

Healthcare workers' guide to the Road to Health book

2020 edition



Nutrition



Love



Protection



Healthcare



Extra Care



health

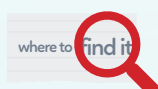
Department:
Health
REPUBLIC OF SOUTH AFRICA



Contents

Abbreviations and acronyms	2
Background	3
Why was the Road to Health book revised?	3
How was the Road to Health book revised?	3
Background to the Road to Health book 2017 revision	3
Introduction to the Road to Health book	4
Getting started with the Road to Health book	4
How to use the Road to Health book.....	5
Theme 1: Good NUTRITION to grow and be healthy	6
Why a section on nutrition?	6
What does the section on nutrition contain?	6
What do health workers need to emphasise to caregivers about their	6
child's nutrition and how can the Road to Health book help them?	
Other reference materials	6
Growth monitoring and promotion (GMP)	7
Weight-for-age chart (WFA)	7–11
Length/Height-for-age (L/HFA)	12–15
Weight-for-length/height (WFL/H)	16–19
Mid-upper arm circumference (MUAC)	20–21
Nutritional Assessment Summary table.....	22–25
Theme 2: LOVE, play and talk for healthy development.....	26–29
Theme 3: PROTECTION from preventable childhood	30
diseases and injuries	
Immunisations	31–35
Vitamin A.....	35–36
Deworming.....	36–37
Oral health.....	38
Theme 4: HEALTH CARE for sick children	39–41
Theme 5: Special care for children who need EXTRA CARE.....	42–43
Annexures	44
Annexure 1: Procedure to accurately take child's weight	44
Annexure 2: Procedure to accurately take child's length/height	45–46
Annexure 3: Procedure to accurately measure child's MUAC	47
Annexure 4: Example of completed EPI schedule	48

Icons used in this guide



This icon tells you where in the Road to Health book you can find the content being discussed.



Sections marked with this icon show you examples of accurately filled-in tables and charts from the Road to Health book.



Important information is marked with this icon. Make sure you have read it and understand it.

Abbreviations and acronyms

AEFI	Adverse Event Following Immunisation
AIDS	Acquired Immune Deficiency Syndrome
AFP	Accute Flaccid Paralysis
ARV	Antiretroviral
EPI	Expanded Programme on Immunisation
GMP	Growth Monitoring and Promotion
HIV	Human Immunodeficiency Virus
IMCI	Integrated Management of Childhood Illnesses
IYCF	Infant and Young Child Feeding
L/HFA	Length/Height-for-age
MAM	Moderate Acute Malnutrition
MUAC	Mid-upper arm circumference
NAM	Not Acutely Malnourished
NCDs	Non-Communicable Diseases
NNT	Neonatal Tetanus
PHC	Primary Health Care
RtHB	Road to Health book
SAM	Severe Acute Malnutrition
TB	Tuberculosis
VVM	Vaccine Vial Monitor
WFA	Weight-for-age
WFL/H	Weight-for-length/height

This guide is for health workers. It explains how to use the revised 2018 Road to Health Book (RtHB).

Background

The RtHB is a record of the child's medical history, health, growth and development. Therefore, it is an important tool for all health workers who are providing care and monitoring the care given to children from birth until they turn five. Equally as important, the RtHB is a tool for caregivers because it informs them on the entire spectrum of care children need in order to develop well.

Why was the RtHB revised?

- To track and improve infant and young child feeding, thus preventing malnutrition and promoting healthy growth.
- To promote secure and responsive relationships between caregivers and their children.
- To improve early learning for children through age- and developmentally-appropriate play and communication.
- To improve recognition of risks and early identification of children needing extra care and support.
- To improve the prevention, treatment and management of childhood illnesses at primary health care (PHC) level and facilitate referral of children in need of secondary and tertiary level services.
- To empower caregivers with knowledge of the care their children need to develop, grow well and be healthy.
- To facilitate discussion between healthcare workers and caregivers.

How was the RtHB revised?

Content inputs were made by the National Directorate of Child, Youth and School Health with contributions from partners and provinces. The RtHB will be printed and distributed by the provincial departments of health. It is recommended that provinces liaise with private institutions at local level to facilitate access and ensure that all children are issued the same type of RtHB.

Background to the RtHB 2017 revision

The Ministerial Committee on Morbidity and Mortality in Children under 5 years (CoMMIC) recommended that the opportunities afforded by the RtHB should be maximised to improve health outcomes for children. Healthcare workers should use the RtHB as an ideal platform for the delivery of an essential package of services to achieve healthy growth, development and wellbeing of young children. Parents or caregivers should be encouraged to use the RtHB for monitoring their child's health.

In line with the South African Early Childhood Development Policy, there is a need to ensure children not only survive but also thrive and transform. This can be done by looking at all aspects of child well-being (nutrition, early learning, providing care and support). The themes in the RtHB cover **all aspects of early childhood development**.

Introduction to the Road to Health book

The RtHB reaches approximately 1 million households every year. Therefore, it has the potential to be an effective tool to improve child health, growth and development, in the context of the under-5 health campaign, Side-by-Side.

The RtHB is:

1. A record of the child's medical history, health, growth and development
2. A guide for caregivers, informing them of the care their children need to be healthy, develop and grow well
3. A tool to encourage collaboration between health workers and caregivers

How to use the RtHB:

If you are a health worker:

- Ensure that every child younger than five years has a RtHB and that every infant receives one at birth.
- Remind the caregiver to always bring the RtHB along when visiting a health facility.
- Tell the caregiver that the RtHB is for them. Tell them that it contains useful childcare information and urge them to read it from cover to cover.
- Complete all relevant sections of the RtHB at each clinic visit.
- Use the five sections of the RtHB to inform and discuss with caregivers any services that are being offered or are available.
- Encourage caregivers to ask questions and share any concerns they may have.
- Ensure that all pregnant women are introduced to the RtHB during antenatal care.

If you are a community health worker:






- Use the RtHB as a tool to prepare for visits and to lead discussions with caregivers.
- Structure household visits around the five sections/themes of the RtHB.
- Look at each of the five sections/themes of the book together with caregivers.
- Help caregivers to understand the messages and answer any questions they may have.
- Ensure that caregivers understand the danger signs on the RtHB's back cover (and on page 3) because these will inform them when their child needs to get help urgently.
- Measure and record the child's mid-upper arm circumference (MUAC) on page 10 of the RtHB.
- Use the book to check for immunisations, routine treatments or tests that are due and either provide these or ensure the child visits the clinic to obtain them.

If you are a parent or caregiver:

- Know that the RtHB is a guide for them on how to give children the care they need.
- Read the RtHB from cover to cover.
- Discuss any questions with a health worker at the clinic or community health worker during home visits.
- Keep the RtHB safe as it is a record of child's health and growth.
- Bring the RtHB along every time their child visits a healthcare facility (clinic, mobile or hospital) or the doctor.

How is the RtHB structured?

The revised RtHB is structured around the five elements of care and services young children need to stay healthy, grow and develop optimally. They are:

Theme/section	Pages in the RtHB	Icons
Good nutrition	Page 4 – 21	
Love, play and talk	Page 22 – 25	
Protection from disease and injury	Page 26 – 29	
Health care when sick or injured	Page 30 – 39	
Extra care and support	Page 40 – 43	



THEME 1:

Good NUTRITION to grow and be healthy

where to find it **pp4 to 21**
of the RtHB

Why a section on nutrition?

- To help children grow and achieve optimum health.
- To prevent all forms of malnutrition.
- To improve exclusive and continued breastfeeding.
- To improve complementary feeding practices.

What does the nutrition section contain?

- Important information and encouragement for mothers to breastfeed exclusively for the first six months of their child's life, and to continue breastfeeding until their child is two years old, and beyond. **Q PAGES 4 AND 5**
- An introduction to appropriate, timely, adequate and safe complementary foods to give to children from six months onwards (while continuing to breastfeed for two years and beyond). **Q PAGES 6 AND 7**
- Growth charts to track and assess the child's weight-for-height, weight-for-age, and height-for-age measurements. **Q PAGES 11 TO 20**

- A table to track and assess the child's mid-upper arm circumference measurement (MUAC). **Q PAGE 10**
- A table to record the child's nutritional assessment. **Q PAGE 21**

! Stunted children are short for their age. Their bodies are not growing optimally, so their brains are most likely also not growing optimally. Stunting also increases the risk of obesity and non-communicable diseases (NCDs). It's estimated that at least one in five children in South Africa is stunted.¹

¹ National Income Dynamics Study, 2014/15

What do health workers need to emphasise to caregivers about their child's nutrition and how can the Road to Health Book help them?

- Mothers need to understand that exclusive breastfeeding is the foundation of good nutrition. Go through the information on pages 4 and 5 together with them. Ensure that all mothers are able to breastfeed successfully.
- HIV-positive mothers need to know that they must breastfeed exclusively and adhere to their antiretroviral treatment and viral load monitoring, so they can prevent mother-to-child transmission of the HIV to their child.
- All mothers need to know how to express and store breastmilk so they can continue exclusive breastfeeding when they are away from their babies. Go through the information on pages 4 and 5 of the RtHB with them.
- Caregivers need to know what foods to give and how much food to give to their children from six months onwards. Go through the information on pages 6 and 7 of the RtHB with the caregiver.
- Mothers who are not breastfeeding their child must understand correct replacement feeding.

Other reference materials

- What you should know about breastfeeding – Supporting breastfeeding in the workplace translated caregiver message booklet available from sidebyside website <https://sidebyside.co.za/>
- National Infant and Young Child Feeding (IYCF) Policy 2013 and update circulars
- National Guideline for the Prevention of Mother-to-Child Transmission of Communicable Infections, 2019
- Integrated Management of Childhood Illnesses (IMCI) Guidelines

Growth monitoring and promotion (GMP)



Why is growth monitoring done?

- Regular growth monitoring of children from birth to five years is crucial because children grow rapidly during this period.
- The rapid growth of infants and young children make them vulnerable to factors such as inadequate nutrition and illness, which might slow or stop growth with long-term consequences for their mental and physical health.
- An undernourished or sick child will have a slower rate of weight gain than a well-nourished healthy child.
- Growth monitoring is an important way to find out if a child is not growing well early so that appropriate corrective measures can be taken.
- Measurements of a child's weight, height/length, and MUAC are used to assess growth. These are known as anthropometric measurements.

Anthropometric refers to the measurement of the size, shape and make-up of the human body.

How is growth monitoring done in the RthB?

- Growth monitoring is done by recording and assessing the child's measurements using the growth charts on pages 10 to 21 in the RthB.
- There are different charts for boys and girls because they grow differently. Make sure you are using the correct charts. They are labeled GIRLS or BOYS at the top of the page.
- The charts will allow you to record, monitor and assess the measurements continuously over time against growth standards.
- The following nutrition indices for children are used in the RthB:
 - Weight-for-Age (WFA)
 - Length/Height-for-Age (L/HFA)
 - Weight-for-Length/Height (WFL/H)
 - Mid-upper arm circumference (MUAC).



Growth monitoring and promotion (GMP) is one of the most useful tools available in child health because it allows you to detect disease, as well as developmental and nutritional problems early. But the value of GMP is dependent on you acting appropriately on the information and on positively reinforcing behaviours that caregivers can take at home to promote growth in their children.

Weight-for-Age chart (WFA)



BOYS WFA CHART ON PAGES 12 - 14 AND
GIRLS WFA CHART ON PAGES 16 - 18 OF RthB.

What is the WFA chart used for?

- The WFA chart is used to reflect body weight relative to the child's age on a given day.
- This chart is good at **detecting growth faltering** because a child's weight fluctuates relatively rapidly with changes in health status or dietary intake.
- WFA is a composite indicator of both **chronic undernutrition and acute undernutrition**.



You must consider all the child's growth charts together, particularly if one of the charts shows a problem. For example, if a child is underweight on the weight-for-age chart, it is important to also measure and record their length/height-for-age and weight-for-length to check for stunting and wasting, respectively.

How do you use the WFA chart?

Getting started:

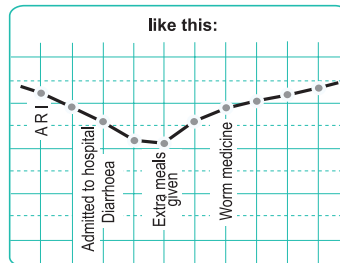
- The WFA chart runs over three pages.
- The horizontal axis line at the bottom of the graph tracks the child's age, from birth to five years.
- Fill in the child's birth day, month and year on the birth weight line (first line). This should be done by the health worker who issues the RthB at birth.
- Fill in the subsequent months from birth month on the successive lines.

Practical example

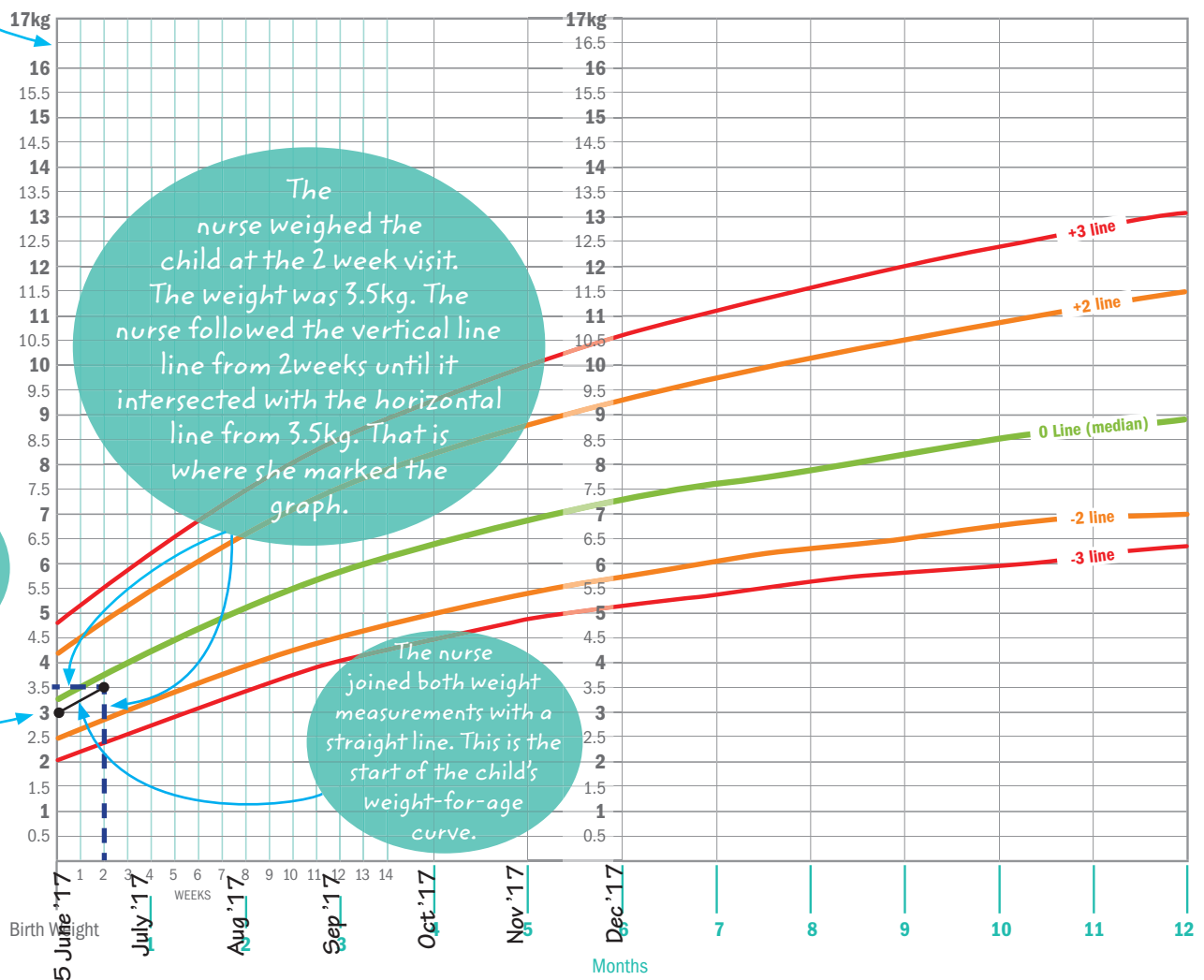
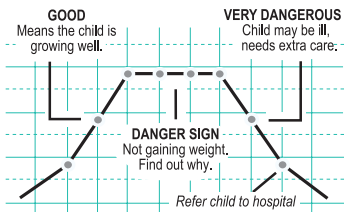
The vertical axis line at the left most side of the graph tracks the child's weight in kilograms, every grey line is 0.5kg

Write on the chart

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



Watch the direction of the curve showing the child's growth:



Birth to 1 year

This child was born on 5 June 2017. The health worker recorded the birthdate, month and year on the birth weight line. The months subsequent to the birth month (June) were filled in on subsequent lines.



Recording weight measurements at each visit:

- Weigh the child. See annexure 1 on page 44 for the procedure to accurately take a child's weight.
- Record the measurement on the chart by finding the age of the child on the horizontal axis and following the vertical line from that point until it intersects with the horizontal line corresponding to the child's weight. Mark a dot at that intersection.
- Link the dot you have just made with the dot made at the previous appointment. Link the dots with a straight line. This is the child's weight-for-age curve.



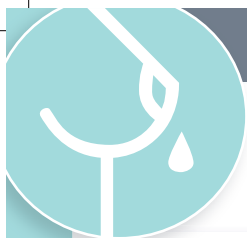
Growth monitoring should be done at every visit to the clinic as per the schedule on page 2 of the RtHB. In the first year of life, weight is measured every single month.

How do you interpret the weight-for-age curve?

- If the weight-for-age curve is below the orange -2 line, this means that the child is **underweight**.
- If the weight-for-age curve is below the red -3 line, this means that the child is **severely underweight**.
- **The weight-for-age chart is not used to classify a child as overweight or obese.**
- See extra notes on Nutrition Assessment section/table on pages 22–25.

Steps to take after measuring weight-for-age:

If the child's weight-for-age curve is below -2/-3 line or above +2/+3 line, the length should be measured to check length/height-for-age.



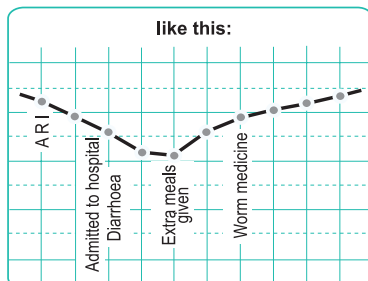
Practical example

GIRLS: Weight-for-age-chart

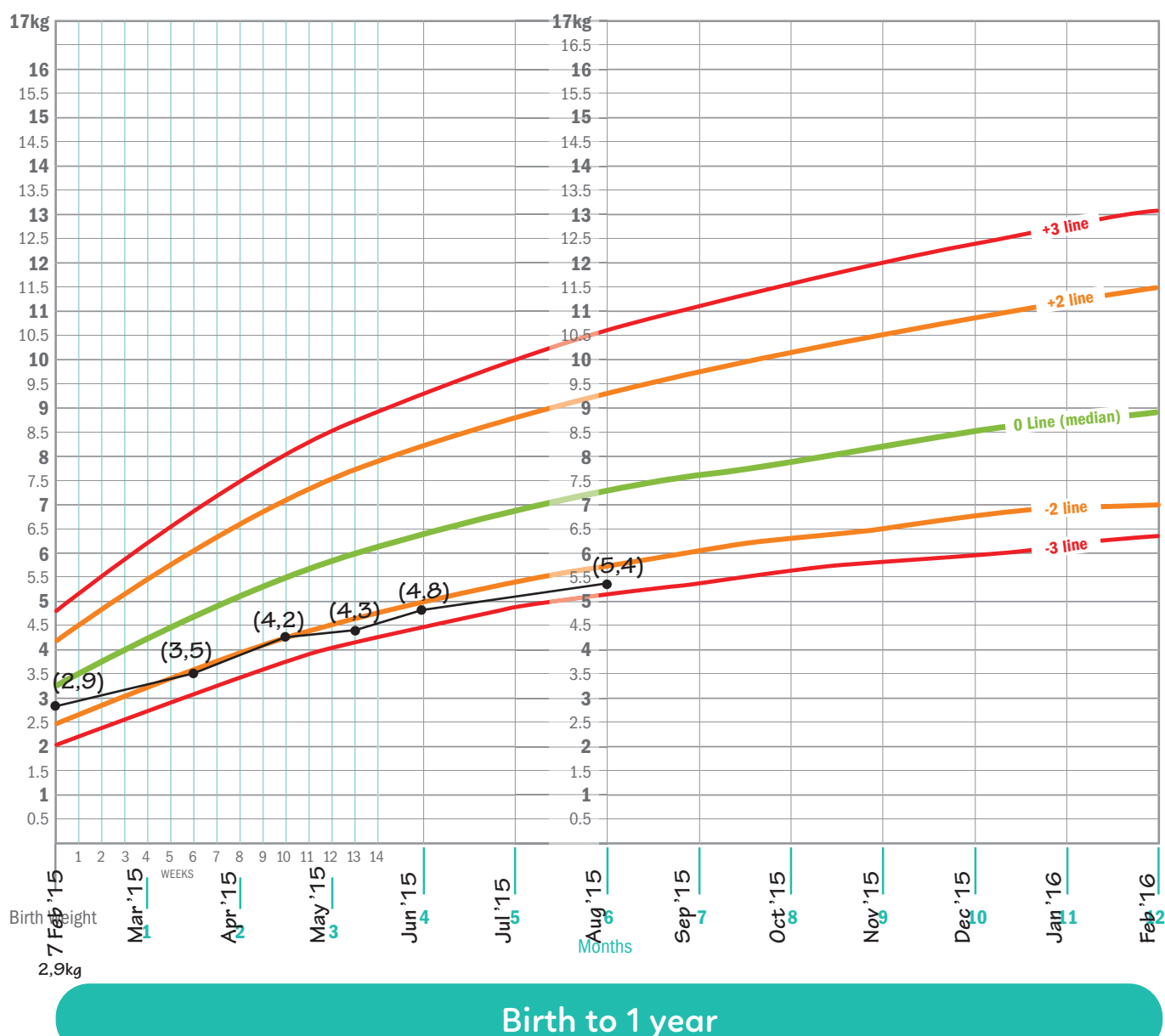
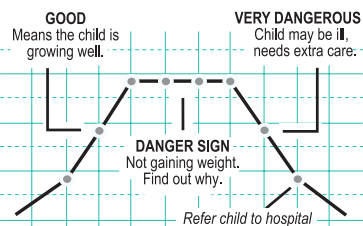
Write on the chart

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

like this:



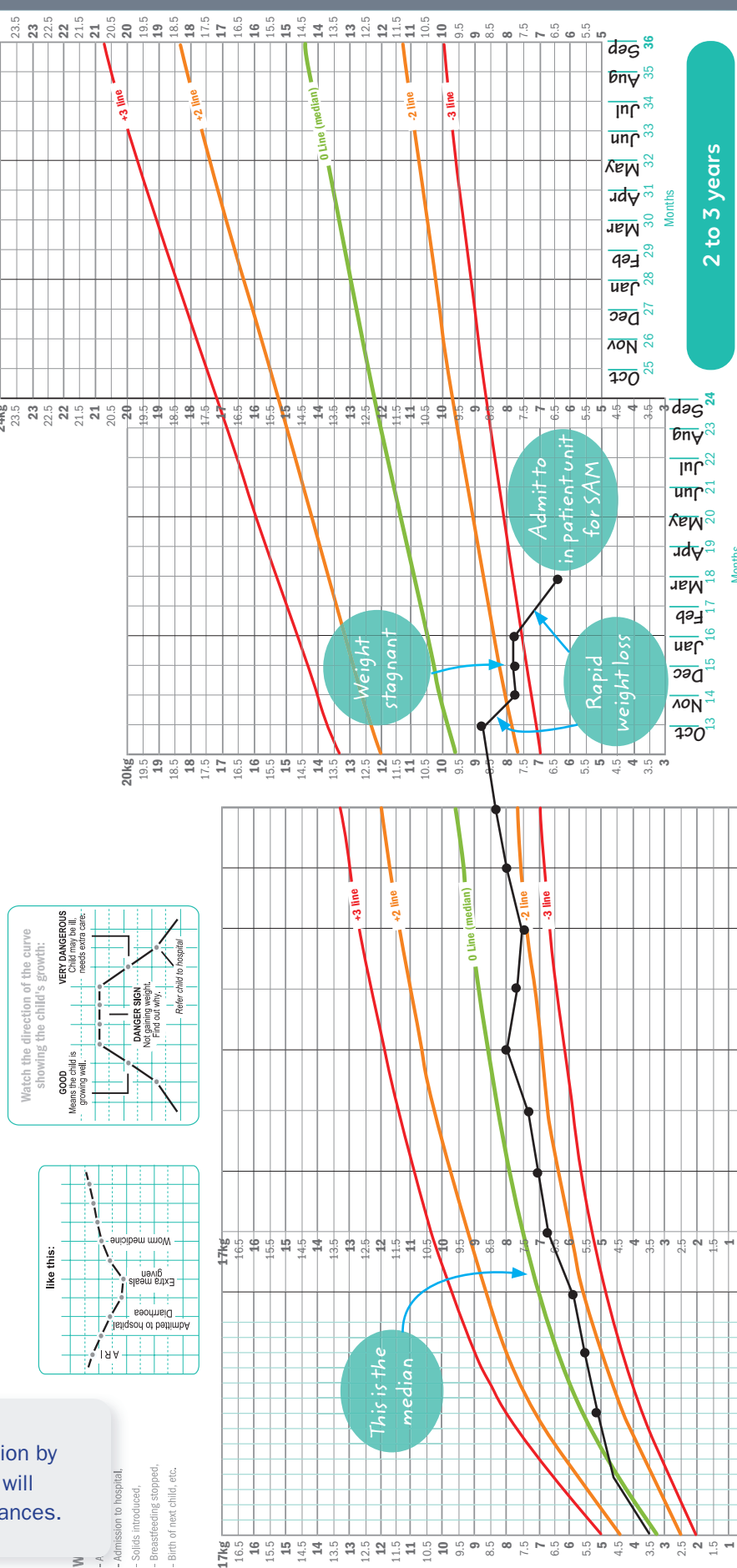
Watch the direction of the curve showing the child's growth:



This example shows the weight-for-age chart for a girl child born on 07 February 2015. The child's birth weight was 2,9kg and she visited the health facility five times after her birth. Notice her weight-for-age curve crossed below the -2 z-score line at six weeks. Her weight-for-age remained stagnant between 10 and 13 weeks and remains below -2 z-score line. She is underweight.

BOYS: Weight-for-age-chart

! Early intervention by healthcare workers will prevent similar instances.



1 to 2 years

2 to 3 years

Birth to 1 year

This example shows the weight-for-age chart for a boy child born on 15 September 2017. The child's birth weight was 3,5kg and he visited the health facility monthly after his birth. Notice his birth weight was above the median, it then crossed the median line on following visit. His weight remained below the median until 13 months. Then he experienced rapid weight loss, crossing two z-score lines – the -2 line and -3 line. He is severely underweight and was admitted to an inpatient unit for Severe Acute Malnutrition (SAM).



Length/Height-for-age (L/HFA)

 BOYS L/HFA CHART IS ON PAGE 15 AND GIRLS L/HFA CHART IS ON PAGE 19 OF RTHB.

What is the L/HFA chart used for?

- The L/HFA chart reflects attained growth in length/height.
- A low length/height-for-age **identifies past or chronic malnutrition** (stunting or severe stunting).
- Stunting indicates reduced linear growth.
- Children who are stunted are more **susceptible to infections and illness**.
- **Length/height-for-age must be done especially if the child's weight-for-age line is below -2/-3 line or above +2/+3 line.**

How do you use the L/HFA chart?

Getting started:

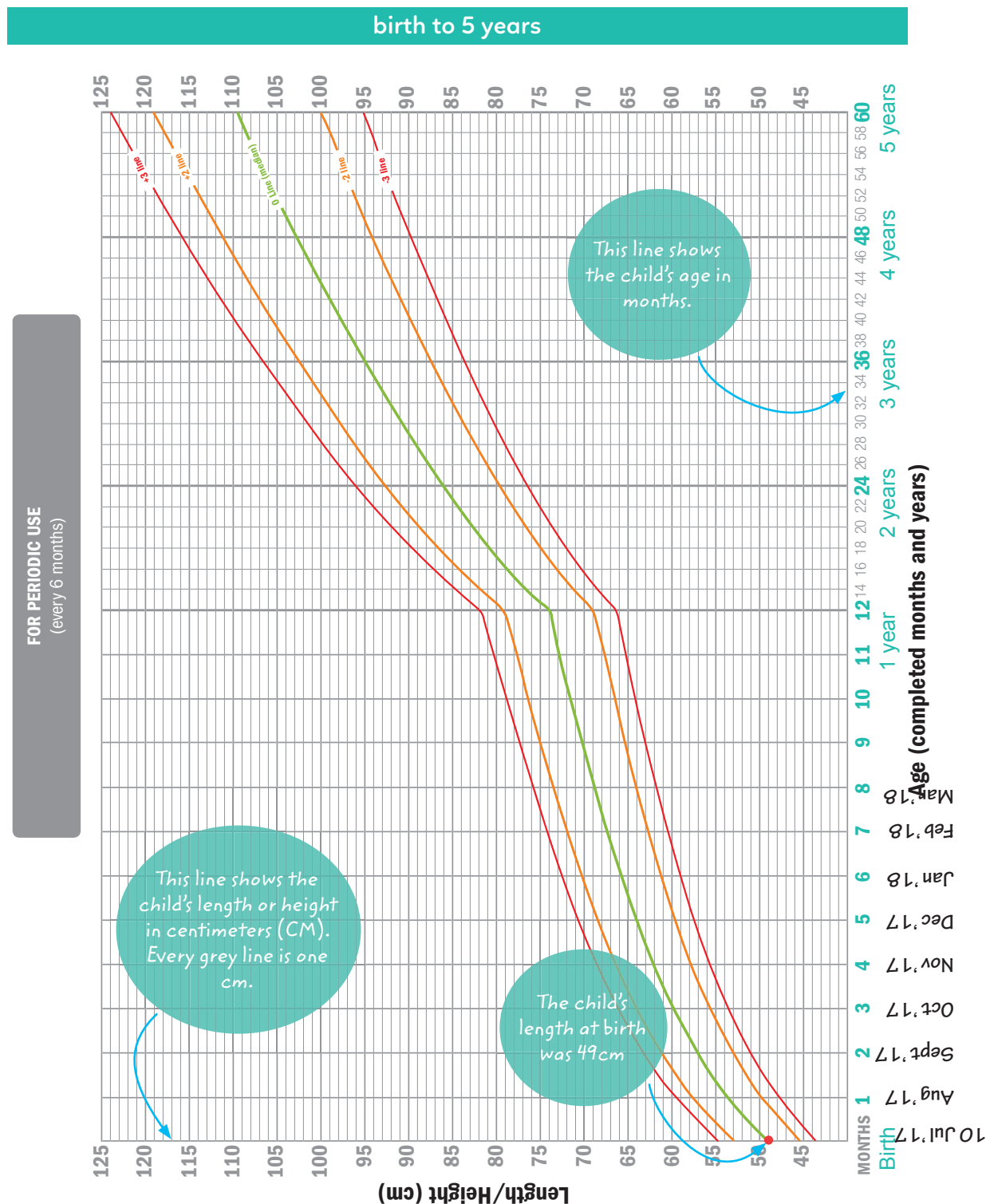
- The vertical axis (vertical left border) of the chart represents the child's length/height in centimetres (cm), starting at 45 cm, with 1 cm increments. It is numbered at every 5 cm.
- Children under 2 years of age are measured lying down (to take recumbent length).
- Children 2 years and above are measured standing up (to take height).
- See annexure 2 on page 45 for the procedure to accurately take child's length/height.
- The horizontal axis line (horizontal line at the bottom of the graph) represents the child's age.
- Fill in the month and year below the birth weight line (first line).
- Fill in the subsequent months below the number of the age lines (e.g. March, April, May, June, etc.) for the first year.



Practical example



GIRLS: Height-for-age charts



This girl child was born on 10 July 2017. The health worker recorded the birthdate, month and year on the birth weight line. The months subsequent to the birth month (July) were filled in on subsequent lines.

! If the child is growing well, length/height measurement should be taken and recorded on the chart every six months until the child is five years of age. **If the child is not growing well, the length/height measurement should be done every month.**



Recording length/height on the chart:

- Find the child's length/height measurement on the vertical axis and follow the horizontal line until it intersects with the vertical line corresponding to the child's age at the time of the reading.
- Put a dot where the lines intersect.
- Judge whether a plotted point seems sensible, and if necessary, re-measure the child. For example, a baby's length cannot be shorter than at the previous visit. If it is, one of the measurements was wrong.
- Link the dot you have just made with the dot made at the previous appointment. Link the dots with straight lines. This is the child's L/HFA curve.

How do you interpret the L/HFA curve?

- The direction of the green O-line or median L/HFA curve on the graph shows the expected rate at which a healthy child's length/height increases with age.
- A child whose L/HFA curve is **below the orange -2 line is stunted**.
- Stunting (L/HFA below the orange -2 line) implies that for a long period the child received inadequate nutrients to support normal growth and/or that the child has suffered from repeated infections.
- A child whose L/HFA curve is below the red -3 line **is severely stunted**.
- Children with severe stunting (L/HFA below the red -3 line) are at **increased risk of mortality** and therefore **require interventions**.
- A stunted child may have a normal weight-for-height, but have low weight-for-age due to shortness.

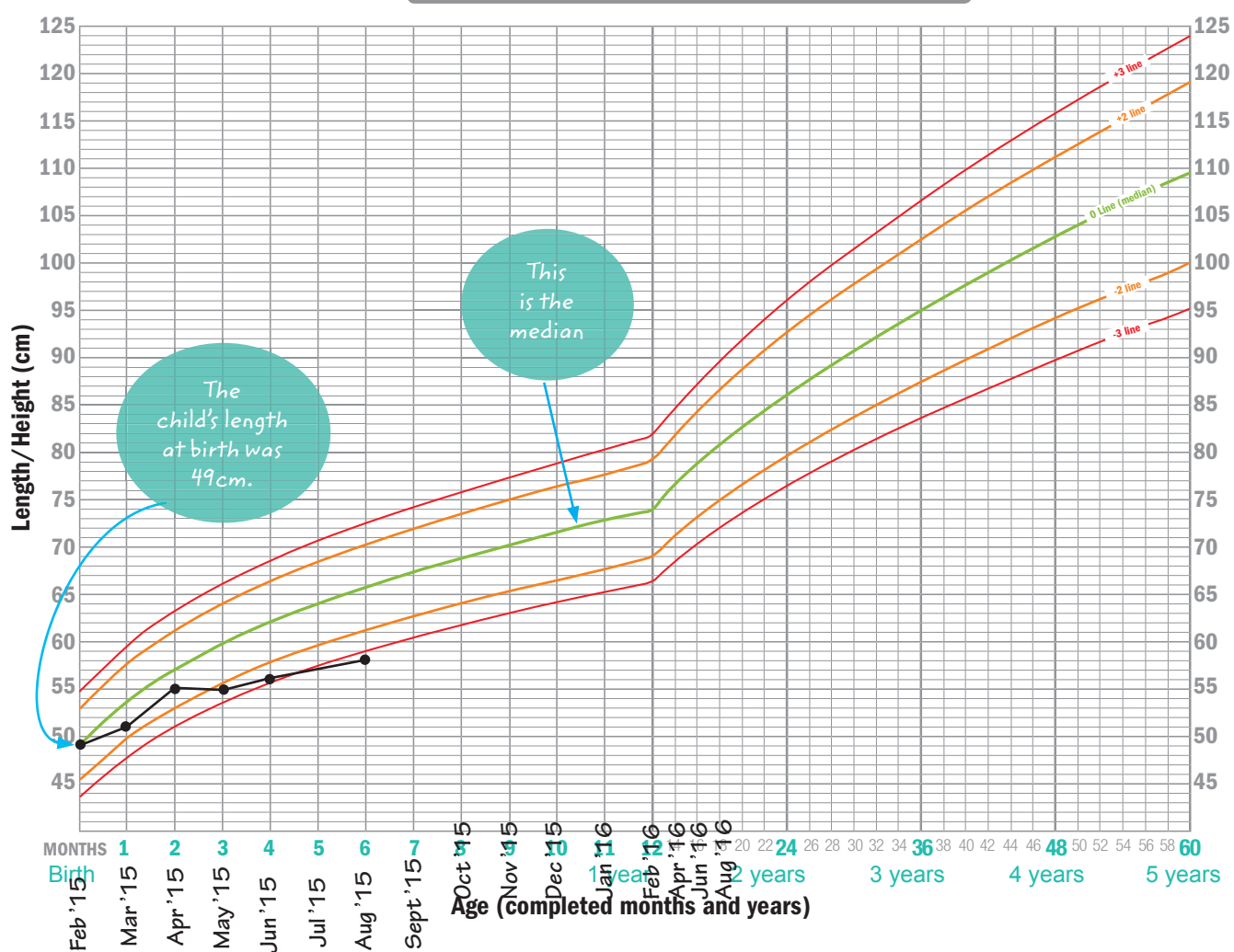


Practical example



GIRLS: Height-for-age-chart

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 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**

This example shows the L/HFA chart of a girl who is six months. Notice her length-for-age was on the median at birth. Her growth in length was stagnant from two to three months. Since the age of two months she crossed two z-score lines (-2 and -3) and is now below -3. She is severely stunted.



Weight-for-length/height (WFL/H)

 BOYS WFL/H CHART IS ON PAGE 11 AND GIRLS WFL/H CHART IS ON PAGE 20 OF RTHB.

What is the WFL/H chart used for?

- The WFL/H chart is a reliable growth indicator even when the age of the child is not known.
- The WFL/H measurement should be done especially if the child's WFA curve is below the -2 or -3 lines or above the +2 or +3 lines.
- A low WFL/H identifies current or acute malnutrition (wasting or severe wasting) usually because of a recent severe event, such as drastically reduced food intake and/or illness that caused severe weight loss.
- WFL/H is a predictor of **immediate mortality risk**.
- **The WFL/H chart is also used to classify children who are overweight or obese.**

How do you use the WFL/H chart?

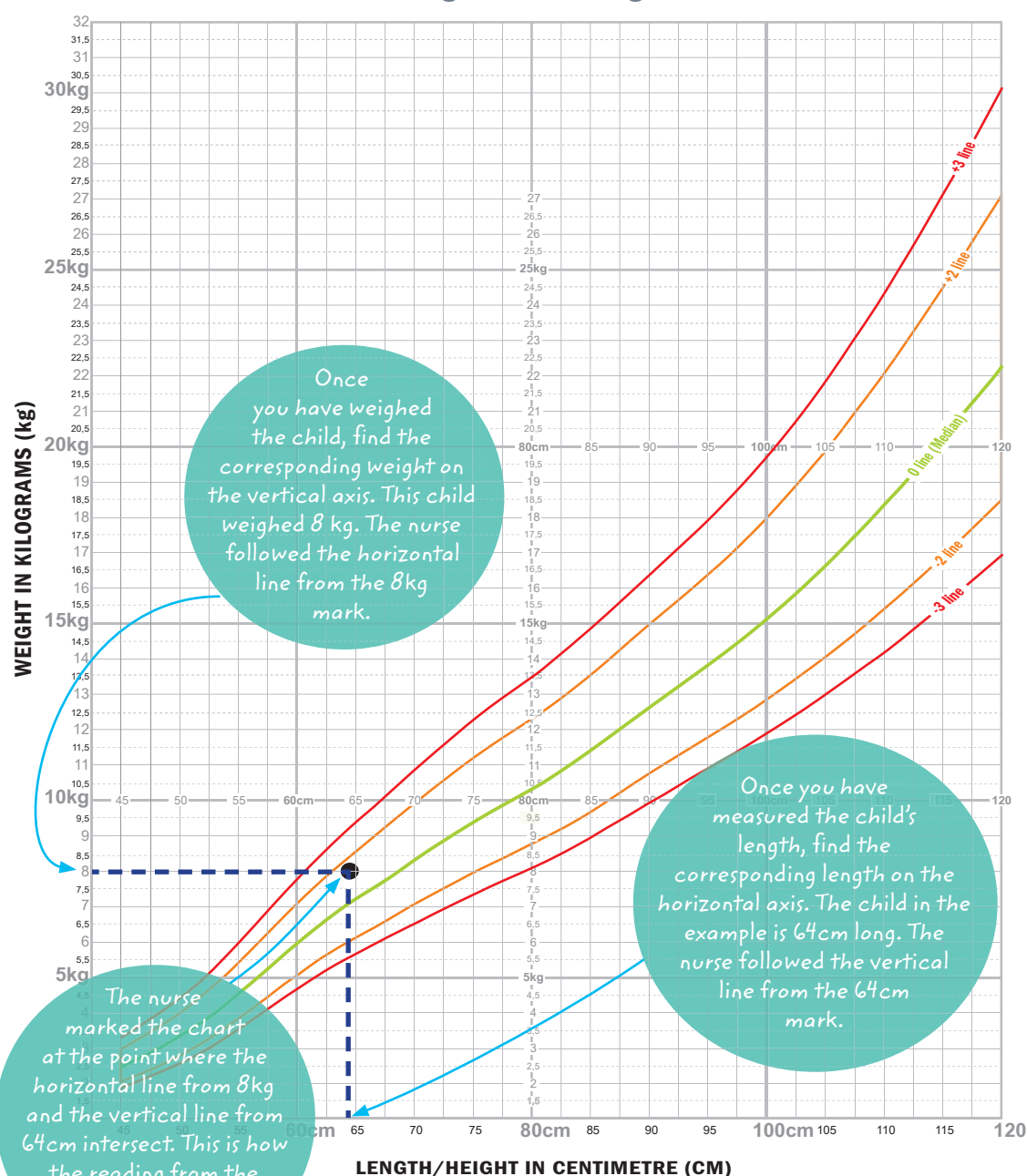
Getting started:

- The vertical axis (vertical left border) of the chart represents the child's weight, in kilograms in increments of 0.5kg.
- The horizontal axis (horizontal line at the bottom of the graph) of the chart represents the child's length/height, in centimetres (cm), starting at 45cm and in 2.5cm increments.
- Children under two years of age are measured lying down, therefore recumbent length is measured.
- Children two years and above are measured whilst standing up, therefore their height is measured.



Practical example

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.

This example shows the WFL/H chart of a four month old boy child.

! Length/height measurement should be done periodically every six months until five years of age if the child is growing well. **Weight should be measured at every visit to the clinic as per schedule on page 2 of the RthB.**



Recording length/height on the chart:

- Measure the length or height of the child. See annexure 2 on page 45 for the procedure to accurately take a child's length/height.
- Weigh the child. See annexure 1 on page 44 for the procedure to accurately take a child's weight.
- Find the length/height measurement on the horizontal axis and follow the corresponding vertical line until it intersects with the horizontal line corresponding to the child's weight.
- Put a dot where the lines intersect.
- Link the dot you have just made with the dot made at the previous appointment. Link the dots with straight lines. This is the child's **weight-for-length/height curve**.

How do you interpret the WFL/H curve?

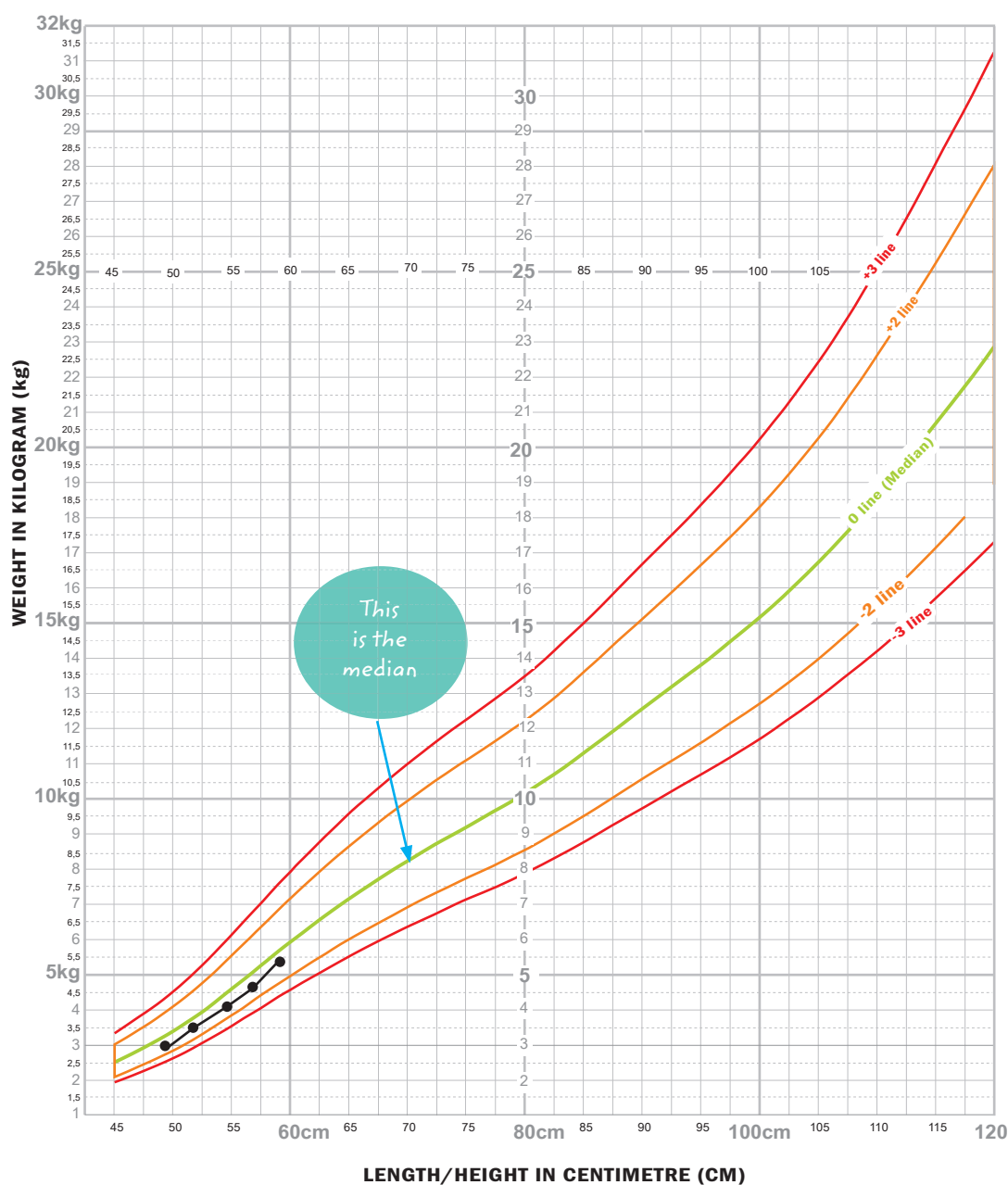
- The direction of the reference WFL/H curve – the green 0-line labeled Median – shows the expected rate at which a healthy child's weight increases with an increase in length/height.
- If the child's WFL/H curve is above the red +3 line, the child is **obese**.
- If the child's WFL/H is above the orange +2 line, the child is **overweight**.
- If the child's WFL/H curve is closer to the -2 line from the green 0-line, the child is **at risk of wasting**.
- If the child's WFL/H is below the orange -2 line, the child is **wasted**.
- If the child's WFL/H is below the red -3 line, the child is **severely wasted**.



Practical example



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.

This example shows the WFH/L chart of a girl who is six months. Notice her WFH/L was on or just below the median. This WFH/L does not show a growth problem.

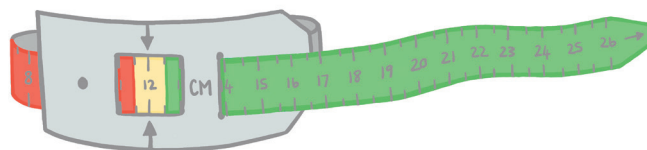


Mid-upper arm circumference (MUAC)

Q PAGE 10 OF THE RTHB.

What is the MUAC measurement used for?

- The MUAC is a quick and easy way to determine if a child (aged between six and 59 months) is acutely malnourished.
- The measurement of the circumference of the mid-upper arm is done using a coloured MUAC tape
- MUAC helps to determine the **level of malnutrition** easily.
- A “thin” or “decreasing” arm circumference shows the loss of muscle mass.
- Muscle mass is important in maintaining body functions and in fighting infections.
- MUAC is a better predictor of immediate risk of death compared to the WFL/H.



Colour coded MUAC tape

How do you do the MUAC measurement?

- See annexure 3 on page 47 for the procedure to accurately measure a child's MUAC.
- The MUAC chart (RtHB page 10) should be completed by Community Health Workers and other health workers after taking the MUAC measurement.

! MUAC should be measured at every visit for all children 6 months to 5 years old.

How do you interpret the MUAC reading?

- The table below indicates the classification based on MUAC measurement for children of age six to 60 months.
- The table also indicates the necessary action which must be taken based on the classification.
- The recommended action should always be recorded in the MUAC table on page 10 of the RtHB.
- MUAC is **not used** to measure malnutrition in children under six months.

Interpretation of MUAC		
MUAC (cm)	Classification	Actions taken
MUAC less than 11.5cm	Severe Acute Malnutrition	Refer child urgently for treatment
MUAC of 11.5cm to less than 12.5cm without oedema	Moderate Acute Malnutrition	Refer to PHC facility; manage according to IMCI guidelines
MUAC of 12.5cm and more	Not Acutely Malnourished (NAM)	Praise mother. Continue routine growth monitoring.

	Severe Acute Malnutrition (SAM) – refer immediately
	Moderate Acute Malnutrition (MAM) – IMCI Guidelines
	No Acute Malnutrition (NAM)



Practical example



MUAC chart

	Date	MUAC (cm)	Assessment (Circle one)	Action taken	Signature
Girl	3/08/2016	13.7	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Complementary feeding	M. Khoza
	7/09/2016	13.9	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Nutrition message	M. Khoza
	5/10/2016	14.0	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Encouragement	M. Khoza
	9/11/2016	13.0	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Encouragement	G. Nkosi
	7/12/2016	12.1	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Assess feeding	M. Khoza
	10/01/2017	12.0	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Counsel about feeding	G. Nkosi
	8/02/2017	12.1	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Counsel about feeding	B. Sebedi
	5/02/2017	11.2	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Refer for admission	B. Sebedi
	14/04/2017	11.3	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Inpatient treatment	S. Myeza
	15/06/2017	11.4	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Inpatient treatment	Z. Kubeka
	8/08/2017	12.6	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Continue with supplements	M. Khoza
	10/10/2017	12.7	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	Continue with supplements	M. Khoza
	6/12/2017	13.5	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Encourage	G. Nkosi
	7/02/2018	13.9	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>	Nutrition messages	G. Nkosi
	8/08/2018	14.2	<input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>		
			<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>		



Nutritional Assessment Summary table

 PAGE 21 OF THE RTHB.

Why has a Nutritional Assessment Summary table been included in the RTHB?

The Nutritional Assessment Summary table was included to help you interpret the plotting of the growth curves and take the next intervention step.

How do you complete the Nutritional Assessment Summary?

- The Nutritional Assessment Summary should be completed **after considering all the charts for child's growth** in the following order: WFA; L/HFA; WFL/H.
- Interpretation of nutritional assessment follows IMCI classification. Therefore, you will classify the child as "red", "yellow" or "green".
"Red" indicates severe conditions which need urgent referral to an inpatient facility; "yellow" indicates situations that can be managed at the primary health centre but require follow-up; and "green" indicates home care.
- Finally, you will record what action you or your team has taken based on the assessment.

How often should you complete the Nutritional Assessment Summary?

- The table needs to be completed **every time the child's nutritional status is assessed**.
- The General Clinical Notes section on pages 31-35 of the RTHB can be used for extra notes on action taken should this be required.

Summary of growth assessment classification

Z-score lines	Growth Indices		
	Length/height for age	Weight-for-age	Weight-for-length/height
Above the +3 line (red)	Child very tall - rarely an endocrine disorder	Maybe growth problem. (assess weight-for-length/height)	Obese
Above the +2 line (orange)	Child is tall – rarely an endocrine disorder		Overweight
0 (median) green line			
Below -1 line			At risk of wasting
Below -2 line (orange)	Stunted	Underweight (assess weight-for-length/height)	Wasted
Below -3 line (red)	Severely stunted	Severely underweight (assess weight-for-length/height)	Severely wasted



Interpreting plotted points for growth indicators				
Growth curve on WFA chart	Growth Line	Assessment	Classification (IMCI)	Action you must take
Sharp decline		Child has stopped growing and is losing weight	Not growing well	<ul style="list-style-type: none"> Take the height and plot L/HFA and WFL/H charts Assess and treat IMCI illness Assess feeding practice Counsel about feeding (RtHB pg. 4-7 for nutrition messages) Refer for food supplementation Refer for household food insecurity
Flattening (stagnation) curve (zero weight gain)		No weight gain (stopped growing)	Not growing well	
Slow weight gain		Poor weight gain (gaining weight inadequately)	Not growing well	
Normal incline curve		Gaining weight well (adequately)	Growing well	<ul style="list-style-type: none"> GMP (routine) Encouragement Key nutrition messages about feeding (RtHB pg. 4-7 for nutrition messages) Length/Height can be done every six months
Sharp incline		Gaining weight adequately. It occurs when a child recovers from being severely underweight (catch-up growth) may signal feeding practices that will result in a child becoming overweight.	Growing well if child grew in weight and height proportionally (catch-up-growth). If weight increases and not height it signals child is gaining too much weight.	<ul style="list-style-type: none"> Take the height and plot L/HFA and WFL/H charts. Assess feeding practice and counsel about feeding. Counsel on risk of overweight if applicable as per weight for length/height chart.
Crossing a Z-score line		If the shift is towards the median (green line) this is probably a good change. If the shift is away from the median this likely signals a problem.		<ul style="list-style-type: none"> If a child's growth line is inclining or declining so that it may cross a Z-score line soon, consider whether the change may be problematic. If a trend towards overweight or underweight is noticed in time, it may be possible to intervene early and prevent a problem.



Guide to complete Nutritional Assessment according to IMCI (Further classification)

Type	Oedema of both feet	MUAC	WFL/H Z-score	Action (See IMCI chart booklet page 30)
Severe Acute Malnutrition (SAM) with medical complications	Yes	MUAC less than 11.5 cm	Z-score below -3	<ul style="list-style-type: none"> Refer for admission
Severe Acute Malnutrition (SAM) without complications	No	MUAC equal or less than 11.5 cm	Z-score below -3	<ul style="list-style-type: none"> Assess and treat according to IMCI guidelines Assess feeding practice Provide RUTF or other supplements according to local guidelines Follow up in 7 days
Moderate Acute Malnutrition (MAM)	No	MUAC of 11.5 cm to less than 12.5 cm	Z-score between -3 and -2	<ul style="list-style-type: none"> Assess and treat according to IMCI guidelines Assess feeding practice Counsel about feeding (RtHB pg. 4 – 7 for nutrition messages) Refer for food supplementation Follow up in 7 days
Not growing well	No	Poor weight gain No weight gain Losing weight		<ul style="list-style-type: none"> Assess the child's feeding and counsel the caregiver on the feeding recommendations
Overweight/obese	No	MUAC above 21 cm	Overweight: Z-score above +2 Obese: Z-score above +3	<ul style="list-style-type: none"> Assess feeding, and counsel caregiver Encouraging healthy eating (RtHB pg. 4 – 7 for nutrition messages) Provide advice on physical activity
Growing well	No	MUAC from 12.5 cm or more	Z-score more than -2	<ul style="list-style-type: none"> GMP (routine) Encouragement Key nutrition messages (RtHB pg. 4 – 7 for nutrition messages)



Practical example



This interpretation follows IMCI classification. Classify the child as either red, yellow or green based on their nutrition assessment.

This is a summary of nutritional assessment to be done after all measurements have been considered: weight-for-age, length/height-for-age, and weight-for-length/height

Nutritional Assessment

Date	Weight	Height	Interpretation (IMCI)	Action (if any)	Health worker name
16/02/17	2.9kg	48cm	Red Yellow Green	Routine GMP	M. Khoza
23/03/17	4.1kg		Red Yellow Green	Exclusive breastfeeding counselling RthB pages 4&5	Z. Kubeka
20/04/17	5kg		Red Yellow Green	Assess breastfeeding. Discourage mixed feeding.	Z. Kubeka
22/05/17	5.8kg		Red Yellow Green	Encourage to continue exclusive breastfeeding	S. Myeza
24/06/17	6.4kg		Red Yellow Green	Praise mother (continued exclusive breastfeeding)	S. Myeza
25/07/17	6.9kg	72cm	Red Yellow Green	Breastmilk expression RthB pg 4	G. Nkosi
26/08/17	7.3kg	75cm	Red Yellow Green	Praise mother	S. Myeza
25/09/17	6.2kg	76cm	Red Yellow Green	Growth faltering. Assess feeding practice. Complementary feeding messages on RthB pg6	S. Myeza

Note your action every time you assess a child's nutritional status

If you need extra space, you can record your action in the General Clinic Notes on RthB pg31.

Filled in nutritional assessment table



Theme 2: LOVE, play and talk for healthy development

where to find it **pp22 to 25**
of the RtHB

Why a section on love, play and talk?

The first years of a child's life is a critical period for brain development and for laying the foundation for future learning. Caregivers are at the centre of their child's development because they help their children to understand and explore their environment by creating safe spaces and learning opportunities.

! The love pillar promotes nurturing relationships and responsive interactions between caregivers and their young children, as well as opportunities for learning.

What does the love, play and talk section contain?

- Information and encouragement for caregivers to take simple actions at home to promote their child's development. **Q PAGE 22 OF THE RtHB**
- Space to record the results of developmental screening done by a health professional, as well as space to record caregivers' concerns about their child's development. **Q PAGE 23-24 OF THE RtHB**
- Information for caregivers to identify any concerns linked to their child's development. **Q PAGE 25 OF THE RtHB**
- Space to record the child's head circumference at 14 weeks and 12 months. **Q PAGE 25 OF THE RtHB**

What do healthworkers need to emphasise to caregivers about their child's development and how can the RtHB help them?

- Make sure that caregivers have read page 22 and that they understand the importance of taking simple everyday actions to love, play and talk at home with their child.
- Caregivers should understand the stages of their child's development (hearing and communication, seeing, behaviour, motor skills). You can help them understand what to anticipate by going through the table on pages 23 and 24 with them.
- Caregivers should know that they can approach you or another health professional if they are concerned about any aspect of their child's development.
- Caregivers should know what specialist they need to consult if their child has a suspected developmental delay.
- Caregivers should know the possible developmental *danger signs* linked to their child's development. These are listed on page 25 of the RtHB. Show them to the caregiver and make sure that he or she knows to seek medical assistance if they appear.

Developmental screening

How do you do developmental screening?


- You must screen children's development at specified visits. These are detailed in the table on pages 23-24 of the RtHB.
- At the six and 10 week visits, ask parents if they have any concerns. If there are any concerns then list them in the space provided on page 23. Infants should be referred for further assessment if the parent has any specific concerns.



- At **every** visit, ask the caregiver if he or she has any specific concerns about how their child hears, sees, communicates, learns, behaves, interacts with others and how they use their hands, arms, legs and body. Record the concerns in the 'Caregiver concerns' column in the developmental screening table on pages 23 and 24 of the RthB.
- When completing the developmental screening tool, tick (✓) the boxes if the caregiver says that the child **CAN** do or show the activity or behaviour **OR** if you have observed the behaviour or child performing the activity during the visit.
- If not observed, try to elicit the behaviour or movement through spontaneous play and interaction
- Cross the boxes (X) if the child **DOES NOT** do or show the activity or behaviour even after you have tried to elicit it during the visit.
- Indicate ND (for Not Done) next to the relevant task/s, if you were unable to assess the task or behaviour.
- Therapists, psychologists and doctors are encouraged to assist in building the capacity of health workers to monitor children's development as part of routine care.



Practical example



Developmental screening

	Hearing/ communication	Vision and adaptive	Cognitive/ behaviour	Motor skills	Caregiver concerns
6 weeks					
10 weeks					
14 weeks Date <u>16/05/17</u> Sign <u>S. Myeza</u>	<input checked="" type="checkbox"/> Startles to loud sounds	<input checked="" type="checkbox"/> Follows face or close objects with eyes	<input checked="" type="checkbox"/> Smiles at people	<input checked="" type="checkbox"/> Holds head upright when held against shoulder <input checked="" type="checkbox"/> Hands are open most of the time	
6 months Date <u>03/08/17</u> Sign <u>S. Myeza</u>	<input checked="" type="checkbox"/> Moves eyes or head in direction of sounds <input checked="" type="checkbox"/> Responds by making sounds when talked to	<input checked="" type="checkbox"/> Eyes move well together (no squint) <input checked="" type="checkbox"/> Recognises familiar faces <input checked="" type="checkbox"/> Looks at own hands	<input checked="" type="checkbox"/> Laughs aloud <input checked="" type="checkbox"/> Uses different cries or sounds to show hunger, tiredness, discomfort	<input checked="" type="checkbox"/> Grasps toy in each hand <input checked="" type="checkbox"/> Lifts head when lying on tummy	Caregiver concerned about hearing. This was confirmed in observation as well. Referred to Doctor Kubeka.
9 months Date <u> / / </u>	<input type="checkbox"/> Babbles ('ma-ma', 'da-da') <input type="checkbox"/> Turns when called	<input type="checkbox"/> Eyes focus on far objects	<input type="checkbox"/> Throws, bangs toys/objects <input type="checkbox"/> Reacts when caregiver leaves, calms	<input type="checkbox"/> Sits without support <input type="checkbox"/> Moves objects from hand to hand	


Filled in developmental screening table.

When and how do you refer a child for developmental assessment?

- A child must be referred for a developmental assessment if they have a cross (X) against any of the relevant tasks assessed for their age category.
- In the instance where caregivers raise concerns about their child's development but the child completes all the relevant tasks successfully, you should refer the child for further assessment on the caregiver's request after discussing the screening results with them.
- Refer children to the health professionals specified in each column in the 'Referred to' category on page 24 of the RthB.



- If the specified health professional is not available, refer to one of the following health professionals for an initial developmental assessment: Doctor/Physiotherapist/Occupational therapist/Speech therapist.
- Ideally, children should be referred for developmental assessment (by one of the specified professionals), at the same facility or at the next level of care/referral centre that is closest to the facility.

 Use the referral slips on page 36 of the RtHB to refer children for developmental assessment by one of the specified health professionals.

Are there any instances where development should be monitored more closely than the schedule in the RtHB?

Children at higher risk of developmental difficulties should have their development monitored more closely (at least at every facility visit) and parents should be encouraged to raise any concerns at every visit. Children are high risk for developmental difficulties if they fit any of the following descriptions:

- born premature or low birth weight
- birth defect
- HIV
- severe or moderate acute malnutrition
- iron deficiency anaemia
- recurrent illnesses or frequent hospitalisation.

Head circumference measurement

Why is head circumference measurement included in the RtHB?

- An infant's head and brain grows rapidly in the first two years
- Head circumference tells us whether the child's brain is growing normally or not

How do you record head circumference measurement?

- You are required to measure children's head circumference at 14 weeks and 12 months and record these on page 25 of the RtHB
- The measurement taken at birth is to be recorded on page 38 in the 'Antenatal, birth and newborn history' table

What is the next step after measuring and recording head circumference?

Refer for further assessment if the head circumference is larger or smaller than the ranges shown in the table on page 25 of the RtHB.



Practical example



Head Circumference

Measure every child's head circumference at 14 weeks and at 12 months
Record the child's head circumference, and **refer if larger or smaller than the range shown below.**

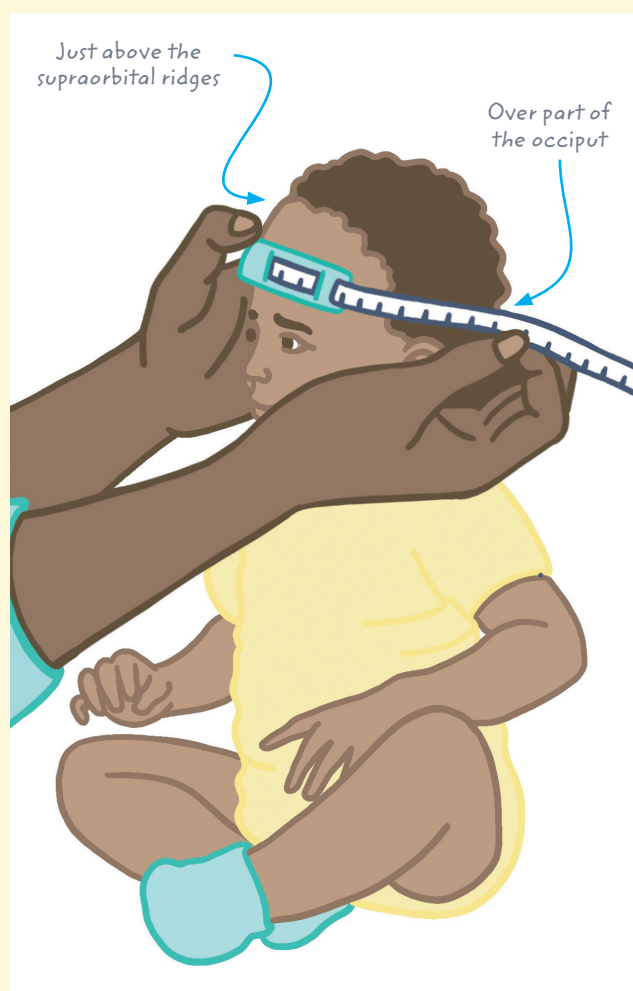
14 weeks (cm)	39cm
Range	38 – 43 cm
12 months (cm)	42cm (referred to Dr Ray Kubeka)
Range	43.5 – 48.5cm

The child's head circumference of 42cm was below the normal range of 43.5cm – 48.5cm. The nurse referred the child to a doctor.

Filled in head circumference table.

Methodology of Head Circumference

- A flexible, non-stretchable measuring tape with 1cm increments, must be used.
- Infants can be measured while sitting in the caregiver's lap and older children can be measured while standing.
- Headgear or any objects like hairpins must be removed.
- The tape is positioned just above the eyebrows (i.e. supraorbital ridges), above the ears and around the back of the head (i.e. occiput) so that the maximum circumference is measured.
- The tape should be on the same plane on both sides of the head and tight enough to compress the hair.
- An average of 3 readings is taken and measurements are read to the nearest millimeter.









Theme 3: PROTECTION from preventable childhood diseases and injuries

where to find it **pp26 to 29**
of the RtHB

Why a section on protection?

- Children need to be kept safe from preventable childhood diseases and injuries.
- To educate caregivers on how they can prevent childhood disease and injuries in the home.

What does the protection section contain?

- Information for caregivers on how they can protect their child from preventable childhood diseases and injuries on page 26. This includes information on immunisations, postnatal care, treatment for HIV-positive mothers, and preventing injury at home.
- A schedule of the child's Expanded Programme of Immunisations.  **PAGE 27 OF THE RtHB**
- A schedule for the child's routine Vitamin A and deworming.  **PAGE 28 OF THE RtHB**
- Information for caregivers on oral health and hygiene.  **PAGE 28 OF THE RtHB**
- A dental health record.  **PAGE 29 OF THE RtHB**

What do caregivers need to know about protecting their child from preventable diseases and injuries? How can you use the RtHB to support them?

- The caregiver needs to understand the actions he or she can take to protect their child. These are explained on page 26 of the RtHB. Make sure that the caregiver has read and understands them.
- Invite the caregiver to ask you any questions they may have about protecting the health of their child, immunisations, oral health, or Vitamin A and deworming doses.
- The caregiver needs to understand the importance of immunisations and the importance of returning to the clinic on time for the child's next scheduled immunisation. Always tell the caregiver the date when s/he must return for the next appointment.
- The caregiver needs to understand how to protect his or her child's teeth. This is explained on page 28 of the RtHB.

How should health workers use the RtHB to protect children against disease and injury?

- Remember that every visit to the clinic is an opportunity to provide preventable health services and health promotion.
- Check the child's RtHB for immunisations, routine treatment and tests that are due.
- Record all immunisations, Vitamin A, deworming doses given in the appropriate tables.
- Document oral health screening done in the table on page 29 of the RtHB.
- Always give mother/caregiver a date for their child's next visit to the clinic.



Are there any changes to the Expanded Programme of Immunisation Schedule?

In the Expanded Programme of Immunisation (EPI) Schedule on page 27 of the RTHB, the HPV1 and HPV2 vaccines are new additions for grade 4 girls who are 9 years and older in public and special schools. See annexure 4 on page 48 for the full and filled in immunisation schedule.

What are the routine immunisations given to children in South Africa?

BCG Vaccine	<ul style="list-style-type: none"> • Live attenuated bacterial vaccine • Powder form, must be reconstituted with diluent before use • Only use diluent supplied with the vaccine • The diluent should be at the same temperature as the vaccine at the time of reconstitution • BCG should be stored at 2°C to 8°C after reconstitution • Multi-dose policy applies • The unused reconstituted vaccine must be discarded after six hours or at the end of the immunisation session or whichever comes first • Monitor the Vaccine Vial Monitor (VVM) for exposure to heat • BCG should not be given to children above 12 months of age
Oral Polio Vaccine (OPV)	<ul style="list-style-type: none"> • Bivalent live attenuated vaccine, containing antigens of two types of poliovirus • Liquid vaccine presented in a vial with droppers, for oral administration • Stored at 2°C to 8°C, may be frozen and thawed multiple times • Multi-dose vial policy applies, if opened, store between 2°C to 8°C, for 28 days • Doses given at birth and 6 weeks • Monitor the VVM for exposure to heat
Pneumococcal Conjugate Vaccine -13 valent (PCV13)	<ul style="list-style-type: none"> • Inactivated polysaccharide conjugate vaccine containing the saccharides of the capsules of the 13 serotypes of pneumococcus • Contains aluminum phosphate to enhance the antibody response • Pre-filled single dose syringe in 1 or 10 dose packages • Should not be mixed with other vaccines in the same syringe • If administered with other vaccines, use different injection sites • Store at 2°C to 8°C, DO NOT FREEZE • Doses administered at 6 weeks, 14 weeks and 9 months • Perform "Shake test" if exposure to <0 °C, suspected



**DTaP-IPV-HB-Hib
(Hexaxim)**

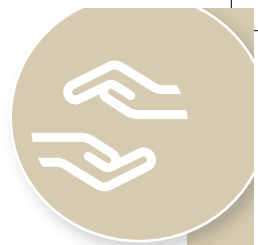
- Combination of six inactivated antigens
- Contains: Diphtheria toxoid, Tetanus toxoid, acellular Pertussis, inactivated Polio vaccine, Haemophilus influenza type B and Hepatitis B vaccine
- Liquid formulation does not require reconstitution
- Presented in single dose glass vial
- Can be administered with other vaccines including pneumococcal conjugate vaccine (PCV), rotavirus (RV) and measles-mumps-rubella (MMR) combination vaccine
- Separate injection sites must be used in case of concomitant administration
- Should not be mixed with other vaccines in the same syringe
- Store at 2°C to 8°C, DO NOT FREEZE
- Doses administered at 6, 10, 14 weeks and 18 months
- Perform “Shake test” if exposure to <0 °C, suspected
- Indicated for active immunisation against diphtheria, tetanus, pertussis, poliomyelitis, hepatitis B, and invasive infections caused by Haemophilus influenzae type b (Hib), such as meningitis, septicemia, cellulitis, arthritis, epiglottitis, pneumonia and osteomyelitis

**Rotavirus Vaccine
(RV)**

- Live attenuated viral vaccine containing G1P strain
- Clear, colourless liquid formulation, free of visible particles, presented as single dose suspension for oral administration
- Vaccine requires no reconstitution/dilution
- Store between 2°C to 8°C
- Doses administered at 6 and 14 weeks, do not administer after 24 weeks
- If infant spits, DO NOT REPEAT the dose
- Monitor the VVM for exposure to heat

Measles vaccine

- Live attenuated vaccine
- Powder form, must be reconstituted with diluent before use
- Only use diluent supplied with the vaccine
- The diluent should be at the same temperature as the vaccine at the time of reconstitution
- Do not administer with any other vaccine
- Measles vaccine should be kept at 2°C to 8°C after reconstitution
- Doses administered at 6 and 12 months
- Multi-dose policy applies
- The unused reconstituted vaccine must be discarded after six hours or at the end of the immunisation session or whichever comes first
- Monitor the VVM for exposure to heat



Tetanus – reduce Diphtheria vaccine (Td)	<ul style="list-style-type: none"> • Bivalent toxoid vaccine combination of Tetanus and Diphtheria • Cloudy liquid formulation, may form sediment if it stands for a long time • Store at 2°C to 8°C, DO NOT FREEZE • Shake before withdrawing dose • Presented in a 10 dose vial • Multi-dose vial policy applies, if opened, store between 2°C to 8°C, for 28 days • If administered with other vaccines, use different injection sites • Perform “Shake test” if exposure to <0 °C, suspected
Human Papillomavirus (HPV) vaccine (used during campaigns)	<ul style="list-style-type: none"> • Bivalent recombinant vaccine contains two HPV antigens: type 16 and 18 • Non-infectious vaccine prepared from highly purified virus like particles (VLP) • Contains AS04 adjuvant to enhance the antibody response • Liquid formulation in a single dose vial • Store at 2°C to 8°C, DO NOT FREEZE • Perform “Shake test” if exposure to <0 °C, suspected • Separate injection sites must be used in case of concomitant administration • Grade 4 girls who are 9 years and older in public and special schools are targeted during two campaigns per year • May be combined with oral contraception (the pill)
(for special cases) Hepatitis B (Hep. B)	<ul style="list-style-type: none"> • Inactivated fractional viral vaccine • Cloudy liquid formulation, may form sediment if it stands for a long time • Store at 2°C to 8°C, DO NOT FREEZE • Shake before withdrawing for use • Single and multi-dose presentations available • Multi-dose vial policy applies, if opened, store between 2°C to 8°C, for 28 days • If administered with other vaccines, use different injection sites • Perform “Shake test” if exposure to <0 °C, suspected • Given to all personnel working in healthcare facilities



Adverse events following immunisation (AEFI) that should be reported

Local reactions

- All cases of BCG lymphadenitis
- All injection sites abscesses
- Severe local reactions with swelling more than 5cm from injection site, or pain, redness and swelling that last for longer than three days

Systematic and severe reactions

- All cases of hospitalisation thought to be related to immunisation
- Collapse or shock-like state within 48 hours of DTaP-IPV-HB-Hib (Hexavalent) administration
- Anaphylaxis
- Encephalopathy within seven days of DTaP-IPV-HB-Hib administration
- Fever of 39°C or more within 48 hours of DTaP-IPV-HB-Hib administration
- Seizures within three days of DTaP-IPV-HB-Hib administration
- All deaths thought to be related to immunisation
- Vaccine Associated Paralytic Polio (VAPP), which is paralysis within 30 to 40 days of oral polio vaccine. This should be reported as an acute flaccid paralysis (AFP)

Surveillance for vaccine preventable diseases

- Good surveillance systems include prediction of who is at risk, when and where a condition occurs and the risk factors critical for its occurrence
- Purpose is identification and response to AFP (for detection of Polio), measles, Neonatal Tetanus (NNT) and AEFI.

Case definitions:

- **AFP:** Sudden weakness or paralysis not caused by injury in a child less than 15 years of age
- **Measles:** Any person with rash, fever and one of the following: cough, coryza and conjunctivitis
- **NNT:** Any newborn that cannot suck normally and is stiff or dies within 3-28 days in which the cause of death is unknown
- **AEFI:** Any untoward medical occurrence which follows immunisation and which does not have a causal relationship with the usage of the vaccine

Six steps used in disease surveillance and control activities:

- Detecting and reporting a case or an outbreak
- Investigating a case or an outbreak
- Analysing district EPI disease surveillance data and producing report
- Preparing and responding to a case or an outbreak
- Monitoring and evaluating of disease surveillance system
- Providing feedback to local staff and feed forward to the next level



How should pre-term infants be immunised?

Preterm infants receive immunisation doses according to the same schedule as full-term infants.

Are there any precautions about immunising children who are exposed to HIV and/or TB?

- Children who are well controlled on ARV therapy can be vaccinated at the discretion of the attending healthcare provider.
- Infants who are born to mothers who are on anti-TB treatment should not be given BCG at birth; they should be put on TB prophylaxis and followed up for BCG later.

What is the concurrent administration of vaccines with ARVs?

- There are no drug interactions between anti-retroviral drugs and EPI vaccines.
- Children who are well controlled on ARV therapy can be vaccinated at the discretion of the attending healthcare provider.

Can children be given more than one immunisation at the same time?

Most EPI vaccines can be safely given at the same time (except measles vaccine), always in different site.

What happens if a child has missed scheduled immunisation doses?

- If a child has missed the scheduled doses for age, they should be vaccinated with all missed doses as appropriate for age.
- The doses given for the first time should be recorded as first doses, regardless of the age.
- Record the return date for the next dose/s in the RTHB after discussing with the caregiver.
- The child should be given the next booster doses after the recommended interval between the doses (minimum four weeks).

Storage – cold chain

- Only vaccines should be stored in a vaccine fridge.
- Every vaccine fridge should have a fridge tag or a thermometer in the fridge.
- Cooler boxes used during vaccination should have a thermometer.
- Fridge temperature should be recorded twice daily.
- A vaccine fridge should not be overstocked.



Discuss what an Adverse Event Following Immunisation is with the caregivers

Vitamin A

 PAGE 28 OF THE RTHB.

Why is Vitamin A given to children?

- To improve the coverage of Vitamin A supplementation to all children 6 – 59 months.
- To eliminate Vitamin A deficiency.
- To treat xerophthalmia, night blindness, measles, severe acute malnutrition and persistent diarrhoea, and to prevent illnesses by boosting the immune system.



What are the checks to do before administering a Vitamin A dose?

- Check the child's age.
- Do not give Vitamin A if the child has received it in the last 30 days.

How is a Vitamin A dose administered?

- Check the expiry date on the label.
- Check the label to determine the dose: give vitamin A 100 000IU for child 6-11 months and 200 000IU for child 12-59 months.
- Cut the narrow end of each capsule with scissors.
- Help the child open his/her mouth by gently squeezing the cheeks.
- Squeeze the drops from the capsule directly into back of the child's mouth.
- If a child spits up most of the Vitamin A liquid immediately, give one more dose.
- DO NOT give the capsule to the caregiver to take home.

How should Vitamin A dosage be recorded in the RtHB?

- Record in the table on page 28 of the Road to Health book after giving a Vitamin A dose.
- Remember to record the date and sign your name in the table.

When and how are additional doses of Vitamin A administered?

- Give additional dose for conditions such as measles, severe malnutrition, xerophthalmia and persistent diarrhoea (omit if a child has been given in the past 30 days).
- Give one dose daily for two consecutive days (24 hours apart) for measles and xerophthalmia.
- Record additional doses on page 28 of the RtHB and in the general clinical notes on page 31 of the RtHB stating reasons for issuing the additional doses.

! All children between six months and five years should receive Vitamin A every six months

What should you tell the caregiver about Vitamin A doses?

- Vitamin A will help their child to grow strong and stay healthy.
- Encourage the caregiver to give child foods rich in vitamin A like eggs, pumpkin, paw-paw, pasteurized cows milk and fortified foods like bread and maize meal flour.
- Give the caregiver the date on which they should return for the next Vitamin A dose.

! Ensure that the caregiver understands that the child must visit the clinic every six months for Vitamin A capsules and must eat foods that are rich in Vitamin A

Deworming

Q PAGE 28 OF THE RtHB.

Why should children be dewormed?

- To treat all common forms of worms and allow children to stay healthy and grow normally.
- To eliminate intestinal parasites, which are common in children and contribute to undernutrition and clinical problems.



How is deworming medication administered?

- Deworm children between one and five years of age with mebendazole every six months.
- For children between 12-24 months, give 100 mg of mebendazole twice a day for three consecutive days.
- For children older than two years, give one 500mg dose of mebendazole every six months.

How is deworming medication recorded in the RtHB?

- Record in the table on page 28 of the RtHB after deworming.
- Remember to record the date and sign your name in the table.
- Record the date on which the caregiver and child must return for the next dose in the table.



Practical example

Vitamin A and deworming doses						
	Vitamin A	Date	Signature	Mebendazole	Date	Signature
6 months	100 000IU	24/7/10	D. Jukwana			
12 months	200 000IU	31/1/11	P. Mazibuko	100mg bd for 3 days	31/1/11	P. Mazibuko
18 months	200 000IU	22/7/11	D. Jukwana	100mg bd for 3 days	22/7/11	D. Jukwana
<p>Starting from 24 months, every child should receive Vitamin A and mebendazole every six months (up to 5 years of age).</p> <p>Record when these doses are given, and the return date below.</p>						
Vitamin A (200 000IU)			Mebendazole (500 mg stat)			
Date	Signature	Return date	Date	Signature	Return date	
21/1/12	C. Ntuane	10/07/12				
29/12/12	C. Ntuane	01/07/13				

Filled in Deworming and Vitamin A dosage table.

What should you tell the caregiver about deworming?

- Roundworms are the most common worms in South Africa.
- Roundworm eggs are found in soil that has been contaminated by human faeces.
- Children playing in the sand may swallow the eggs.
- Eggs can hatch into parasites internally, which leads to undernutrition and clinical problems.
- Deworming eliminates the parasites, allowing children to stay healthy and grow normally.

! Give the caregivers a specific return date for Vitamin A and deworming.




Oral health

 PAGE 28 – 29 OF THE RtHB.

Why is oral health important?

- Baby teeth play an important role in helping a child bite, chew and speak clearly. It keeps the space for- and guides permanent teeth.
- Tooth decay may lead to persistent pain affecting sleep, eating and general health.

What does the oral health section in the RtHB contain?

- Specific instructions for caregivers to follow in order to protect their child's teeth on page 28.
- Space for you to record oral health observations at stipulated periods for children up until age six.  PAGE 29 OF THE RtHB

How should the oral health table on page 29 be completed?

- Record any oral abnormalities observed.
- Refer to an oral health practitioner (oral hygienist/dentist) if any oral health concerns or problems are identified.



Practical example

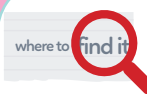
Frequency of screening	Findings (report as upper or lower, front or back teeth, right or left side of mouth)	Follow-up	Signature
1st visit on appearance of first tooth (or at 6 months measles immunisation)	First two upper and lower front teeth have erupted.		G. Myeza
At age 12 months (measles immunisation)	Most of the baby teeth have erupted. No sign of tooth decay.	The nurse begins checking for decay and delayed eruption at 12 months.	C. Ntuane
In the 2nd year	Full set of the baby teeth have erupted. No sign of tooth decay.		C. Ntuane
In the 3rd year	Full set of baby teeth have erupted. Some evidence of possible tooth decay.	Referred to dentist.	G. Myeza
In the 4th year	The first permanent tooth is erupting in the lower front teeth. Baby tooth is still in place - this is normal.	The nurse referred the child to the dentist because she found possible evidence of tooth decay during the screening	

Filled in oral health table.



Ensure that caregivers have read the oral health promotion messages on page 28 and understand how to protect their children's teeth.

Theme 4: HEALTH CARE for sick children









pp30 to 39
of the RtHB

Why a section on health care?

- This section is to make sure that sick children get the right treatment quickly.
- Caregivers need to be able to recognise and know what to do when children are sick.

What does the health care section contain?

- Important information for caregivers on the danger signs for children's health, on page 30. These danger signs are repeated and illustrated on page 3 and the back cover of the RtHB.
- Important information for caregivers on treating children with diarrhoea and instructions on how to use a sugar-salt solution for children with diarrhoea at home.  **PAGE 30 OF THE RtHB**
- Tables to record general clinical notes.  **PAGE 31-35 OF THE RtHB**
- A record of the child's referrals and follow-ups. There is space for you to briefly indicate reasons for referring the child and indicate the place the referral was completed. **This doesn't replace the facility based records which should always be more detailed.** Only a summary is expected to be recorded on the space in the RtHB.  **PAGE 36 OF THE RtHB**
- A record of the child's hospital admissions.  **PAGE 36 OF THE RtHB**
- A table to record long-term health conditions. This page could also be used to record if child is on ARVs. Other conditions may include asthma, epilepsy, congenital heart disease, cerebral palsy, etc.  **PAGE 37 OF THE RtHB**
- A record of the child's antenatal, birth and newborn history. Whether child is HIV-exposed, as well as whether mother is on lifelong ARV therapy should be indicated here. It also allows for recording of infant prophylaxis.  **PAGE 38 OF THE RtHB**



If a PCR test has been done, the **sticker should be placed on page 39 of the RtHB**. Follow up tests should be recorded and any required follow-up action should be noted here as well. This page may also be used to record TB screening.



What do health workers need to emphasise to caregivers about caring for a sick child and how can you help them using the RtHB?

- Caregivers should be able to identify the danger signs for children's health and know what to do if they spot the danger signs. Ensure that they have seen and read page 30 and page 3 of the RtHB.
- Caregivers should know how to make and use a sugar-salt solution at home to treat children with diarrhoea. Ensure that they have seen and read the instructions on page 30.



1 litre of cooled boiled water



8 level teaspoons of sugar



half a teaspoon of salt (level)

- Give a sugar-salt solution (SSS) in addition to feeds.
- Give SSS after each loose stool, using frequent small sips from a cup.
 - Half a cup for children under 2 years.
 - 1 cup for children 2–5 years.
- If your child vomits, wait 10 minutes then continue, but slower.
- If your child wants more than suggested, give more.
- Continue feeding your child.

Where in the RtHB is HIV-related information recorded?

- Record information related to HIV in the Healthcare section, pages 30-39.
- Record if child was exposed to HIV and whether the mother or infant had received any prenatal treatment or prophylaxis on the antenatal, birth and newborn history chart on page 38.
- Record HIV tests and results on the screening and test results chart on page 39.
- Place the PCR sticker on page 39 of the RtHB and note any required follow up action.



Practical example



Antenatal, birth and newborn history

Place of Birth: Polokwane Hospital	
Birth Weight 3.2kg	Length at Birth 52cm
Head Circumference at birth 36cm	Gestational Age (weeks) Term
Breastfeeding Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown <input type="checkbox"/>	HIV exposure Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Prenatal ARVs FDC Duration 5 months Infant prophylaxis Nevirapine Duration 6 weeks
If PCR test done, place sticker on pg 39 also record follow-up tests on pg 39.	
APGARS	1 min 9 5 min 10
Antenatal History	
RPR result	Rhesus Blood Group (if available)
Antenatal (Maternal history) G1P0 Induced at 42 weeks	Intrapartum history (including mode of delivery) NVD
Are risk factors present?	
Low birthweight (less than 2.5kg) <input type="checkbox"/>	Mother has died or is ill <input type="checkbox"/>
Known congenital or neurological problem <input type="checkbox"/>	Infant not exclusively breastfed <input type="checkbox"/>

Filled in Antenatal, birth and newborn history chart

Other reference materials:

- Integrated Management of Childhood Illnesses (IMCI) Guidelines
- National Guidelines for Prevention of Mother-to-Child Transmission



How does the RtHB support children exposed to HIV?

The new RtHB deals with information related to HIV in the same way as other long-term health conditions. HIV-related information is recorded in the Antenatal, birth and newborn history table on page 38 of the RtHB.

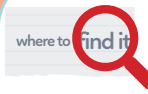
What extra care can you provide to caregivers of children exposed to HIV?

- Educate the caregiver about dosages of medication like nevirapine.
- Discourage the use of traditional remedies, including enemas.
- Emphasise the importance of taking the prescribed medicine daily at the same time.
- Ensure that the caregiver knows about the list of contact numbers for important emergency services on the inside back cover of the RtHB. There is extra space provided for including additional numbers that may be useful at local level.

Other reference materials:

Guideline for the Prevention of Mother to Child Transmission of Communicable Infections, 2019

Theme 5: Special care for children who need EXTRA CARE



pp40 to 43
of the RtHB

Why a section on extra care?

- To identify vulnerable children to ensure they receive special care and support and knowing what to do and where to go for help. This includes access to child support grants and ensuring that the child's birth is registered with Home Affairs.
- You need to know about the different grants available to support children and families so that you are able to refer them.

What does the extra care section contain?

- Information on how to access support if a child or caregiver needs extra care. This includes:
 - Specific medical conditions, like HIV & TB
 - Disability
 - Preventing injuries
 - Social risks to the child's development
 - Birth registration
 - Accessing social grants.
- A checklist for you to identify caregivers or children who potentially may need extra care.

 PAGE 41 OF THE RtHB



Practical example

For health workers:

This table incorporates key social risks for children. Complete this table at the 6 or 14 week visit.

Are social risk factors present?	Notes (include details of risk, referral and/or extra care provided)
Child has a birth certificate <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
Mother has died or is ill <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	
Teenage parent or caregiver <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	Unemployed teenage mother relies on family. No financial from baby's father. Referred to SASSA for Child Support Grant. Referred to counsellor for counselling.
Child receives a child support grant <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	
Child receives a care dependency grant <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	
Child receives a foster care grant <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown	

The nurse identified two social risk factors and referred the mother to receive financial and psychosocial support.

Filled in extra care checklist

Annexures

Annexure 1: Procedure to accurately take child's weight

Infants and young children between 0-24 months

- Use a paediatric scale.
- Place the scale on a hard-flat surface.
- Clean the scale before each weighing.
- Make sure the scale can weigh accurately.
- The weighing scale should be zeroed daily and calibrated weekly with standard 5kg and 10kg weights.
- Set the scale to zero.
- Ask the mother to remove the child's clothes.
- Help the mother to correctly place the child on the scale.
- Read the weight correctly when the numbers on the scale stop moving.
- Show the mother the weight plotted on the RtHB and see if she understands what it means.

Note: The child should be weighed naked or with minimal clothing (example: vest and dry nappy) Explain to the mother the reasons for weighing the child, for example, to see how the child is growing, how the child is recovering from a previous illness, or how the child is responding to changes that have been made in his/her feeding or care.



Baby on a pan scale

Children older than 24 months

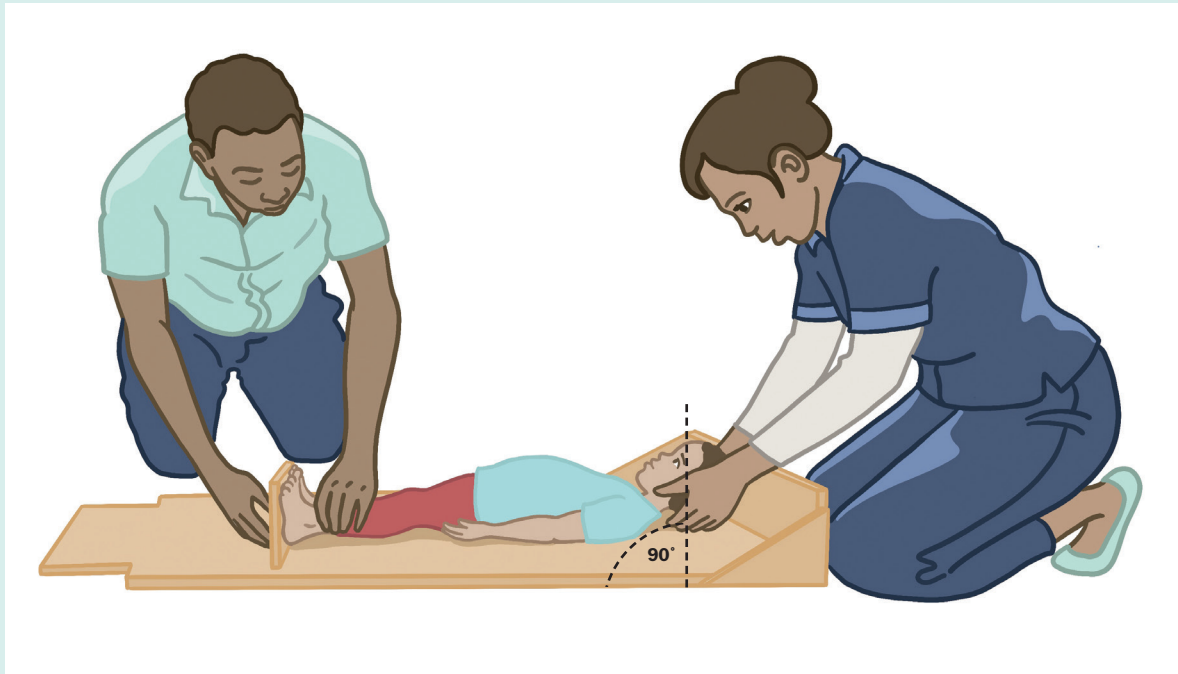
- Use an adult scale.
- Place the scale on a hard-flat surface.
- Zero the scale before weighing.
- Ask the caregiver to remove the child's shoes, hat, scarf and remove everything from pockets.
- Ensure that the child stands straight and unassisted on the centre of the scale.
- Read the weight when the child is completely still.
- Record the weight to the nearest 100g.
- Record and plot the weight in the RtHB on the WFA chart.

Note: Sometimes children are restless or do not want to stand on the scale. In such cases apply the subtraction method, which is to weigh the mom, dad, caregiver, etc. first and record their weight then record their weight while holding the child. You then subtract the recorded weight of the caregiver standing on the scale alone from that of the weight where the caregiver was holding the child. For example, the caregiver weighed on their own is 70kg and the caregiver weight while holding the child is 86kg, then you subtract the 70kg from the 86kg in order to get the correct weight of the child, which is then 16kg. Children's weight records are very important and therefore healthcare workers must make sure to get these as precise as possible

Annexure 2: Procedure to accurately take child's length/height

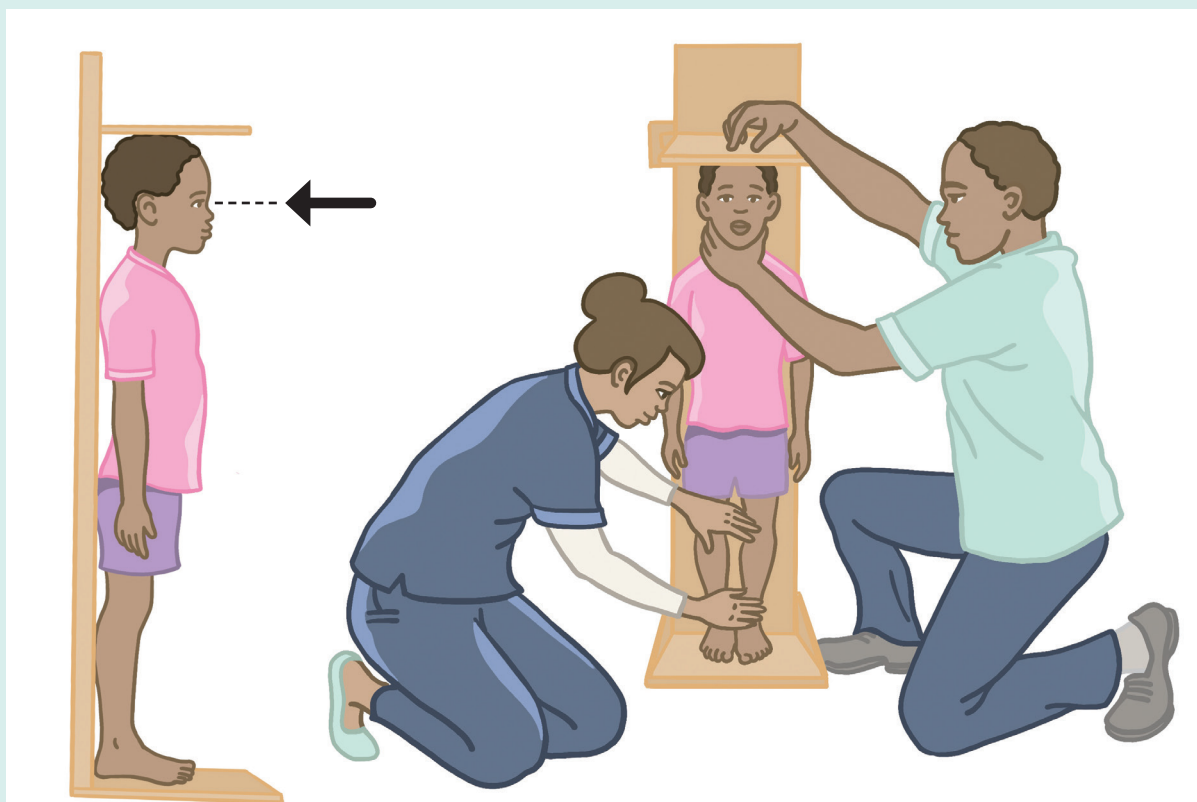
Children under two years old or less than 87cm tall

- Place the length board on a table or the ground.
- Remove the infant or young child's footwear and any head coverings.
- Place the infant or young child on her or his back in the middle of the board or length mat with arms at the sides and feet at right angles to the board.
- The heels, knees, buttocks, back of the head and shoulders should touch the board. Gently hold the infant or young child's head so eyes point straight up.
- Gently bring the top of the head to the fixed end of the board.
- Gently hold the infant or young child's ankles or knees. With the other hand, slide the moveable foot piece until both heels touch it.
- Immediately lift the infant or young child's feet from the foot piece to prevent kicking, holding the footboard securely with the other hand. Read the measurement aloud to the nearest 0.1cm.
- Record and plot the measurement in the RTHB on the L/HFA and WFL/H graphs. Infants and young children's (birth to 2 years) length should be assessed and documented every six months. This is the minimum suggested schedule.



Child 2 years or older:

- Use a stadiometer or height measure or fasten a non-stretchable tape measure securely to a wall.
- Place the height measure vertically on a flat surface.
- Remove the child's shoes and headwear.
- Make sure the shoulder blades, buttocks and heels touch the vertical surface of the board.
- The feet should be flat on the floor, close together and touching the back of the board.
- The legs and back should be straight, with arms at the sides.
- The shoulders should be relaxed and touching the board.
- The head need not touch the board.
- Ask the child to stand straight and tall and look straight ahead.
- Gently hold the client's head to look straight ahead.
- Bring the moveable head piece to rest firmly on the top of the client's head.
- Read and record the measurement to the nearest 0.1cm.



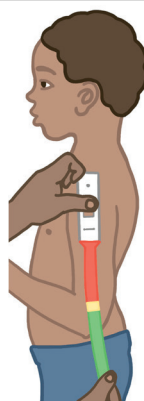
Annexure 3: Procedure to accurately measure child's MUAC



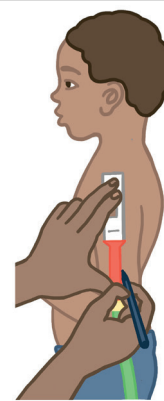
1. Bend the left arm at a 90° angle.



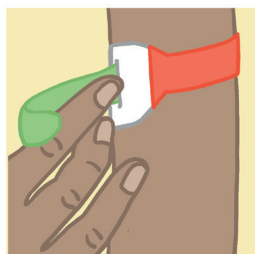
2. Find the top of the shoulder and the tip of the elbow.



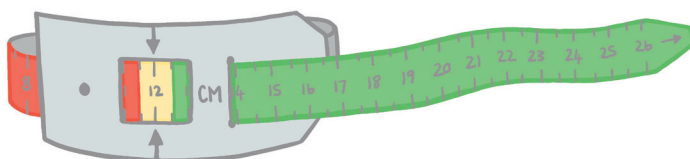
3. Keep the tape at eye level and place it at the top of the shoulder. Put your right thumb on the tape where it meets the tip of the elbow (endpoint).



4. Find the middle of the upper arm by carefully folding the endpoint to the top edge of the tape. Place your left thumb on the point where the tape folds (midpoint). Mark the midpoint with a finger or pen.



5. Straighten the client's arm and wrap the tape around the arm at the midpoint.
6. Place the tape through the window and correct the tape tension.



7. Read the measurement in cm in the window where the arrows point inward.
8. Record the measurement to the nearest 0.1cm and the colour.

Annexure 4: Full and completed EPI schedule

Child's Name				Child's Date of Birth	
Age	Vaccine	Route & Site	Batch no.	Date given	Signature
Birth	BCG	Intradermal Right arm	2503017A 12/2019	22/2/2018	M. Diale
	OPV0	Oral	N3L881V 11/2020	22/2/2018	M. Diale
6 weeks	OPV1	Oral	N3L881V 11/2020	5/4/2018	M. Diale
	Rotavirus 1	Oral	AB0LC085AA 4/2019	5/4/2018	M. Diale
	PCV1	IM Right thigh	30B18 10/2020	5/4/2018	M. Diale
	Hexavalent (DTaP-IPV-Hib-HBV)1	IM Left thigh	N3F522V 11/2020	3/5/2018	M. Diale
10 weeks	Hexavalent (DTaP-IPV-Hib-HBV)2	IM Left thigh	N3F522V 11/2020	3/5/2018	M. Diale
14 weeks	Rotavirus 2	Oral	AB0LC085AA 4/2019	31/5/2018	M. Diale
	PCV2	IM Right thigh	30B18 10/2020	31/5/2018	M. Diale
	Hexavalent (DTaP-IPV-Hib-HBV)3	IM Left thigh	N3F522N 11/2020	31/5/2018	M. Diale
6 months	Measles 1	S/C Left thigh	250317 5/2019	16/8/2018	M. Diale
9 months	PCV 3	IM Right Thigh	N3F522V 11/2020	15/11/2018	M. Diale
12 months	Measles 2	S/C Right arm	250317 5/2019	21/2/2019	M. Diale
18 months	Hexavalent (DTaP-IPV-Hib-HBV)4	IM Left arm	N37522V 11/2020	22/8/2019	M. Diale
6 years	Td	IM Left arm			
12 years	Td	IM Left arm			
Additional Vaccinations					
Girls 9 years and older	HPV1	IM Non- dominant arm			
	HPV2				

Danger signs!

Take your child to the nearest clinic
if you see any of the following.



Child is coughing and
breathing fast (more
than 50 breaths per
minute)



Child under 2
months old has a
fever and is not
feeding



Child is
vomiting
everything



Child has diarrhoea,
sunken eyes, and a
sunken fontanelle



Child is shaking
(convulsions)



Child has signs of
malnutrition (swollen
ankles and feet)



Child is not moving or
does not wake up



Child is unable
to breastfeed