

Training Course on Child Growth Assessment

WHO Child Growth Standards

D

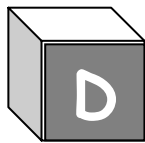
Counselling on Growth and Feeding



World Health
Organization

Training Course on Child Growth Assessment

WHO Child Growth Standards



Counselling on Growth and Feeding



**World Health
Organization**

**Department of Nutrition for
Health and Development**

WHO Library Cataloguing-in-Publication Data

WHO child growth standards : training course on child growth assessment.

"The project was designed and coordinated by Adelheid W. Onyango and Mercedes de Onis ..."--Acknowledgements.

Contents: A. Introduction -- B. Measuring a child's growth -- C. Interpreting growth indicators -- D. Counselling on growth and feeding -- E. Photo booklet -- Answer sheets -- Facilitator's guide -- Course director's guide -- Boy's growth record -- Girl's growth record -- Job aids.

1.Child development. 2.Growth. 3.Anthropometry - methods. 4.Body weights and measures - standards. 5.Nutrition assessment. 6.Teaching materials. I.Onyango, Adelheid W. II.de Onis, Mercedes. III.World Health Organization. IV.Title: World Health Organization child growth standards.

ISBN 92 4 159507 8

(NLM classification: WS 103)

ISBN 978 92 4 159507 0

© World Health Organization 2008

All rights reserved. Publications of the World Health Organization can be obtained from WHO Press, World Health Organization, 20 Avenue Appia, 1211 Geneva 27, Switzerland (tel.: +41 22 791 3264; fax: +41 22 791 4857; e-mail: bookorders@who.int). Requests for permission to reproduce or translate WHO publications – whether for sale or for noncommercial distribution – should be addressed to WHO Press, at the above address (fax: +41 22 791 4806; e-mail: permissions@who.int).

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization be liable for damages arising from its use.

The named authors alone are responsible for the views expressed in this publication.

Printed in China

Training Course on Child Growth Assessment WHO Child Growth Standards

Acknowledgements

This training course has been prepared by the Department of Nutrition, World Health Organization, Geneva. The project was designed and coordinated by Adelheid W. Onyango and Mercedes de Onis who provided the main technical input. Contributions to the technical content by Chessa Lutter (AMRO/PAHO), Cutberto Garza (Boston, MA, USA) and Ilgi Ertem (Ankara, Turkey) are gratefully acknowledged. The field-test version of the materials was reviewed in-depth by staff of the FANTA Project, USAID, and participants in the PAHO regional Training of Trainers workshop in Barbados, May 2006. Version 1, published in November 2006 was reviewed during Regional workshops in EMRO (Cairo, February 2007), AFRO (Addis Ababa, June 2007), WPRO (Shah Alam, September 2007) and SEARO (Bali, October 2007). The comments and suggestions provided by participants at these workshops have been used to refine the course for this final printing. The course modules were developed and laid out by Patricia Whitesell Shirey and Florence C. Johnson of ACT International, Atlanta, Georgia, USA.

With funds from the Bill and Melinda Gates Foundation, the course was field-tested in collaboration with the Caribbean Program Coordination, PAHO in Barbados, and its first version further tested and refined with the collaboration of the respective WHO Regional Offices (EMRO, AFRO, WPRO and SEARO) and the Country Offices in Ethiopia, Malaysia and Indonesia.

Suggested citation:

World Health Organization. Training Course on Child Growth Assessment. Geneva, WHO, 2008.

D: Counselling on Growth and Feeding

Contents

| | |
|---|----|
| Introduction..... | 1 |
| Module objectives..... | 2 |
| 1.0 Inform the mother of the results of the child's growth assessment | 3 |
| 2.0 Refer children with severe growth problems | 5 |
| 3.0 Counsel a mother whose child is growing well | 6 |
| Exercise A..... | 9 |
| 4.0 Counsel a mother whose child has a problem of undernutrition | 10 |
| 4.1 Interview the mother to investigate causes of undernutrition..... | 10 |
| Exercise B..... | 14 |
| 4.2 Give advice related to the causes of undernutrition..... | 18 |
| 4.3 Set a goal for improving growth of an undernourished child | 21 |
| Exercise C | 22 |
| 5.0 Counsel a mother whose child has a problem of overweight | 26 |
| 5.1 Interview the mother to investigate causes of overweight..... | 26 |
| Exercise D..... | 29 |
| 5.2 Give advice related to the causes of overweight..... | 33 |
| 5.3 Set a goal for improving growth of an overweight child | 35 |
| Exercise E | 36 |
| Exercise F..... | 40 |
| Exercise G (clinic exercise) | 49 |
| Answers to short answer exercises | 50 |
| Annex: Recommendations for Child Feeding..... | 53 |
| Feeding recommendations | 53 |
| Care for development..... | 60 |

D: Counselling on Growth and Feeding

Introduction

This module describes how to counsel a mother following her child's growth assessment. The mother will be very curious to know what you have found, so the first step is to inform her in a clear and sensitive way.

If the child is growing well, the next step is to provide appropriate feeding advice for the child's upcoming age group, so that the child will continue to grow well.

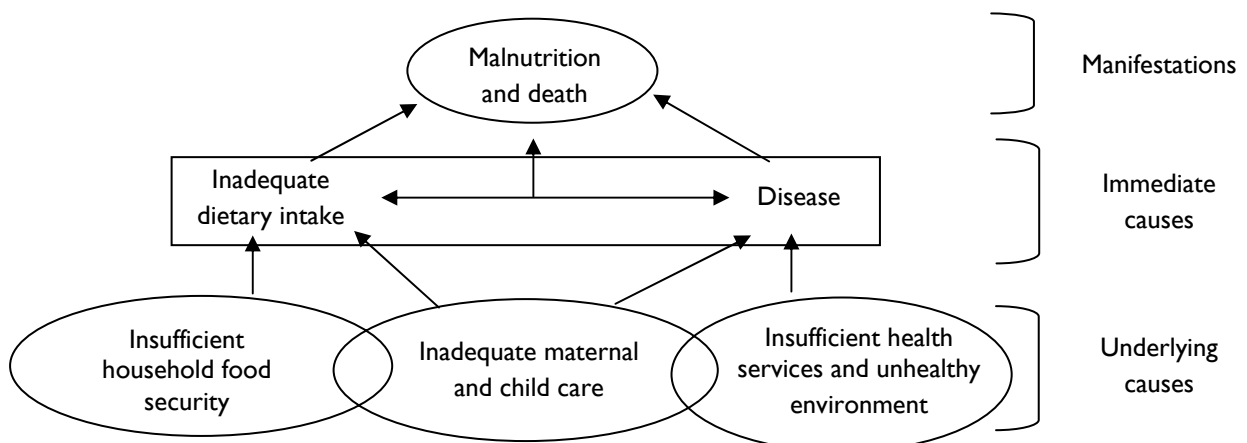
If there is a growth problem, or a trend towards a problem, you will interview the mother to identify possible causes of the problem. A booklet is provided with this course to assist in these interviews; the booklet includes two job-aids:

- *Investigating the causes of undernutrition*
- *Investigating the causes of overweight*

As you work on this module, you will have opportunities to practise using these job-aids. The job-aids suggest questions to ask the mother to identify causes of problems and also specific advice related to each possible cause.

Many social and environmental factors can affect a child's feeding, care, and resulting growth. That is why it is very important to determine the most important causes of a problem for a particular child **before** giving advice. For example, if a child is wasted primarily because the family lacks food, it will not be helpful simply to advise the mother to feed the child more often. In such a situation, it would be better to guide the family to a source of assistance.

In 1990 UNICEF developed the following diagram showing possible causes of undernutrition.¹



¹ Adapted from UNICEF (1990) *Strategy for improved nutrition of children and women in developing countries*. New York: United Nations Children's Fund.

As shown in the diagram, in order to resolve the immediate causes of undernutrition, i.e. inadequate diet and disease, it may be necessary to address causes in the home environment, such as the absence of a responsible adult to care for the child during the day, or poor sanitation or contaminated water. It is not always possible to resolve these causes, but the health care provider can help the mother to understand them and think of positive actions to take.

Causes of overweight and obesity are also typically rooted in the environment. For example, a busy family may rely on high-energy convenience foods instead of taking time for leisurely, well-planned meals. Children may not be able to play outdoors safely and thus spend too much inactive time watching television or playing video games. Resolving problems of overweight and obesity will require addressing root environmental causes as well as immediate dietary causes.

During the counselling session it is important to agree on actions to improve the child's growth that are feasible for the mother or caregiver. If too many actions are suggested, she may forget many of them or be discouraged. Suggest the most important and feasible actions (two or three), and encourage the mother to bring the child back for follow-up. The follow-up visit will give the mother a chance to report success and the health care provider a chance to give additional advice as needed. Change takes time and the underlying causes of poor growth are unlikely to be resolved in a single counselling session. The need to follow up and monitor the child's feeding, care, and growth is critical.

Module objectives

Participants will learn how to:

Refer to section:

- | | |
|--|-----|
| • Inform a mother or other caregiver about the results of a child's growth assessment. | 1.0 |
| • Give appropriate feeding recommendations for a child's age. | 3.0 |
| • Interview a mother to investigate causes of undernutrition. | 4.1 |
| • Give advice related to specific causes of undernutrition. | 4.2 |
| • Interview a mother to investigate causes of overweight. | 5.1 |
| • Give advice related to specific causes of overweight. | 5.2 |

1.0 Inform the mother of the results of the child's growth assessment

Throughout the growth assessment, the mother has seen you recording measurements in the *Growth Record* and plotting and connecting points on the growth charts. She is likely to be curious about the results. Explain that you have plotted the points to see if the child is growing as expected, or if there is any growth problem. Explain the points and trends on each chart to her clearly and simply.

If a child is growing well, be sure to say so to the mother and compliment her. If there are problems, it is still very important to keep the discussion positive. Avoid any suggestion of accusing or judging the mother. You want to build the mother's trust and communicate that she can help the child.

Use clear, non-medical language as much as possible. If you use an unfamiliar word, such as "obese," explain it to the mother. For example, you could say, "obese means very heavy for one's height." Words such as "stunted," "wasted," and "obese" are used in the *Growth Record*, so be prepared to explain them in simple words.

Example 1

A child's weight-for-age is between the -1 and -2 z-score lines, as it has been for the last 3 visits. The health care provider explains, "Your child is lighter than most children of his age, but he is growing consistently. Notice how his growth line has stayed between these two lines. His weight has increased with his age. This is good."

Example 2

A child's weight-for-height chart shows a sharp decline to a level below the -2 z-score line. The health care provider shows the mother the chart and says, "You may have noticed that your child has become very thin. See how the growth line on this chart has gone sharply down. That shows that she has very low weight for her height. We will talk about what to do to help her gain weight. Do not worry; there are ways to help her grow."



SHORT ANSWER EXERCISE

1. Liana is a 1-year-old girl who has not gained weight for 3 months. Her weight has been about 8 kg for 3 months. Her weight-for-age is now on the -1 z-score line.

Tick (✓) below to indicate the best way to describe Liana's growth line to her mother:

- a) ___ Liana's growth has stagnated.
- b) ___ In 3 months Liana has had no weight gain. You must be underfeeding her.
- c) ___ Liana still weighs 8 kg, the same as 3 months ago. It is not normal for a child of Liana's age not to grow and gain weight. We need to find out what is happening.
2. Omar is a 4-year-old boy whose growth line shows a trend towards overweight. Both his BMI-for-age and his weight-for-height have been increasing and are now just below the 2 z-score line.

Tick (✓) below to indicate the best way to describe Omar's growth line to his mother:

- a) ___ Omar's chart shows that he is way above the median, heading towards obesity.
- b) ___ Omar is growing faster in weight than in height. If this pattern continues, he could become overweight.
- c) ___ Omar's weight is too much. Are you overfeeding him or what?
3. Rewrite the following explanation in simpler words that a mother would understand:

"Nadia's length-for-age chart shows that she is stunted. Her weight-for-length, however, is at the median. Although she does not appear wasted, there is reason to be concerned about undernutrition."

When you have finished this exercise, compare your answers to those given on page 50 at the end of this module. If you have questions, talk with a facilitator.

2.0 Refer children with severe growth problems

Children with any of the following **severe undernutrition** problems should be referred **urgently for specialized care**:

- severely wasted (below -3 z-score for weight-for-length/height or BMI-for-age)
- clinical signs of marasmus (e.g. appears severely wasted, like “skin and bones”)
- clinical signs of kwashiorkor (e.g. generalized oedema; thin, sparse hair; dark or cracking/peeling patches of skin)
- oedema of both feet

An undernourished child may have a current illness (such as diarrhoea) or a chronic health problem that could be contributing to undernutrition. If so, treat the contributing illness or problem if you are able. If not, refer the child for appropriate treatment. If you know or suspect that a child has a chronic health problem (such as HIV/AIDS), refer the caregiver/child for counselling or testing as appropriate.

Refer children with obesity (above 3 z-score for weight-for-length/height or BMI-for-age) for **medical assessment and specialized management**.

Whenever you refer a child, explain to the mother the reasons for the referral and stress its importance. According to your usual practice, provide a referral form or note for the mother to take with her. Also write a note in the *Growth Record* in the Visit Notes section, such as on page 7, and show the mother this note. Ensure that she knows when and where to take the child. Ask whether she has transportation, and help her to arrange it if necessary. Follow up later to ensure that the child was taken for the required urgent care or medical assessment.

Counselling Techniques

The rest of this module describes how to counsel mothers of children who are growing well or who have problems of undernutrition or overweight. In all of these situations, it is important to use good counselling techniques.

Listen to and learn from the mother:

- Ask open questions.
- Listen and make sure that you understand what the mother says.
- Use body language and gestures that show interest.
- Empathize, that is, show that you understand how the mother feels.

Build confidence and offer support:

- Recognize and praise what a mother is doing right.
- Avoid words that sound judging.
- Accept what the mother thinks and feels.
- Give relevant information in simple language.
- Make a small number of suggestions, not commands.
- Offer practical help.

3.0 Counsel a mother whose child is growing well

If a child is growing well, compliment the mother on her child's growth. Then, depending on the child's age and the probable timing of the next visit:

- Review the feeding recommendations given in the *Growth Record* for the child's current age group, and/or explain the feeding recommendations for the child's next age group if the child will enter that age group before the next visit. The age groups that have specific feeding recommendations in the *Growth Record* are:
 - infants up to 6 months of age (page 14)
 - infants age 6 months to 1 year (pages 16–17)
 - children age 1 to 2 years (page 18)
 - children age 2 to 5 years (page 19)
- Refer to generic guidelines in the *Growth Record* as needed for the following:
 - recommendations for feeding a sick child (page 13).
 - recommended foods for babies and children age 6 months to 5 years (page 15).
 - recommendations for food safety and hygiene (page 20).



Read the Feeding Recommendations given in the *Growth Record* on pages 13–20 now. The recommendations are the same for boys and girls. Note that nutritious, available local snacks should be written on the blank lines in each child's *Growth Record* on page 19.

The feeding recommendations are also presented in the annex of this module.

Example

An exclusively breastfed 4-month-old boy is growing normally. The health care provider should congratulate the mother and encourage her to continue exclusive breastfeeding until age 6 months and to breastfeed as often as the child wants. Then the health care provider should explain the feeding recommendations for the child's **next** age group (age 6 months to 1 year). These recommendations are shown on pages 16–17 of the *Growth Record*. Since the child should be seen again at 9 months for immunization, the health care provider should explain only the instructions that are relevant for children up to 9 months.





SHORT ANSWER EXERCISE

Referring to the feeding recommendations in the *Growth Record* as needed, answer the following questions or fill in the blanks:

1. How long should a mother exclusively breastfeed her baby?
2. How often should an exclusively breastfed baby be fed?
3. When does a baby begin to need foods and liquids in addition to breast milk?
4. List three examples of staple foods that give a baby energy:
5. At 6–8 months of age, a child should be offered _____ tablespoons of thick porridge or well-mashed food _____ times per day. Increase the amount _____ to _____ cup. By ___ months, also give him small chewable foods to eat with his fingers.
6. At 9–11 months of age, a baby should be offered finely chopped or mashed foods and foods that he can pick up, about _____ cup, at ___ meals per day plus ___ snack(s).
7. How should one treat water to make it safe for a baby to drink?
8. List three times that it is important for a caregiver to wash her hands:
9. True or False? (Write T if the statement is true and F if it is false.)
 - a) _____ If a 4-month-old baby seems thirsty after breastfeeding, it is fine to give him some clean water.
 - b) _____ After 6 months of age, babies need some foods that are from animal sources.
 - c) _____ New foods should be introduced to a baby one at a time.
 - d) _____ A child who is 1 year old needs 1-2 snacks as well as 3-4 meals per day.
 - e) _____ A child should be given as much as he wants to eat of the foods that he likes.

When you have finished this exercise, compare your answers to those given on page 50 at the end of this module. If you have questions, talk with a facilitator.

When counselling mothers on feeding, take time to explain each recommendation clearly and simply. Suggest nutritious local foods and how to prepare them. It is helpful to show pictures or posters of local foods. In some health facilities, demonstrations are given on how to prepare nutritious foods for young children. Encourage the mother to attend a cooking demonstration if available.

Ask the mother whether she has any questions or concerns about being able to follow the feeding recommendations. If she has concerns, listen carefully. Help the mother plan how to overcome any obstacles to correct feeding, if possible.

After explaining the feeding recommendations, ask **checking questions** to ensure that the mother has understood the information given. Checking questions are intended to find out what a person has learned, so that you can provide more information or clarify instructions as needed.

Try to phrase checking questions so that the answer must be more than simply “yes” or “no.” For example, you would **not** ask, “Do you remember what foods to give your child?” The mother might answer “yes” just to avoid seeming forgetful. A better checking question would be, “What foods will you give?”

Asking checking questions requires patience. Give the mother time to think and answer. She may know the answer but be slow to respond for several reasons. She may be timid, may be surprised that you really expect an answer, or may be afraid of answering incorrectly. Wait for an answer and give encouragement.

Sometimes a mother may answer a checking question vaguely or incompletely. Then you will need to ask a follow-up checking question to determine whether she really understands.

If a mother answers incorrectly or cannot remember, be careful not to make her feel uncomfortable. Clarify or give more information. Then ask a checking question again.

Example

A health care provider has just explained to a mother the feeding recommendations for her 3-year-old child. To check the mother’s understanding, the health care provider asks the following checking questions:

- How many meals will you give each day?
- How many snacks will you give between meals?
- What are some nutritious snacks that you will give?

The mother answers that she will give 3 meals and 2 snacks each day, but she says that the snacks will be “whatever we have.”

The health care provider then asks a follow-up checking question, “What foods do you usually have in the home that are nutritious?” When the mother says that she usually has bananas, the health care provider replies that a banana is a very good snack. The health care provider then asks, “What are some other nutritious snacks that you might have?”



Exercise A

Group Discussion – Local feeding practices

In this exercise your group will discuss local feeding practices, common growth problems and their causes, and feeding advice that is most needed to solve these problems.

To prepare for the discussion, think about your community and write brief answers to the following questions.

1. What are typical local food choices for children age 6 months to 2 years?
2. How do local food choices for children up to 5 years compare to the foods recommended on page 15 of the *Growth Record*?
3. What are some commonly held beliefs that affect feeding (such as beliefs about heavy and thin children)?
4. What are common food handling practices that may lead to illness?
5. Is undernutrition common in your area? If so, what are some important causes of undernutrition in your area?
6. Is overweight or obesity common in your area? If so, what are some important causes?

**Tell a facilitator when you are ready for
the group discussion.**

4.0 Counsel a mother whose child has a problem of undernutrition

If a child has a problem of undernutrition, it is important to investigate the causes of the problem before giving advice to the mother. Investigate the causes by interviewing the mother of any child who is:

- wasted (below -2 z-score for weight-for-length/height or BMI-for-age)
- underweight (below -2 z-score for weight-for-age)¹
- stunted (below -2 z-score for length/height-for-age)¹ and **not** overweight or at risk of overweight
- has a growth trend towards one of these problems.

4.1 Interview the mother to investigate causes of undernutrition

Use the job-aid titled *Investigating the Causes of Undernutrition* provided with this course. The left side of this job-aid lists questions to ask the mother. The right side lists advice to be given depending on the mother's answers. Some pages of the job-aid are used only for children in a specific age group, while others apply to all children.

To use the job-aid, first ask all of the relevant questions about causes. Give advice only after the investigation of causes is complete, so that you can tailor your advice to the most important causes.

To investigate causes of undernutrition:

- Ask all the relevant questions for the child's age.
- Listen carefully to the mother's answers.
- Ask follow-up questions as needed to get complete information to understand the causes of the child's undernutrition.
- Note causes that are applicable for the child.

If there are many applicable causes, try to identify the most important ones. Ask the mother for her opinion about which causes are most important. You may comment on causes as they are discovered, but give advice only when the investigation of causes is complete.

The following situations require special consideration:

- If the child is currently ill or has a chronic disease that could be a cause of undernutrition, treat the child (or refer the child for treatment) rather than completing the entire interview about causes. Also advise the mother how to feed the child during illness using the feeding recommendations for the child's age group in the *Growth Record*. When the child returns for follow-up, you can investigate other possible reasons for the undernutrition.

¹ In highly undernourished populations, the number of children below -2 z-score in weight-for-age and length/height-for-age will be high. It may therefore be necessary to consider lower z-score cut-offs for selecting children for counselling.

- If the child has experienced a trauma (such as death in the family or a change in caregiver), this may be a contributing factor to a decrease in food intake. In this type of situation, assess whether it would be better to wait to conduct the interview at a later time.

Questions in the interview are related to breastfeeding, the child's appetite, types and variety of foods given, frequency of feeding, family mealtime habits, illnesses, recent trauma, and social and environmental factors that may contribute to undernutrition. The interview also includes a question to ask the mother directly what she thinks the causes may be.

The interview requires taking time with the mother, but taking this time is critical in order to identify the most relevant and helpful advice. **In a busy health facility, it may be necessary to assign specific health care providers to do the tasks of interviewing and counselling mothers.**

Take time now to study the job-aid titled *Investigating Causes of Undernutrition*. Focus on the questions listed on the left side. Remember that you will ask all of the relevant questions for the child's age, listen to the mother's or caregiver's replies, and determine the most important causes of undernutrition **before** giving advice.

Here is a summary of the steps to follow:

- Step 1: Find out if the child is currently ill
- Step 2: If not ill, initiate investigation of causes
- Step 3: Ask about any recent changes in eating and/or breastfeeding
- Step 4: Discuss age-specific questions about the child's feeding
- Step 5: Ask about recurrent illnesses
- Step 6: Assess possible underlying social and environmental causes
- Step 7: Jointly with the caregiver, identify causes
- Step 8: Counsel



SHORT ANSWER EXERCISE

Refer to the job-aid titled *Investigating the Causes of Undernutrition* to fill in the blanks in the story below. This exercise is intended to help you follow the sequence of steps in the job-aid. Assume that the nurse in the story is following the steps correctly.

Arif

Arif's age today is 1 year and 2 months. His weight-for-length was on the median at birth, but it has been trending downward and is now close to the -2 z-score line. The nurse finds Step 1 of the job-aid for his age group (_____). Arif is not currently _____ and has no known _____. Next she looks at Step 2 and explains to the mother that there are many possible _____ of undernutrition. The nurse explains that she is going to ask the mother some _____ to determine the causes for Arif. Next, in Step 3, the nurse asks whether Arif has been _____ or _____ less than usual. The mother answers No.

In Step 4, the nurse locates the appropriate questions about feeding for Arif's age group on page _____. The nurse asks the questions and finds that Arif is no longer breastfed. He is eating mostly thin cereal and not many animal-source foods. He eats 3 meals daily but no snacks. His appetite is good.

After asking questions about feeding, the nurse goes to Step ____ on page _____. She finds out that Arif is not often tired or sick. She then goes to Step 6 to assess possible _____ and _____ factors that may affect Arif's feeding and care. Then, in Step 7, the nurse asks the _____ for her opinion on the causes of Arif's undernutrition. Finally, in Step 8, the nurse _____ the mother on how to address the causes.

When you have finished this exercise, compare your answers to those given on page 51 at the end of this module. If you have questions, talk with a facilitator.

Possible causes of undernutrition

While interviewing the mother, you may note several possible causes of undernutrition, for example, feeding practices that differ from the recommendations for the child's age. You may also note sanitation problems that could cause illnesses leading to undernutrition. In addition, you may note social and environmental factors that could affect the child's feeding and care. Following are some examples:

- If three or more children under 5 years of age live in the household, the child is at risk of undernutrition and neglect. The risk is decreased if there are two or more people who share responsibilities for child feeding and care.
- If there is no mother or no father present in the household (e.g. due to family separation or death), or if one parent is not involved in the child's care, the child's risk of undernutrition and neglect is increased.
- If the mother or father is not in good health, the child's risk is increased.
- If the mother states that there is not usually enough food to feed the family, she is facing serious obstacles and needs food assistance as well as advice.

When there are several possible causes of undernutrition, it is helpful to focus on the main causes that can be changed. After asking the questions in the interview, ask the mother's opinion of the causes, so that you know which causes she recognizes. Then summarize what you see as the main causes. The next exercise includes an example of an interview with the mother of an undernourished child.



Exercise B

Continuing Case Study – Nalah



In this exercise, two participants will act out a script of an interview with Nalah's mother. The nurse is following the steps in the job aid and these are marked in the script. As you listen to the interview, mentally compare the mother's answers about feeding to the recommended practices for Nalah's age to identify possible causes of her undernutrition.

After the interview, the facilitators will lead a discussion of the causes of Nalah's undernutrition.

Background information

Nalah is now 6 months old and has visited the health centre 5 times since her birth. Nalah is the only child at home living with her mother and father. Both parents are in good health; neither is known to be HIV positive. Her growth has been charted in the *Girl's Growth Record*. Because Nalah is below the -2 z-score line in both length-for-age and weight-for-age, the nurse will counsel the mother, Mrs Parab, about growth and feeding. Before giving any advice, the nurse will interview Mrs Parab about Nalah's feeding and the home situation in order to find out possible causes of her undernutrition.

Step 1: Nalah is not currently ill and has no known chronic disease.

Script – Interview with Nalah's mother about the causes of undernutrition

Nurse: Thank you for bringing Nalah back again, Mrs Parab. Now that we have measured and weighed her, let's take a minute to talk, shall we?

Mrs Parab: Of course.

Nurse: (*Showing the growth charts*) As you can see from her length chart, Nalah was an average length at birth and she could have grown along this green line if all was going well. But we can see that she is a lot shorter than an average girl of 6 months. Her weight also is a lot lower than the average. Since her growth in both weight and length have slowed down together, she does not look too thin. But we want her to grow longer and to gain weight.

Mrs Parab: What should we do?

Step 2

Nurse: Well, since Nalah has not been ill, I think we should focus on her feeding. Do you mind if I ask you some questions so that we can better understand the reasons why her growth has slowed down?

Mrs Parab: That would be fine.

Step 3

Nurse: Alright then, has Nalah been breastfeeding less or eating less than usual?

Mrs Parab: Maybe less, because it's hard to breastfeed when I have to go to work. Sometimes I have to leave her with my neighbour.

Step 4: The nurse turns to page 5 of the job aid since Nalah is 6 months old.

Nurse: So you are still breastfeeding?

Mrs Parab: Yes, when I can.

Nurse: That's good. How many times is that during a day and a night?

Mrs Parab: When I have Nalah with me at work, I breastfeed about 4 or 5 times from morning until night. If she stays with my neighbour, I can only breastfeed twice, once in the morning and once at night.

Nurse: Do you have any difficulty with breastfeeding itself? Is Nalah attaching well to the breast and emptying the breasts whenever she breastfeeds?

Mrs Parab: Well, I have never thought about that. I was told that I should feed her from both breasts so sometimes I switch to the other breast before the first is empty.

Nurse: That is something we can look at together in a moment. Do you give Nalah any other fluids besides breast milk?

Mrs Parab: I sometimes have given her water, and I leave her some milk when she stays with my neighbour.

Nurse: What kind of milk?

Mrs Parab: I buy it at the shop. It's cow's milk from a tin.

Nurse: Do you add any water to it?

Mrs Parab: No, because it already looks thin to me.

Nurse: How many times does the neighbour give her the milk?

Mrs Parab: Twice, I think.

Nurse: And how does she feed Nalah the milk?

Mrs Parab: In a cup.

Nurse: That is good. Do you or the neighbour give Nalah any semi-solid or solid foods?

Mrs Parab: My neighbour gives her some porridge if she seems hungry after the milk.

Nurse: How often is that?

Mrs Parab: Not more than once a day.

Nurse: How does the neighbour feed Nalah the porridge?

Mrs Parab: With a spoon.

Nurse: Have you offered Nalah any porridge at home?

Mrs Parab: Not yet.

Step 5

Nurse: Let me just ask you a few more questions about Nalah's health and your home. Is Nalah often tired, or sick with diarrhoea, cough, or fever?

Mrs Parab: Nalah does not seem strong to me. She sometimes has a runny nose, and she likes to be held. She does not move around a lot but lies still.

Step 6

Nurse: Tell me about where you live. Do you have a latrine or toilet?

Mrs Parab: No, we live in a poor area. There is a common latrine for many houses.

Nurse: Where do you get water?

Mrs Parab: We get water from a tap in the yard, and once a week I buy water in large cans.

Nurse: Do you boil or treat your water?

Mrs Parab: I boil the drinking water, but not the water for washing dishes.

Nurse: It is very good that you boil the water for drinking. How is water stored in your home?

Mrs Parab: I just keep it in the same cans that we buy it in.

Nurse: How many people are living at home now?

Mrs Parab: Just me, my husband, and Nalah.

Nurse: And how is your health?

Mrs Parab: We are fine, although I am very tired, I must admit.

Nurse: Does Mr. Parab help with Nalah?

Mrs Parab: He is out looking for construction work most days, but he helps a bit.

Nurse: Do you have enough food to feed the family?

Mrs Parab: We have enough to manage.

Step 7

Nurse: What do you think is the most important reason for Nalah's small size and tiredness?

Mrs Parab: Well, I thought she looked small but I did not know why. Maybe she needs more food. I wish that I could stay home and breastfeed more...

Nurse: Yes, that would be good if you can do it. From what you have said, it seems to me that Nalah may be growing slowly for a number of reasons, but most probably because she is not getting enough food. Please put her to the breast for a feed so we can see if she attaches well and let's speak more about the emptying of the breasts.

The facilitators will lead a discussion of possible causes of Nalah's undernutrition. You will hear the rest of the interview, including feeding advice and actions to take, after Exercise C.

4.2 Give advice related to the causes of undernutrition

During the first part of the interview with the mother or other caregiver, you summarized the possible causes of the child's undernutrition and determined which causes seemed most applicable and important. Next, focusing on the main causes that the mother or caregiver recognizes as important, ask her:

“What do you think that you can do to help the child, given these causes?”

Then discuss what is feasible to do and who can provide help and support. Acknowledge any difficulties in the mother's situation. Encourage her to take action.

Specific advice related to feeding is given on the right-hand side of the job-aid, next to the related questions. If you noted that a feeding practice differs from what is recommended, explain the recommended practice. Also commend the mother if she is following some of the recommendations.

If there are many causes of undernutrition, there may be much applicable advice, but the mother will only be able to remember a limited number of actions to take. Limit your advice to two or three actions that are most important and feasible.

A stunted child whose weight-for-length/height and BMI-for-age are within normal range needs a diet that will improve growth in length/height without excessive weight gain that could result in overweight or obesity. Rather than increasing their energy intake, a strategy for such children is to improve the amount and bioavailability of micronutrients in their diet by increasing consumption of animal-source foods. Animal-source foods are high in micronutrients, and many minerals are better absorbed from meat than they are from plant-derived foods.¹ Among vegetarian populations or where access to a micronutrient-adequate diet is limited, strategies to improve micronutrient intake include using fortified foods and sprinkles or providing micronutrient supplements.

Once again, study the job-aid titled *Investigating Causes of Undernutrition*. This time focus on the advice listed on the right side.

¹ Allen LH, Gillespie SR. 2001. What works? A review of the efficacy and effectiveness of nutrition interventions. United Nations Administrative Committee on Coordination, Sub-Committee on Nutrition, Geneva in collaboration with the Asian Development Bank, Manila.



SHORT ANSWER EXERCISE

Refer to the job-aid titled *Investigating the Causes of Undernutrition* and to the *Growth Record* to answer the following questions about advice needed for Arif's mother.

1. Arif is 1 year and 2 months old. On what page of the *Growth Record* is feeding advice for his age group?
2. Arif is eating mostly thin cereal. What advice is needed related to the cereal?
3. Arif's only animal source foods are milk and yogurt. What advice is needed about animal source foods?
4. Arif eats 3 meals daily but no snacks. What advice is needed about snacks?
5. In Step 6 of the interview with Arif's mother, the nurse learned that there are three children in Arif's family and he is the youngest. When Arif's father is out of work, there is sometimes not enough money to buy food. What can the nurse do or say about this?

When you have finished this exercise, compare your answers to those given on page 51 at the end of this module. If you have questions, talk with a facilitator.

Example 1: Giving advice about feeding

A 9-month-old boy is showing a trend towards underweight. During an interview the mother says that her son is breastfeeding exclusively about 8 times a day. He has not yet begun taking semi-solid foods. After the interview, the health care provider explains that one cause of the child's trend toward underweight is that he is not yet eating complementary foods. The health care provider compliments the mother for continuing to breastfeed and encourages her to continue breastfeeding as often as the child wants. Then the health care provider tells the mother that it is time to start giving her child some nutritious complementary foods, 3–4 times per day, plus one or two snacks. The health care provider also gives examples of good complementary foods.

It may be more difficult to resolve causes of undernutrition related to poor sanitation, contaminated water, chronic illness of a parent (such as HIV/AIDS), or adverse social and environmental factors. Advice must always be accompanied by questions about the feasibility of following the advice, for example, “How will you be able to do this? Is there anyone who can help you?” If the mother will have difficulties, refer her to a source of assistance if possible.

Example 2: Giving advice related to other causes

A 2-year-old girl has experienced repeated episodes of diarrhoea. The health care provider and the mother believe that this repeated illness is a main cause of the child's wasting. The family does not have a toilet or latrine, and their drinking water is kept uncovered in a large vessel and dipped out with a cup. It would be a large undertaking to build this family a latrine, so the health care provider advises the mother on how to obtain assistance for building a latrine. In the meantime, he advises her about handwashing. He also advises her on how to boil the drinking water, to keep the drinking water covered, and ensure that the cup is only used for scooping out water, not for drinking.

4.3 Set a goal for improving growth of an undernourished child

At the end of the discussion with the mother or other caregiver, it is important to set a reasonable time for the child's next visit and to set a general goal for improved growth. The next visit may be at the time that an immunization is required or at another convenient time.

Since improvement in the child's growth may take some time, and the rate of improvement cannot be predicted, set goals for a few (2 or 3) actions that the caregiver can take towards improving the child's growth. Suggest actions that can be taken within a few weeks. You can praise and encourage the caregiver when they are accomplished. Make notes (e.g. in the *Growth Record*) of the underlying causes of undernutrition for discussion at follow-up visits, when goals may be set for additional actions to take.

If the cause of the child's undernutrition is a recent illness, the goal is to return the child to his previous, normal growth line in a reasonable amount of time, such as 3 months.

If there are other causes of the child's undernutrition, the first goal is to stop the trend towards undernutrition and eventually reverse the trend. Stress that the mother can help to achieve these goals by following the recommendations discussed.

Avoid setting any specific target for weight gain, especially for a stunted child. If the stunted child gains weight without increasing in length, he or she may become overweight. Express goals in terms of improving growth so that length and weight increase appropriately in relation to one another.

Example

Hamid is 11 months old and weighs 8.0 kg and has a length of 74 cm. His length-for-age is just below the median, but his weight-for-age is below the -1 z-score line. Hamid's weight-for-length is on the -2 z-score line.

After discussing with Hamid's mother how to improve his feeding, the health care provider suggests that Hamid return in 1 month for another growth assessment. The goal is that Hamid will start gaining weight and avoid becoming wasted.



Exercise C

Continuing Case Study – Nalah



In this exercise, you will determine what advice should be given to Nalah's mother about feeding Nalah. The advice should include feeding recommendations for Nalah's age as well as address causes of undernutrition identified in the previous exercise. It will be necessary to limit the advice to the most important points so as not to overwhelm the mother.

1. Nalah is now 6 months old. What pages of the *Girl's Growth Record* should the health care provider use to describe the recommended feeding for Nalah now?
2. The main causes of Nalah's undernutrition are written on the left below. You may add other causes based on the group's earlier discussion if you wish. To the right of each cause, briefly describe relevant advice. Refer to the *Girl's Growth Record* as needed.

Causes of Nalah's undernutrition

Possible advice to be given

*Nalah has not been fed frequently enough.
Because Nalah's mother works, she has not
been able to breastfeed enough.*

*Nalah is sickly (runny nose, tired),
which may be partly due to hygiene problems
in the home.*

**When you have finished this part of the exercise,
review your answers with a facilitator.**

When everyone has finished the written part of this exercise, two participants will act out the following script, which includes the advice given to Nalah's mother as well as appropriate checking questions. The three main actions suggested are indicated by numbers to the left of the script.

Script – Conclusion of counselling session with Nalah's mother

Nurse: Nalah's breast attachment is very good. Well done. Now whenever you breastfeed, leave her to empty each breast so that she gets the hind-milk which has more fat than the fore-milk. Let's talk now about how frequently you can feed her. You said that you would like to stay home and breastfeed more. Is there any way that you could do that?

Mrs Parab: If my husband could get more work, I could stay home and breastfeed more.

Nurse: That would be helpful to Nalah if you can do it. Let's talk about some more ways to help Nalah. Let's look in the *Growth Record* for the feeding recommendations for her age.

(The nurse opens the Growth Record to pages 16-17 to show the recommendations to Mrs Parab.)

① Since Nalah is now 6 months old, we need to follow the recommendations for infants 6 months to 1 year of age. You see that the first recommendation is to breastfeed as often as Nalah wants. Even if you cannot breastfeed more during the day, you could do it at night.

Nalah also needs a good soft staple food now that she is 6 months old. What kind of porridge is she eating at your neighbour's home?

Mrs Parab: The porridge is made of maize meal.

Nurse: That is a fine staple food. You need to feed Nalah thick porridge 2–3 times each day, about 2–3 tablespoons. *(Shows amount with her hands or a spoon)* If she is already taking more than this, do not reduce the amount.

Mrs Parab: Should I give her any other foods?

Nurse: Yes, but start just one new food at a time to be sure that she can tolerate it. For example, you can start giving some mashed fruit, such as banana. Let's look at the list of some appropriate foods on page 15 of Nalah's *Growth Record*.

③

The porridge will give Nalah energy, but she needs a variety of other foods for their nutrients to help her grow. Just remember to introduce them one at a time.

Mrs Parab: But I don't have all of these foods. Foods like chicken and butter are too expensive.

Nurse: You don't have to give those. Let's talk about what you do have. What animal source foods can you give her?

Mrs Parab: I can get eggs, and sometimes fish or a bit of meat.

Nurse: That will do very well. Can you get leafy green and yellow-coloured vegetables and fruit?

Mrs Parab: Yes. For vegetables I can get pumpkin and chard. And banana and papaya for fruit.

Nurse: And do you have oil or fat that you could add a little to her food?

Mrs Parab: I have oil, but I think it causes constipation in babies.

Nurse: Oil should not cause constipation, but what it will do is to increase the energy in Nalah's food.

Mrs Parab: That all seems like too much food.

Nurse: Well, you will not give all of these foods every day. Remember, at first you will only give a small amount 2 or 3 times each day. And you will only introduce one new food every 3–4 days. Please tell me why you should introduce new foods one at a time.

Checking question

Mrs Parab: To be sure that the new food does not make her sick.

Nurse: That's right.

Mrs Parab: What about breastfeeding? How long should I breastfeed?

Nurse: Keep breastfeeding as often as Nalah wants to, day and night for two years or more.

Mrs Parab: I hope that I can do that.

Nurse: I think that if you feed Nalah the way that we have discussed, she will be better nourished and more lively. The food will help her grow and develop more. Now, to review, please tell me how you will feed Nalah for the next month.

Mrs Parab: I will try to breastfeed more often.

Nurse: Good. What else?

Mrs Parab: I will give her porridge.

Nurse: OK. That's good. How much porridge and how often?

Mrs Parab: About this much (*shows with hands*) two or three times a day.

- Nurse: Very good. And what other foods will you start giving, one at a time?
- Mrs Parab: Mashed banana, papaya, pumpkin.
- Nurse: What food will you give that comes from an animal?
- Mrs Parab: Eggs, most likely.
- Nurse: All of these foods will help Nalah grow. If you can feed her as we have agreed for one month, there should be a change in her health. Do you think that you could bring Nalah back next month?
- Mrs Parab: Yes, I can bring her back.
- Nurse: Good. We will weigh and measure her again. When she is getting enough food, you will see her being more active instead of lying still. We should also see her growing in length and weight. So, next month we will speak about her feeding needs at 7–8 months, and maybe also look for ways to prevent problems like the runny nose that you mentioned.
- Mrs Parab: Okay, I will bring her back in one month.
- Nurse: That's great. Let me write the date for that visit in her book. Of course, if Nalah gets sick or if you have any problems or questions, you can come sooner. I look forward to seeing you again.
- Mrs Parab: Thank you.

Oral Drill

Your facilitator will lead this drill when everyone is ready. The purpose of the drill is to become more familiar with the feeding recommendations and to practise asking checking questions. Your facilitator will explain how the drill will proceed.

5.0 Counsel a mother whose child has a problem of overweight

As with problems of undernutrition, it is important to investigate the causes of overweight before giving advice to the mother. Investigate the causes by interviewing the mother of any child who:

- is overweight (above 2 z-score for weight-for-length/height or BMI-for-age)
- has a growth trend towards overweight (above 1 z-score for weight-for-length/height or BMI-for-age, with a trend towards the 2 z-score line)

A stunted child can be overweight or obese.

Note: Obese children (above 3 z-score) need referral for medical assessment and specialized management. If there is a referral system for obese children, refer them. If not, interview the mother about causes and counsel her as instructed in sections 5.1 – 5.3.

5.1 Interview the mother to investigate causes of overweight

Use the job-aid titled *Investigating the Causes of Overweight* provided with this course. The left side of this job-aid lists questions to ask the mother. The right side lists advice to be given depending on the mother's answers. Some questions in the job-aid are used only for children in a specific age group, while others apply to all children.

To use the job-aid, first ask all of the relevant questions about causes. Give advice only after the investigation of causes is complete, so that you can tailor your advice to the most important causes.

To investigate the causes of overweight:

- Ask all the relevant questions for the child's age.
- Listen carefully to the mother's answers.
- Ask follow-up questions as needed to get complete information to understand the causes of the child's overweight.
- Note causes that are applicable for the child.

If there are many applicable causes, try to identify the most important ones. You may comment on causes as they are discovered, but wait to give advice when the investigation of causes is complete.

To identify the causes of overweight, you will ask the mother questions about her child's diet and frequency of feeding/eating. For older children, also ask about leisure activities (such as hours spent watching television) and level of physical activity. Take care to ask these questions in a sensitive way that will not offend the mother or imply that she is at fault. If a child is being fed too much or too often, ask follow-up questions to determine why. Particularly in late infancy (age 6–12 months), a child may be overfed by parents who are

anxious to keep up the child's weight. Knowing the reasons for overfeeding will help you express your advice in the most relevant way.

You may need to be particularly sensitive if the mother herself appears to be overweight. If one parent is obese, the child has 40% probability of being overweight; if both parents are obese, the probability that the child will be overweight goes up to 70%. Although children do have a genetic tendency towards leanness or overweight, the causes of overweight are primarily factors such as family eating patterns and environment (for example, poor dietary habits, high consumption of energy-dense foods, and little physical activity). If parents have poor eating and activity habits, the child is likely to learn the same habits. During the interview about causes of overweight, focus on the child's eating and activity patterns rather than the parents'. However, realize that the parents may need to change some of their habits in order to address the causes of the child's overweight.

When there are several possible causes, it is helpful to focus on the main ones that can be changed. After asking the questions in the interview, ask the mother's opinion of the main causes of overweight, so that you know which causes she recognizes. Then summarize what you see as the main causes.

Take time now to study the job-aid titled *Investigating Causes of Overweight*. Focus on the questions listed on the left side. Remember that you will ask all of the relevant questions for the child's age, listen to the mother's or caregiver's replies, and determine the most important causes **before** giving advice.

Here is a summary of the steps to follow:

- Step 1: Initiate investigation of causes
- Step 2: Discuss age-specific questions about the child's feeding
- Step 3: Ask about physical activity (children over age 6 months)
- Step 4: Jointly with the caregiver, identify causes
- Step 5: Counsel



SHORT ANSWER EXERCISE

Refer to the job-aid titled *Investigating the Causes of Overweight* to fill in the blanks in the story below. This exercise is intended to help you follow the sequence of steps in the job-aid. Assume that the nurse in the story is following the steps correctly.

Mona

Mona's age today is 1 year and 6 months. Her weight-for-length is just above the 2 z-score line. The nurse looks at Step 1 of the job aid and explains to the mother that there are many possible _____ of overweight. The nurse explains that she is going to ask the mother some questions to determine the causes for Mona. Next, in Step 2 from mid-page 2, the nurse asks the mother what types of food Mona is given and if she receives any milk.

Mona eats about 3 meals a day with the family and up to 3 snacks, usually pastry or cake, throughout the day. In addition she is given about 1 litre of formula milk each day.

After asking questions about feeding, the nurse goes to Step ___ on page _____. She asks about Mona's _____. She finds out that Mona is kept in a crib for many hours when her mother is busy.

Then, in Step 4, the nurse asks the mother for her opinion on the _____ of Mona's overweight. Finally, in Step 5, the nurse _____ the mother on how to address the _____.

When you have finished this exercise, compare your answers to those given on pages 51–52 at the end of this module. If you have questions, talk with a facilitator.



Exercise D

Continuing Case Study – Toman



In this exercise, two participants will act out a script of an interview with Toman's mother. The nurse is following the job-aid titled *Investigating the Causes of Overweight*. As you listen to the interview, mentally compare the mother's answers about feeding to the recommended practices for Toman's age to identify possible causes of his overweight.

After the interview, the facilitators will lead a discussion of the causes of Toman's overweight.

Background information

Toman is now 2 years old. Toman is the only child at home living with his mother. Mr and Mrs Baruni are separated, and Toman spends weekends with his father. Both parents are in good health; neither is known to be HIV positive. Mrs Baruni does not appear to be overweight.

His growth has been charted in the *Boy's Growth Record*. Because Toman is above the 2 z-score line in weight-for-height and BMI-for-age, the nurse is going to counsel his mother, Mrs Baruni, about growth and feeding. Before giving any advice, the nurse will interview Mrs Baruni about Toman's feeding and the home situation in order to find out the possible causes of his overweight.

Script – Interview with Toman's mother about the causes of overweight

Step 1

Nurse: Let's look together at Toman's *Growth Record*. Looking at his length-for-age, we see that he is a nice height, a bit taller than average for boys his age. The other charts show that Toman is quite heavy for his height. What do you think? Would you agree that Toman is overweight?

Mrs Baruni: I don't know. I think that he is a big, healthy boy. I never thought he was really overweight. Is this a problem?

Nurse: It will be a problem if he continues gaining weight so fast. We need to slow down his weight gain until his height catches up. Do you mind if I ask you some questions about Toman's eating and his physical activity? Then we can both understand why he seems to be gaining weight faster than expected.

Mrs Baruni: Alright.

Step 2

Nurse: Is Toman breastfed?

Mrs Baruni: No, I stopped breastfeeding him when he was 3 months old.

Nurse: Is he fed any milk formula or other milk?

Mrs Baruni: He drinks lots of milk. He loves milk.

Nurse: About how much milk does he drink each day?

Mrs Baruni: Oh, probably a litre. He has a glass in the morning, then at about 10:00, and also with snacks. I also give him a bottle to help him go to sleep without crying at night.

Nurse: How is the milk prepared? Is anything added to sweeten or thicken it?

Mrs Baruni: Usually it's just fresh milk from a packet, but sometimes I warm it and add a bit of sugar or chocolate powder.

Nurse: How many meals does he eat each day?

Mrs Baruni: Three.

Nurse: OK. About how much does he eat at each meal?

Mrs Baruni: A small bowl full.

Nurse: What type of bread does Toman eat?

Mrs Baruni: He likes regular sliced bread, toast, and sweet breads.

Nurse: Does he eat cakes or other sweets?

Mrs Baruni: Well, he eats sweets like cookies and cake when he stays with his father and his father's mother over the weekend. My mother-in-law likes to bake and feed Toman sweets. She is a bit heavy herself.

Nurse: Does Toman drink soft drinks?

Mrs Baruni: Yes, sometimes.

Nurse: How often?

Mrs Baruni: At my mother-in-law's house he has soft drinks with his meals. I give him juice instead.

Nurse: What about spreads on bread? Does Toman eat a lot of butter, margarine, or sweet spreads on his bread?

Mrs Baruni: Oh yes, he loves chocolate and hazelnut spread.

Nurse: Does he eat high-energy snacks like chips?

Mrs Baruni: No, I don't think so.

Nurse: What about fried foods, such as deep-fried breads or meats, or French fries?

Mrs Baruni: I don't usually fry foods. I may add some oil when I cook, but not much.

Nurse: Does he eat fatty meat?

Mrs Baruni: He likes meat, but I don't know whether the meat is fatty.

Nurse: You said that Toman eats 3 meals each day. Does he also have snacks?

Mrs Baruni: Well, he eats breakfast, a snack around 10:00, lunch, a snack after his nap, then dinner, and finally his bottle of milk before bed. So I guess he eats about 6 times each day.

Nurse: Do you think that Toman eats too much at meals?

Mrs Baruni: No, not really.

Nurse: Besides the planned snacks, does Toman eat between meals?

Mrs Baruni: I don't think so, but I don't really know what happens at his grandmother's house.

Nurse: Do you and Toman sit down at a table to eat?

Mrs Baruni: We try, but sometimes we may sit in front of the television to eat.

Step 3

Nurse: How many physically inactive hours does Toman spend each day, for example, watching the television?

Mrs Baruni: When he's at home with the babysitter while I am at work, he watches a lot of television.

Nurse: How often is that?

Mrs Baruni: Five days each week while I am working.

Nurse: When he is at his father's, what kind of meals does he have?

Mrs Baruni: Oh, at his father's he is sure to have fast foods. That's why they usually eat at his grandmother's.

Nurse: Does Toman have many opportunities for active physical play?

Mrs Baruni: He really doesn't. The babysitter stays indoors with him.

Step 4

Nurse: What do you think could be the main reasons that Toman is overweight?

Mrs Baruni: You know, I think he's just a big boy like his father. He seems healthy to me, but maybe he needs to play outside and run around more.

Nurse: I agree. From what you have told me, Toman's weight could be caused by a number of things, including lack of activity and food choices.

After the interview, the facilitators will lead a discussion of the causes of Toman's overweight. You will hear the rest of the interview, including feeding advice and other actions to take, after Exercise E of this module.

5.2 Give advice related to the causes of overweight

During the first part of the interview with the mother or other caregiver, you found out about the possible causes of the child's overweight and asked which causes seemed most important. Next, focusing on the main causes that the mother or caregiver recognizes as important, ask:

“What do you think that you can do to help the child, given these causes?”

Then discuss with her what is feasible to do and who can provide help and support. Acknowledge her situation and encourage her to take action.

Specific advice related to feeding and physical activity is given on the right-hand side of the job-aid, next to the related questions. If you noted that a feeding practice differs from what is recommended, explain the recommended practice. Also commend the mother if she is following some of the recommendations.

In your recommendations, include local examples of high-energy snacks to avoid and nutritious foods to provide. Describe specifically how to prepare foods using less fat and sugar. Also discuss feasible ways for the child to participate in active physical play. Encourage parents to find ways to increase the child's activity and reduce anxiety, insecurity, or boredom, which are feelings that may lead to overeating.

Also encourage parents to adopt a healthy lifestyle including healthy eating habits, physical activity, and positive interaction at family meals. The best way to influence children to have healthy lifestyles is for the parents to model the desired behaviours.

Once again, study the job-aid titled *Investigating Causes of Overweight*. This time focus on the advice listed on the right side.



SHORT ANSWER EXERCISE

Refer to the job-aid titled *Investigating the Causes of Overweight* and to the *Growth Record* to answer the following questions about advice needed for Mona's mother.

1. Mona is 1 year and 6 months old. On what page of the *Growth Record* is feeding advice for her age group?
2. Mona is no longer breastfed, but she drinks formula milk and eats complementary foods. How much formula is enough for Mona each day? (Look in the job-aid titled *Investigating the Causes of Overweight*.)
3. In addition to 3 family meals and a litre of formula milk, Mona receives 3 energy-rich snacks in a day. What advice is needed about the number of meals for Mona?
4. What are a few examples of foods that could be recommended to Mona's mother for her snacks?
5. Mona stays in a crib for hours while her mother is busy. What advice is needed about activity?

When you have finished this exercise, compare your answers to those given on page 52 at the end of this module. If you have questions, talk with a facilitator.

Example

A 4-year-old boy named Marcio is showing a trend towards obesity. Marcio's mother appears to be a normal weight. By questioning the mother, the health care provider finds that Marcio stays at home with an elderly grandmother all day while both parents work. The grandmother feeds the boy lots of fried foods, white rice, and sweets. He spends too much time watching television since the grandmother finds it difficult to take him outside to play. In the evening, the family typically has a pleasant dinner together.

The health care provider commends the mother for making time to eat dinner as a family in the evening and suggests serving small portions and having pleasant conversation to slow down the child's eating. She advises providing some easy-to-prepare, lower-energy meals for the grandmother to serve during the day. The health care provider asks the mother whether it is possible to hire a babysitter to take the child outside, or to register the child for some organized activity such as a pre-school. When the mother says that this is not affordable, the health care provider suggests that the family take walks together after dinner and organize outdoor activities for Marcio with other children his age. The health care provider also suggests limiting time watching television and giving Marcio some simple active chores such as sweeping.

5.3 Set a goal for improving growth of an overweight child

At the end of the discussion with the mother or other caregiver, it is important to set a reasonable time for the child's next visit and to set a general goal for improved growth. The next visit may be at the time that an immunization is required or at another convenient time.

Set goals for a few (2–3) actions that the caregiver can take towards improving the child's growth. These actions can be reviewed at the next visit. Encourage and praise the caregiver when the actions are accomplished. Make notes (e.g. in the *Growth Record*) of the underlying causes of overweight for discussion at follow-up visits, when goals may be set for additional actions to take.

It is not recommended for an overweight child to try to lose weight, but instead to decrease the rate of weight gain while growing in height.

Because one cannot predict the child's rate of growth in height, it is not possible to set a specific weight target for a certain time. Instead, discuss the importance of slowing the child's weight gain so that he or she eventually reaches a more normal weight-for-height.



Exercise E

Continuing Case Study – Toman



In this exercise, you will determine what advice should be given to Toman's mother. The advice should include feeding recommendations for Toman's age as well as address causes of overweight identified in the previous exercise. It will be necessary to select the most important advice to give the mother.

1. Toman is now 2 years old. What page of the *Boy's Growth Record* should the health care provider use to describe the recommended feeding for Toman?
2. The main causes of Toman's overweight are written on the left below. You may add other causes based on the group's earlier discussion if you wish. To the right of each cause, briefly describe relevant advice. Refer to the *Boy's Growth Record* as needed.

Causes of Toman's overweight

Advice to be given

*Too many high energy food choices
such as:*

*Milk with added sugar or chocolate
Soft drinks*

Sweets like cookies and cake

Sweet chocolate and nut spread

Bottle of milk used to get Toman to sleep

Causes of Toman's overweight

*Lack of control over feeding at
father's and grandmother's home*

Advice to be given

*Lack of physical activity and
too much time in front of the television*

**When you have finished this part of the exercise,
review your answers with a facilitator.**

When everyone has finished the written part of this exercise, two participants will act out the following script, which includes the advice given to Toman's mother, as well as appropriate checking questions. The main actions suggested are indicated by numbers to the left of the script.

Script – Conclusion of counselling session with Toman’s mother

Nurse: Your idea of taking Toman outside to play more is a good one. It will help him to have more physical activity. Can you ask the baby sitter to take him outside to play?
①

Mrs Baruni: Yes, I will ask her to do that.

Nurse: On the weekends, is it possible that Toman’s father would take him outside to a playground or to play ball?

Mrs Baruni: I can explain to him that Toman is getting fat and ask him to do that. But I really do not have much control over what he does or eats with his father and grandmother. If I make a suggestion to her, she resents it.

Nurse: I understand. Then let’s discuss first what you can do in your own home. I suggest that you stop adding sugar or sweetened chocolate to Toman’s milk. If you sweeten it, it is more fattening. Also he is likely to drink more than he needs because it tastes so good.
②

Mrs Baruni: He will not like the milk as much if I don’t sweeten it.

Nurse: That is alright. He doesn’t need so much milk as you are giving him. Half a litre each day is plenty. And if he is thirsty before bed, give him milk or water in a cup, not a bottle. He will drink more than he needs from a bottle, and it is bad for his teeth to fall asleep with a bottle.
③

Mrs Baruni: I will never get him to sleep then.

Nurse: It’s alright to let him cry a bit as he falls asleep. He needs to be able to fall asleep without a bottle. It may help to rock him and sing to him. Besides, if he has been outside to play, he may be very tired and have no problem falling asleep.

Mrs Baruni: I had not thought of that.

Nurse: From what you have told me, there are more feeding changes that would be helpful, but for now let’s focus on getting him out to play, reducing sugar in his diet, and decreasing the amount of milk given daily. How do you feel about trying these three things?

Mrs Baruni: I am willing to try, but his grandmother will give him all the sweet foods he wants!

Nurse: I understand the difficulty. Can you discuss the situation with your husband? Maybe he can help.

Mrs Baruni: Not easily, but I could write a letter, or perhaps you could write a note or call him?

Nurse: That is a good idea. I will call him. Please give me his phone number.

Mrs Baruni: Yes, he may listen to you more than me.

Nurse: I will call him. If you make the feeding changes that we have agreed on, and if your husband and mother-in-law make some changes as well, it will be very good for Toman, especially if he also gets more physical activity. Now, just to review, let me ask you how you will reduce the amount of sugar that Toman is taking.

Mrs Baruni: I will stop adding the sugar and chocolate to his milk.

Nurse:
Checking question And how will you reduce the total amount of milk that Toman drinks each day to about half a litre?

Mrs Baruni: I will try to stop giving him the bottle at night.

Nurse: And how will you increase his activity?

Mrs Baruni: I will instruct the baby sitter to take him outside to play.

Nurse: That sounds great. We could weigh and measure Toman again in about 3 months to see his progress. Could you come back in 3 months?

Mrs Baruni: Yes, I will do that.

Nurse: Very well. At that time we will speak about more ways to improve Toman's health. Let me write the date for his next visit in his *Growth Record*.

Mrs Baruni: Could you tell me what Toman's father says after you speak with him?

Nurse: Of course! I will give you a call.

Mrs Baruni: Thank you.



Exercise F

Role plays – Interviewing and counselling mothers

In this exercise participants will practise interviewing and counselling mothers in role plays. Participants will divide into small groups of three for role plays. Three role play situations are described on the following pages. Each small group will do all three role plays, with participants taking turns in the roles of health care provider, mother, and observer.

Participants will need the following materials when they go to their small groups:

- Job-aid on *Investigating Causes of Undernutrition* and *Investigating Causes of Overweight*
- *Boy's Growth Record* and *Girl's Growth Record*
- Note pad and pen or pencil for taking notes during the interview

Instructions for the “health care provider”

1. Review the background information and the child's growth charts shown on the following pages for one of the role play situations.
2. Refer to the relevant job-aid as a guide for conducting the interview and counselling session with the mother.
3. Start the interview by explaining the growth problem to the mother. Then use the job-aid to investigate causes. It is helpful to take notes on the causes.
4. After discussing causes, advise the mother on the most important and relevant actions to take (2–3). Use the *Growth Record* as a reference for giving feeding advice. Ask checking questions as needed.
5. Agree on a time that the mother and child will return for follow-up.

Instructions for the “mother”

1. Review the background information and the child's growth charts shown on the following pages for one of the role play situations.
2. Respond to the health care provider's questions realistically, as if you were the mother described. If necessary, you may make up additional information that is realistic and fits with the story. Answer the questions, but do not volunteer information unless the health care provider asks for it.

Instructions for the observer

1. Review the background information and the child's growth charts shown on the following pages for one of the role play situations.
2. As the health care provider interviews the mother, follow the relevant job-aid.
3. After the role play, comment on whether:
 - all of the relevant questions were asked;
 - the most important, relevant advice was given in an appropriate manner;
 - checking questions were asked to ensure that the mother understood what to do.
4. Ask the mother and then the health worker for their comments on the role play, for example, what was done well, what was omitted, or possible improvements.

When all the small groups have finished with the role plays, the facilitators will lead a brief discussion of lessons learned during the role plays.

Background information for role plays

Role play situation 1 – Mrs Khan and her son Veebol

Mrs Khan has a son named Veebol, who is 9 months old. He is still breastfed, but he also takes formula in a bottle occasionally. Mrs Khan stays home to care for her son while her husband travels as a bicycle salesman. Their home is comfortable and has many conveniences, including a television. There is plenty of money for food. Veebol takes about a cup of mashed foods (such as porridge or sweet potatoes) 3 or 4 times each day. Mrs Khan appears to be overweight, and her son's growth lines show a trend towards overweight, but Mrs Khan does not think that there is any problem. He is beginning to crawl but is carried around much of the time because his mother does not want him to get his hands dirty and put them into his mouth. Veebol's growth charts are shown on pages 43–44.

Role play situation 2 – Mrs Begum and her niece Razia

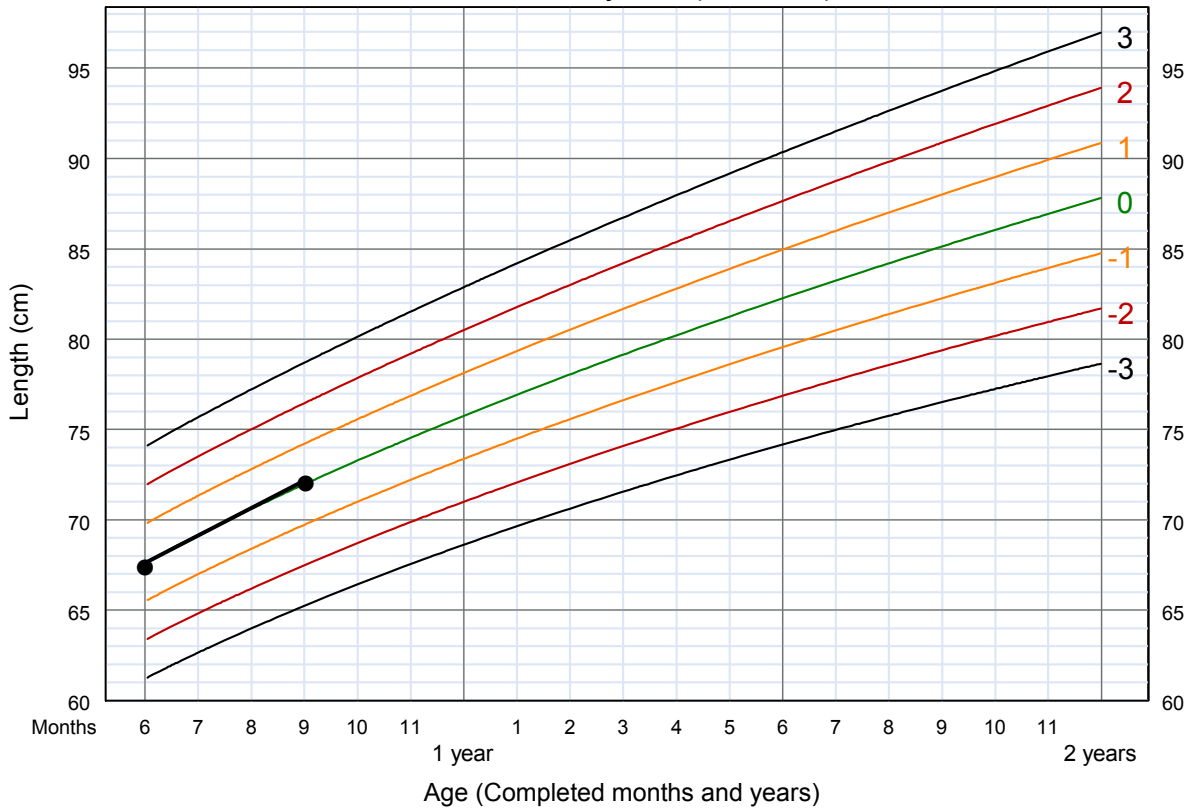
Mrs Begum is the caregiver for her niece Razia, who is 3 years and 3 months old. Razia's parents are both dead, most likely of HIV/AIDS. Razia is not ill, although she appears extremely thin. Her growth charts are shown on pages 45–46.

Mrs Begum has been caring for Razia since her parents died 6 months ago. Mrs Begum has 3 other children of her own and struggles to feed them all. She can rarely afford to buy meat. Sometimes the family can only have two meals a day. Her husband works for very low wages in a factory. Their home has a latrine. Mrs Begum boils their drinking water but not the water used for washing.

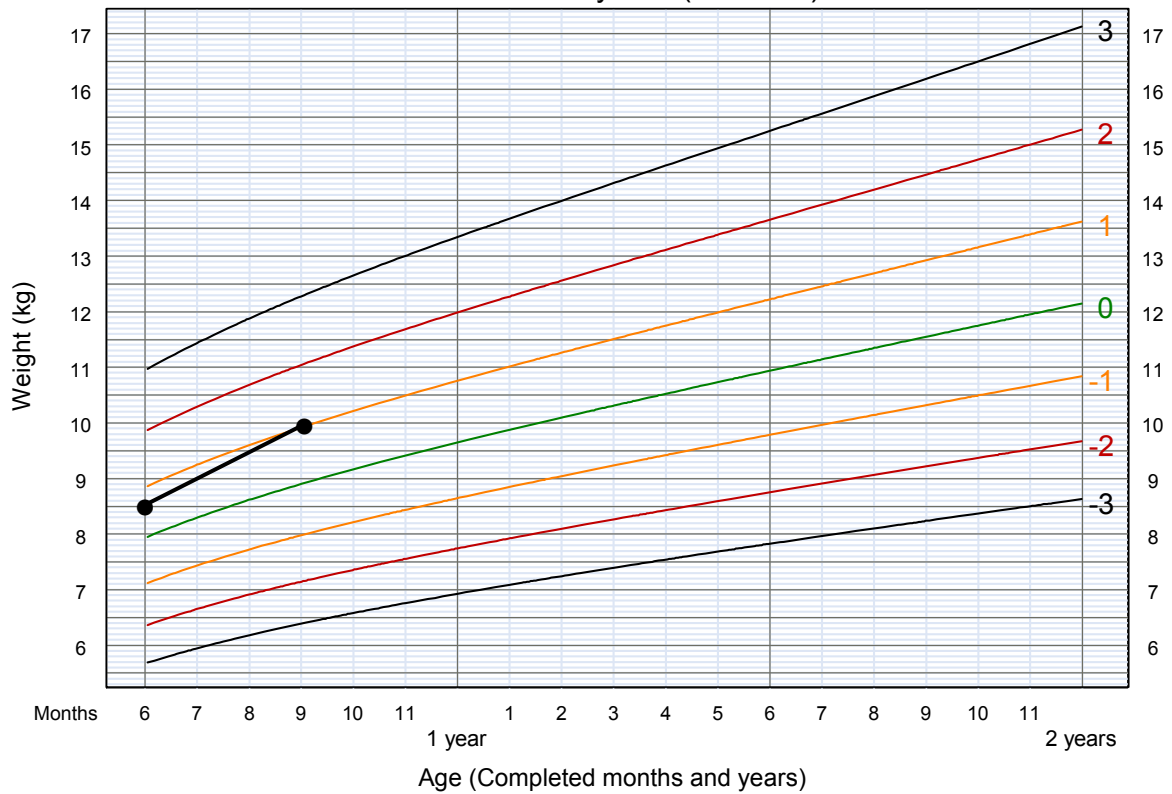
Role play situation 3 – Mrs Lima and her daughter Anete

Mrs Lima is the mother of Anete, age 18 months, who seems happy and active. Anete is stunted but looks healthy. She is not breastfed. She does not like to eat and prefers to move around rather than sit still for meals. Although Mrs Lima tries to feed Anete 3 times each day, sometimes she will only take $\frac{1}{4}$ cup of food at a time. Anete's growth charts are shown on pages 47–48. Mrs Lima appears to be normal height. She does not have HIV. Her home is simple, but there is enough money for food.

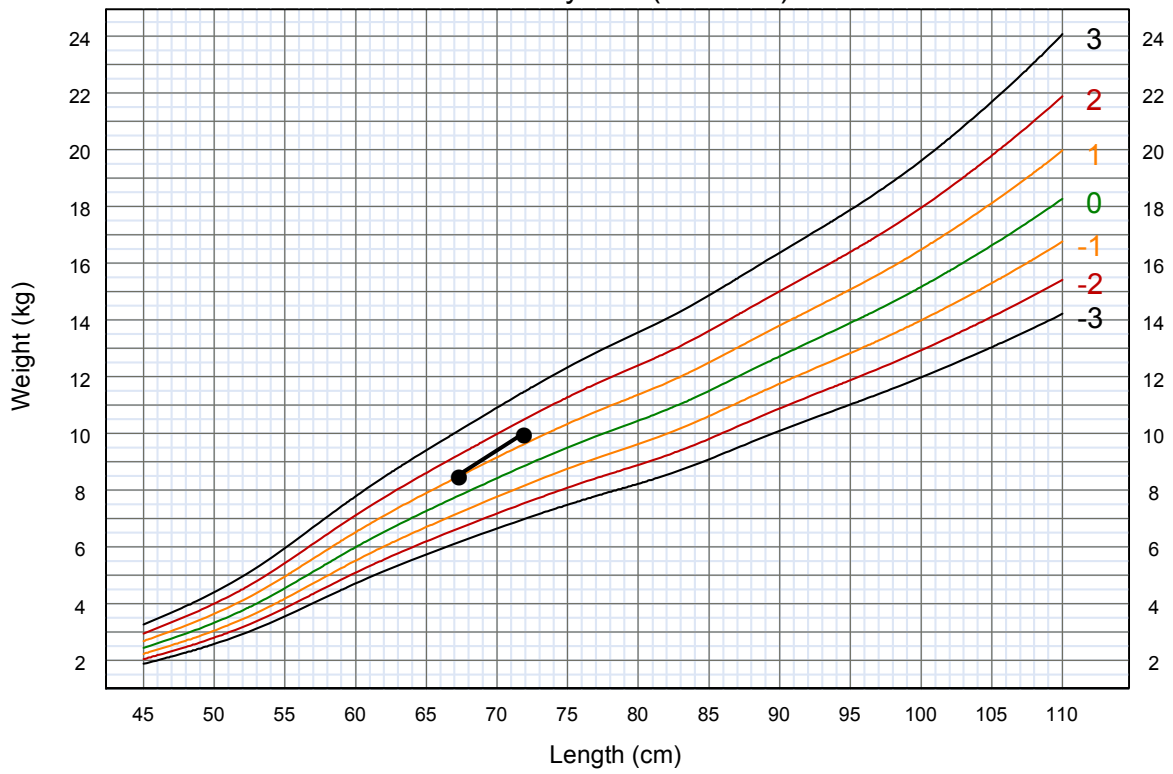
Length-for-age BOYS
6 months to 2 years (z-scores)



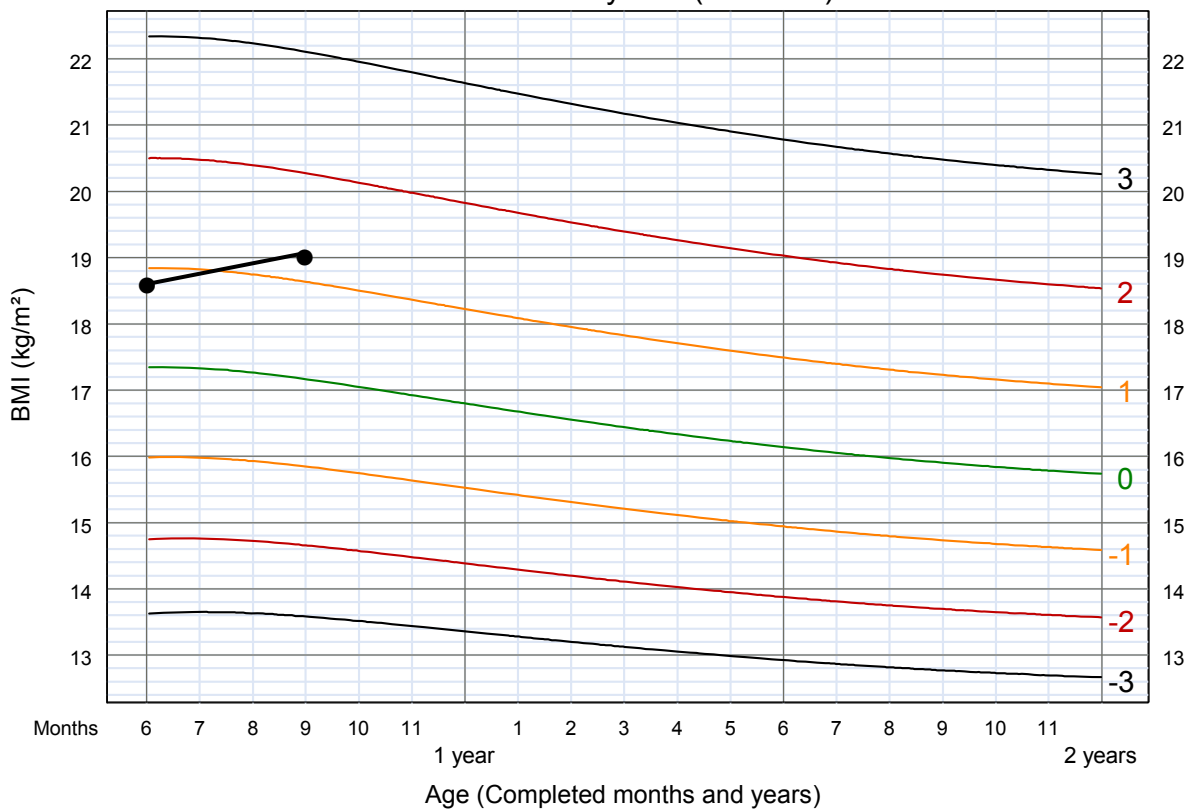
Weight-for-age BOYS
6 months to 2 years (z-scores)



Weight-for-length BOYS
Birth to 2 years (z-scores)

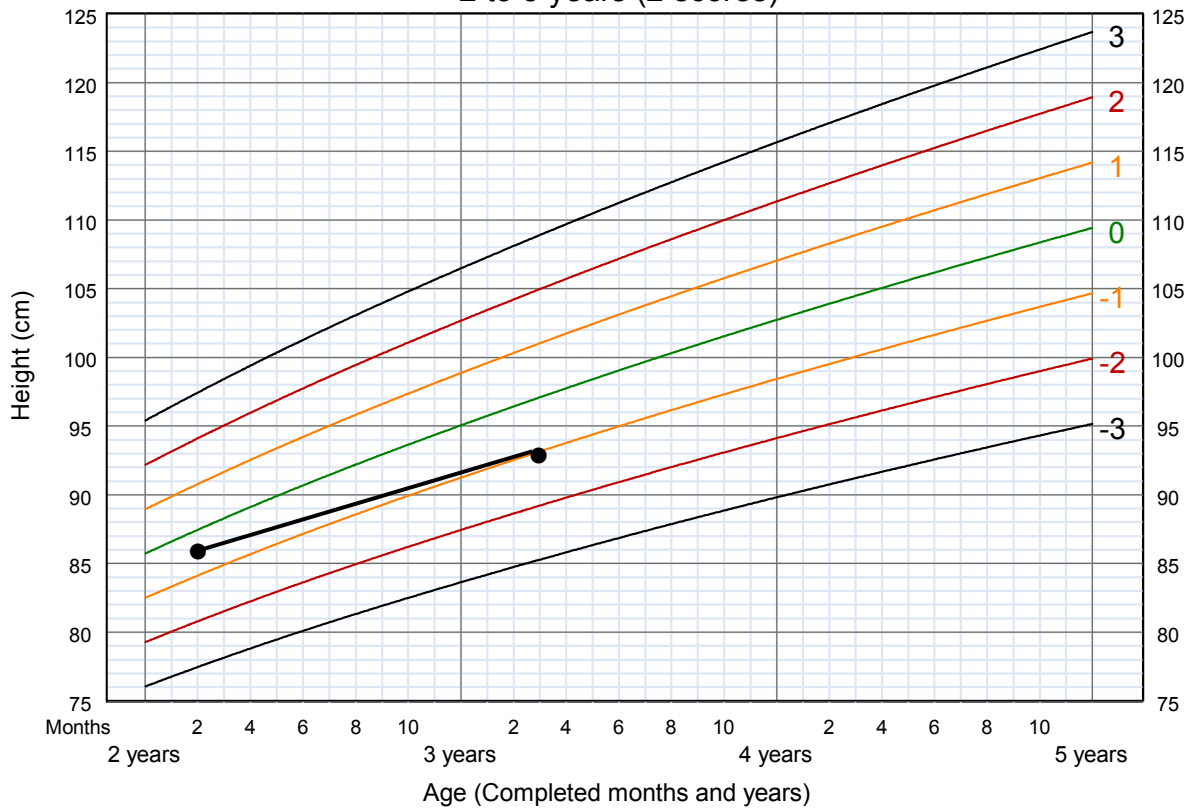


BMI-for-age BOYS
6 months to 2 years (z-scores)

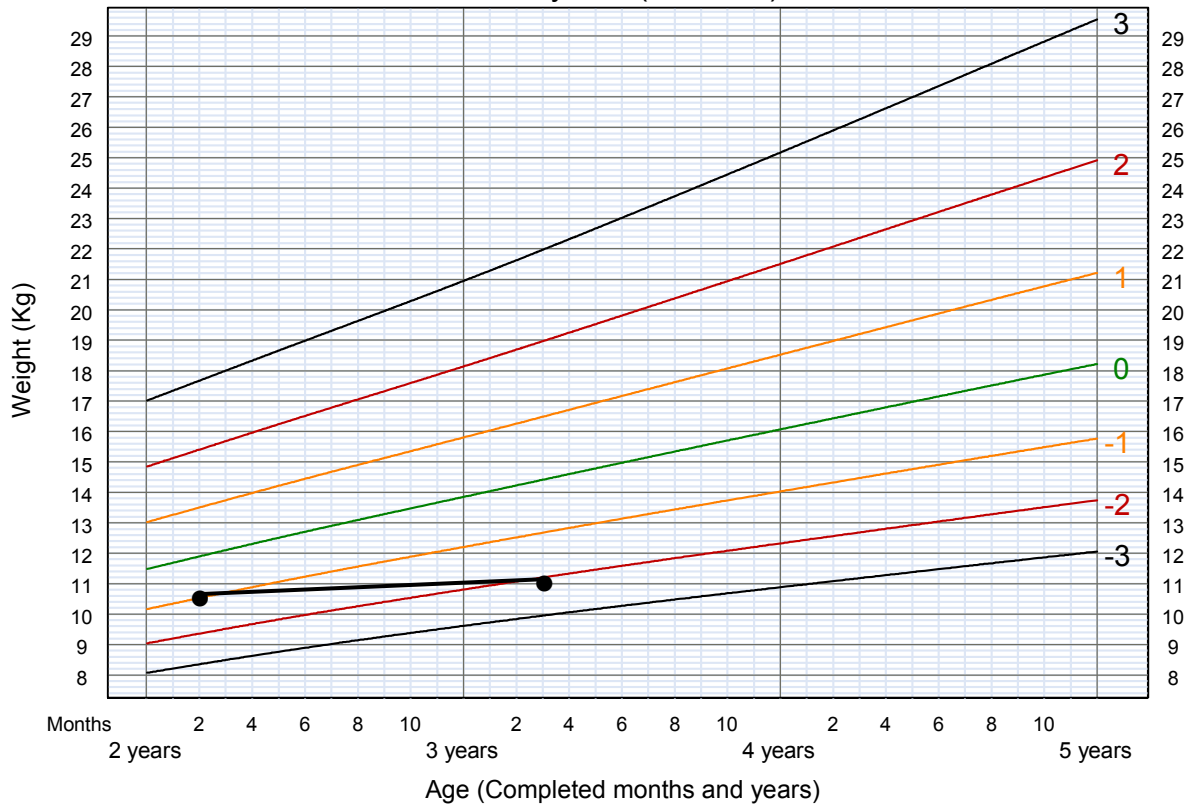


Razia

Height-for-age GIRLS 2 to 5 years (z-scores)

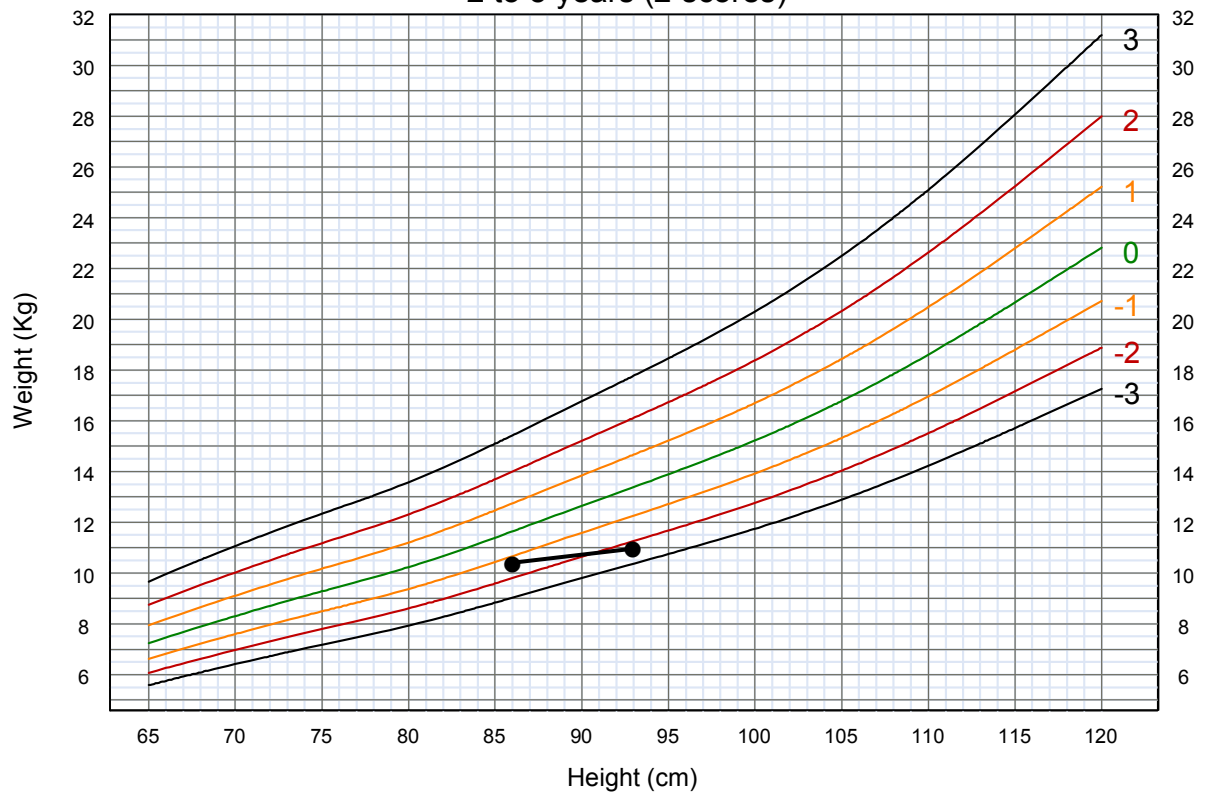


Weight-for-age GIRLS 2 to 5 years (z-scores)

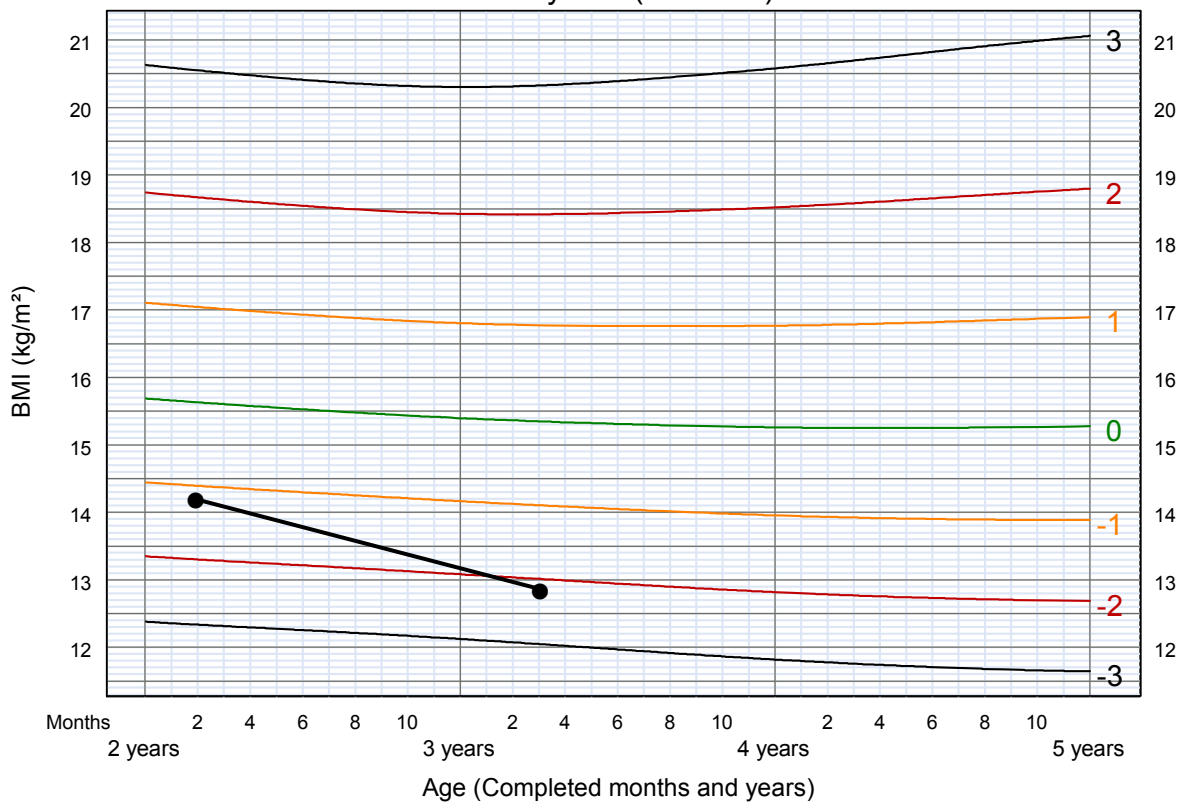


Razia

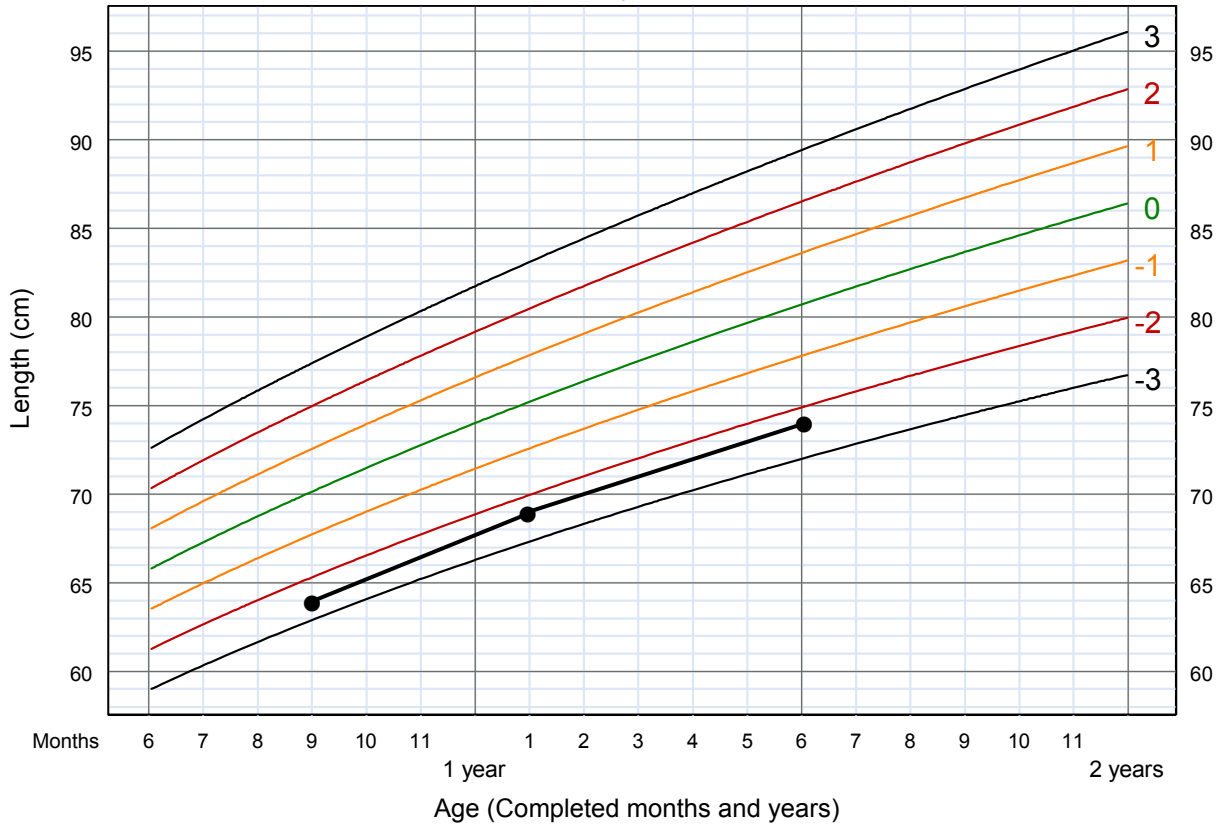
Weight-for-height GIRLS 2 to 5 years (z-scores)



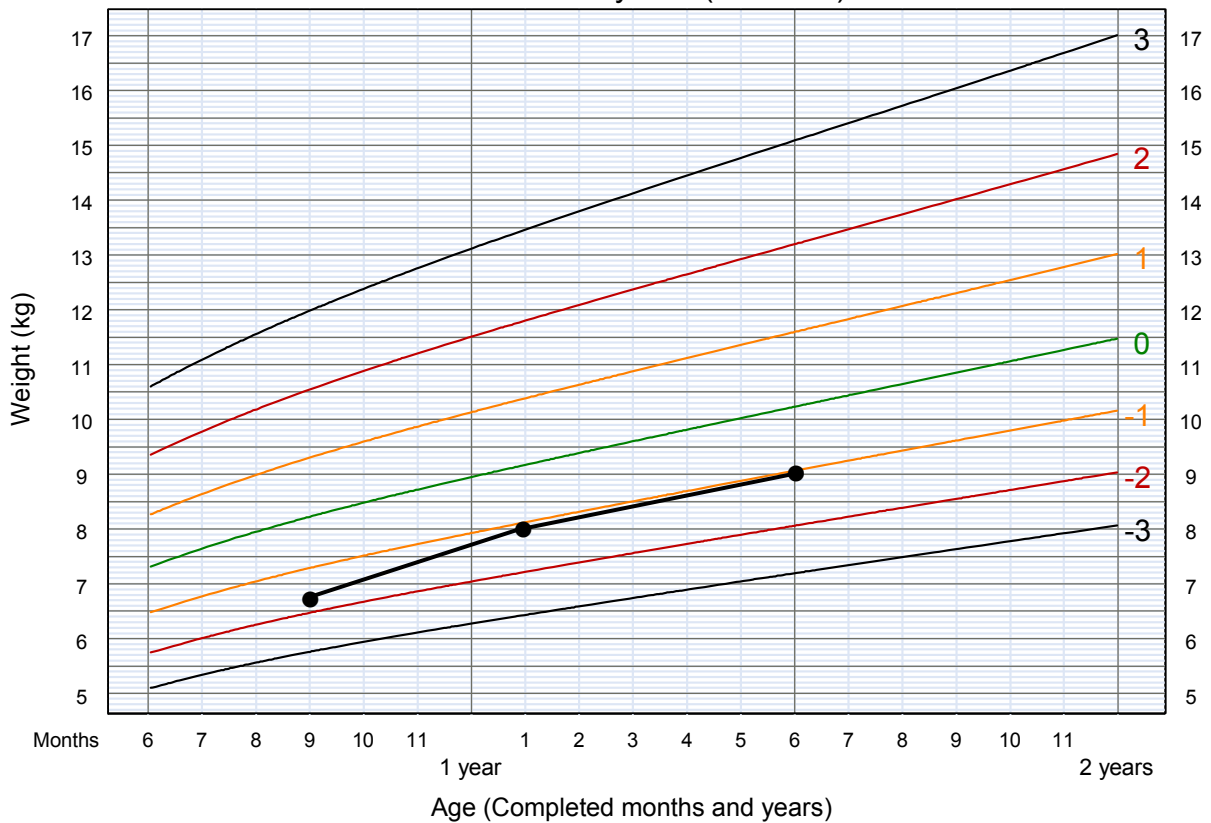
BMI-for-age GIRLS 2 to 5 years (z-scores)



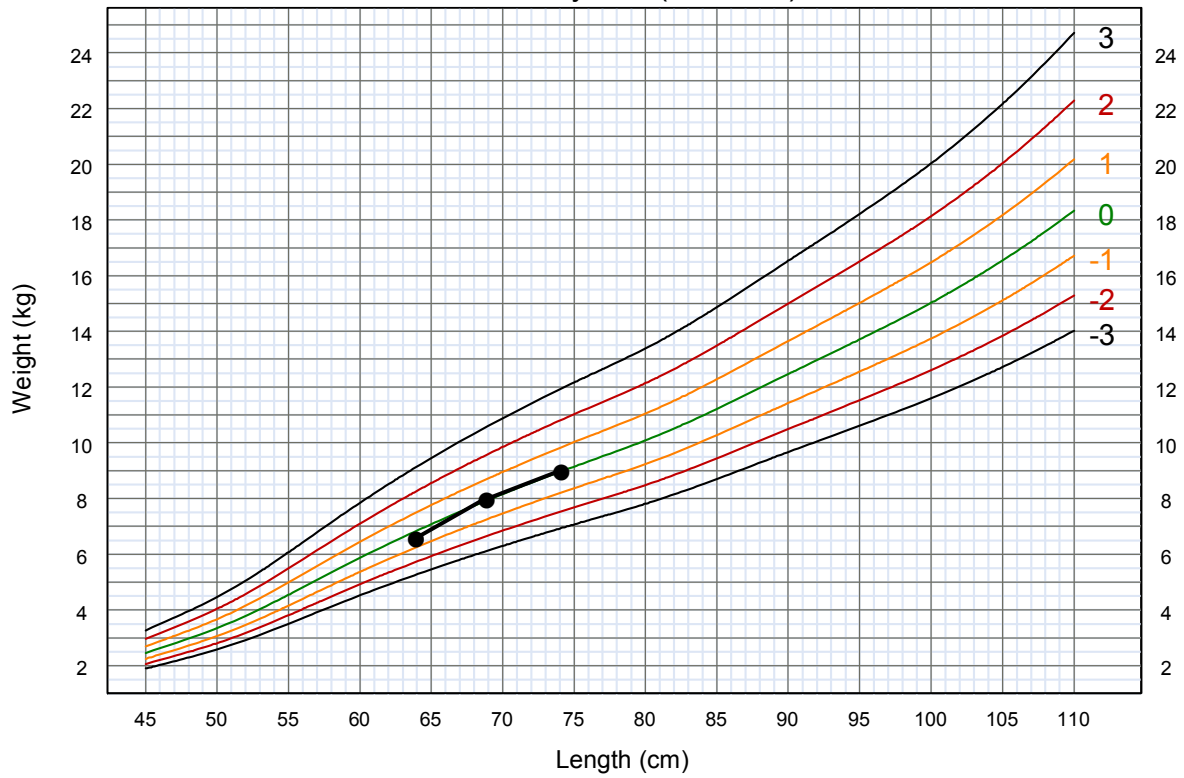
Length-for-age GIRLS
6 months to 2 years (z-scores)



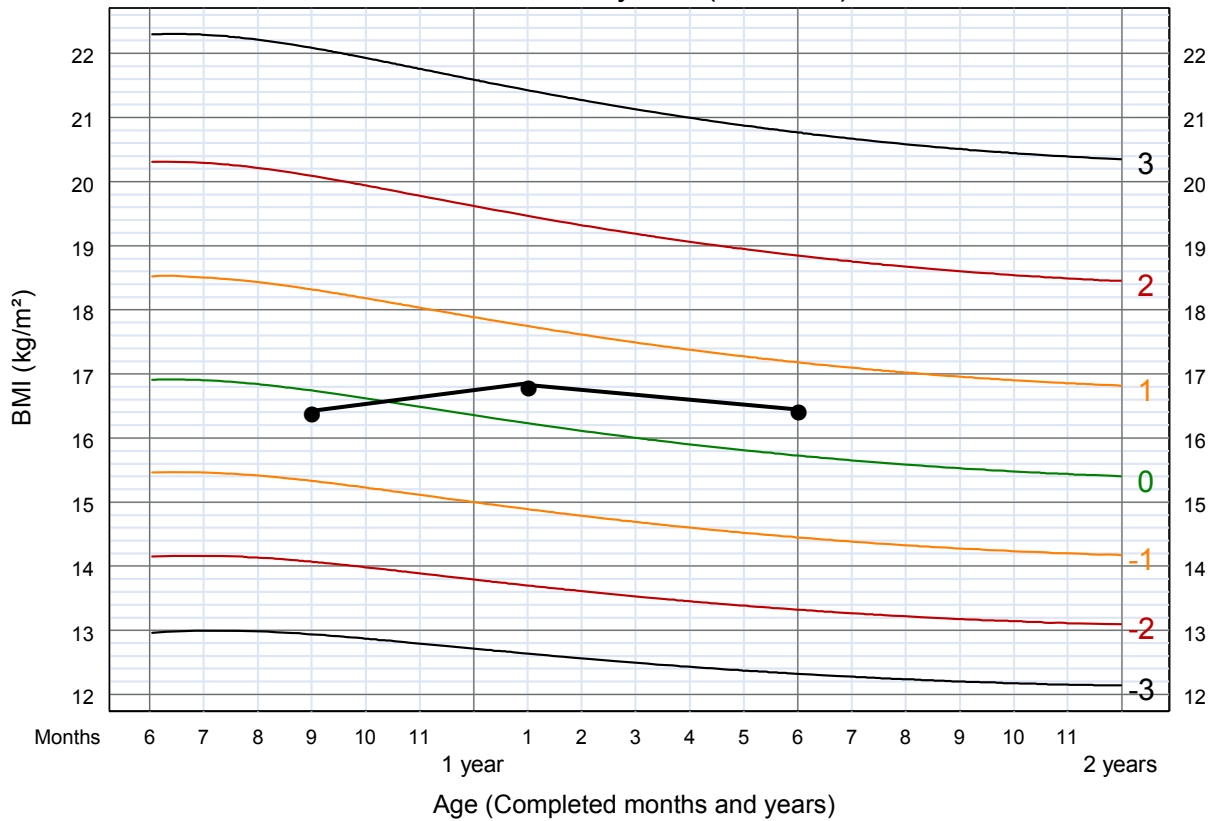
Weight-for-age GIRLS
6 months to 2 years (z-scores)

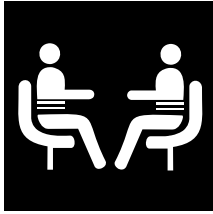


Weight-for-length GIRLS
Birth to 2 years (z-scores)



BMI-for-age GIRLS
6 months to 2 years (z-scores)





Exercise G

Clinic exercise – Measuring children, interviewing and counselling mothers

In this exercise you will visit a health facility in order to measure children and interview and counsel mothers. Your facilitator will tell you about plans for the health facility visit. Be sure to take a note pad, pencil, your WHO child age calculator, and your job-aids for measuring children and investigating causes of undernutrition and overweight. It is also helpful to have some toys to distract the children. The facilitators should bring some small toys.

An extra set of the *Growth Records* will be provided to each working pair for use at the health facility. The facilitators will explain to health care staff and mothers that these *Growth Records* are based on the WHO growth standards and are designed specifically for this course.

At the health facility, your facilitators will have assigned you to work with another participant. You will take turns talking with mothers, taking measurements, and recording. Measure as many children and counsel as many mothers as time allows.

Instructions

1. With guidance from the facilitator, select a parent and child from the waiting area. The facilitator will try to help you select children of different ages, some with normal growth and some with growth problems.
2. Talk with the mother to determine the child's name, sex, and date of birth. Use the WHO age calculator to determine the child's age today. Record this information on a note pad.
3. With the mother's help, weigh the child and measure the child's length or height. Record the weight and length/height measurement on the note pad.
4. Plot points on the appropriate graphs in a *Growth Record* (use pencil), and determine if there is a growth problem. (You will not be able to determine trends based on this one visit.) Show the three charts to the mother and explain the meaning of her child's plots.
5. Counsel the mother about feeding.
 - If the child has no growth problem, say so to the mother and counsel her about feeding recommendations for the child's next age group.
 - If there is a growth problem, determine whether the mother recognizes it, as this will affect how you approach the counselling. Then use the appropriate job-aid to interview the mother about causes of undernutrition or overweight. Ask the mother what she thinks are the most likely causes of her child's growth problem. Counsel the mother and suggest 2–3 actions to take. Ask checking questions as appropriate. Speak to a staff member of the facility if you have proposed a return visit for follow-up. Thank the mother and let her go.

A facilitator will observe as many counselling sessions as possible and give you feedback.

Answers to short answer exercises

Page 4

1. The best answer is “c.” Answer “a” uses a difficult word, i.e. “stagnated.” Answer “b” accuses the mother of being at fault. Answer “c” uses simple, non-accusatory words and explains the need to find the causes of the problem.
2. The best answer is “b.” Answer “a” uses two difficult words, i.e. “median” and “obesity.” Answer “c” suggests that the mother is to blame. Answer “b” expresses concern in a clear way without suggesting blame.
3. Here is an example of a simpler explanation. Your answer may be different:

“Nadia is short for her age, but her weight is appropriate for her length. She looks healthy, but we want to be sure that she is getting enough good food to grow in both length and weight.”

Page 7

1. A mother should exclusively breastfeed her baby for the first 6 months.
2. As often as the child wants, day and night, at least 8 times in 24 hours
3. At age 6 months (180 days)
4. You should have listed any 3 of the following: cereals (e.g. rice, wheat, maize, millet, quinoa), roots (cassava, yam, potato), and starchy fruits (plantain, breadfruit).
5. At 6–8 months of age, a child should be offered 2–3 tablespoons of thick porridge or well-mashed food 2–3 times per day. Increase the amount gradually to 1/2 cup. By 8 months, also give him small chewable foods to eat with his fingers.
6. At 9–11 months of age, a baby should be offered finely chopped or mashed foods and foods that he can pick up, about 1/2 cup, at 3–4 meals per day plus 1–2 snacks.
7. Boil water vigorously for a few seconds. Cover and let it cool down on its own without adding ice.
8. Wash hands before preparing food, before feeding a baby, and after using the latrine or toilet.
9. True or false – See pages of *Growth Record* indicated in parentheses for related information.
 - a) False (*page 14*)
 - b) True (*page 15*) *Note: If the child is a vegetarian, micronutrient supplementation is needed*
 - c) True (*page 16*)
 - d) True (*page 18*)

- e) False: Give a variety of foods in realistic portions for the child's age, size, and activity level. (page 19)

Page 12

Arif's age today is 1 year and 2 months. His weight-for-length was on the median at birth, but it has been trending downward and is now close to the -2 z-score line. The nurse finds Step 1 of the job-aid for his age group (**age 1 to 2 years**). Arif is not currently **ill** and has no known **chronic disease**. Next she looks at Step 2 and explains to the mother that there are many possible **causes** of undernutrition. The nurse explains that she is going to ask the mother some **questions** to determine the causes for Arif. Next, in Step 3, the nurse asks whether Arif has been **breastfeeding less** or **eating** less than usual. The mother answers No.

In Step 4, the nurse locates the appropriate questions about feeding for Arif's age group on page **7**. The nurse asks the questions and finds that Arif is no longer breastfed. He is eating mostly thin cereal and not many animal-source foods. He eats 3 meals daily but no snacks. His appetite is good.

After asking questions about feeding, the nurse goes to Step **5** on page **10**. She finds out that Arif is not often tired or sick. She then goes to Step 6 to assess possible **social** and **environmental** factors that may affect Arif's feeding and care. Then, in Step 7, the nurse asks the **mother** for her opinion on the causes of Arif's undernutrition. Finally, in Step 8, the nurse **counsels** the mother on how to address the causes.

Page 19

1. page 18 of the *Growth Record*
2. Make the cereal thick and add some fat (e.g. oil) to increase energy density (page 7 of job-aid *Investigating Causes of Undernutrition*).
3. Encourage the mother to add a variety of animal-source foods such as meat, fish, poultry, and eggs. Tell her that legumes are also good for protein.
4. Give 1–2 snacks between meals depending on his appetite.
5. Discuss sources of assistance for the family.

Page 28

Mona's age today is 1 year and 6 months. Her weight-for-length is just above the 2 z-score line. The nurse looks at Step 1 of the job-aid and explains to the mother that there are many possible **causes** of overweight. The nurse explains that she is going to ask the mother some questions to determine the causes for Mona. Next, in Step 2 from mid-page 2, the nurse asks the mother whether Mona is **breastfed**. The mother answers No. The nurse then asks what types of food Mona is given and if she receives any milk.

Mona eats about 3 meals a day with the family and up to 3 snacks, usually pastry or cake, throughout the day. In addition she is given about 1 litre of formula milk each day.

After asking questions about feeding, the nurse goes to Step 3 on page 4. She asks about Mona's physical activity. She finds out that Mona is kept in a crib for many hours when her mother is busy.

Then, in Step 4, the nurse asks the mother for her opinion on the main causes of Mona's overweight. Finally, in Step 5, the nurse counsels the mother on how to address the causes of overweight.

Page 34

1. page 18 of the *Growth Record*
2. 500 ml (page 2 of job-aid *Investigating Causes of Overweight*)
3. Since she eats 3 meals with the family, Mona needs no more than 1-2 snacks, which includes the formula milk.
4. Fruits and vegetables.
5. Mona needs more opportunities for active play and movement. Take her out of the crib to move around more.

Annex: Recommendations for Child Feeding and Care for Development

Feeding recommendations

The recommendations for child feeding in this annex comprise a set of messages that are incorporated in the WHO child *Growth Records* as a reference for parents, other caregivers, and health care providers. Additional references that may be helpful include the following:

WHO/UNICEF. *Infant and Young Child Feeding Counselling: An Integrated Course*. Geneva, World Health Organization, Department of Nutrition for Health and Development, 2006.

Pan American Health Organization/WHO. *Guiding principles for complementary feeding of the breastfed child*. Washington DC, Pan American Health Organization/World Health Organization, 2003.

WHO. *Guiding principles for feeding non-breastfed children 6–24 months of age*. Geneva, World Health Organization, Department of Child and Adolescent Health and Development, 2005.

WHO/UNICEF/USAID. *HIV and infant feeding counselling tools: Reference Guide*. Geneva, World Health Organization, Department of Child and Adolescent Health and Development, 2005.
<http://whqlibdoc.who.int/publications/2005/9241593016.pdf>

In this module (*D: Counselling on Growth and Feeding*), health care providers are taught to carefully select what feeding advice to give caregivers to avoid overwhelming them with too much information at once.

- If a child has a problem of undernutrition or overweight, or a trend towards a problem, the caregiver should be interviewed to determine the causes of the problem. Then the advice can be selected to address the most significant causes.
- If there is no growth problem, the caregiver should be advised on appropriate feeding for the child's age group or the upcoming age group if the child will soon change age groups.

These feeding recommendations are the same for boys and girls. They can be found on pages 13–19 of the *Growth Records*. The recommendations reproduced here are taken from the *Girl's Growth Record*. The gender changes appropriately in the *Boy's Growth Record*.

Measurements specified in the recommendations will need to be adapted appropriately by countries. The “cup” specified in these recommendations is 250 ml (8 fluid ounces). The “tablespoon” is 15 ml.

When a child is sick

When a child is sick, he or she should be fed according to the recommendations for his or her age group but given extra fluids and food as described below.

- ♥ If your child is sick, feed her according to the recommendations for her age group provided in this section. Also give more fluids (breastfeed more for a breastfed child) and encourage her to eat soft, varied, appetizing, favourite foods. After illness, give food more often than usual and encourage the child to eat more.

Feeding recommendations for a child’s age group



Recommendations for feeding an infant up to 6 months of age

- Feed your baby only breast milk until she is 6 months of age (180 days).
- Breastfeed as often as your baby wants, day and night, at least 8 times in 24 hours.
- Breastfeed when your baby shows signs of hunger: beginning to fuss, sucking fingers, or moving her lips.
- At each feeding, encourage your baby to empty the breast and then offer the other breast.
- Do not give her other foods or fluids. Breast milk quenches your baby’s thirst and satisfies her hunger.



Recommended foods for babies and children age 6 months to 5 years

Breast milk continues to be an important source of nutrients up to age 2 years or beyond. Your baby needs other foods and liquids in addition to breast milk once she reaches 6 months of age (180 days). This page lists examples of recommended foods. The following pages recommend how much, how often and how to feed your child at different ages.

- Staple foods give your child energy. These foods include cereals (rice, wheat, maize, millet, quinoa), roots (cassava, yam, potato), and starchy fruits (plantain, breadfruit).
- Staple foods do not contain enough nutrients by themselves. You also need to give animal-source and other nutritious foods. Your child should eat a variety of these foods:
 - Animal-source foods: Liver, meat, chicken, fish, eggs
 - Milk products: Cheese, yoghurt, curds (and milk, for non-breastfed children)
 - Pulses: Chickpeas, lentils, cow peas, black-eyed peas, kidney beans, lima beans (For vegetarians, these are important alternatives to animal-source foods.)
 - Green leafy and yellow-coloured vegetables: Spinach, broccoli, chard, sweet potatoes, carrots, pumpkin
 - Fruits: Banana, orange, guava, mango, peach, kiwi, papaya
 - Oils and fats: Vegetable oils, butter
 - Groundnut paste, other nut pastes; soaked or germinated seeds such as sesame, pumpkin, sunflower, melon seeds
- Feed your child different foods from the groups above, together with the staple food.



Recommendations for feeding an infant age 6 months to 1 year



- Breastfeed as often as your baby wants.
- To initiate complementary feeding, begin offering her small amounts of other foods at age 6 months (180 days). Introduce new foods one at a time. Wait 3–4 days to be sure that she can tolerate a new food before introducing another food.
- Give her staple foods and a variety of animal-source and other nutritious foods (listed on page 15).
- Increase the quantity of food as she grows older while continuing to breastfeed frequently.
 - **At 6–8 months of age**, start by offering 2–3 tablespoons of thick porridge or well-mashed foods 2–3 times per day. Increase the amount gradually to 1/2 cup*. By 8 months, give her small chewable items to eat with her fingers. Let her try to feed herself, but provide help. Avoid foods that can cause choking (such as nuts, grapes, raw carrots). Give 1–2 snacks between meals depending on her appetite.
 - **At 9–11 months of age**, offer finely chopped or mashed foods and foods that baby can pick up, about 1/2 cup, at 3–4 meals per day plus 1–2 snacks depending on her appetite.
- Feed her from her own plate or bowl.
- Patiently help your baby eat. Talk to her lovingly, look into her eyes and actively encourage her to eat, but do not force her.
- If she loses interest while eating, remove any distractions and try to keep her interested in the meal.
- After 6 months of age, babies may need more water even when they drink the recommended amounts of milk. To find out if your baby is still thirsty after eating, offer her some water (that has been boiled and cooled).

* In these recommendations, a cup refers to 250 ml or an 8 ounce cup and a tablespoon refers to a 15 ml spoon. Each country should specify customary measures that mothers will understand.

The suggested amounts assume an energy density of 0.8 to 1.0 Kcal/g. If the foods given are thin and lower in nutritional content (i.e. about 0.6 Kcal/g), meals should increase to 2/3 cup at 6–8 months and to 3/4 cup at 9–11 months.

Recommendations for feeding a child age 1 to 2 years

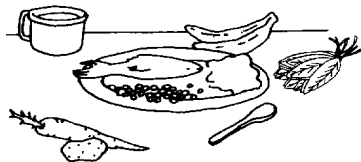
- Breastfeed as often as your child wants up to age 2 or beyond.
 - Continue to give 3–4 meals of nutritious foods, chopped or mashed if necessary, 3/4–1 cup* at each meal. Also give 1–2 snacks per day between meals depending on her appetite.
 - At each meal, feed your child a staple food along with different nutritious foods from the groups listed on page 15.
 - Feed her from her own plate or bowl. Continue to actively help her to eat.
- * The suggested amount assumes an energy density of 0.8 to 1.0 Kcal/g. If the foods given are thin and lower in nutritional content, the child should receive a full cup at each meal.



Recommendations for feeding a child age 2 to 5 years

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

- Offer a variety of foods such as those on page 15. If she refuses a new food, offer her “tastes” of it several times. Show that you like the food.
- Do not force her to eat. Give realistic portions depending on her age, size and activity level. Increase the quantity of food as she grows older.



Recommendations for food safety and hygiene

These messages are provided on page 20 of the *Growth Record* and may be used by health care providers, parents, and other caregivers as needed.

Recommendations for Safe Food Preparation and Hygiene

Practise good hygiene to prevent illness:

- Wash your hands with soap before preparing food, before feeding a baby, and after using the latrine or toilet.
- Obtain clean water for drinking, treat it properly,* store it in clean covered containers, and use a clean scoop to draw it.
- Wash your child's cup or bowl thoroughly with soap and clean water or boil it.
- Avoid using feeding bottles which are difficult to clean.
- Prepare food using clean utensils. Feed a baby with a clean spoon.
- Keep food preparation surfaces clean by using water and soap or detergent to clean them after each use.
- Cook foods thoroughly, especially meat, poultry, eggs and seafood. Reheat cooked food thoroughly, e.g. bring soups and stews to boiling point.
- Cover food that is left over, and refrigerate it if possible. Discard cooked food that is left at room temperature for longer than two hours.
- Avoid contact between raw and cooked foods and store them in separate containers.
- Have a clean, functioning latrine that is used by all family members old enough to do so. Quickly collect the stool of a young child or baby and put it into a latrine. Promptly clean a child who has passed stool. Then wash your hands and hers.

* Boil water vigorously for a few seconds. Cover and let it cool down on its own without adding ice. This water is safe for the baby to drink.

When special care or advice may be needed

Health care providers should communicate the following messages so that parents or other caregivers know when to seek special care or advice for their children. These messages are on page 12 of the *Growth Record*.

When Special Care or Advice May be Needed

Any time that you have concerns about your child's growth or development, seek the advice of a health care provider. He or she can assess your child and advise you.

Other times that special care or advice may be needed include:

- ♥ If the child's growth curve is too far from the centre line (labelled '0'), it may be a sign that she is undernourished or overweight. If she is not within the normal range, a health care provider can help you find ways to help her grow normally. For example, changes may be needed in the type of foods she is given, or the frequency or quantity of feeding. Or she may need more emotional support, or stimulation, or physical activity that will help her become healthy.
- ♥ If the child is severely undernourished, she needs urgent specialized care.
- ♥ If the child is obese, she needs medical assessment and specialized management. Discuss this with the health care provider.
- ♥ If a mother suspects that she may be HIV positive, she should be encouraged to go for counselling and testing.
- ♥ If a pregnant woman or the mother of an infant knows that she is HIV positive, she needs specialized counselling about her options for feeding the baby.

Care for development

Care for development is care intended to help a child's development in many ways, not just physical growth. It is care intended to stimulate emotional, intellectual, and motor development. This section of the annex is a set of messages, provided for general information, on how a child's care can stimulate development. The course *IMCI Care for Development* (available from the WHO Department of Child and Adolescent Health and Development) describes in detail how to assess care for development, identify developmental problems, and counsel mothers and other caregivers about such problems.

As a child grows, he or she needs increasing emotional and physical stimulation through communication and play. Caregivers should be encouraged to play with their children using simple, homemade toys. Some common games, such as peek-a-boo, require no toys at all. Many ideas for toys and structured play are given in the *IMCI Care for Development* course mentioned above, as well as in annexes 7 and 8 of *Management of severe malnutrition: a manual for physicians and other senior health workers* (WHO, 1999). Other useful references are the following:

Ertem IO. *Guide for developmental monitoring and support*. In: Textbook of Developmental Pediatrics, Ertem IO (Ed). Ankara University School of Medicine, Department of Pediatrics, Developmental-Behavioral Pediatrics Unit, 2005.

World Health Organization. Integrated Management of Childhood Illness. Counsel the mother on feeding, care for development, when to return and the mother's health. Geneva, World Health Organization, Department of Child and Adolescent Health and Development, 2001.

World Health Organization. The importance of caregiver-child interactions for the survival and healthy development of young children: a review. Geneva, World Health Organization, Department of Child and Adolescent Health and Development, 2004.
http://www.who.int/child-adolescent-health/New_Publications/CHILD_HEALTH/ISBN_92_4_159134_X.pdf



The *Growth Record* outlines some key points about care. On pages 21–26 of the *Growth Record*, there are messages appropriate for mothers of children in specific age groups.

In health care facilities where group sessions are held for health education purposes, the care messages could be taught to groups of mothers. For example, in addition to group sessions about food preparation and hygiene, mothers could attend sessions about how to make simple toys and play games with children.

Group sessions should not be limited to talking, but should include demonstrations and practice whenever possible. Use the following teaching techniques:

- Communicate clearly in a way that mothers understand.
- Use suitable visual aids such as pictures, posters, real foods, homemade toys, etc.
- Demonstrate skills when necessary (e.g. handwashing, cooking procedures, playing peek-a-boo).
- Encourage questions and discussion so that the session is interactive and mothers can contribute ideas. Encourage interaction by posing open-ended questions such as "How can fathers participate in caring for children?" or "What games can you play with children of ages 9–12 months?", rather than questions that can be answered simply "yes" or "no."

Key messages about care for children of all ages

Key messages are given on page 21 of the *Growth Record* and below. Those reproduced in this module are taken from the *Boy's Growth Record*. The gender changes appropriately in the *Girl's Growth Record*. Notice that some of the points provide **reasons** why early communication and play with the child are important. It is important to connect the **actions that the mother should take** with these reasons. For example, **because** brain development is most rapid in the first years of life, it is important to stimulate babies by talking and playing with them.

Key Messages about Care for All Times

- ♥ Brain development is most rapid in the first two years of life, so young children need to be stimulated by playing with others, moving around, hearing sounds, and having things to see, touch, and explore.
- ♥ Daily routines regarding eating, sleeping, hygiene, etc. help children to develop regular patterns and to feel secure.
- ♥ Teach your child to communicate by speaking to him, listening to him, and playing with him.
- ♥ Play is children's work. It gives them many chances to learn and develop the ability to solve problems. They learn by trying things out and by observing and copying others.
- ♥ Fancy toys are not needed for development. Toys to stimulate development can be made at home.
- ♥ Illness interferes with normal growth and development. To prevent illness, have your child immunized and feed him following the recommendations in the *Growth Record*. When he is ill, take him to a health care provider.
- ♥ Children learn most rapidly when they are in nurturing and stimulating relationships with their caregivers. The mother, father, and siblings can all contribute to the child's development by caring for and playing with him.
- ♥ Protecting children from physical harm and emotional distress (due to violence or strong anger) helps them gain confidence to explore and learn.

Care messages relevant for a child's age group

Parents and caregivers need to be aware of the care messages relevant for the child's current age, or for the next age group that the child is about to enter. In a group session with mothers, focus on the most relevant messages for the mothers and children in attendance. Discuss the reasons for the actions that the caregivers should take. Use visual examples and demonstrations whenever possible. If appropriate, ask the mothers to practise (for example, a game). Remember to ask checking questions to be sure that the mothers understand the messages.

Care for development messages **Age 0 to 4 months**

Emotional development

- A healthy child can see, hear, and smell at birth. He recognizes his mother from her voice, scent, and face.
- His father plays an important role in the child's development and should be involved in caring for him.
- He can learn a lot from older siblings, and they from him, so they too should play with and help care for him.
- Soothing him when he is distressed will help him learn to trust and communicate with you.
- Breastfeeding is a good time for cuddling, nurturing, and emotional bonding.

Communication

- Look into your child's eyes and smile at him (e.g. when feeding). Talking face to face with him, repeating his sounds and gestures, and singing to him will teach him to communicate.
- He will respond to his mother's touch, looks, smiles and sounds. He will try to communicate his needs through movements, cooing sounds, and cries.

Movement

- He will soon discover his hands and feet. Letting him move his arms and legs freely will help him grow strong.
- He will begin to reach for objects and put them in his mouth because he learns by taste and touch.
- He will try to raise his head to see around. Help by carrying him, raising his head and back so he can see. Letting him roll on a safe surface will help him develop his muscles.

Care for development messages Age 4 to 6 months

Emotional development

- Children love to see people and faces, so family members should hold and carry the baby, smile, laugh, and talk with him.
- He is now attaching to his mother and may feel uncomfortable with strangers. Leaving him with people he knows will help him feel secure.

Communication

- He enjoys making new sounds like squeals and laughs. He will respond to someone's voice with more sounds, copy the sounds he hears, and start learning about making a conversation with another person.
- To prepare him for talking, repeat his sounds and talk to him about what he feels, sees and wants.



Movement

- As he sees his world, he will want to touch, taste, and explore. Giving him safe clean colourful household objects that he can touch, bang, throw, and put into his mouth will help him learn and develop hand skills. Keep away small objects that can go into the mouth and be swallowed.
- Letting him sit with support and roll around safely will help his muscles develop.

Care for development messages Age 6 months to 1 year

Emotional development

- He may not want to separate from you. Help him cope with separation by gently telling him when you will need to leave him and by leaving him with people he is familiar with. Peek-a-boo and hide-and-seek are well-known games to teach him that you are not gone forever when he cannot see you.
- He will notice when people express strong anger and may be upset by it. Avoid exposing him to such emotional distress and reassure him if it does happen.
- The love and time you give him, your interest in what he is doing, and your support for his curiosity will help his self-confidence.

Communication

- Respond to his sounds and interests. Talk to him, sing for him, give meaning to his babbling, take notice, and respond when he tries to tell you something. Telling him stories, reading to him, and telling him the names of things and people will help him learn to speak and communicate.

Movement

- Playing with safe clean household items like non-breakable plates, cups and spoons, banging pots and pans, opening and closing lids, stacking and sorting objects, and feeding himself with his fingers will help his learning and hand skills.
- Letting him move freely and play in a safe environment will help his muscles develop.



Care for development messages

Age 1 to 2 years

Emotional development

- Give him opportunities to do things for himself, and rejoice in what he does to help him develop self-esteem.
- He may be angry and frustrated when he cannot have all that he wants. Tell him about his feelings. He will learn rules quicker if there are not many of them and if they are clear and consistent.
- He may want to do everything on his own and appear stubborn. He may want to stay an infant and also be grown up at the same time. Understanding this phase of his childhood, holding him when he wants to be a baby, and giving him some independence when he wants to be grown up will help him.

Communication

- This age is important for him to learn to speak and understand words. Encourage his learning by watching what he does and naming it. Use every chance to make conversation with him (e.g. when feeding, bathing, or working near him).
- Ask him simple questions and respond to his attempts to talk. Encourage him to repeat words. Listening when he uses gestures or words will increase his efforts to talk. Imaginary play, books, songs, rhymes, stories, and taking turns in games will enrich his development.

Movement

- He will begin to use one hand more frequently and skilfully. Let him use whichever hand the brain has selected. He can practice hand skills while he is feeding and dressing himself, drawing, scribbling, playing with water, playing with things he can stack or combine, and putting things in and out of containers.
- Take him outside so that he can run, jump, climb, and grow strong.



Care for development messages **Age 2 years and older**

Emotional development

- The love and time you give him, your interest in what he is doing, your belief that he will succeed, and your support for his curiosity will help his self-confidence and desire to learn.
- At this age he can understand what is right and wrong. He can be taught how people should behave through stories, songs, and games. He will learn better if he is told what is correct first, and he should be corrected gently so that he does not feel ashamed.
- Cooking and doing errands together, sorting clothes, and doing other household chores will boost his self-confidence and improve his learning.

Communication

- Listen to what he is telling you, encourage him to ask questions, and try to answer them. Let him talk about whatever he has experienced or wants to tell you. Encourage him to tell stories. Teach him to name things, to count, and to compare and match sizes, shapes and colours of things around him.

Movement

- Drawing, writing, colouring, stacking, sorting, and helping prepare food will improve his hand skills.
- Playing out of doors and with other children will enrich all of his development.
- Encourage his active play and movement. Provide opportunities for activities such as marching, jumping, kicking and hopping.



In addition to the messages about care in the *Growth Record*, different countries may have other messages to be given at specific ages or in certain circumstances, such as messages about immunization or vitamin A. Health care providers should give these messages according to their national guidelines.



**World Health
Organization**

Department of Nutrition for Health and Development

World Health Organization
20 Avenue Appia
1211 Geneva 27
Switzerland

Fax: +41 (0)22 791 4156
Email: nutrition@who.int
Link: www.who.int/nutrition



9 789241 595070