Integrated Management of

Childhood Illness 2019

Nutrition

Love

Protection

Healthcare

Extra Care

health
Department:
Health
REPUBLIC OF SOUTH AFRICA

Side-by-Side

2030 NDP

CONTENTS

YOUNG INFANT
(BIRTH UP TO 2 MONTHS)

CHILD (AGE 2 MONTHS UP TO 5YEARS)

Suspected Symptomatic HIV infection 50
Confirmed or Probable TB. 51
TB exposure or infection 51
Palliative Care for Children 51

Treat for Local Infections
Dry the Ear by wicking 44
Mouth ulcers 44
Thrush 44
Soothe the Throat, relieve the cough 44
Eye Infection 44

Counsel the Caregiver
Advise Caregiver to Give Home Care 45-46
When to Return 45

Give Follow-up Care
Pneumonia 47
Wheeze 47
Diarrhoea 47
Persistent Diarrhoea 47
Dysentery 47
Not Growing Well 48
Feeding problem 48
Anaemia 48
Acute Malnutrition 48
Fever - other cause 49
Malaria or Suspected Malaria 49
Ear infection 49
Possible Streptococcal Infection 49
Measles 49
HIV Infection not on ART 50
Ongoing HIV exposure 50
HIV-exposed 50
Suspected Symptomatic HIV infection 50
Confirmed or Probable TB. 51
TB exposure or infection 51
Palliative Care for Children 51

COUNSEL THE MOTHER OR CAREGIVER ON INFANT AND YOUNG CHILD FEEDING
(BIRTH UP TO 2 MONTHS)

ANTI-RETROVIRAL THERAPY (ART)

SKIN PROBLEMS

IMCI PROCESS FOR **ALL YOUNG INFANTS**

(Birth up to two months)

HAS THE INFANT JUST BEEN DELIVERED?

YES

- **Provide Emergency Newborn Care**
- **Resuscitate using the Helping Babies Breathe (HBB) approach.**
- Keep baby warm (p. 11)
- **ASSESS** and **CLASSIFY** for **POSSIBLE SERIOUS BACTERIAL INFECTION** and provide any treatments (p. 3)
- Support mother to initiate breastfeeding (p. 17 - 18)
- Refer to maternity unit/hospital

NO

- **GREET THE CAREGIVER**
- **ASK:** Why the caregiver has brought the child to the health facility today?
- **DETERMINE IF THIS IS AN INITIAL, FOLLOW UP or ROUTINE VISIT**
- Ensure that an infant who has come for an INITIAL VISIT (i.e. because they are sick) is fast-tracked.
- Measure the infant's weight and temperature

IF THE INFANT BEEN BROUGHT TO THE FACILITY BECAUSE S/HE IS SICK (INITIAL VISIT):

- **URGENTLY ASSESS and CLASSIFY for POSSIBLE SERIOUS BACTERIAL INFECTION** (p. 3)
- Then complete the YOUNG INFANT assessment (p. 4 - 10)
- Provide treatment (including pre-referral treatment and referral if required)
- Counsel the caregiver on Home Care for the Young Infant and When to Return (p. 14)
- Assess breastfeeding and support the mother to successfully breastfeed the infant (p. 17 - 18)

IF THIS IS A FOLLOW-UP VISIT:

- Complete the YOUNG INFANT assessment including ASSESS and CLASSIFY for POSSIBLE SERIOUS BACTERIAL INFECTION (p. 3)
- Provide FOLLOW-UP CARE (p. 15)
- Counsel the caregiver on Home Care for the Young Infant and When to Return (p. 14)
- Assess breastfeeding and support the mother to successfully breastfeed the infant (p. 17 - 18)

IF THE YOUNG INFANT HAS BEEN BROUGHT FOR A ROUTINE POST-NATAL OR WELL CHILD VISIT:

- Complete the YOUNG INFANT assessment including ASSESS and CLASSIFY for POSSIBLE SERIOUS BACTERIAL INFECTION (p. 3)
- TREAT (if necessary)
- Counsel the caregiver on Home Care for the Young Infant and When to Return (p.14)
- Assess breastfeeding and support the mother to successfully breastfeed the infant (p. 17 - 18)

CHECK FOR POSSIBLE BACTERIAL INFECTION AND JAUNDICE

ASK	LOOK, LISTEN, FEEL
• Has the infant had convulsions? • Has the infant had any attacks where he stops breathing, or becomes stiff or blue (apnoea)?	• Is the infant convulsing now? • Count the breaths in one minute. Repeat the count if elevated. • Look for severe chest indrawing • Look for nasal flaring. • Listen for grunting. (Young infant must be calm) • Look and feel for bulging fontanelle. • Measure temperature (or feel for fever or low body temperature). • Look at the young infant's movements. Does he/ she only move when stimulated? • Look for discharge from the eyes. Is there a purulent or sticky discharge? Is there abundant pus? Are the eyelids swollen • Look at the umbilicus. Is it red or draining pus? Does the redness extend to the skin? • Look for skin pustules. Are there many or severe pustules? • Look for jaundice (yellow eyes or skin) • Look at the young infant's palms and soles. Are they yellow?

CLASSIFY ALL YOUNG INFANTS

Any of these:		
• Convulsions with this illness. • Apnoea or breathing < 30 per minute • Fast breathing (> 60 per minute), severe chest indrawing, nasal flaring or grunting. • Bulging fontanelle. • Fever (37.5 °C or above or feels hot) or low body temperature (less than 35.5 °C or feels cold). • Only moves when stimulated. • Abundant pus/purulent discharge from eyes, or swollen eyelids • Umbilical redness extending to the skin and/or draining pus. • Many or severe skin pustules.	**POSSIBLE SERIOUS BACTERIAL INFECTION**	• Give diazepam rectally if convulsing at present (p. 35) • Give oxygen if indicated (p. 11) • Give first dose of ceftriaxone IM (p. 12) • If fast breathing, chest indrawing or grunt-ing, give cotrimoxazole 2.5 ml if older than 1 month (p. 38) • If there is abundant pus or purulent discharge or eyelids are swollen, irrigate with normal saline immediately. Repeat hourly until referral. • Test for low blood sugar, and treat or pre-vent (p. 11) • Breastfeed if possible • Keep the infant warm on the way (p. 11) • Refer URGENTLY
• Purulent (small amount) or sticky discharge of eyes **OR** • Red umbilicus. **OR** • Skin pustules.	**LOCAL BACTERIAL INFECTION**	• Treat skin pustules and a red umbilicus with cephalexin or flucloxacillin (p. 12) • Give chloramphenicol eye ointment if sticky or purulent discharge of eyes is present (p. 13) • If the discharge is purulent, give one dose of Ceftriaxone (p. 12). Follow-up after one day (p. 15). • Teach the caregiver to treat local infections at home (p. 13) and counsel on home care for the young infant (p. 14) • Follow-up in 2 days (p. 15)
• None of the above signs.	**NO BACTERIAL INFECTION**	• Counsel the caregiver on home care for the young infant (p. 14)

CLASSIFY ALL YOUNG INFANTS

• Any jaundice if age less than 24 hours **OR** • Yellow palms and soles	**SEVERE JAUNDICE**	• Test for low blood sugar, and treat or prevent (p. 11) • Keep the infant warm (p. 11) • Refer URGENTLY
• Jaundice appearing after 24 hours of age **AND** • Palms and soles not yellow	**JAUNDICE**	• Advise the caregiver to return immediately if palms and soles appear yellow (p. 15) • Follow-up in 1 day (p. 15) • If the young infant is older than 14 days, refer for assessment
• No jaundice	**NO JAUNDICE**	• Counsel the caregiver on home care for the young infant (p. 14)

DOES THE YOUNG INFANT HAVE DIARRHOEA?

ASK	LOOK, LISTEN, FEEL

• For how long?
• Is there blood in the stool?
	• Look at the young infant's general condition. Is the infant:
	  • Lethargic or unconscious?
	  • Restless and irritable?
	• Look for sunken eyes.
	• Pinch the skin of the abdomen. Does it go back:
	  • Very slowly (> 2 seconds)?
	  • Slowly?

	A YOUNG INFANT HAS DIARRHOEA IF THE STOOLS HAVE CHANGED FROM THE USUAL PATTERN, AND ARE MANY AND WATERY (MORE WATER THAN FAECAL MATTER)

CLASSIFY DIARRHOEA

FOR DEHYDRATION

Two of the following signs:		
• Lethargic or unconscious. • Sunken eyes. • Skin pinch goes back very slowly. • Young infant less than one month of age.	**SEVERE DEHYDRATION**	• Start intravenous infusion (Plan C, p. 43) • Give first dose of ceftriaxone IM (p. 12) • Breastfeed or give frequent sips of ORS if possible • Keep the infant warm on the way to hospital (p. 11) • Refer **URGENTLY**
Two of the following signs: • Restless, irritable. • Sunken eyes. • Skin pinch goes back slowly.	**SOME DEHYDRATION**	• If other severe classification, refer with breastfeeding or ORS sips on the way • Give fluid for some dehydration Plan B (p. 42) • Advise mother to continue breastfeeding • Give zinc for 14 days (p. 41) • Follow-up in 2 days (p. 15) • Counsel the caregiver on home care for the young infant (p. 14)
• Not enough signs to classify as some or severe dehydration.	**NO VISIBLE DEHYDRATION**	• Give fluids to treat for diarrhoea at Home (Plan A p. 42) • If exclusively breastfed, do not give other fluids except SSS • Give zinc for 14 days (p. 41) • Counsel the caregiver on home care for the young infant (p. 14) • Follow-up in 2 days (p. 15)

AND DIARRHOEA 14 DAYS OR MORE

• Diarrhoea lasting 14 days or more	**SEVERE PERSISTENT DIARRHOEA**	• Refer after treating for dehydration if present • Keep the infant warm on the way to hospital (p. 11)

AND IF BLOOD IN STOOL

• Blood in the stool.	**SERIOUS ABDOMINAL PROBLEM**	• Refer URGENTLY. • Keep the infant warm on the way to hospital (p. 11)

WAS THE YOUNG INFANT EXAMINED BY A HEALTH WORKERS AFTER BIRTH?

IF NO, ASSESS FOR CONGENITAL PROBLEMS

ASK	LOOK AND FEEL
• Ask the mother if she has any concerns • Ask for any identified birth defects or other problems • Was the mother's RPR tested in pregnancy? • If yes, was it positive or negative? • If positive, did she receive treatment? • If yes, how many doses? • How long before delivery did she receive the last dose?	• Measure head circumference, • LOOK FOR PRIORITY SIGNS • Cleft lip or palate • Imperforate anus • Nose not patent • Macrocephaly (birth head circumference more than 39 cm) • Ambiguous Genitalia • Abdominal distention • Very low birth weight (≤ 2kg) **LOOK FOR OTHER ABNORMAL SIGNS** **HEAD AND NECK** • Microcephaly (Birth head circumference less than 32 cm) • Fontanelle or sutures abnormal • Swelling of scalp, abnormal shape • Neck swelling or webbing • Face, eyes, mouth or nose abnormal • Unusual appearance **LIMBS AND TRUNK** • Abnormal position of limbs • Club foot • Abnormal fingers and toes, palms • Abnormal chest, back and abdomen • Undescended testis or hernia

SIGNS OF CONGENITAL SYPHILIS
- Oedema
- Pallor or jaundice
- Reduced movements or irregular, jerky movements.
- Full fontanelle
- Large lymph nodes
- Large liver and/ or spleen
- Respiratory distress
- Small red or purple spots in the skin (petechiae)
- Blisters on hands and feet

CLASSIFY YOUNG INFANT

Any one of the PRIORITY SIGNS:

Signs	Classify	Treatment
• Cleft palate or lip • Imperforate anus • Nose not patent • Macrocephaly • Ambiguous genitalia • Abdominal distention • Very low birth weight (≤ 2kg)	MAJOR ABNORMALITY OR SERIOUS ILLNESS	• Give diazepam rectally if convulsing at present (p. 35) • Give oxygen if indicated (p. 11) • Give first dose of ceftriaxone IM (p. 12) • If fast breathing, chest indrawing or grunt-ing, give cotrimoxazole 2.5 ml if older than 1 month (p. 38) • If there is abundant pus or purulent dis-charge or eyelids are swollen, irrigate with normal saline immediately. Repeat hourly until referral. • Test for low blood sugar, and treat or pre-vent (p. 11) • Breastfeed if possible • Keep the infant warm on the way (p. 11) • Refer URGENTLY
• One or more abnormal signs	BIRTH ABNORMALITY	• Keep warm, skin to skin (p. 11) • Assess breastfeeding (p. 20) • Address any feeding problems and support mother to breastfeed successfully (p. 20—21) • Refer for assessment • If not able to breastfeed, give EBM 3ml/kg per hour on the way
• Mother's RPR positive and she is - Untreated - Partially treated (fewer than three doses) - Treatment completed less than 1 month before delivery **OR** • Mother's RPR is not known, and it is not possible to get the result now	POSSIBLE CONGENITAL SYPHILIS	• Check for signs of congenital syphilis and if present refer to hospital. • If no signs of congenital syphilis, give intramus-cular penicillin (p. 12). • Ask about the caregiver's health, and treat as necessary (p. 10). • Ensure that the mother receives full treatment for positive RPR.
• No risks nor abnormal signs	NO BIRTH ABNORMALITIES	• Counsel the caregiver on home care for the young infant (p. 14)

THEN CONSIDER
RISK FACTORS IN ALL YOUNG INFANTS

LOOK AT THE CHILD'S ROAD TO HEALTH BOOKLET AND/OR ASK:

- Has the mother or a close contact had TB or been on TB treatment in the last 6 months? If yes:
- Did the mother start TB treatment more than 2 months before delivery?
- Assess the infant for symptoms and signs of congenital TB (box below).
- How much did the infant weigh at birth?
- Was the infant admitted to hospital after birth? If so, for how many days?
- Who is the child's caregiver?
- How old is the mother/caregiver?
- Is the infant exclusively breastfed?

CHECK FOR SIGNS AND SYMPTOMS OF CONGENITAL TB

Congenital TB may be asymptomatic.

Symptoms suggestive of TB:

- Low birth weight
- Poor feeding
- Poor weight gain
- Fever
- Lethargy/ irritability
- Fast breathing/ shortness of breath
- Enlarged lymph nodes
- Enlarged liver and/ or spleen

CLASSIFY ALL YOUNG INFANT

• Mother on TB treatment for less than 2 months before delivery **AND** • Infant has one or more symptoms/ signs of congenital TB	**POSSIBLE CONGENITAL TB**	• Refer to hospital for investigations. If diagnosed with TB the baby will need a full course of TB treatment (p. 39). • Give BCG on completion of INH or TB treatment. • Ask about the caregiver's health, and treat as necessary (p. 10) • Provide follow-up (p. 51).
• Mother on TB treatment for more than 2 months before delivery **AND** • Infant has no symptoms/ signs of congenital TB	**TB EXPOSED**	• Give INH for 6 months if mother has received TB treatment for more than 2 months before delivery (p. 38) • Give BCG on completion of INH or TB treatment • Consider HIV infection in the infant (p. 7) • Ask about the caregiver's health, and treat as necessary (p. 10) • Provide follow-up (p. 51)
• Infant weighed less than 2 kg at birth **OR** • Admitted to hospital for more than three days after delivery **OR** • Known neurological or congenital problem	**AT RISK INFANT**	• Monitor growth and health more frequently • Assess feeding and encourage breastfeeding (p. 21 - 23) • Conduct home visits to assess feeding and growth • Encourage mother to attend follow-up appointments and refer to other services if indicated (further medical assessment, so-cial worker, support group) • Make sure that the birth has been registered and that the child is receiving a child support grant if eligible
• Mother has died or is ill **OR** • Infant not breastfed **OR** • Teenage caregiver **OR** • Social deprivation	**POSSIBLE SOCIAL PROBLEM**	• Assess breastfeeding and support mother to breastfeed suc-cessfully (p. 21 - 23) • If not breastfeeding, counsel and explain safe replacement feeding (p. 20, 24 - 25) • Monitor growth and health more frequently • Conduct home visits to assess feeding and growth • Make sure that the birth has been registered and that the child is receiving a child support grant if eligible. • Refer to other available services if indicated (social worker, community based organisations) • No risk factors • Counsel the caregiver on home care for the young
• No risk factors	**NO RISK FACTORS**	• Counsel the caregiver on home care for the young infant (p. 14)

HAS THE CHILD BEEN TESTED FOR HIV INFECTION?

THEN CONSIDER HIV INFECTION IN ALL YOUNG INFANTS

IF YES, AND THE RESULT IS AVAILABLE, ASK:

- What was the result of the test?
- Was the child breastfeeding when the test was done, or had the child breastfed less than 6 weeks before the test was done?
- Is the child currently taking ARV prophylaxis?

HIV testing in infants 0 - 2 months:

- All HIV-exposed infants should have been tested at birth. Ensure you obtain the result.
- If the test was negative, re-test:
- At 10 weeks of age— all HIV-exposed infants.
- At 6 months of age— all HIV-exposed infants.
- If the child is ill or has features of HIV infection
- 6 weeks after stopping breastfeeding.
- Universal HIV rapid test at 18 months for all infants, regardless of HIV exposure.

Below 18 months of age, use an HIV PCR test to determine the child's HIV status. Do not use an antibody test to determine HIV status in this age group. If HIV PCR positive, do a second HIV PCR test to confirm the child's status

CLASSIFY FOR HIV STATUS

Signs	Classify	Treatment
• Infant has positive PCR test	HIV INFECTION	• Follow the six steps for initiation of ART (p. 52) • Give cotrimoxazole prophylaxis from 6 weeks (p. 38) • Assess feeding and counsel appropriately (p. 16 - 22) • Ask about the caregiver's health, and ensure that she is receiving the necessary care and treatment. • Provide long term follow-up (p. 57)
• Infant is receiving ARV prophy-laxis	HIV-EXPOSED: ON ARV PROPHYLAXIS	• Complete appropriate ARV prophylaxis (p. 12) • Give cotrimoxazole prophylaxis from 6 weeks (p. 38) • Assess feeding and counsel appropriately (p. 16 - 22) • Repeat PCR test according to testing schedule. Reclassify on the basis of the test result. • Ask about the caregiver's health, and ensure that she is receiving the necessary care and treatment. • Provide follow-up care (p. 50)
• Infant has completed ARV prophylaxis AND • Infant has negative PCR test AND • Infant still breastfeeding or stopped breastfeeding < 6 weeks before the test	ONGOING HIV EXPOSURE	• Give cotrimoxazole prophylaxis from 6 weeks (p. 38) • Repeat PCR test according to testing schedule. Reclas-sify on the basis of the test result. • Assess feeding and counsel appropriately (p. 16 - 22) • Ask about the caregiver's health, and ensure that she is receiving the necessary care and treatment. • Check the mother's VL at delivery and if suppressed repeat VL every 6 months while breastfeeding. • Provide follow-up care (p. 50)
• Infant has a negative PCR test AND • Infant is not breastfeeding and was not breastfed for six weeks	HIV-NEGATIVE	• Stop cotrimoxazole prophylaxis • Counsel the caregiver on home care for the young infant (p. 14)

IF NO TEST RESULT FOR CHILD, CLASSIFY ACCORDING TO MOTHER'S STATUS

ASK

- Was the mother tested for HIV during pregnancy or since the child was born?
- If YES, was the test negative or positive?

CLASSIFY CHILD ACCORDING TO MOTHER'S HIV STATUS

Signs	Classify	Treatment
• Mother is HIV-positive	HIV-EXPOSED	• Do a PCR test immediately. Reclassify the child on the basis of the result. • Give infant ART prophylaxis (p. 12). • Give cotrimoxazole prophylaxis from 6 weeks (p. 38) • Assess feeding and provide counselling (p. 16 - 22) • Ask about the caregiver's health, and ensure that she is receiving the necessary care and treatment. - If mother not on ART: start ART immediately. - If mother on ART: check the mother's VL at delivery and if sup- pressed repeat VL every 6 months while breastfeeding. • Provide long term follow-up (p. 50)
• No HIV test done on mother OR • HIV test result not available	HIV UNKNOWN	• If the mother is available: counsel, offer HIV testing and reclassify based on the result. • If the mother is not available: do an HIV antibody (rapid) test to determine if the infant was HIV exposed. If the antibody test is positive, immediately do an HIV PCR to determine if the infant is HIV–infected and manage accordingly.
• Mother HIV-negative	HIV UNLIKELY	• Counsel the caregiver on home care for the young infant (p. 14). • Retest the mother at the 10 week visit, 6 month visit and every 3 months while breastfeeding.

THEN CHECK FOR FEEDING AND GROWTH

If the infant is not being breastfed, use the alternative chart.

ASK	LOOK, LISTEN, FEEL
• How is feeding going? • How many times do you breastfeed in 24 hours? • Does your baby get any other food or drink? • If yes, how often? • What do you use to feed your baby?	• Plot the weight on the RTHB to determine the weight for age. • Look at the shape of the curve. Is the child growing well? • If the child is less than 10 days old: • Has the child lost more than expected body weight? • Has the child regained birth weight at 10 days? • Is the child gaining sufficient weight? • Look for ulcers or white patches in the mouth (thrush).

IF THE BABY:

- Has any difficulty feeding, or
- Is breastfeeding less than 8 times in 24 hours, or
- Is taking any other foods or drinks, or
- Is low weight for age, or
- Is not gaining weight

AND

- Has no indications to refer urgently to hospital:

THEN ASSESS BREASTFEEDING:

- Has the baby breastfed in the previous hour?
- If baby has not fed in the last hour, ask mother to put baby to the breast. Observe the breastfeed for 4 minutes. (If baby was fed during the last hour, ask mother if she can wait and tell you when the infant is willing to feed again).
- Is baby able to attach?

☐ not at all **OR** ☐ poor attachment **OR** ☐ good attachment

- Is the baby suckling well (that is, slow deep sucks, sometimes pausing)?
- not at all not suckling well suckling well
- Clear a blocked nose if it interferes with breastfeeding

NOTE:

- Young infants may lose up to 10% of their birth weight in the first few days after birth, but should regain their birth weight by ten days of age
- Thereafter minimum weight gain should be: Preterm: 10g/kg/day or Term: 20g/kg/day

10% OF BIRTH WEIGHT = BIRTH WEIGHT divided by 10

CLASSIFY FEEDING IN ALL YOUNG INFANTS

Signs	Classification	Treatment
• Not able to feed. or • No attachment at all. or • Not suckling at all.	**NOT ABLE TO FEED**	• Treat as possible serious bacterial infection (p. 3) • Give first dose of ceftriaxone IM (p. 12). • Test for low blood sugar, and treat or pre- vent (p. 11) • Refer URGENTLY to hospital—make sure that the baby is kept warm (p. 11)
• Not well attached to breast. **OR** • Not suckling effectively. or • Less than 8 breastfeeds in 24 hours. **OR** • Infant is taking foods or drinks other than breast- milk **OR** • Thrush	**FEEDING PROBLEM**	• Advise the mother to breastfeed as often and for as long as the infant wants, day and night • If not well attached or not suckling effectively, teach correct positioning and attachment (p. 17) • If breastfeeding less than 8 times in 24 hours, advise to increase frequency of feeding • If mother has a breastfeeding problem see advice for common breastfeeding problems (p. 17 - 18,22) • If receiving other foods or drinks, counsel mother on exclusive breastfeeding, and the importance of stopping other foods or drinks P. 17 - 18,22) • If thrush, treat and teach the mother to treat for thrush at home (p. 13) • Follow-up in 2 days (p. 15)
• More than 10% weight loss in the first week of life. **OR** • Weight less than birth weight at or after 2 week visit. **OR** • Low weight for age. or • Weight gain is unsatisfactory. **OR** • Weight loss following discharge of LBW infant	**POOR GROWTH**	• Advise the mother to breastfeed as often and for as long as the infant wants, day and night • If less than 2 weeks old follow-up in 2 days (p. 15) • If more than 2 weeks old follow-up in 7 days (p. 15)
• Not low weight for age and no other signs of inadequate feeding. • Less than 10% weight loss in the first week of life	**FEEDING AND GROWING WELL**	• Praise the mother for feeding the infant well • Counsel the caregiver on home care for the young infant (p. 14)

THEN CHECK FOR FEEDING AND GROWTH

(Alternative chart for non-Breastfed infants)

ASK	LOOK, LISTEN, FEEL
• How is feeding going? • What milk are you giving? • How many times during the day and night? • How much is given at each feed? • How are you preparing the milk? • Let caregiver demonstrate or explain how a feed is prepared, and how it is given to the baby. • Are you giving any breastmilk at all? • What foods and fluids in addition to replacement milk is being given? • How is the milk being given? Cup or bottle? • How are you cleaning the utensils?	• Plot the weight on the RTHB to deter-mine the weight for age. • Look at the shape of the curve. Is the child growing well? • If the child is less than 10 days old: • Has the child lost more than ex-pected body weight? • Has the child regained birth weight at 10 days? • Is the child gaining sufficient weight? • Look for ulcers or white patches in the mouth (thrush).

NOTE:

- Young infants may lose up to 10% of their birth weight in the first week after birth, then from day 7-10 regain birth weight loss
- Thereafter minimum weight gain should be:
- Preterm: 10g/kg/day OR Term: 20g/kg/day

10% OF BIRTH WEIGHT = BIRTH WEIGHT divided by 10

CLASSIFY FEEDING AND GROWTH IN ALL YOUNG INFANTS

Signs	Classify as	Treatment
• Not able to feed **OR** • Not sucking at all	**NOT ABLE TO FEED**	• Treat as possible serious bacterial infection (p. 3) • Give first dose of ceftriaxone IM (p. 12). Test for low blood sugar, and treat or prevent (p. 11) • Refer URGENTLY —make sure that the baby is kept warm
• Milk incorrectly or unhygienically prepared. **OR** • Giving inappropriate replacement milk or other foods/fluids. **OR** • Giving insufficient replacement feeds. **OR** • Using a feeding bottle. **OR** • Thrush	**FEEDING PROBLEM**	• Counsel about feeding and explain the guidelines for safe replacement feeding (p. 19 - 20) • Identify concerns of caregiver and fami-ly about feeding • If caregiver is using a bottle, teach cup feeding (p. 18) • If thrush, treat and teach the caregiver to treat it at home (p. 13) • Follow-up in 2 days (p. 15)
• More than 10% weight loss in the first week of life. **OR** • Weight less than birth weight at or after 10 days of age. **OR** • Weight gain is unsatisfactory. **OR** • Weight loss following discharge of LBW infant.	**POOR GROWTH**	• Check for feeding problem (p. 21) • Counsel about feeding (p. 19 - 20) • If less than 2 weeks old follow-up in 2 days (p. 15) • If more than 2 weeks old follow-up in 7 days (p. 15)
• Not low weight for age and no other signs of inadequate feeding. • Less than 10% weight loss in the first week of life	**FEEDING AND GROWING WELL**	• Counsel the caregiver on home care for the young infant emphasising the need for good hygiene (p. 14). • Praise the caregiver

THEN CHECK THE YOUNG INFANT'S IMMUNISATION STATUS **AND IMMUNISE IF NEEDED**

IMMUNISATION SCHEDULE:				
BIRTH	**BCG**	**OPV0**		
6 weeks	Hexavalent1 (DaPT-IPV-HB-Hib1)	OPV1	PCV1	RV1
10 weeks	Hexavalent2 (DaPT-IPV-HB-Hib2)			

- Give all missed doses on this visit
- Preterm infants should be immunised at six and ten weeks: do not delay their immunisations. If they received OPV0 less than four weeks before they reached six weeks of age, give all the other immunisations as usual (OPV1 can be given four weeks after OPV0 or with the ten week doses)
- Include sick babies and those without a RTHB
- If the child has no RTHB, issue a new one today
- Advise the caregiver when to return for the next immunisation
- Refer to the EPI Vaccinator's Manual for more information

ASSESS THE **CAREGIVER'S HEALTH**

- Check for maternal danger signs and refer urgently if present.
- Check that mother has received post-natal care according to Maternity Guidelines.
- Check for anaemia and breast problems.
- Ask mother about contraceptive usage, and counsel/ offer family planning.
- Check HIV status and assess for ART if eligible.
- If already on ART, ask about the mother's last VL.
- Screen for TB and manage appropriately.
- Check RPR results and complete treatment if positive.
- Ask about any other problems.

MATERNAL DANGER SIGNS

- Excessive vaginal bleeding
- Foul smelling vaginal discharge
- Severe abdominal pain
- Fever
- Excessive tiredness or breathlessness
- Swelling of the hands and face
- Severe headache or blurred vision
- Convulsion or impaired consciousness

ASSESS AND **MANAGE OTHER PROBLEMS**

TREAT THE YOUNG INFANT

Explain to the caregiver why the treatment is being given

Prevent Low Blood Sugar in Young Infant (hypoglycaemia)

If the child is able to swallow:

- If breastfed: ask the mother to breastfeed the child
- If the baby is too sick to feed, give 3ml/kg per hour of expressed breastmilk
- on the way to hospital
- If baby has severe lethargy and cannot swallow, give the milk by
- nasogastric tube

If feeding is contraindicated:

- Put up intravenous (IV) line and give 10% glucose by slow IV infusion at
- 3ml/kg/hour (3 drops per kg/hour)
- Use a dial-a flow to monitor the flow rate
- Example: If the baby weighs 4 kg then give 12 ml/hour

Give Oxygen

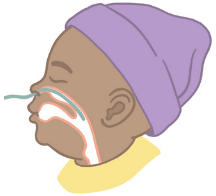
- Give oxygen to all young infants with:
  - Convulsions
  - Apnoea or breathing < 30 minute
  - Fast breathing, severe chest indrawing, nasal flaring or grunting
- Use nasal prongs or a nasal cannula.

Nasal prongs

- Place the prongs just below the baby's nostrils. Use 1mm prongs for small babies and 2mm
- prongs for term babies
- Secure the prongs with tape
- Oxygen should flow at one litre per minute

Nasal cannula

- This method delivers a higher concentration of oxygen
- Insert a FG5 or FG6 nasogastric tube 2 cm into the nostril.
- Secure with tape
- Turn on oxygen to flow of half a litre per minute



Treat for low blood sugar (hypoglycaemia)

- Suspect low blood sugar in any infant or child that:
  - is convulsing, unconscious or lethargic; OR
  - has a temperature below 35°C.
- Confirm low blood sugar using blood glucose testing strips.
- Keep the baby warm at all times.

Low blood sugar 1.4 to less than < 2.5 mmol/L in a young infant

- Breastfeed or feed expressed breastmilk.
- If breastfeeding is not possible give 10mg/kg of replacement milk feed
- Repeat the blood glucose in 15 minutes while awaiting transport to hospital
- If the blood sugar remains low, treat for severe hypoglycaemia (see below)
- If the blood glucose is normal, give milk feeds and check the blood glucose 2-3 hourly

Low blood sugar < 1.4 mmol/L in a young infant

- Give a bolus of 10% dextrose infusion (Neonatalyte) at 2ml/kg
- Then continue with the 10% dextrose infusion at 3ml/kg/hour
- Repeat the blood glucose in 15 minutes.
- If still low repeat the bolus of 2ml/kg and continue IV infusion
- Refer **URGENTLY** and continue feeds during transfer
- If neonatalyte not available add 1 part 50% dextrose water to 4 parts water to make 10% solution

Keep the infant or child warm

- Use Skin to skin to keep the baby warm, unless the mother is too ill, or if the baby is too ill and requires observation. (If this is the case, then nurse the infant in a transport incubator or wrap in blankets.)

Skin-to-Skin

- Dress the baby with a cap, booties and nappy
- Place the baby skin to skin between the mother's breasts
- Cover the baby
- Secure the baby to the mother
- Cover both mother and baby with a blanket or jacket if the room is cold

TREAT THE **YOUNG INFANT**

Treat for POSSIBLE SERIOUS BACTERIAL INFECTION with Intramuscular Ceftriaxone

- Give first dose of ceftriaxone IM.
- The dose of ceftriaxone is 50 mg per kilogram.
- Dilute a 250 mg vial with 1 ml of sterile water.
- Also give one dose of ceftriaxone if the infant has LOCAL BACTERIAL INFECTION with a purulent discharge of eyes.

CEFTRIAXONE INJECTION
Give a single dose in the clinic

WEIGHT	CEFTRIAXONE (250 mg in 1 ml)
2 - < 3 kg	0.5 ml
3 - 6 kg	1 ml

Treat Skin pustules or red umbilicus with Cephalexin or Flucloxacillin

- Give cephalexin OR flucloxicillin for 7 days
- If child has penicillin allergy, refer.

CEPHALEXIN OR FLUCLOXICILLIN
Give four times a day for seven days

WEIGHT	Cephalexin syrup 125 mg in 5 ml	Flucloxacillin syrup 125 mg in 5 ml
Up to 5 kg	2.5 ml	2.5 ml
≥ 5kg	5 ml	5 ml

Give Intramuscular Penicillin for POSSIBLE CONGENITAL SYPHILIS

Give once only

- Give Benzathine Benzylpenicillin IM (injection) 50 000 units / kg into the lateral thigh.
- **Dilute 1.2 million units with 4 ml of sterile water to give in the clinic.**
- Refer all babies if the mother is RPR positive and the baby presents with Low birth Weight **OR** Blisters on hands and feet **OR** Pallor **OR** petechiae **OR** hepatosplenomegaly **OR** if you are unsure

WEIGHT	BENZATHINE BENZYLPENICILLIN INJECTION 300 000 units in 1 ml
2.5 - < 3.5 kg	0.5 ml
3.5 - < 5 kg	0.75ml
> 5 kg	1 ml

Give ARV Prophylaxis

Risk category	Scenario	Infant ART prophylaxis
LOW RISK (at birth)	Newborn infant of mother on ART with a VL result of <1000 copies/ ml at delivery	**Nevirapine** for 6 weeks.
HIGH RISK (at birth)	**At birth:** • Mother on ART with a VL of >1000 copies/ ml at delivery or no HIV VL available at birth/ within the last 12 weeks before birth. • Mother not on ART at delivery.	**Nevirapine** for at least 12 weeks, until mother's VL is <1000 copies/ ml or until 1 week after cessation of all breastfeeding. **AND** **Zidovudine** for 6 weeks.
HIGH RISK (during breastfeeding)	**During breastfeeding:** • Mother on ART with latest VL of >1000 copies/ ml. • Mother not on ART.	
HIGH RISK (exclusive formula feeding)	**Exclusively formula fed infant of:** • Mother not on ART at delivery. • Mother on ART with VL >1000 copies/ ml at delivery or no HIV VL at birth/ with the last 12 weeks before birth.	**Nevirapine** for 6 weeks **and** **Zidovudine** for 6 weeks.

- If at any stage the infant's PCR test is positive, stop prophylaxis and initiate ART according to the six steps p 52.
- Obtain expert advice on dosing of NVP and AZT for:
  - Premature infants <35 weeks gestation and <2.0 kg.
  - Infants underweight for age (with WFA z-score < -3).

AGE/WEIGHT		NEVIRAPINE (NVP) SOLUTION (10mg/ml) Once daily
Birth to 6 weeks	Weight 2.0 - < 2.5 kg	1 ml (10mg) daily
	Weight 2.5 kg or more	1.5 ml (15mg) daily
6 weeks up to 6 months		2 ml (20mg) daily
6 months up to 9 months		3 ml (30mg) daily
9 months until 1 week after breast-feeding stops		4 ml (40mg) daily

AGE/WEIGHT		ZIDOVUDINE (AZT) SOLUTION (10mg/ml) Twice daily
Birth to 6 weeks	Weight 2.0 - < 2.5kg kg	1 ml (10 mg) twice daily
	Weight 2.5 kg	1.5 ml (15 mg) twice daily
> 6 weeks	Weight 3.0 - < 6 kg	6 ml (60 mg) twice daily
	Weight 6 - 8 kg	9 ml (90 mg) twice daily

TREAT THE YOUNG INFANT

Treat for Diarrhoea (p. 42- 43)

- If there is DIARRHOEA WITH SEVERE DEHYDRATION or DIARRHOEA WITH SOME DEHYDRATION (p.42 – 43)
- Explain how the treatment is given
- If there is SEVERE DEHYDRATION commence intravenous rehydration, give the first dose of ceftriaxone IM (p. 12) and REFER URGENTLY.

Teach the Caregiver to treat Local Infections at home

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

Treat for Thrush with Nystatin

If there are thick plaques the caregiver should:

- Wash her hands with soap and water.
- Wet a clean soft cloth with chlorhexidine 0.2% or salt water, wrap this around the little finger, then gently wipe away the plaques.
- Wash hands again.

For all infants with thrush

- Give nystatin 1 ml after feeds for 7 days.
- If breastfed, check mother's breasts for thrush. If present treat mother's breasts with nystatin.
- Advise mother to wash nipples and areolae after feeds.
- If bottle fed, change to cup and make sure that caregiver knows how to clean utensils used to prepare and administer the milk (p. 23 - 25).

Treat for purulent or sticky discharge of eyes

The caregiver should:

- Wash hands with soap and water
- Gently wash off discharge and clean the eye with saline or cooled boiled water at least 4 times a day. Continue until the discharge disappears.
- Apply chloramphenicol ointment 4 times a day for seven days.
- Wash hands again after washing the eye.

Treat for Skin Pustules or Umbilical Infection

The caregiver should:

- Wash hands with soap and water.
- Gently wash off pus and crusts with soap and water.
- Dry the area.
- Apply povidone iodine cream (5%) or ointment (10%) three times daily.
- Wash hands again.
- Give cephalexin or flucloxacillin (p. 12) for 7 days.

COUNSEL THE MOTHER OR CAREGIVER
ON HOME CARE FOR THE YOUNG INFANT

1. FLUIDS AND FEEDING
- Ensure good communication with the mother to promote early and exclusive breastfeeding (p. 17—18)
- Counsel the mother to breastfeed frequently, as often and for as long as the infant wants, day or night, during sickness and health (p. 18 - 20)

2. MAKE SURE THAT THE YOUNG INFANT IS KEPT WARM AT ALL TIMES
- Encourage mother to keep infant warm using skin-top-skin contact (p. 11)
- In cool weather, cover the infant's head and feet and dress the infant with extra clothing.

3. MAINTAIN A HYGIENIC ENVIRONMENT
- Advise the caregiver to wash her hands with soap and water after going to the toilet, changing the infant's nappy and before each feed.

4. SUPPORT THE FAMILY TO CARE FOR THE INFANT
- Help the mother, family and caregiver to ensure the young infant's needs are met.
- Assess any needs of the family and provide or refer for management.

5. WHEN TO RETURN

FOLLOW-UP VISITS

If the infant has:	Follow-up in:
JAUNDICE LOCAL BACTERIAL INFECTION: Purulent discharge of eye	1 day
LOCAL BACTERIAL INFECTION THRUSH SOME DEHYDRATION FEEDING PROBLEM POOR GROWTH AND INFANT LESS THAN 2 WEEKS	2 days
POOR GROWTH and infant more than two weeks	7 days
HIV INFECTION ONGOING HIV EXPOSURE HIV EXPOSED TB EXPOSED	At least once a month
AT RISK INFANT POSSIBLE SOCIAL PROBLEM	As needed

WHEN TO RETURN IMMEDIATELY:

Advise caregiver to return immediately if the young infant has any of these signs:
• Breastfeeding poorly or drinking poorly. • Irritable or lethargic. • Vomits everything. • Convulsions. • Fast breathing. • Difficult breathing. • Blood in stool.

GIVE FOLLOW-UP CARE **FOR THE SICK YOUNG INFANT**

If there is a new problem, assess, classify and treat the new problem using the ASSESS AND CLASSIFY charts (p. 3 - 10).

LOCAL BACTERIAL INFECTION

After 1 or 2 days:
- **Discharge of eyes:** has the discharge improved? Are the lids swollen?
- **Red umbilicus:** Is it red or draining pus? Does redness extend to the skin?
- **Skin pustules:** Are there many or severe pustules?

Treatment:
- If condition remains the same or is worse, refer.
- If condition is improved, tell the caregiver to continue giving the antibiotic and continue treating for the local infection at home (p. 13).

JAUNDICE

After 1 day:
- Look for jaundice (yellow eyes or skin)
- Look at the young infant's palms and soles. Are they yellow?
- Reassess feeding
- If palms and soles yellow, refer
- If palms and soles not yellow and infant feeding well, counsel mother to continue breastfeeding and to provide home care.
- If you are concerned about the jaundice, ask the mother to return after one or two days or if the jaundice becomes worse.

FEEDING PROBLEM

After 2 days:
- Ask about any feeding problems found on the initial visit and reassess feeding (p. 8 or 9).
- Counsel the caregiver about any new or continuing feeding problems. If you counsel the caregiver to make significant changes in feeding, ask her to bring the young infant back again after 5 days.
- If the young infant has POOR GROWTH (low weight for age or has poor weight gain), ask the caregiver to return again after 5 days to measure the young infant's weight gain. Continue follow-up until the weight gain is satisfactory.
- If the young infant has lost weight, **refer**.

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

POOR GROWTH

After 2 days in infant less than 2 weeks or 7 days in infant more than 2 weeks:
- Reassess feeding (p. 8 or 9).
- Check for possible serious bacterial infection and treat if present (p. 3).
- Weigh the young infant. Determine weight gain.
- If the infant is no longer low weight for age, praise the caregiver and encourage her to continue.
- If the infant is still low weight for age, but is gaining weight, praise the caregiver. Ask her to have her infant weighed again within 14 days or when she returns for immunisation, whichever is the earlier.

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

THRUSH

After 2 days in infant less than 2 weeks or 7 days in infant more than 2 weeks:
- Look for thrush in the mouth.
- Reassess feeding. (p. 8 or 9).

Treatment:
- If thrush is worse check that treatment is being given correctly, and that the mother has been treated for thrush, if she is breastfeeding. Also consider HIV INFECTION (p. 7).
- If the infant has problems with attachment or feeding, **refer**.
- If thrush is the same or better, and the baby is feeding well, continue with nystatin for a total of 7 days.

COUNSEL THE MOTHER OR CAREGIVER **ON INFANT AND YOUNG CHILD FEEDING**

COMMUNICATION SKILLS

- Be respectful and understanding
- Listen to the family's concerns and encourage them to ask questions and express their emotions
- Use simple and clear language
- Ensure that the family understands any instructions and give them written information
- If a baby needs to be referred, explain the reason for the referral and how the baby will be referred.
- Respect the family's right to privacy and confidentiality
- Respect the family's cultural beliefs and customs, and accommodate the family's needs as much as possible
- Remember that health care providers may feel anger, guilt, sorrow, pain and frustration
- Obtain informed consent before doing any procedures

Listening and Learning skills

- Use helpful non-verbal behaviour.
- Ask open-ended questions.
- Use responses and gestures that show interest.
- Reflect back what the caregiver says.
- Avoid judging words.

Confidence Building skills

- Accept what the caregiver says, how she thinks and feels.
- Recognise and praise what the caregiver is doing right.
- Give practical help.
- Give relevant information according to the caregiver's needs and check her understanding.
- Use simple language .
- Make suggestions rather than giving commands.
- Reach an agreement with the caregiver about the way forward.

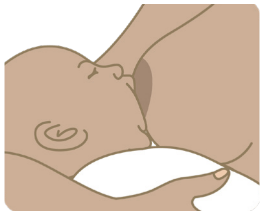
SUPPORT MOTHERS **TO BREASTFEED SUCCESSFULLY**

BREASTFEEDING ASSESSMENT

- Has the baby breastfed in the previous hour?
- If baby has not fed in the last hour, ask mother to put baby to the breast. Observe the breastfeed for 4 minutes. (If baby was fed during the last hour, ask mother if she can wait and tell you when the infant is willing to feed again).
- Is baby able to attach?
- not at all poor attachment good attachment
- Is the baby suckling well (that is, slow deep sucks, sometimes pausing)?
  ☐ not at all ☐ not suckling well ☐ suckling well
- Clear a blocked nose if it interferes with breastfeeding

Signs of good attachment

- More areola visible above than below baby's mouth
- Mouth wide open
- Lower lip turned outwards
- Chin touching breast
- Slow, deep sucks and swallowing sounds

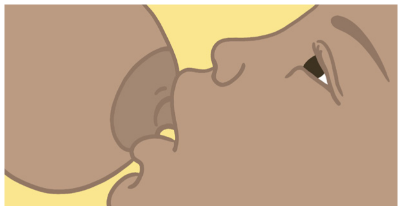


TEACH CORRECT POSITIONING AND ATTACHMENT

- Seat the mother comfortably
- Show the mother how to hold her infant:
  - with the infant's head and body straight
  - facing her breast, with infant's nose opposite her nipple
  - with infant's body close to her body
  - supporting infant's whole body, not just neck and shoulders.
- Show her how to help the infant 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.
- Most of the common breastfeeding problems expressed by mother are related to poor positioning and attachment.

Signs of poor attachment

- Baby sucking on the nipple, not the areola
- Rapid shallow sucks
- Smacking or clicking sounds
- Cheeks drawn in
- Chin not touching breast

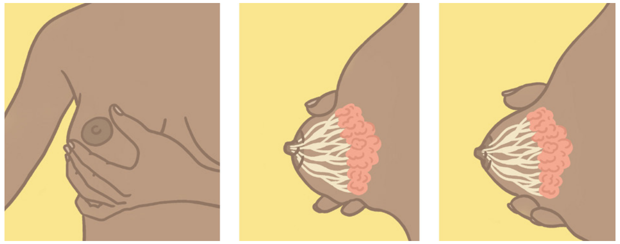


TIPS TO HELP A MOTHER BREASTFEED HER BABY

- Express a few drops of milk on the baby's lip to help the baby start breastfeeding.
- For low birth weight baby give short rests during a breastfeed;
- If the baby coughs, gags, or spits up when starting to breastfeed, the milk may be letting down too fast for the baby. Teach the mother to take the baby off the breast if this happens.
- Hold the baby against her chest until the baby can breathe well again then put it back to the breast after the let-down of milk has passed.
- If the mother will be away from the baby for some time, teach the mother to express breastmilk (p. 18).
- Make sure that the person who will feed the baby has been taught to cupfeed correctly (p. 18).

SUPPORT ON EXPRESSING BREASTMILK AND CUPFEEDING SUCCESSFULLY

EXPRESSING BREASTMILK



- Wash hands with soap and water
- Make sure mother is sitting comfortably – a little forward
- Show her how to cup the breast just behind her areola
- Squeeze the breast gently, using thumb and the rest of fingers in a C shape. This shouldn't hurt (don't squeeze the nipple directly as you'll make it sore and difficult to express).
- Release the pressure then repeat, building up a rhythm. Try not to slide the fingers
- over the skin. At first, only drops will appear, but if she keeps going this will help
- build up her milk supply. With practice and a little time, milk may flow freely.
- When no more drops come out, let her move her fingers round and try a different section of the breast.
- When the flow slows down, swap to the other breast. Keep changing breasts until the milk drips very slowly or stops altogether.
- If the milk doesn't flow, let her try moving her fingers slightly towards the nipple or further away, or give the breast a gentle massage.
- Hold a clean (boiled) cup or container below the breast to catch the milk as it flows.

STORING AND USING EXPRESSED BREASTMILK

- Fresh breastmilk has the highest quality.
- If breastmilk must be stored, advise the mother and family to:
  - Use either a glass or hard plastic container with a large opening and a tight lid to store the breastmilk.
  - Boil the container and lid for 10 minutes before use.
  - If the mother is literate, teach her to write the time and date the milk was expressed (or morning, afternoon, evening) on the container before storing.
  - Defrost frozen breastmilk in a fridge or at room temperature over 12 hours or by letting the container with frozen breastmilk stand in cold water to defrost.
- Make sure that the person who will feed the baby has been taught to cupfeed correctly (see next box).

How long can breast milk be stored

Temperature	Duration
• Room temperature	• Up to 8 hours
• Fridge	• Up to 6 days
• Ice box freezer (-18°C)	• 3-6 months

CUP FEEDING (FOR GIVING EXPRESSED BREASTMILK OR REPLACEMENT FEEDS)

- Hold the baby sitting upright or semi-upright on your lap
- Hold a small cup of milk to the baby's mouth.
- Tip the cup so that the milk just reaches the baby's lips.
- The cup rests lightly on the baby's lower lip and the edge of the cup touches the outer part of the baby's upper lip.
- The baby will become alert
- Do not pour milk into the baby's mouth.
- A low birth weight baby starts to take milk with the tongue.
- A bigger / older baby sucks the milk, spilling some of it
- When finished the baby closes the mouth and will not take any more.
- If the baby has not had the required amount, wait and then offer the cup again, or offer more frequent feeds.
- Give volumes as per guideline (20).

COUNSEL THE CAREGIVER ABOUT **GIVING REPLACEMENT FEEDS**

BENEFITS OF BREASTFEEDING

- Breastfeeding is the perfect food for the baby. It contains many antibodies and substances that fight infection, mature the gut and body, and promote optimal growth, development and health for the baby
- The risk of not breastfeeding is a much higher chance of the baby becoming ill with, or even dying from, diarrhoea, pneumonia or malnutrition.
- If the mother is HIV positive, with ART prophylaxis the risk of HIV transmission is much less than in the past.

REQUIREMENTS FOR SAFE REPLACEMENT FEEDING

- The mother or caregiver must purchase all the formula herself, and be prepared to do this for 12 months.
- Disclosure of her HIV status to relevant family will make it easier as she must give formula only and no breast milk
- She must safely prepare milk before EACH of 6 – 8 feeds a day
- Running water in the house and electricity and a kettle are advisable for safe preparation of 6 – 8 feeds a day.
- She must be able to clean and sterilise the equipment after each feed
- She should use a cup to feed the baby as it is safer than a bottle (p. 23)

REPLACEMENT FEEDS

- Ensure that the mother understands the benefits of breastfeeding and risks of not breastfeeding
- If the mother (or caregiver) nevertheless chooses not to breastfeed, ensure that she understands the requirements for safe replacement feeding and knows how to prepare replacements feeds safely.
- Infants who are on replacement feeds should receive no other foods or drinks until six months of age
- Young infants require to be fed at least 8 times in 24 hours.
- Prepare correct strength and amount of replacement feeds before use. (p. 20).
- Cup feeding is safer than bottle feeding. Use a cup which can be kept clean i.e. not one with a spout (p.18)
- Pasteurised full cream milk may be introduced to the non-breastfed infant's diet from 12 months of age. Avoid coffee, tea, creamers and condensed milk.
- Where infant formula is not available, children over six months may temporarily receive undiluted pasteurised full cream milk (boiled), provided that iron supplements or iron-fortified foods are con-sumed and the amount of fluid in the overall diet is adequate.

SAFE PREPARATION OF REPLACEMENT FEEDS

- Wash your hands with soap and water before preparing a feed.
- Boil the water. If you are boiling the water in a pot, it must boil for three minutes. Cover the pot with the lid while the water cools down. If using an automatic kettle, lift the lid of the kettle and let it boil for three minutes.
- The water must still be hot when you mix the feed to kill germs that might be in the pow-der.
- Carefully pour the amount of water that will be needed in the marked cup. Check if the water level is correct before adding the powder. Measure the powder according to the instructions on the tin using the scoop provided. Only use the scoop that was supplied with the formula.
- Mix by stirring with a clean spoon.
- Cool the feed to body temperature under a running tap or in a container with cold water. Pour the mixed formula into a cup to feed the baby.
- Only make enough formula for one feed at a time.
- Feed the baby using a cup (p. 18) and discard any leftover milk within two hours.

Cleaning of equipment used for preparation and giving of feeds.

- **If the infant is being cup fed:**
  - Wash all containers and utensils used for feeding and preparation thoroughly in hot soapy water. Make sure that all remaining feed is removed. Rinse with clean water, allow to dry or dry with a clean cloth and store in a clean place.
  - If possible, all containers and utensils should be sterilized once a day as described below.
- **If the caregiver is using bottles to feed the infant:**
  - Wash all containers and utensils used for feeding and preparation thoroughly in hot soapy water. Make sure that all remaining feed is removed using a bottle brush. Rinse with clean water.
  - The bottles and other equipment must be sterilised after each use as described below.
- **Sterilization should be done as follows:**
  - fill a large pot with water and completely submerge all washed feeding and preparation equipment, ensuring there are no trapped air bubbles
  - cover the pot with a lid and bring to a rolling boil, making sure the pot does not boil dry
  - keep the pot covered until the feeding and preparation equipment is needed.

COUNSEL **THE CAREGIVER**

CORRECT VOLUMES AND FREQUENCY OF EXPRESSED BREASTMILK OR FORMULA FEEDS

Age	Weight	Approximate amount of Feed needed in 24 hours	Approximate no. of feeds per day.
Birth	3 kg	400ml	8 X 50ml
2 weeks	3 kg	400ml	8 X 50ml
6 weeks	4 kg	600ml	7 X 75ml
10 weeks	5 kg	750ml	6 X 125ml
14 weeks	6.5 kg	900ml	6 X 150ml
4 months	7 kg	1050ml	6 X 175 ml
5 months	7 kg	1050ml	6 X 175 ml
6 months	8 kg	1200ml	6 X 200ml
7 to 12 months	8 - 9 kg	1000ml	4 x 250 ml

NOTE: For formula feeding preparations, advise the caregiver to always use the correct amount of water and formula according to the product instructions.

Over-dilution may lead to undernutrition and under-dilution may lead to overweight and cause constipation .

WHEN TO GIVE RUTF (CHILD MUST BE 6 MONTHS OLD OR ABOVE)

- RUTF is for children with severe acute malnutrition (SAM). It should not be shared with other household member.
- Not all children with moderate acute malnutrition should receive RUTF/RUSF .
- However it may be provided in the following situations:
  - In areas with a high prevalence (new and old cases) of moderate acute malnutrition.
  - To children from food-insecure households.
- For this group of children special attention to nutrition counselling, interventions to address food security and follow-up care to assess response is crucial.
- The provision of RUTF for children who are stunted is not recommended.

HOW MUCH TO GIVE RUTF (REFER TO PAGE 41)

Sick children often do not like to eat. Give small regular portions of RUTF and encourage the child to eat food often, every 3-4 hours (up to 8 meals per day)

HOW TO GIVE RUTF

- Give amounts according to the guidelines (p 41).
- Offer plenty of clean water to drink with RUTF
- Wash the child's hands and face with soap and water before feeding.
- Keep food clean and covered.

HOW TO DO THE APPETITE TEST? (CHILD MUST BE 6 MONTHS OLD OR ABOVE)

- The appetite test should be conducted in a separate quiet area.
- Explain to the caregiver the purpose of the appetite test and how it will be carried out.
- The caregiver should wash her hands.
- The caregiver should sit comfortably with the child on her/his lap and either offer the RUTF from the packet or put a small amount on her/his finger and give it to the child.
- The caregiver should offer the child the RUTF gently, encouraging the child all the time. If the child refuses then the caregiver should continue to quietly encourage the child and take time over the test.
- The test usually takes a short time but may take up to one hour.
- The child must not be forced to take the RUTF.
- The child needs to be offered plenty of water to drink from a cup as he/she is taking the RUTF.

Weight	Sachets (Approx 90g)
4 - < 7 kg	¼ to ⅓
7 - < 10 kg	⅓ to ½
10 - < 15 kg	½ to ¾
15 - < 30 kg	¾ to 1
>30kg	> 1

The result of the appetite test

PASS:

- A child who takes at least the amount shown in the table passes the appetite test.

FAIL:

- A child who does not take at least the amount of RUTF shown in the table should be referred for inpatient care.
- If the appetite is good during the appetite test and the rate of weight gain at home is poor then a home visit should be arranged.
- The MINIMUM amount of RUTF sachets that should be taken is shown in the table

FEEDING **ASSESSMENT**

ASSESS THE CHILD'S FEEDING IF THE CHILD IS:

Classified as having:

- MODERATE SEVERE MALNUTRITION
- NOT GROWING WELL
- ANAEMIA
- **under 2 years of age**

Ask questions about the child's usual feeding and feeding during this illness. Compare the mother/caregiver's answers to the Feeding Recommendations for the child's age (p. 17-23).

ASK:

- **How are you feeding your child?**
- **Are you breastfeeding?**
  - How many times during the day?
  - Do you also breastfeed at night?
- **Are you giving any other milk?**
  - What type of milk is it?
  - What do you use to give the milk?
  - How many times in 24 hours?
  - How much milk each time?
  - How is the milk prepared?
  - How are you cleaning the utensils?
- **What other food or fluids are you giving the child?**
  - How often do you feed him/her?
  - What do you use to give other fluids?
- **How has the feeding changed during this illness?**
- **If the child is not growing well, ASK:**
  - How large are the servings?
  - Does the child receive his/her own serving?
  - Who feeds the child and how?

RECOMMENDED PHYSICAL ACTIVITY BABIES

(BIRTH TO 1 YEAR OLD)

Moving

- Being physically active several times a day in a variety of ways through interactive floor-based play, including crawling. For babies not yet mobile, this includes at least 30 minutes of tummy time spread throughout the day while awake, and other move-ments such as reaching and grasping.

Sitting

- Engaging in stimulating activities with a caregiver, such as playing with safe objects and toys, having baby conversations, singing, and storytelling. Babies should NOT be strapped in and unable to move for more than 1 hour at a time (e.g., in a pram, high chair, or on a caregiver's back or chest) while awake. Screen time is NOT rec-ommended.

TODDLERS (1 AND 2 YEARS OLD)

Moving

- At least 180 minutes spent in a variety of physical activities including energetic play, spread throughout the day; more is better.

Sitting

- Engaging in activities that promote development such as reading, singing, games with blocks, puzzles, and storytelling with a caregiver. Toddlers should NOT be strapped in and unable to move for more than 1 hour at a time (e.g., in a pram, high chair or strapped on a caregiver's back or chest), and should not sit for extended periods. For toddlers younger than 2 years, screen time is NOT recommended. For toddlers aged 2 years, screen time should be no more than 1 hour; less is better.

PRE-SCHOOLERS (3, 4 AND 5 YEARS OLD)

Moving

- At least 180 minutes spent in a variety of physical activities, of which at least 60 minutes is energetic play that raises their heart rate and makes them 'huff and puff' (e.g. running, jumping, dancing), spread throughout the day; more is better.

Sitting

- Engaging in activities such as reading, singing, puzzles, arts and crafts, and story-telling with a caregiver and other children. Pre-schoolers should NOT be strapped in and unable to move for more than 1 hour at a time and should not sit for extended periods. Screen time should be no more than 1 hour per day; less is better.

COUNSEL THE CAREGIVER ABOUT **FEEDING PROBLEMS**

If mother reports difficulty with breastfeeding, assess breastfeeding (p. 8 or 20):

- Identify the reason for the mother's concern and manage any breast condition.
- If needed, show recommended positioning and attachment (p. 17).
- Build the mother's confidence.
- Advise her that frequent feeds improve lactation.

If the child is less than 6 months old, and:

- **the child is taking foods or fluids other than breastmilk:**
  - Build mother's confidence that she can produce all the breastmilk that the child needs. Water and other milk are not necessary.
  - If she has stopped breastfeeding, refer her to a breastfeeding counsellor to help with relactation.
  - Suggest giving more frequent, longer breastfeeds, day or night, and gradually reducing other milk or foods.
- **the mother or infant are not able to breastfeed due to medical reasons, counsel the mother to:**
  - Make sure she uses an appropriate infant formula
  - Prepare formula correctly and hygienically, and give adequate amounts (p. 18- 20).
  - Discard any feed that remains after two hours.

If the caregiver is using a bottle to feed the child

- Recommend a cup instead of a bottle. Show the caregiver how to feed the child with a cup (p. 18).

If the child is not being fed actively, counsel the caregiver to:

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

If the child is not being fed according to the Feeding Recommendations (p. 17) counsel the caregiver accordingly. In addition:

If the child above 6 months has a poor appetite, or is not feeding well during this illness, counsel the caregiver to:

- Breastfeed more frequently and for longer if possible.
- Use soft, varied, favourite foods to encourage the child to eat as much as possible.
- Give foods of a suitable consistency, not too thick or dry.
- Avoid buying sweets, chips and other snacks that replace healthy food.
- Offer small, frequent feeds. Try when the child is alert and happy, and give more food if he/she shows interest.
- Clear a blocked nose if it interferes with feeding.
- Offer soft foods that don't burn the mouth, if the child has mouth ulcers / sores e.g. eggs, mashed potatoes, sweet potatoes, pumpkin or avocado.
- Ensure that the spoon is the right size, food is within reach, child is actively fed, e.g. sits on caregiver's lap while eating.
- Expect the appetite to improve as the child gets better.

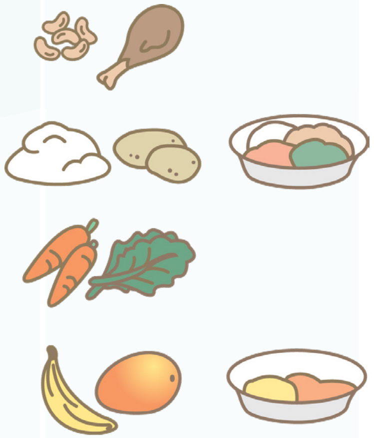
If there is no food available in the house:

- Help caregiver to get a Child Support Grant for any of her children who are eligible.
- Put her in touch with a Social Worker and local organisations that may assist.
- Encourage the caregiver to have or participate in a vegetable garden.
- Supply milk and enriched (energy dense) porridge from the Food Supplementation programme.
- Give caregiver appropriate local recipes for enriched (energy dense) porridge.

COUNSEL THE CAREGIVER OF CHILDREN WHO ARE OVERWEIGHT / OBESE :

- Avoid giving your child unhealthy foods like chips, sweets, sugar, and fizzy drinks.
- Give appropriate amount of food and milk (p 20,23.)
- Encourage on physical activity (p 21).

FEEDING RECOMMENDATIONS FROM 6 MONTHS

Your child's age	What foods to give	How much?
6 – 8 months	**Continue breastfeeding on demand. Breastfeed first, then give other foods.** Your baby needs iron-rich foods (dried beans, egg, minced meat, boneless fish, chicken or chicken livers, ground mopane worms). These foods must be cooked and mashed to make them soft and easy for your baby to swallow. Also, give your baby: • Starches (such as fortified maize meal porridge, mashed sweet potatoes or mashed potatoes) • Mashed, cooked vegetables (such as pumpkin, butternut, carrots) • Soft fruit without pips (such as avocado, bananas, paw-paw, cooked apples) Give your baby clean and safe water to drink from a cup, regularly	Start with 1 – 2 teaspoons, twice a day. Gradually increase the amount and frequency of feeds. 
9 – 11 months	**Continue breastfeeding on demand. Breastfeed first, then give other foods.** • Iron rich foods are very important for your baby's growth • Increase the amount and variety (different kinds) of foods. • Food doesn't need to be smooth as in the past months. • Give your child small pieces of foods they can hold (bananas, bread, cooked carrots) • Avoid small hard foods that may cause choking like peanuts. • Give your baby safe water to drink from a cup, regularly	• About a ¼ cup, then increase to half a cup by 12 months • 5 small meals a day 
12 months up to 5 years	**Continue breastfeeding as often as your child wants up to 2 years and beyond. Give food before breastmilk.** • Give a variety (different kinds) of foods (iron rich foods, starches, vegetables, fruits) • Give foods rich in vitamin A (liver, spinach, pumpkin, yellow sweet potatoes, mango, paw-paw, full cream milk, maas) • Give Vitamin C rich foods (oranges, naartjies, guavas, tomatoes) • Cut up foods in small pieces so that your child can eat on their own • Stay next to your child and encourage them to eat • If not breastfeeding, you can start giving pasteurized full cream cow's milk/maas or yoghurt. Follow up formula is not necessary • Give your child clean, safe water to drink from a cup, during the day	• About 1 full cup • 5 small meals a day (A child has a small stomach, so they will not eat enough to last many hours) 

Remember:

- From the age of 6 months, give your baby clean, safe-to-drink water from a cup during the day. Boil the water and cool before you give it to your child.
- Always stay next to your child when they are eating.
- Keep food and cooking utensils very clean to prevent diarrhoea.
- Always wash your hands and your child's hands with soap and water before preparing food, before eating, and after using the toilet and changing nappies.
- It's not necessary to buy baby food or baby cereals. Homemade foods are good.
- Don't give your child Rooibos tea or any other tea, coffee, creamers, condensed milk, flour water, sugar water, and cold drinks. These foods and drinks do not contain any nutrients and will not help your child to grow.
- Avoid giving your child unhealthy foods like chips, sweets, sugar and fizzy drinks.
- Infant formula increases risk of your baby getting diarrhoea, allergies, and breathing problems.

AGE 2 MONTHS **UP TO 5 YEARS**

ASSESS AND CLASSIFY THE SICK CHILD

- Do a rapid appraisal of all waiting children.
- Greet the caregiver
- ASK THE CAREGIVER WHAT THE CHILD'S PROBLEMS ARE.
- Determine if this is an initial or follow-up visit for this problem.
- If follow-up visit, use the follow-up instructions on pages 47 - 51.
- If initial visit, assess the child as follows:

ASSESS | CLASSIFY | TREATMENT

CHECK FOR GENERAL DANGER SIGNS

ASK	LOOK	CLASSIFY ALL CHILDREN		
• Is the child able to drink or breastfeed? • Does the child vomit everything? • Has the child had convulsions during this illness?	• Is the child lethargic or unconscious? • Is the child convulsing now?	Any general danger sign	**VERY SEVERE DISEASE**	• If child is unconscious or lethargic, give oxygen (p. 36) • Give diazepam if convulsing now (p. 35) • Test for low blood sugar, then treat or prevent (p. 35) • Give any pre-referral treatment immediately • Quickly complete the assessment • Keep the child warm • Refer urgently

A CHILD WITH ANY GENERAL DANGER SIGN NEEDS URGENT ATTENTION AND REFERRAL:
Quickly complete the assessment, give pre-referral treatment immediately and refer as soon as possible

DOES THE CHILD HAVE A COUGH OR DIFFICULT BREATHING?

THEN ASK ABOUT **MAIN SYMPTOMS**

IF YES, ASK:	LOOK, LISTEN, FEEL:
• For how long?	• Count the breaths in one minute. • Look for chest indrawing. (Child must be calm) • Look and listen for stridor or wheeze. (Child must be calm) • If the pulse oximeter is available then determine oxygen saturation

AND IF WHEEZE, ASK:

- Has the child had a wheeze before this illness?
- Does the child frequently cough at night?
- Has the child had a wheeze for more than 7 days?
- Is the child on treatment for asthma at present?

FAST BREATHING

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

CLASSIFY COUGH OR DIFFICULT BREATHING

Signs	Classify as	Treatment
• Any general danger sign **OR** • Chest indrawing **OR** • Stridor in calm child **OR** • Oxygen saturation less than 90% in room air	**SEVERE PNEUMONIA OR VERY SEVERE DISEASE**	• Give oxygen (p. 36) • If wheezing, give salbutamol by inhaler or nebuliser (p. 36) Reassess after 15 minutes, and reclassify for COUGH OR DIFFICULT BREATHING. • If stridor: give nebulised adrenaline and prednisone (p. 36) • Give first dose of ceftriaxone IM (p. 35) • Give first dose cotrimoxazole (p. 38) • Test for low blood sugar, then treat or prevent (p. 35) • Keep child warm (p.11), and refer URGENTLY
• Fast breathing	**PNEUMONIA**	• If wheezing, give salbutamol by inhaler or nebuliser (p. 36) Reassess after 15 minutes, and reclassify for COUGH OR DIFFICULT BREATHING. • Give amoxicillin for 5 days (p. 37) • If coughing for more than 14 days, assess for TB (p. 33) • Soothe the throat and relieve the cough (p. 44) • Advise caregiver when to return immediately (p. 45) • Follow-up in 2 days (p. 47)
• No signs of pneumonia or very severe disease	**COUGH OR COLD**	• If coughing for more than 14 days, assess for TB (p. 33) • Soothe the throat and relieve cough (p. 44) • Advise caregiver when to return immediately (p. 45) • Follow up in 5 days if not improving (p. 47)

AND IF WHEEZE CLASSIFY

Signs	Classify as	Treatment
• Yes to any question	**RECURRENT WHEEZE**	• **Give salbutamol and prednisone if referring for a severe classification (p. 36)** • Give salbutamol via spacer for 5 days
• All other children with wheeze	**WHEEZE (FIRST EPISODE)**	• **Give salbutamol if referring for a severe classification (p. 36)** • Give salbutamol via spacer for 5 days (p. 40) • Follow-up in 5 days if still wheezing (p. 47)

DOES THE THE CHILD HAVE DIARRHOEA?

ASK	LOOK, LISTEN, FEEL

• For how long?
• Is there blood in the stool?
	• Look at the young infant's general condition. Is the infant:
	  • Lethargic or unconscious?
	  • Restless and irritable?
	• Look for sunken eyes.
	• Pinch the skin of the abdomen. Does it go back:
	  • Very slowly (> 2 seconds)?
	  • Slowly?

CLASSIFY DIARRHOEA

FOR DEHYDRATION

Signs	Classify	Treatment
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**	• Start treatment for severe dehydration (Plan C, p. 43) • Refer URGENTLY • Prevent and treat low blood glucose (p. 35) • Give frequent sips of ORS on the way • Advise the caregiver to continue breastfeeding when possible
Two of the following signs: • Restless, irritable. • Sunken eyes. • Drinks eagerly, thirsty. • Skin pinch goes back slowly.	**SOME DEHYDRATION**	• Give fluids to treat for some dehydration (Plan B, p. 42) • Advise caregiver to continue breastfeeding and feeding • Give zinc for 2 weeks (p. 41) • Follow-up in 2 days (p. 47) • Advise the caregiver when to return immediately (p. 45)
• Not enough signs to classify as severe or some dehydra-tion.	**NO VISIBLE DEHYDRATION**	• Give fluid and food for diarrhoea at home (Plan A, p. 42) • Advise caregiver when to return immediately (p. 45) • Give zinc for 2 weeks (p. 41) • Follow up in 5 days if not improving (p. 47)

AND DIARRHOEA 14 DAYS OR MORE

Signs	Classify	Treatment
• Dehydration present **OR** • Losing weight	**SEVERE PERSISTENT DIARRHOEA**	• Start treatment for dehydration • Refer URGENTLY • Give frequent sips of ORS on the way • Give additional dose of Vitamin A (p. 34)
• No visible dehydration.	**PERSISTENT DIARRHOEA**	• Counsel the caregiver about feeding (p. 18 - 24) • Give additional dose of Vitamin A (p. 34) • Give zinc for 2 weeks (p. 41) • Follow-up in 5 days (p. 47) • Advise the caregiver when to return immediately (p. 45)

AND IF BLOOD IN STOOL

Signs	Classify	Treatment
• Dehydration present **OR** • Age less than 12 months	**SEVERE DYSENTERY**	• Refer URGENTLY • Keep child warm (p. 11) • Test for low blood sugar, then treat or prevent (p. 35)
• Age 12 months or more **AND** • No dehydration	**DYSENTERY**	• Treat for 3 days with ciprofloxacin (p. 37) • Advise when to return immediately (p. 45) • Follow-up in 2 days (p. 47)

DOES THE **CHILD HAVE FEVER?**

By history, by feel, or axillary temp is 37.5° C or above

IF YES, DECIDE THE CHILD'S MALARIA RISK:

- Malaria Risk means: Lives in malaria zone or visited a malaria zone during the past 4 weeks. If in doubt, classify for malaria risk.

ASK:	LOOK AND FEEL:
• For how long?	• stiff neck • bulging fontanelle

AND IF MALARIA RISK:

- Do a rapid malaria test

IF MALARIA TEST NOT AVAILABLE:

- Look for a cold with runny nose
- Look for another adequate cause of fever

CONSIDER MEASLES IF:

- Generalized rash with any of the following:
- Runny nose, **OR**
- Red eyes, **OR**
- Cough

Use the Measles chart (p. 28)

CLASSIFY FEVER

FOR SUSPECTED MENINGITIS

Signs	Classify	Treatment
• Any general danger sign **OR** • Stiff neck or bulging fonta-nelle.	SUSPECTED MENINGITIS	• Give first dose of ceftriaxone IM (p. 35) • Test for low blood sugar, then treat or prevent (p. 35) • Give one dose of paracetamol for fever 38°C or above (p. 40) • Refer URGENTLY
• None of the above signs.	FEVER OTHER CAUSE	• Give paracetamol for fever 38°C or above (p. 40) • If fever present for more than 7 days, consider TB (p. 33) • Treat for other causes • Advise caregiver when to return immediately (p. 45) • Follow-up in 2 days if fever persists (p. 49)

AND IF MALARIA RISK

Signs	Classify	Treatment
• Any general danger sign **OR** • Stiff neck or bulging fonta-nelle.	SUSPECTED SEVERE MALARIA	• If Malaria test positive and child older then 12 months, treat for Malaria (p. 40) • Treat for SUSPECTED MENINGITIS • Test for low blood sugar, then treat or prevent (p. 35) • Give one dose of paracetamol for fever 35°C or above (p. 40) • Refer URGENTLY
• Malaria test positive.	MALARIA	• **If age less than 12 months, refer URGENTLY** • If older than 12 months, treat for malaria (p. 40) • Give paracetamol for fever 38°C or above (p. 40) • Advise caregiver when to return immediately (p. 45) • Notify confirmed malaria cases • Follow-up in 2 days if fever persists (p. 49)
• Malaria test not done and PNEUMONIA **OR** • Malaria test not done and no other adequate cause of fever found.	SUSPECTED MALARIA	• Refer child to facility where Malaria Rapid Test can be done • Give paracetamol for fever 38°C or above (p. 40) • If fever present for more than 7 days, assess for TB (p. 33)
• Malaria test negative. **OR** • Malaria test not done and a cold with runny nose, or other adequate cause of fever found.	FEVER OTHER CAUSE	• Give paracetamol for fever 38°C or above (p. 40) • If fever present for more than 7 days, assess for TB (p. 33) • Treat for other causes • Advise caregiver when to return immediately (p. 45) • Follow-up in 2 days if fever persists (p. 49)

MEASLES

Use this chart if the child has Fever and Generalised rash WITH Runny nose or Cough or Red eyes

ASK:	LOOK:
• Has the child been in contact with anyone with measles?	• Look for mouth ulcers. • Are they deep and extensive? • Look for pus draining from the eye. • Look for clouding of the cornea.

TEST FOR MEASLES

- Take 5 mls of blood for serology and a throat swab for viral isolation
- Send blood specimen on ice—consult EPI co-ordinator or EPI guidelines for details
- Send the throat swab in a packed labeled viral transport tube ensuring that the swab is immersed in the sponge containing the viral transport medium
- Specimens should be collected as soon after onset of rash as possible.

NOTE:
IF FEVER IS STILL PRESENT AFTER THE THIRD DAY OF THE RASH, A COMPLICATION SHOULD BE SUSPECTED.

CLASSIFY FOR MEASLES

Signs	Classify as	Treatment
• Any general danger sign **OR** • PNEUMONIA **OR** • Symptomatic HIV infection **OR** • Clouding of cornea. **OR** • Deep or extensive mouth ulcers.	**SUSPECTED COMPLICATED MEASLES**	• Give additional dose Vitamin A (p. 34) • If clouding of the cornea or pus draining from the eye, apply chloramphenicol eye ointment (p. 44) • Give first dose of amoxicillin (p. 37) unless child is receiving IM ceftriaxone for another reason. • **REFER URGENTLY** • Immunise all close contacts within 72 hours of exposure (a close contact is defined as who has been in the same room or vehicle as the child with measles)
• Measles symptoms present **AND** • Measles test positive.	**MEASLES**	• Give additional doses Vitamin A (p. 34) • If pus draining from the eye, treat eye infection with chloramphenicol eye ointment for 7 days (p. 44) • If mouth ulcers, treat with chlorhexidine (p. 44) • Notify EPI coordinator, and complete necessary forms • Isolate the child from other children for 5 days • Immunise all close contacts within 72 hours of exposure (a close contact is defined as who has been in the same room or vehicle as the child with measles) • Follow up in 2 days (p. 49)
• Measles test results not available **AND** • Measles symptoms present	**SUSPECTED MEASLES**	• Give additional doses Vitamin A (p. 34) • Notify EPI coordinator, and complete necessary forms • Take specimens as advised by EPI coordinator, and send these to the NICD. • Isolate the child from other children for 5 days • Immunise all close contacts within 72 hours of exposure (a close contact is defined as who has been in the same room or vehicle as the child with measles) • Follow up in 2 days (p. 49)

DOES THE **CHILD HAVE AN EAR PROBLEM?**

IF YES, ASK:	LOOK AND FEEL:
• Is there ear pain? • Does it wake the child at night? • Is there ear discharge? • If yes, for how long?	• Look for mouth ulcers. • Are they deep and extensive? • Look for pus draining from the eye. • Look for clouding of the cornea.

CLASSIFY EAR PROBLEM

Signs	Classification	Treatment
• Tender swelling behind the ear.	MASTOIDITIS	• **Give ceftriaxone IM (p. 35)** • **Give first dose of paracetamol (p. 40)** • **Refer URGENTLY**
• Pus seen draining from the ear and discharge is reported for less than 14 days. **OR** • Ear pain which wakes the child at night	ACUTE EAR INFECTION	• Give amoxicillin for 5 days (p. 37) • If ear discharge: Teach caregiver to clean ear by dry wicking (p. 44) • Give paracetamol for pain (p. 40). Give for rwo days. • Follow-up in 5 days if pain or discharge persists (p. 49) • Follow-up in 14 days (p. 49)
• Pus is seen draining from the ear. **AND** • Discharge is reported for 14 days or more.	CHRONIC EAR INFECTION	• Teach caregiver to clean ear by dry wicking (p. 44) • Then instil recommended ear drops, if available (p. 44) • Tell the caregiver to come back if she suspects hearing loss • Follow up in 14 days (p. 49)
• No ear pain or ear pain which does not wake the child at night. **AND** • No pus seen draining from the ear.	NO EAR INFECTION	• No additional treatment

If the child is three years old or older ASK: Does the child have a sore throat?

IF YES, ASK:	LOOK AND FEEL:
• Does the child have a runny nose? • Does the child have a FEVER? • Does the child have a cough?	• Look for a rash • Conjunctivitis

CLASSIFY SORE THROAT

Signs	Classification	Treatment
• **Sore throat with:** • No runny nose • No cough • No rash • No conjunctivitis	POSSIBLE STREPTOCOCCAL INFECTION	• Give penicillin (p. 36) • Treat pain and fever (p. 43) • Soothe the throat with a safe remedy (p. 44) • Follow-up in 5 days if symptoms worse or not resolving (p. 49)
• **Sore throat with one of:** • Runny nose • Cough • Rash • Conjunctivitis	SORE THROAT	• Soothe the throat with a safe remedy (p. 44)

THEN CHECK **ALL CHILDREN FOR MALNUTRITION**

LOOK AND FEEL:

- Look for mouth ulcers.
- Are they deep and extensive? Weigh the child and plot the child's Weight-for-Age in the RTHB.
- Look at the shape of the child's weight curve. Does it show weight loss, unsatisfactory weight gain or satisfactory weight gain?
- If the child is 6 months or older measure the child's Mid-Upper Arm Circumference (MUAC) and record in the child's RTHB.
- If the child's weight for age chart shows a prob-lem it is important to also measure and record their length/height for age and weight for length/ height in the child's RtHB to check for stunting and wasting, respectively.
- Look for oedema of both feet.
- Conduct an Appetite Test if indicated (p. 20)

* MUAC is Mid-Upper Arm Circumference which should measured in all children 6 months or older using a MUAC tape.

** Growth curve flattening/ decreasing is defined by changes on the growth curve over a 2-3 month period.

CLASSIFY ALL CHILDREN'S NUTRITIONAL STATUS

One or more of the following • Oedema of both feet. • Weight for length/ height Z-score less than - 3 **OR** MUAC less than 11.5cm **AND** **One or more of the following:** • Any danger sign • Any other RED or YELLOW classification • Weighs 4 kg or less • Less than six months of age • If fails appetie test (p. 20)	**SEVERE ACUTE MALNUTRITION WITH MEDICAL COMPLICATION**	• **Test for low blood sugar, then prevent (p. 35)** • **Keep the child warm (p. 11)** • **Give antibiotic. If indicated for another classification, give ceftriaxone (p. 35). Otherwise give first dose of amoxicillin (p. 37)** • **Give stabilizsng feed or F75 (p. 35)** • **Give dose of Vitamin A (p. 34)** • **Refer URGENTLY**
• Weight for length/ Height Z-score < - 3 **OR** • MUAC ≤ 11.5 cm **AND** • No oedema of both feet • Six months or older • Weighs 4 kg or more • No other RED or YELLOW classification	**ACUTE MALNUTRITION WITHOUT MEDICAL COMPLICA-TION**	• Give amoxicillin for 5 days (p. 37) • Give dose of Vitamin A (p. 34) and treat for worms if due (p. 34) • Assess the child's feeding and counsel the caregiver on the feeding recommendations (p. 16 - 23) • Assess for possible HIV & TB infection (p. 32 & 33) • Provide RUTF or other supplements according to local guidelines (p. 41) • Advise caregiver when to return immediately (p. 45) • Make sure that the has a birth certificate, and is receiving a child support grant if eligible. • Refer to other available services if indicated (CHW, social worker, community based organisations) • Follow up in 7 days (p. 48)
• Weight for length/ height be-tween -3 and –2 z-score **OR** MUAC from 11.5 cm to 12.5cm • No oedema of both feet	**MODERATE ACUTE MALNUTRITION**	• Give dose of Vitamin A (p. 34) and treat for worms if due (p. 34) • Assess the child's feeding and counsel the caregiver on the feeding recommendations (p. 16 - 23) • Assess for possible HIV & TB infection (p. 32 & 33) • Provide RUTF or other supplements according to local guidelines (p. 41) • Advise caregiver when to return immediately (p. 45) • Make sure that the has a birth certificate, and is receiving a child support grant if eligible. • Refer to other available services if indicated (CHW, social worker, community based organisations) • Follow up in 7 days (p. 48)
• Losing weight **OR** • Weight gain unsatisfactory **OR** • Low or very low weight **OR** • Low length for age (children below 24 months)	**NOT GROWING WELL**	• Assess the child's feeding and counsel the caregiver on the feeding recom-mendations (p. 16 - 23) • Assess for possible HIV & TB infection (p. 32 & 33) • Treat for worms and give Vitamin A if due (p. 34) • Make sure that the has a birth certificate, and is receiving a child support grant if eligible. Refer to other available services if indicated (CHW, social worker, community based organisations) • Advise caregiver when to return immediately (p.45) • If feeding problem follow up in 7 days (p. 48) • If no feeding problem, follow-up after 14 days (p. 48)
• Weight for length/ height greater than +2 z-score	**OVERWEIGHT / OBESE**	• Assess feeding, and counsel caregiver(p. 23) • Provide dietary counseling (p. 22) • Encouraging healthy eating habits for entire family (p. 23) • Provide advice on physical activity (p. 21).
• Weight normal **AND** • Weight gain satisfactory **AND** • Weight for length/ height –2 z-score or more **OR** MUAC 12..5 cm or more	**GROWING WELL**	• Praise the caregiver • If the child is less than 2 years old, assess feeding and counsel the caregiver on feeding according to the feeding recommendations (p. 18 - 20) • If feeding problem, follow up in 7 days (p. 48)

THEN CHECK ALL CHILDREN FOR ANAEMIA

LOOK:

- Look for palmar pallor. Is there:
- Severe palmar pallor?
- Some palmar pallor?
- If any pallor, check haemoglobin (Hb) level.

NOTE:

- DO NOT give Iron if the child is receiving RUTF. Small amounts are available in RUTF.
- Iron is extremely toxic in overdose, particularly in children All medication should be stored out of reach of children.

CLASSIFY ALL CHILDREN FOR ANAEMIA

Signs	Classification	Treatment
• Severe palmar pallor **OR** • HB < 7g/dl	**SEVERE ANAEMIA**	• **Refer URGENTLY**
• Some palmar pallor • OR • Hb 7 g/dl up to 11 g/dl.	**ANAEMIA**	• Give iron (p. 41) and counsel on iron-rich foods . • Assess feeding and counsel regarding any feeding problems (p. 17 - 23) • Treat for worms if due (p. 34) • Advise caregiver when to return immediately (p. 45) • Follow-up in 14 days (p. 48)
• No pallor.	**NO ANAEMIA**	• If child is less than 2 years, assess feeding and counsel (p. 17 - 20)

THEN CHECK **ALL CHILDREN FOR HIV INFECTION**

Has the child been tested for HIV infection?

IF YES, ASK:

- What was the result?
- If the test was positive, is the child on ART?
- If the test was negative, was the child still breastfeeding at the time that the test was done, or had the child been breastfed in the 6 weeks before the test was done? Is the child still breastfeeding?

HIV TESTING IN CHILDREN:

- All HIV-exposed infants should have been tested at birth. Ensure you obtain the result.
- If the test was negative, re-test:
  - At 10 weeks of age— all HIV-exposed infants.
  - At 6 months of age— all HIV-exposed infants.
  - If the child is ill or has features of HIV infection
  - 6 weeks after stopping breastfeeding.
  - Universal HIV rapid test at 18 months for all infants, regardless of HIV exposure.

Below 18 months of age, use an HIV PCR test as the first HIV test. If HIV PCR is positive, do a second HIV PCR test to confirm the child's status.

Between 18 months and 2 years, use an HIV antibody (rapid) test as the first HIV test, but an HIV PCR to confirm the child's HIV status. HIV PCR should be used to confirm any positive HIV test up to 2 years.

2 years and older, use an HIV antibody (rapid) test as the firsts HIV test. If positive, use a confirmatory HIV antibody (rapid) test kit. If the confirmatory test is positive, this confirms HIV infection. If the second test is negative, refer for ELISA test and assessment.

CLASSIFY FOR HIV INFECTION IN THE CHILD

Signs	Classify as	Treatment
• Positive HIV test in child. **OR** • Child on ART	HIV INFECTION	• Follow the six steps for initiation of ART (p. 52). • Give cotrimoxazole prophylaxis from 6 weeks (p. 38). • Ask about the caregiver's health and manage appropriately. • Provide long term follow-up (p. 57).
• Infant is receiving ARV prophylaxis	HIV-EXPOSED: ON ARV PROPHYLAXIS	• Complete appropriate ARV prophylaxis (p. 12). • Give cotrimoxazole prophylaxis from 6 weeks (p. 38). • Repeat PCR test according to testing schedule. Reclassify on the basis of the test result. • Ask about the caregiver's health, and ensure that she is receiving the necessary care and treatment. • Provide follow-up care (p. 50)
• Negative HIV test **AND** • Child still breastfeeding or stopped breastfeeding < 6 weeks before the test.	ONGOING HIV EXPOSURE	• Complete appropriate infant ARV prophylaxis (p. 12) • Give cotrimoxazole prophylaxis from 6 weeks (p. 38) • Repeat HIV testing when indicated. Reclassify the child based on the test result. • Provide follow-up care (p. 50)
• Negative HIV test. **AND** • All breastfeeding stopped ≥6 weeks before the test.	HIV-NEGATIVE	• Stop cotrimoxazole. • Consider other causes if child has features of HIV infec-tion (repeat HIV test if indicated).

ASK:

- What was the result?
- If the test was positive, is the child on ART?
- If the test was negative, was the child still breastfeeding at the time that the test was done, or had the child been breastfed in the 6 weeks before the test was done? Is the child still breastfeeding?

CLASSIFY FOR HIV INFECTION

Signs	Classify as	Treatment
• 3 or more features of HIV infection.	SUSPECTED SYMPTOMATIC HIV INFECTION	• Give cotrimoxazole prophylaxis (p. 38) • Counsel and offer HIV testing for the child. Reclassify the child on the basis of the test result. • Counsel the caregiver about her health, offer HIV testing (if mother tests HIV positive: offer same-day initiation). • Provide long-term follow-up (p. 50).
• Mother HIV-positive	HIV-EXPOSED	• Give infant ARV prophylaxis (p.14) • Give cotrimoxazole prophylaxis (p. 38) • Counsel and offer HIV testing for the child. Reclassify based on the test result. • Counsel the caregiver about her health, and provide treatment as necessary. • If mother is not on ART: start ART immediately. • If mother is on ART: check the mother's VL and if suppressed repeat VL every 6 months while breastfeeding. • Provide long-term follow-up (p. 50).
• One or two features of HIV infection	POSSIBLE HIV INFECTION	• Provide routine care including HIV testing for the child. • Counsel the caregiver about her health, offer HIV testing and treat-ment as necessary. • Reclassify the child based on the test results.
• No features of HIV infection	HIV INFECTION UNLIKELY	• Provide routine care including HIV testing for the child and caregiver. (If mother is HIV negative, retest at the 10 week visit, 6 month visit and every 3 months while breastfeeding),

FEATURES OF HIV INFECTION

ASK:

- Does the child have PNEUMONIA now?
- Is there PERSISTENT DIARRHOEA, now or in the past 3 months?
- Has the child ever had ear discharge?
- Is there low weight?
- Has weight gain been unsatisfactory?

LOOK and FEEL:

- Any enlarged lymph glands in two or more of the following sites - neck, axilla or groin?
- Is there oral thrush?
- Is there parotid enlargement?

CLASSIFY ALL **CHILDREN FOR TB RISK**

ASK

- Any history of TB contact in the past twelve months?
- Screening questions
- Cough for more than two weeks?
- Fever for more than seven days?
- NOT GROWING WELL?

CLASSIFY FOR TB RISK

FULL TB ASSESSMENT

STEP 1: ASK ABOUT FEATURES OF TB:

- Persistent, non-remitting cough or wheeze for more than 2 weeks.
- Documented loss of weight or unsatisfactory weight gain during the past 3 months (especially if not responding to deworming together with food and/or micronutrient supplementation).
- Fatigue/reduced playfulness.
- Fever every day for 14 days or more.

STEP 2: SEND SPUTUM OR GASTRIC ASPIRATE FOR EXPERT AND CULTURE

STEP 3: DO A TST

STEP 4: IF AVAILABLE DO OR SEND CHILD FOR A CXR

• A close TB contact. **AND** • Answers YES to any of screening questions	**HIGH RISK OF TB**	• Do Full TB assessment • Follow-up after 48 to 72 hours to read TST • Follow-up after one week and classify child's TB status on the next chart.
• Answers YES to one or more screening questions	**RISK OF TB**	• Do Full TB assessment • Follow-up after 48 to 72 hours to read TST • Follow-up after one week and classify child's TB status on the next chart
• A close TB contact **AND** • No features of TB	**TB EXPOSED**	• Treat with INH for 6 months (p. 38) • If CXR available send for CXR. If CXR abnormal, refer for assessment • Trace other contacts • Follow-up monthly (p. 51)
• No close TB contact **AND** • No features of TB	**LOW RISK OF TB**	• Routine care

THEN CLASSIFY **FOR TB**

ASK ABOUT FEATURES OF TB:

REVIEW RESULTS OF SPUTUM/GASTRIC ASPIRATE:
Are they positive or negative?

IS THE TST POSIITIVE OR NEGATIVE?
Check the Tuberculin Skin Test - if it measures more than 10 mm (or 5 mm in an HIV infected child) it is positive.

REVIEW RESULTS OF CXR:
Is it suggestive of TB?

CLASSIFY FOR TB RISK

• TB culture or Expert positive **OR** • Referred with diagnosis of TB	**CONFIRMED TB**	• Notify and Register in TB register • Treat for TB (p. 39) • Trace contacts and manage according to TB guidelines • Counsel and test for HIV if HIV status unknown (p. 32) • Follow-up monthly to review progress (p. 51)
• Two or more features of TB present **AND** • Close TB contact or TST positive	**PROBABLE TB**	• If CXR available, refer for CXR and further assessment • If CXR not available, treat for TB (p. 39) • Notify and register in TB register • Trace contacts and manage according to TB guidelines • Counsel and test for HIV if HIV status unknown • Follow-up monthly to review progress (p. 51) • Reclassify if necessary once results of Expert or culture available.
• One or more feature of TB persist, but Expert is negative and CXR not suggestive of TB	**POSSIBLE TB**	• Counsel and test for HIV if HIV status unknown • Consult the National TB guidelines or refer for further assessment
• No features of TB present **AND** • Close TB contact or TST posi-tive	**TB EXPOSED**	• Treat with INH for 6 months (p. 38) • If CXR available send for CXR. If CXR abnormal, refer for assessment • Trace other contacts • Follow-up monthly (p. 51)
• No close TB contact **AND** • No features of TB present	**TB UNLIKELY**	• Routine follow-up

NOTE:

* A close TB contact is an adult who has had pulmonary TB in the last 12 months, who lives in the same household as the child, or some-one with whom the child is in close contact or in contact for extended periods. If in doubt, discuss the case with an expert or refer the child.

Chest X-rays can assist in making the diagnosis of TB in children. Decisions as to how they are used in your area should be based on the availability of expertise for taking and interpreting good quality Xrays in children. Follow local guidelines in this regard. Although it is advisable that all children should have a CXR before TB treatment is commenced, where good quality CXR are not available, do not delay treatment.

If you are unsure about the diagnosis of TB, refer the child for assessment and investigation.

THEN CHECK THE CHILD'S IMMUNISATION STATUS **AND GIVE ROUTINE TREATMENTS**

IMMUNISATION SCHEDULE:

BIRTH	**BCG**	**OPV0**	**HepB0**		
6 weeks	Hexavalent1 (DaPT-IPV-HB-Hib1)	OPV1		PCV1	RV1
10 weeks	Hexavalent2 (DaPT-IPV-HB-Hib2)				
14 weeks	Hexavalent3 (DaPT-IPV-HB-Hib3)			PCV2	RV2
6 months			Measles1		
9 months				PCV3	
12 months			Measles2		
18 months	Hexavalent4 (DaPT-IPV-HB-Hib4)				
6 years	Td				
12 years	Td				

- Give all missed immunisations on this visit (observing contraindications).
- This includes sick children and those without a RTHB.
- If the child has no RTHB, give a new one today.
- Advise caregiver when to return for the next immunisation.
- Give routine Vitamin A (p. 34) and record on the RTHB.
- Give routine treatment for worms (p. 34) and record on the RTHB.
- Refer to the EPI Vaccinators Manual or EDL for catch up schedule and contraindications
- Make sure that the child has a birth certificate . If not, refer to Home Affairs or to social worker.
- Make sure that eligible children are receiving a child support grant. If not refer to SASSA or social worker.

ASSESS ANY OTHER PROBLEM e.g. Skin rash or infection, eye INFECTION

CHECK THE **CAREGIVER'S HEALTH**

GIVE VITAMIN A

- Give Vitamin A routinely to all children from the age of 6 months to prevent severe illness (prophylaxis).
- If the child has had a dose of Vitamin A in the past 30 days, defer Vitamin A until 30 days has elapsed.
- Vitamin A is not contraindicated if the child is on multivitamin treatment.
- Vitamin A capsules come in 100 000 IU and 200 000 IU.
- Record the date Vitamin A given on the RTHB.

ROUTINE VITAMIN A*

Age	Vitamin A dose
6 up to 12 months	A single dose of 100 000 IU at age 6 months or up to 12 months
1 up to 5 years	A single dose of 200 000 IU at 12 months, then a dose of 200 000 IU every 6 months up to 5 years

ADDITIONAL DOSE FOR SEVERE MALNUTRITION, PERSISTENT DIARRHOEA, MEASLES OR XEROPHTHALMIA

- Give therapeutic (non-routine) dose of Vitamin A if the child has severe acute malnutrition, persistent diarrhoea, measles or xerophthalmia (dry eyes).
- If the child has measles or xerophthalmia (dry eyes), give caregiver a second dose to take the next day.

Age	Vitamin A Additional dose
< 6 months	50 000IU
6 up to 12 months	100 000 IU
1 up to 5 years	200 000 IU

GIVE MEBENDAZOLE OR ALBENDAZOLE

- Children older than one year of age should receive routine deworming treatment every 6 months.
- Give Mebendazole or Albendazole.
- Give single dose (or first dose of) in the clinic.
- Record the dose in the child's RtHB.

Age	MEBENDAZOLE		
	Suspension (100 mg per 5 ml)	Tablet (100 mg)	Tablet (500 mg)
12 up to 24 months	5 ml twice daily for 3 days	One tablet twice daily for 3 days	
2 up to 5 years	25 ml as single dose	Five tablets as single dose	One tablet as single dose

Age	ALBENDAZOLE	
	Tablet (200 mg)	Tablet (100 mg)
12 up to 24 months	One tablet as single dose	
2 up to 5 years		One tablet as single dose

GIVE THESE TREATMENTS **IN THE CLINIC ONLY**

- Explain to the caregiver why the medicine is given.
- Determine the dose appropriate for the child's weight (or age).
- Measure the dose accurately.

PREVENT LOW BLOOD SUGAR (HYPOGLYCAEMIA)

- **If the child is able to swallow:**
  - If breastfed: ask the mother to breastfeed the child, or give expressed breastmilk.
  - If not breastfed: give a breastmilk substitute or sugar water. Give 30 - 50 ml of milk or sugar water before the child leaves the facility.
  - To make sugar
- **If the child is not able to swallow:**
  - Insert nasogastric tube and check the position of the tube.

TREAT FOR LOW BLOOD SUGAR (HYPOGLYCAEMIA)

Low blood sugar < 3 mmol/L in a child

- **Suspect low blood sugar in any infant or child that:**
  - is convulsing, unconscious or lethargic; OR
  - has a temperature below 35°C.
- **Children with severe malnutrition are particularly likely to be hypoglycaemic.**
- **Confirm low blood sugar using blood glucose testing strips.**
- **Treat with:**
  - 10% Glucose - 5 ml for every kg body weight - by nasogastric tube OR intravenous line.
  - Keep warm.
  - Refer urgently and continue feeds during transfer.
- **If neonatalyte not available add 1 part 50% dextrose water to 4 parts water to make 10% solution .**

TREAT FOR LOW BLOOD SUGAR (HYPOGLYCAEMIA)

- Encourage the caregiver to continue breastfeeding and giving F-75 during referral.
- Give one feed immediately. Repeat two hourly until the child reaches the hospital.
- Keep the child warm (p. 12)

WEIGHT	F - 75
3.0 - < 5 kg	60 ml
5 - < 8 kg	90 ml
≥ 8 kg	120 ml

GIVE DIAZEPAM TO STOP CONVULSIONS

- Turn the child to the side and clear the airway. Avoid putting things in the mouth.
- Give 0.5 mg per kg diazepam injection solution per rectum. Use a small syringe without a needle or a catheter.
- Test for low blood sugar, then treat or prevent.
- **Give oxygen (p. 36).**
- **REFER URGENTLY.**
- If convulsions have not stopped after 10 minutes, repeat the dose once while waiting for transport.

WEIGHT	Age	F - 75
3 - < 4 kg	0 up to 2 months	2 mg (0.4 ml)
4 - < 5 kg	2 up to 3 months	2.5 mg (0.5 ml)
5 - < 15 kg	3 up to 24 months	5 mg (1 ml)
15 - 25 kg	2 up to 5 years	7.5 mg (1.5 ml)

GIVE CEFTRIAXONE IM

- Wherever possible use the weight to calculate the dose.
- **Dilute 250 mg vial with 1 ml of sterile water, or 500 mg with 2 ml sterile water (250 mg per ml).**
- **Give the injection in the upper thigh, not the buttocks.**
- **IF REFERRAL IS NOT POSSIBLE OR DELAYED, repeat the ceftriaxone injection every 24 hours.**
- For children weighing more than 17.5 kg, dilute 1g in 3.5 ml sterile water, and give 5.5 ml IM.

WEIGHT	Age	F - 75
3.5 - < 7 kg	1 up to 3 months	312 mg (1.25 ml)
5.5 - < 7 kg	3 up to 6 months	440 mg (1.75 ml)
7 - < 9 kg	6 up to 12 months	625 mg (2.5 ml)
9 - < 11 kg	12 up to 18 months	750 mg (3 ml)
11 - < 14 kg	18 months up to 3 years	810 mg (3.25 ml)
14 - < 17.5 kg	3 up to 5 years	1g (4 ml)
Give 2 ml in each thigh	2 up to 5 years	7.5 mg (1.5 ml)
≥17.5 kg	5 years and older	See above

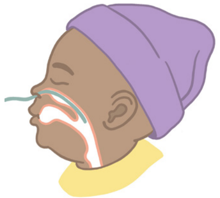
THEN CHECK THE CHILD'S IMMUNISATION STATUS
AND GIVE ROUTINE TREATMENTS

GIVE OXYGEN

- Give oxygen to all young infants with:
  - severe pneumonia, with or without wheeze
  - lethargy or if the child is unconscious
  - convulsions
- Use nasal prongs or a nasal cannula.

Nasal prongs

- Place the prongs just inside or below the baby's nostrils.
- prongs for term babies
- Secure the prongs with tape
- Oxygen should flow 1 - 2 litres per minute



Nasal cannula

- This method delivers a higher concentration of oxygen
- Insert a FG8 nasogastric tube.
- Measure the distance from the side of the nostril to the inner eyebrow margin with the catheter.
- Insert the catheter as shown in the diagramme.
- Secure with tape
- Turn on oxygen to flow of half to one a litre per minute

GIVE PREDNISONE FOR STRIDOR OR RECURRENT WHEEZE WITH SEVERE CLASSIFICATION

- Give one dose of prednisone as part of pre-referral treatment for STRIDOR or RECURRENT
- WHEEZE with severe classification.

WEIGHT	AGE	PREDNISONE 5 mg
Up to 8 kg	-	2 tabs
< 8 kg	Up to 2 years	4 tabs
	2 - 5 years	6 tabs

GIVE NEBULIZED ADRENALINE FOR STRIDOR

- Add 1 ml of 1:1000 adrenaline (one vial) to 1 ml of saline and administer using a nebulizer.
- Always use oxygen at flow-rate of 6 - 8 litres.
- Repeat every 15 minutes, until the child is transferred (or the stridor disappears)
- **Give one dose of prednisone as part of pre-referral treatment for stridor**

GIVE IM PENICILLIN FOR POSSIBLE STREPTOCOCCAL INFECTION
GIVE IM SINGLE DOSE OR ORAL TREATMENT TWICE DAILY (P. 37)

- **IM Penicillin is the treatment of choice (see below).**
- Give azithromycin if the child is allergic to penicillin (p. 37)
- Only give oral penicillin if the caregiver does not want the child to have an injection (p. 37).
- **Dilute 1.2 million units with 3 ml of sterile water or 3.2 ml of lidocaine 1% without adrenaline.**

WEIGHT	Age	BENZATHINE BENZYLPENICILLIN IM INJECTION	
		1.2mu in 3.2 ml lidocaine 1% without adrenaline	1.2mu in 3.2 ml lidocaine 1% without adrenaline
Up to 30 kg	3 up to 5 years	1.6 ml	1.5ml

GIVE SALBUTAMOL FOR WHEEZE WITH SEVERE CLASSIFICATION

SALBUTAMOL	
Nebulised salbutamol (2.5 ml nebule)	• Dilute 1ml in 3 ml saline. • Nebulise in the clinic. • Always use oxygen at flow rate of 6-8 litres. • If still wheezing repeat every 15 minutes in first hour and 2 - 4 hourly thereafter. • Add Ipratropium bromide 0.5 ml if available

OR

MDI - 100 ug per puff	• 4 - 8 puffs using a spacer. • Allow 4 breaths per puff. • If still wheez

TREAT THE SICK CHILD

Carry out the treatment steps identified on the assess and classify chart

TEACH THE CAREGIVER TO GIVE ORAL MEDICINES AT HOME

Follow the general instructions below for all oral medicines to be given at home

Also follow the instructions listed with the dosage table for each medicine

- Determine the appropriate medicines and dosage for the child's weight or age.
- Tell the caregiver the reason for giving the medicine to the child.
- Demonstrate how to measure a dose.
- Watch the caregiver practise measuring a dose by herself.
- Explain carefully how to give the medicine.
- Ask the caregiver to give the first dose to her child.
- Advise the caregiver to store the medicines safely.
- Explain that the course of treatment must be finished, even if the child is better.
- Check the caregiver's understanding before she leaves the clinic.

GIVE AMOXICILLIN* FOR PNEUMONIA, ACUTE EAR INFECTION OR SEVERE ACUTE MALNUTRITION WITHOUT MEDICAL COMPLICATIONS

- Give three times daily for 5 days.
- * If the child is allergic to penicillins, or amoxicillin is out of stock, use azithromycin

WEIGHT	Age	AMOXICILLIN		
		SUSP. 125 mg per 5 ml)	SUSP. (250 mg per 5 ml)	CAPSULE 250 mg
3.5 - 5 kg	2 up to 3 months	5 ml	2.5 ml	
5 - < 7 kg	3 up to 6 months	7 ml	3.5 ml	
7 - < 11 kg	6 up to 18 months	10 ml	5 ml	One
11 - < 17. 5 kg	18 months up to 5 years	15 ml	7.5 ml	
≥17.5 kg	> 5 years		10 ml	Two

GIVE AZITHROMYCIN IF ALLERGIC TO PENICILLIN

- Give azithromycin depending on the child's weight
- Give azithromycin once daily for three days only.

WEIGHT	Age	AZITHROMYCIN SUSPENSSION
		(200 mg per 5 ml)
< 7 kg	3 up to 6 months	
7 - < 9 kg	6 up to 12 months	80 mg (2 ml)
9 - < 11 kg	12 up to 18 months	100 mg (2.5 ml)
11 - < 14 kg	18 months up to 3 years	120 mg (3 ml)
14 - < 18 kg	3 up to 5 years	160 mg (4 ml)
≥ 18 kg	≥ 5 years	200 mg (5 ml)

GIVE CIPROFLOXACIN FOR DYSENTERY

- Give twice a day for 3 days

WEIGHT	Age	CIPROFLOXACIN SUSPENSION	CIPROFLOXACIN TABLET
		(250 mg per 5ml)	(250mg)
< 11 kg	12 up to 18 months	3ml	
11 - < 14 kg	18 months up to 3 years	4ml	
14 - < 17.5 kg	3 up to 5 years	5ml	One
17.5 - < 25 kg	3 up to 5 years	6ml	

GIVE PENICILLIN FOR POSSIBLE STREPTOCOCCAL INFECTION

- Give twice a day for 10 days
- The recommended treatment for POSSIBLE STREPTOCOOCAL INFECTION is IM Benzathine Benzylpenicillin (p. 36).
- Only give oral penicillin if the caregiver refuses an injection.
- If the child is allergic, use azithromycin instead.

WEIGHT	Age	PHENOXYMETHYL PENICILLIN	
		SUSPENSION (250 mg per 5ml)	TABLET (250 mg)
11 - < 35 kg	3 up to 5 years	5 ml	One tablet

TEACH THE CAREGIVER
TO GIVE ORAL MEDICINES AT HOME

INH FOR TB EXPOSURE
GIVE ONCE DAILY

- **Follow the general instructions for all oral medicines to be given at home.**
- Tablets can be crushed and dissolved in water if necessary
- Treatment must be given for 6 months.
- Follow-up children each month (p. 51) to check adherence and progress, and to provide medication.

WEIGHT	ISONIAZID (INH) 100 mg tablet
	Once daily
2 - < 3.5 kg	¼ tab
3.5 - < 7 kg	½ tab
7 - < 10 kg	1 tab
10 - < 15 kg	1½ tabs
15 - < 20 kg	2 tabs
20 - 25 kg	2½ tabs
≥ 25 kg	3 tabs

Preventative therapy in case of drug-resistant TB contact:

Isoniazid mono-resistant contact:
Rifampicin, oral, 15 mg/kg for 4 months

Rifampicin mono-resistant contact:
Isoniazid, oral, 10 mg/kg daily for 6 months (see table above)

GIVE COTRIMOXAZOLE
GIVE ONCE DAILY AS PROPHYLAXIS

- Give from 6 weeks to all HIV or exposed children unless child is HIV NEGATIVE.
- Continue cotrimoxazole until the child is shown to be HIV-uninfected **AND** has not been breastfed for the last 6 weeks.
- Give to all children with HIV INFECTION (criteria for stopping in children on ART are shown below).

INDICATIONS	WHEN TO START	WHEN TO STOP
HIV-exposed infants (< 1 year of age)	Start from 6 weeks after birth **OR** When identified as HIV-exposed	Stop when HIV-infection is excluded, i.e. PCR is neg-ative ≥ 6 weeks after cessation of breastfeeding.
HIV-infected infants (< 1 year of age)	From 6 weeks of age	Continue until 1 year of age, regardless of clinical stage and CD4 count.
HIV-positive children 1-5 years of age.	All symptomatic children: WHO clinical stage 2, 3 or 4 **OR** CD4 <25% / CD4 <500 cells/µl.	Stop if clinically well on ART and CD4 ≥25% or ≥500 cells/µl on ≥2 occasions 3-6 months apart. Recommence if CD4 drops <200 cells/µl, if ART fails or if new opportunistic infection develops.
HIV-positive children ≥ 5 years of age, adolescents and adults.	Start if CD4 <200 cell/µl **OR** Clinical stage 3 or 4 disease (including TB).	Stop if clinically well on ART and CD4 ≥200 cells/µl on ≥2 occasions 3-6 months apart. Recommence if CD4 drops below 200 cells/µl.

WEIGHT	COTRIMOXAZOLE SYRUP	COTRIMOXAZOLE TABLET	
	(200/40 mg per 5 ml)	400/80 mg	800/160 mg
2.5 - < 5 kg	2.5 ml	¼ tablet	
5 - < 14 kg	5 ml	½ tablet	
14 - < 30 kg	10 ml	1 tablet	½ tablet
≥ 30 kg		2 tablets	1 tablet

TEACH THE CAREGIVER **TO GIVE ORAL MEDICINES AT HOME**

- Follow the general instructions for all oral medicines to be given at home.
- Also follow the instructions listed with the dosage table of each medicine.
- Do not change the regimen of children referred from hospital or a TB clinic without discussing this with an exvpert
- Treatment should be given as Directly Observed Treatment (DOT) 7 days a week.
- Follow-up children each month (p. 51) to check adherence and progress.

GIVE REGIMEN 3A FOR UNCOMPLICATED TB

- Uncomplicated TB includes low bacilliary load TB disease such as pulmonary TB with minimal lung parenchymal involvement (with or without involvement of hilar nodes), TB lymphadenitis and TB pleural effusion.
- Any child with a positive Xpert or culture result must be treated with Regiment 3B.
- All children should receive Rifampicin/INH (RH) together with pyrazinamide (PZA) for two months followed by RH for a further four months.
- For small infants dissolve one dispersible PZA tablet (150 mg) in 3 ml of water.
- Add Pyridoxine 12.5mg daily for 6 months if the child is HIV positive or malnourished

REGIMEN 3A	INTENSIVE PHASE TWO MONTHS Once daily				CONTINUATION PHASE FOUR MONTHS Once daily
WEIGHT	**RH (60mg/60)mg**	**PZA (500mg)**	**OR**	**PZA** 150 mg/3 ml**	**RH (60mg/60mg)**
2 - < 3 kg	½ tab	EXPERT ADVICE ON DOSE		1.5 ml	½ tab
3 - < 4 kg	¾ tab	¼ tab		2.5 ml	¾ tab
4 - < 6 kg	1 tab	¼ tab		3 ml	1 tab
6 - < 8 kg	1½ tab	½ tab			1½ tabs
8 - < 12 kg	2 tabs	½ tab			2 tabs
12 - < 15 kg	3 tabs	1 tab			3 tabs
15 - < 20 kg	3½ tabs	1 tab			3½ tabs
20 - < 25 kg	4½ tabs	1½ tabs			4½ tabs
25- < 30 kg	5 tabs	2 tabs			5 tabs

GIVE REGIMEN 3B FOR COMPLICATED TB

- Use this regimen in children with all forms of severe TB (extensive pulmonary TB, spinal or osteo-articular TB or abdominal TB) or retreatment cases.
- All children should receive four medicines during the intensive phase (Rifampicin/INH (RH), pyrazinamide (PZA) and ethambutol) for two months. This is followed by RH for a further four months (continuation phase).
- For small infants dissolve one dispersible PZA tablet (150 mg) in 3 ml of water.
- To make ethambutol solution, crush one tablet (400 mg) to a fine powder and dissolve in 8 ml of water. Discard unused solution.
- Add Pyridoxine 12.5 mg daily for 6 months if the child is HIV positive or malnourished

REGIMEN 3B	INTENSIVE PHASE TWO MONTHS Once daily					CONTINUATION PHASE FOUR MONTHS Once daily
WEIGHT	**RH (60mg/ 60)mg**	**PZA (500mg)**	**OR**	**PZA** 150 mg/ 3 ml**	**ETHAMBUTOL 400mg/8ml solution OR 400 mg tablet**	**RH (60mg/60mg)**
2 - < 3 kg	½ tab	EXPERT ADVICE ON DOSE		1.5 ml	1ml	½ tab
3 - < 4 kg	¾ tab	¼ tab		2.5 ml	1.5ml	¾ tab
4 - < 6 kg	1 tab	¼ tab		3 ml	2ml	1 tab
6 - < 8 kg	1½ tab	½ tab			3ml	1½ tabs
8 - < 12 kg	2 tabs	½ tab			½ tab	2 tabs
12 - < 15 kg	3 tabs	1 tab			¾ tab	3 tabs
15 - < 20 kg	3½ tabs	1 tab			1 tab	3½ tabs
20 - < 25 kg	4½ tabs	1½ tabs			1 tab	4½ tabs
25- < 30 kg	5 tabs	2 tabs			1½ tabs	5 tabs

TEACH THE CAREGIVER **TO GIVE MEDICINES AT HOME**

- Follow the general instructions for all oral medicines to be given at home.
- Also follow the instructions listed with the dosage table of each medicine.

TREAT FOR MALARIA

- Give the current malaria treatment recommended for your area. See the Malaria Treatment Guidelines.
- **Treat only test-confirmed malaria. Refer if unable to test, or if the child is unable to swallow, or is under one year of age.**
- Record and notify malaria cases.

In all provinces combination therapy (Co-ArtemR) must be used.
It is advisable to consult the provincial guidelines on a regular basis.

Artemether + Lumefantrine (Co-ArtemR)

- Watch the caregiver give the first dose of Co-ArtemR in the clinic and observe for one hour. If the child vomits within an hour repeat the dose.
- Give Co-Artemether with fat-containing food/milk to ensure adequate absorption. food.
- Give first dose immediately
- Second dose should be taken at home 8 hours later. Then twice daily for two more days.

WEIGHT	WEIGHT CO-ARTEMETHER TABLET (20mg/120mg)	
	Day 1: First dose and repeat this after 8 hours (2 doses)	Days 2 and 3: take dose twice daily (4 doses)
< 15 kg	1 tablet	1 tab twice a day
15 - 25 kg	2 tablets	2 tabs twice a day

GIVE SALBUTAMOL FOR WHEEZE

- Home treatment should be given with an MDI and spacer.
- Teach caregiver how to use it.
- While the child breathes, spray 1 puff into the bottle. Allow the child to breathe for 4 breaths per puff.

SALBUTAMOL	
MDI - 100 ug per puff:	1-2 puffs using a spacer. Allow 4 breaths per puff. Repeat 3 to 4 times a day.

GIVE PARACETAMOL
FOR FEVER 38°C OR ABOVE, OR FOR PAIN

- Give one dose for fever 38°C or above.
- For pain: give paracetamol every 6 hours until free of pain (maximum one week)
- Treat the underlying cause of fever or pain.
- Refer if no pain relief with paracetamol

WEIGHT	AGE	PARACETAMOL SYRUP (120 mg per 5 ml)
3 - < 5 kg	0 up to 3 months	2 ml
5 - < 7 kg	3 up to 6 months	2.5 ml
7 - < 9 kg	6 up to 12 months	4 ml
9 - < 14 kg	12 months up to 3 years	5 ml
14 - < 17.5 kg	3 years up to 5 years	7.5 ml

TEACH THE CAREGIVER **TO GIVE ORAL MEDICINES AT HOME**

- Follow the general instructions for every oral medicines to be given at home.
- Also follow the instructions listed with the dosage table of each medicine.

GIVE IRON FOR ANAEMIA

- Give three doses daily. Supply enough for 14 days.
- Follow-up every 14 days and continue treatment for 2 months.
- Each dose is 2 mg elemental iron for every kilogram weight. Elemental iron content depends on the preparation you have.
- Check the strength and dose of the iron syrup or tablet very carefully.
- Tell caregiver to **keep Iron out of reach of children**, because an overdose is very dangerous.
- Give Iron with food if possible. Inform the caregiver that it can make the stools look black.
- **REMEMBER: Do not give Iron if the child is receiving the RUTF, as RUTF contains sufficient iron.**

WEIGHT	AGE Only if you do not know the weight	Ferrous Gluconate (40 mg elemental iron per 5 ml)	OR	Ferrous Lactate drops (25 mg elemental iron per ml)	OR	Ferrous Sulphate tablet (60 mg elemental iron)
		Give 3 times a day with meals				
3 - < 6 kg	0 up to 3 months	1.25 ml		0.3 ml (½ dropper)		
6 - < 10 kg	3 up to 12 months	2 .5 ml		0.6 ml (1 dropper)		
10 - < 25 kg	One up to 5 years	5.0 ml		0.9 ml (1½ dropper)		½ tablet

GIVE MULTIVITAMINS

- Give prophylaxis dose to child with Low birth Weight or Preterm from the third week of life
- Give to children with Severe Acute Malnutrition not on feed with combined mineral and vitamin complex (CMV) or Anaemia

AGE	WEIGHT	MULTIVITAMINS Once Daily	
		Drops	Syrup
Birth to 6 weeks	< 2.5 kg	0.3 ml	
	≥ 2.5 kg	0.6 ml	
All other children			5 ml

GIVE RUTF TO SAM WITHOUT MEDICAL COMPLICATION AND ELIGIBLE MAM CASES (SEE P .48 FOR CRITERIA)

- The child should be at least 6 months of age and weigh more than 4 kg.
- Make sure that the caregiver knows how to use the RUTF (p. 20)
- The child may have been referred from hospital for ongoing care. Give amounts according to directions from the referring facility, or according to local guidelines.

WEIGHT	RUTF 500Kcal/92gm sachet			
	For SAM without medical complication : Child needs 200kcal/kg/day		For MAM Child needs additional 75 Kcal/kg/day above his dai-ly food intake of 100kcal/day.	
	SAM	SAM	SAM	SAM
	Sachets (per day)	Sachets (per day)	Sachets (per day)	Sachets (per day)
4 - < 5 kg	2	14	4	16
5 - < 7 kg	2½	18	5	20
7 - < 8.5 kg	3	21	7	28
8.5 - < 9.5 kg	3½	25	9	36
9.5 - < 10.5 kg	4	28	10	40
10.5 - < 12 kg	4½	32	11	44
≥ 12 kg	5	35	13	52

GIVE ELEMENTAL ZINC (ZINC SULPHATE, GLUCONATE, ACETATE OR PICOLINATE)

- Give to all children with diarrhoea for 14 days.

WEIGHT	ELEMENTAL ZINC Once Daily
Up to 10 kg	10 mg
≥ 10 kg	20 mg

GIVE EXTRA FLUID FOR **DIARRHOEA AND CONTINUE FEEDING**

PLAN A: TREAT FOR DIARRHOEA AT HOME

Counsel the caregiver on the 4 Rules of Home Treatment:

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

- **COUNSEL THE CAREGIVER:**
  - Breastfeed frequently and for longer at each feed.
  - If the child is exclusively breastfed, give sugar-salt solution (SSS) or ORS in addition to breastmilk.
  - If the child is not receiving breastmilk or is not exclusively breastfed, give one or more of the following: food-based fluids such as soft porridge, amasi (maas) or SSS 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 CAREGIVER HOW TO MIX AND GIVE SSS or ORS:**
  - To make SSS:
    1 litre boiled water + 8 level teaspoons sugar + half a level teaspoon salt.
    SSS is the solution to be used at home to prevent dehydration.

NB The contents of the ORS sachet is mixed with clean water and administered to correct dehydration.

- **SHOW THE CAREGIVER 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.

- **Counsel the caregiver 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 **(p. 41)**

3. CONTINUE FEEDING **(p. 17 - 23)**

4. WHEN TO RETURN **(p. 14 or p. 45)**

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.**
  * The amount of ORS needed each hour is about 20 ml for each kilogram weight. Multiply the child's weight in kg by 20 for each hour. Multiply this by four for the total number of ml over the first four hours. One teacup is approximately 200 ml.
- **SHOW THE CAREGIVER HOW TO GIVE ORS SOLUTION:**
  - Give frequent small sips from a cup.
  - If the child vomits, wait 10 minutes. Then continue, but more slowly.
  - Counsel the mother to continue breastfeeding whenever the child wants.
  - If the child wants more ORS than shown, give more.
- **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 CAREGIVER MUST LEAVE BEFORE COMPLETING TREATMENT, OR THE CLINIC IS CLOSING:**
  - Refer if possible. Otherwise:
    - Show her how to prepare ORS solution at home.
    - Show her how much ORS to give to finish the 4-hour treatment at home.
    - Show her how to prepare SSS for use at home.
    - Explain the Four Rules of Home Treatment:

1. GIVE EXTRA FLUID

2. GIVE ZINC **(p. 41)**

3. CONTINUE FEEDING **(p. 17 - 23)**

4. WHEN TO RETURN **(p. 14 or p. 45)**

GIVE EXTRA FLUID FOR **DIARRHOEA AND CONTINUE FEEDING**

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

PLAN C: TREAT SEVERE DEHYDRATION QUICKLY *

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. Weigh the child or estimate the weight.

Within the first half hour:	Plan for the next 5 hours:
Rapidly give 20 ml IV for each kilogram weight, before re-ferral (weight x 20 gives ml needed). **Repeat** this amount up to twice if the radial pulse is weak or not detectable.	**More slowly** give 20 ml IV for each kilogram weight, every hour, during referral. Ensure the IV continues running, but does not run too fast.

- Give Normal Saline IV:
- **REFER URGENTLY for further management.**
- **Reassess the child every 1- 2 hours while awaiting transfer.** If hydration status is not improving, give the IV drip more rapidly.
- Also give ORS (about 5 ml per kilogram each hour) as soon as the child can drink: usually after 3 - 4 hours (infants) or 1 - 2 hours

NO

Is IV treatment available nearby (within 30 minutes)?

YES

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

NO

Are you trained to use a nasogastric (NG) tube for rehydration?

NO

Can the child drink?

YES

- **Start rehydration with ORS solution, by tube:** give 20 ml per kg each hour for 6 hours (total of 120 ml per kg).
- **REFER URGENTLY for further management.**
- **Reassess the child every 1-2 hours while awaiting transfer:**
  - If there is repeated vomiting give the fluid more slowly.
  - If there is abdominal distension stop fluids and refer urgently.
  - After 6 hours reassess the child if he/she is still at the clinic. Classify dehydration. Then choose the appropriate plan (A, B, or C) to continue treatment.

NO

Refer URGENTLY to hospital for IV

NOTE: If possible, observe the child at least 6 hours after rehydration, to be sure the caregiver can maintain hydration giving the child ORS by mouth.

* **Exception:** Another severe classification e.g. suspected meningitis, severe malnutrition

- Too much IV fluid is dangerous in very sick children. Treatment should be supervised very closely in hospital.
- Set up a drip for severe dehydration, but give Normal Saline **only 10 ml per kilogram over one hour**.
- Then give sips of ORS while awaiting urgent referral.

TEACH THE CAREGIVER **TO TREAT LOCAL INFECTIONS**

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

FOR THRUSH

- **If there are thick plaques the caregiver should:**
  - Wash hands with soap and water.
  - Wet a clean soft cloth with chlorhexidine 0.2% or salt water, wrap this around the little finger, then gentle wipe away the plaques.
  - Wash hands again.
- **Give nystatin 1 ml 4 times a day (after feeds) for 7 days.**
- **If infant is breastfed,**
  - Check mother's breasts for thrush. If present treat mother's breasts with nystatin.
  - Advise mother to wash nipples and areolae after feeds.
- **If bottle fed, change to cup and make sure that the caregiver knows how to clean utensils used to prepare and give the milk (p. 23 - 25)**

FOR CHRONIC EAR INFECTION, CLEAR THE EAR BY DRY WICKING

- **Dry the ear at least 3 times daily**
  - Roll clean absorbent cloth or soft, strong tissue paper into a wick.
  - Place the wick in the child's ear.
  - Remove the wick when wet.
  - Replace the wick with a clean one and repeat these steps until the ear is dry.
- **The ear should not be plugged between dry wicking.**

FOR MOUTH ULCERS

- **Treat for mouth ulcers 3 - 4 times daily for 5 days:**
  - Give paracetamol for pain relief (p. 40) at least 30 minutes before cleaning the mouth or feeding the child.
  - Wash hands.
  - Wet a clean soft cloth with chlorhexidine 0.2% and use it to wash the child's mouth. Repeat this during the day.
  - Wash hands again.
- **Advise caregiver to return for follow-up in two days if the ulcers are not improving.**

SOOTHE THE THROAT, RELIEVE THE COUGH WITH A SAFE REMEDY

Safe remedies to encourage:
- Breastmilk
- If not breastfed and/or older than 6 months, warm water or weak tea can be given. Sugar or honey and lemon can be added, if available

Harmful remedies to discourage:
- Herbal smoke inhalation
- Vicks drops by mouth
- Any mixture containing vinega

FOR EYE INFECTION

The caregiver should:
- Wash hands with soap and water
- Gently wash off pus and clean the eye with normal saline (or cooled boiled water) at least 4 times a day. Continue until the discharge disappears.
- Apply chloramphenicol ointment 4 times a day for seven days.
- Wash hands again after washing the eye.

COUNSEL THE MOTHER **OR CAREGIVER ABOUT HOME CARE**

1. FEEDING

- Counsel the mother to feed her child based on the child's age and findings of feeding assessment (p. 17 - 23)

2. WHEN TO RETURN

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

ROUTINE WELL CHILD VISIT
Advise caregiver when to return for next Routine Child visit ..

FOLLOW-UP VISIT: ADVISE CAREGIVER TO COME FOR FOLLOW-UP AT THE EARLIEST TIME LISTED

If the child has:	Return for follow-up in:
PNEUMONIA DYSENTERY SOME DEHYDRATION - if diarrhoea not improving MALARIA - if fever persists SUSPECTED MALARIA - if fever persists FEVER - OTHER CAUSE - if fever persists MEASLES SUSPECTED MEASLES	2 days
COUGH OR COLD - if no improvement WHEEZE - FIRST EPISODE - if still wheezing NO VISIBLE DEHYDRATION - if diarrhoea not improving PERSISTENT DIARRHOEA ACUTE EAR INFECTION - if pain / discharge persists POSSIBLE STREPTOCOCCAL INFECTION - if symptoms persist FEEDING PROBLEM	5 days
MODERATE ACUTE MALNUTRITION WITH NO MEDICAL COMPLI-CATION MODERATE ACUTE MALNUTRITION FEEDING PROBLEM HIGH RISK OF TB or RISK OF TB	7 days
ACUTE or CHRONIC EAR INFECTION ANAEMIA NOT GROWING WELL - but no feeding problem	14 days
HIV-INFECTION ONGOING HIV EXPOSURE SUSPECTED SYMPTOMATIC HIV HIV EXPOSED TB EXPOSED CONFIRMED or PROBABLE TB OVERWEIGHT/ OBESE	Monthly

COUNSEL THE MOTHER OR CAREGIVER ABOUT HOME CARE

3. SUPPORT THE FAMILY TO CARE FOR THE CHILD

- Help the mother, family and caregiver to ensure the child's needs are met.
- Assess any needs of the family and provide or refer for management.

4. COUNSEL THE CAREGIVER ABOUT HER OWN HEALTH

- If the caregiver is sick, provide care for her, or refer her for help.
- Advise the caregiver to eat well to keep up his/ her own strength and health.
- Encourage caregiver to grow local foods, if possible, and to eat fresh fruit and vegetables.
- Ensure that the child's birth is registered.
- Where indicated, encourage the caregiver to seek social support services e.g. Child Support Grant.
- Make sure the caregiver has access to:
  - Contraception and sexual health services, including HIV testing services.
  - If mother is HIV negative: retest at the 10 week postnatal visit, 6 month visit and every 3 months while breastfeeding.
  - Counselling on STI and prevention of HIV-infection.
  - Any other health or social services she requires.

5. GIVE ADDITIONAL COUNSELLING IF THE MOTHER OR CAREGIVER IS HIV-POSITIVE

- Encourage disclosure: disclosure may improve adherence and viral suppression which is important for all caregivers, including breastfeeding mothers.
- If mother is not on ART: offer same-day ART initiation.
- If mother is on ART: check the mother's VL and if suppressed repeat VL every 6 months while breastfeeding. If not virally suppressed: follow the VL non-suppression algorithm in national ART guidelines.
- Emphasise the importance of adherence if on ART.
- Emphasise early treatment of illnesses, opportunistic infections or drug reaction.
- Counsel caregiver on eating healthy foods that include protein, fat, carbohydrate, vitamins and minerals.
- Reassure her that with regular follow-up, much can be done to prevent serious illness, and maintain her and the child's health.

GIVE FOLLOW-UP CARE

- Care for the child who returns for follow-up using **ALL** the boxes that match the child's previous classifications.
- If the child has a new problem, assess, classify and treat the new problem as on the **ASSESS AND CLASSIFY** Chart.

PNEUMONIA AND COUGH OR COLD

After 2 days
- Check the child for general danger signs
- Assess the child for cough or difficult breathing
- Ask: - Is the child's breathing slower?
  - Is there less fever?
  - Is the child eating better?

See ASSESS & CLASSIFY (p. 25)

Treatment:
- If there is chest indrawing or a general danger sign, give first dose of ceftriaxone IM. (p. 35) Also give first dose cotrimoxazole (p. 38) unless the child is known to be HIV-negative. Then **REFER URGENTLY**.
- If breathing rate, fever and eating are the same, or worse, check if caregiver has been giving the treatment correctly. If yes, **refer**. If she has been giving the antibiotic incorrectly, teach her to give oral medicines at home. Follow-up in 2 days.
- If breathing slower, less fever or eating better, complete 5 days of antibiotic. Remind the caregiver to give one extra meal daily for a week.

WHEEZE - FIRST EPISODE

After 2 days (PNEUMONIA with wheeze), or after 5 days (COUGH OR COLD with wheeze):
- If wheezing has not improved, **refer**.
- If no longer wheezing after 5 days, stop salbutamol. Advise caregiver to re-start salbutamol via spacer if wheezing starts again, and return to clinic immediately if child has not improved within 4 hours.

DIARRHOEA

After 2 days (for some dehydration) or 5 days (for no visible dehydration, but not improving):
- Assess the child for diarrhoea.
- Check if zinc is being given.
- If blood in the stools, assess for dysentery.
- Ask:
  - Are there fewer stools?
  - Is the child eating better?

See ASSESS & CLASSIFY (p. 26)

- If SOME DEHYDRATION, **refer**.
- If diarrhoea still present, but NO VISIBLE DEHYDRATION, follow- up in 5 days.
- Assess and counsel about feeding (p. 17 - 20).
- Advise caregiver when to return immediately (p. 45).

PERSISTENT DIARRHOEA

After 5 days:
- Ask:
  - Has the diarrhoea stopped?
  - How many loose stools is the child having per day

  Assess feeding

Treatment:
- Check if zinc is being given.
- If the diarrhoea has not stopped reassess child, treat for dehydration, then **refer**.
- If the diarrhoea has stopped:
  - Counsel on feeding (p. 17 - 20).
  - Suggest caregiver gives one extra meal every day for one week.
  - Review after 14 days to assess weight gain.

DYSENTERY

After 2 days:
- Assess the child for diarrhoea. See ASSESS & CLASSIFY (p. 26).

  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 general danger sign present, or child sicker, **REFER URGENTLY**.
- If child dehydrated, treat for dehydration, and **REFER URGENTLY**.
- If number of stools, amount of blood, fever or abdominal pain is the same or worse, **refer**.
- If child is better (fewer stools, less blood in stools, less fever, less abdominal pain, eating better), complete 3 days of Ciprofloxacin.
- Give an extra meal each day for a week. (p. 17-20)

GIVE FOLLOW-UP CARE

- Care for the child who returns for follow-up using **ALL** the boxes that match the child's previous classifications.
- If the child has a new problem, assess, classify and treat the new problem as on the **ASSESS AND CLASSIFY** Chart.

NOT GROWING WELL

After 14 days:

- Weigh the child and determine if the child is still low weight for age.
- Determine weight gain.
- Reassess feeding (p. 17 - 23).

Treatment:

- If the child is gaining weight well, praise the caregiver. Review every 2 weeks until GROWING WELL.
- If the child is still NOT GROWING WELL:
  - Check for TB and manage appropriately.
  - Check for HIV infection and manage appropriately.
  - Check for feeding problem. If feeding problem, counsel and follow-up in 5 days.
  - Counsel on feeding recommendations.
- If the child has lost weight or you think feeding will not improve, **refer**. **Otherwise** review again after 14 days: if child has still not gained weight, or has lost weight, **refer**.
- Check if the child is accessing other additional care and support (e.g. Social security (grants).

FEEDING PROBLEM

After 5 days:

- Reassess feeding (p. 17 - 23).
- Ask about feeding problems and counsel the caregiver about any new or continuing feeding problems
- If child is NOT GROWING WELL, review after 14 days to check weight gain.

ANAEMIA

After 14 days:

- Check haemoglobin.

Treatment:

- If haemoglobin lower than before, refer.
- If haemoglobin the same or higher than before, continue iron. Recommend iron rich diet. Review in 14 days. Continue giving iron every day for 2 months (p. 41).
- If the haemoglobin has not improved or the child has palmar pallor after one month, refer.

SEVERE ACUTE MALNUTRITION (SAM) WITHOUT MEDICAL COMPLICATION OR MODERATE ACUTE MALNUTRITION (INCLUDING SAM PATIENTS DISCHARGED FROM INPATIENT CARE)

After 7 days:

ASK:

- Is the child feeding well?
- Is the child finishing the weekly amount of RUTF? Are there any new problems?

LOOK FOR:

- General danger signs, medical complications, fever and fast breathing. If present or there is a new problem, assess and classify accordingly.
- Weight, MUAC, oedema and anaemia
- If the child is well and gaining weight , there is no need to repeat the appetite test. If the child is not gaining weight or you are concerned for any reason, repeat the appetite test.

Treatment:

If any one of the following are present, refer:

- Any danger sign, RED or YELLOW CLASSIFICATION or other problem
- Poor response as indicated by:
  - oedema
  - weight loss of more than 5% of body weight at any visit or for 2 consecutive visits
  - static weight for 3 consecutive visits
  - failure to reach the discharge criteria after 2 months of outpatient treatment.
  - Child fails the appetite test

If there is no indication for referral:

- Assess for possible HIV and TB infection p. 32 & 33
- Give a weekly supply of RUTF (p. 41)
- Counsel the caregiver on feeding her child (p. 23)
- Give immunisations and routine treatments when due (p. 34)
- Follow-up weekly until stable
- Continue to see the child monthly for at least two months until the child is feeding well and gaining weight regularly or until the child is classified as GROWING WELL.

MODERATE ACUTE MALNUTRITION

Routinely providing supplementary foods (RUTF/RUSF) to moderately acute malnutrition to infants and children presenting to primary health-care facilities is not recommended

Supplementary foods are recommended in the following situations:

- Areas with a high prevalence (new and old cases) of moderate acute malnutrition.
- Children/family who are food and nutrient insecure and/ or where food based approach is not feasible. (no or very little food)
- For this group of children special attention to nutrition counselling, interventions to address food security and follow-up care to assess response is crucial.

GIVE **FOLLOW-UP CARE**

- Care for the child who returns for follow-up using all the boxes that match the child's previous classifications.
- If the child has a new problem, assess, classify and treat the new problem as on the **ASSESS AND CLASSIFY** chart (p. 24-34).

FEVER: OTHER CAUSE

If fever persists after 2 days:
Do a full reassessment of the child.

Treatment:
- If the child has any general danger sign or stiff neck or bulging fontanelle, treat for SUSPECTED MENINGITIS (p. 27) and **REFER URGENTLY**.
- If fever has been present for 7 days, assess for TB. (p. 33)
- Treat for other causes of fever.

MALARIA OR SUSPECTED MALARIA

If fever persists after 2 days:
- Do a full reassessment of the child.
- Assess for other causes of fever.

Treatment:
- If the child has any general danger signs, bulging fontanelle or stiff neck, treat as SUSPECTED SEVERE MALARIA (p. 27) and **REFER URGENTLY**.
- If malaria rapid test was positive at initial visit and fever persists or recurs, **REFER URGENTLY**.
- If malaria test was negative at the initial visit, and no other cause for the fever is found after reassessment, repeat the test:
- - If malaria test is negative or unavailable, **refer**.
  - If malaria rapid test is positive, treat for malaria.
- Treat for any other cause of fever.

MEASLES

If fever persists after 2 days or caregiver complains of new problems, do a full reassessment (p. 24 - 34)
- Look for mouth ulcers and clouding of the cornea
- Check that the child has received two doses of Vitamin A (p. 34)
- Check that the necessary specimens have been sent and that contacts have been immunised.

Treatment:
- If child has any danger sign or severe classification, provide prereferral treatment, and **REFER URGENTLY**.
- If child is still feverish, has mouth or eye complications, DIARRHOEA WITH SOME DEHYDRATION, PNEUMONIA or has lost weight, **refer**.
- If child has improved, advise caregiver to provide home care, including providing an extra meal for one week. Make sure she knows When to Return (p. 14 or 45)

EAR INFECTION

Reassess for ear problem. See ASSESS & CLASSIFY (p. 30).

Treatment:
- If there is tender swelling behind the ear or the child has a high fever, **REFER URGENTLY**.

ACUTE EAR INFECTION:
After 5 days:
- If ear pain or discharge persists, treat with amoxicillin for 5 more days.
- Continue dry wicking if discharge persists.
- Follow-up in 5 more days.
- After two weeks of adequate wicking, if discharge persists, **refer**.

CHRONIC EAR INFECTION:
After 14 days:
- If some improvement, continue dry wicking, and review in 14 days
- If no improvement, **refer**

POSSIBLE STREPTOCOCCAL INFECTION

After 5 days:
- Assess and monitor dehydration as some children with a sore throat are reluctant to drink or eat due to pain
- Stress the importance of completing 10 days of oral treatment.
- If not improvement, follow-up in 5 more days.
- After 10 days: If symptoms worse or not resolving, refer.

GIVE FOLLOW-UP CARE

HIV INFECTION NOT ON ART

All children with confirmed HIV should be initiated on ART.

Children whose caregivers are not willing and able to start ART should be referred to the counselor and social worker to identify obstacles to treatment and should start ART as soon as possible.

The following should be provided at each visit:

- Routine child health care: immunisation, growth monitoring, feeding assessment and counseling and developmental screening.
- Find out why the child is not on ART and counsel appropriately.
- Provide cotrimoxazole prophylaxis (p. 38).
- Assessment, classification and treatment of any new problem.
- Ask about the caregiver's health. Provide HIV testing and treatment if necessary.

SUSPECTED SYMPTOMATIC HIV INFECTION

Children with this classification should be tested immediately with an age-appropriate HIV test, and reclassified on the basis of their test result.

See the child at least once a month. At each visit:

- Provide routine child health care: immunization, growth monitoring, feeding assessment and counseling, and developmental screening.
- Provide Cotrimoxazole prophylaxis from 6 weeks of age (p. 38).
- Assess, classify and treat any new problem.
- Ask about the caregiver's health. Provide HIV testing and appropriate treatment.

HIV-EXPOSED: ON ARV PROPHYLAXIS, ONGOING HIV EXPOSURE OR HIV-EXPOSED

See the child at least once every month. At each visit provide:

- Routine child health care: immunisation, growth monitoring, and developmental screening.
- Check that the infant/ child has been receiving prophylactic ARVs correctly (p. 12).
- Support the mother to exclusively breastfeed the infant (p. 17 - 18). If the infant is not breastfed, provide counselling on replacement feeding (p. 23-25) and address any feeding problems (p. 21)
- Infants of mothers on 1st line regimens and VL > 1000 copies/ ml:
  - Regain maternal VL suppression as a matter of urgency.
  - Continue breastfeeding.
  - Continue or re-initiate high risk prophylaxis with AZT twice daily for 6 weeks and NVP once daily for a minimum of 12 weeks.
  - NVP should only be stopped once the maternal VL is confirmed to be < 1000 copies/ ml, or until 1 week after all breastfeeding has stopped.
- Infants of mothers on 2nd or 3rd line regimens and VL >1000 copies/ ml:
  - Advise not to breast feed.
  - Arrange replacement feeding through dietitian.
- Provide cotrimoxazole prophylaxis (p. 38).
- Assess, classify and treat any new problem.
- Recheck the child's HIV status according to the HIV testing schedule (below). Reclassify the child according to the test result, and provide care accordingly.
- Ask about the caregiver's health. Provide counselling, testing and treatment as necessary.

HIV TEST

NB: All HIV-exposed infants not on ART should be tested/ retested:

- At birth
- At 10 weeks of age
- At 6 months of age
- If the child becomes ill or develops symptoms of HIV
- At 18 months of age (all infants regardless of HIV exposure)
- 6 weeks after cessation of breastfeeding
- In infants/ children under 18 months of age, test and confirm HIV with HIV PCR tests.

AGE		INITIAL TEST	CONFIRMATORY TEST
< 18 months	HIV-exposed	HIV PCR	2nd HIV PCR
	Exposure unknown	A positive HIV antibody test confirms exposure. HIV PCR test to determine if child is infected.	2nd HIV PCR
Infant 18 - 24 months		HIV antibody (rapid or ELISA)	HIV PCR
Child > 2 years		HIV antibody (rapid or ELISA)	HIV antibody (rapid or ELISA)

GIVE **FOLLOW-UP CARE**

CONFIRMED OR PROBABLE TB (ON TREATMENT)

- Follow-up monthly.
- Ensure that the child is receiving regular treatment, ideally as Directly Observed Treatment, 7 days a week. Remember to switch to the continuation phase after two months treatment (p. 39).
- Ask about symptoms and check weight.
- If symptoms are not improving or if the child is not growing well, refer.
- Counsel regarding the need for adherence, and for completing six months treatment.
- Counsel and recommend HIV testing if the child's HIV status is not known.

PALLIATIVE CARE FOR THE CHILD

The decision to provide palliative care only should be made at the referral level. Palliative care includes medication, counselling and support for the child and his family:

- Cotrimoxazole prophylaxis for HIV positive children (p. 38).
- Pain relief
- Routine child care.
- Provide psychosocial support to HIV-positive caregivers and children
- Counsel the caregiver regarding good nutrition, hygiene and management of skin lesions.
- Referral to a community support or home based care group.

TB EXPOSURE (ON TREATMENT)

- Follow-up monthly.
- Ask about symptoms and check weight.
- If symptoms develop, or if child is not growing well, **refer**.
- Counsel regarding the need for adherence, and for completing six months treatment.
- Ensure that the child is receiving medication, and provide treatment for one month where necessary (p. 38).

INITIATING ART **IN CHILDREN:** Follow the six steps

STEP 1: RECORD PATIENT DETAILS AND HISTORY

Record the following information in the HIV clinical chart.

- **Patient details.**
- **Caregiver details: Details of primary and secondary caregiver.**
- **Past medical history:**
  - Allergies
  - Mode of transmission
  - ARVs prior to ART start date including PMTCT prophylaxis
  - ART transfer in details
  - Disclosure status
  - Immunisation status (update from RTHB)
  - Past medical history including surgical history

STEP 2: DECIDE IF THE CHILD HAS CONFIRMED HIV INFECTION

Infant/ child <18 months:

The first positive PCR test is confirmed with a second positive HIV PCR.

- **Proceed to Steps 3 - 6 whilst awaiting second PCR result.**

Child >18 months:

Under 2 years: A positive rapid HIV antibody test is confirmed with a positive HIV PCR.

Over 2 years: A positive rapid HIV antibody tests confirmed with a second positive HIV antibody test (rapid or ELISA).

- **If the first rapid HIV test is positive and the second test is negative (discordant), do an ELISA or refer.**
- **Send outstanding tests but proceed to step 3 while awaiting results.**

STEP 3: DECIDE IF THE CAREGIVER IS ABLE TO GIVE ART

- **Check that the caregiver is willing and able to administer ART.**
- **Complete psychosocial readiness and social record sections in the HIV clinical chart.**
- **The caregiver should ideally have disclosed the child's HIV status to another adult who can assist with providing ART (or be part of a support group).**
- **If caregiver is willing and able to give ART, move to Step 4.**
- **If not, classify as HIV INFECTION not on ART, and provide care as outlined on p 50.**

STEP 4: DECIDE IF A IMCI NURSE SHOULD INITIATE ART

Check for the following:

- General danger signs or any severe classification
- Infant <1 month of age
- Child weighs less than 3 kg
- TB
- Fast breathing
- Any WHO stage 4 condition

- **If any of these are present, refer to next level of care for ART initiation.**
- **If none present, move to Step 5.**

STEP 5: ASSESS AND RECORD BASELINE INFORMATION

- **Nutrition assessment:**
- **Weight, height/ length, head circumference (if <2 years), MUAC.**
- **BMI or WFH z-score. Classify based on findings.**
- **Assess and classify for anaemia (p. 31).**
- **TB screening and TB contacts (p. 33)**
- **Developmental screening, school attendance and school performance.**
- **WHO clinical staging.**
- **Baseline laboratory investigations:**

BASELINE INVESTIGATIONS	DONE FOR
CD4 count and FBC/ Hb	All children starting ART.
Creatinine and eGFR (p. 56)	Children/ adolescents starting tenofovir (TDF) .
Alanine Aminotransferase (ALT)	On TB treatment or starting nevirapine (NVP).

- **If the child has SEVERE ACUTE MALNUTRITION, SEVERE ANAEMIA (Hb < 7g/dl) or TB refer to the next level of care for management and for initiation of ART.**
- **If Hb is 7 g/dl - 11 g/dl, classify as ANAEMIA and treat (p. 31). Do not delay starting ART.**
- **Send any outstanding laboratory tests. If the child already meets the criteria for starting**

STEP 6: START ART

- **ART regimens always include 3 drugs.**
- **See ART dosing and instructions)**
- **p. 52-59).**
- **Remember to counsel the caregiver on how to give the drugs and possible side-effects.**
- **Remember to give cotrimoxazole (p. 38).**
- **Give other routine treatments (p. 34).**
- **Follow-up after one week.**

WEIGHT/ AGE	ART REGIMEN
Age >1 month **AND** Weight 2.5kg - < 20 kg	Abacavir (ABC) Lamivudine (3TC) Lopinavir/ritonavir (LPV/r)
Weight 20 - < 35 kg **OR** Age < 10yrs	Abacavir (ABC) Lamivudine (3TC) Dolutegravir (DTG)
Age ≥10 years **AND** Weight ≥ 35kg	Tenofovir (TDF)* Lamivudine (3TC) Dolutegravir (DTG)

ADAPTED **WHO CLINICAL STAGING**

- All children with CONFIRMED HIV INFECTION must be staged at diagnosis and as part of regular follow-up.
- Children are staged in order to monitor their progress on ART.
- If in doubt, discuss the child with a colleague or refer.

STAGE 1	STAGE 2	STAGE 3	STAGE 4
• No symptoms • Persistent generalised lymphadenopathy	• Unexplained persistent enlarged liver and/ or spleen • Papular pruritic eruptions • Seborrheic dermatitis • Extensive human papilloma infection • Extensive molluscum contagiosum • Fungal nail infections • Recurrent oral ulcerations • Linear gingival erythema • Angular cheilitis • Unexplained persistent enlarged parotid • Herpes zoster • Recurrent or chronic respirato-y tract infections (sinusitis, ear infection, otorrhoea, sinus-itis, tonsillitis)	• Unexplained Moderate Malnutrition not adequately responding to standard therapy • Oral thrush (outside neonatal period) • Oral hairy leucoplakia • Acute necrotising ulcerative gingivitis/ periodontitis • The following conditions if unexplained and if not re-sponding to standard treatment: - Diarrhoea for 14 days or more - Fever for one month or more - Anaemia (Hb <8 g/dL) for one month or more - Neutropaenia (< 500/mm3) for one month - Thrombocytopaenia (platelets <50,000/mm3) for one month or more • Recurrent severe bacterial pneumonia • Pulmonary TB • TB lymphadenopathy • Chronic HIV-associated lung disease, including bronchiectasis • Symptomatic Lymphoid Interstitial Pneumonitis	• Unexplained severe wasting or Severe Malnutrition not adequately responding to standard therapy. • Oesophageal thrush • Herpes simplex ulceration for one month or more • Severe multiple or recurrent bacterial infections, two or more episodes in a year (not including pneumonia) • Pneumocystis pneumonia (PCP/ PJP) • Kaposi sarcoma • Extrapulmonary TB

STARTING ART **FOR CHILDREN**

All children should receive three drugs in their ART regimen (p. 52)

ABACAVIR (ABC) GIVE ONCE OR TWICE DAILY

- **Tablets (except 60mg) must not be chewed, divided or crushed. They should be swallowed whole, with or without food.**
- **A hypersensitivity (allergic) reaction to abacavir may occur in a very small number of children. This usually happens in the first six weeks of treatment.**
  - Symptoms tend to worsen in the hours immediately after the dose, and worsen with each subsequent dose.
  - Common side-effect symptoms include fever and rash (usually raised and itchy), gastrointestinal symptoms (nausea, vomiting, abdominal pain) and respiratory symptoms (dyspnoea, sore throat, cough).
  - If the child has at least 2 of the above, do NOT stop the medicine but call for advice or refer **URGENTLY**.
  - If a hypersensitivity reaction is confirmed, abacavir will be stopped.
  - A child who has had a hypersensitivity reaction must never be given abacavir again. Make sure that the reaction is recorded, and that the patient knows that he/ she should never take abacavir again.

ABACAVIR / ABC (choose one option)			
Weight	**Solution: 20 mg/ml**	**Tablet: 60 mg**	**Tablet: 300 mg**
≤3 kg or neonate	Consult with expert		
3 – < 5 kg	2 ml twice daily		
5 – < 7 kg	3 ml twice daily		
7 – <10 kg	4 ml twice daily		
10 – <14 kg	6 ml twice daily **OR** 12 ml once daily	2 tablets twice daily **OR** 4 tablets once daily	
14 – < 20 kg	8 ml twice daily **OR** 15 ml once daily	2½ tablets twice daily **OR** 5 tablets once daily	1 tablet once daily
20 – < 23 kg	10 ml twice daily **OR** 20 ml once daily	3 x 60 mg tablets twice daily **OR** 1 x 300 mg + 1 x 60 mg tablet once daily	
23 – < 25 kg	10 ml twice daily **OR** 20 ml once daily	3 x 60 mg tablets twice daily **OR** 1 x 300 mg + 2 x 60 mg tablet once daily	
> 25 kg		1 x 300 mg tablet twice daily **OR** 1 x 600 mg tablet once daily	

LAMIVUDINE (3TC) GIVE ONCE OR TWICE DAILY

- **Lamivudine is very well tolerated and can be taken with our without food.**
- **Tablets are scored and can be easily divided. They may be crushed and mixed with a small amount of water or food—if this is done they must be given immediately.**
- **Side-effects are minimal ,but include headache, tiredness, abdominal pain and red cell aplasia.**
- **If side-effects are mild continue treatment.**
- **If the child has severe symptoms, REFER URGENTLY.**

LAMIVUDINE / 3TC (choose one option)			
Weight	**Solution: 10 mg/ml**	**Tablet: 150 mg**	**Tablet: 300 mg**
≤3 kg or neonate	Consult with expert		
3 – < 5 kg	2 ml twice daily		
5 – < 7 kg	3 ml twice daily		
7 – <10 kg	4 ml twice daily		
10 – <14 kg	6 ml twice daily **OR** 12 ml once daily		
14 – < 20 kg	8 ml twice daily **OR** 15 ml once daily	½ tablets twice daily **OR** 1 tablet once daily	
20 – < 25 kg	15 ml twice daily **OR** 30 ml once daily	1 tablet twice daily **OR** 2 tablet once daily	1 tablet once daily
> 25 kg	15 ml twice daily **OR** 30 ml once daily	1 tablet twice daily **OR** 2 tablet once daily	1 tablet once daily
	One ABC/3TC (600/300 mg) combination tablet once daily		

STARTING ART **FOR CHILDREN**

All children should receive three drugs in their ART regimen (p. 52)

LOPINAVIR/ RITONAVIR (LPV/R)
MUST BE GIVEN TWICE DAILY

- The solution should be stored in a fridge. However it can be stored at room temperature up to 25°C for up to 6 weeks.
- Give with food (a high-fat meal is best).
- May need techniques to increase tolerance and palatability: coat mouth with peanut butter, dull taste buds with ice, follow dose with sweet foods.
- Tablets must not be chewed, divided or crushed. Swallow them whole, with or without food.
- Side-effects include nausea, vomiting and diarrhoea. Continue if these are mild.
- There are many drug interactions, and doses must be adjusted for children on TB medicines. (e.g. TB drugs).

LOPINAVIR/ RITONAVIR (choose one option)			
Weight	**Solution: 80/20 mg/ml**	**Tablet: 100/25 mg**	**Tablet: 200/50 mg**
≤3 kg or neonate	Consult with expert		
3 – < 5 kg	1 ml twice daily		
5 – <10 kg	1.5 ml twice daily		
10 – <14 kg	2 ml twice daily	2 tablets in morning 1 tablet in evening	
14 – < 20 kg	2.5 ml twice daily	2 tablets twice daily	1 tablet once daily
20 – <25 kg	3 ml twice daily	2 tablets twice daily	1 tablet once daily
25 – <30 kg	3.5 ml twice daily	3 tablets twice daily	2 tablets in morning plus 1 tablet in evening
		1 of each tablet twice daily	
>30 kg	5 ml twice daily	4 tablets twice daily	2 tablets twice daily

DOLUTEGRAVIR (DTG) GIVE ONCE DAILY

- Dolutegravir belongs to a ARV drug class called integrase inhibitors.
- It is not recommended for children and adolescents weighing <20kg.
- Dolutegravir is well tolerated and can be taken with or without food.
- Can be taken in the morning or in the evening according to preference, but if the patient develops insomnia it should be taken in the morning.
- Side-effects are usually mild and self-limiting, but may include insomnia, headache, central nervous system (CNS) effects, gastrointestinal effects, and weight gain.
- There is a possible association between Dolutegravir and increased risk of neural tube defects (NTD) if taken in the first six weeks of a pregnancy. Extra care must be taken among girls/ women living with HIV desiring pregnancy or who may be at risk of pregnancy for any reason.
- Standard Dose:
  - Children ≥20kg and <35kg regardless of age: 50 mg daily (combined with ABC and 3TC)
  - Children/ adolescents ≥35kg and ≥10 years of age: 50 mg daily (combined with TDF and 3TC in the fixed dose formulation TLD).

DOLUTEGRAVIR / DTG (choose one option)			
Weight	**Dose**	**DTG tablet: 50 mg**	**TLD combination tablet** (TDF 300mg + 3TC 300mg + DTG 50mg)
≥35 kg	2 ml twice daily	1 tablet once daily	
20 – < 35 kg	2 ml twice daily		1 tablet once daily

STARTING ART **FOR CHILDREN**

All children should receive three drugs in their ART regimen (p. 52)

TENOFOVIR (TDF) GIVE ONCE DAILY

- Tenofovir is not recommended for children/ adolescents <10 years old and weighing < 35kg.
- Tenofovir is well tolerated can be taken with or without food in the morning or in the evening.
- Uncommon but important side effects of Tenofovir include reduced bone density and reduced kidney function.
- Creatinine and estimated GFR are done before starting Tenofovir and then monitored at month 3, 6 and 12, and thereafter every 12 months.
- If eGFR <80 ml/min: start or change to ABC in place or TDF and refer.
- Estimated GFR will need to be calculated for children/ adolescents 10-<16 years:
  eGFR (ml/min) = height [cm] x 40 x creatinine [µmol/l].

TENOFOVIR / TDF (choose one option)			
Weight	**Solution: 20 mg/ml**	**Tablet: 300 mg**	**TLD combination tablet** (TDF 300mg + 3TC 300mg + DTG 50mg)
<35 kg AND <10 years old	Not recommended for children/ adolescents <35 kg and <10 years old		
≥35 kg and ≥10 years old	300 mg	1 tablet once daily	1 tablet once daily

EFAVIRENZ (EFV) GIVE ONCE DAILY AT NIGHT

- Efavirenz is not recommended in children < 3 years and weighing <10 kg.
- Can be taken with our without food, but avoid giving with fatty foods.
- Tablets must not be chewed, divided or crushed. They should be swallowed whole.
- Capsules may be opened and powder content dispersed in water or mixed with a small amount of food (e.g. yogurt, to disguise peppery taste) and immediately ingested.
- Side-effects include skin rash, sleep disturbances and confusion/abnormal thinking. REFER children who develop these symptoms.
- Best given at bed time to reduce central nervous side effects, especially during the first two weeks.

EFAVIRENZ / EFV (choose one option)				
Weight	**Dose**	**50 mg tablet/ capsule**	**200 mg tablet/ capsule**	**600 mg tablet**
10 – <14 kg	200 mg		1 capsule/ tablet	
14 – <25 kg	300 mg	2 x 50 mg capsules/ tablets + 1 x 200 mg capsule/ tablet		
25 – <40 kg	400 mg		2 capsules/ tablets	
≥40 kg	600 mg			1 tablet

PROVIDE FOLLOW-UP **FOR CHILDREN ON ART:** Follow the seven steps

STEP 1: ASSESS AND CLASSIFY

- ASK: Does the child have any problems?
- Has the child received care at another health facility since the last visit?
- Check for General Danger Signs (p. 24)
- Check for ART Danger Signs
  - Severe skin rash
  - Difficulty breathing and severe abdominal pain
  - Yellow eyes

  If present, **REFER URGENTLY**
  - Fever, vomiting, rash (only if on abacavir)
- Check for main symptoms (p. 5 - 10 or 24 - 31). Treat and follow-up accordingly.
- Consider (screen for) TB: Assess, classify and manage (p. 33)
- If child has TB, refer to next level of care.

STEP 2: MONITOR PROGRESS ON ART

ASSESS AND CLASSIFY FOR NUTRITION AND ANAEMIA (P. 30 AND 31):
- Record the child's weight, height and head circumference.

ASSESS DEVELOPMENT:
- Decide if the child is: developing well, has some delay or is losing milestones.

ASSESS ADHERENCE:
- Ask about adherence and how often, if ever, the child misses a dose.
- Record your assessment.

ASSESS DRUG RELATED SIDE-EFFECTS:
- Ask about side-effects. Ask specifically about the side-effects in the table on p. 59.

ASSESS CLINICAL PROGRESS: (P. 53)
- Assess the child's stage of HIV infection
- Compare with the stage at previous visits.

MONITOR BLOOD RESULTS: (P. 58)
- Record results of tests that have been sent. Send tests that are due (p. 58).

IF ANY OF THE FOLLOWING ARE PRESENT, REFER THE CHILD (NON-URGENTLY)
- Not gaining weight for 3 months despite nutritional supplements.
- Loss of milestones.
- Poor adherence despite adherence counselling.
- Significant side-effects despite appropriate management.
- Higher WHO stage than before (clinical deterioration).
- Any WHO stage 4 condition.
- CD4 count significantly lower than before or < 50 cells/mL.
- Viral load >1000 copies despite adherence counselling.
- Total non-fasting cholesterol >3.5 mmol/L.
- TGs >5.6 mmol/L.
- Other abnormal clinical or lab findings.

Manage mild side-effects (p. 59).

STEP 3: CHECK FOR VIRAL SUPPRESSION AND PROVIDE ART

VIRAL LOAD MONITORING:
- If VL is between 50 -1000 copies/mL, begin step-up adherence support and repeat VL after 3 months.
- If VL is >1000 copies/mL, begin step-up adherence support and repeat VL after 3 months. If the repeat VL is:
  - <50 copies/mL, return to routine VL monitoring.
  - 50-1000 copes/mL, continue step-up adherence support and repeat VL after 6 months.
  - >1000 copies/mL, refer the child to be managed for possible treatment failure.

PROVIDE ART
- Check ARV doses —these will need to increase as the child grows.
- Check if child is eligible to transition onto a new ARV regimen. See p. 52 and 59.

STEP 4: PROVIDE OTHER HIV TREATMENTS

- Provide cotrimoxazole prophylaxis (p. 38).
- Remember to stop when it is no longer needed.

STEP 5: PROVIDE ROUTINE CARE

- Check that the child's immunisations are up to date (p. 34).
- Provide Vitamin A and deworming if due (p. 34).

STEP 6: COUNSEL THE CAREGIVER

- Use every visit to educate and provide support to the caregiver.
- Key issues to discuss include: How the child is progressing, feeding, adherence, side-effects and correct management, disclosure (to others and to the child), support for the caregiver, access to CSG and other grants.
- Ask about the health of the mother, father, and siblings. Remember that VL suppression is critical in all family members living with HIV.

STEP 7: ARRANGE FOLLOW-UP CARE

- If the child is well, make an appropriate follow-up date in 1-3 months time, taking into account repeat medication, blood results and clinical check ups.
- If there are any problems, follow-up more frequently.

ROUTINE **LABORATORY TESTS**

- Laboratory tests that should be routinely sent are shown in the table below.
- Always make sure that the results are correctly recorded in the child's records and Paediatric and Adolescent Stationery.
- Make sure that you act on the tests: if you are unsure discuss the test results with a colleague or refer the child.

TEST	WHEN SHOULD IT BE DONE
CD4 count and percentage	• At ART initiation. • After 12 months on ART. • Thereafter every 6 months until the child meets the criteria to discontinue cotrimoxazole prophylaxis. • If not virally suppressed, monitor CD4 count 6 monthly.
Viral load (VL)	• After 6 months on ART. • Thereafter, if virally suppressed, every 12 months. • If not virally suppressed, address adherence, repeat VL after 3 months and reassess.
Hb or FBC	• At initiation/ before change to 2nd line ART. • If less than 8 g/dl refer to next level of care. • If on AZT (1st or 2nd line ART):
Non-fasting total cholesterol and triglycerides	**For children on Protease Inhibitor based regimens (LPV/r, ATV/r, DRV/r)** • After 3 months on ART • Then every 12 months thereafter, if within normal/ acceptable range.
Creatinine and creatinine clearance (Cr Cl)	**For children/ adolescents on tenofovir (TDF)** • At initiation • At month 3, 6 and 12 • Thereafter, repeat every 12 months.

VIRAL LOAD (VL)	RESPONSE
Lower than detectable limits (LDL) or <50 copies/mL	• Praise the patient and caregiver (s). • Continue VL monitoring according to normal schedule. • Continue routine follow up and adherence support.
50 - 1 000 copies/mL	• Begin step up adherence package. • Repeat VL in 3 months. • Thereafter monitor VL according to
>1 000 copies/mL	• Begin step-up adherence package. • Repeat VL in 3 months: - If <50: Return to routine monitoring as above. - If 50 - 1 000: Continue step up adherence support and repeat VL after 6 months. - If VL still >1000: Refer to doctor visiting the clinic or local hospital if no visiting doctor.
Creatinine and creatinine clearance (Cr Cl)	**For children/ adolescents on tenofovir (TDF)** • At initiation • At month 3, 6 and 12 • Thereafter, repeat every 12 months.

ADHERENCE PRINCIPLES

- Very high levels of adherence (>95%) should be attained for adequate virological response and prevention of viral resistance.
- This can be achieved with regular education and support.
- All efforts to encourage this level of adherence should be made.
- Viral load measurements are useful for monitoring adherence.

SWITCHING CHILDREN AND ADOLESCENTS **BETWEEN FIRST LINE ART REGIMENS**

- If a child is taking an old ARV regimen, change to the corresponding new regimen once the child meets the criteria for switching.
- Make sure all the requirements for switching are met (age, weight, Viral Load (VL), renal function if switching to TDF).
- If the child is taking a regimen with LPV/r, make sure this is a first line regimen. Do not switch if the child/ adolescent is on a second line regimen.
- If the child did not have a VL in the last 6 months, do not do additional VL outside the routine monitoring. Wait for the result of the next routine VL before switching.
- For adolescent girls in childbearing age, provide information on risks and benefits of DTG (p. 55) to enable the girl/ caregiver to make an informed choice to either stay on EFV or switch to DTG.
- Dose according to the paediatric ART dosing chart

TEST	CURRENT first line regimen	NEW FIRST LINE REGIMEN	REQUIREMENTS BEFORE SWITCHING
Infants >4 weeks of age and >42 weeks gestational age	AZT + 3TC + NVP	ABC + 3TC + LPV/r	• VL is not required before switching. • If body weight is <3 kg, obtain expert advice on dosing.
Children and adolescents weighing ≥20 kg	ABC + 3TC + LPV/r **OR** ABC + 3TC + EFV	ABC + 3TC + DTG	• VL <50 copies/mL in the last 6 months or alternatively VL 50 –999 copies/mL twice in the last 6 months, provided adequate assessment (cause of elevated VL) and enhanced adherence counselling is provided. • If VL >1000 copies/mL on 2 successive tests, refer to doctor.
Children and adolescents weighing ≥35 kg and ≥10 years of age	ABC + 3TC + LPV/r **OR** ABC + 3TC + EFV	TDF + 3TC + DTG	• VL <50 copies/mL in the last 6 months or alternatively VL 50 –999 copies/mL twice in the last 6 months, provided adequate assessment (cause of elevated VL) and enhanced adherence counselling is provided. • If VL >1000 copies/mL on 2 successive tests, refer to doctor. • Estimated GFR >80 mL/min is required for starting TDF.

Ensure that the patient is taking a first line regimen with LPV/r and not a second line regimen.

SIDE EFFECTS **OF ARVs**

SIGNS/SYMPTOMS	MANAGEMENT
Yellow eyes (jaundice) or abdominal pain	• Stop medicines and REFER URGENTLY.
Rash	• **If on abacavir,** assess carefully. Are there any signs & symptoms of Abacavir hypersensitivity: Is there any fever, nausea, vomiting, diarrhoea or abdominal pain? Is there generalized fatigue or achiness? Is there any shortness of breath, cough or pharyngitis? If the child has at least 2 of the above, do NOT stop medicine but call for advice or refer URGENTLY. • **If on efavirenz or nevirapine:** • If the rash is severe and associated with symptoms such as fever, vomiting, oral lesions, blistering, facial swelling, conjunctivitis and skin peeling, STOP all mediciness and refer URGENTLY. • If the rash is mild to moderate, with no systemic symptoms; the medicine can be continued with no interruption but under close observation.
Nausea and vomiting	• Advise that the medicines should be given with food. If persists for more than 2 weeks or worsens, call for advice or refer. If vomiting everything, or vomiting associated with severe abdominal pain or difficult breathing, **REFER URGENTLY**.
Diarrhoea	• Assess, classify and treat using diarrhoea charts (p. 4, 26, 42-43). Reassure caregiver that if due to ARV, it will improve in a few weeks. Follow-up as per Chart Booklet (p. 47). If not improved after two weeks, call for advice or refer.
Fever	• Assess, classify and manage according to Fever Chart (p. 3, 27).
Headache	• Give paracetamol (p. 40). If on efavirenz, reassure that this is common and usually self-limiting. If persists for more than 2 weeks or worsens, call for advice or refer.
Sleep disturbances, nightmares, anxiety	• This may be due to efavirenz. Give at night; counsel and support (usually lasts less than 3 weeks). If persists for more than 2 weeks or worsens, call for advice or refer.
Tingling, numb or painful feet/legs	• If new or worse on treatment, call for advice or refer.
Changes in fat distribution	• Ask about and look for changes in appearance, especially thinness around the face and temples and excess fat around the tummy and shoulders. • If child on stavudine: Substitute stavudine with abacavir if VL is less than 50 copies/mL. If VL is greater than 50 copies/mL or if the child is not on stavudine, REFER. • If child develops enlarged breasts (lipomastia) which is severe and/or occurs before puberty, REFER.

IDENTIFY **SKIN PROBLEMS** | IF SKIN IS ITCHING

LOOK	SIGNS	CLASSIFY	TREAT	FEATURES IN HIV INFECTION
	• Itchy papules at different stages of evolution. • Found on the arms and legs. • Healed lesions are often dark/ hyper pigmented. • The itch is difficult to manage. • May flare after starting ART, but generally improves as the CD4 count increases. • Essential to exclude scabies.	**PAPULAR URTICARIA** OR **PAPULAR PRURITIC ERUPTIONS**	• Trim finger nails and avoid scratching. • Apply 1% hydrocortisone to new, inflamed lesions for five days. • Give oral antihistamine to relieve itch: - Short term use: Chlorphenamine, oral, 0.1mg/kg/ dose 6-8 hourly - Long term use for children 2-6 years: Cetirizine, oral, 5mg once daily - Caution: Do not give antihistamines to children < 2 years of age. • Refer if no improvement after 2 weeks or if underlying malignancy or systemic disease is suspected.	• Is a clinical stage 2 defining case (p. 53) • Consider HIV infection in all cases.
	• An itchy circular lesion with a raised edge and fine scaly area. • Scalp lesions may result in loss of hair.	**RINGWORM (TINEA)**	• Avoid sharing clothes, towels and toiletries (e.g. brushes and combs) to prevent spreading the infec-tion to others. • Wash and dry skin well before applying treatment. • Apply an imidazole (e.g. clotrimazole 1% cream) three times daily until two weeks after lesions have cleared. • For scalp infections (tinea capitis) give oral fluconazole 6mg/kg once daily for 28 days.	• Extensive: there is a high inci-dence of co-existing nail infec-tion which has to be treated adequately to prevent recurrence of tinea infections of skin. • Fungal nail infection is a clinical stage 2 defining disease (p. 53).
	• Intense itching, more severe at night. • Small burrows between fingers, tows, elbow areas and buttocks. • Secondary infection may occur. • Small babies may have vesi-cles and pustules on the palms and soles and face. • The infestation spreads easily, usually affecting more than one person in the household.	**SCABIES**	• All close contacts should be treated simultaneously (even if not itchy). • Wash all bed linen and underwear in hot water • Expose all bedding to direct sunlight. • Put on clean clothes after treatment. **In children 6 yrs and older** • Apply benzyl benzoate 25% from the neck to the toes. Allow the lotion to remain on the body for 24 hours , then wash off using soap and water. **If benzyl benzoate is unsuccessful or in children > 6 yrs** • Apply permethrin 5% lotion. Leave on overnight and wash off in the morning (may be repeated after one week). • Treatment may need to be repeated after one week. • Treat secondary bacterial infection if present.	• HIV-positive children, may present with crusted scabies - extensive areas of crusting mainly on the scalp, face, back and feet. • Patients may not complain of itching.

IDENTIFY **SKIN PROBLEMS** | IF SKIN HAS BLISTERS/SORES/PUSTULES

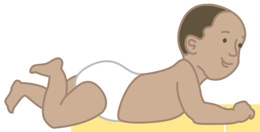
LOOK	SIGNS	CLASSIFY	TREAT	FEATURES IN HIV INFECTION
	• Mild fever preceding the rash. • Rash begins on the trunk and face, later spreads to the arms and legs. • Vesicles appear progressively over days and forms scabs after they rupture. • Contagious from the fever starts until all lesions have crusted. • Usually lasts for about 1 week.	**CHICKEN POX**	• Limit contact with other children and pregnant women until all lesions have crusted. • Ensure adequate hydration. • Cut fingernails short and discourage scratching. • Treat itching: - Apply calamine lotion - In severe cases, give an oral antihista-mine: Chlorphenamine 0.1 mg/kg/dose 6–8 hourly NB: only children >2 years). • **Refer urgently if severe rash or complications** (e.g. pneumonia, jaundice, me-ingitis, myocarditis, hepatitis).	• Atypical presentation in immunocom-promised children. • May last longer. • Complications like secondary bacterial infection, myocarditis, hepatitis, encephalitis, meningitis and pneumonia are more frequent. • Chronic infection with continued appearance of new lesions for >1 month; • Typical vesicles evolve into non-healing ulcers that become necrotic and crusted.
	• Vesicles in one area on one side of body with intense pain or scars plus shooting pain. • They are uncommon in children except when they are immune-compromised.	**HERPES ZOSTER**	• Keep lesions clean and dry. • Acyclovir 20 mg/kg 4 times daily for 7 days. • Give paracetamol for pain relief (p. 40). • Follow up in 7 days. • Refer if disseminated disease, involvement of the eye, pneumonia or features meningtis. • Monitor for secondary bacterial infection.	• Duration of disease longer. • Haemorrhagic vesicles, necrotic ulceration. • Rarely recurrent, disseminated or multidermatomal. • A clinical stage 2 defining disease (p. 53).
	• Pustules and papules with honey-coloured crusts. • Commonly starts on the face or buttocks, then spreads to the neck, hands, arms and legs.	**IMPETIGO**	• Good personal and household hygiene to avoid spread of infection. • Wash and soak sores in soapy water to soften and remove crusts. • Apply antiseptic 8 hourly: Povidone iodine 5% cream or 10% ointment. • Drain pus if fluctuant. • Give antibiotic if extensive lesions: Cephalexin, oral, 12-25mg/kg/dose 6 hourly OR Flucloxacillin, oral, 500mg 6 hourly. • **Refer urgently if child has fever and or if infection extends to the muscles.**	

IDENTIFY **SKIN PROBLEMS** | NON-ITCHY

LOOK	SIGNS	CLASSIFY	TREAT	FEATURES IN HIV INFECTION
	• Caused by a poxvirus. • Dome-shaped papules with a central depression (umblication). • Most commonly seen on the face and trunk in children.	**MOLLUSCUM CONTAGIOSUM**	• Allow to heal spontaneously if few in number. • Apply a tincture of iodine BP to the core of individual lesions using an applicator. • Refer children with: - Extensive lesions - No response to treatment - Lesions close to the eye (to an ophthalmologist).	• Incidence is higher. • More than 100 lesions may be seen. • Lesions often chronic and difficult to eradicate. • Extensive molluscum contagiosum indicates Stage II HIV disease (p. 53).
	• Appears as papules or nodules with a rough surface. • Seen most often on the hands and fingers, but can be found anywhere on the body.	**WARTS**	• May be left alone to wait for improvement • Apply salicylic acid 15-20% to the warts. - Protect surrounding skin with petroleum jelly - Apply daily to the wart and allow to dry - Occlude for 24 hours - Soften lesions by soaking in warm water, and remove loosened keratin. - Repeat process daily until the warts disap-pear. • Refer if extensive.	• Lesions are numerous and recalci-trant to therapy. • Extensive viral warts indicates Stage II HIV disease (p. 53).
	• Greasy scales and redness on central face, body folds. • The scalp, face, ears and skin folds (e.g. axillae, groins, under the breasts) are commonly affected.	**SEBORRHOEIC DERMATITIS**	• Apply hydrocortisone 1% cream to the face and flexures. • For scalp itching, scaling and dandruff: wash hair and scalp 2-3 times a week with selenium suphide 2.5% suspension. • If severe, REFER.	• May be severe in HIV infection. • Secondary infection may occur.

CLINICAL REACTIONS **TO MEDICINES**

LOOK	SIGNS	CLASSIFY	TREAT	FEATURES IN HIV INFECTION
	• One or more dark round or oval skin lesions with central vesicles . • The lesions recur on the same spot, and increase in number with each successive attack.	**FIXED DRUG REACTION**	• Stop the offending medication. • In mild cases, apply 1% hydrocortisone for five days. • Discuss all cases with a doctor.	• Could be a sign of reactions to ARVs or clotrimazole (See also p. 59).
	• Erythematous (red), sometimes scaly plaques found on the face, flexures, trunk and extensors. • Yellow pustules which crust indicate secondary bacterial infection.	**ECZEMA**	• Bath in warm water using soap substitutes only once daily. • Dry skin gently. • Apply Hydrocortisone 1% cream followed by application of moisturizer (emulsifying oint-ment). • Treat itching oral chlorphenamine 0.1 mg/kg/dose 6–8 hourly • Treat secondary infection: Cephalexin, oral, 12–25 mg/kg/dose 6 hourly for 5 days OR: Flucloxacillin, oral, 12–25mg/kg/dose 6 hour-ly for 5 days. • Refer if: - severe acute moist or weeping eczema is present - no improvement after two weeks - Secondary herpes infection (eczema herpeticum) is suspected	• Lesions are numerous and recalci-trant to therapy.
	• Severe and acute reaction due to many drugs, the commonest being cotrimoxazole or nevirapine. • Lesions involve the skin as well as the mucous membranes (e.g. eyes, mouth and genitalia). • May start as widespread red irregu-lar rash with or without blisters. The blisters rupture leaving denuded areas of skin. • May cause difficulty in breathing.	**STEVEN JOHNSON SYNDROME (SJS)**	• Stop medication • **REFER URGENTLY** • Assess for dehydration (p. 26) and give fluids according to plan A, B or C (p. 42-43). • Give pain relief (Paracetamol p. 40).	• May be caused by a number of drugs including nevirapine, cotri-moxazole, efavirenz, antiepilep-tics, antibiotics, antifungals and traditional medications. • HIV and other infections predis-pose patients to SJS.



Developmental screening

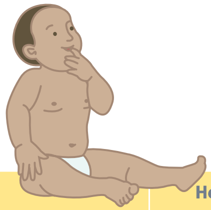
	Hearing/ communication	Vision and adaptive	Cognitive/ behaviour	Motor skills	Caregiver concerns
6 weeks					
10 weeks					
14 weeks Date __/__/__ Sign________	☐ Startles to loud sounds	☐ Follows face or close objects with eyes	☐ Smiles at people	☐ Holds head upright when held against shoulder ☐ Hands are open most of the time	
6 months Date __/__/__ Sign________	☐ Moves eyes or head in direction of sounds ☐ Responds by making sounds when talked to	☐ Eyes move well together (no squint) ☐ Recognises familiar faces ☐ Looks at own hands	☐ Laughs aloud ☐ Uses different cries or sounds to show hunger, tiredness, discomfort	☐ Grasps toy in each hand ☐ Lifts head when lying on tummy	
9 months Date __/__/__ Sign________	☐ Babbles ('ma-ma', 'da-da') ☐ Turns when called	☐ Eyes focus on far objects	☐ Throws, bangs toys/objects ☐ Reacts when caregiver leaves, calms when she/he returns	☐ Sits without support ☐ Moves objects from hand to hand	
12 months Date __/__/__ Sign________	☐ Uses simple gestures (e.g. lifts arms to be picked up) ☐ Has one meaningful word (dada, mama) although sounds may not be clear ☐ Imitates different speech sounds	☐ Looks for toys/ objects that disappear ☐ Looks closely at toys/objects and pictures	☐ Imitates gestures (e.g. clapping hands) ☐ Understands 'no'	☐ Stands with support ☐ Picks up small objects with thumb and index finger	

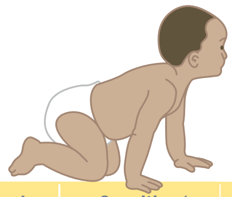
For Health Workers...

AT EVERY VISIT: Ask the parents or caregiver if they have any specific concerns about how their child hears, sees, communicates, learns, behaves, interacts with others and uses their hands, arms, legs and body.

Tick the boxes above if the caregiver says that the child CAN do the following or if it was OBSERVED during the visit. Try to elicit the behaviour or movement if not observed through spontaneous play and interaction.

If the child can complete the task, tick the box ☑. If the child cannot complete the task, cross the box ☒. If you were unable to assess the task, indicate ND (not done) next to the relevant task.

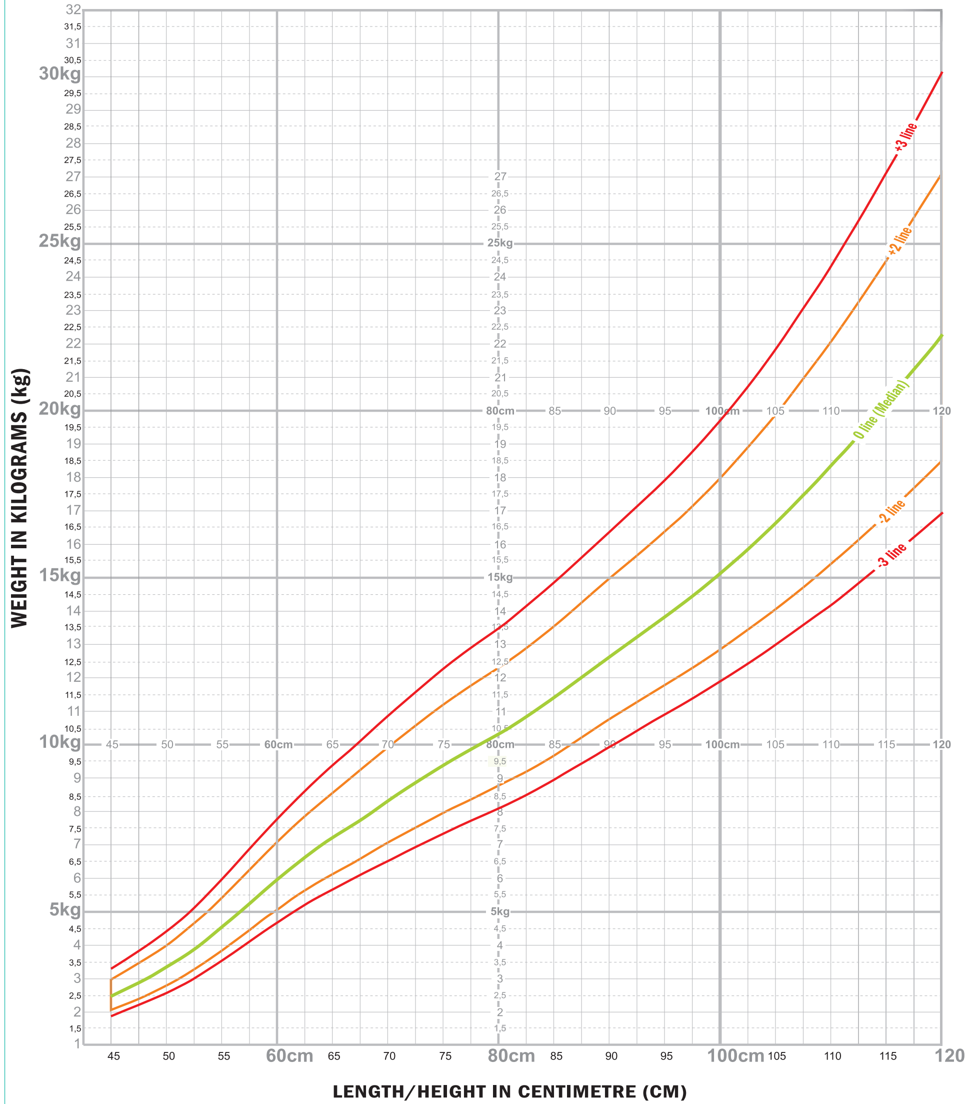




	Hearing/ communication	Vision and adaptive	Cognitive/ behaviour	Motor skills	Caregiver concerns
18 months Date __/__/__ Sign________	☐ Understands names of at least 2 common objects e.g. cup ☐ Uses at least 3 words other than names	☐ Looks at small things and pictures	☐ Follows simple commands (e.g. 'come here')	☐ Walks alone ☐ Uses fingers to feed	
3 years Date __/__/__ Sign________	☐ Child speaks in simple 3 word sentences	☐ Sees small shapes clearly at a distance (across room)	☐ Plays with other children/ adults ☐ Uses pretend play (e.g. feeds doll)	☐ Runs well ☐ Eats on own	
5-6 years Date __/__/__ Sign________	☐ Speaks in full sentences ☐ Caregiver understands child's speech	☐ No reported/ observed vision problems (Use illiterate E chart if available)	☐ Interacts with children and adults ☐ Understands multiple commands (e.g. 'go to the kitchen and bring me your plate')	☐ Hops on one foot ☐ Holds with fingers at top or middle of pencil or stick to draw ☐ Dresses self	
REFERRED TO:	☐ Speech therapy ☐ Audiology ☐ Doctor	☐ Doctor ☐ Optometrist ☐ Ophthalmic nurse ☐ Occupational therapist	☐ Occupational therapist ☐ Doctor ☐ Psychologist ☐ Speech therapist	☐ Physiotherapist ☐ Occupational therapist ☐ Doctor	

If specified health professional not available, refer to one of the following health professionals for an initial developmental assessment: Doctor/physiotherapist/occupational therapist/speech therapist

BOYS: Weight-for-height charts



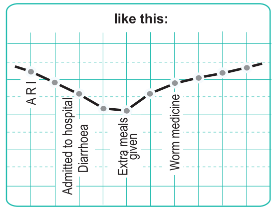
This **Weight-for-Length Chart** shows body-weight relative to length/height in comparison to the Median (the green line).

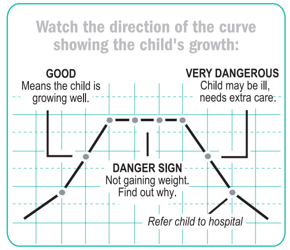
- A boy whose weight-for-length/height is above the +3 (red) line, is **obese**.
- A boy whose weight-for-length/height is above the +2 line (orange), is **overweight**.
- A boy whose weight-for-length/height is below the –2 line (orange), is **wasted**.
- A boy whose weight-for-length/weight is below the –3 line (red), is **severely wasted (SEVERE ACUTE MALNUTRITION). Refer for urgent specialised care.**

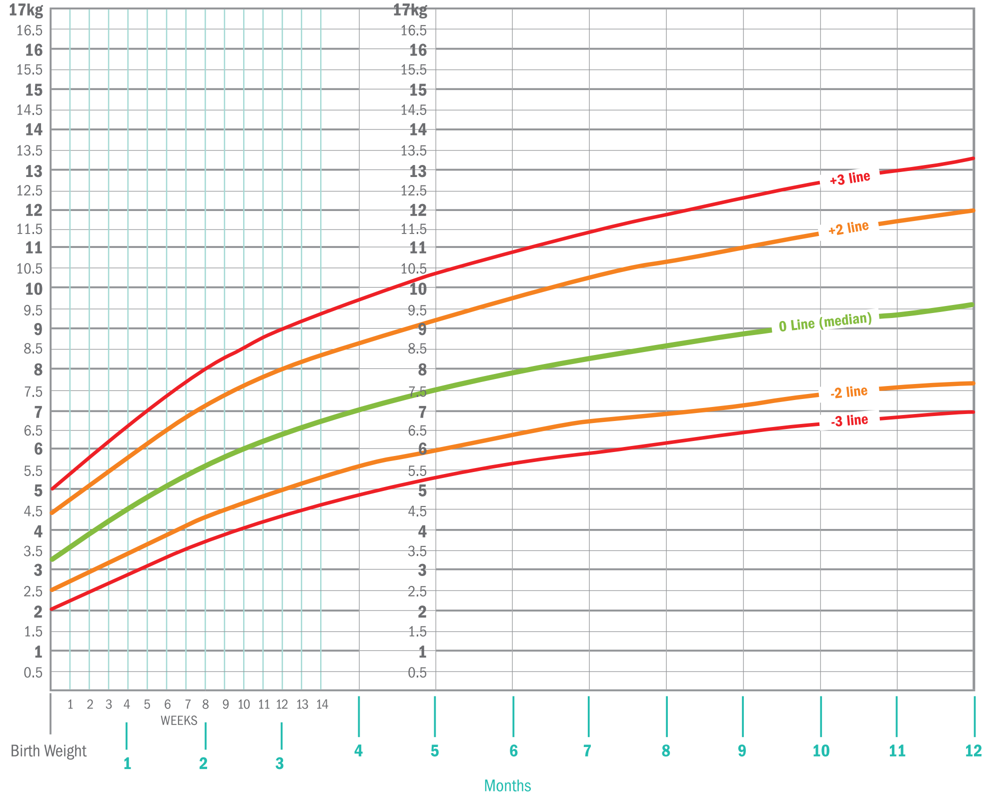
BOYS: Weight-for-age charts

Write on the chart

- Any illness e.g. diarrhoea, ARI, etc.
- Admission to hospital,
- Solids introduced,
- Breastfeeding stopped,
- Birth of next child, etc.

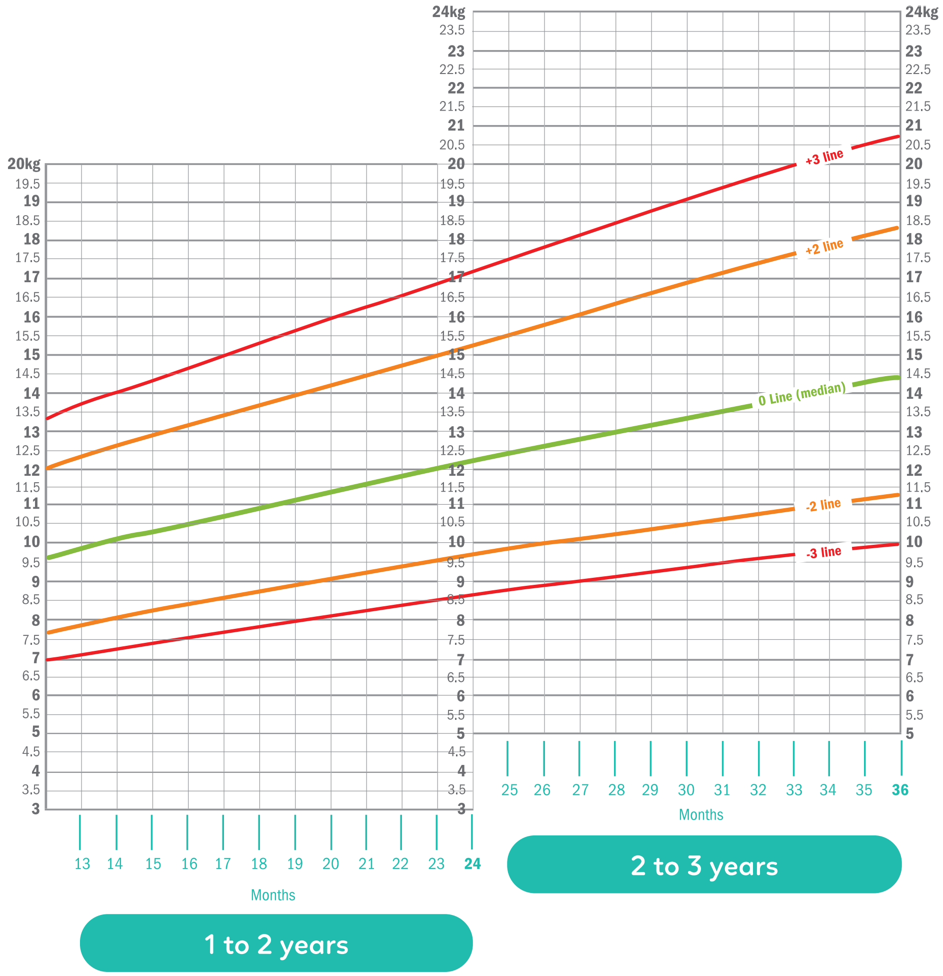






Birth to 1 year

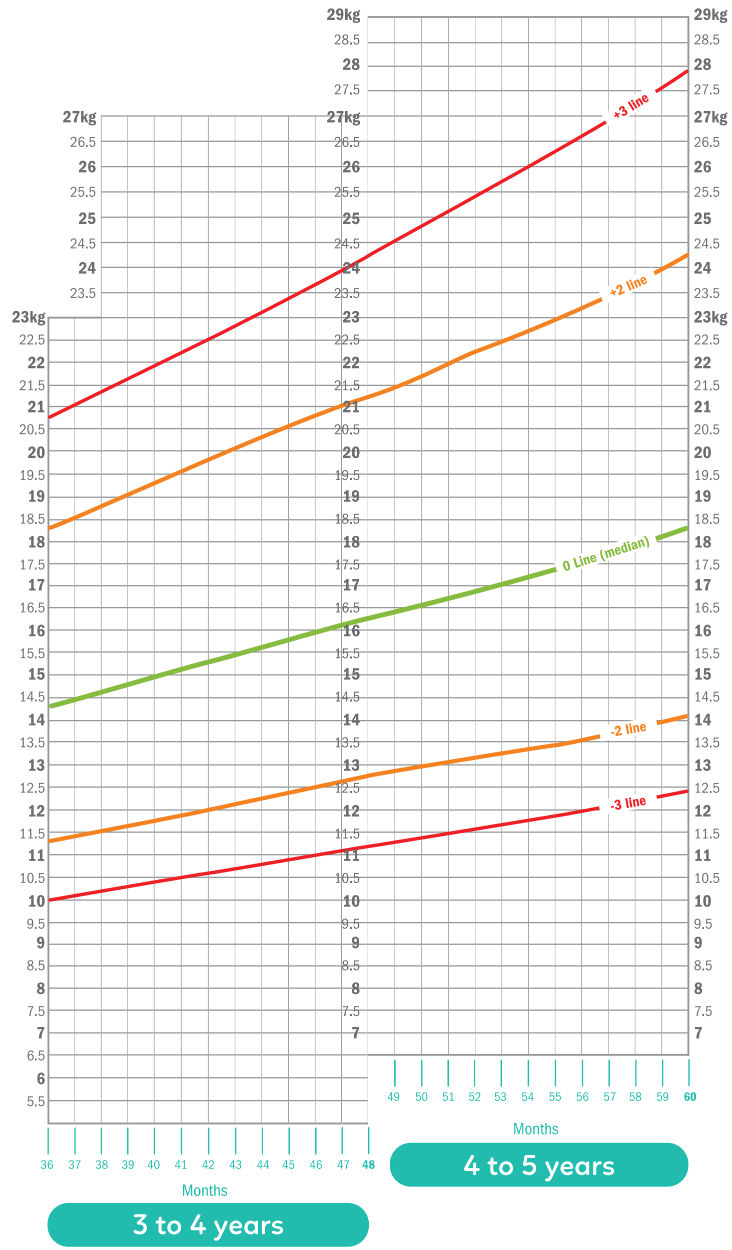
BOYS: Weight-for-age charts



Interpretation of lines:

- This Weight-for-Age Chart shows body-weight relative to age in comparison to the Median (green O-line).
- A boy whose weight-for-age is below the orange -2 line, is underweight.
- A boy whose weight-for-age is below the red -3 line, is severely underweight.
- If his line crosses a z-score line and the shift is away from the median, this may indicate a problem or risk of a problem.
- If his line shifts away from his birth trend line, this may indicate a problem or a risk of a problem.

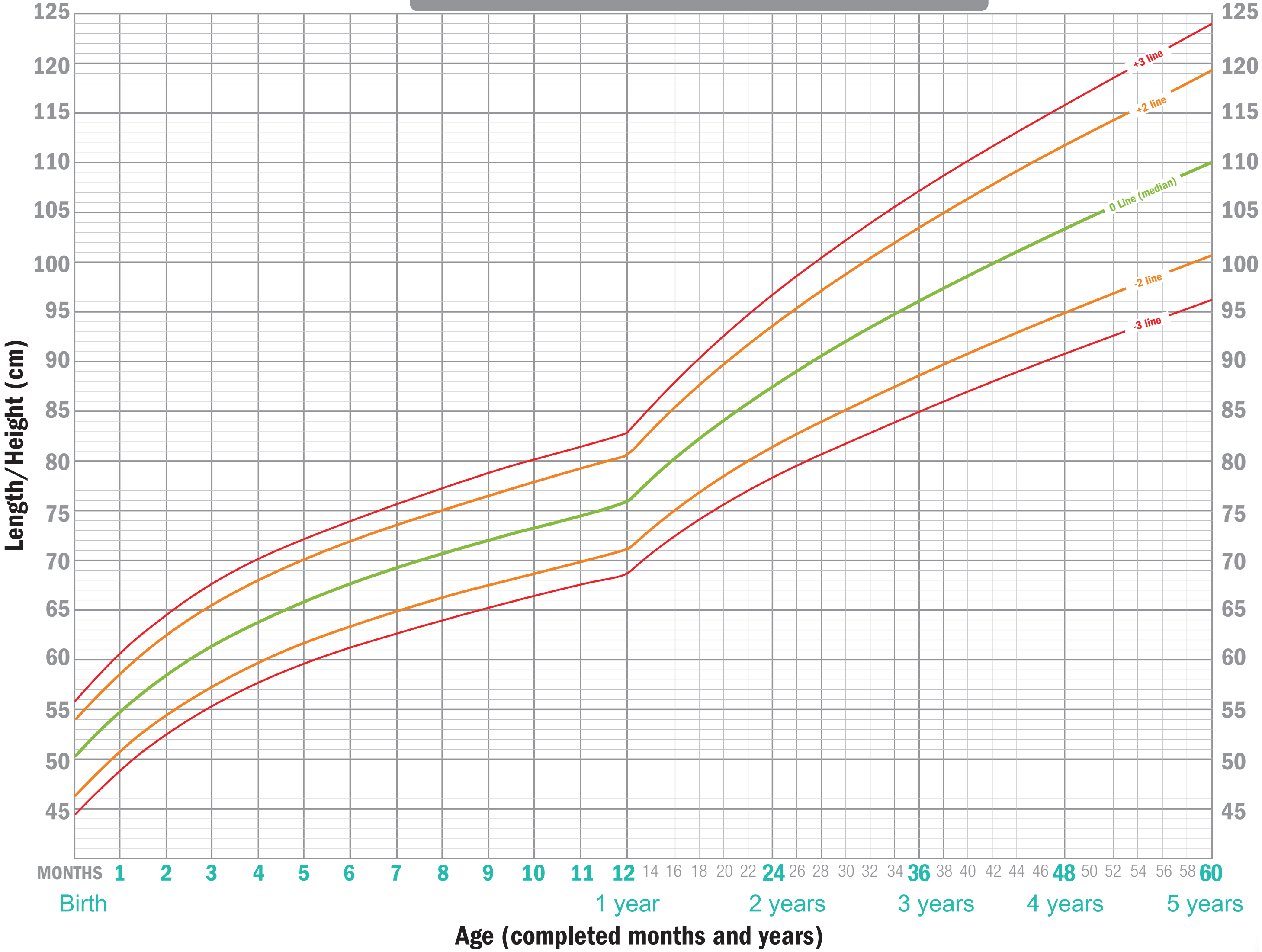
BOYS: Weight-for-age charts 3 to 5 years



BOYS: Height-for-age charts

birth to 5 years

FOR PERIODIC USE
(every 6 months)



INTERPRETATION OF LINES
This **Length/Height-for-Age Chart** shows height relative to age in comparison to the Median green (0-line)

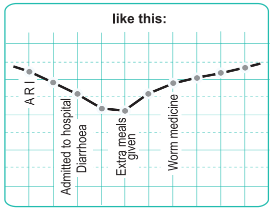
A boy whose length/height-for-age is below the orange -2 line, is **stunted**

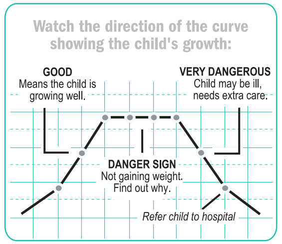
A boy whose length/height-for-age is below the red -3 line, is **severely stunted**

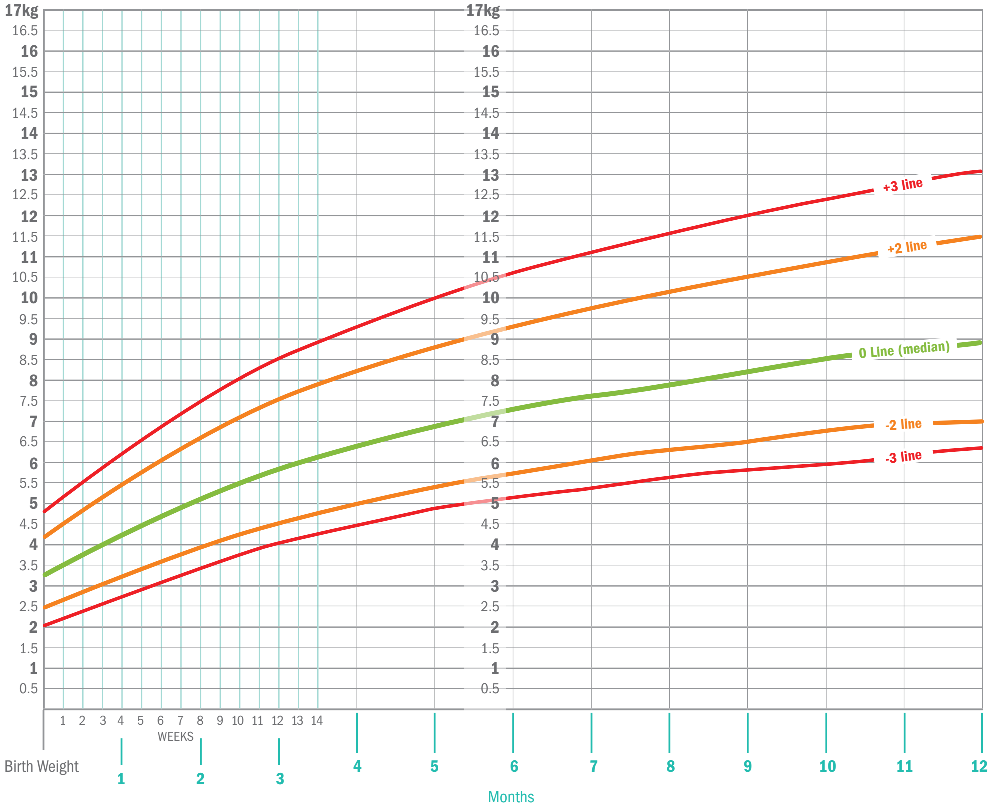
GIRLS: Weight-for-age charts

Write on the chart

- Any illness e.g. diarrhoea, ARI, etc.
- Admission to hospital,
- Solids introduced,
- Breastfeeding stopped,
- Birth of next child, etc.

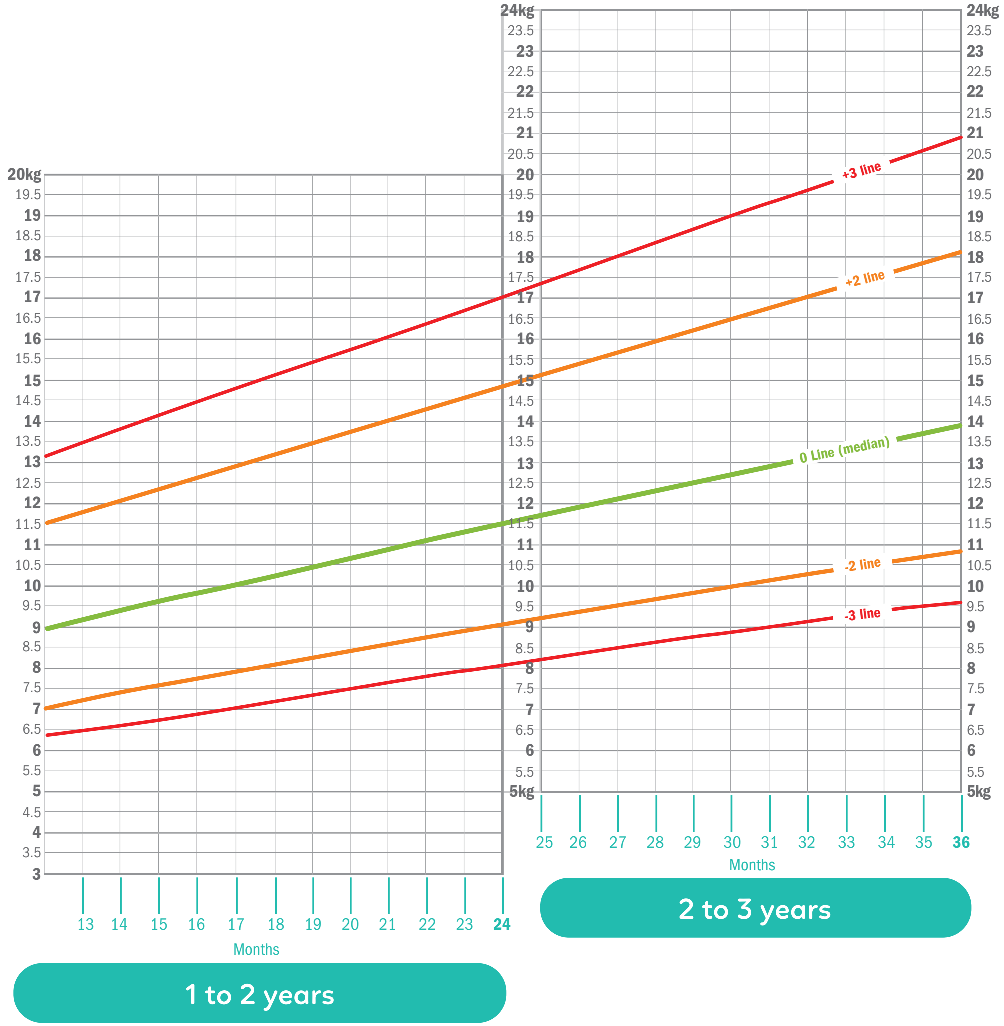






Birth to 1 year

GIRLS: Weight-for-age charts

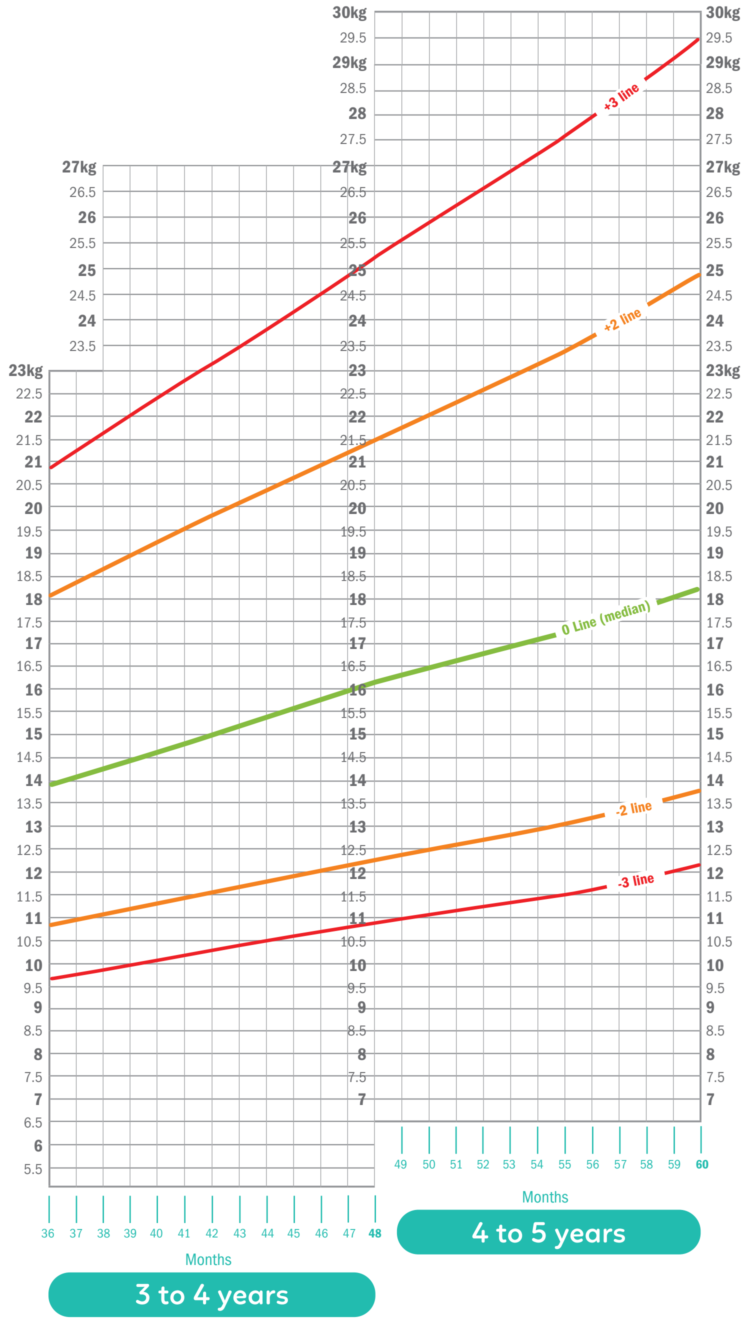


Interpretation of lines:

- This Weight-for-Age Chart shows body-weight relative to age in comparison to the Median (0-line).
- A girl whose weight-for-age is below the orange (-2 line), is underweight.
- A girl whose weight-for-age is below the red (-3 line), is severely underweight.
- If her line crosses a z-score line and the shift is away from the median, this may indicate a problem or risk of a problem.
- If her line shifts away from her birth trend line, this may indicate a problem or a risk of a problem.

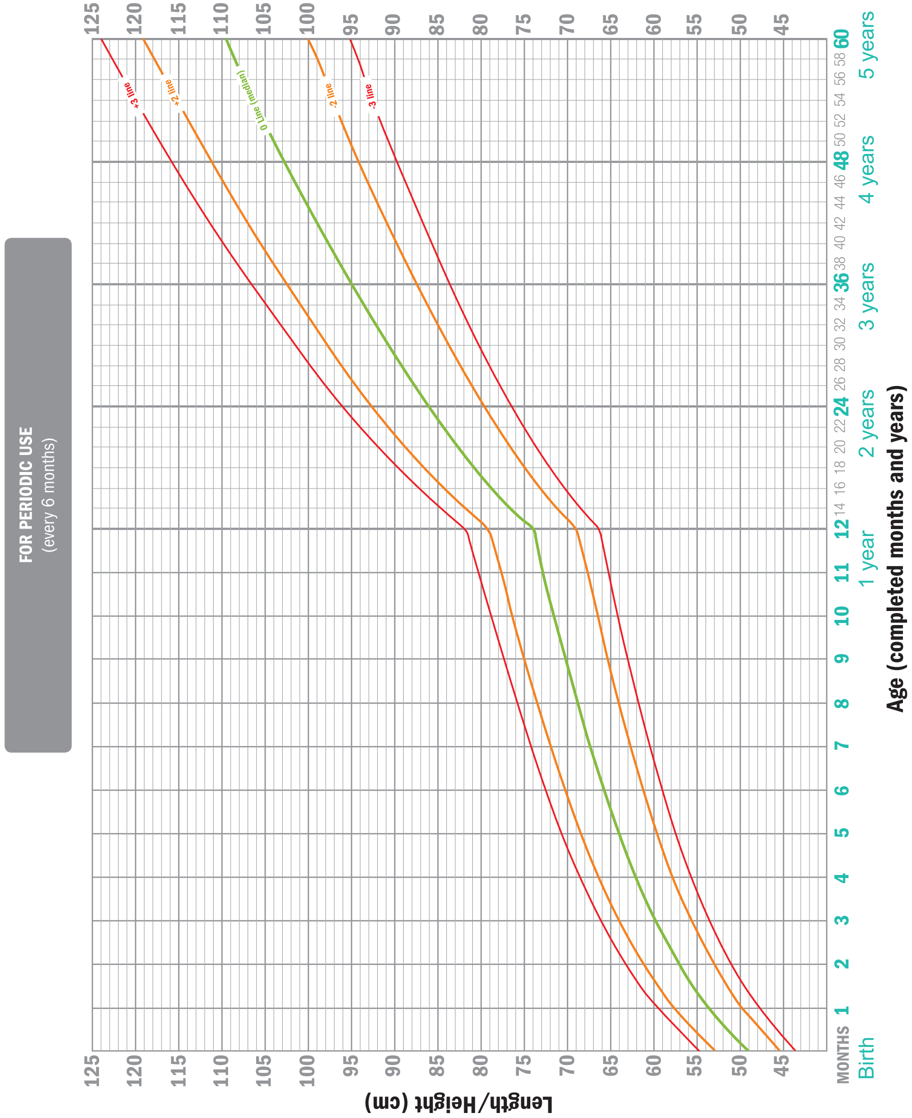
GIRLS: Weight-for-age charts

3 to 5 years



GIRLS: Height-for-age charts

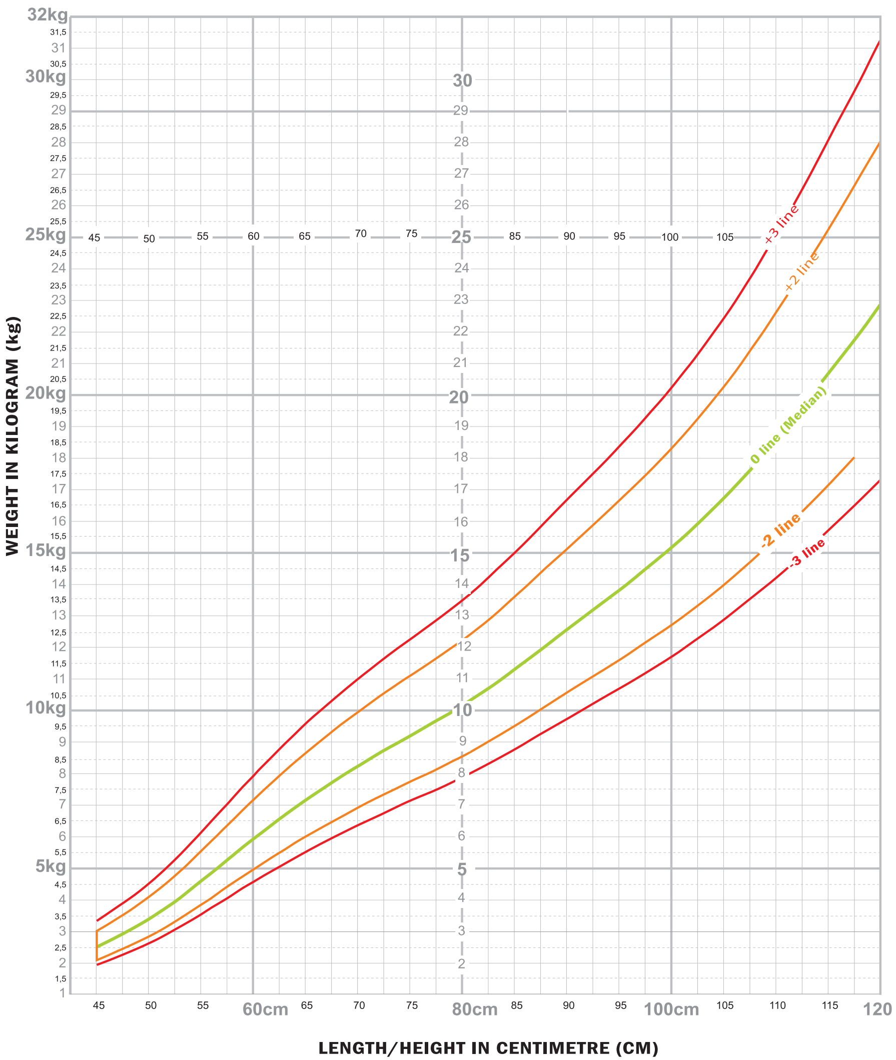
birth to 5 years



INTERPRETATION OF LINES

This **Length/Height-for-Age Chart** shows height relative to age in comparison to the Median green (0-line)
A girl whose length/height-for-age is below the orange -2 line, is **stunted**
A girl whose length/height-for-age is below the red -3 line, is **severely stunted**

GIRLS: Weight-for-height chart



This **Weight-for-Height/Length Chart** shows body-weight relative to length/height in comparison to the Median
(the 0 z-score line).

- A girl whose weight-for-length/height is above the (red) +3 line, is **obese.**
- A girl whose weight-for-length/height is above the (orange) +2 line, is **overweight.**
- A girl whose weight-for-length/height is below the (orange) –2 line, is **wasted.**
- A girl whose weight-for-length/weight is below the (red) –3 line, is **severely wasted (SEVERE ACUTE MALNUTRITION). Refer for urgent specialised care.**

Side-by-Side®

NUTRITION LOVE PROTECTION HEALTHCARE EXTRA CARE

CARE OF YOUNG INFANT AGED BIRTH UP TO 2 MONTHS

Name: ______________________ Age: _______ HC____________ Weight: _______ kg Temp: ______ °C Date: ______________________

CHECK: Is the baby just been delivered? If yes, follow the Helping Babies Breathe approach

ASK: Does the child have any problems? If yes, record here: ______________________

ASK: Has the child received care at another health facility since birth? If yes, record here: ______________________

____

CHECK FOR POSSIBLE BACTERIAL INFECTION AND JAUNDICE (ALL YOUNG INFANTS, CB p. 3) ◯ convulsions with this illness ◯ apnoea Breaths per minute: ______ Repeat (if required): ____ ◯ fast breathing ◯ severe chest indrawing ◯ nasal flaring or grunting ◯ bulging fontanelle ◯ fever (37.5°C or above) or low temperature (below 35.5 °C or feels cold) ◯ only moves when stimulated ◯ pus draining from eye ◯ sticky discharge from eyes ◯ umbilical redness If yes, does it extend to skin or is pus draining ◯ ◯ skin pustules present If yes, are they many or severe ◯ ◯ Any jaundice if age less than 24 hours ◯ Jaundice appearing after 24 hours of age ◯ yellow palms and soles	**ALWAYS classify:**
DOES THE YOUNG INFANT HAVE DIARRHOEA? (CB p. 4) ◯ yes ◯ no Diarrhoea for_____ days ◯ very young infant (> 1 month) ◯ blood in stool ◯ lethargic or unconscious ◯ restless and irritable ◯ sunken eyes **Skin pinch:** ◯ Normal ◯ goes back slowly ◯ goes back very slowly (> 2 secs)	
If infant has not been seen by health worker before, CHECK FOR CONGENITAL PROBLEMS (CB p. 5) **Check Mother RPR results** ◯ Positive ◯ Negative ◯ Unknown **If positive, Mother is** ◯ Untreated ◯ Partially treated ◯ Tx completed > a month before delivery **Check for Priority Signs:** ◯ Cleft lip or palate ◯ Imperforate anus ◯ Ambiguous Genitalia ◯ Nose not patent ◯ Macrocephaly ◯ Abdominal distension ◯ Very low birth weight (≤ 2kg) **Check Head and Neck** ◯ Microcephaly ◯ Fontanelle or sutures abnormal ◯ Swelling of scalp, abnormal shape ◯ Neck Swellings, webbing ◯ Face, Eyes, Mouth or nose abnormal ◯ Unusual appearance ◯ Other problems **Check Limbs and Trunk** ◯ Abnormal position of limbs ◯ Club foot ◯ Abnormal Fingers and toes, palms ◯ Abnormal chest, back and abdomen ◯ Undescended testis or hernia	
CONSIDER RISK FACTORS IN ALL YOUNG INFANTS (CB p. 6) ◯ Signs/symptoms of congenital TB ◯ Mother is on TB treatment ◯ Mother has died or is ill ◯ Infant not breastfed ◯ Admitted to hospital for more than three days after delivery ◯ Teenage caregiver ◯ Social deprivation ◯ Infant weighed less than 2 kg at birth ◯ Known neurological or congenital problem	**ALWAYS classify:**
CONSIDER HIV INFECTION (CB p. 7) **Has the child had an HIV (PCR) test?** ◯ No test ◯ Pos test ◯ Neg test **If test is negative, is the child being breastfed (or breastfed in the 6 weeks before the test was done)?** ◯ yes ◯ no **If child not tested, has the mother had an HIV test?** ◯ No test ◯ Pos test ◯ Neg test	**ALWAYS classify:**

THEN CHECK FOR FEEDING PROBLEM OR POOR GROWTH (all young infants; CB p. 8-9)

Breastfeeding ◯ no ◯ yes ______ times in 24 hours
Difficulties with feeding ◯ no ◯ yes
Receiving other food or drinks ◯ no ◯ yes ______ times in 24 hours
If yes, what do you use to feed the baby? ______________________
Plot weight for age ◯ low weight ◯ not low weight **Weight gain** ◯ satisfactory ◯ unsatisfactory ◯ Thrush

ALWAYS classify:

If the young infant has any difficulty feeding, or is feeding less than 8 times in 24 hours, taking any other food or drinks, or is low weight for age AND has no indication to refer urgently to hospital, assess breastfeeding (CB p. 8 or 9). Record findings on the back of the recording form.

CHECK THE YOUNG INFANT'S IMMUNISATION STATUS (All young infants; CB p. 10) :Underline those already given - Tick those needed today

◯ Birth	◯ BCG	◯ OPV0	◯ RV1
◯ 6 weeks	◯ DaPT-IPV-HB-Hib1	◯ OPV1	◯ PCV1
◯ 10 weeks	◯ DaPT-IPV-HB-Hib2		

Doses needed today:

Next immunisation date:

CONSIDER OTHER RISK FACTORS AND PROBLEMS

ASK ABOUT THE MOTHER OR CAREGIVER'S HEALTH (RECORD FINDINGS AND MANAGEMENT)

TREAT THE SICK YOUNG INFANT

Return for follow-up in: ______________________ **Give any immunization today:** ______________________

Name: ______________________ **Designation:** ______________________

Signature: ______________ **SANC no:** ______________ **Contact no:** ______________

If the young infant has any difficulty feeding, or is feeding less than 8 times in 24 hours, taking any other food or drinks, or is low weight for age AND has no indication to refer urgently to hospital, assess feeding(CB p. 8,9). Record findings here.

ASSESS BREASTFEEDING

Breastfed in previous hour? ◯ yes ◯ no
If the mother has not fed in the previous hour, ask the mother to put the child to the breast
Observe the breastfeed for four minutes, check attachment:
Chin touching breast ◯ yes ◯ no Mouth wide open ◯ yes ◯ no
Lower lip turned out ◯ yes ◯ no More areola above than below the mouth ◯ yes ◯ no
◯ Not attached ◯ Not well attached ◯ Good attachment
Is the young infant suckling effectively (that is, slow deep sucks, sometimes pausing)?
◯ Not sucking at all ◯ Not suckling effectively ◯ Suckling effectively

If an HIV positive mother has chosen not to breastfeed:

Which breastmilk substitute is the infant receiving? ______________________
Is enough milk being given in 24 hrs? ◯ yes ◯ no
Correct feed preparation? ◯ yes ◯ no
Any food or fluids other than formula? ◯ yes ◯ no
Feeding utensils? ◯ cup ◯ bottle
Utensils cleaned adequately? ◯ yes ◯ no

CHILD AGE 2 MONTHS UP TO 5 YEARS

Name: ______________________ Age: ______ HC__________ Weight: ______ kg Temp: ______ °C Date: ______________

What are the child's problems? ________________________________ ◯ Initial Visit ◯ Follow-up Visit

CHECK FOR GENERAL DANGER SIGNS ◯ yes ◯ no ◯ NOT ABLE TO DRINK OR BREASTFEED ◯ CONVULSIONS DURING THIS ILLNESS ◯ VOMITS EVERYTHING ◯ LETHARGIC OR UNCONSCIOUS	**ALWAYS classify:**
COUGH OR DIFFICULT BREATHING? ◯ yes ◯ no For how long? ______ days Counted ______ breaths per minute ◯ Fast breathing ◯ Chest indrawing ◯ Stridor ◯ Wheeze **If wheeze, ask:** ◯ Wheeze before this illness ◯ Wheeze for more than 7 days ◯ Frequent cough at night ◯ Treatment for asthma at present	
DIARRHOEA? ◯ yes ◯ no For how long? _____ days ◯ Blood in the stool How much / what fluid mother has given: _____________ General condition: ◯ Lethargic or unconscious ◯ Restless or irritable ◯ Sunken eyes ◯ Not able to drink/drinking poorly ◯ Drinking eagerly, thirsty Pinched abdomen skin goes back: ◯ Normal ◯ goes back slowly ◯ goes back very slowly (> 2 secs)	
FEVER (by history or feel or 37.5°C or above)? ◯ yes ◯ no Fever for how long?_______ days ◯ Stiff neck ◯ Bulging fontanelle ◯ Malaria Risk. **If malaria risk:** Malaria Test: ◯ Positive ◯ Negative ◯ Not done	
MEASLES? ◯ yes ◯ no ◯ Fever ◯ Measles rash ◯ Runny nose, or Cough or Red eyes ◯ Contact with measles ◯ Pneumonia ◯ Symptomatic HIV infection ◯ Cornea clouded ◯ Deep mouth ulcers ◯ Mouth ulcers ◯ Eyes draining pus	
EAR PROBLEM? ◯ yes ◯ no ◯ Ear pain ◯ Wakes child at night? ◯ Pus seen draining from ear. ◯ Ear discharge reported: for _____ days ◯ Tender swelling behind the ear	
SORE THROAT? ◯ yes ◯ no ◯ Runny nose ◯ Cough ◯ Rash	
CHECK FOR MALNUTRITION **All children** Weight: ◯ Very Low Weight ◯ Losing weight ◯ Weight gain unsatisfactory ◯ Weight gain satisfactory MUAC: ◯ < 11.5cm ◯ ≥11.5 and< 12.5cm ◯ 12.5cm or more Weight for Height/length: ◯ z-score < -3 ◯ z-score ≥-3 and -2 ◯ z-score ≥ 2 or more Ht:_____ Oedema of both feet: ◯ Yes ◯ No	**ALWAYS classify:**
CHECK FOR ANAEMIA **All children** ◯ Severe Pallor ◯ Some Pallor ◯ No Pallor If pale, Haemoglobin measured _______ gm / dl	**ALWAYS classify:**

CONSIDER HIV INFECTION **All children** Has the child had an HIV test? If yes, what was the result? ◯ Pos HIV test ◯ Neg HIV test If Test Positive: is child on ART ◯ yes ◯ no If no test, has the mother had an HIV test? ◯ No test ◯ Pos HIV test ◯ Neg HIV test And: ◯ Pneumonia now ◯ Unsatisfactory weight gain ◯ Persistent diarrhoea now or in past 3 months ◯ Oral thrush ◯ Ear discharge now or in the past ◯ Parotid enlargement ◯ Low weight for age ◯ Enlarged glands in 2 or more of: neck, axilla or groin	**ALWAYS classify:**
TB RISK **All children** ◯ Close TB contact ◯ Cough for 3 weeks ◯ Loss of weight ◯ Fever for 7days ◯ NOT GROWING WELL All children with HIGH RISK OF TB or RISK OF TB must have full TB assessment and be classified	**ALWAYS classify:**
ASSESS CHILD'S FEEDING **if anaemia, not growing well or age < two years** How are you feeding your child? ____________ ◯ Breastfed: ________ times during the day. ◯ Breastfed during the night ◯ Given other milk: ______________ type. Using ____________________to give the milk. Other milk given _________ times per day. Amounts of other milk each time:____________ ◯ Given other food or fluids. These are: ____________ These given _________ times per day. Using ____________ to give other fluids. ◯ Feeding changed in this illness. If yes, how? ____________ If Not Growing Well: How large are the servings? ____________ ____________ ◯ Own serving given. Who feeds the child and how?____________	**ALWAYS classify:**

CHECK IMMUNISATION STATUS AND GIVE ROUTINE TREATMENTS

Underline those that have been given. **Tick those already given**	Birth 6 weeks 10 weeks 14 weeks 6 months 9 months 12 months 18 months 6 years	◯ BCG ◯ DaPT-IPV-HB-Hib1 ◯ DaPT-IPV-HB-Hib2 ◯ DaPT-IPV-HB-Hib3 ◯ DaPT-IPV-HB-Hib4 ◯ Td	◯ OPV0 ◯ OPV1	◯ RV1 ◯ RV2 ◯ Measles1 ◯ Measles2	◯ PCV1 ◯ PCV2 ◯ PCV3	Vitamin A ◯ Yes ◯ No Mebendazole ◯ Yes ◯ No

ASSESS OTHER PROBLEMS:

TREAT THE SICK YOUNG INFANT

Refer any child who has a danger sign, even if no other severe classification.

Name: ______________________________ **Designation:** ______________________________

Signature: ____________________ **SANC no:** ____________________ **Contact no:** ____________________