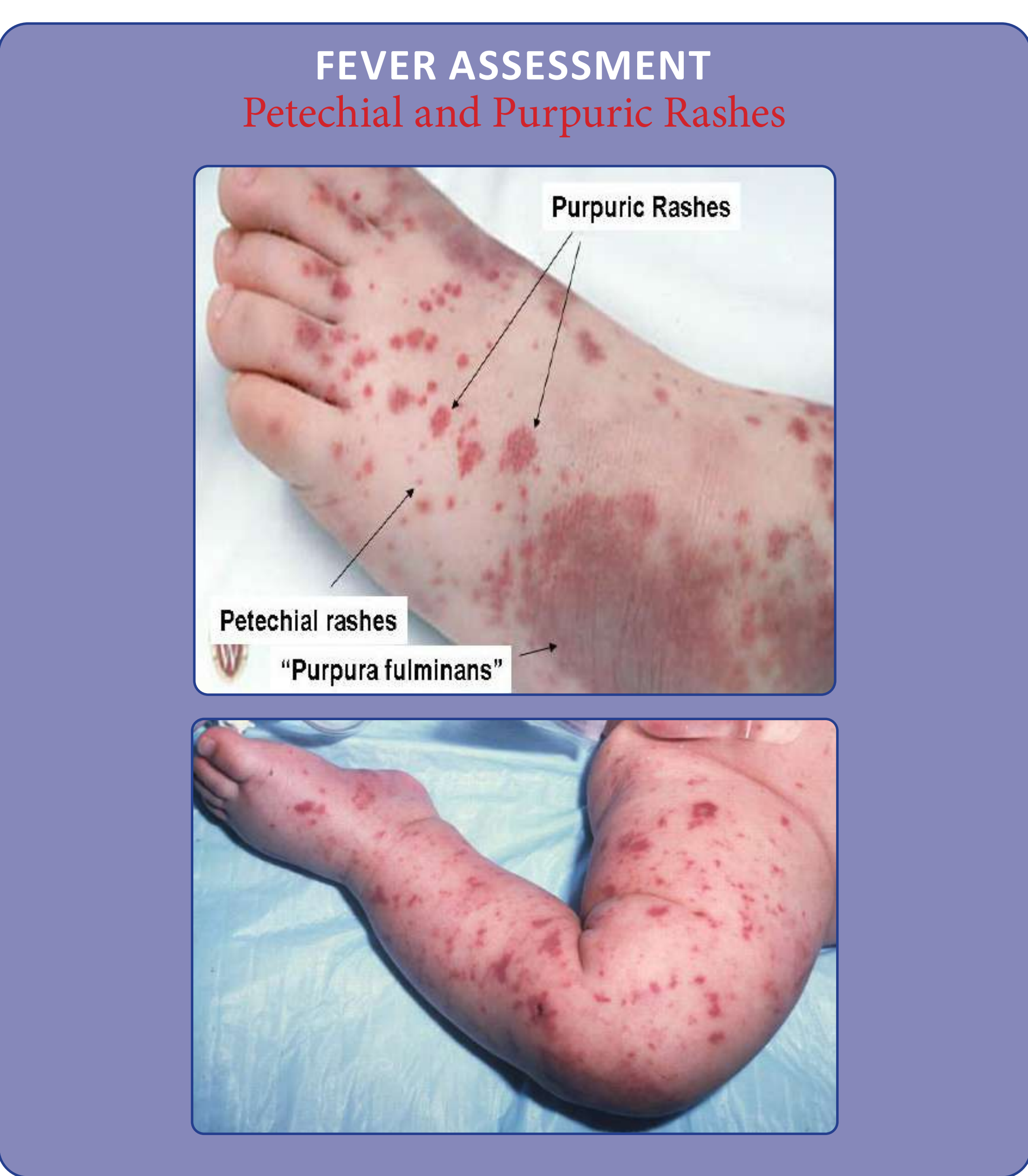
- Dengue fever
- Meningococcemia

•Ask participants; what is the significance of Petechial or purpuric rash with Fever.
•Eg : Dengue, Meningococcaemia

FEVER ASSESSMENT

Examples of Petechial and Purpuric rash with fever:

- Dengue fever
- Meningococcemia



- These pictures shows petechial and purpuric rashes.
- Ask participant how to assess these rashes:
  - Using Glass test
  - Petechial and purpuric rashes does not blanch on pressure

FEVER ASSESSMENT

Look for maculopapular rash on palm or soles

- Macular rash - flat, red area on skin, size <1cm, well defined border.
- Papular rash - small (pin head size), raised well defined border, typically inflamed, feels like sand paper to touch. Papular rash may have a variety of shapes in profile (domed, flat-topped, umbilicated)
- When present together : Maculopapular rashes.
- Both blanch on pressure
- Presence of maculopapular rash on palm and soles with fever-likely to be HFMD

- Explain what is macular and papular rashes (refer slide).
- Participants should be able to recognize maculopapular rash and differentiate it from petechiae/ purpura. Important to highlight maculopapular rash is not blancheble
- May ask the participants, what are the examples of maculopapular rash with fever. Eg: Measles, Other viral exanthems, HFMD
- Distribution of the rashes is very important because different types of disease may present with typical distribution of rashes

FEVER ASSESSMENT

Other Rashes

Macular Rash

Papular Rash

- Ask participant how to differentiate macular & papular rashes
  - Macular : flat rash
  - Papular : raised

FEVER ASSESSMENT
HFMD Case Definition :

Any child with:

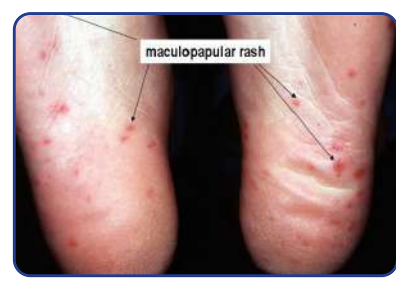
- ✓ **mouth/tongue ulcer and**
  - multiple painful mouth ulcers occurs over lips, buccal mucosa, gingival and posterior part of oral cavity
- ✓ **maculopapular rashes and/or vesicles on palms and soles**
  - rashes sometimes at buttocks, knees & elbows)
  - rashes-not usually itchy or painful.
- ✓ **with or without history of fever**

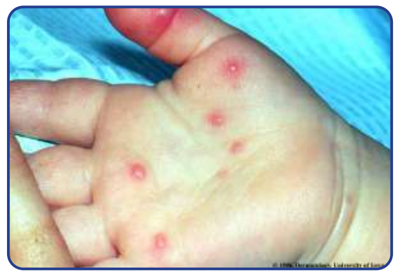
**may present with maculopapular rashes without mouth ulcer*

- Explain to participants differences between HFMD & Herpangina (painful mouth ulcer associated with sore throat & fever, caused by Coxsakie Group A virus)

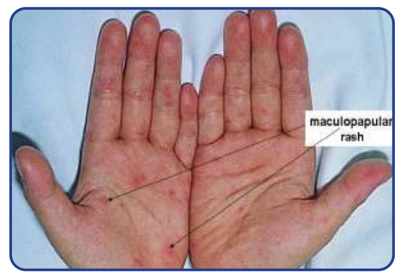
FEVER ASSESSMENT
Hand Foot Mouth Rash

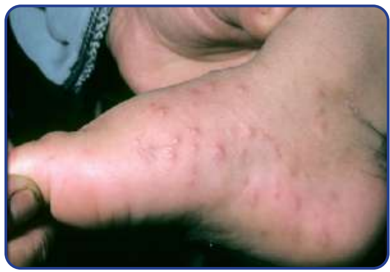
Rashes on sole



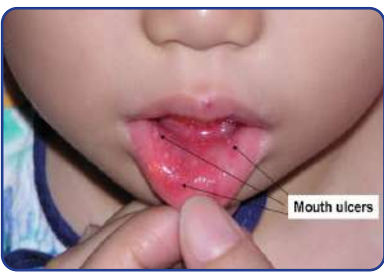


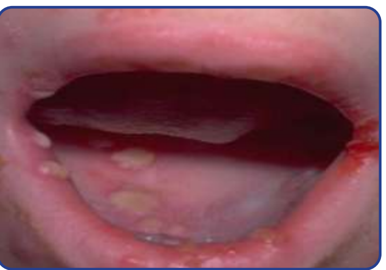
Rashes on palm





Mouth ulcers





FEVER

Hand Foot Mouth Disease

IMPORTANT HISTORY-To assess severity of disease

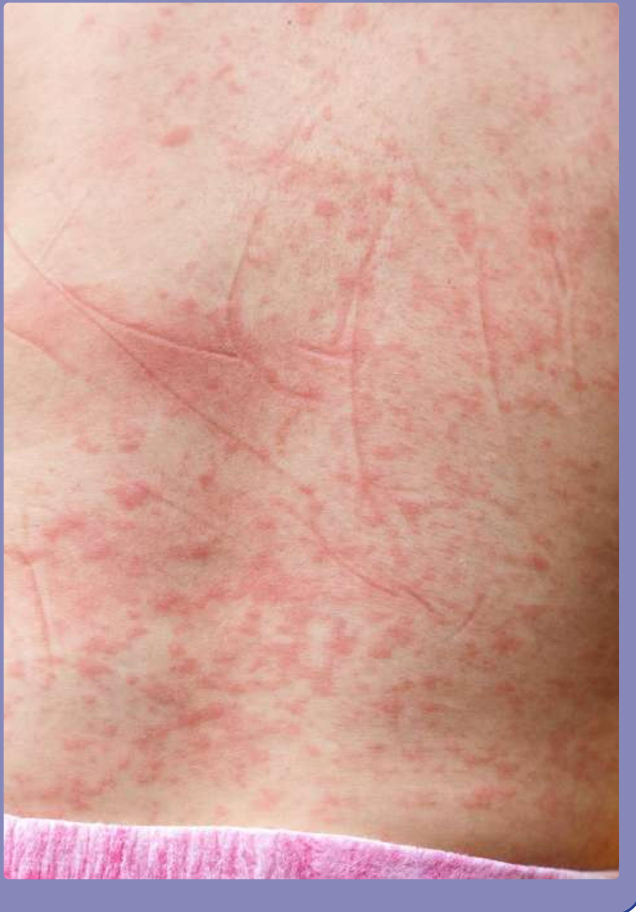
- Date of onset Fever, mouth ulcer, rash/vesicles
- Vomiting, poor feeding, lethargy, drowsiness, fits
- Repeated Startling during sleep/awake (myoclonus seizure)
- History of travelling within last 1 week & any contact with other children with HFMD

- Once HFMD suspected, participants need to ask further questions to:
  1. Assess the disease severity
  2. Travelling history – to identify locality based on present epidemic.
  3. To notify
- Explained to participants that the Management of HFMD is not covered in this module.
- Criteria for admission, warning signs in HFMD and Further management: To follow HFMD Guidelines KKM 2007.

FEVER

Dengue Rash

- Maculopapular rash or macular confluent rash over the face, thorax and flexor surface with islands of skin sparing
- Typically begin on day 3 and persists 2-3 days



- Explain about dengue rash (island of white in the sea of red)and how it is different from HFMD rash and other types of rash.

FEVER

Dengue Rash

- Maculopapular rash or macular confluent rash over the face thorax and flexor surface with islands of skin sparing
- Typically begin on day 3 and persists 2-3 days

- Explain about dengue rash (island of white in the sea of red) and how it is different from HFMD rash and other types of rash.

FEVER

Dengue fever in children

- Fever with any 2 following criteria
  - ✓ Nausea, vomiting
  - ✓ Rash
  - ✓ Aches and pains
  - ✓ Leucopoenia
  - ✓ Any Dengue warning signs

- Any child with the above signs & symptoms need to consider dengue especially during dengue outbreak or in dengue endemic area

FEVER

Dengue Fever in Children

- **Warning signs**
  - ✓ **Abdominal pain or tenderness**
  - ✓ Persistent vomiting (>3x/day)
  - ✓ Persistent diarrhoea (>3x/day)
  - ✓ **Mucosal bleeding**
  - ✓ Clinical fluid accumulations
  - ✓ Increased HCT with decrease platelet
  - ✓ Lethargy, confusion or restless
  - ✓ Tender liver
  - ✓ **Abnormal CCTVR (colour,capillary refill time, temperature, pulse volume and HR)**
- **Suspect Dengue**
  - ✓ for Dengue Combo Test NS-1 Combo test
  - ✓ Refer for further management

Further detail on Management-Refer Paeds Protocol

- Further management of Dengue-to refer to Paeds Protocol.
- To emphasize on warning signs: abdominal pain (including tender liver), mucosal bleeding, abnormal CCTVR.
- Suspected dengue to refer for further management

FEVER

Diagnosis of Measles

- History of measles for past 3 months or currently having measles?
- Progression of Measles Rash:
  - ✓ Within 3/7-maculopapular rash begins behind ears and neck then spreads to face and whole body
  - ✓ Next 3/7-fading of the rashes
  - ✓ Last 3 days, peeling of skin and brownish discoloration
  - ✓ Rash lasted 7-9 days (not itchy)
  - ✓ Rash with 3C's either cough/conjunctivitis /coryza (running nose)

- Ask the participants- Why is history of measles in past 3 months is significant?
  - o Answer: Measles damages the child's immune system and leaves the child at risk for other infections for many weeks. Untreated severe measles can caused complications such as an eye infection and corneal ulcer.
- Diagnosis of measles based on the characteristic of rash, onset of fever and presence of any of the 3C's - Cough, Conjunctivitis, Coryza
- Make sure the participants understand the distribution and progression of measles rash.
- Presence of rash MUST be accompanied by any one of the 3C's - Cough, Conjunctivitis, Coryza (runny nose)

FEVER

Measles Rash

Koplik's Spot

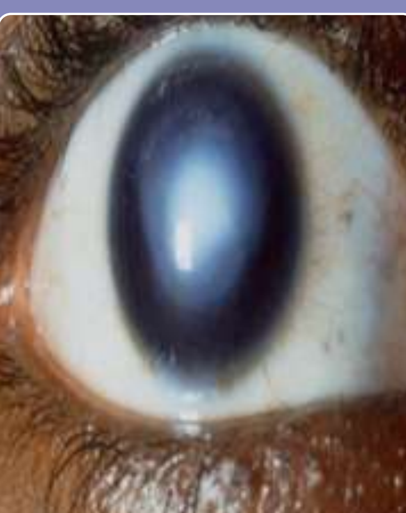
- Explain characteristic of the Measles rash

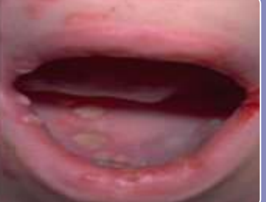
FEVER ASSESSMENT
Measles Assessment

•Child with measles, look for any complication of measles:
- ✓ Clouding of cornea
- ✓ Pus draining from the eyes
- ✓ Extensive mouth ulcers (>5 deep extensive mouth ulcers affecting feeding)
- ✓ Other complications eg: stridor, pneumonia, diarrhoea, malnutrition and ear infection

- Once suspected to have measles, need to do further assessment to look for:
  1. Severity of the disease - Conjunctivitis, mouth ulcer
  2. Complications of disease eg - clouding of cornea, may be worse in children with Vitamin A deficiency.
- Therefore in severe measles - Vitamin A is given to prevent severe complications.

FEVER ASSESSMENT
Measles Complications



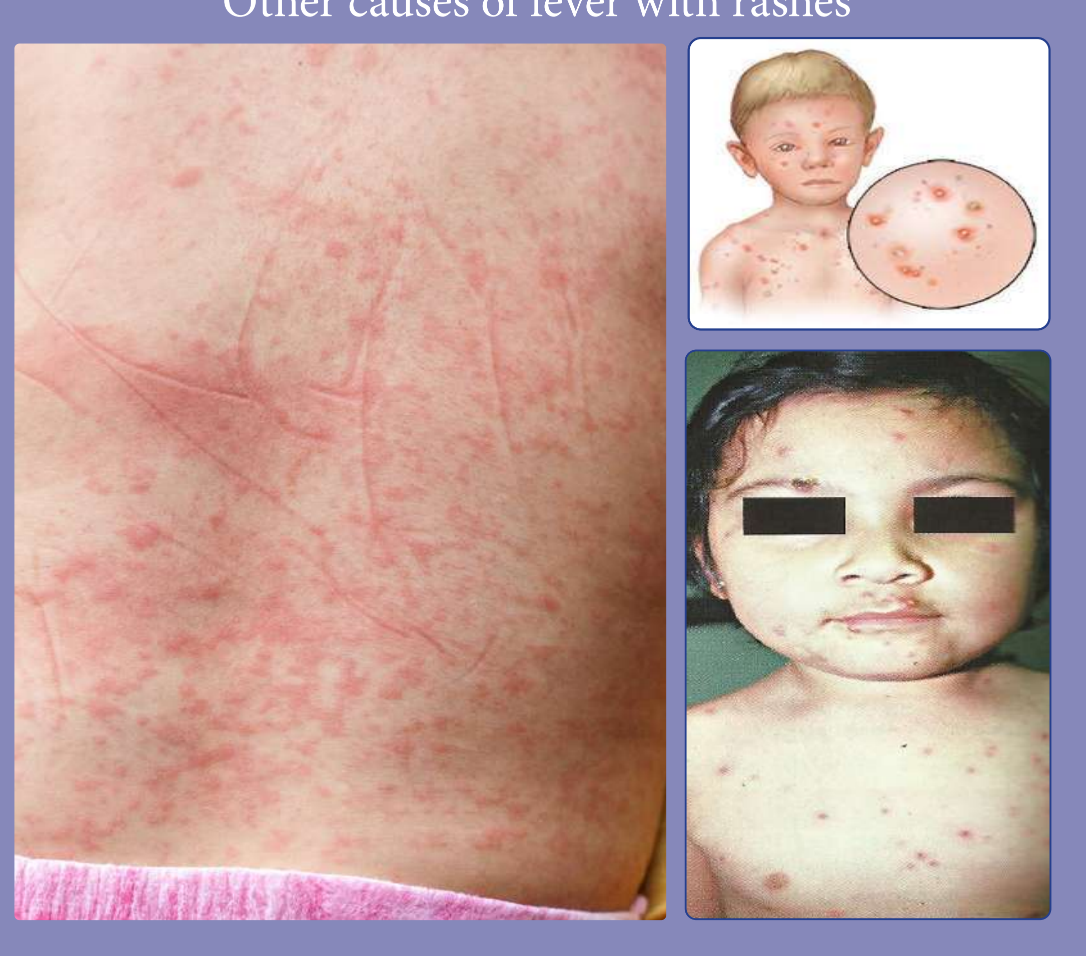


• To show:
- Clouding of cornea
- Mouth ulcer

FEVER ASSESSMENT

• Video – assess measles Video\25_LOOK FOR SIGN OF MEASLES.mpg

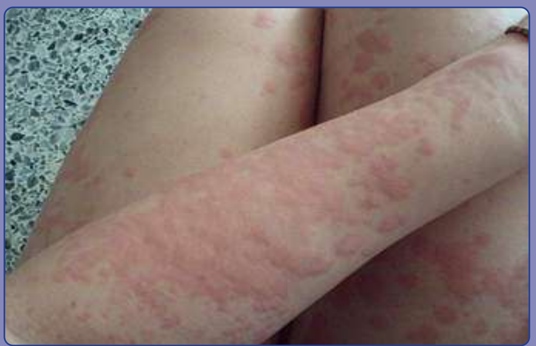
FEVER ASSESSMENT
Other causes of fever with rashes

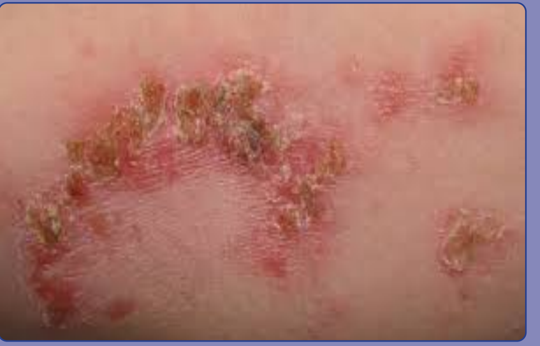


Other causes of fever with rash

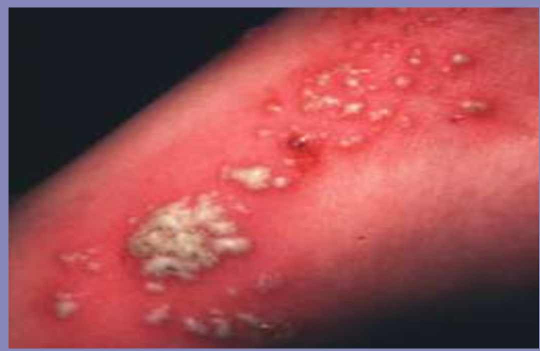
- Explain different types of rashes with fever and how to differentiate them.
- Eg :
  - Heat rash is a maculopapular rash, can be localise or generalise and usually child is well with no fever.
  - Chicken pox present with fever and vesicular papular rashes. The vesicles are on a red base ("Dew drop on a rose petal") and pruritic.

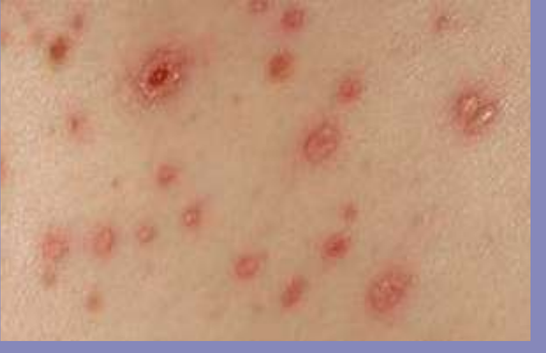
FEVER ASSESSMENT
Other causes of fever with rashes


Urticaria following allergy reactions


Impetigo pustule, vesicles, honey crusted erythematous lesion.

FEVER ASSESSMENT
Other causes of fever with rashes

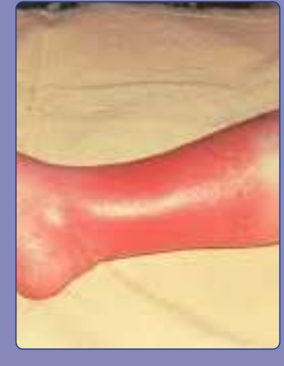

Pustular rashes are circumscribed elevated lesions that contain pus. They are most commonly infected (as in folliculitis) but may be sterile.

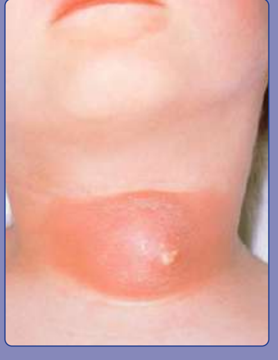

Vesicular rashes are raised lesions less than 1 cm in diameter that are filled with clear fluid.

FEVER ASSESSMENT
Other causes of fever

Examine for other causes of fever

- ✓General examinations-cellulitis, abscesses, skin infection,septic arthritis osteomyelitis
- ✓Ear-Ear infection
- ✓Throat-Pharyngitis, Tonsillitis
- ✓Lung-Pneumonia
- ✓Abdomen Acute Appendicitis
- ✓Other causes: Diarrhoea, URTI, UTI, TB, Viral fever, Dengue, Malaria



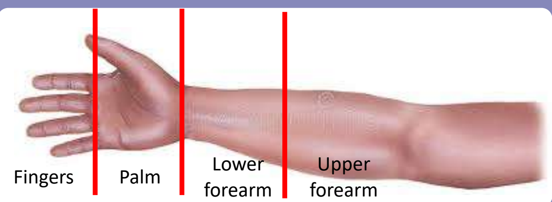


- To do thorough physical examination for a child with fever.

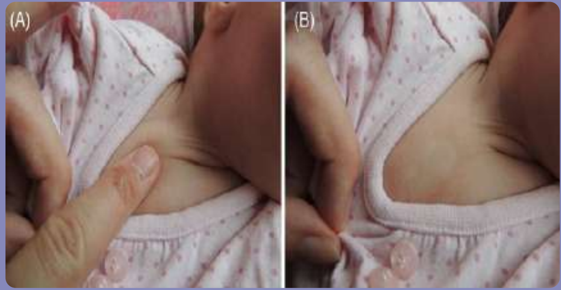
FEVER ASSESSMENT

CCTVR (colour, capillary refill time, temperature, pulse volume and rate)

1. Colour → 2. Capillary refill time → 3. Temperature → 4. Pulse volume → 5. Pulse rate



Colour and temperature
- Look and feel at the palm of the hand
- Temperature line



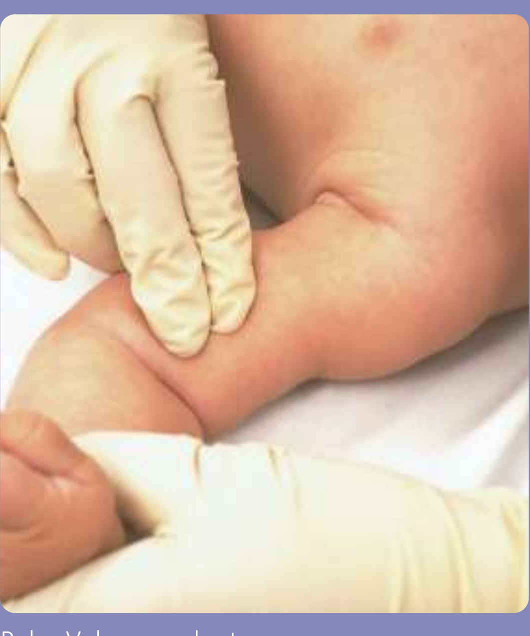
CRT
- Use thumb to put pressure over sternum for 5 sec
- Release thumb and count for 2 sec
- Observe the return of colour while counting
- Normal:<2 sec

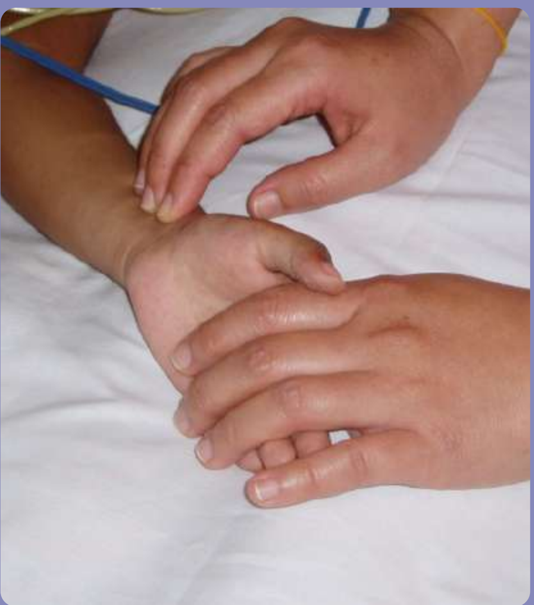
- CCTVR : colour, capillary refill time, temperature, pulse volume and HR
- Colour and temperature:
  - o Look and feel at the palm of the hand
  - o In a normal child it should be pink and warm
  - o Practical tip for temperature: Temperature line refers to the demarcation area of cold peripheries. The level of temperature line indicates severity of haemodynamic compromise (vasoconstriction)
  - o Areas of temperature line:
    - Fingers
    - Palm
    - Lower forearm
    - Upper forearm
- Capillary refill time (CRT):
  - o Use thumb to put pressure over sternum for 5 seconds (001-002-003-004-005)
  - o Release thumb and count for 2 seconds (001-002)
  - o Observe the return of colour while counting
  - o CRT < 2sec is normal. If CRT > 2 sec indicates patient in shock

FEVER ASSESSMENT

CCTVR (colour, capillary refill time, temperature, pulse volume and rate)

1. Colour → 2. Capillary refill time → 3. Temperature → 4. Pulse volume → 5. Pulse rate





Pulse Volume and rate
- Child< 1year old: use brachial pulse to check for pulse volume
- Child>1 year old: use radial pulse
- Feel for strong or weak pulse and count the rate

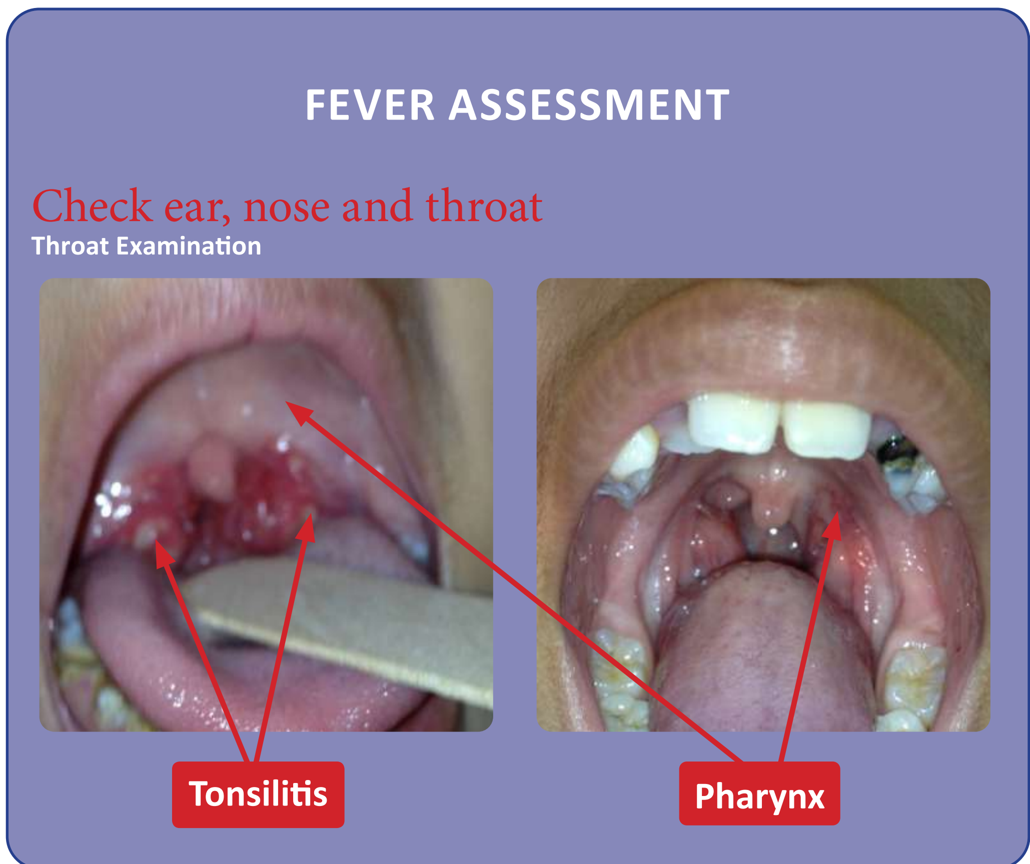
- Pulse volume & rate:
  - o Child < 1 year old: use brachial pulse to check for pulse volume
  - o Child > 1 year old: use radial pulse
  - o Feel for strong or weak pulse and count the rate
  - o Practical tip to examine pulse volume: compare with your own radial pulse while examining child's radial/brachial pulse. The normal child's pulse volume is as strong as your own pulse volume. If the child's pulse volume is weaker than your own pulse, it is considered low pulse volume

FEVER ASSESSMENT

Check ear, nose and throat

- Fever with only runny nose-very likely due to common cold.

- When runny nose is the only symptom associated with fever, then the child's fever is probably caused by common cold.
- Look into the child's nostril area-any nasal discharge, any crust at nostril.

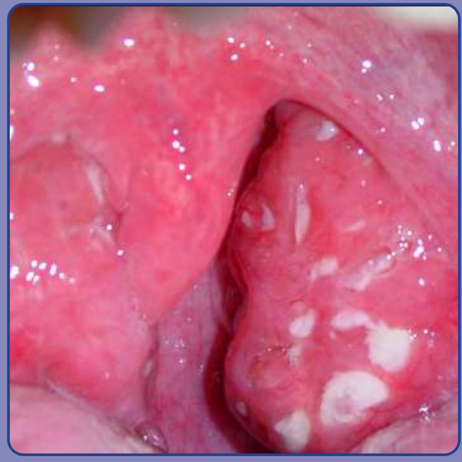


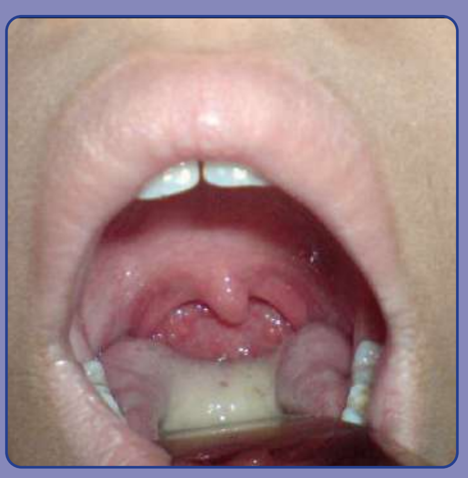
- To explain to the participants-how to do proper throat examination.
  - Explain proper way of holding child
  - To look at pharynx, tonsils & buccal mucosa
- Show to them which is pharynx, tonsils, buccal mucosa.

FEVER ASSESSMENT

Check ear, nose and throat

Throat Examination





Acute Pharyngitis

- To explained differences between pharyngitis, tonsilitis.
- Acute tonsilitis – presence of exudates at the tonsils

FEVER ASSESSMENT

Check ear, nose and throat

Assessment of Ear Problem

- **Ask**
  - Any ear pain
  - Any ear discharge
  - Duration of ear discharge

- **Look & Feel :**
  - Pus draining from ear
  - Tender swelling behind the ear

ASSESSMENT FOR EAR PROBLEM		
Signs	**Ear Problem**	**Action**
Tender swelling behind the ear	Mastoiditis	Refer urgently
Pus draining from the ear less than 14 days or ear pain	Acute ear infection	Start antibiotics-National Antibiotic Guidelines Sy. PCM for pain Dry ear by wicking F/U 5 days
Pus draining from the ear 14 days or more	Chronic ear infection	Refer CPG Management of Otitis Media with Effusion in Children Dry ear by wicking

FEVER ASSESSMENT		
Signs	**Ear Problem**	**Action**
Check For General Danger Signs		
Not Able To Drink Or Breastfeed Vomit Everything Or Greenish Vomitus Convulsions During This Illness	Drowsy Or Unconscius Convulsing Now	General Danger Sign
DOES THE CHILD HAVE FEVER? (history/ temperature > 37.5°C (axillary/forehead) or > 38°C (ears)) (YES / NO)		
For how long? .... days If more than 7 days, has fever been present every day? Coming from Dengue Endemic area Recent HFMD outbreak	Look and feel for stiff neck. Look for petechial or purpuric rash Look for maculopapular rash on palms or soles Look for other causes of fever Check nose, ear and throat Check CCTVR (colour,capillary refill time, temperature, pulse volume and HR) * BFMP: Positive (Falciparum/ Vivax)/ Negative/ Not done/ pending	General danger sign Stiff neck Petechial/purpuric rash Dengue Malaria HFMD with myoclonic jerk Mastoiditis Unsure cause of fever (for further assessment
Does the child has measles now or within the last 3 months:	Look for signs of MEASLES now: * Generalized measles rash * Triad : cough/ runny nose/ red eyes Look for mouth ulcers. If Yes, are they deep or extensive? Look for pus draining from the eye. Look for clouding of the cornea.	Measles with eyes and mouth complications

FEVER ASSESSMENT

Fever Management

- If no indication for urgent referral, allow home with Sy.Paracetamol
- 1st dose at clinic if temp ≥ 38.5 °C
- Follow up in 2/7 if fever persist
- Fever > 7 days - refer for further assessment

FEVER ASSESSMENT		
Management : Paracetamol Dose – 10 -15mg/Kg/Dose (4-6 hourly)		
Age Or Weight	**Syrup (120mg/5ml)**	**Tablet (500mg)**
2/12 up to 4/12 (4 - <6kg)	2.0 ml	
4/12 up to 12/12 (6 - <10kg)	4.0 ml	¼ tab
1 year up to 3 year (10 - <14kg)	7.5ml	½ tab
3 year up to 5 years (14 - <19kg)	10ml	½ tab

- In giving medication to children, dosage is based on child's weight. The table is a guide to the estimated of the common weight in the population.
- Eg : Child aged 1 year and weighing 9kg, the Paracetamol dosage will be (let participant show on the white board)
  - -9 x 10 = 90mg 4-6 hrly
  - -90/120 x 5ml = 3.75 ml
  - -Or can use the table – according to weight = 4ml
- To check different strength in Sy. Paracetamol 250mg/5ml or 120mg/5ml

Advice When To return immediately

Not able to drink or breastfeed

Becomes sicker

Develop fever

Having seizures

- As patient had already presented with fever as the initial symptom, therefore the fever box is not circled.
- To ask participant what are the local layman terms for above symptoms
- Eg
  - Not able to drink / breastfeed : Tak nak minum / menyusu
  - Becomes sicker : semakin lemah, tak aktif, tidur sahaja, tak nak main
  - Seizures : Sawan , Tarik, Luput

ASSESSMENT OF NUTRITIONAL STATUS: MALNUTRITION & ANAEMIA

5. MALNUTRITION AND ANAEMIA

5.1 Malnutrition

MALNUTRITION : INTRODUCTION

Lacks of:

- Essential vitamins
- Minerals

Causes of Acute Malnutrition
(Appetite↓ & food consumed not efficiently)

- Frequent illness
- HIV infection
- Tuberculosis

SEVERE ACUTE MALNUTRITION - SAM

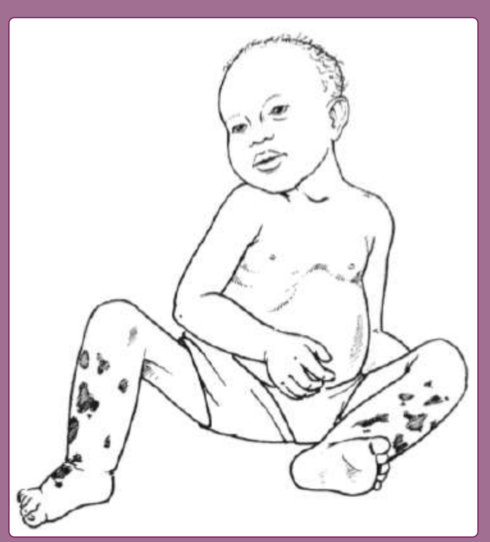
Clinical Signs

Severely wasted (sign of marasmus)

Oedema (sign of kwashiorkor)

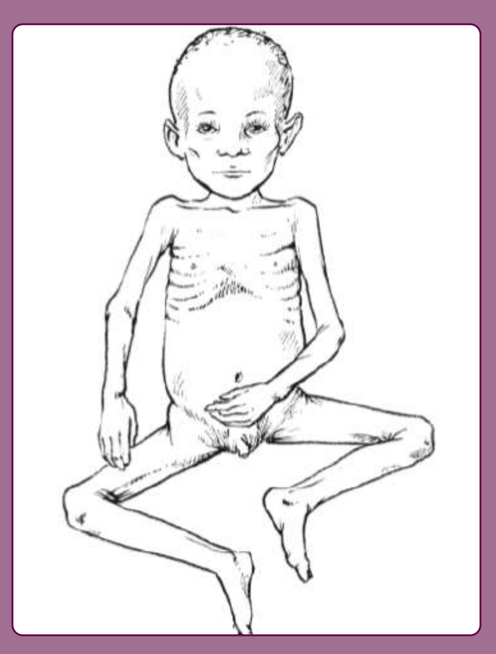
Kwashiorkor Clinical signs

- Thin, sparse & pale (yellowish or reddish) hair that easily falls out
- Dry, scaly skin especially on the arms & legs
- A puffy or 'moon' face
- Swelling of ankles &/or feet

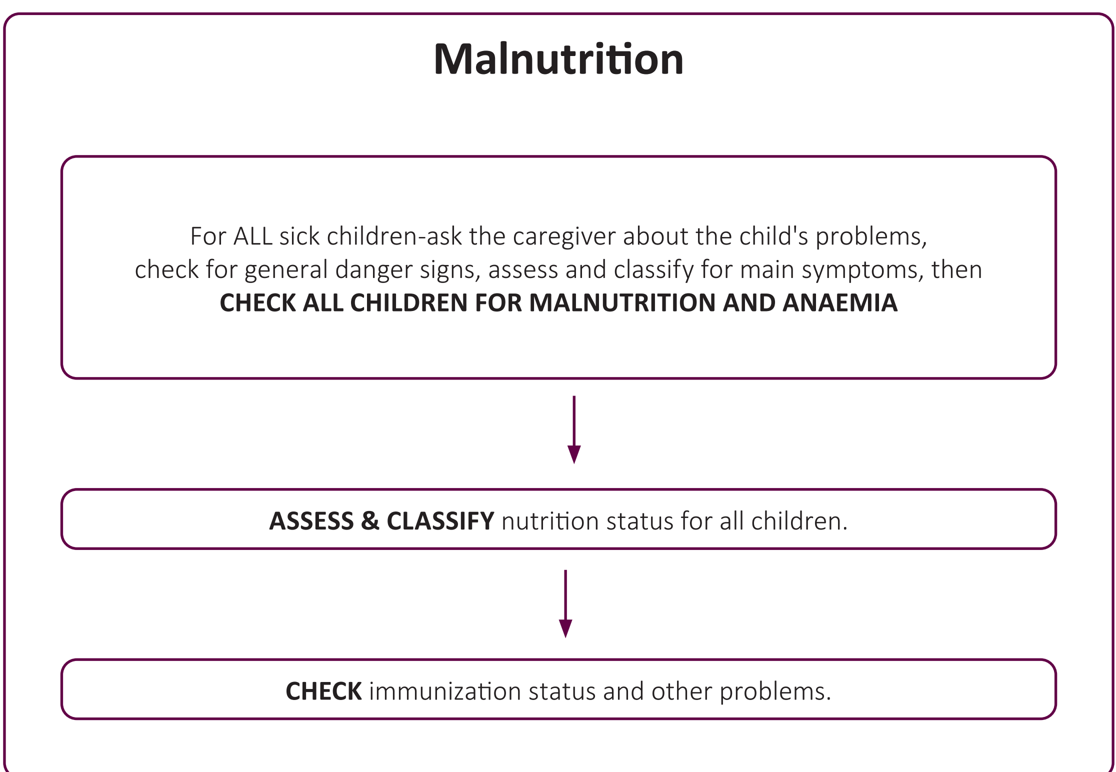


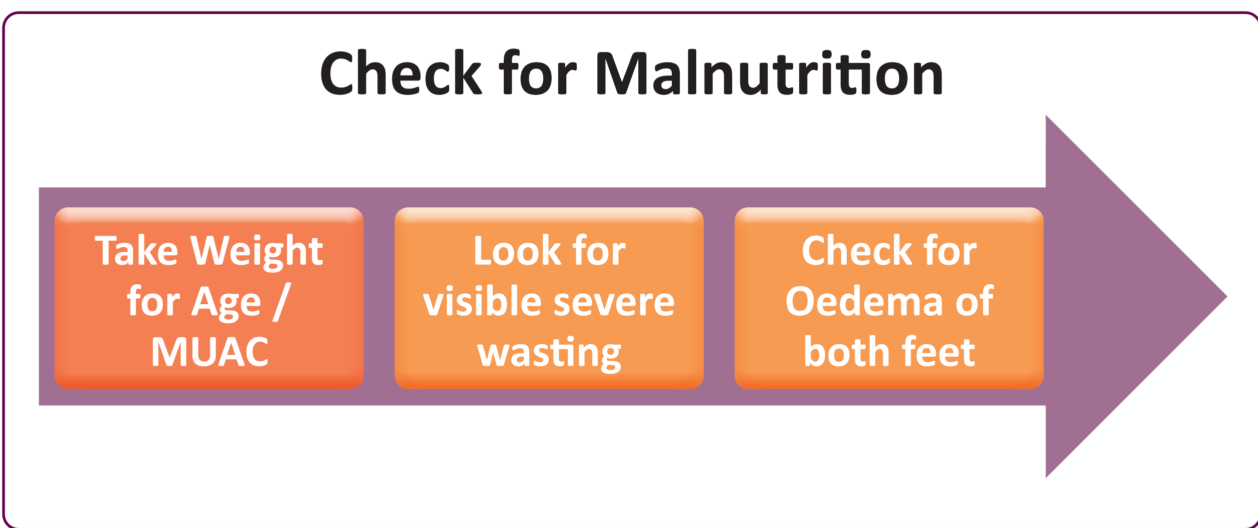
Marasmus: Clinical signs

- Very thin body with reduced subcutaneous fat: especially on the arms, legs & buttocks
- The belly may be distended
- The face may appear the same



5.2 Malnutrition





Now we are focusing on weight for age then MUAC

Measure Weight

Measure Weight

- Beam /Spring types
  - Stable
  - Flat
  - Easy

Measure Length / Height

- Pengukur Tinggi

- Bodymeter

- Alat pengukur panjang Seca

- Infantometer

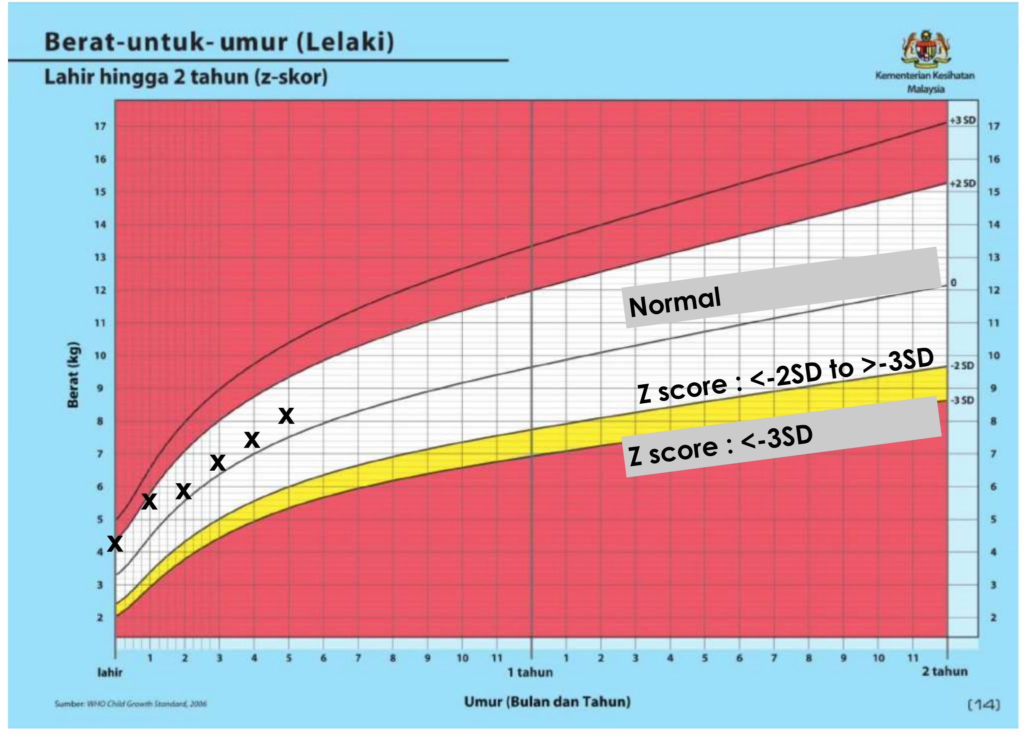
Interpreting Growth Indicators

Weight for age	z-score	Height for age	BMI for age
Low weight	< -2	Stunting	Wasting
Very low weight	< -3	Severe stunting	Severe wasting

Recording for Malnutrition

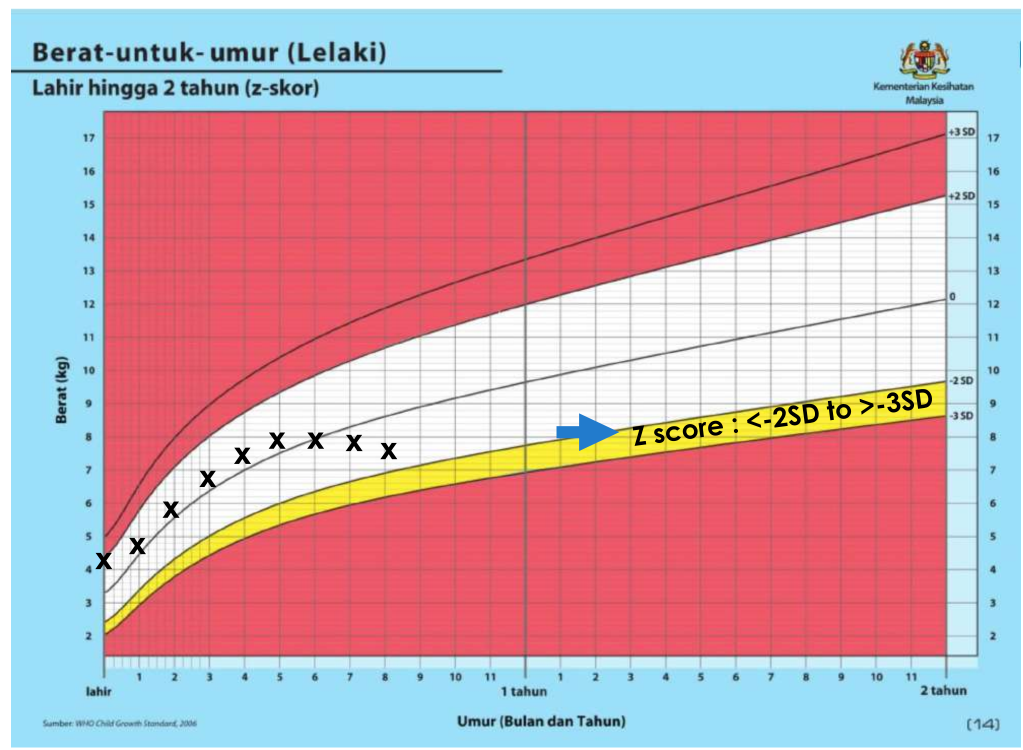
Assess acute Malnutrition and anaemia **Look** **Feel**	Determine weight for age Children >6 months MUAC Look for oedema of Both feet and visible severe wasting
If Child MUAC< 115 mm **OR** Weight for Age in Red Zone **OR** Oedema of Both Feet	Is There medical Complication? - General Danger Signs For a child less than 6 months is there a breast feeding problem?

Weight for Age : White Zone (Normal)



Explain the Z score clearly to the participant

Weight for Age : Yellow Zone (Uncomplicated SAM & Moderate AM)



Explain clearly to the participants regarding the 3 zone :
1. Red Zone
2. Yellow Zone
3. White Zone

Weight for Age : Red Zone (Complicated SAM)

Berat-untuk- umur (Lelaki)

Lahir hingga 2 tahun (z-skor)

Kementerian Kesihatan Malaysia

Berat (kg)

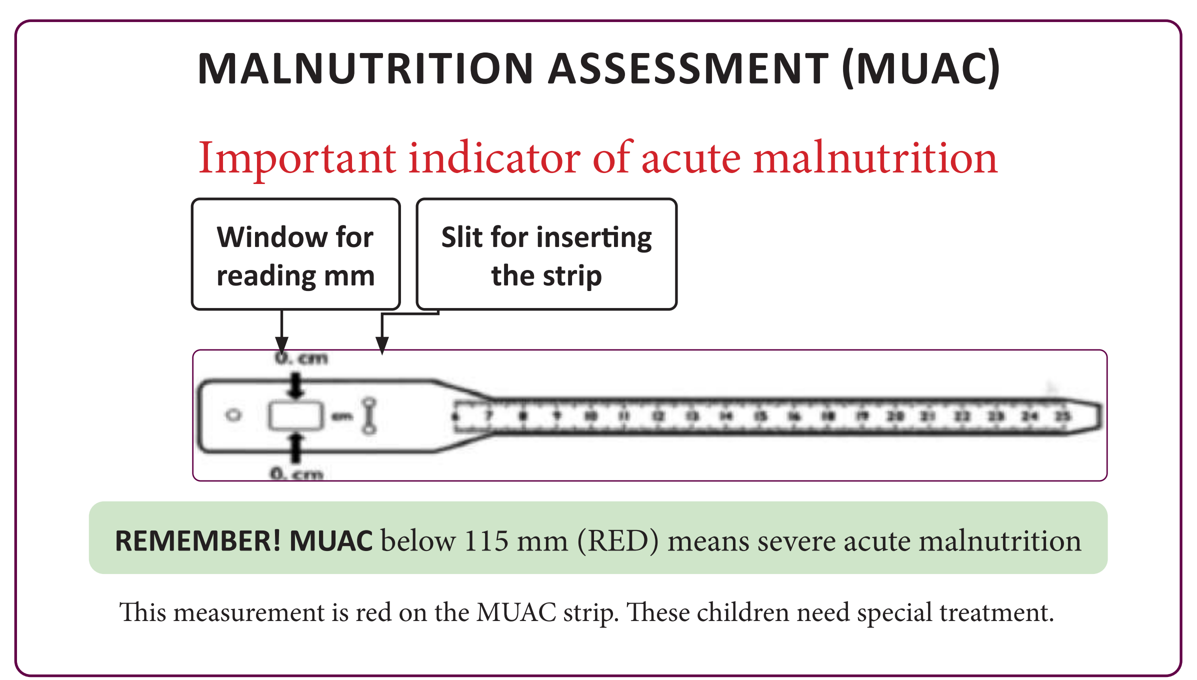
Umur (Bulan dan Tahun)

Z score : <-3SD

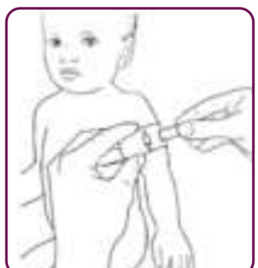
Sumber: WHO Child Growth Standard, 2006

(14)

Explain clearly to the participant, when a child's weight chart crosses zone, she/he must be refer. EG here: at 5 month should have been referred

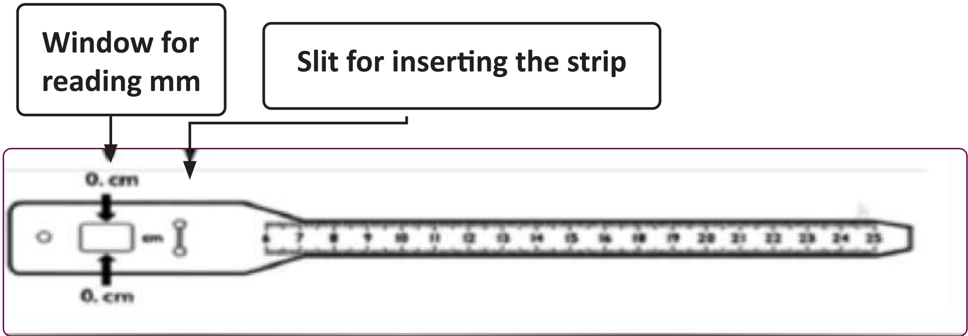


STEP 3: MEASURE MUAC (only for children 6-59 months)



WHAT IS MUAC?

The measurement around the middle of a child's upper arm is an important indicator of acute malnutrition in a child. This is called mid-upper arm circumference (MUAC). The MUAC strip is a flexible measuring tape that measures in millimetres (mm). MUAC can only be used for children 6-59 months.



HOW DO YOU READ THE MUAC STRIP

Examine your own MUAC strip, and refer to the picture below. The first thing you should note about your MUAC strip is that there are three different colours: green, yellow, and red to note danger of child's MUAC

There are two important pieces of the MUAC strip you should note in the picture above. 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 mm.

MALNUTRITION ASSESSMENT (MUAC)

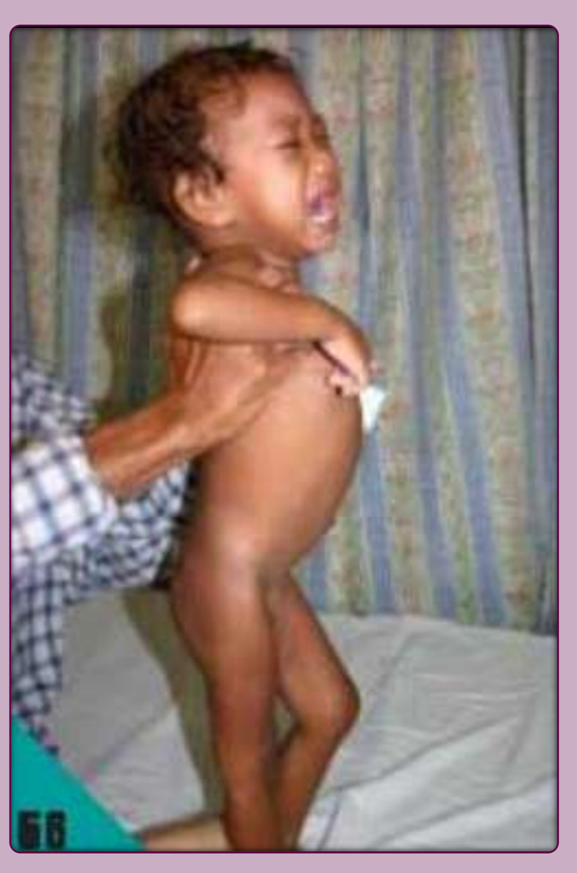
1. Find the mid point of child's upper arm between the shoulder and elbow
2. Hold the large end of the strap around child's arm
3. Put the other end of the strap around the child's arm. Thread the end up though the second small slit in the strap
4. Pull both ends until the strap fits closely
5. It should not so tight that it makes skin folds and it should also not too loose

Check for Malnutrition

Take Weight for Age / MUAC → Look for visible severe wasting → Check for Oedema of both feet

Look for visible severe wasting

- Remove all the child's clothes to check for wasting

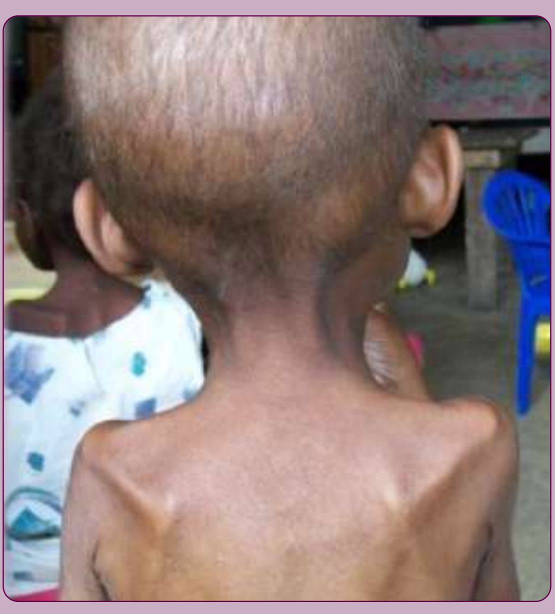


Look for visible severe wasting

- A child has visible severe wasting if the child looks all **skin and bones.**
- The **outline of ribs** is easily seen.

Look for visible severe wasting

- Wasting of the muscles of the **shoulder and arms**

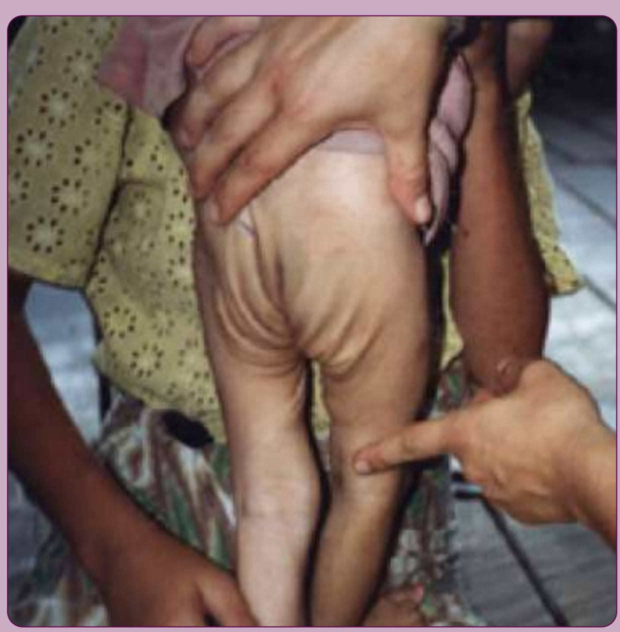


Look for visible severe wasting

- The arms and legs of a severely wasted child look like sticks.

Look for visible severe wasting

- The buttocks are wasted and there are skin folds (**baggy pants**).



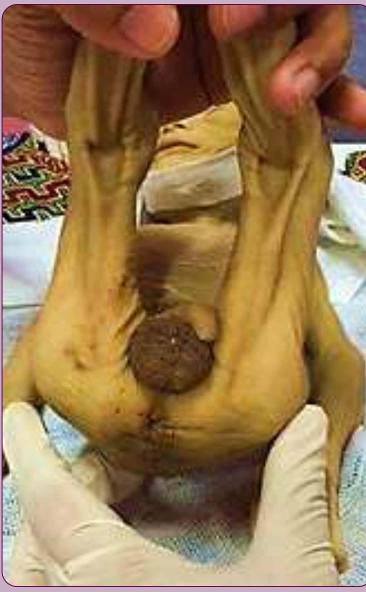
Look for visible severe wasting

- **Abdomen** may be large or distended.

Look for visible severe wasting

- **Face** may still looks normal.

Look for visible severe wasting



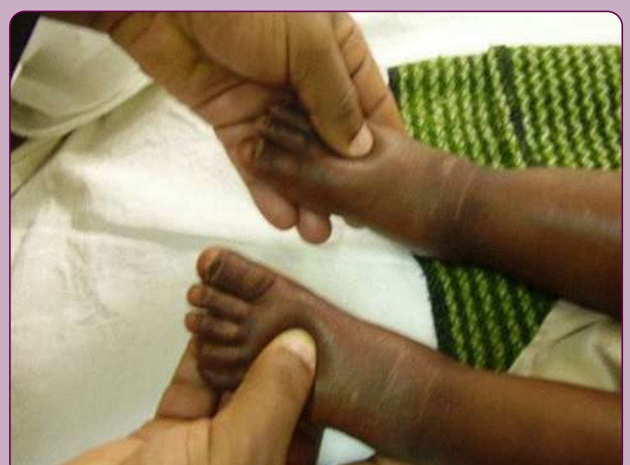
Baby boy BW 2.2 kg, discharged hospital day 10 and died on day 15.
Clinically marasmic but asymptomatic prior to death.
Wt 1.9 kg at time of death.

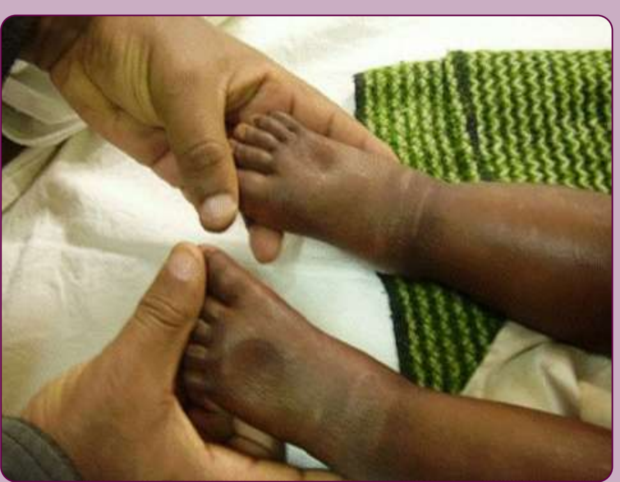
Check for Malnutrition

Take Weight for Age / MUAC → Look for visible severe wasting → Check for Oedema of both feet

MALNUTRITION: ASSESSMENT

- Fluid accumulation in child's tissue
- Look & Feel For Oedema Of Both Feet
  - ✓ Using thumb, press the dorsum of both feet simultaneously for 5 seconds
  - ✓ A shallow pit remains in the child's foot when you lift your thumb
- A child with oedema of both feet may have kwashiorkor or other form of severe malnutrition

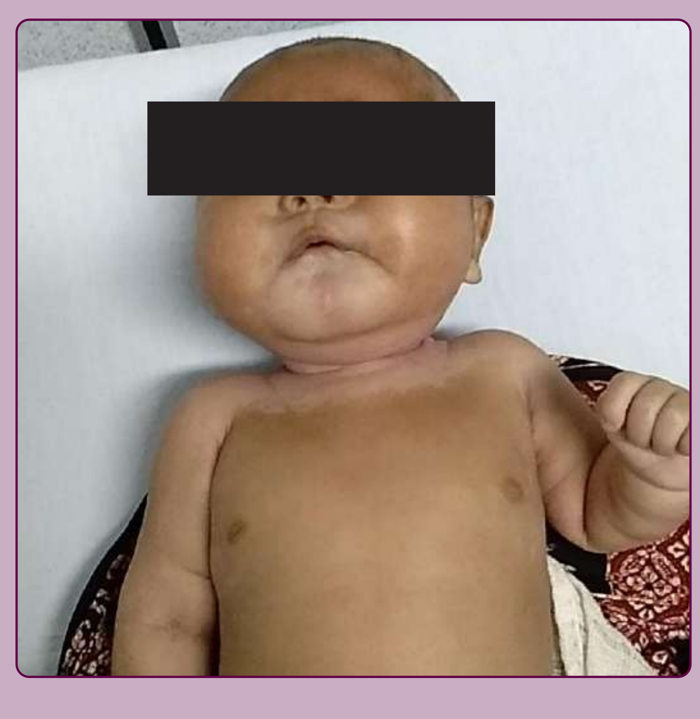




Check for oedema of both feet

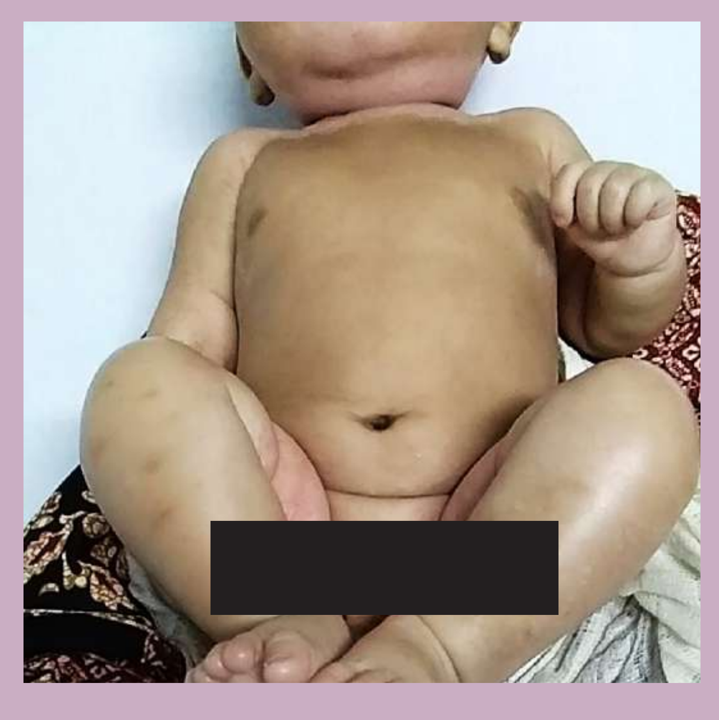
Swelling is present if there is depression left in the place where you pressed. This should be checked on the other foot also

Comment on this child



- 4 months old baby boy, first child to a teenage OA mother living with poverty.
- Mum gave him condensed milk after breastfeeding ceased.
- WFA coming down from < -2SD to < -3 SD but skin looks oedematous. Face chubby. Pitting oedema present.
- Admitted and treated for Kwarshiorkor.

OEDEMA

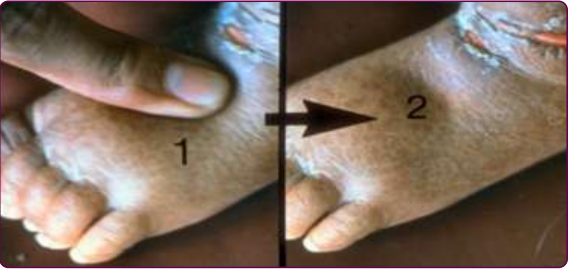


Pitting oedema present but mild and hard to elicit.
But the tell tale sign was the shiny skin in a very low weight baby.

Check for Malnutrition (Normal)

Condition at 6 months old. Given infant formula feed.
WFA returned to < - 2SD

Photo Of Oedema On The Foot (Kwashiorkor)



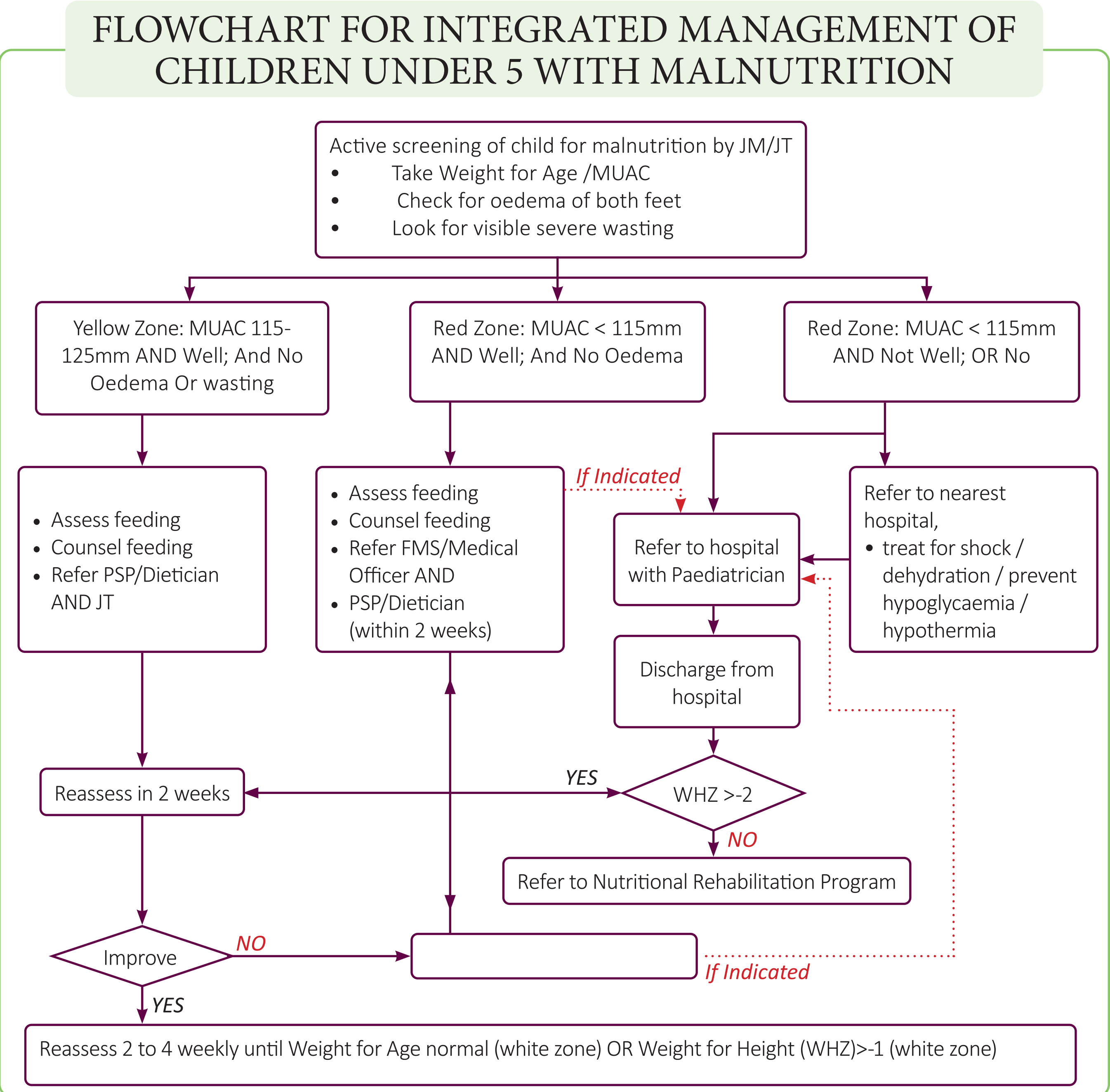
REMEMBER! Oedema of both feet means severe acute malnutrition.
ALL CHILDREN WITH OEDEMA OF BOTH FEET SHOULD BE REFERRED TO A HOSPITAL.

SIGNS OF SAM

<6 months
Oedema of both feet
Weight for Age - **RED ZONE**

>6 months
Oedema of both feet
Weight for Age - **RED ZONE**
MUAC- ≤ 115mm or below

FLOWCHART FOR INTEGRATED MANAGEMENT OF CHILDREN UNDER 5 WITH MALNUTRITION



OUTPATIENT MANAGEMENT

Zone	Action	Follow up
RED ZONE; MUAC < 115 AND Unwell OR Visible severe wasting OR Edema of both feet	Refer urgently to hospital with paeditrician	Follow Inpatient management
RED ZONE: MUAC < 115 AND Well AND NO severe wasting AND NO edema of both feet	• Assess and counsel feeding • Refer FMS/MO • Refer PSP/dietician	Reassess 2 weekly
YELLOW ZONE; MUAC 115-125 AND NO severe wasting NO edema of both feet	• Refer MO • Assess and counsel feeding • Refer PSP/dietician	Reassess 2-4 weekly

If the child **continues to lose weight**, please **REFER to HOSPITAL**

Criteria for normal child health follow up
- 2 readings in White Zone

ANAEMIA : DEFINITION

- **Reduced Hb or Hct** below level normal for that of **Age & Sex**

- Normal Hb level-**11g/dL**

- WHO Hb threshold used to define anaemia:

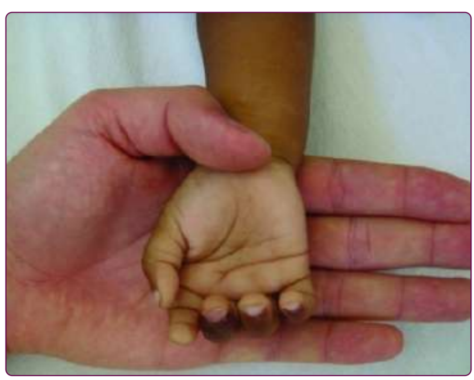
AGE	Hb (g/dl)
Children (6 m/o-5y/o)	11
Children (5-12 y/o)	11.5
Teens (12-15 y/o)	12

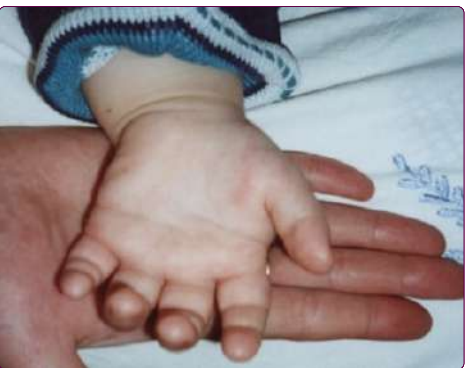
ANAEMIA: SIGNS &SYMPTOMS

ALL children **MUST BE CHECKED** for **Anaemia**

- **Look** for **palmar pallor**
- Look at the skin of the child's palm
- Hold the palm open by grasping it gently from the side
- Do not stretch the fingers backward this may cause pallor by blocking the blood supply.
- **Compare** the color of the child's palm with your own palm
- Refer all anaemic child to nearest clinic/hospital for further assessment

Palmar pallor

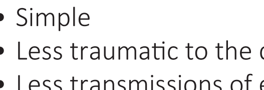




- LOOK at the skin of the child's palm.
- Hold the child's palm open by grasping it gently from the side.
- Do not stretch the fingers backwards - this may cause pallor by blocking the blood supply.
- Compare the colour of the child's palm with your own palm

Look for Palmar pallor

Why palmar pallor?



- Simple
- Less traumatic to the child
- Less transmissions of eye pathogens
- Conjunctiva hyperaemia can obscure anaemia

ANAEMIA: MANAGEMENT

Palmar Pallor	Anaemia Sevrity	Actions
Severe Hb < 6gm/dl	**Severe**	Refer URGENTLY to hospital
Some (*pls do FBC if available) Hb: 6-8gm/dl	**Anaemia**	1. Assess feeding & counsel based on "**Counsel The Mother-chart**" 2. Give iron 3. Give Albendazole : ≥ 1 y/o & not received deworming in previous 6 months 4. If **feeding problem** present : follow-up in **5 days** 5. No feeding problem, Follow-up in **2 weeks**

**If any failure symptom is present, please refer STAT
**If there is visible severe palmar pallor-classify it as SEVERE ANAEMIA
**Children with severe anaemia are at risk of death

ANAEMIA : IRON DOSAGES

Age or Weight	**Iron Syrup Ferrous Fumarate (FF) Mixture	Iron Syrup Ferrous Ammonium Citrate (FAC) Mixture
2 m/o-4m/o (4-<6 kg)	2.5 ml	2 ml
4 m/o -12 m/o (6-<10 kg)	3.5 ml	3 ml
12 m/o-3 y/o (10-<14 kg)	5 ml	4 ml
3 y/o-5 y/o (14-<19 kg)	6 ml	5 ml

**FF only last for 14 days
**One dose daily for 14 days

Preparation: 6 mg/kg of elemental iron

Age or Weight	**Iron/folate tablet grams per day**	**Iron syrup sachets per day**
	Ferrous sulfate 200 mg + 250 µg folate (60 mg elemental iron)	Ferrous fumarate 100 mg per 5 ml (20 mg elemental iron per ml)
2–4 mths or 4-6kg		1 ml (< ¼ tsp)
4-12 mths or 6-10kg		1.25 ml (¼ tsp.)
12 mths-3 yrs or 10-14 kg	½ tablet	2ml (< ½ tsp.)
3-5 years or 14-19kg	½ tablet	2.5ml (½ tsp.)

- Note Children with Severe Acute Mainutrition and on RUTF should not be given iron
- To check with local preparation of Ferrous Fumarate, different centre has different preparation

ANAEMIA:PREVENTION BY DEWORMING

For every child > 1 y/o:

To give Albendazole 400 mg single dose every 6 months (WHO)

Usual dosage :

1-2 y/o : 200 mg stat
≥ 2 y/o : 400 mg stat

FEEDING ASSESSMENT

For **WHOM** & **WHEN** to do?

All Children 2 years old

Very low weight for age

Anaemia

FEEDING ASSESSMENT

Do you breastfeed your child?

How many times during the day?
Breastfeed during the night?

Does the child take any other food or fluids?

Variety-type of food?
Frequency?
Amount?

Identifying Feeding Problem

- Inadequate frequency
- Inadequate amount
- Lack of variety
- Not exclusively breastfeeding
- Difficulty breastfeeding
- Use of feeding bottle
- Lack of active feeding (share portion)
- Not feeding well during illness
- Sore mouth or ulcers

Mother's Card On Feeding Assesent

➢ Feeding Recommendations During Sickne

Good Feeding knowledge and practice is important for parents and family members. Children w
adequate amount, many varieties and more frequent meals can increase the weight.

Up to 4 M[illegible] of Age

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

4 Months up to 6 Months

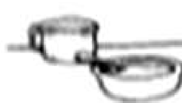
- Breastfeed as often as the child wants, day or night, at least 8 times in 24 hours
- **Only** if the child:
  - shows interest in semisolid foods, or
  - appears hungry after breastfeeding, or
  - is not gaining weight adequately.

Then add complementary foods (listed under 6 months up to 12 months)

Give these foods 1 or 2 times per day after breastfeeding

6 Months up to 12 Months

- Breastfeed as often a
  wants
- Give adequate servi
  - Thick cereal/ thick
    bread / biscuit
  - Fish/ Chicken/ mea
  - Mashed vegetable
    tapioca /sweet pot
  - Mashed fruit / bite
  - 3 times per day if b
  - 5 times per day if n



** A good daily diet should be adequate in quantity and include an energy-rich food (for example, th*

Feeding Recommendations For a Child Who Has PERSISTENT DIARRHOEA

- If still breastfeeding, give more frequent, longer breastfeeds, day & night
- If taking other milk:
  - replace with increased breastfeeding OR
  - replace half the milk with nutrient-rich semisolid food OR
  - replace with fermented milk products, such as yoghurt if available
- For other foods, follow feeding recommendations for the child's age

Porridge P

- Cook until very soft
- Can add in chicken, fish, pota
- Do not blend the porridge
- Do not filter the porridge
- Do not add salt to the porridg
  than year-old

TCA 5 days to see whether problem has solved

ess and Health

th very low weight can easily fall sick and it will affect their school performance. Good feeding with

as the child

ngs of:
porridge/

at/ eggs/Taufu
s/beans/ carrot
ato/potato
size fruits

reastfed
ot breastfed

12 Months up to 2 Years

- Breastfeed as often as the child wants
- Give adequate servings of complimentary food or family food 5 times per day:
  - Thick porridge/ rice/ mee /biscuit/ bread
  - Fish/ Chicken/ meat/ eggs/ ikan bilis
  - Tapioca /sweet potato/potato/ carrot
  - Green vegetables/ beans
  - Fruits/ bite size fruits

Give small chewable soft finger food. Let the child try to feed himself but with help

2 Years and Older

- Give family foods at 3 meals each day. Also, twice daily, give nutritious food between meals, such as:
  - Mee / Mee hoon/ Bread/ "Kuih Muih"
  - Fruits /soya bean / sweet corn/ Taufu / beancurd / Corn/ "Ubi"
  - Tapioca /sweet potato/potato/ carrot
  - Sandwich / bun/ cake / biscuits
  - Red beans /green beans/ dhall
  - Oat / sardine / egg
  - Milk / yogurt / cheese

ick cereal with added oil); meat, fish, eggs, or beans; and fruits and vegetables.

reparation

to, carrot, egg or vegetables

e that given to children less

WARNING

DO NOT GIVE FOOD OF HAND OR STICKY CONSISTENCY TO CHILDREN LESS THAN 4 YEARS OLD, such as PEANUT AND ALL NUTS, SWEETS AND TOFFEE, "NATA DE COTO", HARD JELLY

THESE CAN CAUSE CHOKING AND BLOCK THE AIRWAY

Prevent Home Injury: fall down, scalding, burn, poisoning, drowning, suffocation, car accident.
Avoid negligence, being abuse or cheated

FEEDING PROBLEMS

➢ *Counsel the Mother About Feeding Problems*

If the child is not being fed as described in the above recommendations, counsel the mother accordingly. In addition:

➢ **If the mother reports difficulty with breastfeeding, assess breastfeeding. (See *YOUNG INFANT* chart.) As needed, show the mother correct positioning and attachment for breastfeeding.**

➢ **If the child is less than 4 months old and is taking other milk or foods:**

- Build mother's confidence that she can produce all the breastmilk that the child needs
- Suggest giving more frequent, longer breastfeeds day or night, and gradually reducing other milk or foods

If other milk needs to be continued, counsel the mother to:

- Breastfeed as much as possible, including at night
- Make sure that other milk is a locally appropriate breastmilk substitute
- Make sure other milk is correctly and hygienically prepared and given in adequate amounts
- Finish prepared milk within an hour

➢ **If the mother is using a bottle to feed the child:**

- Recommend substituting a cup for bottle
- Show the mother how to feed the child with a cup

➢ **If the child is not being fed actively, counsel the mother to:**

- Sit with the child and encourage eating
- Give the child an adequate serving in a separate plate or bowl

➢ **If the child is not feeding well during illness, counsel the mother to:**

- Breastfeed more frequently and for longer if possible
- Use soft, varied, appetizing, favourite foods to encourage the child to eat as much as possible, and offer frequent small feedings
- Clear a blocked nose if it interferes with feeding
- Expect that appetite will improve as child gets better

➢ **If the child has a poor appetite :**

- Plan small, frequent meals
- Give milk rather than other fluids except where there is diarrhoea with some dehydration
- Give snacks between meals
- Give high energy foods
- Check feeding regularly

➢ **If the child has sore mouth or ulcers**

- Give soft foods that will not burn the mouth, such as eggs, mashed banana, papaya, pumpkin or potato
- Avoid spicy, salty or sour foods
- Chop foods finely
- Give cold drinks if available

➢ **Follow-up any feeding problem in 5 days.**

Newborn, birth up to 1 week

- Immediately after birth, put your baby in skin to skin contact with you
- Allow your baby to take the breast within the first hour. Give your baby colostrum, the first yellowish, thick milk. It protects the baby from many illnessess
- 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 at least every 2 to 3 hours.
- DO NOT give other foods or fluids. Breast milk is all your baby need
- All baby born to HIV positive mother are given infant formula and not allowed to breastfeed according to the national breastfeeding policy

1 week up to 6 months

- Breastfeed as often as your child wants. Look for signs of hunger, such as beginning to fuss sucking fingers, or moving lips.
- Breastfeed day and night whenever your baby wants, at least 8 times in 24 hours. Frequent feeding produces more milk.
- Do not give other foods or fluids Breast milk is all your baby needs.

FEEDING RECOMMENDATIONS

Up To 6 Months Of Age

Breastfeed as often as the child wants, day and night **at least** 8 times in 24 hours

Do not give other foods or fluids

Complementary foods can be given when child is above 4 months of age (DOCTOR'S PRESCRIPTION)

Only if the child:

-shows interest in semisolid foods, or
-appears hungry after breastfeeding, or
-is not gaining weight adequately

Give these foods 1 or 2 times per day **after** breastfeeding

SIGNS OF GOOD ATTACHMENT

The four signs of good attachment are:

- more areola seen above infant's top lip than below bottom lip
- mouth wide open
- lower lip turned outward
- chin touching breast

FEEDING ASSESSMENT

6 up to 9 months

- Breastfeed as often as your child wants.
- Also give thick porridge or well-mashed foods including animal-source foods and vitamin A-rich fruits and vegetables
- Start by giving 2 to 3 tablespoons of food. Gradually increase to 1/2cups (1 cup = 250ml).
- Give 2 to 3 meals each day
- Offer 1 or 2 snacks between meals. When the child seems hungry

9 up to 12 months

- Breastfeed as often as your child wants.
- Also give a variety of mashed or finely chopped family food, including animal-source foods and vitamin A-rich fruits and vegetables.
- Give 1/2 cup at each meal (1 cup = 250 ml).
- Give 3 to 4 meals each day
- Offer 1 or 2 snacks between meals. The child will eat if hungry.
- For snacks, give small chewable items that the child can hold. Let your child try to eat the snack, but provide help if needed

Feeding Recommendations For Aged 6 Months-12 Months

Children begin to need complementary or weaning foods

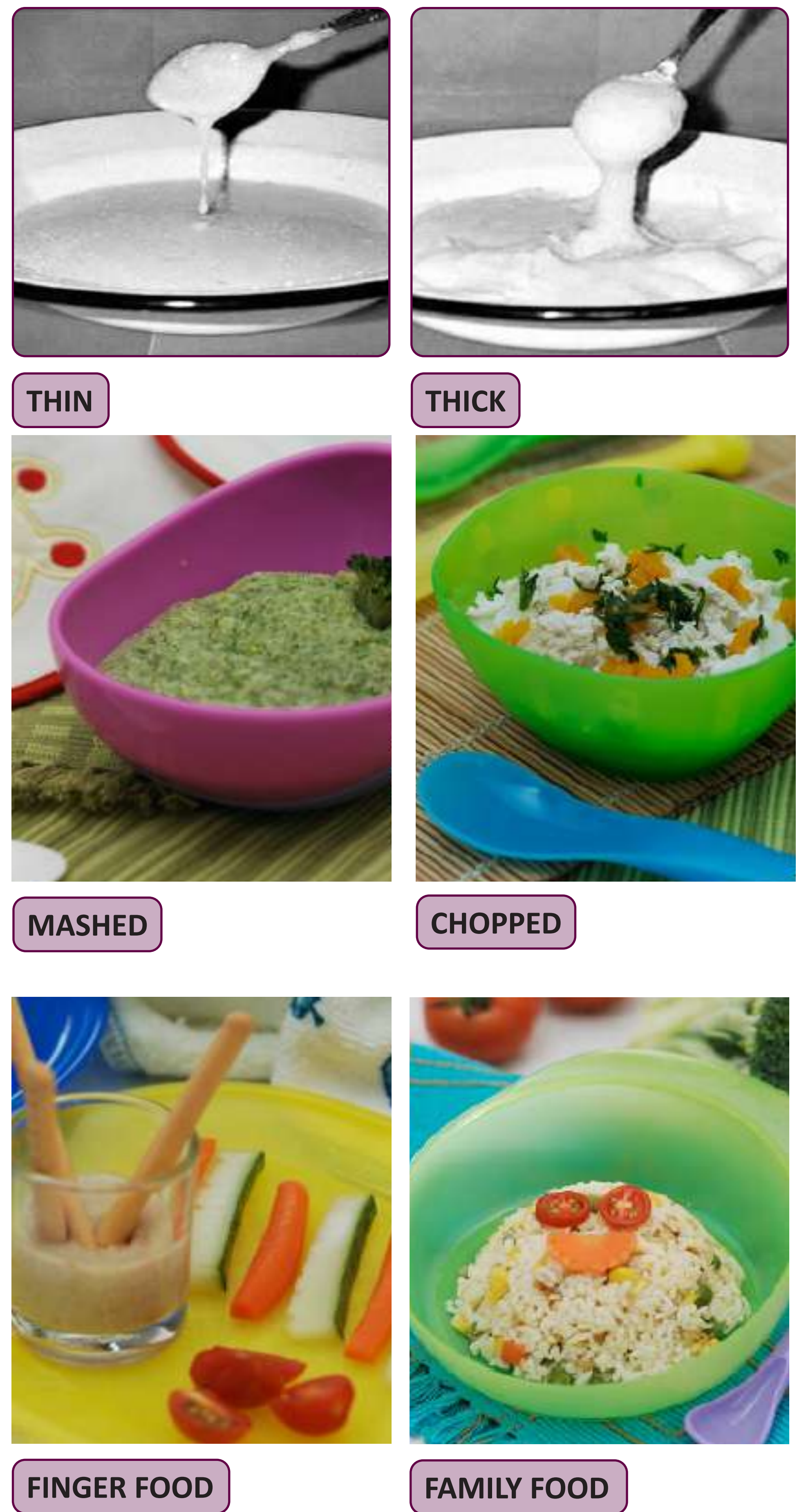
- The mother should continue to breastfeed as often as the child wants

Start giving 1 or 2 tablespoons of complementary foods 1 or 2 times per day and gradually increase the frequency and amount given.

- Practise responsive feeding (for example, feed infants directly and assist older children. Feed slowly and patiently, encourage them to eat but not force them, talk to the child and maintain eye contact).

By the age of 12 months, complementary foods are the main source of energy.

- 6 to 8 months: complementary food can be mashed
  After 8 months: complementary food can be mashed


THIN
THICK
MASHED
CHOPPED
FINGER FOOD
FAMILY FOOD

AMOUNTS OF FOODS TO OFFER			
Age	**Texture**	**Frequency**	**Amount of food an average child will usually eat at each meal**
6-8 months	Mashed food	2-3 meals per day plus frequent breastfeeds Depending on the child's appetite 1-2 snacks may be offered	Start with 2-3 tablespoonfuls per feed increasing gradually to ½ of a 250 ml cup
9-11 months	Finely chopped or mashed foods, and foods that baby can pick up	3-4 meals plus breastfeeds	½ of a 250 ml cup/bowl
12-23 months	Family foods, chopped or mashed if necessary	Depending on the child's appetite 1-2 snacks may be offered	¾ to one 250 ml cup/bowl

If baby is not breastfeed, give in addition: 1-2 cups of milk per day, and 1-2 extra meals per day.

12 months up to 2 years

- Breastfeed as often as your child wants
- Also give a variety of mashed or finely chopped family food, including animal-source foods and vitamin A-rich fruits and vegetables.
- Give 3/4 cup at each meal (1 cup = 250ml).
- Give 3 to 4 meals each day
- Offer 1 to 2 snacks between meals.
- Continue to feed your child slowly, patiently. Encourage -but do not force- your child to eat

FEEDING RECOMMENDATIONS
For Aged 12 Months-2 Years

If the child is breastfeed, give complementary foods 3 to 4 times daily plus 1-2 snacks

If the child is not breastfeed, give complementary foods 5 to 6 times daily actively feed the child

The child should not have to compete with older brothers and sisters for food from a common plate

The child should have his or her own adequate serving. An adequate serving means that the child does not want any more food after active feeding

2 years and older

- Give a variety of family foods to your child including animal- source foods and vitamin A-rich fruits and vegetables
- Give at least 1 full cup (250 ml) at each meal.
- Give 3 to 4 meals each day.
- Offer 1 or 2 snacks between meals.
- If your child refuses a new food, offer tastes several times. Show that you like the food. Be patient.
- Talk with your child during a meal, and keep eye contact.

Feeding Recommendations For More than 2 Years

- Child should be given variety of family foods in 3 meals per day
- The child should also be given 2 extra feeding per day
- It should be family food or nutritious food

Feeding Advice During Illness Sick Child Aged Less Than 6 Months

- Encourage them to breastfeed as often as the child wants
- For non breastfeeding children, increase milk intake
- If a sick child needs referral-advise mother to keep breastfeeding till arrives at health facility

Feeding Advice During Illness Sick Child Aged More Than 6 Months

- Continue breastfeeding on demand
- More frequent than usual, smaller amount of soft, favourite food
- When during recovery period -give extra portion at each meal, or add extra meal/snack

Correct Feeding Practices

- Still breastfeeding
- Uses spoon or cup rather than feeding bottle

Cooking Demonstration & Recipe

- Best way attracting patient
- 2 weekly or monthly

Advise When To Return Immediately For All Children

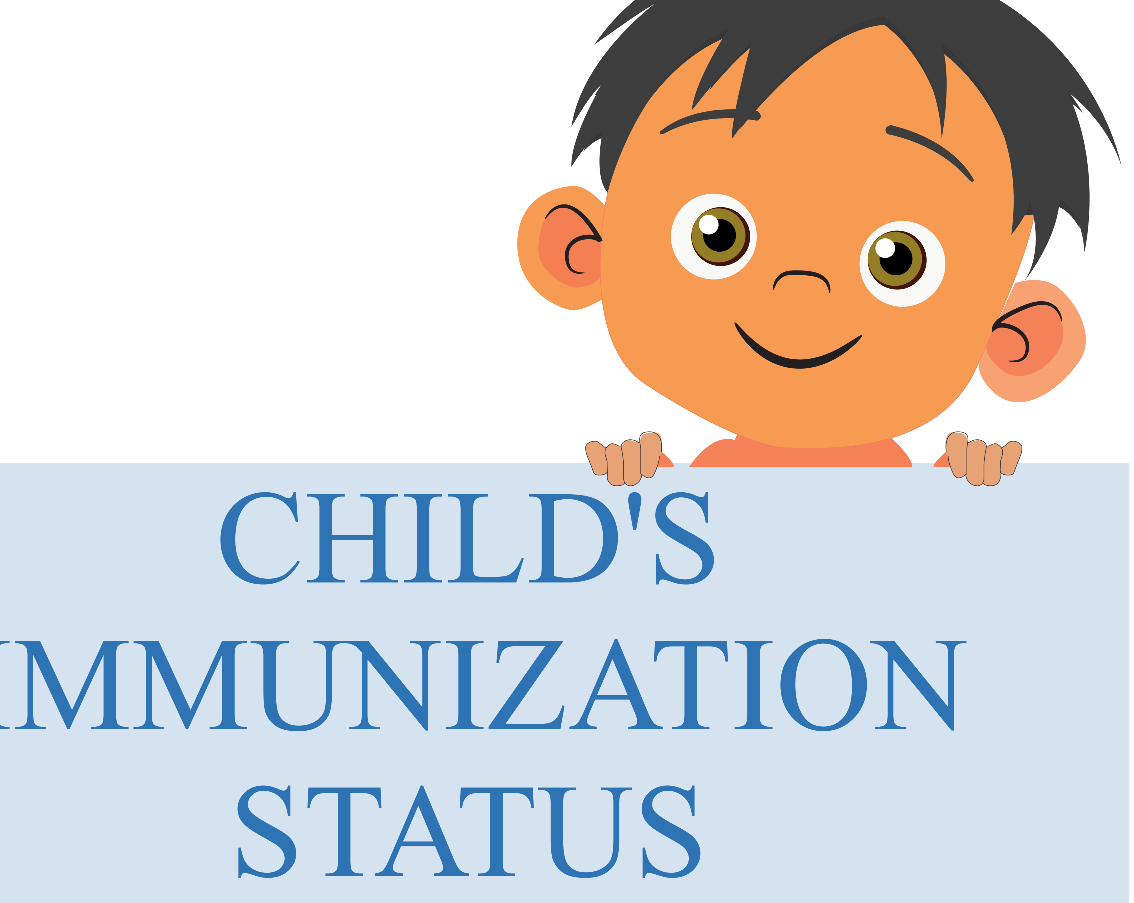
BRING ANY SICK CHILD IF –

Not able to drink or breastfeed

Becomes sicker

Develops fever

Seizure



CHILD'S IMMUNIZATION STATUS

Introduction

- In Malaysia, every child must complete vaccination by 2 years old.
- They need to be checked whether they have been vaccinated up to the appropriate schedule, and if not, they should be given the missed vaccinations on the day of the visit.
- The recommended vaccine should be given when the child reaches the appropriate age for each dose. If vaccination is administered too early, protection may not be adequate. If there is any delay in giving the appropriate vaccine, this will increase the risk of the child developing the disease.

CHECK IMMUNIZATION STATUS AND DETERMINE VACCINATION NEEDED

1. Compare the child's vaccination record (and the dates) with the recommended schedule.
2. Decide if the child has had all vaccinations recommended for his/her age. Identify any vaccination the child needs today (either due vaccine or missed vaccine)
3. Give the required vaccination needed today unless the child is being referred to hospital.
4. Record the immunization and date on the child's book.

CURRENT NATIONAL IMMUNIZATION SCHEDULE

Age	Vaccination
At birth	**BCG** **Hepatitis B1**
1 month	**Hepatitis B2**
2 month	**(DTaP-IPV//Hib) 1**
3 month	**(DTaP-IPV//Hib) 2**
5 month	**(DTaP-IPV//Hib) 3**
6 month	**Measles** (Orang Asli, Penan / Sabah) **Hepatitis B3**
9 month	**MMR 1** **IMOJEV 1** (Sarawak only)
12 month	**MMR 2**
18 month	**(DTaP -IPV//Hib) 4**
21 month	**IMOJEV 2** (Sarawak only)

- This is our current National Immunisation schedule for children
- There are additional immunization given to certain vulnerable population groups. Eg: JE given in Sarawak because it is endemic there. Measles given early in Sabah because it is endemic. Measles given for OA and penan because lack of herd immunity

WHAT DISEASES DO IMMUNIZATIONS PROTECT CHILDREN FROM?

Types of vaccine	Role	When to give
BCG (Bacille Calmette-Guérin)	Strain of the attenuated (weakened) live bovine tuberculosis bacillus against tuberculosis	Given at birth but for premature baby to be given at 1.8kg upon discharge
(DTaP-IPV//Hib)	a mixture of 5 vaccines Immunize against • Diphtheria • pertussis (whooping cough), • tetanus • invasive Haemophilus influenza type B disease • poliomyelitis (IPV or inactivated polio vaccine replaces OPV)	- Given at 2, 3, 5 month old - Booster dose given at 18-24 months Remark : - DtaP-IPV//Hib can be given at 7 weeks of age if opportunistic immunization is indicated eg. remote area or difficult patient

BCG

- Check BCG scar at 3 month old, if no scar or pin point scar- to repeat BCG vaccination
- Recheck the scar after 3 month- if no scar, need to refer MO/ FMS (may consider repeat in high risk area/ case dependent)

WHAT DISEASES DO IMMUNIZATIONS PROTECT CHILDREN FROM?

Hepatitis B	-vaccine against hepatitis B	Given at 0, 1,6 month •For premature baby to be given at 1.8kg upon discharge
IMOJEV (in Sarawak only)	•is a live-attenuated vaccine-immunize against Japanese encephalitis	•Given at 9 month old and 21 month
MMR (Measles, Mumps & Rubella)	•is a live-attenuated vaccine to immunize against measles, mumps & rubella	•Given at 9 and 12 month old •The highest priority to be given in case of missed immunisation

Hepatitis B

- for child of Hep B positive mother, Hep B immunoglobulin should be given prior to first dose of Hep B (within 24 hours; the earlier the better)

ADVERSE EVENT

- Adverse event following immunization (AEFI) is an unwanted or unexpected event occurring following administration of vaccine(s)
- Majority cause **minor** adverse events including low-grade fever, or pain or redness at the injection site. Therefore these should be explained to the caregivers.
- All AEFI cases must be reported to NPRA using ADR form
- Common adverse events also not contraindicated to subsequent vaccination.

• Acute Drug Reaction Form see Appendix 7. Please refer to P*anduan Program Immunisasi Kebangsaan Bayi dan Kanak-kanak,* 2017 for further management on AEFI

WHAT ARE COMMON ADVERSE EVENTS?

Vaccine(s)	Common event, should not last long	Uncommon, return to facility
• DTap-IPV//Hib	• Swelling at injection site • Redness, soreness at injection site • Low-grade fever • Crying and irritability (in infants) • Injection site nodules are not as common, but do not require treatment	• Extensive swelling of limb, not just injection site

HOW DO YOU MANAGE FEVER FOLLOWING VACCINATION?

- If a child develops fever of over 38.5 °C **following vaccination**, give oral paracetamol at a dose of 10-15 mg/kg/dose given 4-6 hourly. This can be given for up to 2 days if child is still with high fever
- DO NOT GIVE PARACETAMOL IF FEVER < 38.5 °C
- ROUTINE PROPHYLACTIC PARACETAMOL IS NO LONGER RECOMMENDED
- DO NOT OVER WRAP THE CHILD

CONTRAINDICATION

- A contraindication is a condition when the vaccine is **not advised due to some potential and serious adverse effects**.
- **First, it is important to note that common illnesses are not a contraindication to vaccination**. Therefore no sick child, including the malnourished child, should miss vaccination. A child should only miss the vaccination if there is a clear contraindication

ABSOLUTE CONTRAINDICATION

- **Situations that are contraindications to vaccination**. These are important to remember:

1. Do not give to children with history of severe anaphylaxis following vaccination
2. Do not give live attenuated vaccine to severely immunocompromise child. Eg: Do not give BCG to a child with AIDS
3. Do not give whole cell pertussis to a child who has had convulsions or shock within 7 days of the last dose of the vaccine.
4. Do not give pertussis vaccination to a child with recurrent convulsions or another active/ progressive neurological disease of the central nervous system.

IMMUNISATION POSTPONEMENT - ACUTE ILLNESS

1. Temperature >38.5 C.
2. Malnourished child with complications
3. Baby who are suspected to have congenital TB should delay BCG vaccination and refer paediatrician

IMMUNISATION POSTPONEMENT- CHRONIC ILLNESS

1. Children who have received IvIg or blood products should have their live vaccine (MMR, IMOJEV, BCG) given 3 months after their treatment.
2. Children who have received steroids (Eg: Nephrotic syndrome, ITP, Immune haemolytic anaemia) with a dose of Predinisolone >2mg/kg/day for >7 days or lower dose for >2 weeks, vaccination should be given after 6 months only.
3. Child born to mother with active TB, BCG vaccination is delayed for 6 months to allow completion of isoniazide prophylaxis therapy (IPT)

PRECAUTION

Child with bleeding tendency vaccination should consult paediatrician

HOW WILL YOU HANDLE IMMUNIZATIONS IN A SICK CHILD?

- Before giving a child any vaccination use 'senarai semak buku rekod kesihatan' that is in the clinic copy of BRKK
- There are two good rules to remember:

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

2. If a child require referral for admission, to postpone the immunisation until after discharge

SENARAI SEMAK SEBELUM DI BERI IMUNISASI

Bil.	Perkara	Tarikh										
1.	Tarikh											
2.	Suhu badan °C (sekiranya demam)											
3.	Keadaan Am (Sakit / Sihat)											
4.	Riwayat penyakit yang lalu (Ada/Tiada/Tidak tahu) Sekiranya ada, sila nyatakan											
5.	Riwayat penyakit semasa (Ada/Tiada) Sekiranya ada, sila nyatakan											
6.	Alahan/Reaksi yang teruk terhadap imunisasi masa lalu (Ada/Tiada/Tidak tahu) Sekiranya ada, sila nyatakan											
7.	Adakah sedang mengalami keadaan berikut (Ya/Tidak/Tidak tahu)											
	Sawan											
	Cirit-birit/ Muntah											
	Mendapat Imunoglobulin (dalam tempoh 9 bulan)											
	Mengidap penyakit trombocytopania											
	Mendapat rawatan kemoterapi/ kanser											
	Jangkitan HIV											

Catatan:

i. Tandakan di dalam kotak setiap kali lawatan sebelum suntikan imunisasi diberi.

ii. Jika jawapannya 'ya' kepada mana-mana soalan di atas, dapatkan nasihat penyelia sebelum imunisasi elektif.

SELF-ASSESSMENT EXERCISE

COMPLETE THE QUESTIONS ABOUT IMMUNIZATIONS.

1. In the scenarios below, decide if a contraindication is present, and if you will vaccinate today or not. If you decide that the child should not be vaccinated, make a note giving your reasons.

IF THE CHILD:	Vaccinate today (if due)	Do not vaccinate today	Reasons:
a. Will be treated at home with antibiotics			
b. Has a local skin infection			
c. Had convulsion immediately after DtapT-IPV//Hib Dose 1, and needs DTap-IPV//Hib Dose 2 today			
d. Has diarrhoea			
e. Older brother had convulsion last year			
f. Is premature with VERY LOW WEIGHT, 1.78kg			
g. Is known to have AIDS and has not received any immunizations at all			
h. Has NO PNEUMONIA: COUGH OR COLD			

CATCH UP IMMUNIZATION

- Rule No.1: Immunization must be at least 4/52 apart
- Rule No.2: Practice Opportunistic Immunization
- Rule No.3: (DTaP-IPV//Hib 1 can be given at 7/52 old if Opportunistic Immunization is indicated*
- Rule No.4: Many vaccines can be given together simultaneously but must be given at different sites

If the child does not come for an immunization at the recommended age, give the necessary immunizations any time after the child reaches that age. Give the remaining doses at least 4 weeks apart. You do not need to repeat the whole schedule. Refer to catch up immunization schedule below

CHILD'S IMMUNIZATION STATUS

Recommended Interval Between Doses For Catch Up
Immunization Schedule For 2 Month Up To 6 Year-old

Vaccine	Min age for dose	Recommended Interval between dose		
		Dose 1-2	Dose 2-3	Dose 3-4
Hepatitis B	Birth	4-6 week	5-12 months	
DTaP-IPV//Hib	8/52	4-6 week	4-6 week	6-12 month
Japanese Encephalitis	9/12	12-24 month		
MMR	9/12	1-3 months		

Minimum age to receive the 1st dose as stated as above
For Hep B dose 3 – should be given at least 8 weeks after Hep B 2 and /at least 16 weeks after Hep B 1

Scenario 1

Question 1

- Baby was born on 1st January 2017. She was given BCG and Hepatitis B1, then defaulted.She came to see you today (1st August 2017):
- What do you plan to give her today?
- How to follow up subsequent visits?
- What would be the catch-up immunization for this patient?

Scenario 1

Answer 1

- 7 month old child only received BCG and Hep B 1 at birth. By right at this age she should have received HepB 2,3 and DTap-IPV//Hib 1,2,3.
- Plan of immunization schedule:

Date	Age	Type of vaccine
1st Aug 2017 (today)	7 month	• Hep B2 • DTaP-IPV//Hib 1
1st September 2017	8 month	• DTaP-IPV//Hib 2
1st October 2017	9 month	• MMR 1 • DTaP -IPV//Hib 3 • IMOJEV1 (In Sarawak only)
1stJanuary 2018	1 year	• MMR 2 • Hep B 3

Scenario 2

Question 2

- Baby was born on 1st June 2014. He was given BCG and Hep B1 then defaulted. He came back on 1st August 2015:
- What immunization you would give?
- How would you follow up subsequent visits?
- What would be the catch-up immunization for this patient?

Scenario 2

Answer 2

- 1 year 2 month old child received BCG and Hep B1. By right at this age she should have received HepB 2,3, DtaP/Hib/IPV 1,2,3 and MMR 1,2.

Date	Age	Type of vaccine
1st Aug 2015 (today)	1year 2 month	• MMR 1 • DTaP-IPV//Hib 1 • Hep B2 • IMOJEV1 (In Sarawak only)
1st September 2015	1year 3 month	• MMR 2 • DTaP-IPV//Hib 2
1st October 2015	1year 4 month	• DTaP-IPV//Hib 3
1stJanuary 2016	1year 7 month	• Hep B 3
1stApril2016	1year 10 month	• DTaP-IPV//Hib (booster)
1stAugust 2016	2year 2 month	• IMOJEV (In Sarawak only)

Scenario 3

Question 3

- Baby was born on 1st May 2015. He received BCG and Hep B1, then defaulted. He came to clinic on 1st August 2015.
- What immunization you would give?
- How to follow up subsequent visits?

Scenario 3

Answer 3

- 3 month old child received BCG and Hep B1 at birth. She missed Hep B2 at 2 month old and due for DTaP-IPV//Hib 1 at 3 month old. Therefore, on this visit she should be given Heb B2 and DTaP-IPV//Hib 1 and later follow the routine immunization schedule.
- She also should be checked for BCG scar. If there is no scar or pinpoint scar, a repeat BCG vaccine should be given and should recheck the scar after 3 months. If the scar is not present, patient need to refer to MO/ FMS (may need to consider repeat BCG in high risk area/ case dependent).

TREATING LOCAL INFECTION

OBJECTIVES

1. Advise the mother on how to treat her child at home
2. Teach the mother how to treat local infection at home
3. Check the mother's understanding with good checking questions

LOCAL INFECTIONS

Local infections includes:

a. Eye or Ear infection
b. Mouth ulcers
c. Oral Thrush
d. Skin pustules
e. Umbilical infection

EYE INFECTION
(pus discharge from the eyes, conjunctivitis)

Home treatment

1.Clean both eyes 4 times daily
   •Wash hands
   •Use clean cloth and water to gently wipe away pus

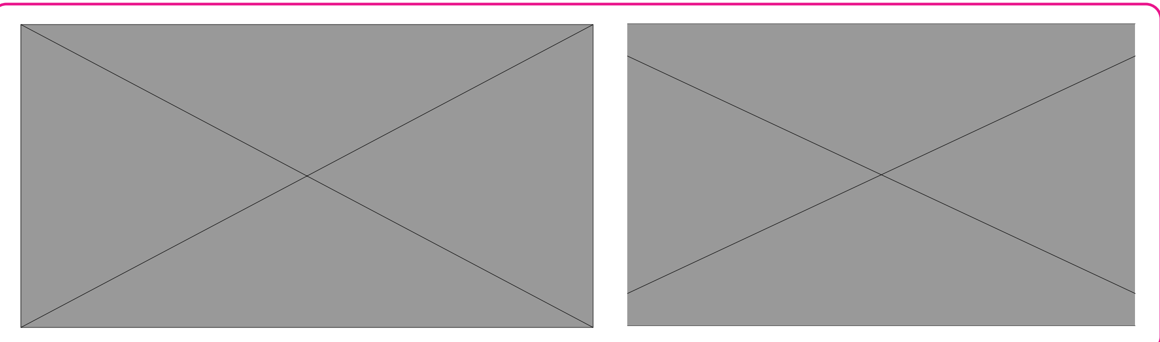
2. The apply Chloramphenicol eye ointment in both eyes 4 times daily
   •Squirt a small amount of ointment on the inside of the lower
   •Wash hands again

3. Treat until there is no pus discharge
   •Do not put anything else in the eyes

EAR INFECTION
(ear discharge, ear pain)

Home treatment

1. Dry the ear at least 3 times daily
   - Roll clean absorbent cloth or soft, strong tissue into a wick
   - Place the wick in the child's ear
   - Remove the wick when wet
   - Replace the wick with a clean one and repeat these steps until the ear is dry
- do not use cotton buds



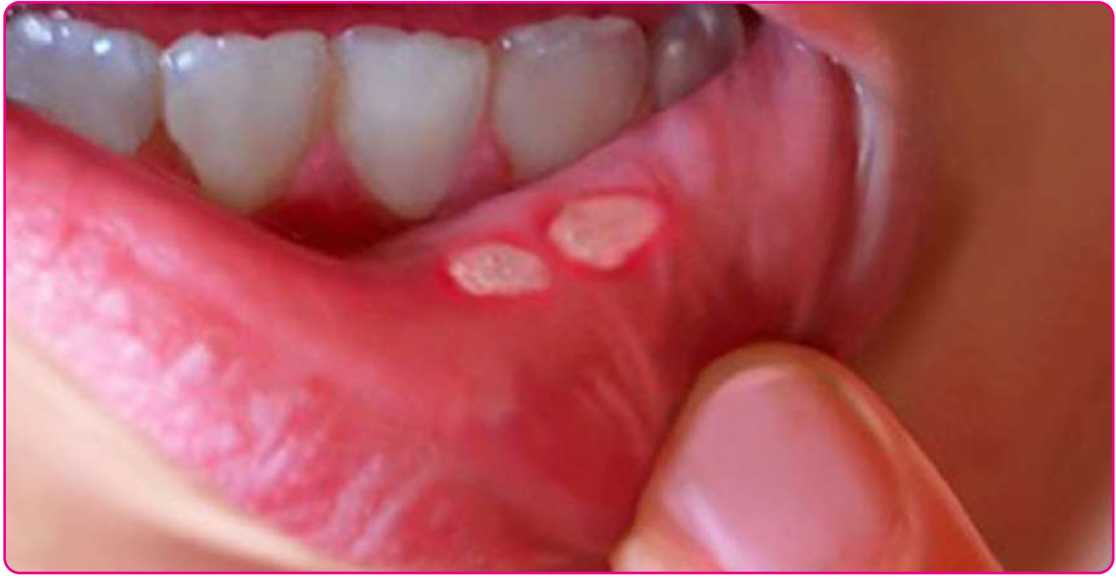
DO NOT USE COTTON BUDS

-

MOUTH ULCERS

Home treatment

1. Treat for mouth ulcers twice daily
   - Wash hands
   - Wash the child's mouth with clean soft cloth wrapped around the finger and wet with sodium bicarbonate solution (if available), if not available use salt water
   - Wash hands again
   - Give paracetamol for pain relief

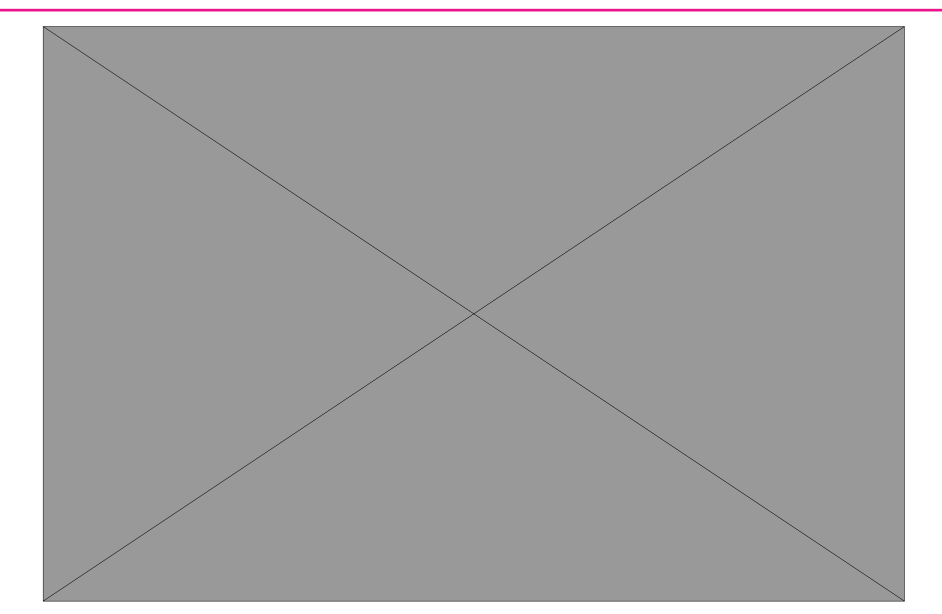


- 1 teaspoon sodium bicarbonate/salt in 250ml cool boiled water
- Change the solution every 24 hours

ORAL TRUSH

Home treatment

1. Treat thrush four times daily for 7 days
    - Wash hands
    - Wet a clean soft cloth with salt water and use it to wash the child's mouth.
    - Instill nystatin 1ml four times a day
    - Avoid feeding for 20 minutes after medication
    - If breastfed check mother's breasts for thrush. If present treat with nystatin
    - Advise mother to wash breasts after feeds. If bottle fed advice change to cup and spoon
    - Give paracetamol if needed for pain.

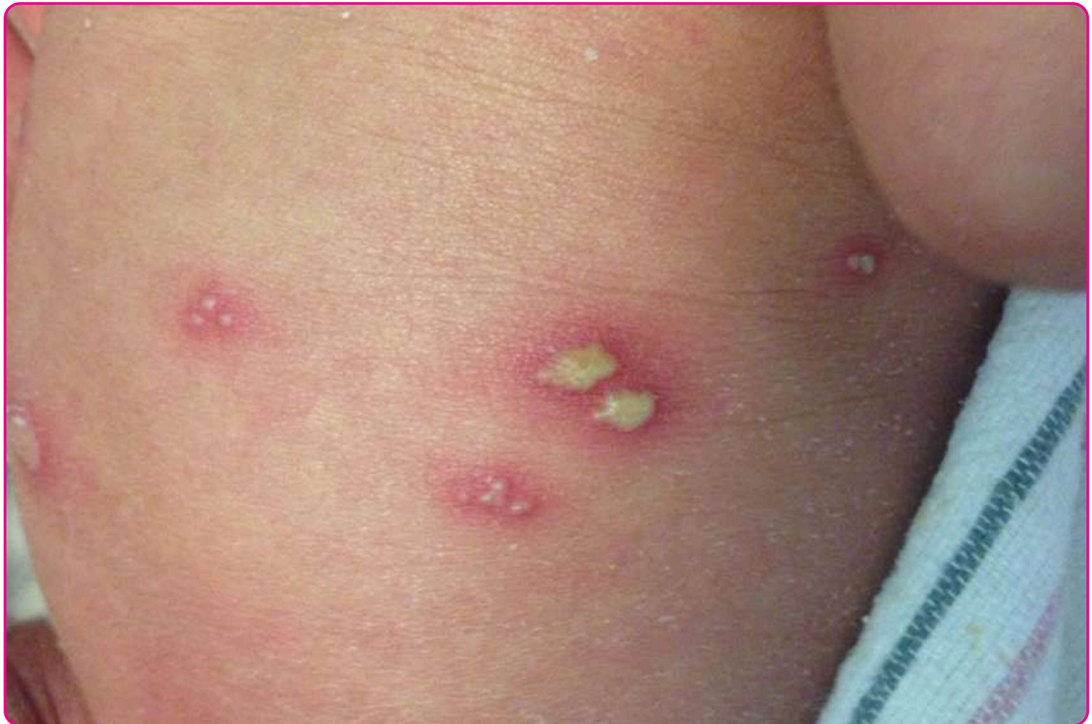


SKIN PUSTULES

Home treatment

1. Wash hands
2. Gently wash pus and crusts with soap and water
3. Dry the area
4. Wash hands

- To do the treatment twice daily for 5 days
- Do not rupture any pustules



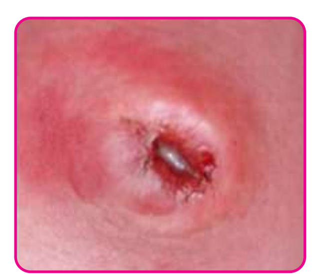
- Depends on local setting, may use normal saline or potassium permanganate solution
- Preparation for potassium permanganates solution:
  - o 1 part potassium to 9 part of water OR until solution is light pink in colour
  - o Stop using once the pustules have scabbed

UMBILICAL INFECTION

Home treatment

1. Wash hands
2. Gently wash off pus and crusts with soap and water
3. Dry the area
4. Wash hands

- To do the treatment twice daily for 5 days



DISCHARGE

- **Before sending the patients home, need to check the mother's understanding by using good checking questions.**

Example:

- How much ointment you will put in the eyes. Show me.
- How often will you treat the eyes?
- When will you wash your hands?
- How many times per day will you dry the ear with a wick?

ASSESSMENT OF YOUNG INFANTS

Introduction

MODULE LEARNING OBJECTIVES

After you study this module, you will know how to:

- Assess a young infant for very severe disease and local bacterial infection
- Recognize the clinical signs for assessing jaundice and diarrhoea.
- Check for a feeding problem or low weight
- Identify young infant that require urgent referral
- Provide pre-referral treatment to a young infant with very severe disease
- Assess breastfeeding

WHY ARE YOUNG INFANTS SPECIAL?

- All young infants must be checked for very severe disease and local bacterial infection
- Young infants can become sick and die very quickly from bacterial infection. Therefore, they require urgent referral.

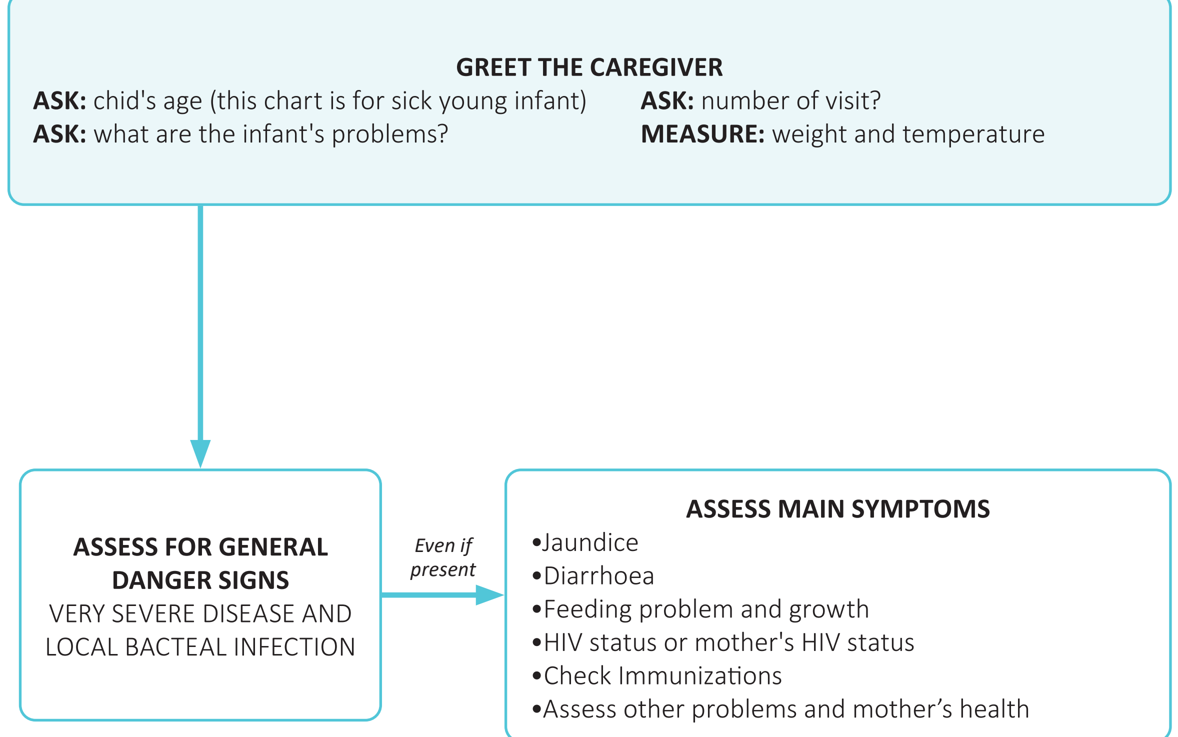
WHY ARE YOUNG INFANTS SPECIAL?

- Young infants different from older infants and children in the ways they show signs of infection.
- They become ill and die very quickly from serious bacterial infections. Severe infections are the most common serious illness during first 2 months of life.
- Special risk for low birth weight infants: Infants under 2.5 kilograms at birth are low weight. Infections are particularly dangerous in low birth weight infants. This means the infant had low weight at birth, due either to poor growth in the womb or to prematurity (being born early).
- Infants often show only general signs when seriously ill, such as difficulty in feeding, reduced movements, fever or low body temperature.
- Newborn infants are often sick from conditions related to labour and delivery. Newborns with any of these conditions require immediate attention. Some infants are premature, or born before 37 weeks of pregnancy. They may have trouble in breathing due to immature lungs. These conditions include birth asphyxia, birth trauma, preterm birth, and early-onset infections such as sepsis from premature ruptured membranes.

What To Do When Examining Young Infant?

Young Infant : Newborn To Age < 2 Months

- This lecture will emphasize on what should we do when examining young infant. Before start with the lecture-to recap on age definition for child age 2 months up to 5 years. Start with age definition of young infant: < 2 months.



CHECK FOR VERY SEVERE DISEASE

- Not feeding well
- Greenish vomitus
- Convulsions
- Fast breathing 60 breath/min or more
- Severe chest indrawing
- Fever (37.5 C or above)
- Low body temperature (less than 35.5 C)
- Movement only when stimulated or no movement at all

- The first part of your assessment is checking for signs of severe illness. Every sick young infant is checked for signs of very severe disease, especially a serious infection such as pneumonia, sepsis, and meningitis. The signs of very severe disease also identify young infants who have other serious conditions like severe birth asphyxia and complications of preterm birth.

- If one or more signs present
    - o Young infant requires urgent referral. Continue assessment quickly so referral is not delayed.

- If no signs present
    - o CONTINUE ASSESSMENT: assess for jaundice, diarrhoea, check feeding problems and low weight, check immunization status, and other problems

HISTORY (MUST ASK)

- Is the infant not feeding well?
- Does the infant vomits greenish vomitus?
- Has the infant had convulsions/fits/seizures?

- It is important to assess the signs in sequence.

ASK: IS YOUR BABY HAVING DIFFICULTY IN FEEDING?

Infant not feeding well
- Poor suckling effort
- Reduce frequency of feeding whether breastfeeding/supplementary feeding
- Feeding less amount than usual

ASK: IS YOUR BABY HAVING DIFFICULTY IN FEEDING?
***history should be taken from mother or observation**
- A young infant who was feeding well earlier but is not feeding well now may have a serious infection. A newborn that has not been able to feed since birth may be premature or may have complications such as birth asphyxia. These infants who are either not able to feed or are not feeding well should be referred urgently to hospital.
- Poor suckling effort is assessed by asking duration of each suckling effort and the ability to maintain suckling

ASK: ABOUT GREENISH VOMITUS

Greenish vomitus- Anak ada muntah hijau?

ASK: HAS YOUR BABY HAD CONVULSIONS [FITS]?

- spasms(kejang)
- arms & legs become stiff
- stop breathing & become blue (cyanosed)
- rhythmic movement any part of body
  - ✓ eg: twitching of mouth or blinking of eyes
- loss of consciousness

- Greenish (bilious) vomiting is a sign of intestinal obstruction in a young infant. It is an urgent condition that requires immediate referral to exclude conditions such as Duodenal Atresia, midgut malrotation and volvulus, meconium ileus and necrotizing enterocolitis.

- For convulsions, use words the caregiver understands. For example, the caregiver may know convulsions as “fits” or “spasms”.

LOOK: DOES THE SICK INFANT HAVE FAST BREATHING?

- Count Respiratory rate for 1 minute.
- Child must be calm and not feeding when counting the respiration rate.
- Healthy young infant : Resp. rate = 50-59/min.
- If Resp. rate ≥ 60/min, the respiration rate is counted for a second time because it is normal for young infants to have irregular breathing.
- If the second respiration rate is also ≥ 60/ min, the young infant has FAST BREATHING.
- Remark: episodic breathing in young infant is usual

- If the first count is 60 breaths or more, repeat the count. This is important because the breathing rate of a young infant is often irregular. The young infant will occasionally stop breathing for a few seconds, followed by a period of faster breathing. If the second count is also 60 breaths or more, the young infant has fast breathing.
- TO EMPHASIZE THE CHILD MUST BE CALM AND NOT FEEDING

LOOK: DOES THE SICK INFANT HAVE FAST BREATHING

Exercise : Count the breath.mpg

LOOK: DOES THE INFANT HAVE SEVERE CHEST INDRAWING?

- The infant has chest indrawing if the lower chest wall (lower ribs) goes IN when breath in
- Severe chest indrawing very deep and easy to see
- Present all the time when child is calm

The child breathing in WITHOUT chest indrawing

The child breathing in WITH chest indrawing

- Only severe chest indrawing is a serious sign in a young infant. 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, and is a sign of pneumonia.
- TO EMPHASIZE THE CHILD MUST BE CALM AND NOT FEEDING

LOOK: DOES THE INFANT HAVE SEVERE CHEST INDRAWING?

Exercise: Count the breath & severe chest indrawing.mpg

MEASURE TEMPERATURE: FEVER OR LOW BODY TEMPERATURE?

- Fever is defined as 37.5°C or above (axillary/ forehead)
- Low body temperature is below 35.5°C (axillary/ forehead)

•The thresholds for fever in the YOUNG INFANT chart are based on axillary temperature. Axillary temperature is measured in the armpits.

•Fever is defined as 37.5 °C or above (axillary), 38.5°C (tympanic). Fever is uncommon in the first two months of life. If a young infant has fever, this may mean the infant has very severe disease. Fever may be the only sign of a serious bacterial infection.

•Low body temperature is below 35.5 °C (axillary), 36.5°C (tympanic). Young infants can also respond to infection by dropping their body temperature. This is called hypothermia.

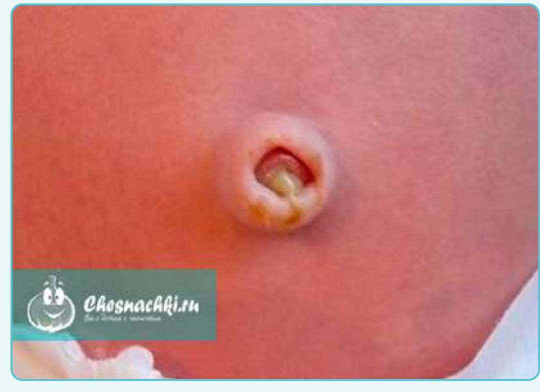
LOOK AT THE YOUNG INFANT'S MOVEMENTS

- Does the young infant move on his /her own?
- Does the young infant moves only when stimulated then stops? (by tapping the infant soles with your 2 fingers)
- Infant does not move at all
  - no movement despite being stimulated
  - cannot be woken up even after stimulation

- Young infants often sleep most of the time, and this is not a sign of illness. Observe the infant’s movements while you do the assessment. If a young infant does not wake up during the assessment, ask the caregiver to wake him. An awake young infant will normally move his arms or legs or turn his head several times in a minute if you watch him closely.
- If the infant is awake but has no spontaneous movements, gently stimulate the young infant. If the infant moves only when stimulated and then stops moving, or does not move at all, it is a sign of severe disease. An infant who cannot be waken up even after stimulation should also be considered to have this sign.

CHECK FOR LOCAL BACTERIAL INFECTION
LOOK AT THE UMBILICUS: IS IT RED OR DRAINING PUS

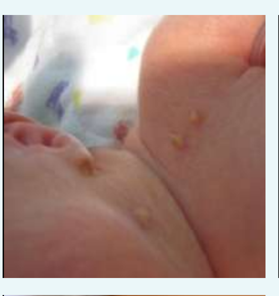
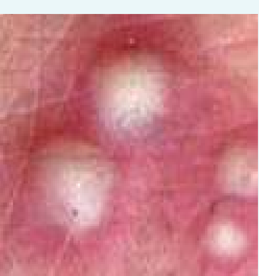
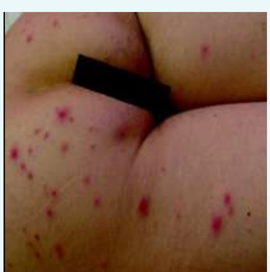
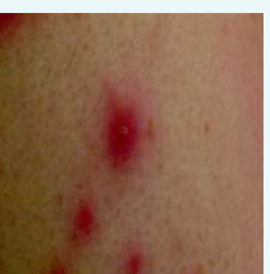
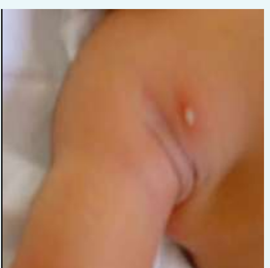
- Redness at the skin surrounding the umbilicus
- Pus draining from the umbilicus



- The umbilical cord usually separates one to two weeks after birth. The wound heals within 15 days. Redness of the end of the umbilicus, or pus draining from the umbilicus, is a sign of umbilical infection. Recognizing and treating an infected umbilicus early are essential to prevent sepsis.
- Explain on technique on how to examine the umbilicus by using thumb and forefinger to separate the umbilicus at 3 – 9 o'clock and 6 – 12 o'clock. If umbilicus is dirty, to clean it first.

LOOK FOR SKIN PUSTULES

- Examine whole body to look for skin pustules

- Skin pustules are red spots or blisters that contain pus.
- Examine the skin on the entire body. If you see pustules, is it just a few pustules or are there many?
- A severe pustule is large or has redness extending beyond the pustule. Many or severe pustules indicate a serious infection.
- Emphasize to expose child and look at hidden area; neck, axilla and perineum

LOOK FOR SKIN PUSTULES

- Young infant with redness of umbilicus/ pus at umbilicus skin pustules requires oral antibiotic
- Refer to doctor for further assessment
- If child is unwell must refer urgently

CHECK FOR VERY SEVERE DISEASE

- Not feeding well
- Greenish vomitus
- Convulsions
- Fast breathing 60 breath/min or more
- Severe chest indrawing
- Fever (37.5 Cor above)
- Low body temperature (less than 35.5 C)
- Movement only when stimulated or no movement at all

Infant with any VERY SEVERE DISEASE signs needs urgent referral to hospital

ASSESSMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS

- Video on assessment of the sick young infant age up to 2 months

CHECK FOR JAUNDICE

if jaundice present ask:
- When did the jaundice first appear?

LOOK AND FEEL:
- Look for jaundice (yellow eyes or skin)
- Look at the young infant's palms and soles. Are they yellow

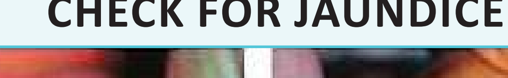
CLASSIFY JAUNDICE

Signs	Classify	Treatment
• Any jaundice if age less than 24 hours or • Yellow palms and soles at any age	**PINK: SEVERE JAUNDICE**	• Treat to prevent low blood sugar • Prefer URGENTY to hospital • Advise mother how to keep the infant warm on the way to hospital
• Jaundice appearing after 24 hours of age and • Palms and soles not yellow	**YELLOW: JAUNDICE**	• Advise the mother to give home care in the young infant • Advise mother to return immedately if palms and soles appear yellow • If the young infant is older than 14 days, refer to a hospital for assessment Follow-up in 1 day
• No jaundice	**GREEN: NO JAUNDICE**	• Advise the mother to give home care in the young infant

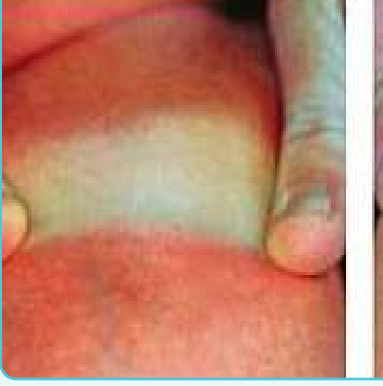
CHECK FOR JAUNDICE

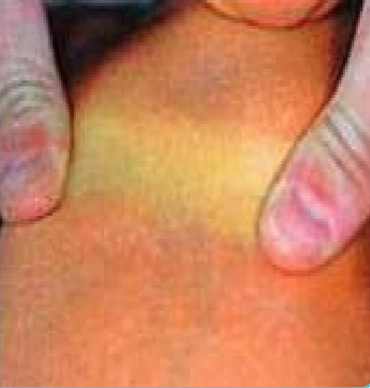
- Look for jaundice under natural sunlight
- Press infant skin over the forehead with your fingers to blanch and look for yellow discoloration
- If jaundice present: Ask did jaundice first appear before 24H of life or at Day 1 of life? If jaundice is prolonged more than 14 days?
- Check level of jaundice:
  - palms and soles
  - below umbilicus
  - above umbilicus

- To explain on the examination technique, show on the doll
- Explain examination of jaundice according to CPG for Neonatal Jaundice is done on the anterior chest



CHECK FOR JAUNDICE

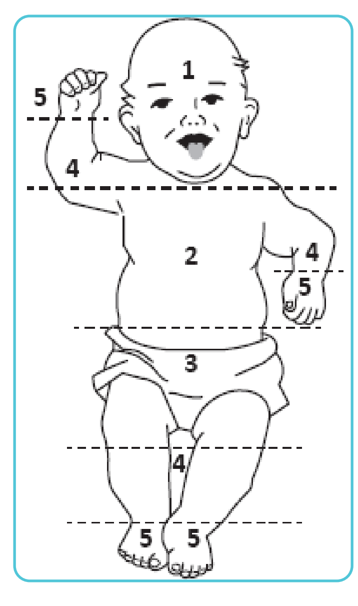




- To explain on the examination technique, show on the doll
- Using both thumb to stretch the skin

VIDEO BLANCHING TEST

KRAMER'S RULE



Area of the Body	Level	Range of Serum Bilirubin	
		µmol/L	Mg/dL
Head and neck	1	68-133	4-8
Upper Tunk (above umbilicus)	2	85-204	5-12
Lower Tunk and thighs (below umbilicus)	3	136-272	8-16
Arms and lower legs	4	187-306	11-18
Palms and soles	5	≥306	≥18

- Look for jaundice under natural light
- Press infant skin over the forehead with your fingers to blanch and look for yellow discoloration. Jaundice is usually visible when bilirubin level =5-7mg/dL (86-120umol/L)
- Check level of jaundice

CHECK FOR JAUNDICE

Refer urgently to hospital if jaundice:

- Appears at **Day 1 of life or before 24H of life**

OR

- Jaundice at **palms and soles**

JAUNDICE INFANT.MPG

- Video on jaundice infant

FOR JAUNDICE

- Refer to doctor
- Prolonged jaundice → jaundice > 14 days, inspect the stool and refer for assessment

- Refer to Integrated Manual on Detection and Management of Neonatal Jaundice and CPG on Neonatal Jaundice

STOOL COLOUR CHART

1 2 3

Abnormal Colour Chart

4 5 6

anamarek.com

Normal Stool Colours

- Abnormal colour: White, Grey, Light yellow (1,2,3)
- Normal stool colour: Yellowish, greenish (4,5,6)

• Recap : Check for very severe disease

- Ask participant to list out criteria for very severe disease and explain each of them

CHECK FOR VERY SEVERE DISEASE

- **Not feeding well**
- **Greenish vomitus**
- **Convulsions**
- **Fast breathing 60 breath/min or more**
- **Severe chest indrawing**
- **Fever (37.5 C or above)**
- **Low body temperature (less than 35.5 C)**
- **Movement only when stimulated or no movement at all**

- Participants should be able to answer as in the picture above

DOES THE YOUNG INFANT HAVE DIARRHOEA?

Diarrhoea in young infant:

- Change of stool pattern from usual stool pattern
- More frequent and watery (more water than faecal matter)

Normal frequent or semi-solid stool of a breastfed infant is NOT diarrhoea

- If the mother or caregiver says that the young infant has diarrhea, assess and classify for diarrhoea.
- Diarrhoea in young infant:
  - Change in pattern from usual stool pattern
  - More frequent stool
  - More watery stool (more water than faecal matter)
- It is normal for breastfed young infant to have frequent, loose or semi-solid stool.

NORMAL INFANT STOOL

- Examples of normal infant stool - can vary in colour, consistency and amount.

YOUNG INFANT WITH DIARRHOEA

- Examine for hydration status
- Look for infant movements
  - ✓ move on his/her own
  - ✓ move only when stimulated then stops
  - ✓ does not move at all
- Is the infant restless/irritable
- Look for sunken eyes
- Skin pinch : goes back very slowly (>2 sec)/slowly

- Look for infant movements
  - Spontaneous movement
  - Movement when stimulated and then stops
  - No movement at all
  - Is the infant restless / irritable?
- Look for sunken eyes
- Abdomen Skin pinch : goes back immediately or slowly

YOUNG INFANT WITH DIARRHOEA

Sign of dehydration in young infant

- ☐ Movement when stimulated and then stops
- ☐ No movement at all
- ☐ Restless/irritable?
- ☐ Sunken eyes
- ☐ Skin pinch : goes back slowly

If none of the above signs are present, treat with Plan A and follow up in 2 days. If not improving, the infant may require admission.

Assess diarrhoea.mpg

- Sign of dehydration in young infant (add in slide above the point)
  - Movement when stimulated and then stops
  - No movement at all
  - Restless / irritable?
  - sunken eyes
  - Skin pinch : goes back slowly

ASSESS FEEDING PROBLEM & CHECK FOR LOW WEIGHT

- Is the infant breastfeed? If yes how many times in 24 hours?
- Does the infant receive any other food or drinks? If yes, how often?
- What do you use to feed the infant?
- Determine weight for age (plot against chart)
- Look for ulcers or white patches (thrush) in mouth.

Check for feeding problem or low weight for age.mpg

- Adequate feeding is essential for growth and development.
- Poor feeding during infancy can have lifelong effects.
- In Infant growth is assessed by weight for age.
- Young infants should be breastfeed exclusively to provide the best nutrition and protection against disease.
- Check for feeding or low weight for age ONLY if the infant does not have any indication for urgent referral to hospital.

ASSESS BREASTFEEDING

Assess breastfeeding technique:

✓ Has the infant breastfeed in the previous hour?
  - If not, observe breastfeeding for 4 minutes

✓ Check for signs of good positioning

✓ Check for signs of good attachment

✓ Check for effective suckling (slow deep sucks, sometimes pausing)

- It is important to observe breastfeeding technique and give corrective measures immediately.

ASSESS BREASTFEEDING

Assess breastfeeding technique:

✓ Check for signs of good positioning:
- Baby's head and body in line
- Baby's held close to mother's body
- Baby's whole body supported
- Baby approaches breast, nose to nipple

ASSESS BREASTFEEDING

Assess breastfeeding technique:

✓ **Check for signs of good attachment:**
- More areola seen above baby's top lip
- Baby's mouth open wide
- Lower lip turn outwards
- Baby's chin touches breast

ASSESS BREASTFEEDING

Assess breastfeeding technique:

✓ **Check for effective suckling (slow deep sucks sometimes pausing)**
- Slow deep sucks with pauses
- Cheeks round when suckling
- Baby releases breast when finished
- Mother notices signs of oxytocin reflex

BREASTFEEDING

Correct Positioning and Attachment

(Show video)
https://globalhealthmedia.org/videos

* Baby head must be in line with spine. Mother should support baby's body adequately.

ASSESSMENT OF SICK YOUNG INFANTS

Summary

- Young infant From birth to less than 2 months
- ALL young infant must check for very severe disease or local bacterial infection
- All young infant must check for Jaundice
- All young infant must ask if has diarrhoea
- Check for feeding problem or low weight

MOTHER'S CARD

APAKAH TANDA -TANDA BAHAYA ANAK ANDA PERLU SERTA MERTA DIBAWA KE KLINIK?

Penjagaan bayi dan kanak-kanak memerlukan kesedaran dan perhatian yang tinggi. Ini kerana keadaan anak boleh berubah menjadi teruk dan tenat dalam tempoh masa yang amat singkat

BAWA ANAK YANG KURANG SIHAT JIKA KAMU SANGAT BIMBANG:

Tidak berupaya untuk minum atau kerap muntah, air kencing yang sedikit

Menjadi semakin lemah atau tenat atau asyik tidur atau menangis berterusan

Mengalami demam panas (angat) atau ruam kullit

Mengalami sawan atau kejang atau mengeras (luput)

BAWA ANAK YANG BATUK JIKA:

Sesak nafas atau pernafasan yang berbunyi

Bernafas dengan laju

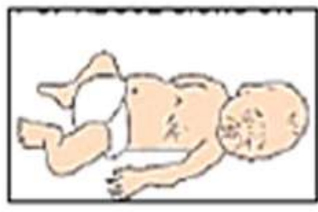
BAWA ANAK YANG CIRIT-BIRIT JIKA:

Najis bercampur dengan darah

Hanya minum sedikit atau tidak mahu minum atau air kencing yang sedikit

BAWA BAYI ANDA YANG BERUSIA KURANG DARI 2 BULAN JIKA:

Tidak menyusu dengan baik atau kurang menyusu



Tangan dan kaki yang sejuk atau nampak biru atau pusat yang kurang sihat

Mengalami jaundis / kekuningan tapak tangan

Kurang aktif atau menjadi semakin lemah atau tenat atau asyik tidur atau tangisan yang lemah

APAKAH TANDA -TANDA BAHAYA ANAK ANDA PERLU SERTA MERTA DIBAWA KE KLINIK?

CECAIR DAN MAKANAN

Pastikan selepas menyusu, tegakkan bayi dan tepuk belakang sehingga sendawa

Pastikan anak duduk tegak semasa menyuap makanan atau menyusu supaya tidak tercekik

BAGI ANAK YANG SAKIT

- Berikan susu ibu dengan lebih kerap
- Tambah pengambilan cecair dengan memberikan sup, air bubur, jus buah-buahan atau air masak.

MAKANAN BAGI ANAK YANG SAKIT

- Tambah pengambilan makanan yang digemari oleh anak anda
- Sedikit demi sedikit tetapi beri dengan lebih kerap

BAGI ANAK YANG CIRIT-BIRIT

- Berikan banyak cecair dan lebih kerap
- Berikan tambahan air seberapa banyak yang boleh seperti berikut :
  1. ORS (Garam rehidrasi)
  2. Makanan cecair seperti sup, air bubur, jus buah-buahan
  3. Air masak
- Penyusuan susu ibu lebih kerap dan lama bagi setiap penyusuan
- Berikan cecair tambahan sehingga cirit-birit berhenti

Anak yang Batuk atau Selesema

- Batuk atau Selesema biasanya akan pulih sendiri dalam 1 hingga 2 minggu.
- Penggunaan atau pengambilan antibiotik tidak diperlukan.
- Legakan batuk atau sakit kerongkong anak dengan susu ibu atau air suam atau air teh lemon suam (warm lemon tea)

Ubat batuk atau ubat selesema

- Tidak digalakkan kerana ia merbahaya dan membawa kesan sampingan seperti mengantuk, muntah dan kembung perut
- Kesan ini menyebabkan anak kurang pengambilan makanan dan minuman yang boleh menyebabkan kekurangan gula di dalam darah
- Menyembunyikan tanda-tanda penyakit sekirannya keadaan kesihatan bertambah teruk
- Kelewatan menghantar anak ke klinik akan menjejaskan pernafasan dan tahap kesedaran anak

PASTIKAN BAYI ANDA TIDAK BERADA DALAM KESEJUKKAN
Jika cuaca sejuk, tudung/ balut kepala dan kaki bayi serta pakaikan pakaian tambahan supaya bayi berasa hangat

Ikut jadual untuk suntikan imunisasi anak anda.
www.ifl.my

APPENDIX 1

ROLE PLAY

(45 MINUTES)

STATION 1-PLAN B (CLINIC TREATMENT)

OBJECTIVE : Teaching Mother to take care for a diarrhoea child with Some Dehydration at the clinic

PREPARATIONS

1. DOLL
2. ORS SOLUTION (ALREADY MIXED) 4 PACKETS
3. CUP, SPOON & 250mls bottle (AT LEAST 4)
4. FLIPCHART/MANJONG PAPER/MARKER

PLAN B (DEMO)

3 facilitators
- 1 Health worker
- 1 Mother
- 1 Moderator

Scenario: Baby Lura, 1 yr old ,10kg, diarrhoea with **SOME DEHYDRATION** treat with Plan B at clinic

Health worker

- to explain on treatment of Plan B to mother-To determine amount of ORS first 4H
- to show mother how to give ORS solution, reassess after 4H for any signs of dehydration
- to emphasize no other fluids other than ORS & breastmilk within first 4H

Mother

- Should behave as a real concerned mother,
- To ask health worker about other fluids ie plain water,juices etc
- To ask about if child's vomit
- To make up additional realistic information that fits the situation if necessary

Facilitator

-Introduction
-Emphasize on plan B at clinic
-Check mother's understanding-APAC technique
-Summary

APPENDIX 2

ROLE PLAY

(45 MINUTES)

STATION 1-PLAN B (CLINIC TREATMENT)

Role play 1

1 facilitator – as moderator

2 participants :

1. Health worker
2. Mother

Case scenario:

Baby Lura, 1 yr old ,10kg, Diarrhoea with SOME DEHYDRATION. Baby needs to be given Plan B at the clinic.

Mother (Facilitator to explain to participant earlier their role as Mother)

Encourage to act like normal concerned mother

To ask medicine to stop diarrhoea / vomiting

To become alarmed when the child vomits after giving ORS

To ask whether can give food / fluids to your child

Health worker (Facilitator to explain to participant earlier their role as Health Worker)

To explain to mother the reason for giving treatment plan B — is to replace the lost fluid with ORS. This is very important in treating patient with some dehydration. (by explaining the reason, the caretaker can coorperate better)

Steps for Plan B :

1. Determine the amount of fluids to be given in 4 hours
2. Show the mother how to give ORS solution

Facilitator

Inform all participants about the content of the scenario

-To emphasize on Plan B treatment at clinic

-To lead the discussion

-Key point of role play Plan B:

- What did the health worker do well?
- Did the health worker leave out anything important?
- Be sure to comment if the health worker told the mother the amount of ORS to give in the next 4 hours, give ORS slowly, show her how to give fluid with spoon, the 3 basics steps (Give information, Show example, Let Mother practise)
- Check the mother's understanding
- To emphasize : APAC technique

  A - Ask

  P - Praise

  A - Advice : give information, show example and practise

  C - Check understanding : 5W (What, When, Where, Who, Which); 1H (How)

-Summary of role play and stress about the learning points from the role play

STATION 2

(45 minutes)

PLAN A (Home treatment)

OBJECTIVE : Teaching Mother to take care for a diarrhoea child with No Dehydration at home

PREPARATIONS

1.DOLL
2.ORS SOLUTION – 10 packets (1 for demo, 1 for mother to practice, 8 to be given to mother)
3.CUP, SPOON & 250MLS BOTTLE
4.FLIPCHART/MAHJONG PAPER/MARKER PEN

DEMO

3 facilitators
- 1 Health worker
- 1 Mother
- 1 Moderator

Scenario: Baby Lura, 1 yr old ,10kg, diarrhoea with SOME DEHYDRATION, treated with Plan B at clinic. After 4 hours, reassessment by health worker shows Lura has improved and no signs of dehydration. Health worker plan to discharge Lura and before discharge, the health worker counselled mother on plan A

Health worker

- to explain on treatment of Plan A to mother (home care)
- to show mother how to mix ORS-expiry date, shake, colour of ORS, mix 250ml water
- to give extra fluid, amount of fluid given each diarrhoea
- to counsel when to return

Mother

- Should behave as a real concerned mother,
- To ask health worker about other fluids ie plain water, juices etc
- To ask what to do if child's vomit
- To ask about the any medication to stop the diarrhoea or antibiotic
- To make up additional realistic information that fits the situation if necessary

Facilitator

- Introduction
- Emphasize on plan A at home – 4 steps
- Emphasize 3 basic steps-info, example, practise
- Check mother's understanding-APAC

-Summary and stress about the learning points from the role play

STATION 2

(45 minutes)

Role play 2

Facilitator – as moderator

2 Participants

Health worker :

- To teach mother Plan A (take extra fluids, teach to mix and give ORS, continue feeding)
- To show mother how much fluid to give
- To demonstrate how to give the fluid
- To counsel on when to return
- To check mother's understanding

Mother

- To wait if health worker ask mother to practice on how to mix ORS (pretend to miss some steps)
- To mix and give ORS to child
- Use 3 basic steps
- To ask no other medication needed eg anti-diarrhoeal or antibiotic

Facilitator

- To lead the discussion, introduction of scenario
- To comments whether the health worker do well or leave out anything important

Key point of role play

- If the health worker told the mother the amount of fluids to give and when to give?
- If the health worker said to continue giving normal fluids
- If he told to give fluids until diarrhoea stop
- If he discussed to continue feeding and when to return immediately
- How were the 3 basics steps (info, example and practice) demonstrated
- How did the health worker check the mother's understanding?
- To emphasize APAC technique

Feeding Assessment and Mother's Card

Objectives:

- To assess feeding and to identify feeding problems
- To give the correct feeding recommendation
- To introduce how to use mother's card

Part 1 (demo) 10 min
Part 2 (role play) 15 min
Part 3 (role play) 15 min

Preparation

- Doll
- Mother's card
- Checklist
- Mahjung paper/flip chart/marker pen

APPENDIX 3

STATION 2

(45 minutes)

Part 1 (demo case)
3 facilitators
1 Health worker
1 Mother
1 Moderator

To introduce role play on feeding advice and recommendation, use of checklist & mother's card. Using APAC technique during consultation
- To use scripted role play (Refer Appendix 1)
- Health worker to use the questions on the checklist to identify feeding problems
- Health worker to recommend the correct feeding practice
- Health worker to use mother's card
- Mother to describe the child's feeding
- Mother should behave as a real mother, to make up additional realistic information that fits the situation if necessary

1 facilitator to lead the discussion

Key point:
- When to do feeding assessment :
    - All child < 2 years old or
    - Very low weight for age or
    - Child with Anaemia
- Use checklist to assess feeding
    - Do you breastfeed your child? How many time per day? Do you breastfeed at night?
    - Does your child take any other food / fluids ? Types of food (variety)? Frequency ? Amount?
- Review the answers from mother
- List down on the flip chart the feeding problems and correct feeding practices
- Discuss whether all the necessary questions were asked of the mother
- Any additional questions should have been asked
- What might be the consequences of not asking these questions?
- To emphasize using of mother's card when giving feeding advice & choices of food variety to follow local food availability in the family / community
- To emphasize APAC technique
- Summary of the role play and stress about the learning points from the role play

Part 2 and 3 (role play)
2 participants
1 Health worker
1 Mother

Scenario: Baby Lura, 15 months old ,10kg. You are worried about Lura because you have very little food available at home and you have other 3 children to feed. Lura no longer breastfeed. She takes family diet 2 or 3 times per day. Drink condensed milk. She share her meal with her other siblings.
(The scenario is given to the mother)
Health worker to use checklist to identify feeding problems and use mother's card for feeding recommendation
Facilitator to lead the discussion
Key point – as above

APPENDIX 4

Scripted Role Play Feeding Assessment & Feeding Advice

Aziz is 8 months old, weight 9.2 kg. He comes to clinic for URTI and his condition is stable.

		Cues / Key points
Health Worker :	Do you breastfeed Aziz ?	Ask , Listen
Mother :	Yes, I'm still breastfeeding	
Health Worker :	That's very good. Breastmilk is the best for your baby. How often do you breastfeed?	Praise , Ask , Listen
Mother :	About 4-5 times in the day	
Health Worker :	Do you breastfeed at night ?	
Mother :	Yes if he wakes up at night 3-4 times.	
Health Worker :	Good. Continue breastfeeding as often as he wants. Are you giving Aziz other foods or fluids?	Praise , Advice, Ask, Listen
Mother :	Yes, I give him porridge and recently started giving him fruits eg banana	
Health Worker :	Those are good choices. How often do you give porridge or fruits? Do you put anything in the porridge?	Praise, Ask, Listen
Mother :	Just plain porridge about twice a day, sometimes I give fruits once a week	
Health Worker :	Let me show you on the mother's card. For Aziz can give food 3 times per day. Can be porridge or fruits . You can either give him porridge 3 times per day or twice a day porridge then fruits once a day.	Advice, show on the mother's card
Mother :	Oh ok	
Health Worker :	At his age he can eat any food listed in this picture. Eg You can choose one or two of these food, such as meat /chicken /egg /fish / vegetables, cook together with the porridge. Can give potatoes and other types of fruits too.	Advice, show on the mother's card
Mother :	All right, I'll add some food in the porridge	
Health Worker :	That's good mom. Now, during this illness has Aziz's feeding changed?	Praise, Ask, Listen
Mother :	Yes	
Health Worker :	How does his feeding changed when he is sick?	Ask, Listen
Mother :	When he is sick he eats & drinks less than usual. He has poor appetite	
Health Worker :	You must be very worried when Aziz is sick.	
Mother :	Yes. He will only breastfeed when he is not well.	

APPENDIX 5

Case Discussion Day 1:

Cough/Difficulty Breathing and Diarrhoea (Refer slide Title: Case Discussion Day 1)

- ✓ This is an interactive session with participants
- ✓ To ensure to check for general danger signs
- ✓ Use clarifying questions during history taking
- ✓ Not to miss important points during general observation
- ✓ Use the checklist as a guideline
- ✓ To ensure participant are able to manage the case well

Case 1:

Salina, 15-month-old girl with weight of 8.5kg. Complaining of cough for 4 days and not eating well. How would you manage this child?

Case 2:

Justin, 3-year-old bay with weight of 12 kg. Complaining of cough for 3 days and mom noticed child looks weak. Temperature 37◦C

Case 3:

A 3-year-old child brought by mother to the clinic with history of loose watery stools for 3 days

Case 4:

1-year-old boy, presented with history of > 5 times diarrhoea and vomiting for 3 days. No blood in stools. During examination, child was restless and irritable, no sunken eyes and skin pinch was immediately. He take drinks eagerly.
How would you manage this child?

APPENDIX 6

Case Discussion Day 2: (Refer slide Title: Case Discussion Day 2)
Fever, Cough/Difficulty Breathing and Diarrhoea
Assessment of the sick young infant

Case Discussion Day 2:
(Refer slide Title: Case Discussion Day 2)

Fever, Cough/Difficulty Breathing and Diarrhoea
Assessment of the sick young infant

Case 1:

Ali, 3 years 6 month old boy with weight of 14.5kg came to the clinic with history of fever for 2 days. How would you manage this child? What history do you ask and what are the important general observation should be done?

Case 2:

Salina is a 15 months old girl with weight of 8.5kg. Mother complains child has been having cough for 4 days and not eating well. How would you manage this child?

Case 3:

Raymond, a 2-year-old boy came to clinic with his mother. He has history of loose watery stools, vomiting and fever for the past 3 days. He also has on and off abdominal pain. What are you plans for Raymond?

Case 4:

A mother came to the clinic with her 1-month-old baby girl. She complains the baby is having runny nose and notice baby was having difficulty to breath. The child's weight is 2.8kg. What would you do?

APPENDIX 7

Report on suspected adverse drug reactions
(to be filled by healthcare worker)

REPORT ON SUSPECTED ADVERSE DRUG REACTIONS
NATIONAL CENTRE FOR ADVERSE DRUG REACTIONS MONITORING
www.bpfk.gov.my

(Please report **all** suspected drug reactions including those for vaccines and traditional medicines. Do not hesitate to report if some details are not known. Identities of Reporter, Patient and Institution will remain **Confidential**.)

REPORT No .... (for official use only)

PATIENT INFORMATION

R/N or Initials	Age	Sex	Wt (kg)	Ethnic Group	Institution

ADVERSE REACTION DESCRIPTION

Time to onset of reaction : ____ Date of reaction : ____ Date end of reaction : ____

Reaction subsided after stopping drug / reducing dose : Yes ☐ No ☐ Unknown ☐

Reaction reappeared after reintroducing drug: Yes ☐ No ☐ Not applicable ☐

Extent of reaction : Mild ☐ Moderate ☐ Severe ☐

Treatment of adverse reaction : ____

Outcome : Recovered ☐ Not yet recovered ☐ Unknown ☐ Fatal-Date of death: ....

Drug Reaction Relationship : Certain ☐ Probable ☐ Possible ☐ Unlikely ☐ Unclassifiable

Suspected Drug :

Product/Generic Name	Dosage Given	MAL and Batch No.	Therapy Dates		Indication
			Start	Stop	

Concomitant Drug :

Product/Generic Name	Dosage Given	MAL and Batch No.	Therapy Dates		Indication
			Start	Stop	

**Please attach further papers if necessary

Relevant Investigations / Laboratory Data	Relevant Medical History

Reporter

Name : ____ Address: ____

Tel No : ____

Email Address : ____ Date of Report : ____ Signature : ____

Submission of a report does not constitute an admission that medical personnel or the products caused or contributed to the reaction. Thank you for reporting.

APPENDIX 8

Checklist Approach to Unwell Children Under 5 years
The Sick Young Infant Age Up To 2 Month

FH/ATUCU5- checklist 1/2020

CHECKLIST

APPROACH TO UNWELL CHILDREN UNDER FIVE YEARS THE SICK YOUNG INFANT AGE UP TO 2 MONTH

Name: .... Age:.............................. Weight: .... Temperature: .... ˚C

ASK:What are the child's problems?...................................... Visit: 1st /2nd/3rd/4th/5th

ASSESS(Circle all signs present)

ASK	LOOK AND FEEL	REFER FOR ADMISSION IF PRESENT
CHECK FOR VERY SEVERE DISEASE AND LOCAL BACTERIAL INFECTION		
• Is the infant not feeding well? • Does the infant vomit greenish vomitus? • Has the infant had convulsion?	• Count the breaths in one minute. .... breath per minute. Repeat if 60 or more .... Fast breathing? • Look for severe chest indrawing. • Look at umbilicus. Is it red or draining pus? • Look for skin pustule? • Look at young infant's movements Movement only when stimulated? No movement at all? • Check temperature: * Fever (> 37.5°C) * Low body temperature (below 35.5°C)	• Not able to feed • Feeding poorly • Greenish vomitus • Convulsions • Fast breathing • severe chest indrawing • Fever (> 37.5°C) or low body temperature (35.5°C) • Movement only when stimulated or no movement at all
CHECK FOR JAUNDICE (Jaundice present / No Jaundice)		
• When did the jaundice first appear? Before 24 hours of life / after 24 hours of life • Is the infant more than 14 days old?	• Look for level of jaundice * Jaundice palms and sole * Jaundice below umbilicus * Jaundice above umbilicus • Look at stool colour • Check TSB if jaundice present	• Jaundice appearing before 24hrs of age • Jaundice palm and sole at any age • TSB above photolevel • Pale stool
DOES THE CHILD HAVE DIARRHOEA? (YES / NO)		
•For how long?...............Days •Is there blood in the stools?	• Look at the young infant's general condition. Move only when stimulated or not move at all? Restless or irritable? • Look for sunken eyes. • Pinch the skin of the abdomen. Does it go back: Slowly OR Immediately	• 2 or more signs * movement only when stimulated or no movement * restless or irritable * sunken eyes * skin pinch goes back slowly

CHECK THE YOUNG INFANT'S IMMUNIZATION STATUS (IMMUNIZATION SCHEDULE)

AGE		VACCINE	
Birth	BCG	Hep B 1	**Vit K
1 month		Hep B 2	

If the infant has no indications to refer urgently to hospital CHECK FOR FEEDING PROBLEM OR LOW WEIGHT • 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? If Yes, please specify_____ If Yes, how often?___________ • Check feeding hygiene and preparation	• Determine weight for age. Low_____ Not Low_____ • Look for white patches in the mouth (thrush)
ASSESS BREASTFEEDING • Has the infant breastfed in the previous hour?	If infant has not fed in the previous hour, ask the mother to put her infant to the breast. Observe the breastfeed for 4 minutes. • Is the infant able to attach? To check attachment, look for : - More areola seen above infant's top lip than below bottom lip Yes____ No____ - Mouth open wide open Yes____ No____ - Lower lip turned outwards Yes____ No____ - Chin touhing breast Yes____ No____ not well attached good attachment • Is the infant suckling effectively (that is, slow deep sucks, sometimes pausing) not suckling effectively suckling effectively • Clear a blocked nose if it interferes with breastfeeding.

Assess other problem

APPENDIX 9

Checklist Approach to Unwell Children Under 5 years
The Unwell Child Age 2 Months Up to 5 Years

FH/ATUCU5- checklist 2/2020

CHECKLIST
APPROACH TO UNWELL CHILDREN UNDER FIVE YEARS THE UNWELL CHILD AGE 2 MONTHS UP TO 5 YEARS

Name:	Age: .... Weight:	Temperature: .... °C
ASK:What are the child's problems?...	Visit: 1st /2nd/3rd/4th/5th	
ASSESS(Circle all signs present)		
ASK	LOOK AND FEEL	REFER FOR ADMISSION IF PRESENT
CHECK FOR GENERAL DANGER SIGNS		
NOT ABLE TO DRINK OR BREASTFEED VOMIT EVERYTHING OR GREENISH VOMITUS CONVULSIONS DURING THIS ILLNESS	DROWSY OR UNCONSCIUS CONVULSING NOW	●General danger sign
DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? (YES / NO)		
● For how long? .... days	● Count the breaths in one minute. .... breath per minute. Fast breathing? ● Check SPO2 (if available) ● Look for chest indrawing. ● Look and listen for stridor. ● Look and listen for wheeze.	●Chest indrawing ●Stridor in calm child ●Fast breathing ●SPO2 <96%
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: Drowsy or unconcious? Restless or irritable? ● Look for sunken eyes. ● Offer the child fliuds. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? ● Pinch the skin of the abdomen. Does it go back: very slowly (longer than 2 seconds)? slowly?	● General danger sign ● Severe dehydration (2 or more signs) ● Drowsy or unconcious ● Sunken eyes ● Not able to drink or drink poorly ● Skin pinch goes back very slowly
DOES THE CHILD HAVE FEVER? (history/ temperature > 37.5°C (axillary/forehead) or > 38°C (ears)) (YES / NO)		
● For how long? .... days ● If more than 7 days, has fever been present every day? ● Coming from Dengue Endemic area ● Recent HFMD outbreak	● Look and feel for stiff neck. ● Look for petechial or purpuric rash ● Look for maculopapular rash on palms or soles ● Look for other causes of fever ● Check nose, ear and throat ● Check CCTVR (colour,capillary refill time, temperature, pulse volume and HR) * BFMP: Positive (Falciparum/Vivax)/ Negative/ Not done/pending	● General danger sign ● Stiff neck ●Petechial/purpuric rash ● Dengue ● Malaria ● HFMD with myoclonic jerk ● Mastoiditis ● Unsure cause of fever (for further assessment
Does the child has measles now or within the last 3 months:	● Look for signs of MEASLES now: * Generalized measles rash and * Triad : cough/ runny nose/ red eyes ● Look for mouth ulcers. If Yes, are they deep or extensive? ● Look for pus draining from the eye. ● Look for clouding of the cornea.	● Measles with eyes and mouth complications
CHECK FOR MALNUTRITION	● Determine weight for age (growth chart) Yellow zone___ Red zone___ Static /crossing zone ● Measure MUAC. 11.5 12.5 OR < 11.5 ● Look for oedema of both feet ● Look for visible severe wasting	● Sign of severe wasting or edema both feet
CHECK FOR ANAEMIA	● Look for palmar pallor If present to check Hb	
CHECK THE CHILD IMMUNIZATION STATUS (IMMUNIZATION SCHEDULE) AGE Birth 1 month 2 months 3 months 5 months 6 months 9 months 12 months 18 months 21 months	VACCINE BCG Hep B 1 ** Vit K (DTaP - IPV //Hib) 1 Hep B 2 (DTaP - IPV //Hib) 2 (DTaP - IPV //Hib) 3 *Measles Hep B 3 MMR 1 * JE 1 MMR 2 (DTaP - IPV //Hib) 4 * JE 2	
ASSESS CHILD'S FEEDING if child has ANAEMIA OR weigth for age in Yellow/Red zone OR child less than 2 years old. ● Do you breastfeed your child ? Yes_____ No _____ (If Yes, how many times in 24 hours ? _____ times. Do you beastfeed during the night ? Yes______ No______) ● Does the child take any other food or fluids ? Yes ______ No _____ (If Yes, what food or fluids ? ____________________ How many times per day? ______times. What do you use to feed the child ? ____________________) ● If very low weight for age : How large are servings ? ____________________ Does the child receive his own serving ? _____ Who feeds the child and how ?____________________ ● During the illness, has the child's feeding changed? Yes________ No_______ (If Yes, How ? ____________________)		
Assess other problem		

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