

Integrated Management of Childhood Illness

Complementary course on HIV/AIDS

Module 1

Recap and technical updates on IMCI



Department of Child and Adolescent
Health and Development (CAH)

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1.0 INTRODUCTION

Read through the following introduction by yourself or aloud in small groups. Then proceed to written exercise A.

Before you assess and classify a child for HIV/AIDS you need to do a complete assessment of the child based on what you learnt in the IMCI case management course. This means that for each child you will need to check for general danger signs, then ask about main symptoms and assess and classify the child for cough and difficulty breathing, diarrhoea, fever, ear problem, malnutrition and anaemia; then check the child's immunization status and finally assess other problems.

This module is designed to help you recap the principles of the IMCI case management process before you learn how to assess and classify for HIV/AIDS. In the Introductory module of this course you read that you will meet four children as you work through this module: Mishu, aged 3 months, Dan aged 23 months, Ebai, aged 2 weeks, and Henri, aged 3 weeks. In Module 1, these case studies will help you recap the IMCI case management process and in subsequent modules they will help you learn how to manage children born to HIV-infected women.

This module is comprised of a number of case studies, written exercises and video exercises, all designed to help you to recap on the principles of IMCI:

- The first two sections of the module are the Introduction and Learning Objectives. Participants should read through these 2 sections individually or in small groups.
- Section 3 comprises 4 written exercises (case studies) and a video exercise, each of which should be completed individually before discussing in plenary with the rest of the group. These exercises will help participants to recap the principles of the IMCI case management process.
- Section 4 is comprised of a further recap on IMCI and an opportunity to provide technical updates based on a recent WHO review. The section includes the practice of drills and 2 short answer exercises which should be completed in small groups. These exercises will help participants to further recap the principles of IMCI and ensure that you have fully understood the technical updates presented to you.

Once you have completed reading this introduction and you are familiar with the learning objectives of this module you may proceed to written exercise A and video exercise A. For each child, use the appropriate Recording Form to record main symptoms and to assess, classify, identify treatment, counsel and suggest a follow-up day or date.

During this module you will need to keep your IMCI chart booklet close to you. As you read through this module, open your chart booklet to the relevant page and refer to the relevant chart. It is best if you work in small groups to go through this module and cross-refer to the IMCI chart booklet.

Additionally you may wish to refer to the Introductory module to this course which contains a glossary of terms and signs that you will be hearing about as you recap the principles of IMCI and work through modules 2, 3 and 4.

2.0 LEARNING OBJECTIVES

Read through the learning objectives individually and think about them so that you internalise them.

By the end of the module you should have:

- Recapped on the full IMCI case management process and be able to describe how to:
 - Assess sick young infants (aged up to 2 months) and children (aged 2 months up to 5 years)
 - Classify their illness
 - Treat the child, and refer if necessary
 - Counsel the mother
 - Plan for follow up
 - Accurately complete recording forms
 - Correctly use the IMCI chart booklet
- Understood the latest IMCI technical updates and be able to describe them, including updates around:
 - Treatment of pneumonia, with or without wheezing
 - ORS and zinc supplements for dehydration
 - Treatment for dysentery
 - Treatment of fever/malaria
 - Ear problem
 - New algorithm for the sick young infant

3.0 EXERCISES TO RECAP THE IMCI CASE MANAGEMENT PROCESS



WRITTEN EXERCISE A

Read the case studies that follow, and go through a process of assessment, classification, treatment, counselling and follow-up for each child. First do each case study by yourself; then discuss the case study in small groups. For each case study, record the child's signs, classification, treatment, follow-up and the counselling plans on the Recording Form. Refer to the IMCI chart booklet as you do the exercise. If you have difficulty with an exercise, seek help from a fellow participant or from your facilitator before you move to the next case study. Once you have completed the written case studies, and have discussed them with your fellow participants and facilitator, your facilitator will ask you to do video exercise A.

Keep the recording forms and the classifications for each child safely as you will need these recording forms for written exercise B in Module 2.

On the following pages you will see examples of Recording Forms for the SICK YOUNG INFANT (aged up to 2 months) and the SICK CHILD (aged 2 months up to 5 years). Your facilitator will hand out copies of these recording forms so that you can use them in the exercises.

NOTE: You will notice that these Recording Forms differ from the original IMCI Recording Forms, as they have been adapted to include assessment of HIV/AIDS. The SICK CHILD recording form has a section entitled 'Consider HIV infection' and the SICK YOUNG INFANT form has a question regarding the mother's HIV status. These sections of the recording forms will not be used in this module, but we will go on to look at them in Module 2.

Before exercise A, your facilitator will review the IMCI algorithm on the wall chart.

MANAGEMENT OF THE SICK CHILD AGE 2 MONTHS UP TO 5 YEARS

Name: _____ Age: _____ Weight: _____ kg Temperature: _____ °C

ASK: What are the child's problems? _____ Initial visit? ___ Follow-up Visit? ___

ASSESS (Circle all signs present)

CLASSIFY

<p>CHECK FOR GENERAL DANGER SIGNS</p> <p>NOT ABLE TO DRINK OR BREASTFEED VOMITS EVERYTHING CONVULSIONS</p>	<p>LETHARGIC OR UNCONSCIOUS CONVULSING NOW</p>	<p>General danger signs present? Yes ___ No ___</p> <p>Remember to use danger sign when selecting classifications</p>												
<p>DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? Yes ___ No ___</p> <ul style="list-style-type: none"> • For how long? ___ Days • Count the breaths in one minute. _____ breaths per minute. Fast breathing? • Look for chest indrawing. • Look and listen for stridor/wheeze. 														
<p>DOES THE CHILD HAVE DIARRHOEA? Yes ___ No ___</p> <ul style="list-style-type: none"> • For how long? ___ Days • Is there blood in the stools? • Look at the child's general condition. Is the child: Lethargic or unconscious? Restless or irritable? • Look for sunken eyes. • Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? • Pinch the skin of the abdomen. Does it go back: Very slowly (longer than 2 seconds)? Slowly? 														
<p>DOES THE CHILD HAVE FEVER? (by history/feels hot/temperature 37.5°C or above)</p> <p>Decide Malaria Risk: High ___ Low ___ Yes ___ No ___</p> <ul style="list-style-type: none"> • For how long? ___ Days • If more than 7 days, has fever been present every day? • Has child had measles within the last three months? <p>If the child has measles now or within the last 3 months:</p> <ul style="list-style-type: none"> • Look or feel for stiff neck. • Look for runny nose. Look for signs of MEASLES: <ul style="list-style-type: none"> • Generalized rash and • One of these: cough, runny nose, or red eyes. • Look for mouth ulcers. If Yes, are they deep and extensive? • Look for pus draining from the eye. • Look for clouding of the cornea. 														
<p>DOES THE CHILD HAVE AN EAR PROBLEM? Yes ___ No ___</p> <ul style="list-style-type: none"> • Is there ear pain? • Is there ear discharge? If Yes, for how long? ___ Days • Look for pus draining from the ear. • Feel for tender swelling behind the ear. 														
<p>THEN CHECK FOR MALNUTRITION AND ANAEMIA</p> <ul style="list-style-type: none"> • Look for visible severe wasting. • Look for palmar pallor. Severe palmar pallor? Some palmar pallor? • Look for oedema of both feet. • Determine weight for age. Very Low ___ Not Very Low ___ 														
<p>CHECK FOR HIV INFECTION</p> <p>HIV tested before (confidential): <u>Mother</u> o positive o negative o unknown <u>Child</u> o positive o negative o unknown <u>pneumonia</u> or Very low weight or <u>persistent diarrhoea</u> or <u>ear discharge</u> or <u>mother or child HIV status known</u>: Yes ___ No ___</p> <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> Pneumonia</td> <td><input type="checkbox"/> Parotid enlargement</td> </tr> <tr> <td><input type="checkbox"/> Very Low weight for age</td> <td><input type="checkbox"/> Oral thrush</td> </tr> <tr> <td><input type="checkbox"/> Ear discharge</td> <td><input type="checkbox"/> Generalized persistent lymphadenopathy</td> </tr> <tr> <td><input type="checkbox"/> Persistent diarrhoea</td> <td></td> </tr> </table> <p>If mother is HIV infected, and child less than 24 months old, decide on infant feeding counseling needs</p>		<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Parotid enlargement	<input type="checkbox"/> Very Low weight for age	<input type="checkbox"/> Oral thrush	<input type="checkbox"/> Ear discharge	<input type="checkbox"/> Generalized persistent lymphadenopathy	<input type="checkbox"/> Persistent diarrhoea						
<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Parotid enlargement													
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<input type="checkbox"/> Ear discharge	<input type="checkbox"/> Generalized persistent lymphadenopathy													
<input type="checkbox"/> Persistent diarrhoea														
<p>CHECK THE CHILD'S IMMUNIZATION STATUS Circle immunizations needed today.</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">_____ BCG</td> <td style="text-align: center;">_____ DPT1</td> <td style="text-align: center;">_____ DPT2</td> <td style="text-align: center;">_____ DPT3</td> </tr> <tr> <td style="text-align: center;">_____ OPV 0</td> <td style="text-align: center;">_____ OPV 1</td> <td style="text-align: center;">_____ OPV 2</td> <td style="text-align: center;">_____ OPV 3</td> </tr> <tr> <td colspan="4" style="text-align: center;">_____ Measles</td> </tr> </table>		_____ BCG	_____ DPT1	_____ DPT2	_____ DPT3	_____ OPV 0	_____ OPV 1	_____ OPV 2	_____ OPV 3	_____ Measles				<p>Return for next immunization on:</p> <p style="text-align: center;">_____ (Date)</p>
_____ BCG	_____ DPT1	_____ DPT2	_____ DPT3											
_____ OPV 0	_____ OPV 1	_____ OPV 2	_____ OPV 3											
_____ Measles														
<p>ASSESS CHILD'S FEEDING if child has ANAEMIA OR VERY LOW WEIGHT or is less than 2 years old.</p> <ul style="list-style-type: none"> • Do you breastfeed your child? Yes ___ No ___ If Yes, how many times in 24 hours? ___ times. Do you breastfeed during the night? Yes ___ No ___ • Does the child take any other food or fluids? Yes ___ No ___ If Yes, what food or fluids? _____ _____ How many times per day? ___ times. What do you use to feed the child? _____ If very low weight for age: How large are servings? _____ Does the child receive how own serving? ___ Who feeds the child and how? _____ • During the illness, has the child's feeding changed? Yes ___ No ___ If Yes, how? 		<p>FEEDING PROBLEMS</p>												
<p>ASSESS OTHER PROBLEMS Ask about mother's own health</p>		<p>Time taken: _____</p>												

MANAGEMENT OF THE SICK YOUNG INFANT AGE UP TO 2 MONTHS

Name _____ Age: _____ Weight: _____ Temperature: _____
 ASK: What are the baby's problems? _____ Initial visit? _____ Follow-up visit? _____

ASSESS

CLASSIFY

<p>CHECK FOR VERY SEVERE DISEASE AND LOCAL INFECTION</p> <p><input type="checkbox"/> IS the infant having difficulty feeding?</p> <p><input type="checkbox"/> had convulsions</p> <p><input type="checkbox"/> fast breathing : breaths per minute: _____ Repeat if required: _____</p> <p><input type="checkbox"/> grunting</p> <p><input type="checkbox"/> severe chest indrawing</p> <p><input type="checkbox"/> umbilical draining pus or redness</p> <p><input type="checkbox"/> Fever (38 or above) or low temperature (below 35.5 or feels cold)</p> <p><input type="checkbox"/> skin pustules</p> <p><input type="checkbox"/> Does the infant move only when stimulated?</p> <p><input type="checkbox"/> Does the infant not move even when stimulated?</p>	Classify all young infants
<p>DOES THE YOUNG INFANT HAVE DIARRHOEA? <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p><input type="checkbox"/> Does the infant move only when stimulated? <input type="checkbox"/> Does the infant not move even when stimulated?</p> <p><input type="checkbox"/> restless and irritable <input type="checkbox"/> sunken eyes</p> <p><input type="checkbox"/> pinched skin goes back slowly <input type="checkbox"/> goes back very slowly (> 2 secs)</p>	
<p>THEN CHECK FOR FEEDING PROBLEM OR LOW WEIGHT in breastfed infants (infants receiving breastmilk)</p> <p>Breastfeeding <input type="checkbox"/> no <input type="checkbox"/> yes _____ times in 24 hours</p> <p>Receiving other food or drinks <input type="checkbox"/> no <input type="checkbox"/> yes _____ times in 24 hours</p> <p>If yes what do you use to feed the baby? _____</p> <p>Plot weight for age <input type="checkbox"/> low weight <input type="checkbox"/> not low weight <input type="checkbox"/> Poor weight gain</p> <p>If any difficulty feeding, feeding less than 8 times in 24 hours, taking any other food or drinks, or is low weight for age AND has no indication to refer urgently to hospital</p> <p><u>Assess breastfeeding</u> Breastfed in previous hour? <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>If the mother has not fed in the previous hour, ask the mother to put the child to the breast</p> <p>Observe the breastfeed for four minutes, check attachment:</p> <p>Chin touching breast <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Mouth wide open <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Lower lip turned out <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>More areola above than below the mouth <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p style="padding-left: 40px;"><input type="checkbox"/> <i>not attached</i> <input type="checkbox"/> <i>not well attached</i> <input type="checkbox"/> <i>Good attachment</i></p> <p>Is the young infant suckling effectively (that is, slow deep sucks, sometimes pausing)?</p> <p style="padding-left: 40px;"><input type="checkbox"/> Not sucking at all <input type="checkbox"/> not sucking effectively <input type="checkbox"/> suckling effectively</p> <p>Is thrush present?</p>	State feeding problems identified:
<p>CHECK FOR HIV INFECTION</p> <p><input type="checkbox"/> Does the mother or infant have had an HIV test?</p> <p><input type="checkbox"/> What was the result ?</p>	
<p>THEN CHECK FOR FEEDING PROBLEM OR LOW WEIGHT in infants receiving no breastmilk</p> <p>Difficulty feeding? <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p style="padding-left: 40px;">What made you decide not to breastfeed*? _____</p> <p>Which breastmilk substitute? _____</p> <p>Is enough milk being given in 24 hrs? <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Correct feed preparation? <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Any food or fluids other than milk? <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Feeding utensils: <input type="checkbox"/> cup <input type="checkbox"/> bottle</p> <p>Utensils cleaned adequately? <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Thrush present? <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p>Plot weight for age: <input type="checkbox"/> low weight <input type="checkbox"/> not low weight <input type="checkbox"/> Poor weight gain</p>	
<p>ARE THERE ANY SPECIAL RISK FACTORS PRESENT? <input type="checkbox"/> yes <input type="checkbox"/> no</p> <p><input type="checkbox"/> Premature or low birthweight <input type="checkbox"/> Young adolescent mother</p> <p><input type="checkbox"/> Birth asphyxia <input type="checkbox"/> Not breast fed</p> <p><input type="checkbox"/> Severe socioeconomic deprivation <input type="checkbox"/> Mother known to be HIV positive</p> <p>other _____</p>	
<p>CHECK THE YOUNG INFANTS IMMUNIZATION STATUS mark immunizations needed today</p> <p>Birth <input type="checkbox"/> BCG <input type="checkbox"/> OPV-0</p> <p>6weeks <input type="checkbox"/> OPV-1 <input type="checkbox"/> DPT+HIB-1 <input type="checkbox"/> HepB 1</p> <p>10weeks <input type="checkbox"/> OPV-2 <input type="checkbox"/> DPT+HIB-2 <input type="checkbox"/> HepB 2</p>	Return for next immunization on: _____ (Date)

Case 1: Mishu

Mishu is 3 months old. She weighs 5.5 kg. Her temperature is 38.0°C. She is in the clinic today because she has diarrhoea and fever.

She does not have any general danger signs.

The health worker assesses Mishu for diarrhoea. The mother says that she has had diarrhoea for 2 days and that there is blood in the stool. Mishu is not restless or irritable; she is not unconscious or lethargic. Her eyes are not sunken. She drinks normally. Her skin pinch goes back immediately.

The health worker next assesses Mishu for fever. The malaria risk is high at this time of year. The mother says that Mishu has had fever for 2 days. She has not had measles in the last 3 months. She does not have a stiff neck, bulging fontanelle or runny nose. There are no signs suggesting measles.

Mishu does not have an ear problem.

The health worker checks for malnutrition and anaemia. She does not have visible severe wasting. There is no palmar pallor and no oedema of both feet. The health worker determines her weight for age, which is not very low.

The health worker asks about feeding. Mishu is breastfed and also receives other fluids such as glucose water, traditional medicines and water, because it is hot and she is sometimes constipated. Mishu also gets thin cereal twice a day because the mother thinks that Mishu is big enough to receive it, and the mother does not have enough milk.

At birth Mishu received BCG and OPV 0. Four weeks ago, she received DPT 1 and OPV 1.

Record Mishu's signs and their classifications on the Recording Form.
Write down how Mishu should be managed including what follow-up care and counselling the mother should receive.

Case 2: Dan

Dan is 9 months old. He weighs 5.5 kg. His temperature is 39.5°C. His mother says he has had difficulty breathing for 3 days and diarrhoea for 15 days. He also has had an ear discharge for 15 days.

Dan does not have any general danger signs.

The health worker counted 55 breaths in one minute. The health worker looked for chest indrawing and listened for stridor. Dan did not have any chest in drawing or stridor.

The health worker assessed Dan for signs of diarrhoea. The mother said earlier that Dan has had diarrhoea for 15 days. Dan does have blood in the stool. He is not restless or irritable; he is not lethargic or unconscious. He has sunken eyes. He is thirsty and drinks eagerly when offered a drink. His skin pinch goes back slowly.

The health worker next assesses Dan for fever. The malaria risk is high at this time of year. The mother says that Dan has had fever for 2 days. He has not had measles in the last 3 months. He does not have a stiff neck, bulging fontanelle or runny nose. There are no signs suggesting measles.

The health worker noticed pus draining from Dan's ear. The mother says that the ear has been discharging pus for 15 days. There is no tender swelling behind the ear.

The health worker checked for signs of malnutrition and anaemia. Dan has visible severe wasting. There are no signs of palmar pallor. He does not have oedema of both feet. The health worker determined his weight for age.

Dan has had BCG, DPT 1, DPT 2, and DPT 3. He has also had OPV 0, OPV 1, OPV 2, OPV 3 and measles.

The health worker asks about feeding. Dan is breastfed and also receives other fluids and foods 3 times a day. His mother mixes his food with ground nuts and gives him fruit and vegetables once a week. For most of his meals Dan eats maize.

Record Dan's signs and their classifications on the Recording Form.
Write down how Dan should be treated and what counselling and follow-up he and his mother should receive.

Case 3: Ebai

Ebai is a tiny baby who was born exactly 2 weeks ago. His weight is 2.5 kg. His auxiliary temperature is 36.5° C. His mother says that he was born prematurely, at home, and was born much smaller than her other babies. She is worried because his umbilicus is red and draining pus. She says he has not had convulsions. The health worker counts his breathing and finds he is breathing at 55 breaths per minute. He has no chest indrawing, no nasal flaring and no grunting. His fontanelle is not bulging. There is no pus draining from his ears. His umbilicus has pus on the tip and is red but the redness does not extend to skin. The health worker looks over his entire body and finds no skin pustules. He is awake and content. He is moving a normal amount. He does not have diarrhoea.

Ebai's mother says that she has problems breastfeeding him and that he breastfeeds less than 8 times in 24 hours. She has not given him any other milk or drinks. The health worker checks his weight for age.

Since Ebai is low weight for age, the health worker decides to assess breastfeeding. His mother says that he is probably hungry now, and puts him to the breast. The health worker observes that Ebai's chin touches the breast, his mouth is wide open and his lower lip is turned outward. More areola is visible above than below the mouth. He is suckling with slow deep sucks, sometimes pausing. His mother continues feeding him until he is finished. The health worker sees no ulcers or white patches in his mouth.

Ebai has had no immunizations.

Write down Ebai's classifications and how he should be managed, including what follow-up care and counselling the mother should receive.

Case 4: Henri

Henri is a 3-week-old infant. His weight is 3.6 kg. His axillary temperature is 36.5°C. He is brought to the clinic because he is having difficulty breathing. The health worker first checks Henri for signs of possible bacterial infection. His mother says that Henri has not had convulsions. The health worker counts 74 breaths per minute. He repeats the count. The second count is 70 breaths per minute. He finds that Henri has mild chest indrawing and nasal flaring. He has no grunting. The fontanelle does not bulge. There is no pus in his ears, the umbilicus is normal, and there are no skin pustules. Henri is calm and awake, and his movements are normal. He does not have diarrhoea.

Henri's mother says that she has no difficulty feeding him. He breastfeeds about 8 times in 24 hours. She does not give him any other food or drink between feeds. The health worker uses the Weight for Age chart and determines that Henri's weight (3.6 kg) is not low for his age.

The health worker assesses breastfeeding. She finds that Henri is well attached and suckles effectively. He has no thrush.

When asked about immunizations, Henri's mother says that he was born at home and had no immunizations. There are no other problems.

Write down Henri's classifications and how he should be managed, including what follow-up care and counselling the mother should receive.



VIDEO EXERCISE A

Once you have completed the written case studies, you will do the following video exercise, which shows the whole IMCI algorithm. Working individually, record Martha's signs and classifications and management on a Recording Form, then discuss in a plenary with the whole group.

Exercise T (WHO IMCI video/DVD): "Martha"

4.0 FURTHER RECAP OF IMCI INCLUDING NEW IMCI TECHNICAL UPDATES

In this section participants review the IMCI algorithm using the wall chart and the chart booklet. Any areas of weaknesses identified, based on the previous written exercises, will be discussed and clarifications made. As we progress through each sub-section, relevant technical updates will be introduced - based upon a recent WHO review of evidence.

At the end of each sub-section, the facilitator will take participants through a drill, in order to practice recalling the information that they need to use when assessing and classifying sick children.

4.1 GENERAL DANGER SIGNS

Check ALL sick children aged 2 months up to 5 years for general danger signs.

A child with any general danger sign requires URGENT attention: complete the assessment, start pre-referral treatment and refer URGENTLY.

The facilitator will now take you through the following drill:

Drill: general danger signs

QUESTIONS	ANSWERS
A child is aged 2 months up to 5 years. <i>What are the 4 steps for checking for general danger signs?</i>	
<i>How do you decide if the child:</i>	
-- Is not able to drink or breastfeed?	
-- Vomits everything?	
-- Has had convulsions?	
-- Child is convulsing now?	
-- Is lethargic?	
-- Is unconscious?	

4.2 COUGH OR DIFFICULT BREATHING

Open your IMCI chart booklet to the page on cough and difficult breathing. Read through the charts. Remind yourself of the cut-offs for fast breathing for all age groups:

If the child is:	Fast breathing is:
up to 2 months	60 breaths per minute and repeated
2 months up to 12 months	50 breaths per minute or more
12 months up to 5 years	40 breaths per minute or more

Note that the WHO recommended duration of treatment for PNEUMONIA has been changed to 3 days (from 5 days) in low HIV prevalent countries after a review of evidence.

Note that WHO recommends the addition of wheezing into the cough or difficult breathing box as shown below. All children with wheeze should be tried with a rapid acting bronchodilator for three cycles every 15 minutes. A disappearance of chest indrawing or fast breathing in any of the cycles will exclude need for antibiotic treatment.

<ul style="list-style-type: none"> • Any general danger signs or • Chest indrawing or • Stridor in calm child 	<p>SEVERE PNEUMONIA OR VERY SEVERE DISEASE</p>	<ul style="list-style-type: none"> ➤ Give first dose of an appropriate antibiotic ➤ If wheezing give a trial of rapid acting bronchodilator for three cycles before classifying pneumonia ➤ Refer urgently to hospital 	red
<ul style="list-style-type: none"> • Fast breathing 	<p>PNEUMONIA</p>	<ul style="list-style-type: none"> ➤ Give oral antibiotic for 5 days ➤ If wheezing give a trial of rapid acting bronchodilator three times before classifying pneumonia ➤ Soothe the throat and relieve the cough with a safe remedy ➤ If recurrent wheezing refer for an assessment ➤ Assess for HIV infection ➤ If coughing for more than 30 days refer for possible TB or asthma ➤ Advise the mother when to return immediately ➤ Follow-up in 2 days 	yellow
<ul style="list-style-type: none"> • No signs of pneumonia or very severe disease 	<p>COUGH OR COLD</p>	<ul style="list-style-type: none"> ➤ If wheezing give an inhaled bronchodilator for 5 days ➤ If recurrent wheezing refer for assessment ➤ Soothe the throat and relieve the cough ➤ If coughing for more than 30 days refer for possible TB or asthma ➤ Advise the mother when to return immediately ➤ Follow-up in 2 days if not improving 	green

All children classified as having pneumonia should be checked for, SUSPECTED SYMPTOMATIC HIV INFECTION. You will learn more about this in Module 2.

The facilitator will now take you through the following drills on fast breathing and pneumonia and wheezing.

DRILL: fast breathing

QUESTION	ANSWER
<i>ASK: What is fast breathing in a child who is:</i>	
4 months old	
18 months old	
36 months old	
6 months old	
11 months old	
3 weeks old	
12 months old	
10 days old	
2 months old	

DRILL: Technical update for pneumonia and wheezing

QUESTIONS	ANSWERS
Which signs indicate that a child should be classified as SEVERE PNEUMONIA OR VERY SEVERE DISEASE?	
A child aged 12 months has PNEUMONIA. <i>What should be the duration of antibiotic treatment?</i>	

Continued on next page...

A child aged 2 months up to 5 years has a general danger sign and wheeze. <i>What is her classification?</i>	
For how many cycles should one give a rapid acting inhaled bronchodilator before classifying the child with wheeze?	
A child aged 9 months has received a trial of rapid-acting inhaled bronchodilator. He is now breathing at 55 breaths per minute and has no wheeze. <i>What is his classification?</i>	
A child aged 15 months has received a trial of rapid-acting inhaled bronchodilator. She is now breathing at 45 breaths per minute and has a wheeze. <i>What is her classification?</i>	
A child aged 11 months has received a trial of rapid-acting inhaled bronchodilator. He is now breathing at 44 breaths per minute and has no wheeze. <i>What is his classification?</i>	
A child aged 36 months has received a trial of rapid-acting inhaled bronchodilator. She is now breathing at 32 breaths per minute and has a wheeze. <i>What is her classification?</i>	
A 15 month old child has chest indrawing and a wheeze. <i>What is his classification?</i>	
A 44 months old child has stridor when calm and a wheeze. <i>What is his classification?</i>	
How would you treat a 13 month old child with a classification: SEVERE PNEUMONIA WITH WHEEZING OR VERY SEVERE DISEASE?	
How would you treat a 23 month old with PNEUMONIA WITH WHEEZING?	

4.3 DIARRHOEA

You will need to note that, following the WHO review, the ORS used for treating dehydration should be low osmolality ORS. Furthermore the treatment for SOME DEHYDRATION and NO DEHYDRATION has changed to include zinc, as follows:

SOME DEHYDRATION	<ul style="list-style-type: none"> ➤ Give fluid, zinc supplements and food for some dehydration (Plan B). ➤ If the child also has a severe classification, refer URGENTLY with the mother giving frequent sips of ORS on the way. Advise mother to continue breastfeeding. ➤ Advise mother when to return immediately 	yellow
NO DEHYDRATION	<ul style="list-style-type: none"> ➤ Give fluid, zinc supplements and food to treat diarrhoea at home (Plan A) ➤ Advise mother when to return immediately 	green

Note that there are now 4, not 3, rules for home treatment of diarrhoea:

1. Give extra fluid
2. **Give zinc supplements**
3. Continue feeding
4. When to return

The box describes how much zinc to give a child with diarrhoea. Read through the box and discuss amongst your group or with the facilitator if there are any questions.

GIVE ZINC SUPPLEMENTS(one tablet is 20 mg zinc)	
•	Tell the mother how much zinc to give:
	Up to 6 months ½ tablet per day for 14 days
	6 months or more 1 tablet per day for 14 days
•	Show the mother how to give zinc supplements
	Infants dissolve the tablet in a small amount of breast
	milk, ORS or clean water, in a small cup or
	spoon
	Older children tablets can be chewed or dissolved in a small
	amount of clean water in a cup or spoon
•	Remind the mother to give zinc supplements for the full 14 days

All children classified as having PERSISTENT DIARRHOEA should be checked for SUSPECTED SYMPTOMATIC HIV INFECTION. You will learn more about this in Module 2: Assess, Classify and Manage the Child for HIV/AIDS.

Persistent diarrhoea is commonly mismanaged by healthy workers. Therefore the management of a child with persistent diarrhoea is revised in greater detail below.

After you classify the child's dehydration, classify the child for persistent diarrhoea if the child has had diarrhoea for 14 days or more. There are two classifications for persistent diarrhoea.

- SEVERE PERSISTENT DIARRHOEA
- PERSISTENT DIARRHOEA

Follow the treatment guidelines for each classification.

Note that after a WHO review, the treatment of PERSISTENT DIARRHOEA has been modified (see box below):

And if diarrhoea 14 days or more	• Dehydration present	SEVERE PERSISTENT DIARRHOEA	➤ Treat dehydration before referral unless child has another severe classification ➤ Refer to hospital	red
	• No dehydration	PERSISTENT DIARRHOEA	➤ Advise the mother on feeding a child who has PERSISTENT DIARRHOEA ➤ Give multivitamins and zinc for 14 days ➤ Follow-up in 5 days	yellow

The feeding advice for a child with PERSISTENT DIARRHOEA is listed below:

- If still breastfeeding, give more frequent, longer breastfeeds, day and night.
- If taking other milk:
 - replace with increased breastfeeding OR
 - replace with fermented milk products, such as yoghurt OR
 - replace half the milk with nutrient-rich semisolid food.
- For other foods, follow feeding recommendations for the child's age.

The child with persistent diarrhoea should receive a **FOLLOW-UP** visit in 5 days. Read through the follow-up box in your chart booklet.

You should also note that the treatment for dysentery / blood in the stool has changed, as indicated in the box below:

CLASSIFY	TREAT
BLOOD IN THE STOOL/ DYSENTERY	<ul style="list-style-type: none"> ➤ Treat for 3 days with ciprofloxacin ➤ Treat dehydration ➤ Give zinc ➤ Follow-up in 2 days

yellow

The facilitator will now take you through the following drill:

DRILL: Technical update for diarrhoea

QUESTIONS	ANSWERS
How many signs are needed to classify a child as having SOME DEHYDRATION?	
Give two signs that may indicate that a child has SEVERE DEHYDRATION	
What type of ORS should be used to treat dehydration?	
Which children need zinc supplements?	
How will you give zinc supplements to a 4 month old infant with SOME DEHYDRATION?	
How will you give zinc supplements to a 37 month old child with NO DEHYDRATION?	
What are the 4 rules of home treatment of diarrhoea?	
How would you treat a 9 month old with a classification of DYSENTERY?	
How would you treat a 36 month old with a classification of DYSENTERY?	

4.4 FEVER

Malaria is a common cause of fever amongst children under 5 in malaria endemic areas. In previous years, chloroquine and Sulfadoxine-pyrimethamine (SP) were the first-line and second-line antimalarial drugs recommended in the IMCI guidelines of many countries. More recently, malaria case management has been greatly affected by the emergence and spread of firstly chloroquine and, increasingly, SP resistance. WHO now recommends the use of artemisinin-based combination therapies (ACT), which have been shown to improve treatment efficacy. The advantages of ACT are that it can very quickly reduce the number of malarial parasites and improve the symptoms.

Based on available data on safety and efficacy, the following options are available, and should be used if costs are not an issue (in prioritized order):

- artemether-lumefantrine (Coartem™)
- artesunate (3 days) plus amodiaquine
- artesunate (3 days) plus SP in areas where SP efficacy remains high
- SP plus amodiaquine in areas where efficacy of both amodiaquine and SP remain high (this is mainly limited to countries in West Africa).

Note that the antimalarials to be used for treatment of malaria will depend on the national policy guidelines.

The facilitator will take you through the following drill:

DRILL: Fever

QUESTIONS	ANSWERS
Should all children be classified for fever?	
What signs of measles should you look for?	
Which signs indicate that a child has SEVERE COMPLICATED MEASLES?	
Which signs indicate that a child has VERY SEVERE FEBRILE DISEASE?	
What are the fever classifications in a high malaria risk area?	
What are the fever classifications in a low malaria risk area	
In a high malaria risk area, which children should be classified as having malaria?	
How would you treat a child with VERY SEVERE FEBRILE DISEASE?	

4.5 EAR PROBLEM

You will need to note that, following the WHO review, oral amoxicillin is found to be a better choice for the management of acute ear infection in countries where antimicrobial resistance to co-trimoxazole is high. In addition, chronic ear infection should be treated with topical quinolone ear drops for at least two weeks in addition to dry ear-wicking. Quinolone ear drops may be that of norfloxacin, ciprofloxacin or ofloxacin given as a drop once daily for 14 days.

CLASSIFY	TREAT
CHRONIC EAR INFECTION	<ul style="list-style-type: none"> - Dry the ear by wicking - Treat with topical quinolone ear drops for two weeks - Follow up in 5 days

yellow

All children with ear discharge should be checked for SUSPECTED SYMPTOMATIC HIV INFECTION. You will learn more about this in Module 2.

DRILL: Ear Infection

QUESTIONS	ANSWERS
Which signs indicate that a child should be classified as having CHRONIC EAR INFECTION?	
How would you treat a child with CHRONIC EAR INFECTION?	
Which signs indicate that a child has MASTOIDITIS?	
Which signs indicate that a child should be classified as having ACUTE EAR INFECTION?	

4.6 MALNUTRITION AND ANAEMIA

Remember to check all sick children for signs suggesting malnutrition and / or anaemia. The technical updates for malnutrition and anaemia are as follows:

- All children with SEVERE MALNUTRITION SHOULD RECEIVE VITAMIN A – for treatment.
- All children with VERY LOW WEIGHT or NOT VERY LOW WEIGHT should routinely receive 6-monthly Vitamin A supplements.
- All children with malnutrition should be checked for SUSPECTED SYMPTOMATIC HIV INFECTION. You will learn more about this in Module 2.

DRILL: Malnutrition and anaemia

QUESTIONS	ANSWERS
Should all children be classified for malnutrition?	
Should all children be classified for anaemia?	
Which children should receive Vitamin A for treatment?	
Which children should routinely receive 6-monthly Vitamin A?	
When assessing and classifying for nutrition, which signs should one look for?	

4.7 THE SICK YOUNG INFANT

CAH in collaboration with the WHO regional offices and other collaborators has been working to improve the management of sick young infants because the identification and treatment of young infants with serious problems is unsatisfactory in most low resource settings. Data is now available from the recently completed 'Multicentre study of clinical signs predicting severe illness in young infants' in Bangladesh, Bolivia, Ghana, India (two sites), Pakistan (three community based sites) and South Africa. The objective of the study was to determine whether the IMCI algorithm based on a combination of signs and symptoms identified by a health worker at a first-level health facility, predict illness among young infants, which is severe enough to require management at a referral facility. A total of 8904 young infants were enrolled at nine sites and 35% were 0-6 days old, 36% 7-27 days and the rest from 28 to 59 days old. In light of this data, the 7-59 days young infant component of the IMCI guidelines has been simplified and the first week of life has now been included in the guidelines. This revised IMCI component addresses the recognition and management of serious problems in young infants with an acceptable sensitivity and specificity.

Review the IMCI algorithm for the young infant either using the wall chart or the chart booklet. The facilitator will take you through the following drill to practice assessing, classifying, treating and follow-up of the sick young infant:

DRILL: Sick young infant: Assess, classify and treat illness

QUESTIONS	ANSWERS
An infant aged 6 weeks has umbilical redness extending to the skin. <i>What is his classification?</i>	
A 3 week old infant has slight chest indrawing and localised skin pustules. <i>What is the classification?</i>	
How would you treat a 4 week old infant with VERY SEVERE DISEASE?	
A 2 day old infant has CONVULSIONS. <i>How would you treat the child?</i>	
What antibiotic would you use to treat a 4 week old infant with LOCAL BACTERIAL INFECTION?	
After how many days would you follow up an infant with LOCAL BACTERIAL INFECTION?	

5.0 SHORT ANSWER EXERCISES



SHORT ANSWER GROUP EXERCISE A: TREAT THE CHILD AND COUNSEL THE MOTHER

Answer the following short questions in the space provided. Do the exercises in small groups then discuss the answers with your facilitator.

1. How should you manage a child aged 5 months with cough and difficulty breathing and a general danger sign?

2. How do you manage a 5 month old with SOME DEHYDRATION and DYSENTERY?

3. How should you manage a 7 month old child with SEVERE DEHYDRATION?

4. How should you manage a 15 month old child with VERY SEVERE FEBRILE DISEASE living in a high risk malaria area?

5. How should a child with PERSISTENT DIARRHOEA BE MANAGED?

6. What feeding advice would you give to the mother of a 3 month old child? The child has NO PNEUMONIA: COUGH OR COLD and does not have diarrhoea, fever or ear problem. The child has been classified as NO ANAEMIA AND NOT VERY LOW WEIGHT. The mother and child do not know their HIV status.
7. What feeding advice would you give to the mother of an 8 month old child? The child has NO PNEUMONIA: COUGH OR COLD and diarrhoea with NO DEHYDRATION. The child does not fever or ear problem. The child has been classified as NO ANAEMIA AND NOT VERY LOW WEIGHT. The mother and child do not know their HIV status.



SHORT ANSWER GROUP EXERCISE B: FOLLOW-UP

Write a "T" by the statements that are True. Write an "F" by the statements that are False.

	True or false (T / F)	
A		A child with PEUMONIA should be followed up in 2 days.
B		A child with NO PNEUMONIA: COUGH OR COLD should be followed up in 5 days.
C		A child with diarrhoea and NO DEHYDRATION should be followed up in 2 days even if the child is improving.
D		A child with PERISTENT DIARRHOEA should be followed up in 5 days.
E		A child with DYSENTERY should be followed up in 5 days.
F		A child with VERY LOW WEIGHT should be followed up in 5 days if they have a feeding problem.
G		A child with ANAEMIA and no feeding problem should be followed up in 14 days.
H		A child with VERY LOW WEIGHT FOR AGE and no ANAEMIA and no feeding problem should be followed up in 30 days.

6.0 SUMMARY OF MODULE AND CLOSING

The facilitator will now ask participants to briefly summarize what topics have been covered by Module 1. Participants should call out what this module has taught them and the facilitator will list your responses on a flipchart.

Look back to the learning objectives for the module and provide your feedback as to whether you feel that these objectives have been met.

Participants should highlight any difficult areas, where you need further clarification and ask final questions.

You have now completed a recap of IMCI and a review of recent technical updates. You are now ready to proceed to Module 2, where you will learn how to assess, classify and manage the child for HIV/AIDS.

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