

IMCI COMPLEMENTARY COURSE ON HIV/AIDS

INTRODUCTION

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Integrated Management of Childhood Illness Complementary course on HIV/AIDS
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TABLE OF CONTENTS

**INTRODUCTION TO THE COURSE AND TO THE INTRODUCTORY
MODULE.....4**

**WHAT IS THE PURPOSE OF THIS IMCI COMPLEMENTARY COURSE ON
HIV/AIDS AND HOW DOES IT FIT IN WITH THE STANDARD IMCI CASE
MANAGEMENT TRAINING COURSE?4**

WHAT ARE THE OBJECTIVES OF THE COURSE?5

WHAT IS THE TEACHING / LEARNING APPROACH?7

**GLOSSARY / EXPLANATION OF SIGNS AND TERMS USED IN MODULES
OF THE IMCI COMPLEMENTARY COURSE ON HIV10**

Introduction to the course and to the introductory module

Welcome to the IMCI Complementary course on HIV/AIDS.

Your facilitator will first conduct a short introductory session, after which you should read through the following introduction by yourself in order to reinforce what the facilitator has introduced. As you read through, think about the objectives of the course so that you can internalize them and work towards them throughout the course.

What is the purpose of this IMCI Complementary course on HIV/AIDS and how does it fit in with the standard IMCI case management training course?

Background:

According to the annual *AIDS Epidemic Update*, published by UNAIDS/WHO in December 2006, the number of people living with HIV globally continues to grow as does the number of deaths due to AIDS. A total of 39.5 million people were estimated to be living with HIV in 2006 and almost three million people died of AIDS-related illnesses; of these, more than 500,000 were children. Globally, there are 2.3 million children living with HIV/AIDS, with children constituting 6% of people living with HIV worldwide, 13 percent of new HIV/AIDS infections and 17 percent of total HIV/AIDS deaths. More than 50% of children with HIV/AIDS die before the age of 2 years as a result of opportunistic infections and intercurrent common diseases such as pneumonia, diarrhoea, malnutrition and malaria – all of which are conditions targeted by IMCI.

Even though children living with HIV/AIDS respond very well to treatment with antiretroviral therapy (ART), to date few children living with HIV/AIDS have access to ART mostly due to a lack of cheap feasible diagnostic tests for infants, lack of affordable child-friendly ARV drugs and lack of trained health personnel.

This IMCI Complementary Course on HIV/AIDS aims to address the issue of lack of trained personnel. With an ever increasing burden of HIV and a high percentage of children infected, health workers urgently require accurate, up to date training and information on assessment and management of HIV in children. The IMCI complementary course on HIV is designed to assist health workers to assess, classify, treat and follow up HIV exposed infants and children, to identify the role of family and community in caring for the child with HIV/AIDS and also to enhance health workers' skills in counselling of caretakers around HIV/AIDS.

The course is designed, as the title suggests, to build upon and complement the existing IMCI case management course, which does not include assessment or management of HIV. The course should not replace the standard IMCI case management course; instead it aims to bridge a gap that might exist amongst health workers working in settings that have a high HIV burden.

The course has been developed for nurses, clinical officers, clinical assistants and general doctors who:

- are based at fixed clinics, mobile clinics, health posts and health centres (not referral hospitals) and
- have previous training in IMCI and
- are responsible for managing children and
- have or have not been trained in integrated management of adolescent and adult illness (IMAI)

What are the objectives of the course?

The course is presented in four modules:

- Module 1: Focuses on exercises to recap participants' knowledge of IMCI. Recent technical updates to IMCI are also introduced in this module
- Module 2: Focuses on assessing and classifying a child for HIV infection and treating and preventing illness in children born to HIV positive women
- Module 3: Focuses on counselling HIV positive women
- Module 4: Focuses on chronic care and follow up of children born to HIV positive women

Objectives:

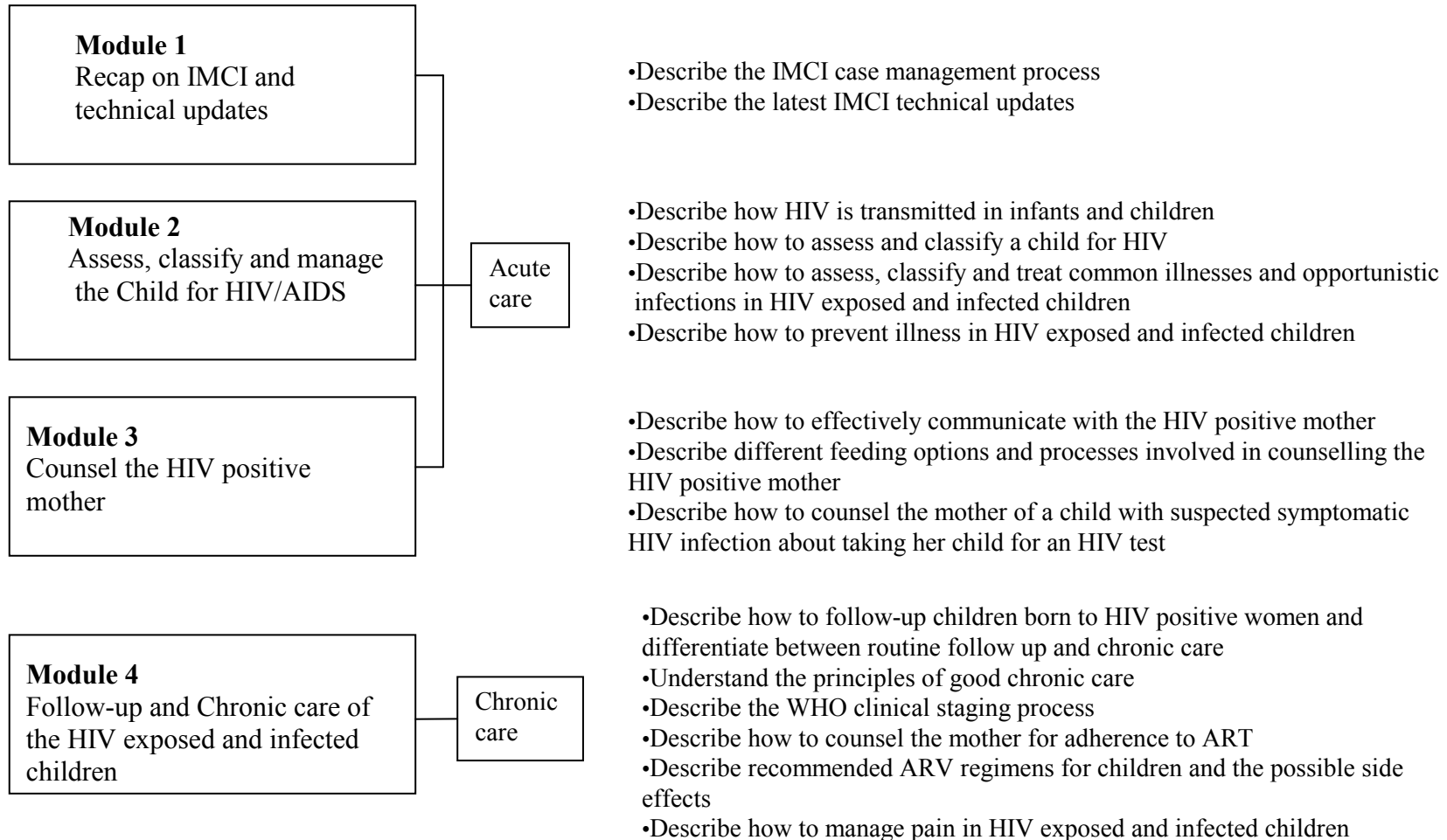
This IMCI Complementary Course on HIV specifically aims to increase participants' knowledge on:

- assessing and classifying young infants (aged up to 2 months) and children (aged 2 months up to 5 years) for HIV-infection
- assessing, classifying and managing common illnesses and opportunistic infections in young infants and children with HIV classifications including POSSIBLE HIV INFECTION / HIV-EXPOSED, SUSPECTED SYMPTOMATIC HIV INFECTION or CONFIRMED HIV INFECTION
- preventing illnesses in young infants and children born with to an HIV positive mother
- communication skills and counselling the HIV positive mother around infant feeding options
- follow-up of HIV exposed infants and children, including chronic care, clinical staging and initiation of antiretroviral therapy

The diagram on the next page provides an overall picture of the objectives of each module. Modules 1-3 are focused around acute care, whilst Module 4 introduces chronic care.

Objectives

By the end of each module, participants should be able to:



What is the teaching / learning approach?

The course adopts a participatory and interactive approach, built around the information contained in the chart booklets and the four modules that each participant will receive a copy of. The chart booklets and the individual module booklets are for participants to keep. As you work through the modules, you may highlight important points or write notes on the pages if you wish.

Participants will learn through a combination of individual reading, group discussion, written exercises, short answer exercises, facilitator-led drills, video exercises and demonstrations within clinical instruction sessions.

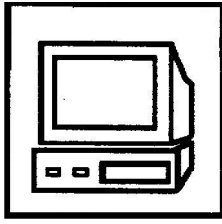
This course draws upon information presented in the IMCI case management course and the IMAI course. Throughout the course you should have the following materials available for cross-reference:

- The IMCI chart booklet
- The IMCI photograph booklet
- The IMCI guide for clinical practice in the inpatient ward
- The IMAI participants manual on acute care
- The IMAI photograph booklet

Throughout the 4 modules, three symbols are used to indicate the different types of exercise:



Written exercise



Video or photograph exercise

You will meet 4 children at different time points as you go through the course: Mishu, aged 3 ½ months, Dan, aged 9 months, Ebai, aged 2 weeks and Henri aged 3 weeks. These children will help you to learn how to assess, classify and follow-up HIV exposed infants and children.

To optimise learning, this course uses adult-based methods such as individual reading and small group discussions guided by a facilitator. You should take advantage of the knowledge and skills of facilitators and of your fellow participants by engaging in the discussions, participating in the drills and exercises and raising questions or issues for discussion.

Once you have completed this course, you will receive a follow-up visit and regular supervision, as for IMCI. The person who does the supervisory visits for this course is likely to be the person who is already doing the IMCI supervisory visits. These visits are intended to be supportive and to help participants with any difficulties that they face with implementing what they have learnt when they return to their clinics.

IMPORTANT POINTS TO REMEMBER WHEN WORKING THROUGH THIS COURSE:

- In all of the four modules, whenever the word “mother” is used it refers to the primary caretaker of the child, who may or may not be the mother
- This course focuses on the children aged up to 5 years and presents information on what action needs to be taken at primary care level to manage these children. Information about care at referral level is contained in a separate book "*Pocket book of hospital care for children*"
- Whilst the principles of IMCI are based on children under 5, much of the principles around assessment, treatment, counselling and follow-up of pneumonia, diarrhoea, malaria, measles and malnutrition and HIV are also applicable to older children. Much of the information on assessment of HIV infection and treatment for opportunistic infections is the same except for dosages. The principles of counseling are similar but the content, for example, on infant feeding will vary by age. The principles of chronic HIV care, antiretroviral drugs, their side effects and management of side effects are also similar. There are notable exceptions including:
 - The cut-off rates for determining fast breathing would be different, because normal breathing rates are slower in older children
 - Drug dosing tables for ARVs and other medicines only apply for children up to 5 years of age

ADAPTATION OF THESE GENERIC MATERIALS TO COUNTRIES

Countries that have completed adaptation of the IMCI guidelines and training materials are expected to process further adaptation of the complementary course in a speedy manner. Further adaptation will need to take into consideration:

- The extent to which IMCI and/or IMAI has been implemented
 - This will affect which modules to consider for inclusion
- National policies on roles and responsibilities of the different levels of health care with respect to HIV care including involvement of the community
- Alignment with the national policies and guidelines of infant feeding in HIV, essential list of medicines for opportunistic infections and antiretroviral drugs

It is important to remember that the adaptation process is also meant to enhance building ownership and consensus.

GLOSSARY / EXPLANATION OF SIGNS and TERMS USED IN MODULES OF THE IMCI COMPLEMENTARY COURSE ON HIV

Acute necrotizing ulcerative gingivitis

(also stomatitis or necrotizing or ulcerative periodontitis).

- Severe pain, ulcerated gingival papillae, loosening of teeth, spontaneous bleeding, bad odour, and rapid loss of bone and/or soft tissue.

AFASS

- In order to minimise the risk of post-natal HIV transmission from mother to infant, HIV infected women should stop breastfeeding when replacement feeding is Acceptable (A), Feasible (F), Affordable (A), Sustainable (S) and Safe (S).

ART

- Giving antiretroviral (ARV) drugs in the correct way, with adherence support, is called **ARV Therapy**, shortened to **ART**.

CD4

- Human T helper cells expressing CD4.

convulsions

- During a convulsion, the child's arms and legs stiffen because the muscles are contracting. The child may lose consciousness or not be able to respond to spoken directions.

chest indrawing

- Look for chest indrawing when the child breathes IN. The child has chest indrawing if the lower chest wall goes IN when the child breathes IN. For chest indrawing to be present, it must be clearly visible and present all the time. If you only see chest indrawing when the child is crying or feeding, the child does not have chest indrawing.

cryptococcal meningitis

- Meningitis: usually sub acute, fever with increasing severe headache, irritability, meningism, confusion, behavioural changes. Responds to anti fungal therapy.

DNA

- DeoxyriboNucleic Acid; the genetic material found inside the nucleus of a cell.

drinking poorly

- A child is *drinking poorly* if the child is weak and cannot drink without help. He may be able to swallow only if fluid is put in his mouth.

drinking eagerly, thirsty

- A child has the sign *drinking eagerly, thirsty* if it is clear that the child wants to drink. Look to see if the child reaches out for the cup or spoon when you offer him water. When the water is taken away, see if the child is unhappy because he wants to drink.

{not able to} drink or breastfeed

- A child has the sign "not able to drink or breastfeed" if the child is not able to suck or swallow when offered a drink or breast milk.

fungal nail infections

- Fungal paronychia (painful, red and swollen nail bed) or onycholysis, (painless separation of the nail from the nail bed). Proximal white subungal onychomycosis is uncommon without immunodeficiency.

herpes zoster

- Painful rash with fluid-filled blisters, dermatomal distribution, can be haemorrhagic on erythematous background, and can become large and confluent. Note, severe persistent herpes zoster may have severe prognosis.

HIV encephalopathy

- At least one of the following progressing over at least 2 months in the absence of another illness:

failure to attain, or loss of, developmental milestones. Loss of intellectual ability.

or

Progressive impaired brain growth demonstrated by stagnation of head circumference.

or

Acquired symmetric motor deficit accompanied by 2 or more of the following; paresis, pathologic reflexes ataxia or gait disturbances.

HIV exposed infant

- A child born to an HIV infected mother. The child is also referred to as POSSIBLE HIV INFECTION.

immune system

- The body's defense system that defends it from diseases.

Kaposi's sarcoma

- Typical appearance in skin or oropharynx, initially flat patches with a pink or blood-bruise colour that usually develop into nodules.

lethargic or unconscious.

- A lethargic child is not awake and alert when he should be. He is drowsy and does not show interest in what is happening around him. Often the lethargic child does not look at his mother or watch a person's face when they talk. The child may stare blankly and appear not to notice what is going on around him.
- An unconscious child cannot be wakened. He does not respond when he is touched, shaken or spoken to.

lymphocytes

- These are one type of white blood cell in the body.

lymphoid interstitial pneumonitis (LIP)

- No presumptive clinical diagnosis. Chest X-ray shows bilateral reticulonodular interstitial pulmonary infiltrates present for > 2 months with no response to antibiotic treatment and no other pathogen found. Oxygen saturation persistently <90%. May present with cor pulmonale and may have increased exercise induced fatigue. Frequently confused with military TB.

molluscum infection

(extensive more than 5% body area or face or disfiguring)

- Characteristic skin lesions: small fleshy-coloured pearly or pink, dome-shaped or umbilicated growths, may be inflamed or red. Also common in uninfected children.

oedema of both feet

- Use your thumb to press gently for a few seconds on the top side of each foot. The child has oedema if a dent remains in the child's foot when you lift your thumb.

Look at photograph 3B in the IMAI photograph book and photograph 50 in the IMCI chart booklet, which shows oedema of the feet.

opportunistic infections

- Infections which occur commonly in patients with reduced immune status and do not occur or are rare in people with normal immune system.

oral thrush

(outside neonatal period)

- Persistent creamy white to yellow soft small plaques on red or normal coloured mucosa of the mouth, easily scraped off (pseudo membranous) or red patches on tongue, palate or lining of mouth, usually painful or tender, responds to antifungal treatment.

oral hairy leukoplakia

- Fixed fine small lined patches on lateral borders of the tongue generally bilaterally, which don't scrape off.

pallor

- This refers to unusual paleness of the skin. It is a sign of anaemia.
- To see if the child has palmar pallor, look at the skin of the child's palm. Hold the child's palm open by grasping it gently from the side. Do not stretch the fingers backwards. This may cause pallor by blocking the blood supply.
- Compare the colour of the child's palm with your own palm and with the palms of other children. If the skin of the child's palm is pale, the child has some palmar pallor. If the skin of the palm is very pale or so pale that it looks white, the child has severe palmar pallor.

papular pruritic eruption

- Persistent papular vesicular lesions that are pruritic, scabies should be excluded.

parotid enlargement

- Asymptomatic bilateral swelling that may spontaneously resolve and recur, in absence of other known cause, usually painless. Uncommon in HIV-uninfected children.

persistent generalized lymphadenopathy (PGL)

- Swollen or enlarged lymph nodes >1cm, in two or more non-contiguous sites, in absence of known cause.

pneumocystis pneumonia

- Dry cough, progressive shortness of breath, cyanosis, tachypnoea and fever; chest indrawing or stridor. Responds to high dose co-trimoxazole +/- prednisolone.
- (Severe or very severe pneumonia as in IMCI).

pulmonary tuberculosis

- Nonspecific symptoms such as chronic cough, fever, night sweats, anorexia, weight loss. In the older child also productive cough and haemoptysis. Response to standard anti TB treatment in 1 month. Diagnosis should be made according to national guidelines.

recurrent severe presumed bacterial infection

(2 or > episodes within one year)

- (e.g. meningitis, empyema, pyomyositis, bone or joint infection, bacteremia)
Fever accompanied by specific symptoms or signs that localize infection, responds to antibiotics.

recurrent oral ulcerations

(2 or more in 6 months)

- Aphthous ulceration, typically with a halo of inflammation and a yellow-gray pseudo membrane.

recurrent upper respiratory tract infections

(otitis media, otorrhoea or sinusitis) twice or more in any 6 month period

- Symptom complex; e.g. fever with unilateral face pain with nasal discharge (sinusitis) or painful swollen ear drum (otitis media) cough with purulent sputum (bronchitis), sore throat (pharyngitis) and barking croup-like cough (LTB). Persistent or recurrent ear discharge.

restless and irritable

- A child has the sign *restless and irritable* if the child is restless and irritable all the time or every time he is touched and handled.

RNA

- Ribonucleic Acid - a chemical found in the nucleus and cytoplasm of cells; it plays an important role in protein synthesis and other chemical activities of the cell. The structure of RNA is similar to that of DNA.

seborrhoeic dermatitis

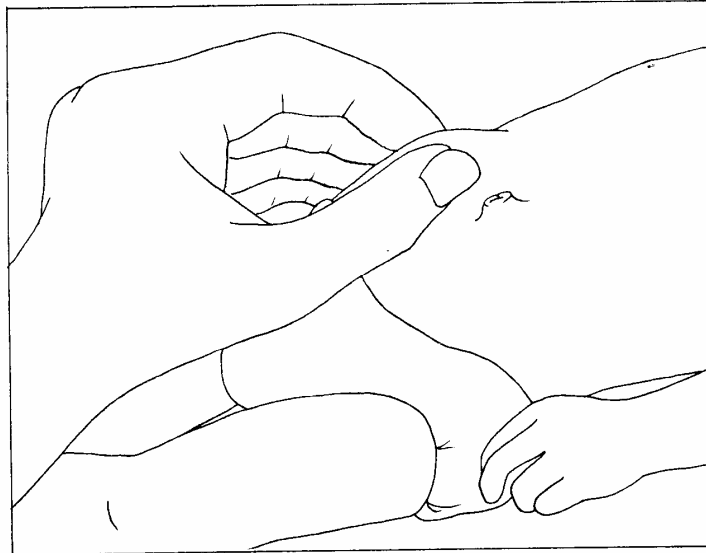
- Itchy scaly skin condition particularly affecting scalp, face, upper trunk and perineum. Common in uninfected children and in babies.

severe recurrent presumed bacterial pneumonia

- Cough with fast breathing, chest indrawing, nasal flaring, wheezing, grunting or head nodding. Crackles on auscultation. Responds to course of antibiotics.

skin pinch

- Most health workers have difficulty with doing a skin pinch. The procedure for doing a skin pinch is illustrated and explained below:



- Ask the mother to place the child on the examining table so that the child is flat on his back with his arms at his sides (not over his head) and his legs straight. Or, ask the mother to hold the child so he is lying flat in her lap.
- Locate the area on the child's abdomen halfway between the umbilicus and the side of the abdomen. To do the skin pinch, use your thumb and first finger. Do not use your fingertips because this will cause pain. Place your hand so that when you pinch the skin, the fold of skin will be in a line up and down the child's body and not across the child's body. Firmly pick up all of the layers of skin and the tissue under them. Pinch the skin for one second and then release it. When you release the skin, look to see if the skin pinch goes back:
 - very slowly (longer than 2 seconds)
 - slowly
 - immediately
- If the skin stays up for even a brief time after you release it, decide that the skin pinch goes back slowly.

Note: In a child with marasmus (severe malnutrition), the skin may go back slowly even if the child is not dehydrated. In an overweight child, or a child with oedema, the skin may go back immediately even if the child is dehydrated. Even though skin pinch is less reliable in these children, still use it to classify the child's dehydration.

stridor

- Stridor is a harsh noise made when the child breathes IN.

sunken eyes

- The eyes of a child who is dehydrated may look sunken. *Note:* In a severely malnourished child who is visibly wasted (that is, who has marasmus), the eyes may always look sunken, even if the child is not dehydrated. Even though sunken eyes is a less reliable sign in a visibly wasted child, still use the sign to classify the child's dehydration.

suspected symptomatic HIV infection

- infant or child presenting with symptoms or conditions of HIV infection but not confirmed by laboratory tests.

unexplained moderate malnutrition not adequately responding to standard therapy

- Unexplained weight loss not adequately responding within two weeks to standard management of malnutrition, characterized by very low weight for age¹ and weight for height of $-2SD$.

unexplained persistent diarrhoea

(more than 14 days as in IMCI guidelines)

- Unexplained persistent diarrhoea (loose or watery stool, 3 or more times daily), not responding to standard treatment.

unexplained persistent fever

(intermittent or constant and for longer than >1 month)

- Reports of fever or night sweats for greater than one month, either intermittent or constant with reported lack of response to antibiotics or anti-malarials.
- No other obvious foci of disease reported or found on examination. Malaria must be excluded in malarious areas.

Unexplained severe wasting or severe malnutrition not adequately responding to standard therapy

- Persistent unexplained weight loss not adequately responding in 2 weeks to standard therapy. It is characterized by; visible severe wasting of muscles of shoulder, arms buttocks and thighs, visible rib outlines, with or without oedema of both feet and or severe palmar pallor, mid upper arm circumference less than 110 mm for children aged 6 months to 5 years, as defined by WHO IMCI guidelines.

VCT

- Voluntary Counselling and Testing.

¹ - http://www.who.int/child-adolescent-health/publications/CHILD_HEALTH/WHO_FCH_CAH_00.1.htm or page4 http://www.who.int/nut/documents/manage_severe_malnutrition_eng.pdf

visible severe wasting

- Remove the child's clothes. Look for severe wasting of the muscles of the shoulders, arms, buttocks and legs. Look to see if the outline of the child's ribs is easily seen. Look at the child's hips. They may look small when you compare them with the chest and abdomen. Look at the child from the side to see if the fat of the buttocks is missing. When wasting is extreme, there are many folds of skin on the buttocks and thigh. It looks as if the child is wearing baggy pants.
- Photograph 3C in the IMAI photograph booklet and photographs 47, 48 and 49 in the IMCI photograph booklet show children with visible severe wasting and will help you learn how to identify visible severe wasting.

vomiting everything

- A child who is not able to hold anything down at all has the sign "vomits everything." What goes down comes back up. A child who vomits everything will not be able to hold down food, fluids or oral drugs. A child who vomits several times but can hold down some fluids does not have this general danger sign.

weight for age

- Weight for age compares the child's weight with the weight of other children who are the same age.

To determine weight for age:

- Calculate the child's age in months.
- Weigh the child if he has not already been weighed today. Use a scale which you know gives accurate weights. The child should wear light clothing when he is weighed. Ask the mother to help remove any coat, sweater, or shoes.
- Use the weight for age chart to determine weight for age.

Wheezing

- A continuous whistling sound. You may hear a wheezing noise when the child breathes OUT.

Window period

- The time period between when a person is infected with HIV (the entrance of the HIV virus into the body) and when antibodies to the virus can be detected in a test. Ninety nine percent of people infected with HIV will have antibodies detectable by 3 months after infection.