World Health Organization

Department of Child and Adolescent Health and Development (CAH)

INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS

unicef

CHILD AGED 2 MONTHS UP TO 5 YEARS

ASSESS AND CLASSIFY THE SICK CHILD

Assess, Classify and Identify Treatment

TREAT THE CHILD

Teach the mother to give oral drugs at home:

Teach the Mother to Treat Local Infections at Home

Give Preventive Treatments in Clinic

Give Emergency Treatment in Clinic only

TREAT THE CHILD, continued

Give Extra Fluid for Diarrhoea and Continue Feeding

Give Follow-up Care

COUNSEL THE MOTHER

SICK YOUNG INFANT AGED UP TO 2 MONTHS

ASSESS, CLASSIFY AND TREAT THE SICK YOUNG INFANT

Assess, Classify and Identify Treatment

Treat the Young Infant and Counsel the Mother

Give Follow-up Care for the Sick Young Infant

ASSESS AND CLASSIFY THE SICK CHILD AGED 2 MONTHS UP TO 5 YEARS

ASSESS

ASK THE MOTHER WHAT THE CHILD'S PROBLEMS ARE

- Determine whether this is an initial or follow-up visit for this problem.
  - if follow-up visit, use the follow-up instructions on *TREAT THE CHILD* chart
  - if initial visit, assess the child as follows:

CHECK FOR GENERAL DANGER SIGNS

ASK:	*LOOK:*
• Is the child able to drink or breastfeed? • Does the child vomit everything? • Has the child had convulsions?	• See if the child is lethargic or unconscious. • Is the child convulsing now?

A child with any general danger sign needs *URGENT* attention; complete the assessment and any pre-referral treatment immediately so that referral is not delayed.

THEN ASK ABOUT MAIN SYMPTOMS:

Does the child have cough or difficult breathing?

IF YES, ASK:

- For how long?

LOOK, LISTEN, FEEL:

- Count the breaths in one minute.
- Look for chest indrawing.
- Look and listen for stridor.
- Look and listen for wheezing.

} CHILD MUST BE CALM

If wheezing and either fast breathing or chest indrawing: *Give a trial of rapid acting inhaled bronchodilator for up to three times 15-20 minutes apart. Count the breaths and look for chest indrawing again, and then classify.*

Classify COUGH or DIFFICULT BREATHING

If the child is:	**Fast breathing is:**
2 months up to 12 months	**50** breaths per minute or more
12 months up to 5 years	**40** breaths per minute or more

CLASSIFY

IDENTIFY TREATMENT

USE ALL BOXES THAT MATCH THE CHILD'S SYMPTOMS AND PROBLEMS TO CLASSIFY THE ILLNESS.

SIGNS	CLASSIFY AS	TREATMENT (Urgent pre-referral treatments are in bold print)
• Any general danger sign or • Chest indrawing or • Stridor in a calm child	**SEVERE PNEUMONIA OR VERY SEVERE DISEASE**	➢ ***Give first dose of an appropriate antibiotic*** ➢ ***Refer URGENTLY to hospital****
• Fast breathing	**PNEUMONIA**	➢ ***Give oral antibiotic for 3 days*** ➢ If wheezing (even if it disappeared after rapidly acting bronchodilator) give an inhaled bronchodilator for 5 days** ➢ Soothe the throat and relieve the cough with a safe remedy ➢ If coughing for more than 3 weeks or if having recurrent wheezing, refer for assessment for TB or asthma ➢ Advise the mother when to return immediately ➢ Follow-up in 2 days
• No signs of pneumonia or very severe disease	**COUGH OR COLD**	➢ If wheezing (even if it disappeared after rapidly acting bronchodilator) give an inhaled bronchodilator for 5 days** ➢ Soothe the throat and relieve the cough with a safe remedy ➢ If coughing for more than 3 weeks or if having recurrent wheezing, refer for assessment for TB or asthma ➢ Advise mother when to return immediately ➢ Follow up in 5 days if not improving

If referral is not possible, manage the child as described in **Integrated Management of Childhood Illness, Treat the Child, Annex: Where Referral Is Not Possible, and WHO guidelines for inpatient care.*

***In settings where inhaled bronchodilator is not available, oral salbutamol may be the second choice*

Does the child have diarrhoea?

IF YES, ASK:

- For how long?
- Is there blood in the stool?

LOOK AND FEEL:

- Look at the child's general condition. Is the child:
  - Lethargic or unconscious?
  - Restless and irritable?
- Look for sunken eyes.
- Offer the child fluid. Is the child:
  - Not able to drink or drinking poorly?
  - Drinking eagerly, thirsty?
- Pinch the skin of the abdomen. Does it go back:
  - Very slowly (longer than 2 seconds)?
  - Slowly?

Classify DIARRHOEA

for DEHYDRATION		
Two of the following signs: • Lethargic or unconscious • Sunken eyes • Not able to drink or drinking poorly • Skin pinch goes back very slowly.	**SEVERE DEHYDRATION**	➢ If child has no other severe classification: - Give fluid for severe dehydration (Plan C) OR ***If child also has another severe classification:*** ***- Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way*** ***- Advise the mother to continue breastfeeding*** ➢ ***If child is 2 years or older and there is cholera in your area, give antibiotic for cholera***
Two of the following signs: • Restless, irritable • Sunken eyes • Drinks eagerly, thirsty • Skin pinch goes back slowly	**SOME DEHYDRATION**	➢ Give fluid, zinc supplements and food for some dehydration (Plan B) ➢ ***If child also has a severe classification:*** ***- Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way*** ***Advise the mother to continue breastfeeding*** ➢ Advise mother when to return immediately ➢ Follow-up in 5 days if not improving.
Not enough signs to classify as some or severe dehydration	**NO DEHYDRATION**	➢ Give fluid, zinc supplements and food to treat diarrhoea at home (Plan A) ➢ Advise mother when to return immediately ➢ Follow-up in 5 days if not improving.
and if diarrhoea for 14 days or more		
• Dehydration present	**SEVERE PERSISTENT DIARRHOEA**	➢Treat dehydration before referral unless the child has another severe classification ➢ Refer to hospital
• No dehydration	**PERSISTENT DIARRHOEA**	➢Advise the mother on feeding a child who has PERSISTENT DIARRHOEA ➢Give multivitamins and minerals (including zinc) for 14 days ➢Follow up in 5 days
and if blood in stool		
• Blood in the stool	**DYSENTERY**	➢ ***Give ciprofloxacin for 3 days*** ➢ Follow-up in 2 days

Does the child have fever?

(by history or feels hot or temperature 37.5°C** or above)

IF YES:
Decide Malaria Risk: high or low

THEN ASK:

- For how long?
- If more than 7 days, has fever been present every day?
- Has the child had measles within the last 3 months?

LOOK AND FEEL:

- Look or feel for stiff neck.
- Look for runny nose.

Look for signs of MEASLES

- Generalized rash and
- One of these: cough, runny nose, or red eyes.

If the child has measles now or within the last 3 months:

- Look for mouth ulcers. Are they deep and extensive?
- Look for pus draining from the eye.
- Look for clouding of the cornea.

High Malaria Risk / ***Low Malaria Risk*** / ***Classify FEVER*** / ***if MEASLES now or within last 3 months, Classify***

HIGH MALARIA RISK

• Any general danger sign or • Stiff neck.	**VERY SEVERE FEBRILE DISEASE**	➢ ***Give quinine for severe malaria (first dose)*** ➢ ***Give first dose of an appropriate antibiotic*** ➢ ***Treat the child to prevent low blood sugar*** ➢ ***Give one dose of paracetamol in clinic for high fever (38.5°C or above)*** ➢ ***Refer URGENTLY to hospital***
• Fever (by history or feels hot or temperature 37.5°C** or above)	**MALARIA**	➢ ***Give oral co-artemether or other recommended antimalarial*** ➢ ***Give one dose of paracetamol in clinic for high fever (38.5°C or above)*** ➢ Advise mother when to return immediately ➢ Follow-up in 2 days if fever persists ➢ If fever is present every day for more than 7 days, refer for assessment

LOW MALARIA RISK

• Any general danger sign or • Stiff neck	**VERY SEVERE FEBRILE DISEASE**	➢ ***Give quinine for severe malaria (first dose) unless no malaria risk*** ➢ ***Give first dose of an appropriate antibiotic*** ➢ ***Treat the child to prevent low blood sugar*** ➢ ***Give one dose of paracetamol in clinic for high fever (38.5°C or above)*** ➢ ***Refer URGENTLY to hospital***
• NO runny nose and NO measles and NO other cause of fever	**MALARIA**	➢ ***Give oral co-artemether or other recommended antimalarial*** ➢ ***Give one dose of paracetamol in clinic for high fever (38.5°C or above)*** ➢ Advise mother when to return immediately ➢ Follow-up in 2 days if fever persists ➢ If fever is present every day for more than 7 days, refer for assessment
• Runny nose PRESENT or • Measles PRESENT or • Other cause of fever PRESENT	**FEVER - MALARIA UNLIKELY**	➢ ***Give one dose of paracetamol in clinic for high fever (38.5°C or above)*** ➢ Advise mother when to return immediately ➢ Follow-up in 2 days if fever persists ➢ If fever is present every day for more than 7 days, refer for assessment

• Any general danger sign or • Clouding of cornea or • Deep or extensive mouth ulcers	**SEVERE COMPLICATED MEASLES*** **	➢ ***Give Vitamin A treatment*** ➢ ***Give first dose of an appropriate antibiotic*** ➢ ***If clouding of the cornea or pus draining from the eye, apply tetracycline eye ointment*** ➢ ***Refer URGENTLY to hospital***
• Pus draining from the eye or • Mouth ulcers	**MEASLES WITH EYE OR MOUTH COMPLICATIONS*** **	➢ ***Give Vitamin A treatment*** ➢ ***If pus draining from the eye, treat eye infection with tetracycline eye ointment*** ➢ If mouth ulcers, treat with gentian violet ➢ Follow-up in 2 days.
• Measles now or within the last 3 months	**MEASLES**	➢ ***Give Vitamin A treatment***

** *These temperatures are based on axillary temperature. Rectal temperature readings are approximately 0.5°C higher.*

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

BACKGROUND:

→ RISKS & DANGERS: A child born into poverty is at risk for nutritional blindness. Starting even before birth, if the mother has a poor diet, especially if she does not get enough vitamin A from eggs, milk, meat, and colored fruits and vegetables, her baby does not develop a strong immune system and cannot fight or heal from diseases. Illness such as measles, malaria or pneumonia can lead to blindness. If the family and caregivers do not recognize early danger signs, and start treatments immediately, permanent blindness can develop very quickly. Usually, the child will die within a few months of going blind. Survivors are blind for life. So, it is necessary to learn to recognize and to act quickly when warning signs appear in children at risk!

→ TREATMENTS: If the child is treated quickly as outlined, the progression to blindness can be stopped in the community, and both sight and life can be saved. Triple dose over 1 week of vitamin A mega-dose capsules (200,000 IU), Micronutrient Powder, Zinc-enriched dentifrice or Zinc tablets oral antibiotics and oral rehydration salts must be readily available to the child, because delay in giving the full courses of treatments could result in blindness.

→ PREVENTION: Family and health workers who care for these children must be vigilant to prevent nutritional blindness by better diet rich in eggs, milk, meat, colored fruits and vegetables. Breast milk should be the only food or drink for babies from the moment of birth to 6 months. After 6 months, children should start to be introduced to the family diet, starting with, for example, boiled eggs, with oil or other source of fat, iodized salt, and fortified with micronutrients. Even healthy children will often become malnourished if weaned to corn or other cereals alone. Immunizing children, frequent hand and face washing, keeping food and water clean and spoon feeding young children can prevent many diseases that can lead to tragedies such as blindness. Community deworming and vitamin A capsule distribution raises the level of nutrition of everyone who participates. Monitoring growth, will detect children who are failing to grow as they should due to "Hidden Hunger". These children need extra special attention, including social stimulation and improved diet fortified with extra micronutrients.

NUTRITIONAL BLINDNESS

EVALUATE:	CLASSIFY:	TREAT:
Poor vision in dim light, but eye may appear completely normal, and child may not complain of any problems, but may be noted to stop playing before other children in evening.	Stage I **Night Blindness** (Nyctalopia)	• Vitamin A Mega-Dose Capsules (200,000 International Units) Triple dose: 1st now, 2nd tomorrow, and 3rd in 7 days (For infants and pregnant women, see the charts) • Zinc tablets, or MAMA Zinc enriched Dentifrice at maximum doses for age • Essential Micronutrients (E.g.-Nora Lynne give 3 miniscoops of .15 cc daily mixed into first meal of the day) and supervise feeding or spoon-feed young child • Evaluate height and weight and treat for malnutrition (Eggs, oils and micronutrient powder) • Evaluate for anemia and treat • Bring child to doctor
Eyes are DRY, may be irritated, red and sore, draining pus, and child may be irritable. (Note: There are many causes of red eyes, but in the setting of micronutrient malnutrition and recent illness such as measles, red eyes must be assumed to be an ominous warning sign for developing nutritional blindness.)	Stage II **Dry Eyes** (Xeropthalmia)	• In child at risk, do all of 6 treatments above • If pus present, tell mother to wash her hands, and then gently using a clean cloth and water to wipe pus away from both eyes • Squirt a small amount of tetracycline ointment on the inside of the lower lid, then wash hands again • Continue until no more pus discharge • Do not put anything else in the eye
Foamy patches appear on the whites (sclera) of the eyes.	Stage III **White Patches** (Bitot Spots)	• Do all of above for Stages I and II • This is an serious indication of advancing nutritional eye disease in a child at risk
Cornea becomes hazy, cloudy and starts to become soft like "gelatin"	Stage IV **Soft Cornea** (Keratomalacia)	• Do all of the above, with great urgency. • Start oral amoxicillin and metronidazole, or give antibiotics such as ceftriaxone by injection • Oral rehydration • Spoon feed and coax child gently to accept fluids, medications and nutritious fortified food such as eggs
Child in distress: May have pain, fever, discharge, bulging cornea, swelling around eye, discharge, ulcer on cornea	Stage V **Bulging Eye**	• Do all treatments above, starting with Vitamin A megadose capsules 3 over 1st week. • This child needs the highest level of eye care available • Start and continue all of the treatments while arranging referral and transportation
After the eye ruptures, it will scar and shrink. Dense corneal scar may cause blindness even without rupture.	Stage VI **Blind Eye**	• If blind child is encountered intact eye, but dense corneal scar (from Vitamin A deficiency, trachoma, injury, etc) refer quickly to eye clinic for surgical evaluation before disuse damages sight • Child who is irreversibly blind needs special education and rehabilitation

SOFT TISSUE INFECTIONS OF THE MOUTH AND FACE

ASK:

-Does child have fever?

-Trouble eating or drinking?

-Recent weight loss?

-Pain in the molar that is intense and continuous?

-Pain in cheek, gums, tongue or mouth?

-Has child recently had a serious illness or a childhood viral illness with rash, or been exposed to strep, mono, mumps, etc.?

-Inquire regarding noma risk factors (Same complaints are much more serious in that context)

NOMA RISK FACTORS:

- Village far from medical care
- Contaminated food and water
- Household exposure to animals
- Poor oral hygiene
- Growth stunting from malnutrition, especially starting before birth
- Not exclusively breastfed 1st 6mo
- Poverty
- Lack of immunizations
- Serious infection, such as mononucleosis, chickenpox, oral herpes, roseola, CMV, measles, malaria, TB, HIV

In this context, children are immune suppressed, so mouth infections are life threatening. Begin treatments without delay in the community and continue until cured.

OBSERVE:

-Bad breath?

-Does child appear ill, uncomfortable, irritable, or lethargic?

-Blisters, spots, ulcers, sores on lips, gums, lining of mouth?

-White patches in the mouth?

-Bleeding gums?

-Pus, redness, warmth, soreness (signs of infection) in mouth?

-Loss of borders of gums, dead or dying tissue or defects inside mouth, or on face?

-Swelling of the face, gums, lips, or inside of cheek?

-Dark hard plaque on face, with line separating dead (gangrenous) tissue from living tissue?

-Scar or defect in face?

-Drooling, trouble swallowing, pain with eating or drinking?

-Small holes or dark spots on surface of teeth?

-Decayed molars?

-Food debris or soft plaque on teeth?

-Enlarged red tonsils? Pus on tonsils?

-Swelling in the soft tissues around the tonsils?

-Swollen lymph nodes in front or back of neck?

-Swollen saliva glands in front of ear, or under jaw?

NOTE: Severe persistent toothache with either hot, cold or pressure and swelling of face near the affected tooth indicates possible acute dental abscess-
SEE PAGE ----- TOOTH PROBLEMS

EVALUATE:	CLASSIFY:	TREAT:
SUSPECT NOMA IN CHILD AT RISK: Bad breath, gums red, bleeding, swollen, starting loss of tissue; poor oral hygiene, any mouth sores in child at risk of noma	Noma Stage I Mucosal Lesion ANUG	• Clean mouth, rinse with salt water • Vitamin A, Zinc, Vitamin C, and all Essential Micronutrients • Antibiotics by mouth-Amoxicillin &/or Metronidazole See charts • Start in the community
SUSPECT NOMA IN CHILD AT RISK: Fever, trouble eating, drooling, weight loss, mucosal lesions, swelling spreading to cheek, chin, nose or other parts of face; irritable, or lethargic and dehydrated; signs of infection	Noma Stage II Facial Swelling	• Perform all treatments for Stage I; Use oral or IV antibiotics • Refer to highest level of emergency care available • Treat dehydration and other conditions, including malnutrition • Feed by mouth or tube if needed • EMERGENCY –Still reversible!
SUSPECT NOMA IN CHILD AT RISK: Border appears between living and dead soft tissue and bones of face.	Noma Stage III Gangrene Plaque	• Perform all of the treatments for Stage I &II, including referral to specialty care • Keep wound clean, change bandages regularly (See manual)
SUSPECT NOMA IN CHILD AT RISK: Permanent defect in face, with loss of function and facial appearance	Noma Stage IV Scar Tissue)	• Refer to surgical specialty clinic for reconstructive surgery, dental care • Psychological care, counseling • Therapy to restore function
• Swelling, warmth, redness in the face, or any of the findings above for Noma STAGE II: SEE ABOVE • Swelling of the soft tissues around the tonsils	Severe Facial or Peritonsillar Infection	• PERFORM ALL TREATMENTS FOR STAGE I&II NOMA ABOVE • Treat fever, pain, • Send urgently to hospital, but begin all treatments in the community and continue during transportation to hospital
• Painful spots, ulcers, blisters or lesions of lips or gums • Bleeding or swollen gums	Stomatitis or Gingivitis	• Rx herpes, if present • Advise improved diet, hygiene, antiseptic rinses, Essential Micronutrients, Zinc, Vitamin C; Vitamin A for measles • Control pain, fever, avoid acidic foods • Infectious precautions if this is oral sign of viral illness (Check immunizations) • Watch for signs of progression to noma
White patches on mucosa of tongue, lips, gums, palate, or inside of the cheeks	Oral Candidiasis (Thrush)	• Administer oral nystatin • Treat fever and pain • Give abundant liquids • Teach the mother danger signs for dehydration • Follow the child in 1-2 days if not better
• Age over 3 • Swollen and painful lymphatic glands in the neck • Tonsil/throat swelling, pus, redness	Strep Throat or Tonsil Infection	• Give plenty of fluids • Treat fever and pain • Oral antibiotics
None of the above symptoms or signs that would indicate serious infection in the mouth	No Oral Infection, or Mild Viral Illness	• Teach fluids, danger signs • Treat fever and pain • Teach prevention of spread of viruses- Hand washing, hygiene

Does the child have an ear problem?

IF YES, ASK:	*LOOK AND FEEL:*
• Is there ear pain? • Is there ear discharge? If yes, for how long?	• Look for pus draining from the ear. • Feel for tender swelling behind the ear.

Classify EAR PROBLEM

• Tender swelling behind the ear.	**MASTOIDITIS**	➢ ***Give first dose of an appropriate antibiotic.*** ➢ ***Give first dose of paracetamol for pain.*** ➢ ***Refer URGENTLY to hospital.***
• Pus is seen draining from the ear and discharge is reported for less than 14 days, or • Ear pain.	**ACUTE EAR INFECTION**	➢ ***Give an antibiotic for 5 days.*** ➢ Give paracetamol for pain. ➢ Dry the ear by wicking. ➢ Follow-up in 5 days.
• Pus is seen draining from the ear and discharge is reported for 14 days or more.	**CHRONIC EAR INFECTION**	➢ Dry the ear by wicking. ➢ Treat with topical quinolone eardrops for 2 weeks ➢ Follow-up in 5 days.
• No ear pain and No pus seen draining from the ear.	**NO EAR INFECTION**	➢ No treatment.

THEN CHECK FOR MALNUTRITION AND ANAEMIA

CHECK FOR MALNUTRITION

LOOK AND FEEL:

- Look for visible severe wasting
- Look for oedema of both feet
- Determine weight for age

CLASSIFY NUTRITIONAL STATUS

• Visible severe wasting or • Oedema of both feet	**SEVERE MALNUTRITION**	➢ ***Treat the child to prevent low sugar*** ➢ ***Refer URGENTLY to a hospital***
• Very low weight for age	**VERY LOW WEIGHT**	➢ Assess the child's feeding and counsel the mother on feeding according to the feeding recommendations ➢ Advise mother when to return immediately ➢ Follow-up in 30 days
• Not very low wight for age and no other signs of malnutrition	**NOT VERY LOW WEIGHT**	➢ If child is less than 2 years old, assess the child's feeding and counsel the mother on feeding according to the feeding recommendations - If feeding problem, follow-up in 5 days ➢ Advise mother when to return immediately

CHECK FOR ANAEMIA

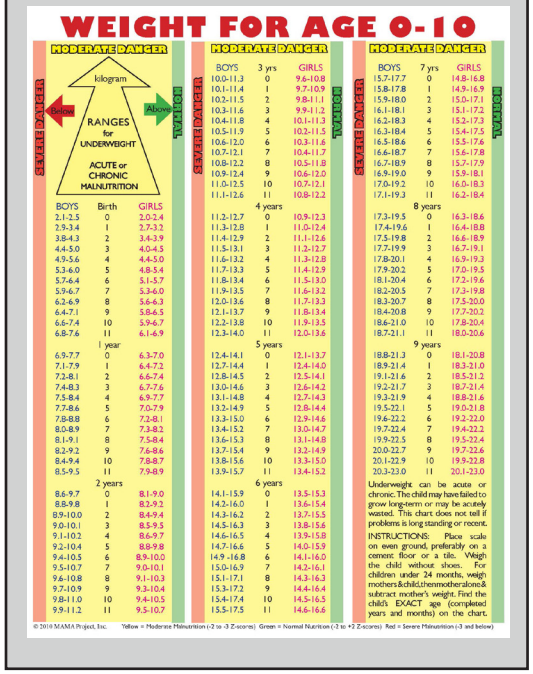
LOOK and FEEL:

- Look for palmar pallor. Is it:
  - Severe palmar pallor?
  - Some palmar pallor?

CLASSIFY ANAEMIA

• Severe palmar pallor	**SEVERE ANAEMIA**	➢ ***Refer URGENTLY to hospital***
• Some palmar pallor	**ANAEMIA**	➢ Give iron ➢ Give oral antimalarial if high malaria risk ➢ Give mebendazole if child is 1 year or older and has not had a dose in the previous six months ➢ Advise mother when to return immediately ➢ Follow up in 14 days
• No palmar pallor	NO ANAEMIA	If child is less than 2 years old, assess the child's feeding and counsel the mother on feeding according to the feeding recommendations - If feeding problem, follow-up in 5 days

ACUTE MALNUTRITION



BACKGROUND:

Acute malnutrition can be assessed by weight for age up to 5th Birthday, BMI for age after 5th Birthday, mid upper arm circumference in children 12-60 months or weight for height if exact birthday is unknown, but child is judged to be under 5.

If child has edema (swelling), the weight is not a dependable indicator of acute malnutrition, and the classification is automatically SEVERE

Use any chart or table assess and treat according to the principles outlined

ASK:

Exact birth date

CALCULATE:

Age to the exact month completed

OBSERVE:

Weight to the exact 0.1 kilogram (or 100g)

Height to 1mm

Swelling of feet?

Wasting?

Swollen belly?

Skin & hair pale, dry?

Lethargy?

Using MAMA Tables determine if child in:

High Risk Range

(Red Column)

Moderate Risk Range (Yellow Column)

Normal Risk Range (Green)

Or, use WHO International Growth Charts find Z-scores:

Severe: <-3Z

Moderate: <-2 to -3Z

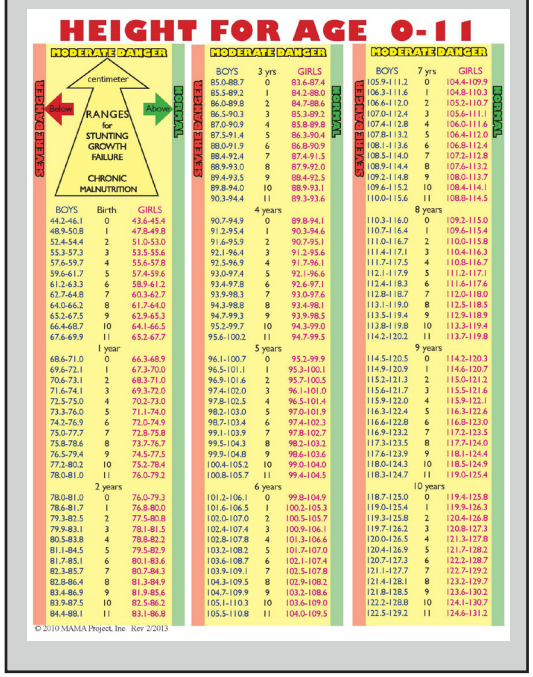
Normal -2 to +2

*Note that children in the normal range may still be mildly under or overweight

MONITOR until 19 years.

EVALUATE:	CLASSIFY:	TREAT:
Weight for age &/or Weight for Height &/or BMI for Age &/or Mid Upper Arm Circ In SEVERE Range or any edema of feet Or Z-Score: < -3 Kwashiorkor or "Wet": Feet swelling, poor skin, orange hair, swollen belly, lethargic, anorexic Marasmus or "Dry": Wasted, emaciated, with wrinkled skin, agitated, hungry	Severe Wasting	• Nora Lynne Micronutrient Powder (MNP) 3 mini-scoops daily • Check weight/height every 2-4 weeks • Nutritious Diet-See guidelines for age in IMCI booklet • Breast Feeding up to 2 years • Nutritional Rehab in community or NUTRITION CENTER –Start slowly • If available, use Ready to Use Therapeutic Food (RUTF) such a Plumpy Nut or MAMA SuperCookies • If no RUTF, supplement the diet with "Homemade RUTF": Boil 3 eggs/day; 3x per day, between meals, mash 1 egg, mix in 10cc oil or fat, iodized salt, and 1 mini-scoop MNP • Spoon-feed young children • Deworm with Albendazole • Treat all other associated illnesses with great urgency in child at high risk • Keep child warm, give glucose, and start appropriate antibiotic immediately
Measurements in range for center yellow area Z-Score: <-2 to -3	Moderate Wasting	• Nora Lynne Micronutrient Powder 2 mini-scoops daily • Carry out all above, adding 2 feeding of eggs and oil as above
None of the above symptoms or signs that would indicate serious infection in the mouth	Normal (See Sidebar)	• Nora Lynne Micronutrient Powder 1 mini-scoop daily • Carry out all above, adding 1 feeding of eggs and oil as a preventive measure for any child from family or community at risk for acute malnutrition

CHRONIC MALNUTRITION



BACKGROUND:

Micronutrient Malnutrition is also called "Hidden Hunger".

The biggest RISK FACTOR for childhood mortality is Micronutrient Malnutrition.

Nutritional Acquired Immune Deficiency Syndrome (Nutritional AIDS) due to Micronutrient Malnutrition makes children vulnerable to serious infections.

The greatest evidence of Micronutrient Malnutrition is Growth Failure or Stunting.

ASK:

Exact birth date

CALCULATE:

Age to the exact month completed

OBSERVE:

Height to the exact millimeter

Swelling of feet?

Wasting?

Swollen belly?

Skin & hair pale, dry?

Lethargy?

Using MAMA Tables determine if child in:

<u>High</u> Risk Range

(Red Column)

<u>Moderate</u> Risk Range (Yellow Column)

<u>Normal</u> Risk Range (Green)

Or, use WHO International Growth Charts find Z-scores:

Severe: <-3Z

Moderate: <-2 to -3Z

Normal -2 to +2

*Note that children in the normal range may still be failing to reach their own potential height due to chronic malnutrition.

MONITOR until 19 years.

EVALUATE:	CLASSIFY:	TREAT:
Height falls below range for sex and age in the center yellow column Z-score below -3 May have no physical evidence of swelling, wasting, poor skin or hair quality, swollen belly, or lethargy.	Severe Growth Failure	• Nora Lynne Micronutrient Powder (MNP) 3 mini-scoops daily • Recheck Growth every 4 weeks in community • Nutritious Diet-See guidelines for age in IMCI booklet • Breast Feeding up to 2 years • Nutritional Rehab in community or NUTRITION CENTER • If available, use Ready to Use Therapeutic Food (RUTF) such a Plumpy Nut or MAMA SuperCookies • If no RUTF, supplement the diet with "Homemade RUTF": Boil 3 eggs/day; 3x per day, between meals, mash 1 egg, mix in 10cc oil or fat, iodized salt, and 1 mini-scoop MNP • Spoon-feed young children • Deworm with albendazole • Treat all other associated illnesses with great urgency in child at high risk
Height falls in range for sex and age in the center yellow column Z-Score -2 to -3 May look normal but still have "Hidden Hunger"	Moderate Growth Failure	• Nora Lynne Micronutrient Powder 2 mini-scoops daily • Carry out all above, adding 2 feeding of eggs and oil as above
Height is above range for sex and age in the center yellow column Z-Score -2 to +2 May still be undernourished	Normal Growth	• Nora Lynne Micronutrient Powder 1 mini-scoop daily • Carry out all above, adding 1 feeding of eggs and oil as a preventive measure for any child from family or community at risk for micronutrient malnutrition

ANEMIA

1. Clean fingertip or heel with alcohol.
2. Obtain drop of blood by skin puncture.
3. Apply to absorbent paper, then blot firmly.
4. Wait 30 seconds, then compare to chart.
5. Read in natural light, out of direct sun.
6. Result may fall above, below or between.
7. Estimate Hemoglobin to 1 gm/dl.

BACKGROUND:

In communities where malnutrition is found, nutritional anemia can result from deficiency of many vitamins & minerals, not just iron.

Intestinal parasites, malaria, complications of pregnancies and excessive menstrual blood loss are sometimes life-threatening causes of anemia.

When malaria is suspected, it is necessary to wait to treat anemia with iron until malaria is under control, since iron in the Micronutrient Powder, or in iron tablets or drops can "feed" the malaria parasite before it helps the anemia.

ASK:

Tiredness?

Lethargy?

Shortness of Breath?

For girls and women:

Multiple pregnancies? Heavy menses?

OBSERVE:

Severe, moderate or mild pallor of palms or fingernails?

Perform Haemoglobin Estimation

*Nora Lynne Essential Micronutrient POWDER can be used as the only iron source, but if iron syrup or tablets are available, add 2-3 doses per day for the 1st 3 months, or double the POWDER dose

Duration: Minimum 3 months combined therapy to replenish iron stores, 6 months if using POWDER alone, then daily prevention.

(Refer to IMCI & MAMA Project Iron dosing guideline and warning charts)

ELEMENTAL IRON:

Nora Lynne Essential Micronutrient POWDER 6 mg /.15cc mini-scoop; IRON SYRUP (Ferrous Fumarate) 20 mg/ml. TABLETS of Ferrous Sulfate 60mg/200 mg

EVALUATE:	CLASSIFY:	TREAT:
Severe pallor of palms or fingernails Lethargy/tiredness/ shortness of breath Pregnancy/heavy menses Haemoglobin under 8	Severe Anemia	• Nora Lynne Micronutrient Powder 3 mini-scoops daily for 6 months *(see side bar) • Recheck anemia every 2-3 days while severe, then every 14 days until normal • Emergency medical consult to detect/ treat causes of anemia • May need transfusion • Test for malaria, and treat before giving iron (alone or in micronutrient powder) • Deworm when stable (or after 1st trimester)
Pregnancy/heavy menses Moderate fatigue Moderate pallor palms/ nails Haemoglobin 8-10	Moderate Anemia	• Nora Lynne Micronutrient Powder 2 mini-scoops daily for 6 months*(see side-bar) • Medical consult to detect/treat causes of anemia • Test for malaria, and treat before giving iron (alone or in micronutrient powder) • Deworm (after 1st trimester)
Mild pallor Mild tiredness Haemoglobin greater than 10; low for age & gender	Mild Anemia	• Nora Lynne Micronutrient Powder 2 mini-scoops daily for 6 months*(see side-bar) • Carry out all for moderate anemia
No pallor No tiredness Newborn under 6 months & Adult has Haemoglobin 14 or higher for male; 12 for female	No Anemia	• Nora Lynne Micronutrient Powder at least 1 mini-scoop daily as part of long anemia prevention • Deworm (after 1st trimester)

THEN CHECK THE CHILD'S IMMUNIZATION, VITAMIN A AND DEWORMING STATUS

IMMUNIZATION SCHEDULE: Follow national guidelines

AGE	VACCINE		
Birth	BCG	OPV-0	
6 weeks	DPT+HIB-1	OPV-1	Hepatitis B1
10 weeks	DPT+HIB-2	OPV-2	Hepatitis B2
14 weeks	DPT+HIB-3	OPV-3	Hepatitis B3
9 months	Measles*		

* Second dose of measles vaccine may be given at any opportunistic moment during periodic supplementary immunisation activities as early as one month following the first dose

VITAMIN A SUPPLEMENTATION

Give every child a dose of Vitamin A every six months from the age of 6 months. Record the dose on the child's card.

ROUTINE WORM TREATMENT

Give every child mebendazole every 6 months from the age of one year. Record the dose on the child's card.

ASSESS OTHER PROBLEMS:

MAKE SURE CHILD WITH ANY GENERAL DANGER SIGN IS REFERRED after first dose of an appropriate antibiotic and other urgent treatments.

TREAT THE CHILD

CARRY OUT THE TREATMENT STEPS IDENTIFIED ON THE *ASSESS AND CLASSIFY* CHART

TEACH THE MOTHER TO GIVE ORAL DRUGS AT HOME

Follow the instructions below for every oral drug to be given at home.
Also follow the instructions listed with each drug's dosage table.

- **Determine the appropriate drugs and dosage for the child's age or weight**
- **Tell the mother the reason for giving the drug to the child**
- **Demonstrate how to measure a dose**
- **Watch the mother practise measuring a dose by herself**
- **Ask the mother to give the first dose to her child**
- **Explain carefully how to give the drug, then label and package the drug. If more than one drug will be given, collect, count and package each drug separately**
- **Explain that all the tablets or syrup must be used to finish the course of treatment, even if the child gets better**
- **Check the mother's understanding before she leaves the clinic**

➢ For dysentery give Ciprofloxacin

15mg/kg/day—2 times a day for 3 days

SECOND-LINE ANTIBIOTIC FOR DYSENTERY: _____

	250 mg TABLET	500 mg TABLET
AGE	**DOSE/ tabs**	**DOSE/ tabs**
Less than 6 months	1/2 tablet	1/4 tablet
6 months up to 5 years	1 tablet	1/2 tablet

➢ Give an Appropriate Oral Antibiotic

➢ FOR PNEUMONIA, ACUTE EAR INFECTION:

FIRST-LINE ANTIBIOTIC: _____
SECOND-LINE ANTIBIOTIC: _____

	CO-TRIMOXAZOLE (trimethoprim / sulphamethoxazole) ➢ *Give two times daily for 3 days for pneumonia* ➢ *Give two times daily for 5 days for acute ear infection*			**AMOXYCILLIN*** ➢ *Give two times daily for 3 days for pneumonia* ➢ *Give two times daily for 5 days for acute ear infection*	
AGE or WEIGHT	**ADULT TABLET** (80/400mg)	**PAEDIATRIC TABLET** (20/100 mg)	**SYRUP** (40/200 mg/5ml)	**TABLET** (250 mg)	**SYRUP** (125 mg /5 ml)
2 months up to 12 months (4 - <10 kg)	1/2	2	5.0 ml	3/4	7.5 ml
12 months up to 5 years (10 - 19 kg)	1	3	7.5 ml	1.5	15 ml

* Amoxycillin should be used if there is high co-trimoxazole resistance.

➢ FOR CHOLERA:

FIRST-LINE ANTIBIOTIC FOR CHOLERA: _____
SECOND-LINE ANTIBIOTIC FOR CHOLERA: _____

	TETRACYCLINE ➢ Give 4 times daily for 3 days	**ERYTHROMYCIN** ➢ Give 4 times daily for 3 days
AGE or WEIGHT	**TABLET** 250 mg	**TABLET** 250 mg
2 years up to 5 years (12 - 19 kg)	1	1

TEACH THE MOTHER TO GIVE ORAL DRUGS AT HOME

➢ GIVE INHALED SALBUTAMOL for WHEEZING

USE OF A SPACER*

A spacer is a way of delivering the bronchodilator drugs effectively into the lungs. No child under 5 years should be given an inhaler without a spacer. A spacer works as well as a nebuliser if correctly used.

- From salbutamol metered dose inhaler (100 μg/puff) give 2 puffs.
- Repeat up to 3 times every 15 minutes before classifying pneumonia.

Spacers can be made in the following way:

- Use a 500ml drink bottle or similar.
- Cut a hole in the bottle base in the same shape as the mouthpiece of the inhaler. This can be done using a sharp knife.
- Cut the bottle between the upper quarter and the lower 3/4 and disregard the upper quarter of the bottle.
- Cut a small V in the border of the large open part of the bottle to fit to the child's nose and be used as a mask.
- Flame the edge of the cut bottle with a candle or a lighter to soften it.
- In a small baby, a mask can be made by making a similar hole in a plastic (not polystyrene) cup.
- Alternatively commercial spacers can be used if available.

To use an inhaler with a spacer:

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

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

➢ Give Iron

- Give one dose daily for 14 days

AGE or WEIGHT	IRON/FOLATE TABLET Ferrous sulfate 200 mg + 250 μg Folate (60 mg elemental iron)	IRON SYRUP Ferrous fumarate 100 mg per 5 ml (20 mg elemental iron per ml)
2 months up to 4 months (4 - <6 kg)		1.0 ml (< 1/4 tsp)
4 months up to 12 months (6 - <10kg)		1.25 ml (1/4 tsp)
12 months up to 3 years (10 - <14 kg)	1/2 tablet	2.0 ml (<1/2 tsp)
3 years up to 5 years (14 - 19 kg)	1/2 tablet	2.5 ml (1/2 tsp)

➢ Give Oral Co-artemether

- Give the first dose of co-artemether in the clinic and observe for one hour If child vomits within an hour repeat the dose. **2nd** dose at home after 8 hours
- Then twice daily for further two days as shown below
- Co-artemether should be taken with food

	Co-artemether tablets (20mg artemether and 120mg lumefantrine)					
WEIGHT (age)	**0hr**	**8h**	**24h**	**36h**	**48h**	**60h**
5 - <15 kg (5 months up to 3 years)	1	1	1	1	1	1
15 - <20 kg (3 years up to 5 years)	2	2	2	2	2	2

TEACH THE MOTHER TO TREAT LOCAL INFECTIONS AT HOME

- **Explain to the mother what the treatment is and why it should be given**
- **Describe the treatment steps listed in the appropriate box**
- **Watch the mother as she gives the first treatment in the clinic (except for remedy for cough or sore throat)**
- **Tell her how often to do the treatment at home**
- **If needed for treatment at home, give mother a tube of tetracycline ointment or a small bottle of gentian violet**
- **Check the mother's understanding before she leaves the clinic**

Clear the Ear by Dry Wicking and Give Eardrops*

- **Do the following 3 times daily**
  - Roll clean absorbent cloth or soft, strong tissue paper 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
  - Instil quinolone eardrops* for two weeks

* Quinolone eardrops may contain ciprofloxacin, norfloxacin, or ofloxacin

Treat Mouth Ulcers with Gentian Violet (GV)

- **Treat the mouth ulcers twice daily**
  - Wash hands
  - Wash the child's mouth with a clean soft cloth wrapped around the finger and wet with salt water
  - Paint the mouth with 1/2 strength gentian violet (0.25% dilution)
  - Wash hands again
  - Continue using GV for 48 hours after the ulcers have been cured
  - Give paracetamol for pain relief

.

Soothe the Throat, Relieve the Cough with a Safe Remedy

- Safe remedies to recommend:
  - Breast milk for a breastfed infant

_____

_____

- Harmful remedies to discourage:

_____

_____

Treat Eye Infection with Tetracycline Eye Ointment

- Clean both eyes 4 times daily.
  - Wash hands.
  - Use clean cloth and water to gently wipe away pus.
- Then apply tetracycline eye ointment in both eyes 4 times daily.
  - Squirt a small amount of ointment on the inside of the lower lid.
  - Wash hands again.
- Treat until there is no pus discharge.
- Do not put anything else in the eye.

GIVE VITAMIN A AND MEBENDAZOLE IN CLINIC

- **Explain to the mother why the drug is given**
- **Determine the dose appropriate for the child's weight (or age)**
- **Measure the dose accurately**

➢ Give Vitamin A

VITAMIN A SUPPLEMENTATION:

- Give first dose any time after 6 months of age to ALL CHILDREN
- Thereafter give vitamin A **every six months** to ALL CHILDREN

VITAMIN A TREATMENT:

- Give an extra dose of Vitamin A (same dose as for supplementation) as part of ***treatment*** if the child has measles or PERSISTENT DIARRHOEA.
- If the child has had a dose of Vitamin A within the past month, DO NOT GIVE VITAMIN A
- Always record the dose of Vitamin A given on the child's chart

Age	VITAMIN A DOSE
6 months up to 12 months	100 000 IU
One year and older	200 000 IU

➢ Give Mebendazole

- Give 500 mg mebendazole as a single dose in clinic if:
  - hookworm/ whipworm is a problem in your area
  - the child is 1 year of age or older, and
  - has not had a dose in the previous 6 months

GIVE THESE TREATMENTS IN THE CLINIC ONLY

- **Explain to the mother why the drug is given**
- **Determine the dose appropriate for the child's weight (or age)**
- **Use a sterile needle and sterile syringe when giving an injection**
- **Measure the dose accurately**
- **Give the drug as an intramuscular injection**
- **If the child cannot be referred, follow the instructions provided**

Give An Intramuscular Antibiotic

- **GIVE TO CHILDREN BEING REFERRED URGENTLY**
- Give ampicillin (50 mg/kg) and gentamicin (7.5mg/kg)

AMPICILLLIN

- Dilute 500mg vial with 2.1ml of sterile water (500mg/2.5ml)
- **Where there is a strong suspicion of meningitis the dose of ampicillin can be increased 4 times**

GENTAMICIN

- Use undiluted 2 ml vial (40mg/ml)
- Of the dose range provided below, use lower dose for children with weight at lower end of the category, and higher dose for children at the higher end of the category

AGE	WEIGHT	AMPICILLIN 500 mg vial	GENTAMICIN 2ml vial (at 40 mg/ml)
2 months up to 4 months	4 – <6 kg	1 ml	0.5 - 1.0 ml
4 up to 12 months	6 – <10 kg	2 ml	1.1 - 1.8 ml
12 months up to 3 years	10 – <14 kg	3 ml	1.9 - 2.7 ml
3 up to 5 years	14 – 19 kg	5 ml	2.8 - 3.5 ml

- IF REFERRAL IS NOT POSSIBLE OR DELAYED, repeat the ampicillin injection every 6 hours, and the gentamicin injection once daily

Give Diazepam to Stop Convulsions

- Turn the child to his/her side and clear the airway. Avoid putting things in the mouth
- Give 0.5mg/kg diazepam injection solution per rectum using a small syringe (like a tuberculin syringe) without a needle, or using a catheter
- Check for low blood sugar, then treat or prevent
- Give oxygen and REFER
- If convulsions have not stopped after 10 minutes repeat diazepam dose

WEIGHT	AGE	DOSE OF DIAZEPAM (10 mg / 2 ml)
< 5 kg	<6 months	0.5 ml
5 - < 10 kg	6 months up to 12 months	1.0 ml
10 - < 14 kg	12 months up to 3 years	1.5 ml
14 - 19 kg	3 years up to 5 years	2.0 ml

Give Quinine for Severe Malaria

FOR CHILDREN BEING REFERRED WITH VERY SEVERE FEBRILE DISEASE:

- Check which quinine formulation is available in your clinic
- Give first dose of intramuscular quinine and refer child urgently to hospital

IF REFERRAL IS NOT POSSIBLE:

- Give first dose of intramuscular quinine
- The child should remain lying down for one hour
- Repeat the quinine injection at 4 and 8 hours later, and then every 12 hours until the child is able to take an oral antimalarial. Do not continue quinine injections for more than 1 week

- If low risk of malaria, do not give quinine to a child less than 4 months of age

AGE or WEIGHT	INTRAMUSCULAR QUININE	
	150 mg /ml (in 2 ml)*	*300 mg /ml* (in 2 ml)*
2 months up to 4 months (4 - < 6 kg)	0.4 ml	0.2 ml
4 months up to 12 months (6 - < 10 kg)	0.6 ml	0.3 ml
12 months up to 2 years (10 - < 12 kg)	0.8 ml	0.4 ml
2 years up to 3 years (12 - < 14 kg)	1.0 ml	0.5 ml
3 years up to 5 years (14 - 19 kg)	1.2 ml	0.6 ml

*quinine salt

Treat the Child to Prevent Low Blood Sugar

If the child is able to breastfeed:

Ask the mother to breastfeed the child

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

- Give expressed breast milk or breast-milk substitute
- If neither of these is available give sugar water
- Give 30-50 ml of milk or sugar water before departure

To make sugar water: Dissolve 4 level teaspoons of sugar (20 grams) in a 200-ml cup of clean water

If the child is not able to swallow:

- Give 50ml of milk or sugar water by naso-gastric tube

GIVE EXTRA FLUID FOR DIARRHOEA AND CONTINUE FEEDING

(See FOOD advice on COUNSEL THE MOTHER chart)

Plan A: Treat for Diarrhoea at Home

Counsel the mother on the 4 Rules of Home Treatment:
1. Give Extra Fluid 2. Give Zinc Supplements (age 2 months up to 5 years)
3. Continue Feeding 4. When to Return

1. GIVE EXTRA FLUID (as much as the child will take)

➢ **TELL THE MOTHER:**

- Breastfeed frequently and for longer at each feed
- If the child is exclusively breastfed, give ORS or clean water in addition to breast milk
- If the child is not exclusively breastfed, give one or more of the following: food-based fluids (such as soup, rice water, and yoghurt drinks), or ORS

It is especially important 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 a clinic if the diarrhoea gets worse*

➢ **TEACH THE MOTHER HOW TO MIX AND GIVE ORS. GIVE THE MOTHER 2 PACKETS OF ORS TO USE AT HOME.**

➢ **SHOW THE MOTHER HOW MUCH FLUID TO GIVE IN ADDITION TO THE USUAL FLUID INTAKE:**

Up to 2 years: 50 to 100 ml after each loose stool
2 years or more: 100 to 200 ml after each loose stool

Tell the mother to:

- Give frequent small sips from a cup.
- If the child vomits, wait 10 minutes then continue - but more slowly
- Continue giving extra fluid until the diarrhoea stops

2. GIVE ZINC **(age 2 months up to 5 years)**

➢ **TELL THE MOTHER HOW MUCH ZINC TO GIVE (20 mg tab) :**

2 months up to 6 months ——- 1/2 tablet daily for 14 days
6 months or more ——- 1 tablet daily for 14 days

➢ **SHOW THE MOTHER HOW TO GIVE ZINC SUPPLEMENTS**

- Infants—dissolve tablet in a small amount of expressed breast milk, ORS or clean water in a cup
- Older children - tablets can be chewed or dissolved in a small amount of clean water in a cup

3. *CONTINUE FEEDING (exclusive breastfeeding if age less than 6 months)*

4. *WHEN TO RETURN*

Plan B: Treat for 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 - <20kg
Amount of fluid (ml) over 4 hours	200 - 450	450 - 800	800 - 960	960 - 1600

** 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
- For infants below 6 months who are not breastfed, also give 100-200ml clean water during this period

➢ **SHOW THE MOTHER HOW TO GIVE ORS SOLUTION:**

- Give frequent small sips from a cup
- 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 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 instructions how to prepare salt and sugar solution for use at home
- Explain the 4 Rules of Home Treatment:

1. *GIVE EXTRA FLUID*
2. GIVE ZINC **(age 2 months up to 5 years)**
3. *CONTINUE FEEDING (exclusive breastfeeding if age less than 6 months)*
4. *WHEN TO RETURN*

GIVE EXTRA FLUID FOR DIARRHOEA AND CONTINUE FEEDING

(See FOOD advice on COUNSEL THE MOTHER chart)

Plan C: Treat for Severe Dehydration Quickly

FOLLOW THE ARROWS. IF ANSWER IS "YES", GO ACROSS. IF "NO", GO DOWN

Can you give intravenous (IV) fluid immediately? — YES →

- **Start IV fluid immediately**.
- If the child can drink, give ORS by mouth while the drip is set up.
- Give 100 ml/kg Ringer's Lactate Solution (or, if not available, normal saline), divided as follows:

AGE	First give 30ml/kg in:	Then give 70ml/kg in
Infants (under 12 months)	1 hour	5 hours
Children (12 months up to 5 years)	30 minutes	2½ hours

- **Reassess the child every 1- 2 hours.** If hydration status is not improving, give the IV drip more rapidly.
- Also give ORS (about 5 ml/kg/hour) as soon as the child can drink: usually after 3-4 hours (infants) or 1-2 hours (children).
- Reassess an infant after 6 hours and a child after 3 hours. Classify dehydration. Then choose the appropriate plan (A, B, or C) to continue treatment.

NO ↓

Is IV treatment available nearby (within 30 minutes)? — YES →

- **Refer URGENTLY to hospital for IV treatment**.
- If the child can drink, provide the mother with ORS solution and show her how to give frequent sips during the trip or give ORS by naso-gastic tube.

NO ↓

Are you trained to use a naso-gastric (NG) tube for rehydration? — YES →

NO ↓

Can the child drink? — YES →

- **Start rehydration by tube (or mouth) with ORS solution**: give 20 ml/kg/hour for 6 hours (total of 120 ml/kg).
- **Reassess the child every 1-2 hours while waiting for transfer:**
  - If there is repeated vomiting or abdominal distension, give the fluid more slowly.
  - If the hydration status is not improving after 3 hours, send the child for IV therapy.
- After 6 hours reassess the child. Classify dehydration. Then choose the appropriate plan (A, B, or C) to continue treatment.

NO ↓

Refer URGENTLY to hospital for IV or NG treatment

NOTE:

- If the child is not referred to hospital, observe the child at least 6 hours after rehydration to be sure the mother can maintain hydration giving the child ORS solution by mouth.

IMMUNIZE EVERY SICK CHILD, AS NEEDED

GIVE FOLLOW-UP CARE

- **Care for the child who returns for follow-up using all the boxes that match the child's previous classification**
- **If the child has any new problems, assess, classify and treat the new problem as on the *ASSESS AND CLASSIFY* chart**

➢ PNEUMONIA

After 2 days:

Check the child for general danger signs.
Assess the child for cough or difficult breathing. } *See ASSESS & CLASSIFY chart.*

Ask:

- Is the child breathing slower?
- Is there less fever?
- Is the child eating better?

Treatment:

- If ***chest indrawing or a general danger sign***, give a dose of second-line antibiotic or intramuscular chloramphenicol. Then refer URGENTLY to hospital.
- If ***breathing rate, fever and eating are the same***, change to the second-line antibiotic and advise the mother to return in 2 days or refer. (If this child had measles within the last 3 months, refer.)
- If ***breathing slower, less fever, or eating better***, complete the 3 days of antibiotic.

➢ PERSISTENT DIARRHOEA

After 5 days:

Ask:

- Has the diarrhoea stopped?
- How many loose stools is the child having per day?

Treatment:

- If **the diarrhoea has not stopped** (child is still having 3 or more loose stools per day) do a full assessment of the child. Treat for dehydration if present. Then refer to hospital.
- If **the diarrhoea has stopped** (child having less than 3 loose stools per day), tell the mother to follow the usual feeding recommendations for the child's age.

➢ DYSENTERY:

After 2 days:

Assess the child for diarrhoea > *See ASSESS & CLASSIFY chart*

Ask:

- Are there fewer stools?
- Is there less blood in the stool?
- Is there less fever?
- Is there less abdominal pain?
- Is the child eating better?

Treatment:

- If the child is **dehydrated**, treat for dehydration.
- If **number of stools, blood in the stools, fever, abdominal pain, or eating is worse or the same:**

  Change to second-line oral antibiotic recommended for dysentery in your area. Give it for 5 days. Advise the mother to return in 2 days. If you do not have the second line antibiotic, REFER TO HOSPITAL.

  Exceptions*:* if the child is less than 12 months old or was dehydrated on the first visit, or if he had measles within the last 3 months, refer to hospital.

- **If fewer stools, less fever, less abdominal pain, and eating better***,* continue giving ciprofloxacin until finished.

  Ensure that the mother understands the oral rehydration method fully and that she also understands the need for an extra meal each day for a week.

GIVE FOLLOW-UP CARE

- **Care for the child who returns for follow-up using all the boxes that match the child's previous classification**
- **If the child has any new problems, assess, classify and treat the new problem as on the *ASSESS AND CLASSIFY* chart**

MALARIA (Low or High Malaria Risk)

If fever persists after 2 days, or returns within 14 days:

Do a full reassessment of the child > *See ASSESS & CLASSIFY chart.*
Assess for other causes of fever.

Treatment:

- If the child has ***any general danger sign or stiff neck***, treat as VERY SEVERE FEBRILE DISEASE.
- If the child has any ***cause of fever other than malaria***, provide treatment.
- If ***malaria is the only apparent cause of fever:***
  - Treat with the second-line oral antimalarial (if no second-line antimalarial is available, refer to hospital.) Advise the mother to return again in 2 days if the fever persists.
  - If fever has been present for 7 days, refer for assessment.

FEVER-MALARIA UNLIKELY (Low Malaria Risk)

If fever persists after 2 days:

Do a full reassessment of the child > *See ASSESS & CLASSIFY chart.*
Assess for other causes of fever.

Treatment:

- If the child has ***any general danger sign or stiff neck***, treat as VERY SEVERE FEBRILE DISEASE.
- If the child has any ***cause of fever other than malaria***, provide treatment.
- If ***malaria is the only apparent cause of fever:***
  - Treat with the first-line oral antimalarial. Advise the mother to return again in 2 days if the fever persists.
  - If fever has been present for 7 days, refer for assessment.

MEASLES WITH EYE OR MOUTH COMPLICATIONS

After 2 days:

Look for red eyes and pus draining from the eyes.
Look at mouth ulcers.
Smell the mouth.

Treatment for Eye Infection:

- If ***pus is draining from the eye***, ask the mother to describe how she has treated the eye infection. If treatment has been correct, refer to hospital. If treatment has not been correct, teach mother correct treatment.
- If ***the pus is gone but redness remains***, continue the treatment.
- If ***no pus or redness***, stop the treatment.

Treatment for Mouth Ulcers:

- If ***mouth ulcers are worse, or there is a very foul smell coming from the mouth***, refer to hospital.
- If ***mouth ulcers are the same or better***, continue using half-strength gentian violet for a total of 5 days.

GIVE FOLLOW-UP CARE

- **Care for the child who returns for follow-up using all the boxes that match the child's previous classification**
- **If the child has any new problems, assess, classify and treat the new problem as on the *ASSESS AND CLASSIFY* chart**

EAR INFECTION

After 5 days:

Reassess for ear problem. > *See ASSESS & CLASSIFY chart.*
Measure the child's temperature.

Treatment:

- If there is ***tender swelling behind the ear or high fever (38.5°C or above)***, refer URGENTLY to hospital.
- ***Acute ear infection:*** if ***ear pain or discharge*** persists, treat with 5 more days of the same antibiotic. Continue wicking to dry the ear. Follow-up in 5 days.
- ***Chronic ear infection:*** Check that the mother is wicking the ear correctly. Encourage her to continue.
- If ***no ear pain or discharge***, praise the mother for her careful treatment. If she has not yet finished the 5 days of antibiotic, tell her to use all of it before stopping.

FEEDING PROBLEM

After 5 days:

Reassess feeding > *See questions at the top of the COUNSEL chart.*
Ask about any feeding problems found on the initial visit.

- Counsel the mother about any new or continuing feeding problems. If you counsel the mother to make significant changes in feeding, ask her to bring the child back again.
- If the child is very low weight for age, ask the mother to return 30 days after the initial visit to measure the child's weight gain.

ANAEMIA

After 14 days:

- Give iron. Advise mother to return in 14 days for more iron.
- Continue giving iron every 14 days for 2 months.
- If the child has palmar pallor after 2 months, refer for assessment.

VERY LOW WEIGHT

After 30 days:

Weigh the child and determine if the child is still very low weight for age.
Reassess feeding. > *See questions at the top of the COUNSEL chart.*

Treatment:

- If the child is ***no longer very low weight for age***, praise the mother and encourage her to continue.
- If the child is still ***very low weight for age***, counsel the mother about any feeding problem found. Ask the mother to return again in one month. Continue to see the child monthly until the child is feeding well and gaining weight regularly or is no longer very low weight for age.

  Exception:

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

COUNSEL THE MOTHER

➢ Assess the Feeding of Sick Infants under 2 years (or if child has very low weight for age)

Ask questions about the child's usual feeding and feeding during this illness. Compare the mother's answers to the ***Feeding Recommendations*** for the child's age.

ASK — How are you feeding your child?

If the infant is receiving *any* breast milk, **ASK:**

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

Does the infant take any other food or fluids?

- What food or fluids?
- How many times per day?
- What do you use to feed the child?

If very low weight for age, ASK:

- How large are servings?
- Does the child receive his own serving?
- Who feeds the child and how?

During this illness, has the infant's feeding changed?

- If yes, how?

FEEDING RECOMMENDATIONS DURING SICKNESS AND HEALTH

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.

6 Months up to 12 Months

- Breastfeed as often as the child wants.
- Give adequate servings of:

  _____
  _____
  _____
  _____ *

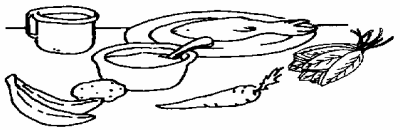
  - 3 times per day if breastfed plus snacks
  - 5 times per day if not breastfed.

12 Months up to 2 Years

- Breastfeed as often as the child wants.
- Give adequate servings of:

  _____
  _____
  _____
  _____
  _____ *

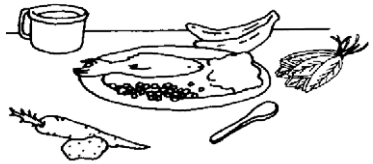
or family foods 3 or 4 times per day plus snacks.



2 Years and Older

- Give family foods at 3 meals each day. Also, twice daily, give nutritious food between meals, such as:

  _____
  _____
  _____
  _____
  _____



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

Feeding Recommendations for a child who has PERSISTENT DIARRHOEA

- If still breastfeeding, give more frequent, longer breastfeeds, day and night.
- If taking other milk:
  - replace with increased breastfeeding OR
  - replace with fermented milk products, such as yoghurt OR
    replace half the milk with nutrient-rich semisolid food

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 6 months old and is taking other milk or foods:**
  - Build mother's confidence that she can produce all the breast milk 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 breast milk 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 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 feeds.
  - 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 regularly.
- **If the child has sore mouth or ulcers:**
  - Give soft foods that will not burn the mouth, such as eggs, mashed potatoes, pumpkin or avocado.
  - Avoid spicy, salty or acid foods.
  - Chop foods finely.
  - Give cold drinks or ice, if available.

COUNSEL THE MOTHER ABOUT HER OWN HEALTH

- If the mother is sick, provide care for her, or refer her for help.
- If she has a breast problem (such as engorgement, sore nipples, breast infection), provide care for her or refer her for help.
- Advise her to eat well to keep up her own strength and health.
- Check the mother's immunization status and give her tetanus toxoid if needed.
- Make sure she has access to:
    - Family planning
    - Counselling on STD and AIDS prevention.

FLUID

Advise the Mother to Increase Fluid During Illness

FOR ANY SICK CHILD:

- If child is breastfed, breastfeed more frequently and for longer at each feed. If child is taking breast-milk substitutes, increase the amount of milk given
- Increase other fluids. For example, give soup, rice water, yoghurt drinks or clean water.

FOR CHILD WITH DIARRHOEA:

- Giving extra fluid can be lifesaving. Give fluid according to Plan A or Plan B on the *TREAT THE CHILD* chart

WHEN TO RETURN

Advise the Mother When to Return to Health Worker

FOLLOW-UP VISIT

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

If the child has:	Return for first follow-up in:
• PNEUMONIA • DYSENTERY • MALARIA, if fever persists • FEVER-MALARIA UNLIKELY, if fever persists • MEASLES WITH EYE OR MOUTH COMPLICATIONS	**2 days**
• PERSISTENT DIARRHOEA • ACUTE EAR INFECTION • CHRONIC EAR INFECTION • FEEDING PROBLEM • COUGH OR COLD, if not improving	**5 days**
• ANAEMIA	**14 days**
• VERY LOW WEIGHT FOR AGE	**30 days**

NEXT WELL CHILD VISIT
Advise mother when to return for next immunization according to immunization schedule.

WHEN TO RETURN IMMEDIATELY

Advise mother to return immediately if the child has any of these signs:	
Any sick child	• Not able to drink or breastfeed • Becomes sicker • Develops a fever
If child has COUGH OR COLD, also return if:	• Fast breathing • Difficult breathing
If child has Diarrhoea, also return if:	• Blood in stool • Drinking poorly

ASSESS, CLASSIFY AND TREAT THE SICK YOUNG INFANT AGED UP TO 2 MONTHS

DO A RAPID APRAISAL OF ALL WAITING INFANTS

ASK THE MOTHER WHAT THE YOUNG INFANT'S PROBLEMS ARE

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

USE ALL BOXES THAT MATCH INFANT'S SYMPTOMS AND PROBLEMS TO CLASSIFY THE ILLNESS.

CHECK FOR VERY SEVERE DISEASE AND LOCAL BACTERIAL INFECTION

ASK:

- Is the infant having difficulty in feeding?
- Has the infant had convulsions (fits)?

LOOK, LISTEN, FEEL:

- Count the breaths in one minute. Repeat the count if 60 or more breaths per minute.
- Look for severe chest indrawing.

} YOUNG INFANT MUST BE CALM

- Measure axillary temperature.
- Look at the umbilicus. Is it red or draining pus?
- Look for skin pustules.
- Look at the young infant's movements. *If infant is sleeping, ask the mother to wake him/her.*

  - Does the infant move on his/her own?

  If the infant is not moving, gently stimulate him/her.

  - Does the infant move only when stimulated but then stops?

  - Does the infant not move at all ?

Classify ALL YOUNG INFANTS

SIGNS	CLASSIFY AS	TREATMENT (Urgent pre-referral treatments are in bold print)
Any one of the following signs • Not feeding well or • Convulsions or • Fast breathing (60 breaths per minute or more) or • Severe chest indrawing or • Fever (37.5°C* or above) or • Low body temperature (less than 35.5°C*) or • Movement only when stimulated or no movement at all	**VERY SEVERE DISEASE**	➢ ***Give first dose of intramuscular antibiotics.*** ➢ ***Treat to prevent low blood sugar.*** ➢ ***Refer URGENTLY to hospital.***** ➢ ***Advise mother how to keep the infant warm on the way to the hospital.***
• Umbilicus red or draining pus • Skin pustules	**LOCAL BACTERIAL INFECTION**	➢ ***Give an appropriate oral antibiotic.*** ➢ Teach mother to treat local infections at home. ➢ Advise mother to give home care for the young infant. ➢ Follow up in 2 days.
• None of the signs of very severe disease or local bacterial infection	**SEVERE DISEASE OR LOCAL INFECTION UNLIKELY**	➢ Advise mother to give home care for the young infant.

* *These thresholds are based on axillary temperature. The thresholds for rectal temperature readings are approximately 0.5°C higher.*

** *If referral is not possible, see **Integrated Management of Childhood Illness**, Management of the sick young infant module, Annex 2 "Where referral is not possible"*

THEN CHECK FOR JAUNDICE

If jaundice present, ***ASK:***

- When did jaundice first appear?

LOOK, LISTEN, FEEL:

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

Classify **Jaundice**

SIGNS	CLASSIFY AS	TREATMENT (Urgent pre-referral treatments are in bold print)
• Any jaundice if age less than 24 hours or • Yellow palms and soles at any age	**SEVERE JAUNDICE**	➢ ***Treat to prevent low blood sugar.*** ➢ ***Refer URGENTLY to hospital.*** ➢ ***Advise mother how to keep the infant warm on the way to the hospital.***
• Jaundice appearing after 24 hours of age and • Palms and soles not yellow	**JAUNDICE**	➢ Advise the mother to give home care for the young infant ➢ Advise mother to return immediately if palms and soles appear yellow. ➢ If the young infant is older than 3 weeks, refer to a hospital for assessment. ➢ Follow-up in 1 day.
• No jaundice	**NO JAUNDICE**	➢ Advise the mother to give home care for the young infant.

THEN ASK: Does the young infant have diarrhoea*?

IF YES, LOOK AND FEEL:

- Look at the young infant's general condition:

- Infant's movements
  - Does the infant move on his/her own?
  - Does the infant move only when stimulated but then stops?
  - Does the infant not move at all ?

- Is the infant restless and irritable?

- Look for sunken eyes.

- Pinch the skin of the abdomen.
  Does it go back:
  - Very slowly (longer than 2 seconds)?
  - or slowly?

Classify DIARRHOEA FOR DEHYDRATION

SIGNS	CLASSIFY AS	TREATMENT (Urgent pre-referral treatments are in bold print)
Two of the following signs: • Movement only when stimulated or no movement at all • Sunken eyes • Skin pinch goes back very slowly.	**SEVERE DEHYDRATION**	➢ If infant has no other severe classification: - Give fluid for severe dehydration (Plan C) OR ***If infant also has another severe classification:*** ***- Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way*** ***- Advise the mother to continue breastfeeding***
Two of the following signs: • Restless, irritable • Sunken eyes • Skin pinch goes back slowly.	**SOME DEHYDRATION**	➢ Give fluid and for some dehydration and continue breastfeeding (Plan B). ➢ ***If infant has any severe classification:*** ***- Refer URGENTLY to hospital with mother giving frequent sips of ORS on the way.*** ***- Advise mother to continue breastfeeding.*** ➢ Advise mother when to return immediately ➢ Follow-up in 2 days if not improving
• Not enough signs to classify as some or severe dehydration.	**NO DEHYDRATION**	➢ Give fluids to treat for diarrhoea at home and continue breastfeeding (Plan A) ➢ Advise mother when to return immediately ➢ Follow up in 2 days if not improving

* ***What is diarrhoea in a young infant?***

A young infant has diarrhoea if the stools have changed from usual pattern and are many and watery (more water than fecal matter).

The normally frequent or semi-solid stools of a breastfed baby are not diarrhoea.

THEN CHECK FOR FEEDING PROBLEM OR LOW WEIGHT FOR AGE

If an infant has no indications to refer urgently to hospital:

ASK:

- Is the infant breastfed? If yes, how many times in 24 hours?
- Does the infant usually receive any other foods or drinks? If yes, how often?
- If yes, what do you use to feed the infant?

LOOK, LISTEN,FEEL:

- Determine weight for age.
- Look for ulcers or white patches in the mouth (thrush).

ASSESS BREASTFEEDING:

- Has the infant breastfed in the previous hour?

If the infant has not fed in the previous hour, ask the mother to put her infant to the breast. Observe the breastfeed for 4 minutes.

(If the infant was fed during the last hour, ask the mother if she can wait and tell you when the infant is willing to feed again.)

- Is the infant well attached?

not well attached *good attachment*

TO CHECK ATTACHMENT, LOOK FOR:

- *More areola seen above infant's top lip than below bottom lip*
- *Mouth wide open*
- *Lower lip turned outwards*
- *Chin touching breast*

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

- Is the infant suckling effectively (that is, slow deep sucks, sometimes pausing)?

not suckling effectively *suckling effectively*

Clear a blocked nose if it interferes with breastfeeding.

Classify FEEDING

SIGNS	CLASSIFY AS	TREATMENT (Urgent pre-referral treatments are in bold print)
• Not well attached to breast <u>or</u> • Not suckling effectively, <u>or</u>	**FEEDING PROBLEM OR LOW WEIGHT FOR AGE**	➢ If not well attached or not suckling effectively, teach correct positioning and attachment. • If not able to attach well immediately, teach the mother to express breast milk and feed by a cup
• Less than 8 breastfeeds in 24 hours, <u>or</u>		➢ If breastfeeding less than 8 times in 24 hours, advise to increase frequency of feeding. Advise her to breastfeed as often and for as long as the infant wants, day and night.
• Receives other foods or drinks, <u>or</u>		➢ If receiving other foods or drinks, counsel mother about breastfeeding more, reducing other foods or drinks, and using a cup. • If not breastfeeding at all: - Refer for breastfeeding counselling and possible relactation. - Advise about correctly preparing breastmilk substitutes and using a cup.
• Low weight for age, <u>or</u>		➢ Advise the mother how to feed and keep the low weight infant warm at home
• Thrush (ulcers or white patches in mouth)		➢ If thrush, teach the mother to treat thrush at home.
		➢ Advise mother to give home care for the young infant.
		➢ Follow-up any feeding problem or thrush in 2 days.
		➢ Follow-up low weight for age in 14 days.
• Not low weight for age and no other signs of inadequate feeding.	**NO FEEDING PROBLEM**	➢ Advise mother to give home care for the young infant. ➢ Praise the mother for feeding the infant well.

THEN CHECK THE YOUNG INFANT'S IMMUNIZATION AND VITAMIN A STATUS:

	AGE	VACCINE			VITAMIN A
IMMUNIZATION SCHEDULE:	**Birth**	BCG	OPV-0		200 000 IU to the mother within 6 weeks of delivery
	6 weeks	DPT+HIB-1	OPV-1	Hepatitis B 1	
	10 weeks	DPT+HIB-2	OPV-2	Hepatitis B 2	

- **Give all missed doses on this visit.**
- Immunize sick infants unless being referred.
- Advise the caretaker when to return for the next dose.

ASSESS OTHER PROBLEMS

TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER

➢ *Give First Dose of Intramuscular Antibiotics*

- Give first dose of ampicillin intramuscularly and
- Give first dose of gentamicin intramuscularly.

WEIGHT	**AMPICILLIN** Dose: 50 mg per kg To a vial of 250 mg Add 1.3 ml sterile water = 250 mg/1.5 ml	**GENTAMICIN** Undiluted 2 ml vial containing 20 mg = 2 ml at 10 mg/ml OR Add 6 ml sterile water to 2 ml vial containing 80 mg* = 8 ml at 10 mg/ml	
		AGE <7 days Dose: 5 mg per kg	AGE≥7 days Dose: 7.5 mg per kg
1-<1.5 kg	0.4 ml	0.6 ml	0.9 ml
1.5-<2 kg	0.5 ml	0.9 ml	1.3 ml
2-<2.5 kg	0.7 ml	1.1 ml	1.7 ml
2.5-<3 kg	0.8 ml	1.4 ml	2.0 ml
3-<3.5 kg	1.0 ml	1.6 ml	2.4 ml
3.5-<4 kg	1.1 ml	1.9 ml	2.8 ml
4-<4.5 kg	1.3 ml	2.1 ml	3.2 ml

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

- Referral is the best option for a young infant classified as VERY SEVERE DISEASE. If referral is not possible, continue to give ampicillin and gentamicin for at least 5 days. Give ampicillin two times daily to infants less than one week of age and 3 times daily to infants one week or older. Give gentamicin once daily.

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

- ***If the young infant is able to breastfeed:***

  Ask the mother to breastfeed the young infant.

- ***If the young infant is not able to breastfeed but is able to swallow:***

  Give 20-50 ml (10 ml/kg) expressed breast milk before departure. If not possible to give expressed breast milk, give 20-50 ml (10 ml/kg) sugar water (***To make sugar water: Dissolve 4 level teaspoons of sugar (20 grams) in a 200-ml cup of clean water).***

- ***If the young infant is not able to swallow:***

  Give 20-50 ml (10 ml/kg) of expressed breast milk or sugar water by naso-gastric tube.

TREAT THE YOUNG INFANT

➢ *Teach the Mother How to Keep the Young Infant Warm on the Way to the Hospital*

- ➢ Provide skin to skin contact, OR
- ➢ Keep the young infant clothed or covered as much as possible all the time. Dress the young infant with extra clothing including hat, gloves, socks and wrap the infant in a soft dry cloth and cover with a blanket.

➢ *Give an Appropriate Oral Antibiotic for local infection*

For local bacterial infection:

First-line antibiotic : _____
Second-line antibiotic: _____

	COTRIMOXAZOLE (trimethoprim + sulphamethoxazole) ➢ Give two times daily for 5 days			**AMOXICILLIN** ➢ Give two times daily for 5 days	
AGE or WEIGHT	Adult Tablet single strength (80 mg trimethoprim + 400 mg sulphamethoxazole)	Paediatric Tablet (20 mg trimethoprim +100 mg sulphamethoxazole)	Syrup (40 mg trimethoprim +200 mg sulphamethoxazole)	Tablet 250 mg	Syrup 125 mg in 5 ml
Birth up to 1 month (<4 kg)		1/2*	1.25 ml*	1/4	2.5 ml
1 month up to 2 months (4-<6 kg)	1/4	1	2.5 ml	1/2	5 ml

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

TREAT THE YOUNG INFANT AND COUNSEL THE MOTHER

➢ *Teach the Mother How to Treat Local Infections at Home*

- Explain how the treatment is given.
- Watch her as she does the first treatment in the clinic.
- Tell her to return to the clinic if the infection worsens.

To Treat Skin Pustules or Umbilical Infection

The mother should do the treatment twice daily for 5 days:

- Wash hands
- Gently wash off pus and crusts with soap and water
- Dry the area
- Paint the skin or umbilicus/cord with full strength gentian violet (0.5%)
- Wash hands again

To Treat Thrush (ulcers or white patches in mouth)

The mother should do the treatment four times daily for 7 days:

- Wash hands
- Paint the mouth with half-strength gentian violet (0.25%) using a clean soft cloth wrapped around the finger
- Wash hands again

➢ *To Treat Diarrhoea, See TREAT THE CHILD CHART.*

➢ *Immunize Every Sick Young Infant, as needed.*

COUNSEL THE MOTHER

➢ *Teach Correct Positioning and Attachment for Breastfeeding*

- Show the mother how to hold her infant
  - with the infant's head and body in line
  - with the infant approaching breast with nose opposite to the nipple
  - with the infant held close to the mother's body
  - with the infant's whole body supported, not just neck and shoulders.

- Show her how to help the infant to attach. She should:
  - touch her infant's lips with her nipple
  - wait until her infant's mouth is opening wide
  - move her infant quickly onto her breast, aiming the infant's lower lip well below the nipple.

- Look for signs of good attachment and effective suckling. If the attachment or suckling is not good, try again.

➢ *Teach the Mother How to Express Breast Milk*

Ask the mother to:

- Wash her hands thoroughly.
- Make herself comfortable.
- Hold a wide necked container under her nipple and areola.
- Place her thumb on top of the breast and the first finger on the under side of the breast so they are opposite each other (at least 4 cm from the tip of the nipple).
- Compress and release the breast tissue between her finger and thumb a few times.
- If the milk does not appear she should re-position her thumb and finger closer to the nipple and compress and release the breast as before.
- Compress and release all the way around the breast, keeping her fingers the same distance from the nipple. Be careful not to squeeze the nipple or to rub the skin or move her thumb or finger on the skin.
- Express one breast until the milk just drips, then express the other breast until the milk just drips.
- Alternate between breasts 5 or 6 times, for at least 20 to 30 minutes.
- Stop expressing when the milk no longer flows but drips from the start.

COUNSEL THE MOTHER

➢ *Teach the Mother How to Feed by a Cup*

- Put a cloth on the infant's front to protect his clothes as some milk can spill
- Hold the infant semi-upright on the lap.
- Put a measured amount of milk in the cup.
- Hold the cup so that it rests lightly on the infant's lower lip.
- Tip the cup so that the milk just reaches the infant's lips.
- Allow the infant to take the milk himself. DO NOT pour the milk into the infant's mouth.

➢ *Teach the Mother How to Keep the Low Weight Infant Warm at Home*

- Keep the young infant in the same bed with the mother.

- Keep the room warm (at least 25°C) with home heating device and make sure that there is no draught of cold air.

- Avoid bathing the low weight infant. When washing or bathing, do it in a very warm room with warm water, dry immediately and thoroughly after bathing and clothe the young infant immediately.

- Change clothes (e.g. nappies) whenever they are wet.

- Provide skin to skin contact as much as possible, day and night. For skin to skin contact:
  - Dress the infant in a warm shirt open at the front, a nappy, hat and socks.
  - Place the infant in skin to skin contact on the mother's chest between the mother's breasts. Keep the infant's head turned to one side
  - Cover the infant with mother's clothes (and an additional warm blanket in cold weather)

- When not in skin to skin contact, keep the young infant clothed or covered as much as possible at all times. Dress the young infant with extra clothing including hat and socks, loosely wrap the young infant in a soft dry cloth and cover with a blanket.

- Check frequently if the hands and feet are warm. If cold, re-warm the baby using skin to skin contact.

- Breastfeed (or give expressed breast milk by cup) the infant frequently

COUNSEL THE MOTHER

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

1. EXCLUSIVELY BREASTFEED THE YOUNG INFANT

Give only breastfeeds to the young infant.
Breastfeed frequently, as often and for as long as the infant wants.

2. **MAKE SURE THAT THE YOUNG INFANT IS KEPT WARM AT ALL TIMES.**

In cool weather cover the infant's head and feet and dress the infant with extra clothing.

3. WHEN TO RETURN:

Follow up visit	
If the infant has:	**Return for first follow-up in:**
• JAUNDICE	1 day
• LOCAL BACTERIAL INFECTION • FEEDING PROBLEM • THRUSH • DIARRHOEA	2 days
• LOW WEIGHT FOR AGE	14 days

WHEN TO RETURN IMMEDIATELY*:*

Advise the caretaker to return immediately if the young infant has any of these signs:
➢ Breastfeeding poorly ➢ Reduced activity ➢ Becomes sicker ➢ Develops a fever ➢ Feels unusually cold ➢ Fast breathing ➢ Difficult breathing ➢ Palms and soles appear yellow

GIVE FOLLOW-UP CARE FOR THE YOUNG INFANT

ASSESS EVERY YOUNG INFANT FOR "VERY SEVERE DISEASE" DURING FOLLOW UP VISIT.

➢ *LOCAL BACTERIAL INFECTION*

After 2 days:
Look at the umbilicus. Is it red or draining pus?
Look for skin pustules.

Treatment:

- If umbilical ***pus or redness remains same or is worse***, refer to hospital. If ***pus and redness are improved***, tell the mother to continue giving the 5 days of antibiotic and continue treating the local infection at home.
- If skin pustules are ***same or worse***, refer to hospital. If ***improved***, tell the mother to continue giving the 5 days of antibiotic and continue treating the local infection at home.

➢ *JAUNDICE*

After 1 day:
Look for jaundice. Are palms and soles yellow?

- If palms and soles are yellow, refer to hospital.
- If palms and soles are not yellow, but jaundice has not decreased, advise the mother home care and ask her to return for follow up in 1 day.
- If jaundice has started decreasing, reassure the mother and ask her to continue home care. Ask her to return for follow up at three weeks of age. If jaundice continues beyond three weeks of age , refer the young infant to a hospital for further assessment.

➢ *DIARRHOEA*

After 2 days:
Ask: -Has the diarrhoea stopped ?

Treatment:

- If the diarrhoea has not stopped, assess and treat the young infant for diarrhoea. >SEE "Does the Young Infant Have Diarrhoea ?"
- If the diarrhoea has stopped, tell the mother to continue exclusive breastfeeding.

GIVE FOLLOW-UP CARE FOR THE YOUNG INFANT

➢ *FEEDING PROBLEM*

After 2 days:

Reassess feeding. > See "Then Check for Feeding Problem or Low Weight" above.
Ask about any feeding problems found on the initial visit.

- Counsel the mother about any new or continuing feeding problems. If you counsel the mother to make significant changes in feeding, ask her to bring the young infant back again.

- If the young infant is low weight for age, ask the mother to return 14 days after the initial visit to measure the young infant's weight gain.

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

GIVE FOLLOW-UP CARE FOR THE YOUNG INFANT

➢ *LOW WEIGHT FOR AGE*

After 14 days:
Weigh the young infant and determine if the infant is still low weight for age.
Reassess feeding. > See "Then Check for Feeding Problem or Low Weight" above.

- If the infant is ***no longer low weight for age***, praise the mother and encourage her to continue.
- If the infant is ***still low weight for age, but is feeding well***, praise the mother. Ask her to have her infant weighed again within a month or when she returns for immunization.
- If the infant is ***still low weight for age and still has a feeding problem***, counsel the mother about the feeding problem. Ask the mother to return again in 14 days (or when she returns for immunization, if this is within 14 days). Continue to see the young infant every few weeks until the infant is feeding well and gaining weight regularly or is no longer low weight for age.

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

➢ *THRUSH*

After 2 days:
Look for ulcers or white patches in the mouth (thrush).
Reassess feeding. > See "Then Check for Feeding Problem or Low Weight" above.

- If ***thrush is worse***, or the infant has ***problems with attachment or suckling***, refer to hospital.
- If ***thrush is the same or better***, and if the infant is ***feeding well***, continue half-strength gentian violet for a total of 7 days.

MANAGEMENT OF THE SICK CHILD AGED 2 MONTHS UP TO 5 YEARS

Name: _____ Age: _____ Weight: _____ kg Temperature: _____°C

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

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

CHECK FOR GENERAL DANGER SIGNS NOT ABLE TO DRINK OR BREASTFEED VOMITS EVERYTHING CONVULSIONS LETHARGIC OR UNCONSCIOUS CONVULSING NOW	General danger signs present? Yes___ No___ **Remember to use danger sign when selecting classifications**
DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? Yes___ No___ • For how long? ____ Days • Count the breaths in one minute. _____ breaths per minute. Fast breathing? • Look for chest indrawing. • Look and listen for stridor • Look and listen for wheezing.	
DOES THE CHILD HAVE DIARRHOEA? Yes ___ No ___ • For how long? _____ Days • Is there blood in the stools? • Look at the child's general condition.Is the child: Lethargic or unconscious? Restless or irritable? • Look for sunken eyes. • Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? • Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly?	
DOES THE CHILD HAVE FEVER? (by history/feels hot/temperature 37.5°C or above) Yes___ No___ Decide Malaria Risk: High Low • For how long? _____ Days • If more than 7 days, has fever been present every day? • Has child had measles within the last three months? • Look or feel for stiff neck. • Look for runny nose. Look for signs of MEASLES: • Generalized rash and • One of these: cough, runny nose, or red eyes. **If the child has measles now or within the last 3 months:** • Look for mouth ulcers. If Yes, are they deep and extensive? • Look for pus draining from the eye. • Look for clouding of the cornea.	
DOES THE CHILD HAVE AN EAR PROBLEM? Yes___ No___ • Is there ear pain? • Is there ear discharge? If Yes, for how long? ___ Days • Look for pus draining from the ear. • Feel for tender swelling behind the ear.	
THEN CHECK FOR MALNUTRITION AND ANAEMIA • Look for visible severe wasting. • Look for oedema of both feet. • Determine weight for age. Very Low ___ Not Very Low ___ • Look for palmar pallor. Severe palmar pallor? Some palmar pallor?	
CHECK THE CHILD'S IMMUNIZATION STATUS Circle immunizations needed today. _____ BCG _____ DPT1 + HIB 1 _____ DPT2 + HIB 2 _____ DPT3 + HIB 3 _____ Vitamin A _____ Mebendazole _____ OPV 0 _____ OPV 1 _____ OPV 2 _____ OPV 3 _____ Measles	Return for next immunization on: _____ (Date)
ASSESS CHILD'S FEEDING if child has ANAEMIA OR VERY LOW WEIGHT or is less than 2 years old. • Do you breastfeed your child? Yes____ No ____ If Yes, how many times in 24 hours? ___ times. Do you breastfeed during the night? Yes___ No___ • Does the child take any other food or fluids? Yes___ No ___ If Yes, what food or fluids? _____ How many times per day? ___ times. What do you use to feed the child? _____ If very low weght 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 PROBLEMS Ask about mother's own health	FEEDING PROBLEMS

MANAGEMENT OF THE SICK YOUNG INFANT AGED UP TO 2 MONTHS

Name: _____ Age: _____ Weight: _____ kg Temperature: _____°C

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

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

CHECK FOR VERY SEVERE DISEASE AND LOCAL BACTERIAL INFECTION

Classify all young infants

- Is the infant having difficulty in feeding?
- Has the infant had convulsions (fits)?
- Count the breaths in one minute. _____ breaths per minute
  Repeat if 60 breaths or more _____ Fast breathing?
- Look for severe chest indrawing.
- Fever (temperature 37.5°C or above).
- Low body temperature (less than 35.5°C)
- Look at the umbilicus. Is it red or draining pus?
- Look for skin pustules.
- Look at the young infant's movements.
  Does the infant move only when stimulated?
  Does the infant not move at all?

THEN CHECK FOR JAUNDICE

- If jaundice present, when did jaundice first appear?
- Look for jaundice (yellow eyes or skin)
- Look at the young infant's palms and soles. Are they yellow?

DOES THE YOUNG INFANT HAVE DIARRHOEA? **Yes _____ No _____**

- Look at the young infant's general condition.

  Does the infant move only when stimulated?
  Does the infant not move at all?

  Is the infant restless or irritable?
- Look for sunken eyes.
- Pinch the skin of the abdomen. Does it go back:
  Very slowly (longer than 2 seconds)?
  Slowly?

If the infant has no indications to refer urgently to hospital
THEN CHECK FOR FEEDING PROBLEM OR LOW WEIGHT FOR AGE

- Is the infant breastfed? Yes _____ No _____
  If Yes, how many times in 24 hours? _____ times
- Does the infant usually receive any other foods or drinks? Yes _____ No _____
  If Yes, how often?
  If Yes, what do you use to feed the infant?
- Determine weight for age. Low ___ Not Low _____
- Look for ulcers or 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 wide open — Yes ___ No ___
  - Lower lip turned outwards — Yes ___ No ___
  - Chin touching 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*

CHECK THE YOUNG INFANT'S IMMUNIZATION AND VITAMIN A STATUS Circle immunizations needed today.

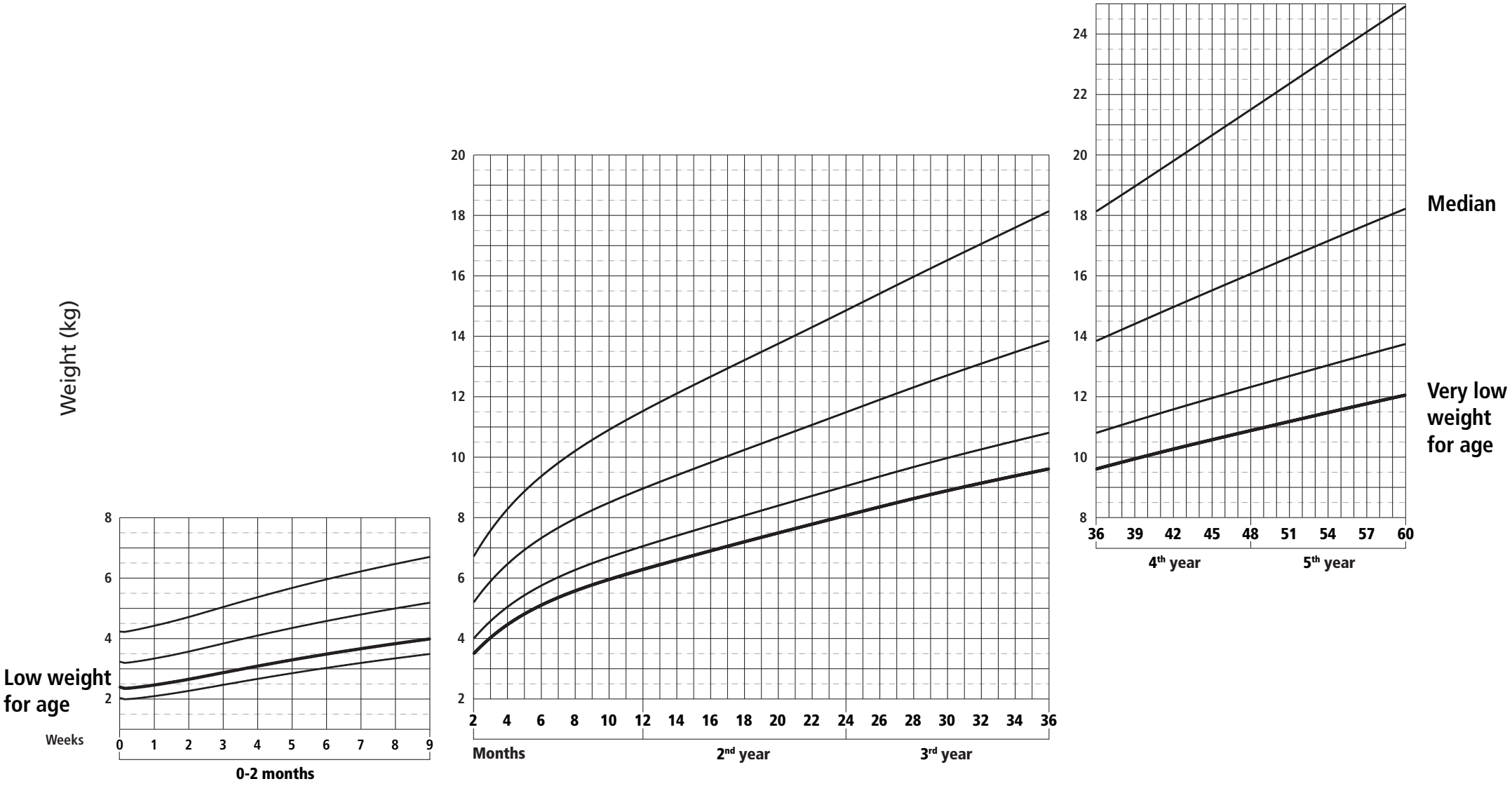
Return for next immunization on:

_____ (Date)

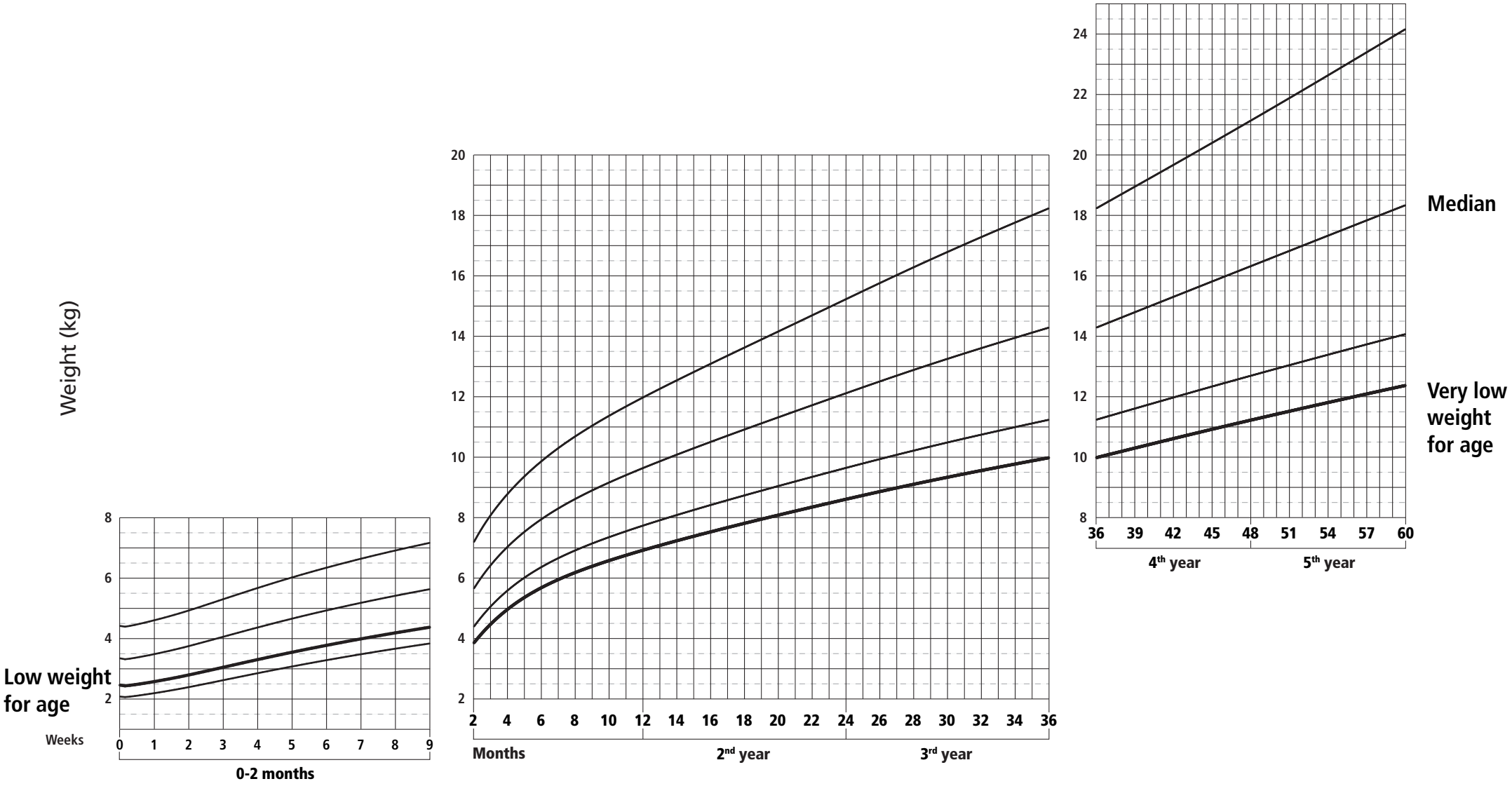
_____ BCG	_____ DPT1 + HIB1	_____ DPT2+ HIB2
_____ OPV 0	_____ OPV1	_____ OPV2
_____ Vitamin A to mother	_____ Hepatitis B1	_____ Hepatitis B2

ASSESS OTHER PROBLEMS Ask about mother's own health

Weight-for-age chart for girls



Weight-for-age chart for boys



Integrated Management of Childhood Illness Chart booklet

Process of updating the chart booklet

The generic IMCI chart booklet was developed and published in 1995 based on evidence existing at that time (*Reference: Integrated management of Childhood Illness Adaptation Guide: C. Technical basis for adapting clinical guidelines, 1998).* New evidence on the management of acute respiratory infections, diarrhoeal diseases, malaria, ear infections and infant feeding, published between 1995 and 2004, was summarized in the document "*Technical updates of the guidelines on IMCI : evidence and recommendations for further adaptations, 2005*".

Evidence reviews supported the formulation of recommendations in each of these areas (see document and the references). Reviews were usually followed by technical consultations where the recommendations and their technical bases were discussed and consensus reached. Similarly, a review and several expert meetings were held to update the young infant section of IMCI to include "care of the newborn in the first week of life". More recently, findings of a multi-centre study (Lancet, 2008) led to the development of simplified recommendations for the assessment of severe infections in the newborn

Who was involved and their declaration of interests

The following experts were involved in the development of the updated newborn recommendations: Zulfiqar Bhutta, Ayivi Blaise, Wally Carlo, Rolando Cerezo, Magdy Omar, Pavel Mazmanyan, MK Bhan, Helenlouise Taylor, Gary Darmstadt, Vinod Paul, Anne Rimoin, Linda Wright and WHO staff from Regional and Headquarter offices. Dr. Gul Rehman and a team of CAH staff members drafted the updated chart booklet based on the above. Dr Antonio Pio did the technical editing of the draft IMCI chart booklet, in addition to participating in its peer-review. Other persons who reviewed the draft chart booklet and provided comments include Ashok Deorari, Teshome Desta,, Assaye Kassie, Dinh Phuang Hoa, Harish Kumar, Vinod Paul and Siddhorth Ramzi.. Their contributions are acknowledged.

None of the above experts declared any conflict of interest.

The Department plans to review the need for an update of this chart booklet by 2011.

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