

MPA MODULE NUTRITION

PARTICIPANT MANUAL

10

**NATIONAL NUTRITION
PROGRAM**



March 2009



USAID
FROM THE AMERICAN PEOPLE



Academy for Educational Development



Developed by the National Nutrition Program, National Maternal and Child Health Center,
with technical support from the A2Z Micronutrient Project, Mr Jan Berkvens and the Nutrition Working Group.
March 2009

GLOSSARY

ABBREVIATIONS

BCG	Tuberculosis immunization (immunisation to protect against TB)
BF	Breastfeeding
DPT	Diphtheria, Pertussis and Tetanus immunization
EDD	Expected Date of Delivery
GP	Growth Promotion
HB	Hepatitis B immunization
HC	Health Centre
HC-1 form/ HIS	Health Centre-1 form, HIS form filled in and sent to OD monthly
HIV	Human Immuno-deficiency Virus, the virus causing AIDS
HIV+	A person who is HIV positive
IDA	Iron Deficiency Anaemia
IMCI	Integrated Management of Childhood Illnesses
IU	International Unit
LMP	Last Menstrual Period
MC	Mother Card
Mg	Milligram
MPA	Minimum Package of Activities
Ms	Months
NFP	Nutrition Focal Point
NNP	National Nutrition Program
OD	Operational District
OPV	Polio immunization
OR	Out Reach
ORS	Oral Re-hydration Solution
PHD	Provincial Health Department
TT	Tetanus immunization
VAC	Vitamin A Capsule
VHSG	Village Health Support Group
Vit A	Vitamin A
Vit C	Vitamin C
WRA	Women of reproductive age
YC	Yellow Card (Child Health Card)
<	Less than
>	More than

TECHNICAL WORDS

Anaemia

Anaemia is deficiency in the amount of haemoglobin in the blood (haemoglobin is an oxygen transporting substance contained in red blood cells). Iron is needed to produce haemoglobin. Iron deficiency causes Iron Deficiency Anaemia. Signs of anaemia are tiredness, breathlessness and pallor of face, lips, eyes and palms of hands. Severe anaemia can cause death. Anaemia caused by Iron deficiency can be prevented by providing iron and folic acid supplement and eating foods that are rich in Iron.

Colostrum

The first milk the mother produces in late pregnancy and during the first few days after the baby is born deliver. Colostrum contains lots on nutrients and protects the baby against diseases. The newborn should be breastfed within the first hour of delivery to receive the benefits of colostrum

Complementary feeding

The provision of other foods in addition to breastfeeding. Complementary foods should be started when the infant is 6 months. Appropriate complementary food means:
Thick enriched Borbor that cannot fall/drip off spoon
Enriched Borbor means that a variety of nutritious foods have been added to the rice porridge such as:

- Fish, egg, blood, chopped meat, tofu, and beans
- Vegetables: morning glory leaves, amaranth leaves, pumpkin, yellow sweet potato and other vegetables
- Cooking oil
- Iodized salt

Complementary foods should be given in the correct amount, consistency and frequency for the child's age

Exclusive breastfeeding

The provision of breast milk only, no other feeding even water is required until the age of 6 months.

Iodine

A chemical element added to salt to prevent goitre

Iron

A micronutrient that is needed to make red blood cells. Adequate iron intake prevents iron deficiency anaemia

Mebendazole

De-worming tablet

Mental

Related to the mind or brain

Messenger

Person giving the message

Physical

Related to the body

Post partum

After delivery

Pre-lacteal feeding

Any foods or fluids (including water) given to the infant, other than breastmilk

Receiver

Person receiving the message

TABLE OF CONTENTS

GLOSSARY	3
TECHNICAL WORDS	4
TABLE OF CONTENTS	5
1. INTRODUCTION	8
1.1 INTRODUCTION	8
1.2 OBJECTIVES OF THE MPA 10	9
1.3 WHY PROVIDE THIS TRAINING TO HEALTH CENTRE STAFF?	9
1.4 HEALTH CENTRE STAFF RESPONSIBILITIES FOR NUTRITION	10
1.5 THE TRAINING	10
1.6 MEASURING THE RESULT OF THE TRAINING	10
1.7 WORKING WITH THE MANUAL	11
2. NUTRITION	12
2.1 WHY NUTRITION IS IMPORTANT	13
2.2 EFFECTS OF POOR NUTRITION	14
2.3 SUPPLEMENTATION	14
2.4 FORTIFIED FOODS	14
2.5 NUTRITION FOR SICK CHILDREN AND ADULTS	15
3. GROWTH PROMOTION	16
3.1 WHAT IS GROWTH PROMOTION?	16
3.2 IMPORTANCE OF GOOD INFANT AND YOUNG CHILD FEEDING PRACTICES	16
3.3 EFFECTS OF MALNUTRITION	17
3.4 CAUSES OF MALNUTRITION	17
3.5 AT RISK AND VULNERABLE GROUPS	17
3.6 CLINICAL SIGNS	18
3.7 BREASTFEEDING	19
3.8 COMMON PROBLEMS WITH BREASTFEEDING	20
3.9 EXPRESSING BREAST MILK	20
3.10 HIV+ MOTHERS AND BREASTFEEDING	21
3.11 COMPLEMENTARY FEEDING	22
3.12 ACTIVE FEEDING	23
3.13 IMPORTANCE OF GOOD HYGIENE	24
3.14 KEY MESSAGES FOR IYCF AND GROWTH PROMOTION	25
3.15 GROWTH ASSESSMENT (ONLY AT HEALTH CENTRES)	25
3.16 CHECKLIST FOR GROWTH ASSESSMENT	26
3.17 TREATMENT	27
3.18 EDUCATION AND PREVENTION	27
3.19 RECORDING AND REPORTING	27
4. VITAMIN A	28
4.1 WHAT IS VITAMIN A?	28
4.2 IMPORTANCE OF VITAMIN A	28
4.3 EFFECTS OF VITAMIN A DEFICIENCY	29
4.4 CAUSES OF VITAMIN A DEFICIENCY	29
4.5 AT RISK AND VULNERABLE GROUPS	29
4.6 CLINICAL SIGNS of VITAMIN A DEFICIENCY	30
4.7 PREVENTION	30

4.8	VITAMIN A RICH FOODS	31
4.9	TREATMENT	32
4.10	KEY MESSAGES	33
4.11	RECORDING & REPORTING	33
5.	IRON, ANAEMIA AND DE-WORMING	34
5.1	WHAT IS ANAEMIA	34
5.2	CAUSES OF ANAEMIA	34
5.3	THE IMPORTANCE OF IRON	35
5.4	THE IMPORTANCE OF DE-WORMING	35
5.5	EFFECTS OF IRON DEFICIENCY	36
5.6	AT RISK AND VULNERABLE GROUPS	36
5.7	CLINICAL SIGNS	36
5.8	PREVENTION	37
5.9	IRON RICH FOODS	38
5.10	TREATMENT OF IRON DEFICIENCY ANEMIA	39
5.11	KEY MESSAGES:	40
5.12	RECORDING & REPORTING	40
6.	IODINE	41
6.1	WHAT IS IODINE	41
6.2	THE IMPORTANCE OF IODINE	41
6.3	EFFECT OF IODINE DEFICIENCY	41
6.4	CAUSES OF IODINE DEFICIENCY	42
6.5	AT RISK AND VULNERABLE GROUPS	42
6.6	CLINICAL SIGNS	42
6.7	PREVENTION	42
6.8	IODINE RICH FOODS	42
6.9	KEY MESSAGES FOR IODINE	43
6.10	TESTING SALT	43
7.	IMMUNIZATION	44
7.1	IMPORTANCE OF IMMUNIZATION	44
7.2	IMMUNIZATIONS	45
7.3	RECORDING AND REPORTING	45
7.4	BASIC MESSAGES	46
7.5	FLOWCHART FOR IMMUNIZATION	46
7.6	IMMUNIZATION TABLES	47
8.	NUTRITION CONTACTS OVERVIEW	48
8.1	INTRODUCTION	48
8.2	ANTENATAL CONTACT	48
8.3	DELIVERY CONTACT	49
8.4	POSTPARTUM CONTACT	50
8.5	IMMUNIZATION CONTACT	51
8.6	WELL AND SICK CHILD CONTACT	52
8.7	VAC DISTRIBUTION CONTACT	52
9.	RECORDING AND REPORTING	53
9.1	RECORDING	53
9.2	WORKING WITH THE MOTHER CARD	53
9.3	WORKING WITH THE CHILD HEALTH CARD	54
9.3.1	GENERAL INFORMATION	55
9.3.2	IMMUNIZATION	55
9.3.3	VITAMIN A	55
9.3.4	OTHER ACTIVITIES AND TREATMENT	56

9.3.5	GROWTH CHART	56
9.3.6	HOW TO FILL IN THE GROWTH CHART	57
9.3.7	HOW TO ASSESS THE CHILD'S GROWTH USING WEIGHT FOR AGE	57
9.3.8	ACTIONS BASED ON THE GROWTH CHART	57
9.4	TALLY SHEETS	58
9.4.1	HOW TO CALCULATE TARGET GROUPS AND STOCK NEEDS	59
9.4.2	TALLYING THE STOCK DISTRIBUTED	60
9.5	REPORTING	60
9.6	REPORTING USING THE HC1 FORM	60
9.7	STEPS FOR VAC DISTRIBUTION, USING TALLY SHEETS AND HC1 FORM	61
10.	PEER FOLLOW-UP	62
10.1	INTRODUCTION	62
10.2	PREPARING FOR THE PEER FOLLOW-UP MEETING	62
10.3	DURING THE FOLLOW-UP MEETING	63
10.4	AT THE END OF THE FOLLOW-UP MEETING	63
11.	COMMUNICATING THE MESSAGES	64
11.1	INTRODUCTION TO MESSAGE COMMUNICATION	64
11.2	COMMUNICATION	64
11.3	MESSAGE	65
11.4	RECEIVER	66
11.5	MESSENGER	66
11.6	COMMUNICATION SKILLS FOR GROUPS	67
	REFERENCES	69
	APPENDICES	70
	EXERCISE A - FOODS THAT ARE RICH IN	71
	EXERCISE B - WHEN DO WE DO WHAT?	72
	EXERCISE C - GROWTH PROMOTION	73
	EXERCISE D - DARAVUTH'S GROWING!	74
	EXERCISE E - VITAMIN A RICH FOODS	75
	EXERCISE F - VITAMIN A CASE STUDIES	76
	EXERCISE G - STEPS IN PLANNING FOR AN EFFECTIVE VITAMIN A SUPPLEMENTATION ROUND	77
	EXERCISE H - IRON RICH FOODS	78
	EXERCISE I - IRON CASE STUDIES	79
	EXERCISE J - IODINE ENRICHED FOODS	80
	EXERCISE K - FLOWCHART	81
	PEER FOLLOW-UP TOOL	82
	CHECKLIST FOR COUNSELLING	83
	ASSESSING A CHILD'S WEIGHT FOR AGE	84
	CALCULATING THE AGE OF A CAMBODIAN CHILD	85
	TALLY SHEET	89

01

INTRODUCTION

1.1 INTRODUCTION

Why nutrition is an important part of your job

Although there has been improvements in the health of mothers and children in Cambodia in the last few years, maternal and child mortality remain very high. An estimated 60,000 children die each year before their fifth birthday, and 2,000 women die during or after pregnancy; 50% of the child deaths are associated with malnutrition. Micronutrient deficiencies such as iron deficiency anaemia and vitamin A deficiency are prevalent and a serious problem in young children, putting them at increased risk of illness and death. The Cambodia Demographic Health Survey 2005 (CDHS 2005) reported 62% of under five children are anaemic. There has been no improvement in the anaemia prevalence among young children in the last five years. Chronic malnutrition (stunting) accepted as a marker for zinc deficiency is also very high at 43%¹.

Anaemia in pregnant women is 57% and is associated with an increased risk of maternal mortality; in addition 17% of women of reproductive age are malnourished (chronically energy deficient/ thin) and 47% of them are anaemic. (CDHS 2005)

Cambodia cannot achieve successful socio- economic development without improvement in the nutrition of women and children. Women are Cambodia's main workforce and nurturers of children. If women are poorly nourished they will be weak and tired and are at risk of complications during and after pregnancy. Children are an important human resource for the future of Cambodia. If children are chronically malnourished they will be unable to study well and unable to work or contribute to their community or country.

The Cambodian government has prioritised improving mother and child health and survival. Improvement in the nutrition of women and children is essential to achieve this goal. In acknowledgment of the important role nutrition plays in the health and survival of women and children, several recent national strategic plans have included nutrition objectives, such as:

A. Health Strategic Plan 2008 -2015 (HSP 2)

The Health Strategic Plan 2008 -2015 (HSP 2) Goal 1 is to reduce maternal, new born and child morbidity and mortality with increased reproductive health. One of the expected outcomes is improved child nutritional status.

B. The National Nutrition Strategy 2008 -2015 (NNS).

The NNS's overall goal is to contribute to improved maternal and child survival and better nutritional status of women and children in Cambodia. The Plan will contribute to achievement of the Cambodia Millennium Development Goals 1,4, and 5: Eradicate extreme poverty and hunger; reduce child mortality and improve maternal health

¹ Re-analysis of the CDHS 2005 data using the revised WHO Growth Standards

C. The Cambodia Child Survival Strategy

The Cambodia Child Survival Strategy specifies 12 high-impact child survival interventions, 'Cambodia Child Survival Scorecard', that need to be scaled-up throughout Cambodia so that all children under-5 have access to them. Four of the child survival score card interventions are related to nutrition:

- **Early initiation of breast feeding**
- **Exclusive breast feeding for six months**
- **Introduction of appropriate complementary foods at six months**
- **Vitamin A supplementation twice per year, around May and November, for children 6-59 months**

The National Nutrition Training Curriculum (MPA Module 10) for Health Centre staff focuses on the four nutrition program intervention areas:

- 1 Infant and Young Child Feeding (including growth promotion and growth assessment)**
- 2 Prevention and treatment of vitamin A deficiency**
- 3 Prevention and treatment of iron deficiency anaemia**
- 4 Prevention of iodine deficiency**

Growth promotion includes promotion and support for early exclusive breastfeeding initiation of appropriate complementary food when infants are six months old, and continued breast feeding for at least two years. Growth promotion also includes assessment of children's growth when they attend a 'child visit' at the health centre.

By implementing these interventions at health centre and community level, health centre staff can effectively improve women and children's health and reduce infant and maternal mortality.

1.2 OBJECTIVES OF THE MPA 10

The purpose of the MPA 10 Training is to provide health centre staff with the knowledge and skills they need in order to improve the health of mothers and young children, which will contribute towards the achievement of the Cambodian government's goal to reduce maternal and under five child mortality.

The objectives of the National Nutrition Training Curriculum (MPA Module 10) are to:

- Improve the nutritional status of women and under-five children in Cambodia, and promote and support positive nutrition practices
- Strengthen the quality and accessibility of nutrition services especially for women and under-five children
- Increase the knowledge and skills of health centre staff about nutrition and strengthen the health centre staff's ability to integrate nutrition interventions into both mother and child visits at health centre and during outreach activities at community level

1.3 WHY PROVIDE THIS TRAINING TO HEALTH CENTRE STAFF?

Health centre staff are the key to improving the health and nutrition of women and children because:

- Health centre staff have the trust and credibility with communities
- Know the communities' problems
- Interact often with women and children in the coverage area

1.4 HEALTH CENTRE STAFF RESPONSIBILITIES FOR NUTRITION

This MPA Module 10 is about the integration of nutrition into everything the health centre staff do. The MPA 10 module provides health centre staff with the knowledge and skills to improve the nutrition status of women and children in Cambodia.

The HC staff is responsible for:

- 1 Educating communities about nutrition and providing nutrition services at health center and village level
- 2 Providing support, training and supervision to village volunteers
- 3 Recording and reporting nutrition activities and using the information to improve the nutrition status of the communities'

1.5 THE TRAINING

This MPA module 10 contains a package of activities that are conducted in health centres and during outreach in the community. The training includes key nutrition information and provides the opportunity for participants to practice and strengthen their skills for providing nutrition education; supporting parents in good nutrition practices, planning outreach activities and providing preventive supplements and treatment for nutrition deficiencies.

Note: Throughout the manual when parents are mentioned it also means other caregivers.

Health centre workers are the best people to help parents to improve their own and their childrens nutrition status. Health centre workers are the professionals who see the parents most often. Parents come to you for advice and treatment when they or their child falls ill. Many illnesses are connected to malnutrition and micronutrient deficiencies. Nutrition interventions and nutrition messages should be integrated into everything you do.

This module provides you with the knowledge and skills about nutrition that you need to use in your daily work. It consists of:

- 1 A participant manual
- 2 A set of six job aids
- 3 A 10-day training course delivered by skilled facilitators

The course is highly participatory. Although nutrition theory is presented, there are many activities during the training that allow you to practice using nutrition knowledge and skills. Firstly together with peers and the facilitators of the course, later with mothers and children during field practice.

Approximately 3 to 6 months after training, there will be follow-up meetings where you can discuss successes, challenges and solutions with your peers from other health centres.

1.6 MEASURING THE RESULT OF THE TRAINING

The results of the training will be measured by:

- 1 A pre test at the beginning and a post test at the end of the course
- 2 A short term evaluation at the end of the training
- 3 A report by the district nutrition 'Focal Point Person' on the successes, challenges and solutions identified during follow-up meetings

Developed by the National Nutrition Program, National Maternal and Child Health Center,
with technical support from the A2Z Micronutrient Project, Mr Jan Berkvens and the Nutrition Working Group.
March 2009


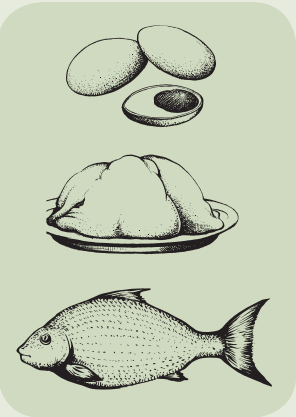
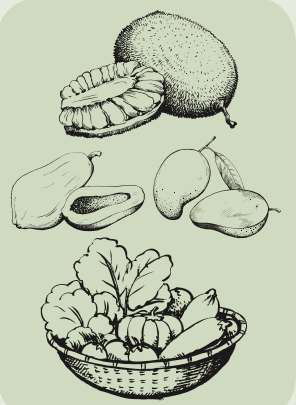
02

NUTRITION

The body needs energy, protein and vitamins to help it grow and keep it in good working order. It is important to eat a varied diet in order to get all the nutrients a body needs to stay healthy. Important nutrients are vitamin A, Iron, Iodine and Zinc.

A nutritious diet means a varied diet that includes eating food from the following food groups at each meal:

FOOD GROUPS

What are they called?	What do they do?	Where do you find them?	Example
Carbohydrates and fats	Give you energy	Sugary and starchy foods like rice, bread, potatoes, taro, cereals, noodles and some fruit and vegetables. Fats are in dairy products, meat and oils	
Proteins	Help your body grow and repair itself	Fish, meats, poultry, eggs, dairy products, beans and nuts	
Vitamins, minerals / micronutrients	Vitamins and micronutrients are good for protecting your body and keeping it healthy.	Vitamins are mostly found in fresh fruit and vegetables and dairy products (milk, and eggs). Minerals/ micronutrients are in lots of foods but are especially in red meat, liver and fresh fruit and vegetables.	
Fibre	Helps you digest food	Fruit, vegetables and cereals	

If we feed ourselves poorly, we are more vulnerable to illness, and recovery will take longer. If our children are not fed well, they will not develop well. They can become slow learners, have weaker bodies and will not grow well. If pregnant women do not eat enough food and a variety of foods, they are at risk of malnutrition, anaemia and increased risk of infection, which can lead to serious complications or death for both mother and baby.

2.1 WHY NUTRITION IS IMPORTANT

Nutrition is the foundation of good health. Good nutrition is necessary for the successful socio-economic development of Cambodia because:

- It helps women to have healthy pregnancies and safe deliveries
- It produces healthier babies
- It helps children to survive the first years of life
- It makes children mentally and physically stronger
- It gives people more strength to learn and work better, care for the family and be productive members of society



More strength to work



Mental and physically strong children



Healthy pregnancies and babies

IMPORTANT
In Cambodia 43% of children under five years are stunted (chronically malnourished). If children do not receive adequate nutrition in the first two years of their life they will likely be stunted for their whole life. That is why exclusive breastfeeding for six months and introduction of appropriate complementary food at 6 months, and continued appropriate feeding and breastfeeding for the first two years of life is vitally important.

2.2 EFFECTS OF POOR NUTRITION

Poor nutrition is not eating a variety of nutritious foods. If nutrition is poor:

- Children become malnourished and don't grow as they should
- Children develop less well, become slow learners and are physically less strong
- Women may experience problems during pregnancy, delivery and in post partum period
- Adults do not have the power to work and care for the family
- Adults and children will get sick more often and recover more slowly



Less development, slow learning, less strong

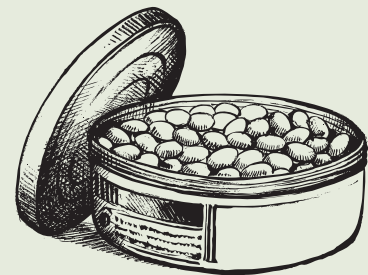


2.3 SUPPLEMENTATION

Sometimes the diet does not contain enough substances (micronutrients) like vitamin A, iron and iodine. Then the diet needs to be supplemented with these micronutrients. At some moments in our life we need more of these micronutrients. These periods are called periods of higher demands, like:

- When a woman is pregnant
- When the body is growing fast (especially children from 6 months to 5 years)
- When recovering from illness

During these periods we need to eat more and eat a variety of foods. We also need to take micronutrient supplements. Pregnant women and breastfeeding mothers should eat at least one extra meal a day and eat regular healthy snacks like fresh fruits. Not eating enough will put both the mother and her baby at risk of malnutrition, infections and serious illnesses.



Iron tablet



Vit A capsule

2.4 FORTIFIED FOODS

Some foods are fortified with micronutrients like salt which is fortified with iodine. Fortified foods contain added micronutrients which we need to maintain good health.



Iodized salt

2.5 NUTRITION FOR SICK CHILDREN AND ADULTS

When children and adults are sick they sometimes lose their appetite. This is difficult, because they need the nutrients in the food to help them recover. They should eat a variety of foods. Fruit, vegetables and animal products will help them to get better faster. If a sick person or child is having trouble eating, suggest the following:

- 1** If a sick child has a poor appetite – breastfeed more often, for a longer duration to prevent dehydration
- 2** Give smaller amounts of food, but more often, 5 or 6 smaller meals is good
- 3** Choose foods that are soft and easy to eat
- 4** Offer food that the sick child or adult likes, but try to offer a variety of foods
- 5** Add vegetables, fruits and meat. Do not just give plain rice soup

03

GROWTH PROMOTION

3.1 WHAT IS GROWTH PROMOTION?

Growth promotion is providing appropriate infant and young child feeding so that the child can grow well. It includes the promotion of:

- Early initiation of breast feeding within the first hour after delivery
- Exclusive breast feeding for the first six months
- Initiation of appropriate complementary food when infants are six months old
- Continued breastfeeding for at least two years

Growth promotion also includes conducting growth assessment at the health center when a child attends for a child visit. Growth assessment involves weighing the child, recording the weight on the Child Health Card, assessing the child's growth, providing feedback to the parents or caregiver about their child's growth and referring the child for treatment if severely malnourished.

3.2 IMPORTANCE OF GOOD INFANT AND YOUNG CHILD FEEDING PRACTICES

Promotion of good feeding practices will lead to:

- Increased child survival chances
- Better physical development of the child
- Better mental development of the child
- Better economic situation for the family and society

**Better physical
development of the child**



**Better mental
development of the child**

3.3 EFFECTS OF MALNUTRITION

If children are malnourished, their body does not get enough nutrients. This can lead to:

- Illness and even death
- Weaker physical development of the child (shorter, thinner)
- Weaker mental development of the child (less smart)
- Weaker economic situation for the family and society

Cambodian society is rapidly changing and some parents have less time to prepare food for their children which may result in their children eating too much of the wrong kinds of foods e.g. processed packaged snacks which are not nutritious and which may contain high amounts of sugar, fat and salt. This will cause children to become overweight (obese) and increase their risk of developing diabetes, high blood pressure and other chronic disease when they become adults.



3.4 CAUSES OF MALNUTRITION

The main causes of malnutrition in young children are:

- 1 Not exclusively breastfeeding
- 2 Amount of food at each meal is not enough and consistency of food is too thin (too much water)
- 3 Child is not fed frequently enough
- 4 Child is not receiving a varied diet
- 5 Food is not rich enough in nutrients (see vitamin A, Iron and Iodine chapters)
- 6 Diet is not enough to meet the needs of a sick child

3.5 AT RISK AND VULNERABLE GROUPS

It is not always clear what is influencing what in malnutrition. It is possible that a child is ill because h/she is malnourished, but also that the child is malnourished because h/she is ill.



All young children are at risk of malnutrition. A well balanced diet and growth assessment are important to make sure the child is growing at the right pace and gaining the right amount of weight.

3.6 CLINICAL SIGNS

Signs of malnutrition:

There are 3 general signs for malnutrition:

- 1 Low weight for age - Underweight
- 2 Low height for age - Stunting
- 3 Low weight for height - Wasting

A child may be malnourished e.g. low weight for age or low height for age without the parents or community realising the child has a problem. Checking the child's weight and plotting the weight on the Child Health Card can help to identify and treat malnourished children early, before they become severely malnourished.

Signs of severe malnutrition: 2 types

• Kwashiorkor

- Swollen legs or feet (push test with finger in both legs and feet)
- Skin does not return to normal position when pinched
- Reddish/pale coloured thin hair, easy falls out
- Dry scaly skin especially hands and legs
- Face looks round like full moon
- Weight seems normal
- No appetite
- Child is quiet and looks miserable



• Marasmus

- Unhappy worried face –looks stressed
- Thin with muscle wasting
- Distended abdomen
- Low weight for age
- Strong appetite



3.7 BREASTFEEDING

Breastfeeding is important because the milk of the mother contains all of the important nutrients needed to keep the baby healthy. The early milk of the mother is called 'colostrum,' it is especially nutritious and important for the baby. The baby should be breastfed within the first hour of delivery.

Importance of early initiation of breastfeeding within one hour after delivery

- To provide the baby warmth from the mother
- To stimulate bonding and a loving relationship between mother and child
- To stimulate early milk production

Importance of colostrum:

- To provide immunity to the child and protect the child from illnesses
- To help to clean the child's gut of 'meconium' (the first dark stool)
- To provide essential vitamins, like vitamin A
- To help prevent the child from developing allergies and intolerance to other foods

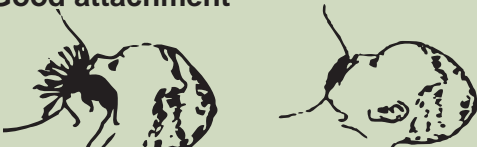

Importance of breastmilk and exclusive breastfeeding:

- To provide exactly the nutrients a baby needs
- To help the baby's development
- To help delay a new pregnancy
- To help protect a mother's health, for example protect against anaemia and ovarian or breast cancer

Also important:

For the first six months after birth, the baby should be exclusively breastfed. No other foods, not even water, tea, sugar or traditional medicine, should be given in this period. Otherwise the baby may get sick and develop diarrhoea.

The correct positioning of the baby is important for effective breast feeding and to stimulate milk production, as shown in the table below.

Signs of good positioning and attachment	Signs of poor positioning and attachment
Mother relaxed and comfortable	Shoulders tense, leans over baby
Baby's body close, facing breast	Baby's body away from mother's body
Baby's head and body straight	Baby's neck twisted
Baby's chin touching breast	Baby's chin not touching breast
Baby's whole body is supported	Only shoulder or head supported
Baby's mouth wide open	Baby's mouth not wide open, points forward
Baby's lower lip turned outwards	Baby's lower lip turned in
Baby's tongue cupped around breast	Baby's tongue not seen
Baby's cheeks round	Baby's cheeks tense or pulled in
More areola above baby's mouth	More areola below baby's mouth
Slow deep sucks, bursts with pauses	Rapid sucks only
Can see or hear swallowing	Can hear smacking or clicking
Baby will release breast spontaneously	Baby tries to continue breast feeding
Baby appears relaxed and sleepy	Baby tries to suck again
Good attachment	Poor attachment
	

(Adapted from 'Breast-feeding Counselling, A Training Course, Trainers Guide' WHO and Unicef, 1993.)

3.8 COMMON PROBLEMS WITH BREASTFEEDING

The table below shows the most common difficulties with breastfeeding. The left column shows the problem, the right column tells what to do.

Experienced difficulty	Counselling messages
Insufficient milk	Feed baby every 2- 3 hours. Mother should drink at least 2 litres of water per day. Eat an extra meal per day and extra nutritious snacks such as fruits
Engorgement	Apply clean warm cloth to breasts for 5 minutes before each breast feed. If baby difficult to attach to breast gently express some milk before feeding Breastfeed every 2-3 hours, express the remaining milk after feeds
Sore or cracked nipples	Keep clean and dry between feeds. Begin feeding on the least sore breast. At the end of feed gently remove baby from the breast
Inverted nipple(s)	Use empty barrel of syringe to pull out the nipples before breastfeeding

3.9 EXPRESSING BREAST MILK

Breast milk is expressed when the mother and child cannot be together during the day, for example, when the mother has to work away from home, or in the field and cannot take the child with her.

Milk should be expressed in advance and can be kept for up to 8 hours without refrigeration, in a clean covered container. The process of expressing breast milk is as follows:

- 1 Wash hands thoroughly with soap and water
- 2 Thoroughly clean a cup or a glass and fill it with hot boiled water for 5 minutes
- 3 Empty the cup or glass
- 4 Express breast milk by placing fingers and thumb each side of the areola and press inwards behind the nipple and areola to push the milk out
- 5 Cover the cup or glass and store in a dark cool place
- 6 Do not keep the milk over 8 hours
- 7 Feed the milk to the baby every 2 -3 hours, using a cup and spoon



3.10 HIV + MOTHERS AND BREASTFEEDING

Refer HIV+ mothers to a facility with health staff who have received training to provide counseling about infant and young child feeding for HIV+ mothers. These specially trained caregivers are called PMTCT counselors, and are usually HC midwives, referral hospital midwives, pediatric AIDS care teams or trained NGO counselors. The most appropriate feeding option for the child of a HIV+ mother depends on the individual circumstances of the mother, including her health status and the local situation. But also on the specific counseling and support she is likely to receive.

The most common option is to provide exclusive breastfeeding for the first six months, unless replacement feeding is AFFORDABLE, FEASIBLE, APPROPRIATE, SUSTAINABLE and SAFE (AFASS):

- **Acceptable:** The mother perceives no social or cultural barrier to replacement feeding and is supported by family members and community
- **Feasible:** The mother and family has adequate time, knowledge, skills and other resources to prepare the replacement food and feed the infant up to 12 times in 24 hours
- **Affordable:** The mother and family can pay the cost of the replacement food and the equipment needed for preparation for at least the one year
- **Sustainable:** There is an uninterrupted supply of the replacement feeding for at least 1 year or longer
- **Safe:** Replacement foods are correctly and hygienically (clean equipment, clean hands) and nutritionally adequate

It is important that HIV+ mothers are followed up and receive support for infant feeding at the community level. This may be conducted by home based care teams, 'Baby Friendly Community' support groups and other community based home care providers who have received training about infant and young child feeding for HIV+ mothers.

3.11 COMPLEMENTARY FEEDING

Breast milk contains all the important nutrients an infant needs until six months of age. At six months the infant needs additional nutrients to promote normal growth and development. Additional nutrients are provided by commencing feeding with appropriate complementary food at six months old and continuing breastfeeding.

The table below provide an overview of the appropriate complementary feeding, recommended by IYCF policy.

When an infant is 6 months old give complementary food. add a variety of foods to thick rice porridge. Feed frequently according to the infants age and continue breastfeeding

The infographic illustrates the process of preparing complementary food. It shows various ingredients like rice, lentils, eggs, and vegetables being added to a pot on a stove. The prepared porridge is then served in a bowl. Below the preparation steps, there is a row of images showing different types of vegetables and fruits. To the right, a table provides a feeding schedule for different age groups, showing the number of meals per day and the consistency of the food.

6 months				
7 - 8 months				
9 -11 months				
12 months and above				

Appropriate Complementary Food and Amounts of Food to Offer

Age	Texture	Frequency	Amount at each meal
6 months	Start with thick enriched Borbor or well mashed foods, e.g. mashed cooked banana, sweet potato, pumpkin, etc.	Start foods 2 times per day plus frequent breastfeeds at least 8 times per day	Start with 2-3 tablespoonfuls per feed
7-8 months	Thick enriched Borbor, well mashed foods	Increasing to 3 times per day plus frequent breastfeeds at least 8 times per day	Increasing gradually to 1/2 of Chan Chang Koeh at each meal
9-11 months	Thick enriched Borbor, finely chopped or mashed foods, and foods that baby can pick up	3 meals plus 1 snack between meals plus breastfeeds at least 6 times per day	Increasing gradually to almost 1 full chan Chang Koeh (kach Chan)
12-24 months	Family foods, chopped or mashed if necessary, thick enriched Borbor	3 meals plus 2 snacks between meals plus breastfeeds as the child wants, at least 3 times per day	1 full Chan Chang Koeh

If baby is not breastfed, give in addition 1-2 extra meals per day.

Thick enriched Borbor that cannot fall/drip off spoon as base add:

- Fish, egg, blood, chopped meat, tofu, and beans
- Vegetables: morning glory leaves, amaranth leaves, pumpkin, yellow sweet potato, and other vegetables
- Cooking oil
- Iodized salt

3.12 ACTIVE FEEDING

Young children learn by watching others and this applies to their eating habits as well. A child often looks to someone else to model the appropriate behaviour. Through the foods we serve and the examples we set, parents and care givers can help children form good eating habits. Children need encouragement to eat and especially to try new foods.

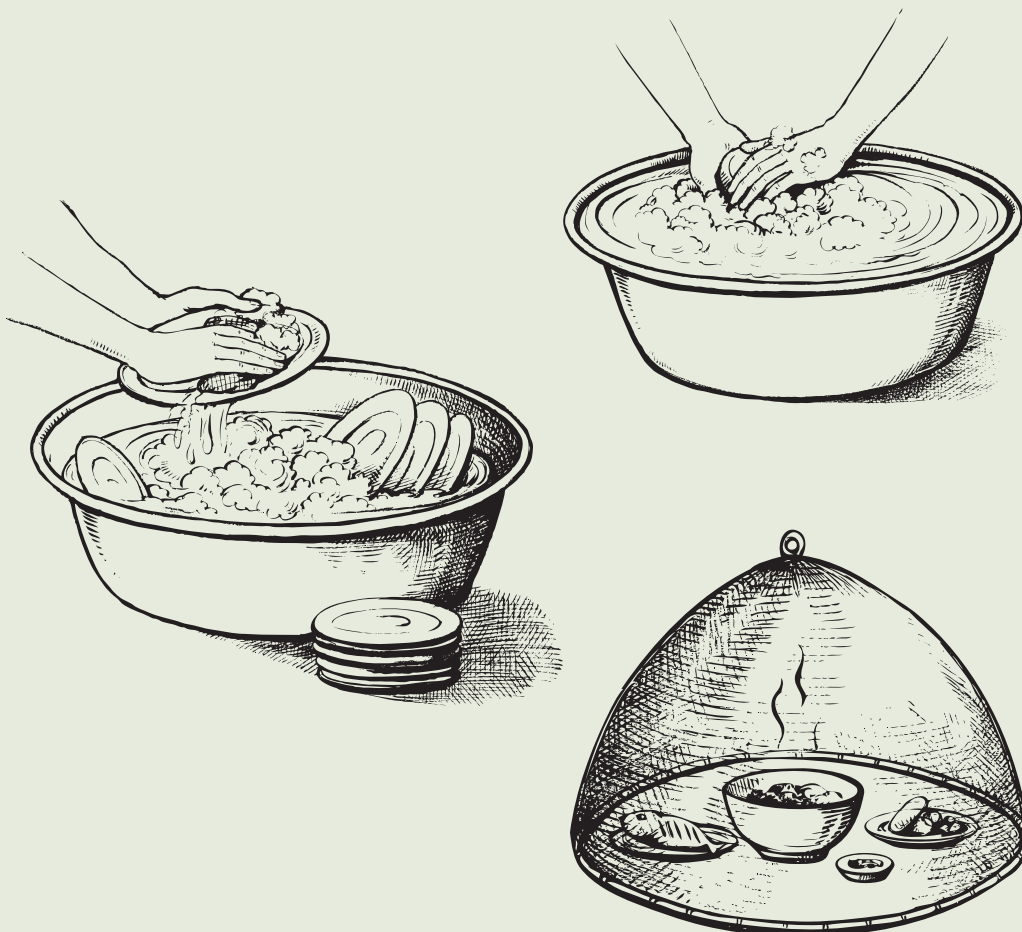
Advise parents to actively assist their young child to eat and encourage them to eat the right amount of food according to the child's age. This will take time and patience, but the child will grow healthy and strong if s/he eats correctly. When the child is older, s/he will want to eat by her/himself. Encourage her/him to eat everything on the plate, but do not force the child to eat.



3.13 IMPORTANCE OF GOOD HYGIENE

Children often suffer because their food or water becomes contaminated with germs or parasites. It is easy for young children to get sick when beginning to introduce complementary feeding. To avoid giving contaminated food or water, parents should be careful when preparing and feeding complementary food to their children. Parents should:

- Wash hand with soap before preparing the food or before touching the food
- Wash utensils with soap and keep them in the kitchen's utensil cabinet or a clean covered container
- Wash vegetables and fruits well with clean water before cooking or eating
- Keep the cooked food under a food net or in a cabinet to protect it from flies, dusts and germs
- Boil drinking water to kill the germs
- Only give freshly cooked food to children
- Cook fish and meat thoroughly to kills any germs or parasites that could infect your child



3.14 MESSAGES FOR IYCF AND GROWTH PROMOTION

Growth promotion is making sure that mothers/parents have accurate information about how to feed their infants and young children. The messages for growth promotion are given at the health centre and during outreach in the communities. The IYCF flipchart is a useful tool to effectively deliver the messages.

The messages for IYCF and growth promotion for children are:

- 1 Promote skin-to-skin contact between mother and child, immediately after delivery
- 2 Start early breastfeeding (within 1 hour of delivery)
- 3 Exclusively breast feed for the first six months. Do not provide breast milk substitutes or any other foods or fluids including water, as a substitute for breast milk
- 4 Breast milk substitutes can be dangerous for child health and survival. It also negatively affects the family budget
- 5 Start appropriate complementary feeding from 6 months of age
- 6 Appropriate complementary food means giving a variety of food in the right consistency, amount and frequency for the infants' age
- 7 Complementary food should be hygienically prepared and served
For some specific target groups – for example low birth weight babies, sick children and HIV + mothers and children there are additional messages:
- 8 Low birth weight newborns require additional care such as being kept close to the mother's skin for warmth (Kangaroo Mother Care) and feeding support if the baby has poor sucking. Expressed breast milk can be given with a cup-and-spoon. A mother with a low birth weight baby will need close follow up support from a health provider who has been trained in the care of low birth weight babies
- 9 Sick children should be breastfed more often. If the sick child is over six months old s/he should get an extra meal every day during the illness
- 10 HIV+ mothers/parents should receive counselling about infant and young child feeding options from a trained health care provider



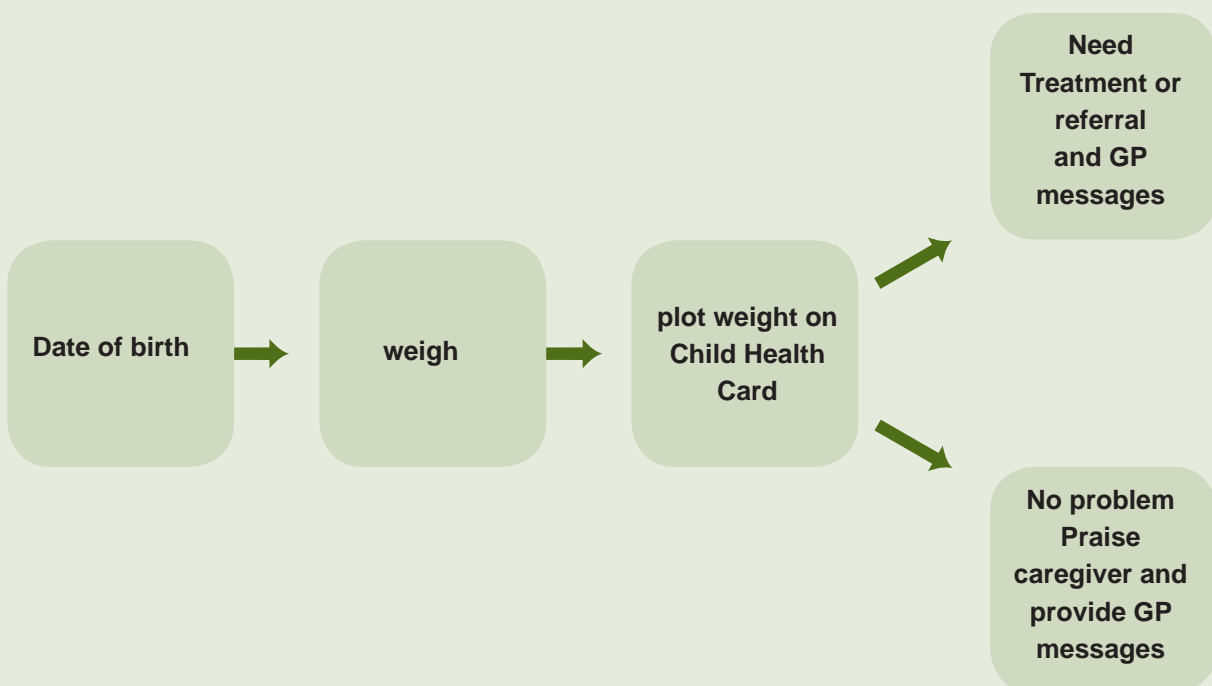
3.15 GROWTH ASSESSMENT (ONLY AT HEALTH CENTRES)

At health centers growth promotion is complemented by growth assessment. Growth assessment compares the growth of a child (weight) using a standard growth chart that shows the average weight for a child of that specific age. In Cambodia, children's weight should be assessed at birth, and at the health center whenever possible, such as at immunization visits (6, 10, 14 weeks and 9 months), during vitamin A distribution rounds at health centers, and at sick-child visits.

Feedback should always be provided to the parents about their child's growth. The weight should be recorded on the child health card. There is a different Child Health Card for boys and girls because boys and girls have different weights and lengths beginning at birth. Boys and girls need to be assessed by standards that reflect normal difference in their sizes.

3.16 CHECKLIST FOR GROWTH ASSESSMENT

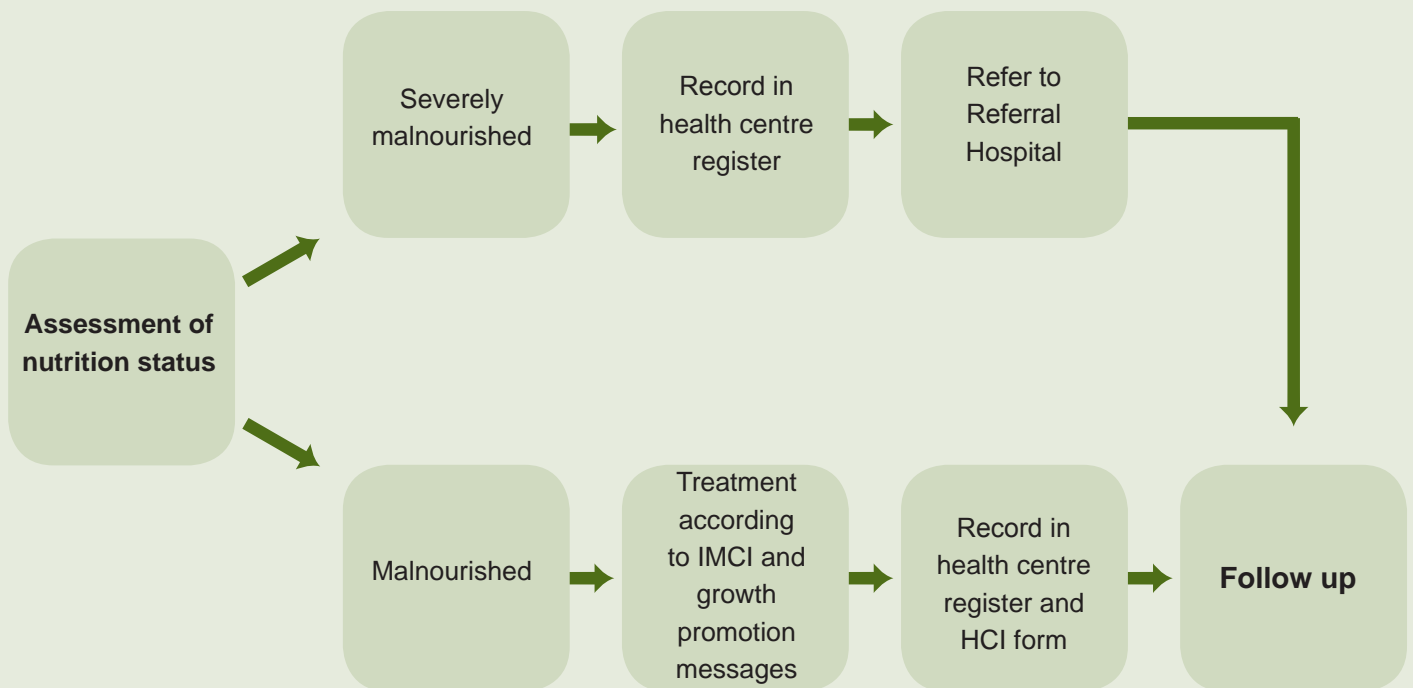
- 1** Assess the date of birth of the child. The date of birth of the child is very important (use the Khmer age chart; in the appendix of this manual to determine exact date of birth). If the child is below three months use completed weeks. If older than three months use completed months; if under 12 months, and after 12 months use completed years and months.
- 2** To plot weight for age:
 - Plot age in complete weeks, months or years and months on a vertical line, not between the vertical lines
 - Plot weight on a horizontal line or in the space between the horizontal lines to show exact weight measurement
 - When points are plotted for two or more visits connect the points with a straight line to better observe trends
 - Assess the child's growth using the growth chart and decide if treatment is needed. Check the Child Health Card on recording and reporting, at the end of this manual.
- 3** If the child's weight is within the green track on the growth chart the child is of a normal weight for age, praise the caregiver for her good child-care practices and give advice to the caregiver about appropriate feeding practices for the child's up and coming age group. (Use job aid or IYCF flip chart as an educational tool)
- 4** If the weight is in the orange track of the growth chart the child is underweight. If underweight investigate the possible causes. Follow the IMCI protocol for treatment and provide growth promotion messages.
- 5** If the weight is in the red track of the growth card the child is severely underweight. Explain the problem to the caregiver and refer to the nearest hospital that has a facility to treat malnourished children.



3.17 TREATMENT

In the HC and during outreach, malnourished children should be identified and treated according to the IMCI protocols. The nutrition status of the children and the treatment given must be recorded in the health centre register and on the HCI form. Health staff should ensure that follow-up is conducted for all malnourished children.

Severely malnourished children must be referred to the nearest hospital that has the staff and equipment to treat severe malnutrition.



3.18 EDUCATION AND PREVENTION

Health Centre staff provide health education to pregnant women, post partum mothers, and families with young infants and children. During all visits and contacts of HC staff with these target groups, the messages for growth promotion described above should be communicated using IEC materials provided such as the IYCF flip chart and the health center job aid for sick child contact.

3.19 RECORDING AND REPORTING

Recording and reporting are important and are done to monitor and evaluate the growth promotion and growth assessment activities, and to assess progress in improving the health of young children. Growth assessment data and information about referral of children with severe malnutrition should be recorded on:

- 1 Child Health Card
- 2 HIS form
- 3 Health centre outpatients register

04

VITAMIN A

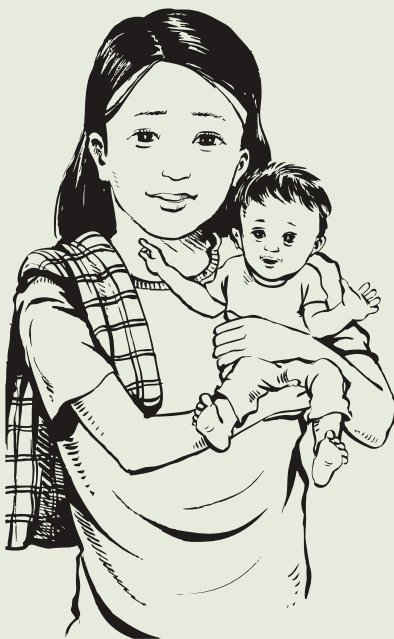
4.1 WHAT IS VITAMIN A?

Vitamin A is an important micronutrient that is found in various foods (meat, fish, liver egg yolks, green leafy vegetables and ripe orange colored fruits and vegetables such as papaya, mangoes and pumpkin). Vitamin A is also found in oil and fats.

4.2 IMPORTANCE OF VITAMIN A

Vitamin A is important because it helps people stay healthy. Vitamin A increases immunity against diseases. If a child has adequate vitamin A intake, the child has a reduced risk of becoming sick. Vitamin A is also important for maintaining good vision, normal growth and brain development.

Protects mother and child from infections



Maintains good vision



Promotes growth

4.3 EFFECTS OF VITAMIN A DEFICIENCY

Children with Vitamin A deficiency:

- Get sick more easily
- Have increased risk of illness and death
- Have reduced body growth and brain development
- If severe, vitamin A deficiency can lead to serious eye diseases and blindness

4.4 CAUSES OF VITAMIN A DEFICIENCY

Vitamin A deficiency is caused by:

- 1 Lack of adequate vitamin A rich food in the daily diet
- 2 Lack of intake of a variety of foods
- 3 Other diseases and conditions

4.5 AT RISK AND VULNERABLE GROUPS

People in the at risk group:

- Children 6-59 months
- Post partum mothers
- Pregnant women
- Infant 0-6 months who are not breast fed

People in the vulnerable group:

- Children with persistent diarrhoea (> 14 days)
- Children with severe malnutrition
- Children with measles
- Children with night blindness
- Children with signs of xerophthalmia

4.6

CLINICAL SIGNS ONLY OCCUR WHEN VITAMIN A DEFICIENCY IS SEVERE

1 Night blindness

Unclear vision at night (walking into objects or avoiding moving around after dark)

2 Bitot's spots in the eye

(small white frothy bubbles that can be seen on the conjunctiva)

3 Corneal xerosis

Lesions on the cornea (damage to the window of the eye)

4 Conjunctival xerosis

The conjunctiva becomes wrinkled and dry

4.7

PREVENTION

Eating enough vitamin A rich foods can prevent vitamin A deficiency. Children 6-59 months should receive preventive vitamin A supplementation twice per year around May and November. Postpartum women should receive vitamin A supplementation within the first six weeks after delivery. There are different prevention protocols for the different target groups:

Pregnant women

- Consume vitamin A rich foods daily

Post partum mothers

- Consume vitamin A rich foods daily
- Encourage and promote home gardening
- Provide 1 VAC 200,000 IU within 6 weeks of delivery

Babies (0 – 6 months)

- Provide colostrum within the first hour of delivery
- Provide exclusive breastfeeding for the first 6 months

Young infants > 6 months

- Continue breastfeeding until a least 2 years of age and beyond
- Start appropriate complementary feeding at 6 months
- Provide VAC every 6 months to children 6-59 months around May and November
- Provide Mebendazole every 6 months to children from 12 - 59 months
- Refer children to health center if any signs of vitamin A deficiency occur

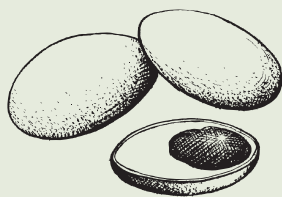
4.8 VITAMIN A RICH FOODS

The pictures below show foods that are rich in vitamin A. Vitamin A can be taken in by eating food that is rich in vitamin A. Most yellow and orange coloured ripe fruit and vegetables like carrots, papaya, sweet potatoes, and pumpkin are rich in vitamin A, as are dark green leafy vegetables, liver, fish, chicken and egg yolk. Breast milk for infant and young children is a good source of vitamin A.



Breast milk

Egg yolk



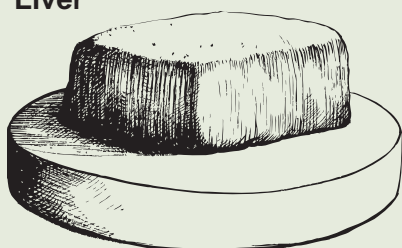
Fish, chicken



Yellow and orange ripe fruits and vegetables



Liver



Dark green leafy vegetables

If children or adults have signs of vitamin A deficiency or if children have any of the clinical signs listed below they should receive vitamin A. There are different forms of capsules available. Make sure that you use the right dose to avoid vitamin A toxicity.

4.9 TREATMENT

When one or more of the clinical signs are present, provide treatment using the treatment table below.

Symptoms / Illness	Age / group	Dose
Persistent Diarrhoea (>14 days) Severe malnutrition	6-11 months	1 dose of 100,000 IU
	1 – 12 years	1 dose of 200,000 IU
Measles	6-11 months	1st day 1 dose 100,000 IU 2nd day 1 dose 100,000 IU
	12 months – 12 years	1st day 1 dose 100,000 IU 2nd day 1 dose 200,000 IU
Xerophthalmia (Night blindness and Conjunctival xerosis) Bitot's spot	0- 5 months	1st day 1 dose 50,000 IU 2nd day 1 dose 50,000 IU At least 14 days later 1 dose 50,000 IU (50,000 IU = ½ of 100,000 IU)
	6-11 months	1st day 1 dose 100,000 IU 2nd day 1 dose 100,000 IU At least 14 days later 1 dose 100,000 IU
	Individuals 12 months and older	1st day 1 dose 200,000 IU 2nd day 1 dose 100,000 IU 14th day 1 dose 200,000 IU
	Women of Reproductive Age > 12 years (Night blindness and Bitot)	1 dose 10,000 IU per day for 30 days If 10,000 IU doses are not available, Use 2 multivitamin tablets a day for 30 days

4.10 KEY MESSAGES:

- 1 Vitamin A saves children's lives by protecting them from common childhood illnesses
- 2 Provide VAC to children 6-59 months twice per year around May and November
- 3 When administering VAC, tell caregiver that their child is receiving vitamin A and that vitamin A saves children's lives
- 4 Explain that every child 6-59 months needs vitamin A twice per year around May and November
- 5 Record on Child Health Card
- 6 Provide Mebendazole every six months if child is > 12 months
- 7 Vitamin A protects the health of a postpartum woman and her newborn baby
- 8 PPM within 6 weeks after delivery should receive VAC supplementation 1 dose (200,000 IU)
- 9 Following the national guidelines provide VAC to all children with :
 - Persistent diarrhoea
 - Severe malnutrition
 - Measles
 - Xerophthalmia (night blindness, bitot spots and corneal lesions) and to all adults with xerophthalmia

4.11 RECORDING & REPORTING

The distribution of VAC is recorded:

- 1 On the Mother Card for pregnant women and mothers
- 2 On the Child Health Card for children
- 3 On the tally sheet for OR
- 4 In the register book at the HC

The vitamin A distribution is reported to the OD by the HC1 form.

05

ANAEMIA, IRON, AND DE-WORMING

5.1 WHAT IS ANAEMIA ?

Anaemia is the most common nutritional deficiency in the world. Anaemia is a deficiency in the amount of haemoglobin (oxygen-carrying substance) in the blood. Iron is needed to produce haemoglobin. There are many different causes of anaemia, but iron deficiency anaemia is one of the leading forms of anaemia.

5.2 CAUSES OF ANAEMIA

The major causes of anemia are:

- Not eating enough iron rich foods
- Other nutritional deficiencies
- Genetic conditions such as thalassemia and sickle cell
- Malaria
- Helminth infections (particularly hookworm but also schistosomiasis)
- Chronic infections including HIV/AIDS and tuberculosis
- Repeated pregnancies (having babies very close after one another)
- Blood loss during child birth and menstruation

Iron deficiency anaemia is one of the main causes of anemia in Cambodia. Every age group is vulnerable and anemia is particular serious in children 6 – 24 months and women of reproductive age.

5.3 THE IMPORTANCE OF IRON

Iron Deficiency Anaemia is caused by the lack of iron in the blood. Iron is a nutrient that protects mother and child against iron deficiency anaemia. Iron also helps the body have enough energy to conduct daily activities. Without iron, the blood is not able to transport oxygen around the body. When the blood cannot provide oxygen, people feel weak, tired and cannot work well. People with iron deficiency anaemia (IDA) have a severe form of iron deficiency.



Helps learning



Protects mother and child



Helps physical activity

5.4 THE IMPORTANCE OF DE-WORMING

Worms can cause anaemia. Pregnant women, mothers and children should all be treated for worms. Mebendazole is the drug used to kill the worms.

Mebendazole is given to:

- Pregnant women (after the first three months of their pregnancy)
- Postpartum women (within the first six weeks after delivery)

Refer to the Iron prevention table for Mebendazole distribution to pregnant women and post partum women.

Children of 12 - 59 months receive the Mebendazole during the twice-yearly vitamin A distribution rounds around May and November. Refer to the vitamin A prevention table for the protocol for Mebendazole distribution to children.

5.5 EFFECTS OF IRON DEFICIENCY

Iron deficiency anemia has many serious negative effects on health; it impairs the cognitive development of children; damages immune mechanisms and reduces resistance to infections. During pregnancy iron deficiency anemia is associated with multiple adverse outcomes for both mother and infant, including an increased risk of haemorrhage, sepsis, maternal mortality, perinatal mortality, and low birth weight. Iron deficiency anaemia also reduces physical work capacity in both men and women by as much as 30%.

The decreased productivity affects both physical and mental productivity. People who cannot work well, cannot make money.

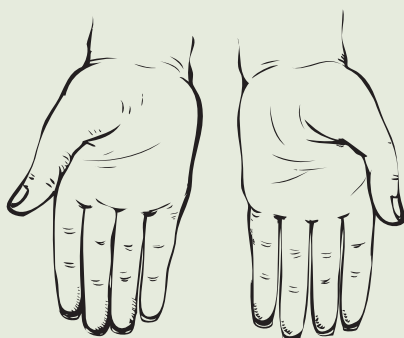
5.6 AT RISK AND VULNERABLE GROUPS

Women and young children have an increased need for iron. The following groups are vulnerable to iron deficiency anaemia:

- Young infants from birth to 24 months
- Women of reproductive age
- Pregnant women
- Post partum women.

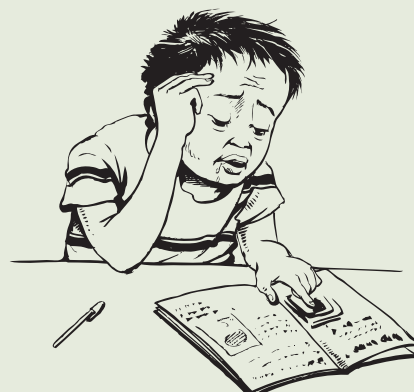
5.7 CLINICAL SIGNS

Symptoms and signs of anaemia are depicted below. If any of these signs occur, treatment is necessary. Please refer to the “prevention and treatment” tables to select the required treatment.



**Palmar pallor
(pale palms)**

**Weakness, no physical
strength, fatigue,
tiredness,
and breathlessness**



**Slow learning
in children**

5.8 PREVENTION

The anaemia prevention and control intervention provides iron/folate tablets to prevent people from developing anaemia and to treat people who have already developed anaemia. The uptake of iron in the body is better when vitamin C rich food is also consumed. Most fruits provide a good source of vitamin C.

Preventing other infectious and parasitic diseases also helps to prevent anaemia. Not having pregnancies too close together also helps to reduce anaemia.

De-worming medicine (Mebendazole) should be given every 6 months for children who are 12 months together with the vitamin A supplement. Pregnant and postpartum women should take Mebendazole once during pregnancy (when the woman is over three months pregnant) and 1 dose in the postpartum period within the first six weeks.

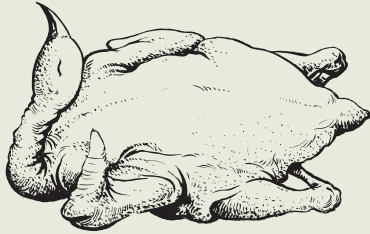
Daily iron/folate supplements should be taken in periods of higher needs. For instance pregnant women and postpartum mothers. Secondary school girls and WRA and children in periods of rapid growth should also take Iron/Folate supplements.

The prevention table below shows the preventive doses of iron/folate and doses of Mebendazole to prevent Iron Deficiency Anaemia.

Target group	Dose Iron/Folate	Dose Mebendazole
WRA	WIF (Weekly Iron/Folate) 1 tablet per week 1 tablet = 60mgs of iron and 2.80µg of folic acid.	
Pregnant women	90 days. 1 tablet per day provide 60 tablets on 1 st visit provide 30 tablets on 2 nd visit (1 tablet contains 60mgs Iron and 400µg Folic Acid)	1 dose (= 1 tablet of 500mgs) after 3 months of pregnancy
Postpartum women	42 days 1 tablet per day	1 dose (= 1 tablet of 500 mgs) within the first six weeks of delivery
Children (1 -2 years)		½ dose (=250 mgs) every 6 months, together with VAC distribution: 1 dose 200,000 IU
Children (2 -4 years)		1 dose (=500 mgs) every 6 months, together with VAC distribution: 1 dose 200,000 IU

5.9 IRON RICH FOODS

Animal products like meat, fish, chicken, eggs and liver, are all rich in iron. Soybeans, ground nuts and dark green leafy vegetables also contain iron. The pictures below show foods that are rich in iron.



Animal products
(meat, fish, chicken, eggs, liver)

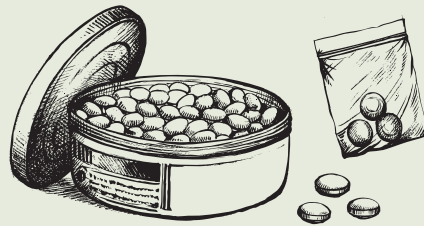


Soybeans
and ground nuts



Dark green leafy
vegetables

Iron Folate 60mgs
and Folic Acid 400µg



Mebendazole 500 mg

5.10 TREATMENT OF IRON DEFICIENCY ANEMIA

When one or more of the clinical signs are present, provide treatment to children or mothers, using the treatment table below.

One tablet of iron/folate contains 60mgs of iron and 400ug Folic Acid

Symptoms / Illness	Age / group	Dose of Iron/Folate
<p>Severe palmar pallor Severe anemia</p> <p>If the haemoglobin or hematocrit can be determined, cutoffs of hemoglobin below 7.0 g/dL or hematocrit below 20% in adults should be used to diagnose severe anemia.</p> <p>A common complaint is that individuals feel breathless at rest.</p>	Pregnant (gestation less than 36 weeks pregnant) Postpartum women WRA	1 tablet x 2 times per day (morning and evening) for 3 months Follow up to assess progress every 2 weeks
	Pregnant (36 gestation weeks and over)	Refer to Referral Hospital immediately for hospitalisation until delivery
	Children 0-5 months	Do not give Iron 1 VAC 50,000 IU (100,000 IU) Refer urgently to hospital
	Children 6-11 months	Do not give Iron 1 VAC 100,000 IU Refer urgently to hospital
	Children 1-12 years	Do not give Iron 1 VAC 200,000 IU Refer urgently to hospital
<p>Some palmar pallor Mild or moderate anemia defined as a haemoglobin between 7.0 g/dL . 11.0 g/dL or a haematocrit between 21 - . 30 %</p>	Pregnant women Postpartum women WRA	1 tablet Iron/Folate 2 x day for 14 days. Follow up after 14 days. If still anaemic repeat the treatment for 14 days and follow up.
	4 - 12 months (6 - <10 kg)	1/4 tablet Iron/Folate a day for 14 days and reassess after treatment
	1–5 years (10 - 19 kg)	1/2 tablet Iron/Folate a day for 14 days and reassess after treatment

Iron/Folate tablets should be taken with some vitamin C (fruits). Explain about possible side effects such as epigastric discomfort, nausea, diarrhoea, or constipation. If these symptoms occur, supplement should be taken with meals. The faeces may turn black, which is not harmful. Treatment should continue.

Iron/Folate tablets inhibits the absorption of some antibiotics and should not given if the patient is receiving antibiotics such as sulphonamides, or trimethoprim.

5.11 KEY MESSAGES:

- 1** Provide Iron/Folate tablets to women during pregnancy (60 tablets at first contact and 30 tablets at second contact)
- 2** Provide Iron/Folate tablets to post partum women (42 tablets) within the first 6 weeks of delivery
- 3** Promote intake of iron rich foods such as meat, liver and fish to everybody but especially to women during pregnancy and the postpartum period
- 4** Promote consumption of fruits (vitamin C)
- 5** Promote de-worming of children 1-5 years of age every six months
- 6** Promote de-worming of pregnant women (after the first 3 months of pregnancy) and post-partum women within the first six weeks after delivery
- 7** Advise not to take iron/folate tablets with tea or coffee
- 8** Treat malaria, as advised by the National Malaria Guidelines

5.12 RECORDING & REPORTING

The distribution of Iron and Mebendazole is recorded:

- On the Mother Card for pregnant women and post partum mothers
- On the Child Health Card for children
- On the tally sheet for OR
- In the register book at the HC.

The Iron and Mebendazole distribution is reported to the OD on the HC1 form.

06

IODINE

6.1 WHAT IS IODINE ?

Iodine is a micronutrient that is present in seafood and added to salt. Only salt that has been fortified with iodine contains iodine.

6.2 THE IMPORTANCE OF IODINE



Good growth of children

Iodine makes the thyroid gland work well. The thyroid gland is in the neck and plays an important role in the growth of children, the development and function of the brain, the way energy is used in the body, and also in regulating the body temperature.



Good development of the brain

6.3 EFFECT OF IODINE DEFICIENCY

Most effects of iodine deficiency are long-lasting and cannot be reversed. The following effects are caused by the lack of iodine in the body:



Goitre



Fatigue and slow movement



Miscarriages, still births, low birth weights, deformities

Cretinism (impaired growth and mental retardation)



6.4 CAUSES OF IODINE DEFICIENCY

Iodine deficiency is caused by:

- 1 Lack of iodine rich food in the daily diet
- 2 Lack of food variety

6.5 AT RISK AND VULNERABLE GROUPS

All Cambodians not using iodized salt are at risk for iodine deficiency

6.6 CLINICAL SIGNS

The signs are the same as the effects which are: goitre, impaired growth and mental retardation, frequent miscarriages, fatigue and slow movement. Pay special attention to signs of fatigue and slow movement.

6.7 PREVENTION

Iodine deficiency can be prevented by using iodized salt during food preparation. Iodized salt is regularly tested for quality by doing a special test, which is described below.

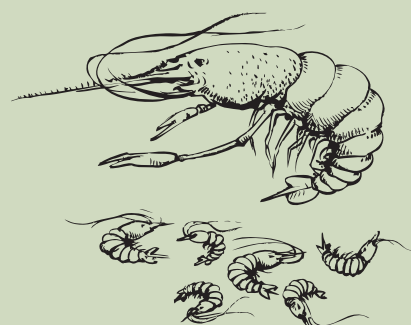
Cambodia has a national intervention for iodized salt. In this program, salt is fortified with iodine. This means that iodine is added to the salt. By using this iodized salt for cooking and in meals, everybody in the family gets enough iodine.

Iodized salt is sold in the market. Salt can be tested to see if it contains enough iodine. The Iodine Testing Kit is used to test the salt. You can test salt during outreach activities every few months. If you have more than one test kit, you could give one to the village chief or community leaders and teach them how to use it. Educate them about the importance of iodized salt. They can provide information and encourage local shop owners and salt vendors to only sell iodized salt.



6.8 IODINE RICH FOODS

Seafood and sea fish are rich in iodine.



6.9 KEY MESSAGES FOR IODINE

- 1 Iodine stimulates the development and functions of the child's brain and prevent goitre and cretinism.
- 2 Everybody should consume iodized salt and iodine rich foods such as seafood

6.10 TESTING SALT

For the testing of salt, ask mothers to bring a little of the salt they use at home. A small spoon of salt is enough. Add one or two drops of the test liquid to the salt. If the salt turns orange/red, there is enough iodine in the salt. If the liquid stays yellow, there is not enough or no iodine at all in the salt.

If there is no iodine in the salt, mothers and village chiefs should request salt vendors to provide iodized salt. Repeat the test on the newly acquired salt.



Positive result of iodine test –salt turns orange or red

07

IMMUNIZATIONS

7.1 IMPORTANCE OF IMMUNIZATIONS

Immunizations prevent people from getting some specific serious diseases. If children receive the full course of immunizations they will be healthy, they can develop normally, they can learn better and be physically strong. Adults can work better and earn money.

Unfortunately, not all illnesses can be prevented with immunizations. Immunization involves injecting or orally administering a vaccine against a specific disease that makes the body immune to the disease the vaccine works against. Immunization only works if the correct number of doses are given. If all the doses are not completed the child could get ill.

If not immunized against tetanus



If not immunized against diphtheria



If not immunized against polio



If not immunized against measles

7.2 IMMUNIZATIONS

Pregnant women or postpartum mothers should be immunized against Tetanus with Tetanus Toxioid vaccine (TT). Children should be immunized against the following disease: Tuberculosis with BCG vaccine; Hepatitis with Hepatitis B vaccine (HB); Polio with oral polio vaccine (OPV); Diphtheria, Pertussis and Tetanus with DPT vaccine and Measles with measles vaccine.

The table below shows which immunizations are available for which target group in Cambodia:

Target group	Vaccine	Disease
Pregnant women / postpartum mothers	TT	Tetanus (a muscle disease)
Children	BCG	Tuberculosis
	OPV	Polio
	DPT	Diphtheria (a severe air tube infection) Pertussis (whooping cough) Tetanus (a muscle disease)
	HB	Hepatitis B (liver infection)
	Measles	Measles

Immunizations are given at Health Centers and during outreach. The immunization table shows the immunization protocols for the different target groups. During each immunization, educate the mother about the need for immunizations and good nutrition practices.

During the consultation, assess the health of mother and child. If a child has a minor illness, note that minor illnesses are **NOT** a reason not to immunize a child. There are 4 situations in which immunizations should **NOT** be given:

- 1 If a child is very unwell with high fever (>38.5°C)
- 2 If a child needs to be referred to a hospital
- 3 If a child has HIV+ symptoms: do not give BCG
- 4 If a child has a previous history of hypersensitivity with DPT/DPT-HB injections: do not give DPT/DPT-HB

7.3 RECORDING AND REPORTING

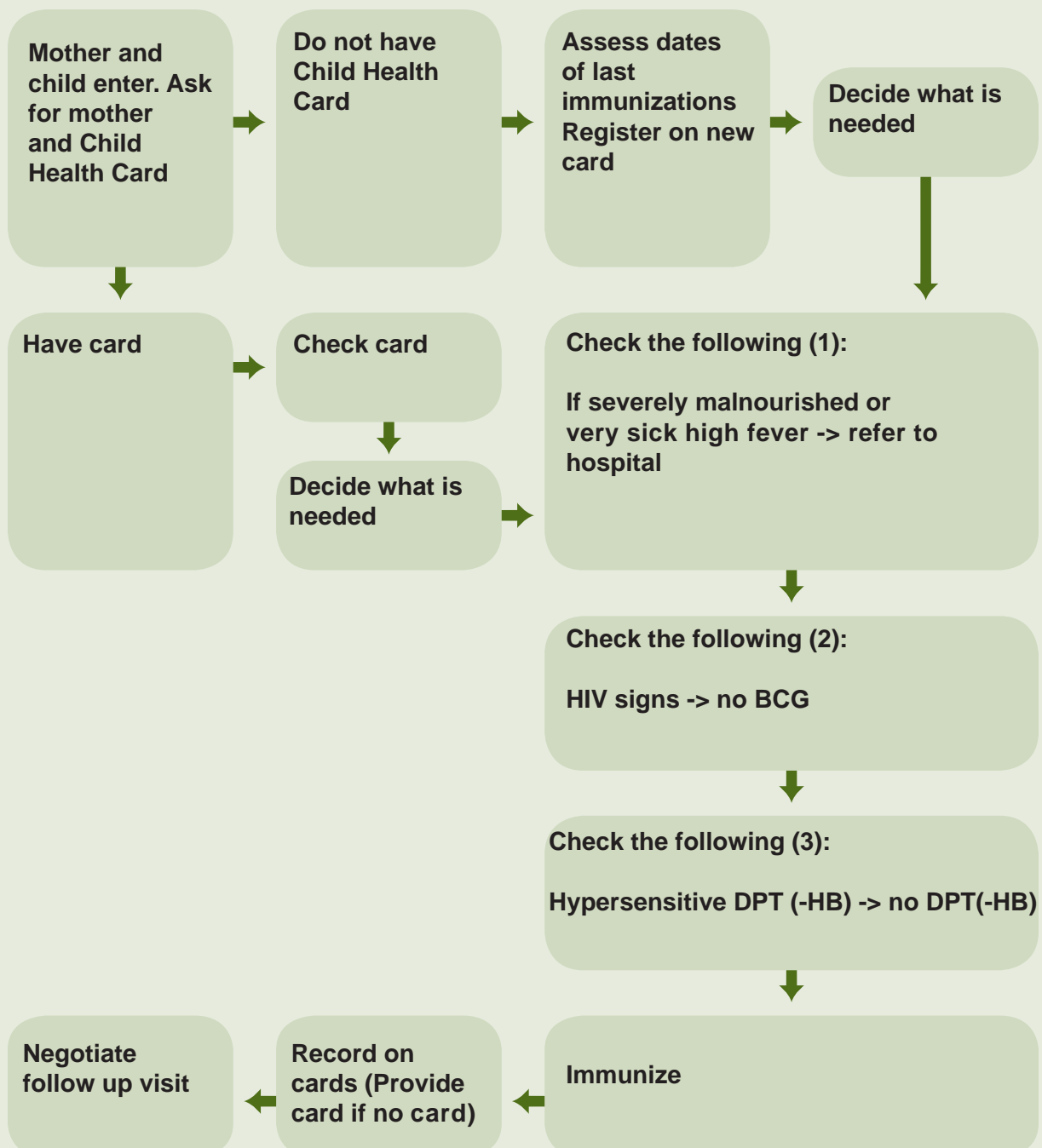
Recording and reporting are done to monitor and evaluate immunization activities. The recording is also necessary to assess if a child or mother needs follow up immunization or not. The mother must be aware of the importance of bringing the Mother Card and Child Health Card to each visit.

If the mother did not bring the Mother Card or Child Health Card, try to assess which immunizations were given to her and to her children. Check in the immunisation register. Decide which immunizations she or her children need and immunize.

7.4 BASIC MESSAGES

- Immunization prevents children and adults from getting certain illnesses
- Immunization should be repeated until the complete course is given
- If the correct number of immunizations are not completed, the child is not fully protected against the specific diseases
- Bringing the Child Health Card and Mother Card are important to ensure the child is given the correct immunizations
- Immunization should not be given if a child is very unwell or needs to be referred to hospital
- Immunization for BCG should not be given to a child with HIV+ symptoms
- Immunization for DPT/DPT-HB should not be given to a child that is known to be hypersensitive for DPT/DPT-HB.

7.5 FLOWCHART FOR IMMUNIZATION



7.6 IMMUNIZATION TABLES

Target group	Dose	Note
Women	<p>TT</p> <p>1st dose during 1st contact 2nd dose at least 1 month after 1st 3rd dose at least 6 months after 2nd 4th dose at least 1 yr after 3rd 5th dose at least 1 yr after 4th dose</p>	<p>If all doses have been given in the past, do not provide again.</p>
Babies at birth	<p>BCG - Single dose</p> <p>HB0 - Single dose</p>	<p>BCG can be provided up until one year after birth</p> <p>Do not provide BCG if HIV signs present</p> <p>HB0 should be provided 24 hours after birth, but may be given within 7 days of birth</p>
Children after 6 weeks until 1 year	<p>OPV, DPT OR DPT-HB</p> <p>1st dose 6 weeks after birth 2nd dose at least 4 weeks after 1st dose 3rd dose at least 4 weeks after 2nd dose</p> <p>Measles</p> <p>1 (single dose) At least 9 months after birth</p>	<p>Do not miss any immunization dates. Immunizations will not work if missed.</p> <p>For DPT-HB do not immunize when a child is VERY sick with high fever >38.5 C</p> <p>Do not give DPT/DPT-HB when hypersensitivity is known.</p> <p>Record immunizations on Child Health Card and in HC records.</p>

08

NUTRITION CONTACTS OVERVIEW

8.1 INTRODUCTION

There are 6 key contact moments for Health Centre staff to counsel women on nutrition and provide nutrition actions to the women and their children. For each of these contacts, a job aid has been designed, that integrates nutrition counselling into these contacts. For each contact, the responsibilities for the women and Health Centre staff are listed.

8.2 ANTENATAL CONTACT

HC staff	Pregnant woman
1. Evaluate Danger signs. Give appropriate emergency care and transfer to referral hospital if necessary	Go to referral hospital if necessary
2. Provide and fill out Mother Card	
3. Evaluate health status at each visit	
4. Treat anaemia and vitamin A deficiency if necessary as per guidelines	Take medicine as prescribed, Return for follow up
5. Counsel on nutrition	Follow nutrition messages Eat one extra meal per day, at least 4 meals per day and drink plenty of fluids, at least 2 litres per day Provide immediate breastfeeding to your child after delivery Provide exclusive breastfeeding for 6 months
6. Counsel on self care during pregnancy	Attend antenatal care at least four times during pregnancy, Avoid smoking and drinking Rest and avoid heavy lifting

HC staff	Pregnant woman
7. Promote HIV and STI screening	Go to screening site for test
8. Help the woman to prepare a birth and emergency plan	Prepare for delivery and travel to HC or hospital
9. Counsel on birth spacing methods	
10. Check tetanus immunizations	Return for follow up immunization as indicated
11. Provide 60 tablets of Iron/Folate on 1st visit. Explain side effects	Take doses as prescribed, store as prescribed
12. Provide 30 tablets of Iron/Folate on 2nd visit. Explain side effects	Take doses as prescribed, store as prescribed
13. Provide 1 dose of Mebendazole (=500mgs) after first trimester of pregnancy	Take when given
14. Counsel on follow up	Return as negotiated Deliver at HC or referral hospital
15. Record on Mother Card and record book	Bring the Mother Card to each visit

8.3 DELIVERY CONTACT

HC staff	Pregnant woman
1. Evaluate Danger Signs. Refer to RH if necessary	Go for delivery at HC /RH
2. Ask / Provide and fill out Mother Card	
3. Evaluate woman in labour or with ruptured membranes	
4. Provide appropriate emergency treatment as per national protocols or prepare for delivery if no problems	
5. Provide care for new born	
6. Counsel on breastfeeding	Provide immediate breastfeeding Provide exclusive breastfeeding for 6 months Provide breastfeeding for at least 2 years Start complementary feeding after 6 months
7. Counsel on nutrition	Take 1 extra meal a day as long as breastfeeding and drink plenty of fluids, at least 2 litres per day Avoid food taboos Use iodized salt Eat foods rich in vitamin A, Iron and energy

HC staff	Pregnant woman
8. Check tetanus immunizations of mother	Return for follow up immunization as indicated
9. Provide vitamin A capsule	
10. Provide 42 tablets of Iron/Folate to mother explain side effects	Take doses as prescribed, store as prescribed
11. Provide Mebendazole	
12. Counsel on birth spacing methods	
13. Fill out Mother Card and record book	Take Mother Card each visit
14. Provide Child Health Card for new born	
15. Evaluate new born health	
16. Provide BCG and HB0 immunization to new born	

8.4 POSTPARTUM CONTACT

HC staff	Mother/caregiver
1. Ask / Child Health and Mother Card	Attend postpartum care as advised by health staff
2. Evaluate mothers health. Treat anaemia and vitamin A deficiency if necessary, using national protocols	Take doses as described
3. Evaluate and counsel on breastfeeding	Provide immediate breastfeeding Provide exclusive breastfeeding for 6 months Provide breastfeeding for at least 2 years Start complementary feeding after 6 months
4. Counsel on nutrition	Take 1 extra meal a day as long as breastfeeding Use Iodized salt Eat foods rich in vitamin A, Iron and energy
5. Check tetanus immunizations to mother	Return for follow up immunization as indicated
6. Check if mother received VAC during delivery If not, provide vitamin A 1 capsule (VAC 200,000 IU)	
7. Provide 42 tablets of Iron/Folate to mother Explain side effects	Take doses as prescribed, store as prescribed
8. Provide 1 dose (=500 mgs) Mebendazole to mother	Take when given
9. Counsel on birth spacing	
10. Advise on self care and hygiene	
11. Advise on danger signs	

Developed by the National Nutrition Program, National Maternal and Child Health Center,
with technical support from the A2Z Micronutrient Project, Mr Jan Berkvens and the Nutrition Working Group.
March 2009

8.6 WELL AND SICK CHILD CONTACT

HC staff	Mother/caregiver
1. Ask Child Health Card	Attend post partum care visit in the first six weeks after delivery
2. Evaluate child health. Treat anaemia and vitamin A deficiency as necessary as per national guidelines	Give medicine as advised
3. Evaluate and counsel on breastfeeding	Provide exclusive breastfeeding for 6 months Provide breastfeeding for at least 2 years Start complementary feeding after 6 months
4. Counsel on nutrition	Give complementary food as advised according to child's ages
5. Provide immunizations to child if necessary	
6. If child is over 12 months, provide Mebendazole if not yet received as per guidelines	
7. Fill out Child Health Card and record book	Take Child Health Card every visit
8. Negotiate return visit	Take Child Health Card every visit Come to HC for follow up visits Come to HC when you or your child is sick Come to VAC distribution twice a year

8.7 VAC DISTRIBUTION CONTACT

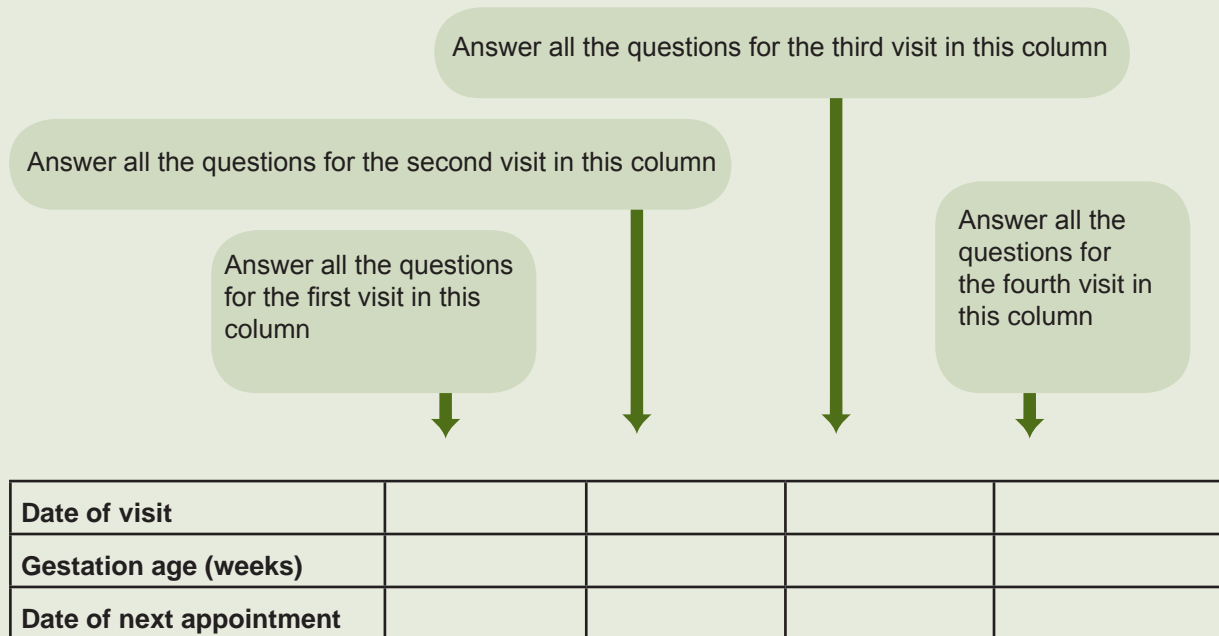
HC staff	Mother/caregiver
1. Ask for Child Health Card	Bring Child Health Card
2. Provide VAC and Mebendazole to children according to the protocol	
3. Counsel on nutrition and vitamin A rich foods	Use Iodized salt. Eat foods rich in vitamin A, Iron and energy
4. Evaluate and counsel on breastfeeding and complementary feeding	Provide exclusive breastfeeding for 6 months Provide breastfeeding for at least 2 years Start complementary feeding after 6 months
5. Fill out Child Health Card and record book	Take Child Health Card every visit
6. Negotiate return visit	Come for postpartum as advised by health staff. Come to HC when you or your child is sick. Bring your child to outreach or health centre for VAC distribution twice a year

GLOSSARY

ABBREVIATIONS

BCG	Tuberculosis immunization (immunisation to protect against TB)
BF	Breastfeeding
DPT	Diphtheria, Pertussis and Tetanus immunization
EDD	Expected Date of Delivery
GP	Growth Promotion
HB	Hepatitis B immunization
HC	Health Centre
HC-1 form/ HIS	Health Centre-1 form, HIS form filled in and sent to OD monthly
HIV	Human Immuno-deficiency Virus, the virus causing AIDS
HIV+	A person who is HIV positive
IDA	Iron Deficiency Anaemia
IMCI	Integrated Management of Childhood Illnesses
IU	International Unit
LMP	Last Menstrual Period
MC	Mother Card
Mg	Milligram
MPA	Minimum Package of Activities
Ms	Months
NFP	Nutrition Focal Point
NNP	National Nutrition Program
OD	Operational District
OPV	Polio immunization
OR	Out Reach
ORS	Oral Re-hydration Solution
PHD	Provincial Health Department
TT	Tetanus immunization
VAC	Vitamin A Capsule
VHSG	Village Health Support Group
Vit A	Vitamin A
Vit C	Vitamin C
WRA	Women of reproductive age
YC	Yellow Card (Child Health Card)
<	Less than
>	More than

The third page is the antenatal visit table. The first column of the table states a question. The second column is for the first visit, the third column for the second visit and so on. Start with putting the date of the visit on the top of the column, after the question “Date of visit:” Then answer all the questions below the first question. Put the answers in the first column. The second column is for the second visit, the third column is for the third visit and so on.



The fourth page is about health topics and if they are discussed with the pregnant woman or mother. There is also a table for recording actions that have been taken. The last item on this page is counselling on birth spacing.

The next page, page 5, is for recording activities and issues during labour and after delivery. Complications during the delivery and information about the newborn(s) need to be recorded here, including the sex of the newborn(s) and birth weight.

Page 6 is for postpartum observations. The final pages are to record referrals.

9.3 WORKING WITH THE CHILD HEALTH CARD

The Child Health Card is used for recording health activities provided to the child until 5 years old. It contains general information about the child, immunizations provided, vitamin A provision dates and other interventions provided to the child. The Child Health Card also contains a growth chart for growth assessment. Note that the growth assessment is only done in HC facilities, not during outreach.



There are different Child Health Cards for boys and girls because boys and girls have different weights and lengths beginning at birth. Boys and girls need to be assessed by standards that reflect normal difference in their sizes.

9.3.1 GENERAL INFORMATION

The general information section is filled in when the child is born. Information in this section is:

- 1 Name
- 2 Number of the child in the family
- 3 Sex
- 4 Name of mother
- 5 Name of father
- 6 Name of child
- 7 Address of the family
- 8 HC that provides services to the family



9.3.2 IMMUNIZATION

The immunization section is a table where the HC staff fills in when an immunization is given and by whom. The first column contains all possible immunizations. Please add the date here, when you give a certain immunization. Add the name of the providing Health Centre in the second column and the name and signature of HC staff member in the last two columns.

Below the big immunization table, an overview is provided about when the immunizations should be given.

9.3.3 VITAMIN A

The vitamin A and Mebendazole section is on the bottom right of the same page as the immunization section. Please note the dose provided in the first column and the day of provision in the second column.

ការទទួលស្រាប់ថ្នាំជីវជាតិ អា				ការទទួលស្រាប់ថ្នាំទំលាក់ព្រូន			
កំរិត	ថ្ងៃទទួល	កំរិត	ថ្ងៃទទួល	កំរិត	ថ្ងៃទទួល	កំរិត	ថ្ងៃទទួល
៧ ដុំ		៧ ដុំ		៧ ដុំ		៧ ដុំ	
៧ ដុំ		៧ ដុំ		៧ ដុំ		៧ ដុំ	
៧ ដុំ		៧ ដុំ		៧ ដុំ		៧ ដុំ	
៧ ដុំ		៧ ដុំ		៧ ដុំ		៧ ដុំ	
៧ ដុំ		៧ ដុំ		៧ ដុំ		៧ ដុំ	

កុមារចាត់ពីអាយុ ៦ខែ ទៅ ៥ឆ្នាំ ត្រូវទទួលស្រាប់ថ្នាំជីវជាតិ អា អោយបានយ៉ាងតិច ២ដងក្នុង១ឆ្នាំ ។

កុមារចាប់ពីអាយុ ១ឆ្នាំឡើងទៅត្រូវទទួលស្រាប់ថ្នាំទំលាក់ព្រូន (Mebendazole) អោយបានយ៉ាងតិច ២ដងក្នុង១ឆ្នាំ ។

9.3.4

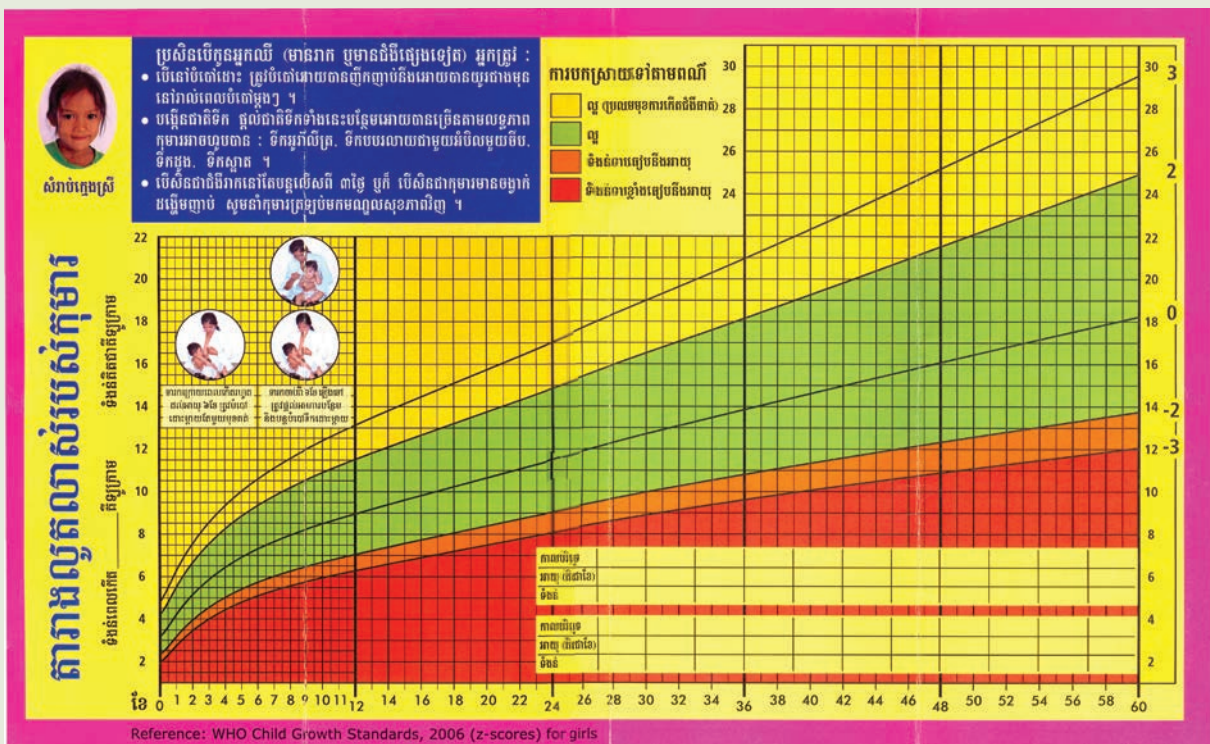
OTHER ACTIVITIES AND TREATMENT

On the right of the same page, above the Vitamin A section, is the section for recording other activities or treatment. Please note any additional provided activities or treatment here.

9.3.5

GROWTH CHART

On the other side of the Child Health Card is the growth chart. The growth chart is helpful to assess the growth development of the child. For the growth chart and growth assessment to be useful children should be weighed every time they come to the health centre. There is a different Child Health Card for boys and girls because boys and girls have different weights and lengths beginning at birth. Boys and girls need to be assessed by standards that reflect normal difference in their sizes.



Example of girl's growth chart

9.3.6 HOW TO FILL IN THE GROWTH CHART

- 1 Assess the age of the child,
- 2 Plot completed weeks, months or years and months on a vertical line not between vertical lines.
- 3 Plot weight on a horizontal line or in the space between the lines to the nearest 0.1kg, e.g. 7.8kgs
- 4 Now follow the line from the weight of the child until it crosses the line of today's date and today's age of the child.
- 5 Put the mark where the lines cross each other.
- 6 When points are plotted for two or more visits connect the points with a straight line to better observe trends.

9.3.7 HOW TO ASSESS THE CHILD'S GROWTH USING WEIGHT FOR AGE

When interpreting growth charts be alert for the following situations, which may indicate a problem or suggest risk:

- A child's growth crosses a z score line
- There is a sharp incline or decline in the child's growth line
- The child's growth line remains flat (stagnant) no gain in weight

The green area includes the median (0). The median (0) central line is the average 'normal weight for age' for children. If the weight of the child is around this central line, the child is healthy.

If a child's weight is above the green track, in the yellow track the child may be overweight or have other problems. The child will need to be reassessed using weight for length/height. If the weight is below the green track, in the orange track the child is underweight. If the weight of the child is in the red track the child is severely underweight and needs to be referred to a hospital that can provide treatment for malnutrition.

9.3.8 ACTIONS BASED ON THE GROWTH CHART

If the child is in the green area (average normal weight for age) praise the caregiver for good child care practices and counsel on appropriate feeding practices according to the child's up and coming age group.

If the child is in the orange track of the growth chart:

- 1 Find out if the child is currently ill – treat as per IMCI guidelines
- 2 Check immunizations status and give missing immunizations
- 3 Check vitamin A and give dose if the child is above six months and has not received vitamin A within the last four months
- 4 Give Mebendazole if the child is more than 12 months and has not received in the last six months.
- 5 If not ill, investigate other causes
- 6 Ask about recent changes in eating /or breastfeeding
- 7 Discuss age specific questions about the child's feeding, child's appetite, types and variety of foods given, frequency of feeding, family meal time habits

- 8 Ask about recurrent illnesses- if ill advise the caregiver to feed during and after illness
- 9 Assess possible underlying social and environmental causes (including sanitation and hygiene)
- 10 Jointly with the caregiver identify possible causes
- 11 Counsel and support caregiver to decide on goals to be achieved before next follow up visit. Promote vitamin A and iron rich foods. Give appropriate complementary food according to the child's age

If the child's weight is in the red track

Refer child to the nearest hospital that provides treatment for malnourished children.

9.4 TALLY SHEETS

The Mother Card and the Child Health Card are given to the mother. It is her responsibility to bring it to the HC and outreach activities. The tally sheets record information about the estimated target population requiring vitamin A, Mebendazole, Iron and ORS in each village. It tallies the doses handed out during outreach. The information is used to fill in the HC1 form that the HC sends to the OD every month.

There are 2 tally sheets:

- 1 VAC and Mebendazole tally sheet
- 2 Iron and ORS tally sheet

The tally sheets are used for:

- 1 Calculating the number of each target group and the stock needed (VAC twice a year during VAC distribution activities; Iron/Folate every month)
- 2 Tallying the doses handed out

The tally sheet is a specially designed table. The table consists of a number of columns. The first column is for the name of the community or HC. The other columns are about the doses given to target groups. In the example of the tally sheet below, the tally sheet is for Phum Bla. How to use the tally sheets, is explained in the next two paragraphs 9.4.1 and 9.4.2.

Village	VIT A			MEBENDAZOLE		
	Child 6-11 months 100,000 IU	Child 12-59 months 200,000 IU	Postpartum mother (<6weeks) 200,000 IU	Child 12-59 months 1 dose	Postpartum mother	Pregnant women (>3 months) 1 dose
Phum Bla						

9.4.1 TO CALCULATE TARGET GROUPS AND STOCK NEEDED

Example: VAC for twice yearly distribution activities.

In this example, the provincial percentages are for Kandal Province in 2007/2008.

- Find the percentages for births, postpartum women under 6 weeks, children of age groups 0-1 years and 0-5 years

Children	0-1 year	2.4% (of total population)
	0-5 years	11.1% (of total population)
Postpartum < 6 weeks		2.6% (of total population)

- Calculate the percentage of children 6-11 months (for VAC 100,000 IU)

Children	0-1 year	2.4%
6-11 months is ½, so		2.4% / 2 = 1.2%

- Calculate the percentage of children 12-59 months (for VAC 200,000 IU)

Children	0-5 years	11.1%
12-59 months – 0-11months		11.1% - 2.4% = 8.7%

- Calculate the estimated number of children 6-11 months in a village

$$\text{M/F (total population in the village)} * 1.2 / 100$$

$$\text{M/F (total population in the village)} * 0.012 = \dots ?$$

- Calculate the estimated number of children 12-59 months in a village

$$\text{M/F (total population in the village)} * 8.7 / 100$$

$$\text{M/F (total population in the village)} * 0.087 = \dots ?$$

- Calculate the estimated number of postpartum women <6 weeks in a village

$$\text{M/F (total population in the village)} * 2.6 / 100$$

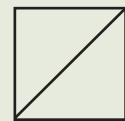
$$\text{M/F (total population in the village)} * 0.026 = \dots \text{ (per 1 year)}$$

- 7** Record the estimated targets in the small box in the upper right corner for each target group each village
- 8** Add all the estimated doses together at the bottom of the back page of the tally sheet
- 9** Order enough stock from OD store for the coming distribution round (or per month)

The VAC and Mebendazole tally sheet is used here as an example. The Iron and ORS tally sheet works in the same way as the example below.

9.4.2 TALLYING THE STOCKS DISTRIBUTED

Use the big boxes to tally the doses handed out, complete a box like the one on the right, adding 1 line for each dose handed out. One box like this represents 5 doses handed out.



Follow the steps below:

- 1** Tally each dose handed out in the appropriate big box per target group per village
- 2** Calculate the difference between the estimated doses and the doses handed out, after all eligible women and children received their dose.
- 3** Were any eligible women and children left out? Why?
- 4** How can you reach the missing women and children to distribute the dose to them?

9.5 REPORTING

Reporting is providing information from one level to another about the activities that were conducted. The information is necessary to adjust programs, policies and workplans. For the HC, this is the HC1 report that is sent to the OD every month.

9.6 REPORTING USING THE HC1 FORM

The HC form is filled in by the HC and sent to the OD once a month. It contains all treatments carried out and doses distributed by the HC in the previous month. The OD collects the data from all its HCs and sends it to PHD. The PHD sends it to the Ministry of Health.

9.7

STEPS FOR VAC DISTRIBUTION, USING TALLY SHEETS AND HC1 FORM

The following steps should be made for an effective VAC distribution round:

- 1** Estimate how many VAC capsules you will need by calculating how many children aged 6-59 months and how many newly delivered women are living in your target areas
- 2** Make an estimate on the tally sheet of each village population and target group of mothers and children for each village
- 3** Check VAC stock. Is it in good condition, when is the expiry date? Order stock as necessary from OD – it is important to do this at least one month before the vitamin A supplementation round
- 4** Check Mebendazole stock. Estimate how much you will need for each child from 12-59 months, pregnant women who are over three months pregnant and postpartum women who have delivered within the last 6 weeks
- 5** Check you have enough IEC material and tally sheets for VAC round order as necessary
- 6** Plan an agenda for a meeting with VHSG to discuss the planning for the VAC supplementation round in each of the villages
- 7** Conduct a refresher session during the monthly meeting for VHSGs about VAC supplementation and discuss the role they will play during the supplementation
- 8** Hold a meeting with all health centre staff and VHSGs to plan the dates you will go to each village
- 9** Inform the village chiefs and community in each village about the supplementation round
- 10** Check the village volunteer register and estimate how many of the eligible children and postpartum women have received the VAC supplement and how many children and postpartum women need to be followed up and given the VAC supplement
- 11** Estimate the number of children that need to be followed up and provide VAC supplement and recording sheet to the VHSGs
- 12** Check the tally sheets are complete before leaving the village
- 13** Complete the HC1 form with the results from the VAC supplementation round

10

Peer follow-up

10.1 INTRODUCTION

The peer follow-up meetings will be conducted 3 to 6 months after the course. A peer is someone who is doing the same work as you, and also has followed the MPA Module 10 course. The meetings will take half a day or a full day. During the meetings, you will identify successes and challenges you met while implementing what you learned about nutrition. The next step will be finding solutions for the challenges you met. You can learn from each other's experiences and find solutions to problems together.

10.2 PREPARING FOR THE PEER FOLLOW-UP MEETING

Look at the participants' manual and go through the key messages and tasks you learned during the course. Which ones went well? Which ones were challenging? Try to identify why they are challenging. Try to make a difference between the problems you could solve together with your peers and the problems that only HC, OD, PHD or NNP could solve. Even then, always try to find things YOU can do to make things work better. Try to make a list like the example given below. Look at the example about "we don't have enough materials".

Challenge	What should be done	Who should do this	What else can I do?
We don't have enough materials	Health center staff should request OD to provide 10 more packages	OD, on our request	Make some material ourselves

10.3 DURING THE FOLLOW-UP MEETING

A OD facilitator will lead the follow-up meeting. He or she will help your group to do the activities and discussions and clarify some theory and skills that are not clear. Feel free to ask questions and put your experiences forward. You can only learn from others, if everybody shares experiences.

10.4 AT THE END OF THE FOLLOW-UP MEETING

At then end of the first follow-up meeting, you will be asked to fill in the long-term evaluation form. This evaluation form will ask you about how, in your work, you used the knowledge and skills learned during the course. The out-comes will be used to revise the course and decide what should be taught in a refresher course.

11

COMMUNICATING THE MESSAGES

11.1 INTRODUCTION TO MESSAGE COMMUNICATION

The nutrition messages you learn in this module must be communicated to the mothers and families in the villages and communities. The better your communication skills, the better people will understand and try to change their behaviour. This chapter will help you to be a good communicator. Try to use the things you learn in this chapter when you are doing role-plays and field practice. The more you practice these skills, the better your communication skills will be. Ask your fellow trainees what they think about your communication skills and try to learn from what they say.

Messages are given in one-to-one contacts or in groups. This chapter is about basic communication skills you can use. The last part of this chapter is about specific skills for communication with groups.

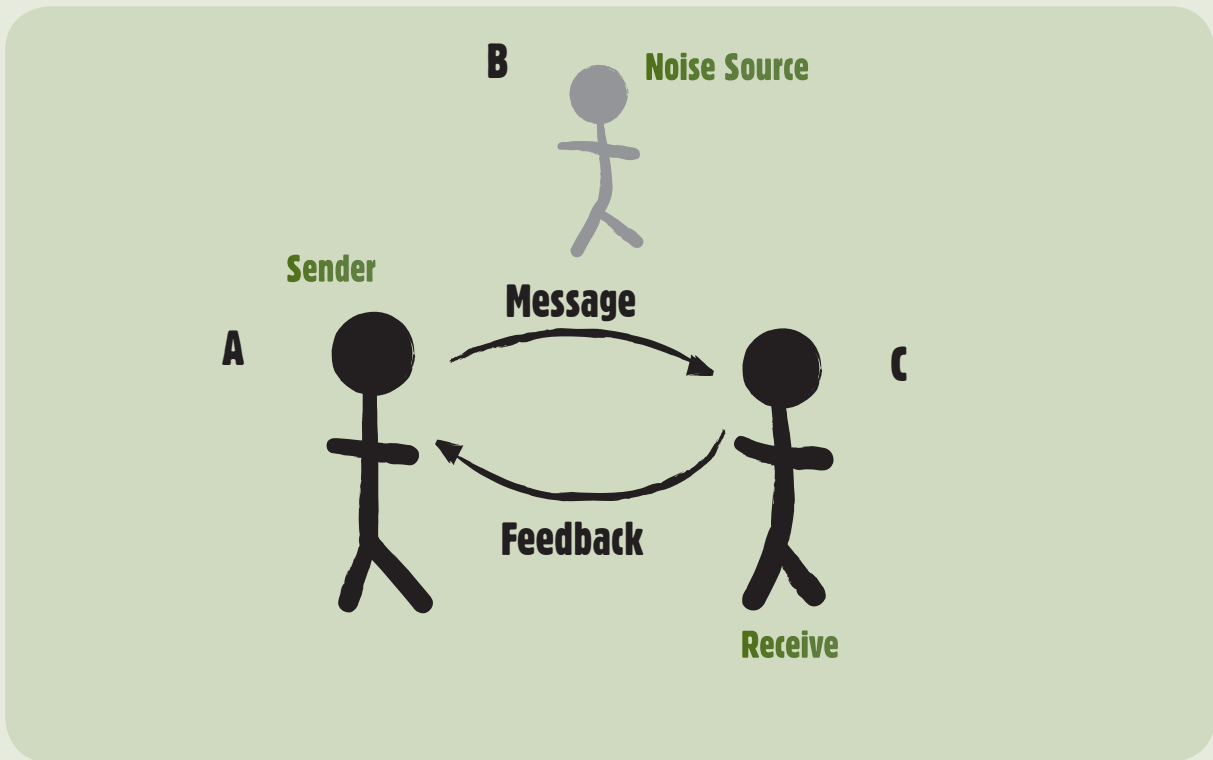
11.2 COMMUNICATION

Communicating with people includes 3 basic things:

- 1 The message you want to give
- 2 The receiver, or the person you wish to receive the message
- 3 The messenger, the person giving the message.

Together, these three basic components of communication make communication effective or not. All components are the responsibility of the messenger to take care of. In this case, it is your responsibility as a health worker that:

- 1 The message is ok
- 2 The receiver is willing and open to receive the message
- 3 You as a messenger are using the right skills to deliver the message

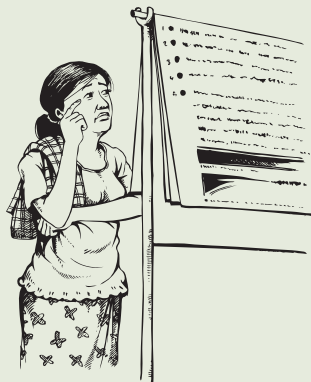


11.3 MESSAGE

The message need to be short, clear and simple. The more difficult a message is, the more people will forget. Or worse, they will receive only half of the message. That is sometimes worse than doing nothing. So make sure your message is simple. A clear message uses words the people understand. Technical terms are usually not understood in the villages. Try to avoid them and use words people know. Remember that it is about the message, not turning people into medical doctors.

So the message needs to be:

- Short
- Clear
- Simple
- Easy to understand



Telling people what to change is not enough. Showing the people the message helps them to understand what you are saying. Use pictures when possible. While you are talking with people, use the pictures to show what you mean. Think about your audience. Is your audience literate? If not use only pictures. If they are literate you can use text, but try to use as little text as possible. Other materials can also be used to strengthen your message. So you need to:

- Use pictures to strengthen your message
- Use other materials to show what you mean

Until now, we only talked about the message. The message can be clear and well prepared, using pictures and a game to let the people experience what they could change in their lives. But there is more. The person that receives the message needs to be open to receiving the message. He or she

needs to be willing to listen to and talk about the message. It is the responsibility of the person who gives the message that the people are willing to listen to the message. The person giving the message is called the messenger. You are the messenger for the nutrition messages. There are important skills you need to have to effectively deliver messages to the people in your communities.

11.4 RECEIVER

The receiver must be open to communication. Partly it is the responsibility of the person to be willing to communicate with you. But it is your responsibility as a communicator to prepare the receiver for receiving the messages. You can do that by:

- Explaining the need for communication: Why we need to give the message
- Letting the person(s) feel at ease, in a quiet place
- Being friendly and open
- Listening to the needs of the person(s)
- Showing pictures, not text

11.5 MESSENGER

Communicating messages needs to be prepared well. You need to know everything you want to communicate by heart. You need to know which materials you will use and make sure they are with you. If people feel that you know what you are talking about, they will listen more carefully. If people feel that you are not confident with what you say, they usually think you do not know enough about the subject. So you need to be:

- Confident
- Knowledgeable

But communication of messages is not only about what you say. It is also about how you say it. People need to feel at ease when they are with you. When you are calm and friendly, asking about their lives and what they do, they will be more willing to listen to and talk with you. Try to work in a calm place, where the person can hear you without other people doing other things around you. So you need to be:

- Calm
- Friendly
- In a quiet place



Always explain what you are going to do and why. If you are going to give a child vitamin A, explain to the mother that you are going to give vitamin A and that it will prevent the child from being sick. People will need to trust you and feel confident that you know what you are doing. So you need to:

- Explain what you will be doing
- Explain why you need to do that

When you are talking to people, make sure that they feel at ease. Make eye contact with everyone listening to and talking with you. Smile and keep an open posture. You need to:

- Make eye contact with all people
- Smile
- Keep a natural posture

Furthermore, you need to talk with the people, not to the people. If you talk with the people, you know what their level of understanding is, what they already do well and what they need to change. If people feel you listen to them, they are more willing to listen to you. Before giving messages find out what the person already knows, what behaviours they currently practices and what their main concern is. Try to discuss consequences of the message for their daily life. If you are giving a message about breastfeeding, let the mother think of how she could breastfeed during the day. So you need to:

- Listen to the people
- Talk with the people, not to the people
- Discuss consequences

After people have left, they will still think about what you said and discussed. Sometimes they have questions and they find they did not really understand some things. Always invite people to come back and ask questions. So you need to:

- Tell people they are welcome to ask more questions.

11.6 COMMUNICATION SKILLS FOR GROUPS

Group communication is different than one-to-one communication. During one-to-one communication, you sit with one person and explain and discuss the message. This is different during group communication. All the skills discussed above are also important for group communication. This section gives you extra skills for working with groups.

When you want to communicate messages in a group, you need to prepare in advance. Decide who you want to join the group, when and where. Invite people to join and communicate the reasons and objectives for the group. If you wish to inform the whole community about the vitamin A distribution round let the village know when and why you will be coming. If you wish to discuss the benefits of iodized salt with the VHSG, invite only the members of the VHSG for the day and time you wish to meet them. So you need to:

- Prepare date, time and place
- Invite the people you want to join

Then decide what you wish to discuss with them and what materials you need. Think about your place and their place during the meeting. Will you be talking with the whole community under a tree outside, or will you be talking with the VHSG in a house? If you are going to work with a big group, think about where you will stand and where you will hang the posters or flipcharts. If you are going to meet in the village chief's house, you might want to sit with the VHSG in a circle on the ground. A ground rule is that with more than 12 people, you usually stand in front of the group. In groups smaller than 12 you could sit in a circle. Point at the pictures or materials you are talking about. So you need to:

- Think about how to organize the meeting
- What materials you need
- Stand in big groups
- Sit with small groups
- Point at pictures

In a group, people can 'hide' from you. Sometimes they hide because they do not understand what you are talking about, and feel shy to show that. Or they hide because they are afraid you will ask them something. Try to involve everybody. Shy people tend to be silent and are usually scared you will ask a question. Try to avoid direct questioning but encourage people to speak their minds. Usually, people feel more at ease to work in small groups to think of questions or speak their minds. Shy people express their questions more easily in a small group. During the presentation less shy group members can present the outcomes of the group. So you need to:

- Let people discuss in small groups
- Let the groups present the outcomes

If you present something to a big group, stand in front of them and point to the pictures on posters or materials. If you talk to or discuss with a small group, sit with them.

One of the best ways to let people experience what you mean and to start a discussion, is the use of an activity. Role-plays and games are excellent activities to do in a group. People will remember the messages better if they practice it in a role-play or a game. Always discuss the outcomes and experiences of role-plays and games after they finish. So, where possible, you need to:

- Use role play or game
- Discuss the outcomes and experiences.

REFERENCES

Breastfeeding Counselling, a Training Course, Trainers Guide. (1993). WHO and UNICEF.

Cambodia Demographic and Health Survey 2005. (Dec. 2006). National Institute of Public Health and National Institute of Statistics. Phnom Penh, Cambodia. ORC Macro, Calverton, Maryland, USA.

Child Survival Strategy for Cambodia. Ministry of Health (April 2007).

National Guidelines for the Use of Iron Folate Supplementation To Prevent and Treat Anaemia in Pregnant and Postpartum Women. (August 2007). National Nutrition Program, National Maternal and Child Health Centre. Phnom Penh, Cambodia.

National Nutrition Strategy 2008-2015. (Draft).

National Vitamin A Policy Guidelines. (Revised 2007). National Nutrition Program, National Maternal and Child Health Centre, Ministry of Health. Phnom Penh, Cambodia.

Report on the Review of the Implementation of Minimum Package of Activities (MPA) Module 10 in 2004. (March 2005). National Nutrition Program, National Maternal and Child Health Centre, Ministry of Health. Phnom Penh, Cambodia.

100 Ways to Energise Groups: Games to Use in Workshops, Meetings and the Community. (2003). International HIV/AIDS Alliance. Brighton, United Kingdom.

Line drawings by Rint Hoeut

APPENDICES

1. Exercise A
2. Exercise B
3. Exercise C
4. Exercise D
5. Exercise E
6. Exercise F
7. Exercise G
8. Exercise H
9. Exercise I
10. Exercise J
11. Exercise K
12. Peer Follow-up Tool
13. Checklist for Counselling
14. Calculating the Age of a Cambodian Child
15. Tally Sheet

EXERCISE A

FOOD THAT ARE RICH IN

Below are pictures of all different kinds of foods. Some are rich in Iron, others are rich in vitamin A and still others are rich in Iodine. Some are also rich in energy. Look at the foods depicted below. Decide what food is rich in what and encircle the foods using the shapes below.

- Vitamin A □ Iron
- ◇ Iodine △ Energy



EXERCISE B

WHEN DO WE DO WHAT ?

Read the nutrition chapter. Look at the table below. On the left side are different groups of targets. The columns give activities. Put crosses (X) when the activities in the columns apply for the target groups on the left. There could be more crosses for each target group. Example: Pregnant women should eat an extra meal a day.

Target group	Extra meal	Smaller amounts	Breastfeed	Complementary foods (Borbor Kroeung)	Snacks	Family foods, cut and mash foods as necessary
Pregnant women	X					
Post partum mothers						
Adults and children recovering from illnesses						
Children 0-6 months						
Children 6-11 months						
Children 1 – 2 years						
Children > 2 years						

EXERCISE C

GROWTH PROMOTION

Below are two stories of mothers. Please write the questions, messages and support you want to give to these mothers in the boxes below.



Phalla

Phalla has just given birth to a beautiful daughter.

What questions will you ask ?

What advice will you provide?

What support will you provide?



Mony

You meet Mony with her child during outreach. Her son is skinny. He is 7 months old and she is still exclusively breastfeeding him.

What questions will you ask ?

What advice will you provide?

What support will you provide?

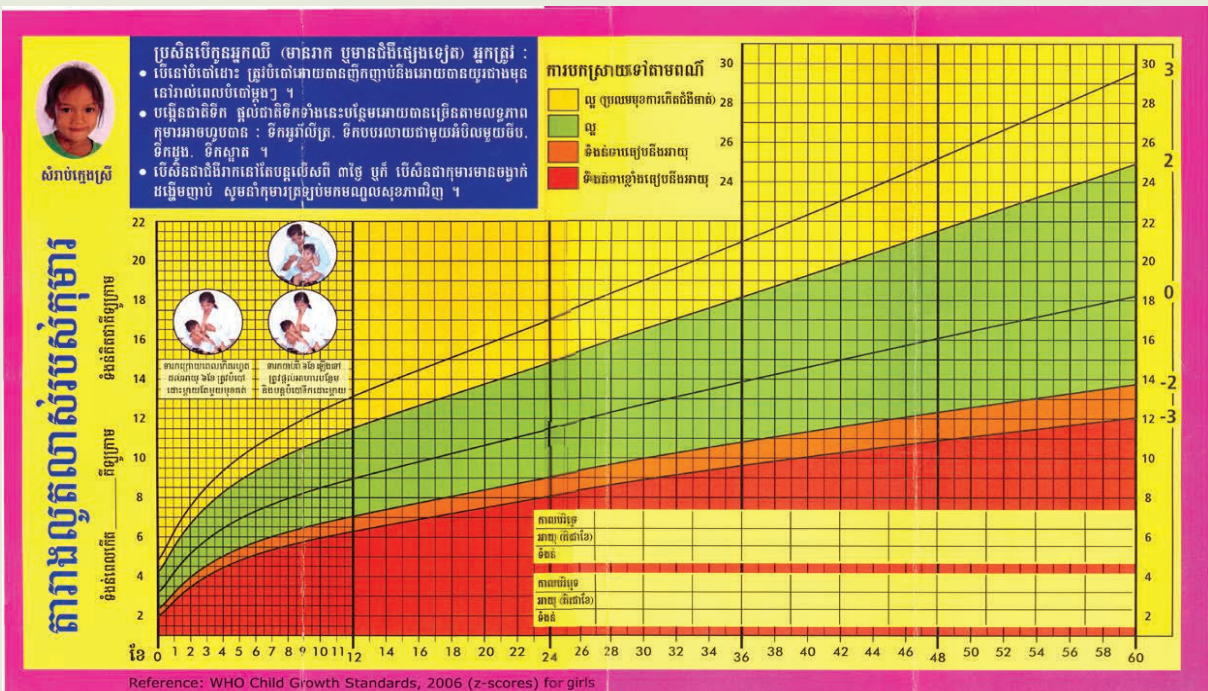
EXERCISE D

DARAVUTH'S GROWING!

Daravuth is now 18 months old. He is weighed at the health centre almost every 2 months. The results of this weighing is in the table below. What you need to do is:

- 1 Use this table to plot Daravuth's weight in the growth chart below the table or on a large growth chart.
- 2 Write your questions, advice and support in the columns of the table.

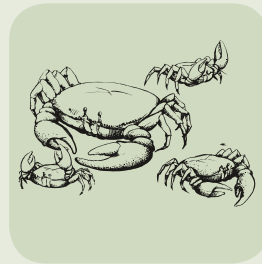
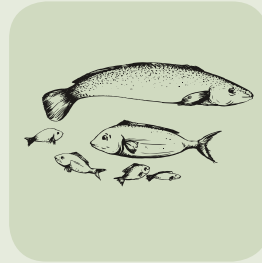
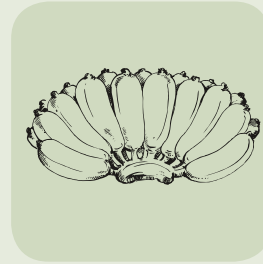
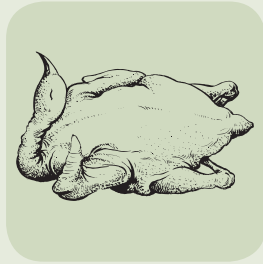
Age	Date of weighing	Weight	Questions for Daravuths parents	Advice	Support
0	24 Oct 06	3.1 kg			
2 months	20 Dec 06	3.6 kg			
4 months	15 Feb 07	4.6 kg			
6 months	21 Apr 07	5.0 kg			
8 months	18 Jun 07	6.6 kg			
10 months	19 Au 07	7.5 kg			
12 months	10 Oct 07	8.0 kg			
14 months	12 Dec 07	8.5 kg			
16 months	14 Feb 08	9.0 kg			
18 months	7 Apr 08	9.5 kg			



EXERCISE E

VITAMIN A RICH FOODS

Look at the pictures of the foods below and encircle 4 foods that are rich in vitamin A.



EXERCISE F

VITAMIN A CASE STUDIES

Below are 4 different stories of mothers and children. Read the stories and look at the pictures. Then decide what questions you will ask, what dose of vitamin A you will give to the mother, the child or both. Also think about what messages you want to give to the mother and how you will record your actions.



Pidor

Pidor is a post partum mother with a 4 weeks old child. She had her delivery at home. She has had no contact with HC staff before, but was helped by the traditional birth attendant.

What questions will you ask?

What treatment?

What messages?

Where record?



Moly

Moly is a mother with a child of 8 months old

What questions will you ask?

What treatment?

What messages?

Where record?



Sothea

Sothea is a 4 year old child with night blindness and Bitot spots.

What questions will you ask?

What treatment?

What messages?

Where record?



Reaksaa

Reaksaa is a 7 month old boy with measles.

What questions will you ask?

What treatment?

What messages?

Where record?

EXERCISE G

STEPS IN PLANNING FOR AN EFFECTIVE VITAMIN A SUPPLEMENTATION ROUND

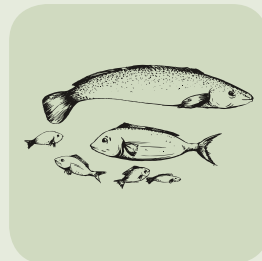
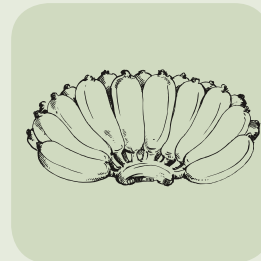
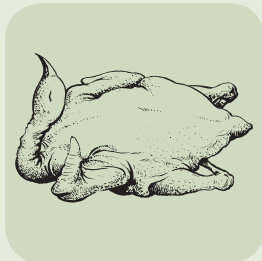
Look at the steps in planning an effective vitamin A supplementation round and put them in the correct order you would conduct them from 1 – 13

	Activity	Step number #
A	Check vitamin A capsule stock. Is it in good condition, when is the expiry date? Order stock as necessary from the OD	
B	Make estimate on the tally sheet of each village pop and target group of mothers and children for each village	
C	Check mebendazole stock. Estimate how much you will need for each child from 12 months - 59 months pregnant women who are over three months pregnant and post partum women who have delivered within the last six weeks	
D	Plan an agenda for a meeting with village volunteers to discuss the planning for the vitamin A supplementation round in each of the villages	
E	Conduct a refresher session during the monthly meeting for village volunteers, about vitamin A supplementation and discuss the role they will play during the supplementation round	
F	Check the village volunteer register and estimate how many of the eligible children and post partum women have received the vitamin A supplement and how many children and post partum women need to be followed up and given the vitamin A supplement	
G	Estimate the number of children that need to be followed up and provide vitamin a supplement and recording sheet to the village volunteer	
H	Check the tally sheets are complete before leaving the village	
I	Complete the HCI form with the results from the vitamin A supplementation round	
J	Estimate how many vitamin A capsules you will need by calculating how many children aged 6- 59 months and how many newly delivered women are living in your target areas	
K	Hold a meeting with all health centre staff and village volunteers to plan the dates you will go to each village	
L	Inform the village chiefs and community in each village about the supplementation round	
M	Check you have enough IEC material and tally sheets for vitamin A round order as necessary	

EXERCISE H

IRON RICH FOODS

Look at the pictures of the foods below and encircle 4 foods that are rich in Iron.



EXERCISE I

IRON CASE STUDIES

Below are 3 different stories of mothers and children. Read the stories and look at the pictures. Then decide what treatment you will give to the mother, the child or both. Also think about what messages you want to give to the mother.



Sokun

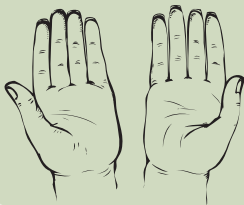
Sokun is a pregnant woman coming to the HC for her first visit.

What questions will you ask?

What treatment?

What messages?

Where record?



Bopha

Bopha is a 10 months old child with palmar pallor

What questions will you ask?

What treatment?

What messages?

Where record?



Sotheavy

Sotheavy is a 32 year old post partum mother with severe palmar pallor.

What questions will you ask?

What treatment?

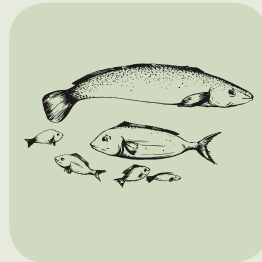
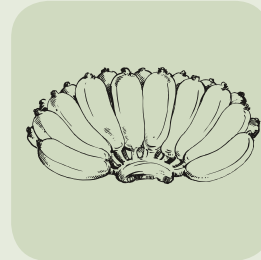
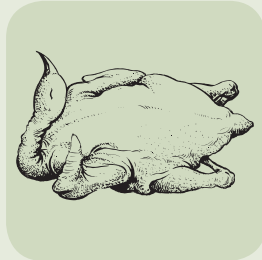
What messages?

Where record?

EXERCISE J

IODINE ENRICHED FOODS

Look at the pictures of the foods below and encircle 4 foods that are rich in Iodine.

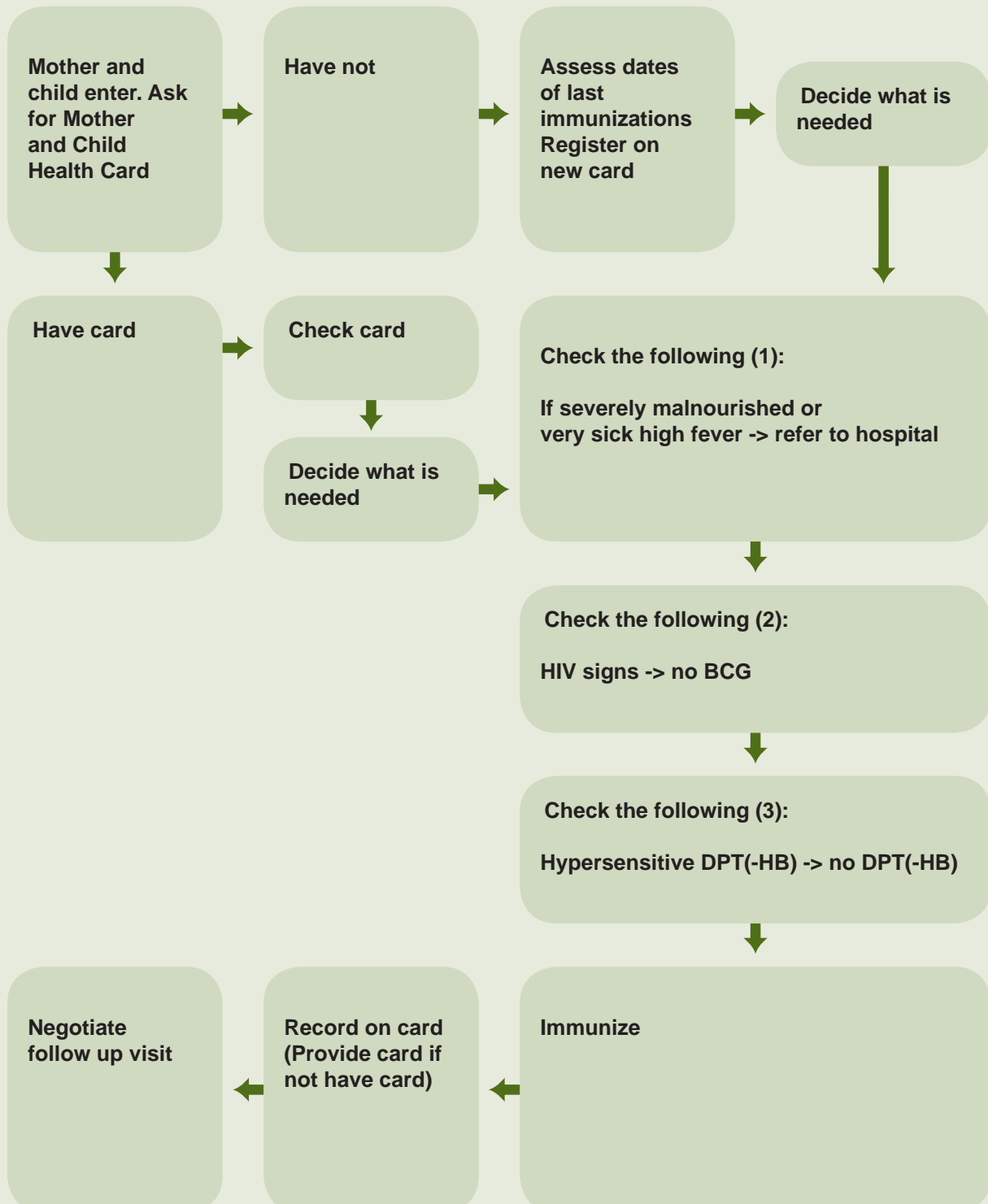


EXERCISE K

FLOWCHART

The facilitator will read a story aloud about Narith. Please listen to the story and indicate on the flowchart below the decisions that you would make.



Flowchart for immunization



PEER FOLLOW-UP TOOL

Challenge	What should be done	Who should do this	What else can I do?
We don't have enough materials (example)	Health center staff should request OD to provide 10 more packages	OD, on our request	Make some material ourselves

CHECKLIST FOR COUNSELLING

CHECKLIST FOR NUTRITION COUNSELLING				
		Good	Not good	comments
A. Communication skills The staff member...				
1	Is friendly			
2	Listens			
3	Shows helpful non verbal communication			
4	Asks open ended questions			
5	Shows interest			
6	Uses simple language			
7	Explains what she / he is doing			
8	Does not judge			
9	Is open to the mothers ideas			
10	Praises what the mother and child do right			
B. Nutrition skills The staff member provides adequate information on...				
1	Vitamin A			
2	Iron			
3	Iodine			
4	Breast feeding			
5	Immediate and exclusive breast feeding			
6	Complementary feeding			
7	Records on Cards and Record Book			
8	Return visit			
C. Integration and use of Job Aids The staff member adequately...				
1	Integrates nutrition messages in the action			
2	Uses the nutrition job aid			
3	Uses the flipchart job aid			
4	Uses another job aid			
5	Provides woman with IEC to bring home			
D. Diagnosis and treatment The staff member adequately...				
1	Diagnoses the patient			
2	Prescribes treatment			
3	Explains the condition to the client			
4	Explains the treatment to the patient			

ASSESSING A CHILD'S WEIGHT FOR AGE

Z score	Growth indicators Weight for age
Above 3	A child whose weight for age falls in this range may have a growth problem, but this is better assessed using weight for length/height or BMI for age
Above 2	A child whose weight for age falls in this range may have a growth problem, but this is better assessed using weight for length/height or BMI for age
Above 1	A child whose weight for age falls in this range may have a growth problem, but this is better assessed using weight for length/height or BMI for age
0 MEDIAN	Normal range
Below - 1	Normal range
Below - 2	Underweight
Below - 3	Severely underweight

CALCULATING THE AGE OF A CAMBODIAN CHILD

So that we can adequately assess the growth of a child, or even provide appropriate treatment and preventive care, we need to know how many months old s/he is. As time is short when providing care at the health centre or in the field, this tool can assist you in quickly determining the child's age.

Following is a description of how to prepare and use an events calendar to calculate a child's age.

First prepare a table that has 13 columns and 8 rows.

In the first row, fill in all 12 months, written in both Khmer and English. Start the first month in the second-to-the-left column of the first row. April (Cheth) is considered the first month of the Khmer year because that is when the Khmer New Year happens. Write April (Cheth) at the top of the second column. Then fill in the following months, finishing with March (Phalkun) as shown below:

	April Cheth	May Pisak	June Ches	July Asath	Aug Srap	Sep. Pho- trabat	Oct. Asoch	Nov. Kadek	Dec. Mikase	Jan. Bos	Feb. Meak	Mar. Phal- kun

Write the Khmer Year and the Western year in the first (leftmost) column. Start with the current year in the box of the second row and the first column. After that, count backwards the previous six years, writing the years in the following rows (in first column). For example if the current year was 2002, the previous five years would be 2001, 2000, 1999, 1998, 1997 & 1996 as shown below:

	April Cheth	May Pisak	June Ches	July Asath	Aug Srap	Sep. Pho- trabat	Oct. Asoch	Nov. Kadek	Dec. Mikase	Jan. Bos	Feb. Meak	Mar. Phal- kun
2002 Horse												
2001 Snake												
2000 Dragon												
1999 Rabbit												
1998 Tiger												
1997 Cow												
1996 Rat												

The last three columns on the right hand side are for January, February & March. These three months are special in calculating the age of the child. As a health worker you should pay attention to them. These three months are the first three months of the Western calendar year, ending in December. They are also the last three months of the Khmer year.

	April Cheth	May Pisak	June Ches	July Asath	Aug Srap	Sep. Pho- trabat	Oct. Asoch	Nov. Kadek	Dec. Mikase	Jan. Bos	Feb. Meak	Mar. Phal- kun
2002 Horse										2003	2003	2003
2001 Snake										2002	2002	2002
2000 Dragon										2001	2001	2001
1999 Rabbit										2000	2000	2000
1998 Tiger										1999	1999	1999
1997 Cow										1998	1998	1998
1996 Rat										1997	1997	1997

For example, if the first year in the first left column were 2002 (Horse year), January, February & March would be the last three months of the Horse year, but are the first three months of the year 2003. Write down the year 2003 in the last three right columns and count down the previous five years and write them down in the cells of columns 11 to 13 and rows 3 to 8 as shown below:

	April Cheth	May Pisak	June Ches	July Asath	Aug Srap	Sep. Pho- trabat	Oct. Asoch	Nov. Kadek	Dec. Mikase	Jan. Bos	Feb. Meak	Mar. Phal- kun
2002 Horse										2003	2003	2003
2001 Snake	10	9	8	7	6	5	4	3	2	2002 1	2002 0	2002
2000 Dragon	22	21	20	19	18	17	16	15	14	2001 13	2001 12	2001 11
1999 Rabbit	34	33	32	31	30	29	28	27	26	2000 25	2000 24	2000 23
1998 Tiger	46	45	44	43	42	41	40	39	38	1999 237	1999 36	1999 35
1997 Cow	58	57	56	55	54	53	52	51	50	1998 49	1998 48	1998 47
1996 Rat										1997	1997	1997 59

Now adapt the calendar for the current date. Write the number 0 in the box of the current month and current year, then move to the left, writing the following numbers (1, 2, etc.) in boxes until you finish with number 59, near the end of the chart. These numbers are the age of the child in months. For example, if it were February (Meak) 2002, we would prepare the calendar as follows:

Many mothers do not know their child's birth date, but they may associate his/her birth with a particular event. Next you should mark national and local events on the calendar, to help mothers determine approximate birthdates. In the example below, such events are noted in the first row, but you should write them in the correct month in each year. Local events such as a storm, harvest, etc. must be included, as they will probably be more helpful than national holidays. Use those dates to ask the mother whether the child was born before or after a particular event, and how many years ago.

	April Cheth	May Pisak	June Ches	July Asath	Aug Srap	Sep. Pho- trabat	Oct. Asoch	Nov. Kadek	Dec. Mikase	Jan. Bos	Feb. Meak	Mar. Phal- kun
2002 Horse	Khmer New Year	Chat Preah Neng- kal				Consti- tution Day	King's birth- day	Bom Om Tuk		2003	2003 Lunar New Year	2003
2001 Snake	10	9	8	7	6	5	4	3	2	2002 1	2002 0	2002
2000 Dragon	22	21	20	19	18	17	16	15	14	2001 13	2001 12	2001 11
1999 Rabbit	34	33	32	31	30	29	28	27	26	2000 25	2000 24	2000 23
1998 Tiger	46	45	44	43	42	41	40	39	38	1999 237	1999 36	1999 35
1997 Cow	58	57	56	55	54	53	52	51	50	1998 49	1998 48	1998 47
1996 Rat										1997	1997	1997 59

With this events calendar prepared as if the current month were February 2002, following is an example of how to calculate the age of child born on Constitution Day in 2000. First locate the year 2000 in the first column. Place a ruler, piece of paper, etc, on the row corresponding to the year. Locate the event on the calendar. Move your finger across, from left to right until it reaches the column corresponding to the month of September, arriving at 17. The child is now 17 months old.

TALLY SHEET

ឧបសម្ព័ន្ធ ទីប្រាំបី (ក)

បញ្ជីកត់ត្រាការបែងចែកឱសថក្នុងការព្យាបាល ដេវ៉ាឡូប្យែនពីមណូសុខភាព

មណូសុខភាព..... ស្រុកប្រតិបត្តិ..... ខែ.....ឆ្នាំ.....

ឈ្មោះភូមិ..... ប្រជាជនសរុប.....	គ្រាប់ថ្នាំជីវជាតិអា			គ្រាប់ថ្នាំចំណាក់ព្រូនពោះវៀន			
	កុមារ ៦-១១ ខែ (100,000UI)	កុមារ ១២-៥៩ ខែ (200,000UI)	ស្ត្រីក្រោយពេល សំរាល (ក្រោម ៨ អាទិត្យ)	កុមារ ១២-២៣ ខែ (250mg)	កុមារ ២៤-៥៩ ខែ (500mg)	ស្ត្រីក្រោយពេល សំរាល (ក្រោម ៨ អាទិត្យ)	ស្ត្រីមានផ្ទៃពោះ (ចាប់ពី ៤ខែ ឡើង)
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ចំណាំ : សូមសរសេរចំនួនប្រជាជនចំណុចចំណែកក្នុងតួអក្សរស្រេចមុនពេលចែក

ឈ្មោះភូមិ..... ប្រជាជនសរុប.....	គ្រាប់ថ្នាំជីវជាតិអា			គ្រាប់ថ្នាំចំណាក់ព្រូនពោះវៀន			
	កុមារ ៦-១១ ខែ (100,000UI)	កុមារ ១២-៥៩ ខែ (200,000UI)	ស្ត្រីក្រោយពេល សំរាល (ក្រោម ៨ អាទិត្យ)	កុមារ ១២-២៣ ខែ (250mg)	កុមារ ២៤-៥៩ ខែ (500mg)	ស្ត្រីក្រោយពេល សំរាល (ក្រោម ៨ អាទិត្យ)	ស្ត្រីមានផ្ទៃពោះ (ចាប់ពី ៤ខែ ឡើង)
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

សរុប

ហត្ថលេខាប្រធានមណូសុខភាព..... ថ្ងៃ.....ខែ.....ឆ្នាំ..... ឈ្មោះអ្នកធ្វើរបាយការណ៍.....

**Design and publishing funded by USAID,
through A2Z Micronutrient Project.**