

Integrated Management of Child Health

**IMCI**  
**pre-service education**  
**Question bank**



World Health  
Organization

Regional Office for the Eastern Mediterranean





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## Foreword

*In the Name of God, the Compassionate, the Merciful*

Medical schools play a key role in preparing the future cadres of health professionals who will be providing child health care services in the community, whether in the public or private sector. It is recognized that investment to enhance teaching in these institutions is as important as other key public health interventions, as well as being of support to those interventions. Effective teaching contributes to improving the quality of health care in a country; also, upgrading teaching represents a long-term response to the health care needs of a community.

Since its inception in the 1990s, when the Integrated Management of Child Health (IMCI) strategy was introduced in the Eastern Mediterranean Region, the WHO Regional Office for the Eastern Mediterranean recognized the need to introduce IMCI not only in the public health system but also in the teaching programmes of medical schools. Thus, it collaborated closely with the medical schools in the Region, and pioneered efforts in this area globally. Wide experience has since been gained in the Region. Based on that experience, the Regional Office has developed this IMCI pre-service education package to support countries and institutions in introducing IMCI in their teaching programmes, and in evaluating its use using standard approaches.

The advantage of this IMCI pre-service education approach is that it can be integrated with existing teaching programmes and does not necessitate the creation of new vertical structures. Further, it enhances the process of skills development that is key to improving the quality of care to children. I trust this package, with the instruments it offers, will be of great benefit to guide and support teaching institutions in their efforts to further enhance the quality of their teaching and, eventually, to produce qualified professionals ready to sustain the challenges ahead.



Hussein A. Gezairy MD FRCS  
WHO Regional Director for the Eastern Mediterranean





## Preface

This publication is part of the IMCI pre-service education package developed by the WHO Regional Office for the Eastern Mediterranean. The package was developed as a set of tools to assist teaching institutions in introducing, implementing and assessing undergraduate teaching programmes that include the IMCI approach.

Medical and allied health professional schools play a key role in preparing the future cadres of health providers who will be providing child health care services in a country, whether in the public or private sector. An increasing number of medical schools in the Eastern Mediterranean Region have been taking steps in recent years to introduce the Integrated Management of Child Health (IMCI) approach into their undergraduate teaching programmes. The Regional Office, through its child and adolescent health and development programme, has been closely collaborating with these institutions in the task, when IMCI was introduced in the Region as a public health approach, and as an initiative to address future IMCI sustainability. Development of this package was based on this collaborative experience and on a recommendation from the Member States. It proposes a standard approach to each phase, from planning to evaluation.

The package comprises the following publications.

1. *IMCI pre-service education: orientation and planning workshop: facilitator guide* is designed to assist in the conduct of in-depth participatory workshops for teaching institutions to develop plans to introduce IMCI into the teaching programmes. The guide, tested in an intercountry workshop in July 2009, includes detailed guidelines, presentations and tools to support this task.
2. *IMCI pre-service education: teaching sessions*, with lesson plans to support planning and conduct of IMCI-related teaching sessions within the paediatric and community medicine teaching programmes, describes the student learning objectives, content and procedures of each session. The content was thoroughly reviewed by an expert group in 2008.
3. *IMCI pre-service education: guide to evaluation* is a comprehensive tool to assess whether IMCI pre-service education as a public health intervention improves students' competencies in managing main childhood health problems in outpatient settings. Extensively reviewed through expert consultations and tested in four medical schools, this guide comes with a user guide to data entry and analysis and a CD with the relevant e-forms and programme files.
4. *IMCI pre-service education: question bank* is a resource library of multiple-choice questions and case scenarios suitable for evaluations of IMCI pre-service education and student formative and summative assessments. It has already been used to develop student knowledge tests for evaluations in two medical schools, in 2009.
5. *IMCI pre-service education: e-lectures* on CD provides standard technical content as a resource to support IMCI-related teaching.
6. *IMCI pre-service education: e-learning material for students* on DVD is designed to support students' learning at their own pace through an electronic, interactive medium.



## Acknowledgements

The IMCI Question Bank was developed by the WHO Regional Office for the Eastern Mediterranean. It was prepared by Dr Sergio Pièche, Medical Officer, Child and Adolescent Health programme and reviewed by Dr Suzanne Farhoud, Regional Adviser.



## Introduction

The question bank is a library of multiple-choice questions (MCQs) and case scenarios based on the standard IMCI (Integrated Management of Child Health) guidelines. It can be used as a resource for:

- the evaluation of IMCI pre-service education;
- practical teaching sessions—especially the case scenarios—for students to practise applying knowledge to given situations;
- student formative knowledge assessment (monitoring); and
- student summative knowledge assessment (examinations).

The MCQs and case scenarios should be properly adapted before being used, based on the country IMCI guidelines, taking into account the conditions included, classifications used and treatment plans. The adaptation should also take into consideration the setting with respect to malaria (high, low, no malaria risk areas).

The question bank provides samples of questions and answers that can serve as examples in order to develop new MCQs and case scenarios or to modify the existing ones. This allows the choices available for IMCI pre-service education evaluations, student practice or student examinations to be increased, so that MCQs or case scenarios which have already been used can be replaced with new or modified ones.

The principles which have been followed to write the MCQs and case scenarios are given in the next section. These principles are recommended for the preparation of new questions or adaptation of those already included in the library.

It is important that the topics covered by MCQs and case scenarios be well distributed in a test, based on:

- the importance of each topic and the proportional time allocated to them in the overall teaching programme;
- the child age group (young infants vs older children);
- the step of the IMCI process (e.g. assessment and classification, assessment of feeding problems, identification of treatment, counselling and follow-up);
- the conditions addressed (e.g. cough or difficult breathing, diarrhoea, fever, throat problem, ear problem, malnutrition and anaemia, assessment of other problems, immunization and vitamin A supplementation status).

The questions are grouped into the following areas:

### Child age 2 months up to 5 years

- A. IMCI guidelines
- B. Assess and classify
- C. Assess feeding problems
- D. Identify treatment
- E. Counsel: checking questions, feeding problems and when to return

## Sick young infant age up to 2 months

F. Assess and classify

G. Identify treatment

The level of difficulty varies among questions. This should also be taken into account when selecting the questions to prepare a test, so as to find a good balance of difficulty throughout the test.

Instructions on how to use the questions in a student knowledge assessment test are given in the section “How to use these questions”. Students should select the correct answer options by circling the letter corresponding to those options. It should be emphasized clearly to the students that the test includes two types of questions, as indicated at the end of each question: one type requiring the selection of one and only one correct option; the other type including more than one correct option. In countries in which only one system is used during examinations—e.g. only one of the available options is correct, the MCQs and case scenarios in this data bank may be revised accordingly, although this is not essential if clear instructions are given before the test.



## Principles recommended for writing MCQs

When writing MCQs, it is advisable to adhere to a number of principles to make the best use of this instrument in developing or testing student knowledge. These principles are described in more detail in many other publications and well summarized in *Effective teaching – A guide for educating healthcare providers*<sup>1</sup>.

The MCQs and case scenarios should strictly relate to the learning objectives of a course, rather than be a general exercise out of the teaching context in which student knowledge is formed. These objectives must therefore be very clearly identified. To have a balanced test, the decision on which MCQ "items" to include in a test should take into account:

- what has been taught;
- how much time in teaching has been spent on the topics addressed in the MCQ test;
- the importance of these topics;
- the practical implications of the aspect of knowledge that is being tested; and
- the level of difficulty of each question.

True–false type questions should be avoided, as there is a 50% chance of students guessing the right answer. It is advisable to arrange items in a test by subject (e.g. assessment and classification, identification of treatment, etc.) and level of difficulty. The latter point is important to build student confidence at the beginning of the test starting with less difficult questions. Case scenarios, which entail a higher level of difficulty for students, should for this reason preferably be left to the end of the test, following the MCQs. In this respect, it should be noted that some MCQs in this question bank are in fact short case scenarios and, therefore, more complex than standard MCQs.

An MCQ, composed of the question and the answer multiple choices, is called "item". The question component of the item is called "stem" while the answer options are called "options". Of the options, correct answers are called "keys" and incorrect answers are called "distractors".

### Example of an MCQ item

#### Stem

Which of the following signs are "general danger signs" in a sick child age 11 months old? (circle all the correct options)

#### Options

- Axillary temperature  $\geq 39.0^{\circ}\text{C}$  ← **distractor**
- Lethargy ← **key**
- History of convulsions related to this illness ← **key**
- Blood in the stool ← **distractor**
- Axillary temperature  $\geq 37.5^{\circ}\text{C}$  for more than 7 days ← **distractor**

<sup>1</sup> WHO. JHPIECO. *Effective teaching: A guide for educating healthcare providers*. Geneva, World Health Organization, 2005. Available at [http://www.who.int/child\\_adolescent\\_health/documents/9241593806/en/index.html](http://www.who.int/child_adolescent_health/documents/9241593806/en/index.html) (accessed 21 October 2008)

## Summary of key principles followed in the MCQ bank

### Stem

- *Avoid controversial questions.*
- *Use simple, clear language.* Abbreviations and such terms as "seldom", "rarely", "occasionally", "sometimes", "often", "frequently", "few", "many" should be avoided, as they are imprecise and subjective. Questions should be straightforward, easy to understand and designed to test knowledge not comprehension of language.
- *Keep each item independent, so that it does not build on the previous one.* The exception is case scenarios where items (questions) may build on the answers given to previous questions.
- *Keep the stem as short as possible.* An exception is when the question contains some clinical data on the case. Longer stems require longer time for the student to read and understand the question before answering.
- *Use direct questions, preferably.*
- *Ask for the correct answer, rather than the wrong answer.* Avoid stating questions negatively (e.g. "It is not recommended that...").
- *Avoid using such terms as "never" or "always".* Absolute truth rarely applies in medicine.

### Options

- *List 4 to 5 options.<sup>2</sup>*
- *Use a similar structure for all the options* (i.e. keys and distractors), in terms of grammar, syntax and length, whenever possible. Make length of options short, including as many words as possible in the stem.
- *Place keys (correct options) at random* (e.g. avoid placing most keys in the b. and c. position).<sup>3</sup>
- *Follow a logical order when that applies* (e.g. in listing different medicine doses, order them from lower to higher dose rather than randomly, to make student identification of the correct option much faster when looking for it).
- *Avoid such options as "All of the above", "None of the above" or a combination of options* (e.g. A + B + D). This requires more reading time and the student may get confused. The main purpose of the test is about student knowledge rather than student comprehension of MCQs.
- *List "distractors" (incorrect options) which are realistic and plausible, on the one hand, and clearly incorrect, on the other hand, based on the IMCI guidelines.*

<sup>2</sup> When the question concerns an IMCI classification and the IMCI guidelines have only 3 classifications for a specific condition (e.g. child with cough or difficult breathing), only these 3 options are usually given in this question bank. This is because any other non-IMCI classification or diagnosis would very obviously appear not plausible to the student.

<sup>3</sup> For IMCI classifications, this question bank follows the same order as the IMCI chart booklet as a standard approach in listing the options.



## Test

- *Include a number of MCQ items in the test based on the time available to students for the test (estimate an average of 1.5 minutes per MCQs; more complex items and items with more text to read in the stem or options require more time).*
- *Use MCQs which have been tested before.* If you introduce any new MCQs to test them, then do not use these MCQs to determine students' score in this first test.
- *Include only a few MCQ items which are very easy (answered correctly by more than 90% of students) or too difficult (answered correctly by less than 30% of students). Preferably, include items which have an intermediate level of difficulty.<sup>4</sup>*

There are many institutions in which students are used to items which include only one correct answer (key) among the options listed, with all the others being incorrect (distractors). In these settings, the items of this question bank which have more than one correct answer may be adapted so as to have one and only one key, although this is not essential.



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<sup>4</sup> Consider also the discrimination index in your decision on which questions to include.



## How to use these questions

The MCQs and case scenarios contained in this question bank can be used in different ways, depending on whether they are part of the student knowledge assessment component of an evaluation of IMCI pre-service education, formative assessment (monitoring of student learning) or summative assessment (examinations). Below is a description of a number of steps to be carried out before, during and at the end of the test in an IMCI evaluation. With proper adaptation, these steps can serve as a guide to the use of MCQs and case scenarios in formative and summative assessments.<sup>5</sup>

### Before the test

- Identify the room where the test will be administered. Make sure that the room:
  - can comfortably accommodate all the students who will be performing the test, so that there is some distance from student to student both in a row and between rows;
  - is a quiet place as much as possible, well lit and ventilated.
- Check that all tests with MCQs and case scenarios are complete, pages are stapled in the right order and you have enough copies of the tests for all students.
- Check that there are enough copies of the "IMCI case recording form" (child age 2 months up to 5 years) available for each case scenario for each student for each case (one copy for each case scenario multiplied by the total number of students). For example, if the test includes 5 case scenarios and 30 students sit in the test, then 150 copies of the case recording form will be needed.
- Check that you have one copy of the IMCI chart booklet available for each student.

### On the morning of the test

- Inform the students of the time allocated to the test, this depending on the number of questions and case scenarios which have been included.
- Assign an ID code to each student (names can be retained for formative and summative assessments).
- Emphasize to the students that they will have to write the same ID code on the MCQs and case scenarios tests.
- Explain how to fill in the test, selecting the correct answer options by circling the letter to the left of the corresponding options.
- Emphasize that the MCQ and case scenario test includes two types of questions, as indicated at the end of each question:<sup>6</sup>
  - one type for which there is only one correct answer: they should circle one and only one of the options given, as instructed at the end of the question ("circle only ONE option"); and
  - the other type for which there is more than one correct answer: they should circle all the correct options in the list ("circle all the correct options").
- Remind them to complete all questions and scenarios carefully and to avoid guessing, as marks may be deducted for wrong answers.

<sup>5</sup> Information on sampling, scoring, data entry and analysis of the results is available in the *IMCI pre-service education: A guide to evaluation*, Cairo, WHO Regional Office for the Eastern Mediterranean, 2010 (available from <http://www.emro.who.int/cah>).

<sup>6</sup> In countries in which students are used to items which include only one correct option among those listed, the items of this question bank which have more than one correct option may be adapted so as to have one and only one option correct, although this is not essential.

- Emphasize that, for each question, "correct answer" refers exclusively to what is recommended in the IMCI guidelines.
- Clarify that if certain signs or symptoms are not specifically mentioned in the case scenarios, they should assume that those signs or symptoms are not present.
- Inform them that they may refer to the IMCI chart booklet and can use the "IMCI case recording form" to record information given in each case scenario to answer the related questions.
- Distribute the MCQs and case scenarios, together with the IMCI case recording forms, to students in the classroom.
- Distribute the IMCI chart booklet to those students who have not taken their own copy with themselves.
- Ask the students to hand over the completed tests to you individually as they finish it.

### During the test

- Stay in the room, ready to respond to any request for clarification.
- Move around the students from time to time to monitor progress of the test in terms of time.
- Collect the completed tests, as they are handed over to you by the students, and arrange them in order according to student IDs, immediately checking that all pages have been filled in.
- Collect the IMCI chart booklet that you have distributed at the beginning of the test.

### Soon after the test

- Inform the students of the correct answers to MCQs and case scenarios.
- Provide them with any clarification they may request.
- Thank the students for participating in the test.



## Multiple-choice question (MCQ) bank

### All children up to 5 years

#### A. IMCI GUIDELINES

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**A1. Which of the following are among the 5 main causes of mortality in under-five children in the country?** (circle all the correct options)

- a. Diarrhoeal diseases
- b. Pneumonia
- c. Road traffic injuries
- d. Malnutrition
- e. AIDS

**A2. For which of the following settings are the IMCI guidelines suitable for use?** (circle all the correct options)

- a. Inpatient ward of a district hospital
- b. Outpatient department of a hospital
- c. First-level health facilities
- d. Inpatient ward of a specialized hospital

**A3. Which of the following age groups do the IMCI clinical guidelines address?** (circle only ONE answer)

- a. Birth up to 5 years
- b. 2 months up to 2 years
- c. 1 week up to 5 years
- d. 2 months up to 6 years

**A4. Which of the following actions does a pink-coded classification require?** (circle all the correct options)

- a. Give pre-referral treatment
- b. Give medicines for home care
- c. Advise mother when to return immediately
- d. Refer urgently to hospital

**A5. Which of the following actions does a green-coded classification require?** (circle only ONE answer)

- a. Give pre-referral treatment
- b. Advise mother on home care
- c. Advise mother on antibiotic treatment
- d. Refer urgently to hospital

**A6. Which of the following colour-coded classification rows for fever of the IMCI chart booklet would apply to a 5-month-old child with fever and stiff neck? (circle only ONE option)**

- a. Pink colour-coded row
- b. Yellow colour-coded row
- c. Green colour-coded row

**A7. Which of the following colour-coded rows of the IMCI chart booklet applies to a 42-month-old child with diarrhoea who has sunken eyes, is thirsty and has no other problems? (circle only ONE option)**

- a. Pink colour-coded row
- b. Yellow colour-coded row
- c. Green colour-coded row

**A8. Which of the following are effective preventive interventions in children under-5? (circle all the correct options)**

- a. Antibiotics for pneumonia
- b. Immunization
- c. Prompt treatment of malaria
- d. Exclusive breastfeeding
- e. Treatment of tuberculosis

## Child age 2 months up to 5 years

### B. ASSESS AND CLASSIFY

---

#### MAIN SYMPTOMS

**B1. According to the IMCI guidelines, which of the following main symptoms should always be assessed in every sick child age 2 months up to 5 years? (circle all the correct options)**

- a. Cough
- b. Abdominal pain
- c. Fever
- d. Skin infection
- e. Diarrhoea

#### GENERAL DANGER SIGNS

**B2. Which of the following signs are "general danger signs" that you should always check for in every sick child age 2 months up to 5 years, according to the IMCI guidelines? (circle all the correct options)**

- a. Child is lethargic or unconscious
- b. Child is restless or irritable
- c. Child is not able to drink or breastfeed
- d. Child vomits frequently
- e. Child has cyanosis

**B3. Which of the following questions should you ask to check for "general danger signs" in a 3-month-old child with fever? (circle all the correct options)**

- a. How many times has s/he vomited in the past 24 hours?
- b. Has s/he been having fever for more than five days?
- c. Did s/he have convulsions since birth?
- d. Is s/he able to drink or breastfeed?
- e. Does s/he vomit everything?

**B4. Which of the following questions should you ask to check for "general danger signs" in a 4-month-old child with fever for 3 days? (circle only ONE option)**

- a. Is s/he able to drink or breastfeed?
- b. Has s/he been very irritable since illness started?
- c. How many times has s/he vomited in the past 24 hours?
- d. Did s/he have convulsions in the past month?

**B5. Which of the following signs are "general danger signs" in a sick child who is 11 months old?** (circle all the correct options)

- a. Axillary temperature  $\geq 39.0^{\circ}\text{C}$
- b. Lethargy
- c. History of convulsions related to this illness
- d. Blood in the stool
- e. Axillary temperature  $\geq 37.5^{\circ}\text{C}$  for more than 7 days

**B6. Which of the following signs is a "general danger sign" in a sick child who is 3 months old?** (circle only ONE option)

- a. Blood in the stool for 4 days
- b. Pus with blood draining from the ear
- c. Convulsions since birth
- d. Unable to breastfeed
- e. Axillary temperature  $\geq 39.0^{\circ}\text{C}$

**B7. Which of the following signs are "general danger signs" to be checked in any child 2 months up to 5 years brought to the health facility?** (circle all the correct options)

- a. Irritability
- b. Axillary temperature  $\geq 39.0^{\circ}\text{C}$
- c. Severe wheezing
- d. Not able to drink or breastfeed
- e. Unconsciousness

## COUGH OR DIFFICULT BREATHING

### • Respiratory rate

**B8. What is needed to count the respiratory rate correctly in an 11-month-old child with cough?** (circle all the correct options)

- a. Child should be calm
- b. Child should be alert
- c. A special timer is indispensable
- d. The count should always be repeated
- e. The count should be for a full minute

**B9. What is needed to count the respiratory rate correctly in a 3-month-old child with difficult breathing?** (circle all the correct options)

- a. Child should be calm
- b. Child should be afebrile
- c. A special timer is indispensable
- d. The count should always be repeated
- e. The count should be for a full minute



**B10. What is the cut-off rate for "fast breathing" in a child who is exactly 12 months old?** (circle only ONE answer)

- a. 60 breaths per minute
- b. 50 breaths per minute
- c. 40 breaths per minute
- d. 30 breaths per minute

**B11. What is "fast breathing" in a 3-month-old child?** (circle only ONE option)

- a. 20 breaths per minute or more
- b. 30 breaths per minute or more
- c. 40 breaths per minute or more
- d. 50 breaths per minute or more
- e. 60 breaths per minute or more

**B12. What is "fast breathing" in a 13-month-old child?** (circle only ONE option)

- a. 20 breaths per minute or more
- b. 30 breaths per minute or more
- c. 40 breaths per minute or more
- d. 50 breaths per minute or more
- e. 60 breaths per minute or more

**B13. Which of the following respiratory rates are "fast breathing" if the child is 11 months old?** (circle all the correct options)

- a. 22 breaths per minute
- b. 36 breaths per minute
- c. 41 breaths per minute
- d. 54 breaths per minute
- e. 60 breaths per minute

**B14. Which of the following respiratory rates are "fast breathing" if the child is 16 months old?** (circle all the correct options)

- a. 21 breaths per minute
- b. 32 breaths per minute
- c. 41 breaths per minute
- d. 53 breaths per minute
- e. 60 breaths per minute

• **Chest indrawing**

**B15. Which of the following movements of the lower chest describes chest indrawing?** (circle only ONE option)

- a. Inward movement during inspiration
- b. Inward movement during expiration
- c. Outward movement during inspiration
- d. Outward movement during expiration

**B16. Which of the following statements best describes chest indrawing?** (circle only ONE option)

- a. Inward movement of the lower chest during inspiration
- b. Inward movement of the lower chest during expiration
- c. Any intercostal retractions during inspiration
- d. Upper intercostal retractions during expiration

• **Wheezing**

**B17. Which of the following statements best describes wheezing?** (circle all the correct options)

- a. It is a harsh sound during inspiration
- b. It is a soft musical sound during expiration
- c. It is accompanied by prolonged expiration
- d. It is a soft musical sound during inspiration
- e. If heard leaning close to the child's mouth, it should be confirmed by auscultation

• **SEVERE PNEUMONIA OR VERY SEVERE DISEASE** <sup>7</sup>

**B18. Which of the following signs would make you classify a 9-month-old child with difficult breathing as SEVERE PNEUMONIA OR VERY SEVERE DISEASE?** (circle all the correct options)

- a. Not able to drink or breastfeed
- b. Chest indrawing
- c. Audible wheeze
- d. Respiratory rate of 55 breaths per minute
- e. Stridor when calm

<sup>7</sup> Although the classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines, it is reported in full in these MCQs as countries in the Region are still using it. MCQ options should be adapted according to the national IMCI guidelines.

**B19. Which of the following signs would make you classify a 4-month-old child with difficult breathing as SEVERE PNEUMONIA OR VERY SEVERE DISEASE? (circle all the correct options)**

- a. Stridor when calm
- b. Chest indrawing
- c. Restlessness
- d. Respiratory rate of 42 breaths per minute
- e. Breastfeeding less than usual

**B20. Which of the following signs would make you classify a 5-month-old child with difficult breathing as SEVERE PNEUMONIA OR VERY SEVERE DISEASE? (circle only ONE option)**

- a. Vomiting
- b. Irritability
- c. Stridor when calm
- d. Respiratory rate of 52 breaths per minute
- e. Restlessness

**B21. Which of the following signs would make you classify any child age 2 months up to 5 years presenting with cough as SEVERE PNEUMONIA OR VERY SEVERE DISEASE? (circle all the correct options)**

- a. Stridor when agitated
- b. Respiratory rate of 65 breaths per minute
- c. Difficult breathing
- d. Vomiting everything
- e. Stridor when calm

**B22. Which of the following signs would make you classify any child age 2 months up to 5 years presenting with cough as SEVERE PNEUMONIA OR VERY SEVERE DISEASE? (circle all the correct options)**

- a. Stridor when agitated
- b. Stridor when calm
- c. Difficult breathing when agitated
- d. Difficult breathing when calm
- e. Chest indrawing

**B23. Which of the following signs in a 5-month-old child with cough are an indication for urgent referral? (circle all the correct options)**

- a. Respiratory rate of 60 breaths per minute
- b. Unconsciousness
- c. Stridor when agitated
- d. Chest indrawing
- e. Axillary temperature  $\geq 39.0^{\circ}\text{C}$

**B24. Which of the following signs in a 12-month-old child with cough are an indication for urgent referral?** (circle all the correct options)

- a. Severe palmar pallor
- b. Respiratory rate of 65 per minute
- c. Axillary temperature  $\geq 39.0^{\circ}\text{C}$
- d. Visible severe wasting
- e. Restlessness

**B25. How do you classify a 3-year-old child with cough who has a respiratory rate of 55 breaths/ minute and chest indrawing?** (circle only ONE answer)

- a. SEVERE PEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. NO PNEUMONIA: COUGH OR COLD

**B26. How do you classify a 1-year-old child who has been coughing for 2 days, has a respiratory rate of 60 breaths/ minute and whose mother says he had convulsions last night?** (circle only ONE answer)

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. NO PNEUMONIA: COUGH OR COLD

**B27. How do you classify a 10-month-old child who has had cough for 4 days, has a respiratory rate of 52 breaths per minute, has chest indrawing and has no stridor?** (circle only ONE option)

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. NO PNEUMONIA: COUGH OR COLD

**B28. How do you classify a 5-month-old child who has had cough for 1 day, has a respiratory rate of 45 breaths per minute, has no stridor and has chest indrawing?** (circle only ONE option)

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. NO PNEUMONIA: COUGH OR COLD

**B29. How do you classify a 5-month-old child who has had difficulty breathing since this morning, has a respiratory rate of 35 breaths per minute, has stridor when calm and has no chest indrawing?** (circle only ONE option)

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. NO PNEUMONIA: COUGH OR COLD

• **PNEUMONIA** <sup>8</sup>

**B30. Which among the following situations classifies a child 2 months up to 5 years old as PNEUMONIA? (circle only ONE option)**

- a. Fast breathing, one general danger sign, no chest indrawing, no stridor
- b. Fast breathing, no general danger sign, chest indrawing, no stridor
- c. Fast breathing, no general danger sign, no chest indrawing, stridor
- d. Fast breathing, no general danger sign, no chest indrawing, no stridor
- e. Fast breathing, one general danger sign, chest indrawing, no stridor

**B31. How do you classify a 6-month-old child who has had cough for 2 days, has no general danger signs, has a respiratory rate of 54 breaths per minute, has no stridor and has no chest indrawing? (circle only ONE option)**

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. NO PNEUMONIA: COUGH OR COLD

**B32. How do you classify a 13-month-old child who has had cough for 4 days, has no general danger signs, has a respiratory rate of 48 breaths per minute, has no stridor and has no chest indrawing? (circle only ONE option)**

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. NO PNEUMONIA: COUGH OR COLD

• **NO PNEUMONIA: COUGH OR COLD** <sup>9</sup>

**B33. How do you classify an 18-month-old child who has had cough for 5 days, has no general danger signs, has a respiratory rate of 30 breaths per minute, has no stridor and has no chest indrawing? (circle only ONE option)**

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. NO PNEUMONIA: COUGH OR COLD

<sup>8</sup> Although the classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines, it is reported in full in these MCQs as countries in the Region are currently using it. MCQ options should be adapted according to the national IMCI guidelines.

<sup>9</sup> Although the classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines, it is reported in full in these MCQs as countries in the Region are still using it. MCQ options should be adapted according to the national IMCI guidelines.

**B34. How do you classify a 36-month-old child who has had cough for 3 days, has no general danger signs, has a respiratory rate of 29 breaths per minute, has no stridor and has no chest indrawing?** (circle only ONE option)

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. NO PNEUMONIA: COUGH OR COLD

### DIARRHOEA

**B35. According to the IMCI guidelines, which of the following key questions should be asked of the mother of every child with diarrhoea?** (circle all the correct options)

- a. For how long has the child had diarrhoea?
- b. Does the child have mucous in the stools?
- c. What did the child eat before the diarrhoea started?
- d. Does the child have blood in the stools?
- e. Does the child have pus in the stools?

**B36. Which of the following signs should you LOOK and FEEL for in an 8-month-old child with diarrhoea to classify his/her dehydration status?** (circle all the correct options)

- a. Lethargic or unconscious
- b. Skin turgor (skin pinch)
- c. Unable to drink
- d. Restless, irritable
- e. More than 3 watery stools

#### • Skin pinch

**B37. A "skin pinch goes back very slowly" if it returns:** (circle only ONE option)

- a. Immediately
- b. In less than 1 seconds
- c. In less than 2 seconds
- d. In 2 seconds or more
- e. In more than 2 seconds

**B38. What is the recommended procedure to take a skin pinch?** (circle all the correct options)

- a. Pinching the abdomen skin halfway between the umbilicus and the side of the abdomen
- b. Holding the skin firmly between the thumb and the side of the 1st finger
- c. Holding the skin firmly between the thumb and the tip of the 1st finger
- d. Holding the skin across the child's body
- e. Holding the skin in line up and down the child's body

**B39. What is the recommended procedure to take a skin pinch?** (circle all the correct options)

- a. Pinching all the layers of the skin
- b. Holding the skin across the child's body
- c. Holding the skin firmly between the thumb and the side of the 1st finger
- d. Holding the skin in line up and down the child's body
- e. Holding the skin firmly between the thumb and the next two fingers

• **SEVERE DEHYDRATION**

**B40. Which two among the following signs are required to classify a one-year-old child with diarrhoea as SEVERE DEHYDRATION?** (circle all the correct options)

- a. Skin pinch goes back slowly
- b. Restless
- c. Lethargic
- d. Unable to drink
- e. Vomiting

**B41. Which of the following children with diarrhoea are classified as having SEVERE DEHYDRATION?** (circle all the correct options)

- a. Skin pinch goes back very slowly and drinks eagerly
- b. Skin pinch goes back very slowly and lethargic
- c. Skin pinch goes back slowly and sunken eyes
- d. Skin pinch goes back very slowly and irritable
- e. Skin pinch goes back very slowly and sunken eyes

**B42. Which of the following children with diarrhoea are classified as having SEVERE DEHYDRATION?** (circle all the correct options)

- a. Sunken eyes and skin pinch goes back slowly
- b. Sunken eyes and skin pinch goes back very slowly
- c. Sunken eyes and lethargic
- d. Sunken eyes and restless
- e. Sunken eyes and not able to drink

**B43. How do you classify a 12-month-old child who has been having diarrhoea for 4 days, has no general danger signs, is irritable, has sunken eyes, drinks normally and in whom the skin pinch goes back in 3 seconds?** (circle only ONE option)

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

**B44. How do you classify an 8-month-old child who has been having diarrhoea for 13 days, is lethargic, has no sunken eyes, drinks poorly and in whom the skin pinch goes back slowly? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SEVERE DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- c. SOME DEHYDRATION
- d. SOME DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- e. NO DEHYDRATION
- f. NO DEHYDRATION, PERSISTENT DIARRHOEA

• **SOME DEHYDRATION**

**B45. Which of the following children with diarrhoea are classified as having SOME DEHYDRATION? (circle all the correct options)**

- a. Drinks eagerly and skin pinch goes back slowly
- b. Has had convulsions during this illness and drinks eagerly
- c. Has blood in the stool and is irritable
- d. Is restless and has sunken eyes
- e. Has sunken eyes and drinks normally

**B46. Which of the following children with diarrhoea are classified as having SOME DEHYDRATION? (circle all the correct options)**

- a. Sunken eyes and skin pinch goes back very slowly
- b. Sunken eyes and restless
- c. Sunken eyes and lethargic
- d. Sunken eyes and drinks eagerly
- e. Sunken eyes and blood in the stool

**B47. Which of the following children with diarrhoea are classified as having SOME DEHYDRATION? (circle all the correct options)**

- a. Thirsty and sunken eyes
- b. Thirsty and restless
- c. Thirsty and lethargic
- d. Thirsty and skin pinch goes back very slowly
- e. Thirsty and blood in the stool

**B48. How do you classify a 6-month-old child who has been having diarrhoea for 9 days, has vomited this morning, has sunken eyes and in whom the skin pinch goes back slowly? (circle only ONE option)**

- a. SEVERE DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- b. SEVERE DEHYDRATION
- c. SOME DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- d. SOME DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- e. NO DEHYDRATION



**B49. How do you classify a 22-month-old child who has been having diarrhoea for 12 days, is irritable, has sunken eyes, drinks eagerly and in whom the skin pinch goes back immediately? (circle only ONE option)**

- a. SEVERE DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- b. SEVERE DEHYDRATION
- c. SOME DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- d. SOME DEHYDRATION
- e. NO DEHYDRATION, PERSISTENT DIARRHOEA
- f. NO DEHYDRATION

**B50. How do you classify a 4-month-old child who has been having diarrhoea for 3 days, has no general danger signs, is alert, has no sunken eyes, is thirsty and in whom the skin pinch goes back slowly? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

• **NO DEHYDRATION**

**B51. How do you classify a 9-month-old child who has been having diarrhoea for 2 days, has no general danger signs, is irritable, has no sunken eyes, drinks normally and in whom the skin pinch goes back immediately? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

**B52. How do you classify a 9-month-old child who has been having diarrhoea for 2 days, has no general danger signs, is irritable, has no sunken eyes, drinks normally and in whom the skin pinch goes back immediately? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

**B53. How do you classify a 7-month-old child who has been having diarrhoea for 4 days, has no general danger signs, is alert, has vomited 2 times yesterday, has no sunken eyes, drinks eagerly and in whom the skin pinch goes back immediately? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

• **SEVERE PERSISTENT DIARRHOEA**

**B54. How do you classify a 5-month-old child who has been having diarrhoea for 15 days, has no general danger signs, is irritable, has sunken eyes, drinks eagerly and in whom the skin pinch goes back immediately? (circle only ONE option)**

- a. SEVERE DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- b. SEVERE DEHYDRATION
- c. SOME DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- d. SOME DEHYDRATION
- e. NO DEHYDRATION, PERSISTENT DIARRHOEA
- f. NO DEHYDRATION

**B55. How do you classify a 36-month-old child who has been having diarrhoea for 14 days, has no general danger signs, no other signs and no other problems? (circle all the correct options)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION
- d. SEVERE PERSISTENT DIARRHOEA
- e. PERSISTENT DIARRHOEA

**B56. How do you classify a 10-month-old child who has been having diarrhoea for 18 days, has no general danger signs, is irritable, has no sunken eyes, drinks eagerly and in whom the skin pinch goes back immediately? (circle all the correct options)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION
- d. SEVERE PERSISTENT DIARRHOEA
- e. PERSISTENT DIARRHOEA

**B57. How do you classify an 8-month-old child who has been having diarrhoea for 21 days, has no general danger signs, is quiet but alert, has no sunken eyes, drinks eagerly and in whom the skin pinch goes back slowly? (circle all the correct options)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION
- d. SEVERE PERSISTENT DIARRHOEA
- e. PERSISTENT DIARRHOEA

**• PERSISTENT DIARRHOEA**

**B58. Which of the following is consistent with a classification of PERSISTENT DIARRHOEA?** (circle only ONE option)

- a. Diarrhoea lasting for 7 days or more
- b. Diarrhoea lasting for more than 7 days
- c. Diarrhoea lasting for more than 10 days
- d. Diarrhoea lasting for 14 days or more
- e. Diarrhoea lasting for more than 14 days

**B59. What is required to classify the illness of a child age 2 months up to 5 years as PERSISTENT DIARRHOEA?** (circle only ONE option)

- a. Blood in the stools for 14 days or more
- b. Diarrhoea lasting for 14 days or more and fever
- c. Diarrhoea lasting for 14 days or more
- d. Diarrhoea lasting for more than 14 days
- e. Blood in the stools for more than 14 days

**B60. How do you classify a 14-month-old child who has had diarrhoea for 15 days, has sunken eyes and has no other signs?** (circle all the correct options)

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION
- d. SEVERE PERSISTENT DIARRHOEA
- e. PERSISTENT DIARRHOEA

**B61. How do you classify a 10-month-old child who has been having diarrhoea for 15 days, has no general danger signs, is alert, has sunken eyes, drinks normally and in whom the skin pinch goes back immediately?** (circle all the correct options)

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION
- d. SEVERE PERSISTENT DIARRHOEA
- e. PERSISTENT DIARRHOEA

**B62. How do you classify a 4-month-old child who has been having diarrhoea for 16 days, is not breast-fed, has no general danger signs, is alert, has no sunken eyes, drinks eagerly and in whom the skin pinch goes back immediately?** (circle all the correct options)

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION
- d. SEVERE PERSISTENT DIARRHOEA
- e. PERSISTENT DIARRHOEA

**B63. How do you classify a 23-month-old child who has been having diarrhoea for 20 days, has no general danger signs, is alert, has no sunken eyes, drinks normally and in whom the skin pinch goes back slowly? (circle all the correct options)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION
- d. SEVERE PERSISTENT DIARRHOEA
- e. PERSISTENT DIARRHOEA

**B64. How do you classify a 23-month-old child who has been having diarrhoea for 20 days, has no general danger signs, is alert, has sunken eyes, drinks eagerly and in whom the skin pinch goes back immediately? (circle all the correct options)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION
- d. SEVERE PERSISTENT DIARRHOEA
- e. PERSISTENT DIARRHOEA

**B65. How do you classify a 23-month-old child who has been having diarrhoea for 21 days, has no general danger signs, is alert, has no sunken eyes, drinks normally and in whom the skin pinch goes back slowly? (circle only ONE option)**

- a. SEVERE DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- b. SOME DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- c. NO DEHYDRATION, PERSISTENT DIARRHOEA

**B66. How do you classify a 19-month-old child who has been having diarrhoea for 17 days, has no general danger signs, is irritable, has no sunken eyes, drinks normally and in whom the skin pinch goes back immediately? (circle all the correct options)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION
- d. SEVERE PERSISTENT DIARRHOEA
- e. PERSISTENT DIARRHOEA

**B67. How do you classify a 19-month-old child who has been having diarrhoea for 17 days, has no general danger signs, is irritable, has no sunken eyes, drinks normally and in whom the skin pinch goes back immediately? (circle only ONE option)**

- a. SEVERE DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- b. SOME DEHYDRATION, SEVERE PERSISTENT DIARRHOEA
- c. NO DEHYDRATION, PERSISTENT DIARRHOEA

### • DYSENTERY

**B68. How do you classify a 7-month-old child who has been having diarrhoea for 5 days with blood in the stools, has no general danger signs, is alert, has sunken eyes, drinks normally and in whom the skin pinch goes back immediately?** (circle only ONE option)

- SEVERE DEHYDRATION, DYSENTERY
- SOME DEHYDRATION, DYSENTERY
- NO DEHYDRATION, DYSENTERY

**B69. Which of the following classifications apply to a 5-month-old child who has been having diarrhoea for 15 days with blood in the stools, has no general danger signs, has sunken eyes, drinks normally and in whom the skin pinch goes back immediately?** (circle all the correct options)

- SOME DEHYDRATION
- NO DEHYDRATION
- SEVERE PERSISTENT DIARRHOEA
- PERSISTENT DIARRHOEA
- DYSENTERY

### FEVER

**B70. A child should be assessed for the main symptom of fever if the child:** (circle all the correct options)

- Has a history of fever
- Does not feel well
- Feels hot to the touch
- Has axillary temperature of 37.0°C or above
- Has axillary temperature of 37.5°C or above

### • VERY SEVERE FEBRILE DISEASE

#### High malaria risk area

**B71. Which of the following signs would make you classify as VERY SEVERE FEBRILE DISEASE a 2-year-old child, living in a high malaria risk area, who has had fever for the last three days?** (circle all the correct options)

- Lethargy
- Fine erythematous rash
- Stiff neck
- Convulsions last night
- Blood in stool

**B72. How do you classify a 7-month-old child living in a high malaria risk area who has an axillary temperature of 38.0°C and is lethargic? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. MALARIA
- c. FEVER – MALARIA UNLIKELY

**B73. How do you classify a 3-year-old child living in a high malaria risk area who has a history of fever for 2 days, has an axillary temperature of 39.5°C and in whom there is resistance when you try to bend his neck forward toward his chest? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. MALARIA
- c. FEVER – MALARIA UNLIKELY

**B74. How do you classify a 17-month-old child living in a high malaria risk area who has a history of fever for 4 days, has an axillary temperature of 38.6°C and had an episode of convulsions last night? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. MALARIA
- c. FEVER – MALARIA UNLIKELY

**B75. How do you classify a 27-month-old child living in a high malaria risk area who has a history of fever for 2 days, has an axillary temperature of 38.0°C and is lethargic? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. MALARIA
- c. FEVER – MALARIA UNLIKELY

### **Low malaria risk area**

**B76. Which of the following signs should a 9-month-old child living in a low malaria risk area have to be classified as having VERY SEVERE FEBRILE DISEASE? (circle all the correct options)**

- a. Child is lethargic
- b. Child has a positive thick blood film
- c. Child has an axillary temperature of 39.0°C
- d. Child is unconscious
- e. Child is vomiting frequently

**B77. Which of the following signs would make you classify as VERY SEVERE FEBRILE DISEASE a 2-year-old child, living in a low malaria risk area, who has had fever for the last three days? (circle all the correct options)**

- a. Vomiting everything
- b. Fine erythematous rash
- c. Stiff neck
- d. Convulsions last night
- e. Blood in stool

**B78. How do you classify a 3-year-old child living in a low malaria risk area who has a history of fever for 2 days, has an axillary temperature of 39.5°C and in whom there is resistance when you try to bend his neck forward toward his chest? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. MALARIA
- c. FEVER – MALARIA UNLIKELY

**B79. How do you classify a 17-month-old child living in a low malaria risk area who has a history of fever for 4 days, has an axillary temperature of 38.6°C and had an episode of convulsions last night? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. MALARIA
- c. FEVER – MALARIA UNLIKELY

**B80. How do you classify a 27-month-old child living in a low malaria risk area who has a history of fever for 2 days, has an axillary temperature of 38.0°C and is lethargic? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. MALARIA
- c. FEVER – MALARIA UNLIKELY

### **No malaria risk area**

**B81. How do you classify a 4-year-old child who has an axillary temperature of 38.8°C and in whom there is resistance to bending when you try to bend his neck forward toward his chest? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. FEVER-POSSIBLE BACTERIAL INFECTION
- c. FEVER-BACTERIAL INFECTION UNLIKELY

**B82. Which of the following signs would make you classify as VERY SEVERE FEBRILE DISEASE a 2-year-old child, who arrived from a no malaria risk area five days ago and has had fever for the last three days (he lives in a no malaria risk area)? (circle all the correct options)**

- a. Lethargy
- b. Fine erythematous rash
- c. Stiff neck
- d. Convulsions last night
- e. Blood in stool

**B83. How do you classify a 3-year-old child living in a no malaria risk area who has a history of fever for 2 days, has an axillary temperature of 39.5°C and in whom there is resistance when you try to bend his neck forward toward his chest? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. FEVER – POSSIBLE BACTERIAL INFECTION
- c. FEVER – BACTERIAL INFECTION UNLIKELY

**B84. How do you classify a 17-month-old child living in a no malaria risk area who has a history of fever for 4 days, has an axillary temperature of 38.6°C and had an episode of convulsions last night? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. FEVER – POSSIBLE BACTERIAL INFECTION
- c. FEVER – BACTERIAL INFECTION UNLIKELY

**B85. How do you classify a 27-month-old child living in a no malaria risk area who has a history of fever for 2 days, has an axillary temperature of 38.0°C and is lethargic? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. FEVER – POSSIBLE BACTERIAL INFECTION
- c. FEVER – BACTERIAL INFECTION UNLIKELY

## • MALARIA

### High malaria risk area

**B86. Which of the following signs would make you classify as MALARIA an 18-month-old child, living in a high malaria risk area, who has had fever for the last three days? (circle all the correct options)**

- a. Lethargy
- b. History of fever
- c. Stiff neck
- d. Convulsions last night
- e. Axillary temperature of 37.5°C or more



**B87. How would you classify children age 2 months up to 5 years who are taken to a health centre with fever and no other signs in a high malaria risk area? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. CEREBRAL MALARIA
- c. MALARIA
- d. FEVER – MALARIA UNLIKELY

### Low malaria risk area

**B88. Which of the following signs or symptoms would make you classify as MALARIA a 9-month-old child, living in a low malaria risk area, who has had fever for the last three days, no runny nose, no measles and no other cause of fever? (circle only ONE option)**

- a. Lethargy
- b. History of fever
- c. Stiff neck
- d. Convulsions last night
- e. Vomiting

**B89. How do you classify a 6-month-old child living in a low malaria risk area who has a history of fever for 2 days, is hot to the touch, has no general danger signs, no stiff neck, no generalized rash, no cough, no runny nose, no red eyes and no other cause of fever? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. MALARIA
- c. FEVER – MALARIA UNLIKELY

### • FEVER – POSSIBLE INFECTION UNLIKELY

### No malaria area

**B90. How do you classify a 22-month-old child living in a no malaria risk area who has a history of fever for 4 days, has an axillary temperature of 38.6°C, had an episode of convulsions three months ago and has no other signs? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE
- b. FEVER – POSSIBLE BACTERIAL INFECTION
- c. FEVER – BACTERIAL INFECTION UNLIKELY

**B91. How do you classify a 10-month-old child living in a low malaria risk area who had a generalized rash with fever and red eyes three weeks ago, now has an axillary temperature of 38.3°C, no general danger signs, has pus draining from the eye, has no other signs nor causes of fever? (circle only ONE option)**

- VERY SEVERE FEBRILE DISEASE
- MALARIA, MEASLES
- FEVER – MALARIA UNLIKELY, SEVERE COMPLICATED MEASLES
- FEVER – MALARIA UNLIKELY, MEASLES WITH EYE OR MOUTH COMPLICATIONS
- MEASLES

## THROAT PROBLEM

### • STREPTOCOCCAL SORE THROAT

**B92. Which of the following signs are used to classify a child with fever or sore throat as having STREPTOCOCCAL SORE THROAT? (circle all the correct options)**

- Severe pain in the throat
- Enlarged tender lymph node(s) on the front of the neck
- Not able to drink
- White or yellow exudate on the throat or tonsils
- Red (congested) throat

**B93. How do you classify a 48-month-old child who has sore throat, a red throat and enlarged tender lymph nodes on the front of his neck? (circle only ONE option)**

- STREPTOCOCCAL SORE THROAT
- NON-STREPTOCOCCAL SORE THROAT
- NO THROAT PROBLEM

**B94. How do you classify a 39-month-old child who has sore throat, yellow exudate on his tonsils and enlarged tender lymph nodes on the front of his neck? (circle only ONE option)**

- STREPTOCOCCAL SORE THROAT
- NON-STREPTOCOCCAL SORE THROAT
- NO THROAT PROBLEM

### • NON-STREPTOCOCCAL SORE THROAT

**B95. How do you classify a 42-month-old child who has a sore and red throat and no other signs?(circle only ONE option)**

- STREPTOCOCCAL SORE THROAT
- NON-STREPTOCOCCAL SORE THROAT
- NO THROAT PROBLEM

## EAR PROBLEM

### • Signs

**B96. Which of the following signs are used to classify an ear problem in a 3-year-old child with ear pain? (circle all the correct options)**

- a. Swelling behind the ear
- b. Tender swelling in front of the ear
- c. Redness of ear pinna (auricle)
- d. Tender swelling behind the ear
- e. Pus draining from the ear

### • MASTOIDITIS

**B97. Which of the following signs must a child have to be classified as having MASTOIDITIS? (circle only ONE option)**

- a. Redness behind the ear
- b. Swelling behind the ear
- c. Pus draining from one of the ears
- d. Pus draining from both ears
- e. Tender swelling behind the ear

**B98. How do you classify a 16-month-old child who has ear pain, no pus draining from the ear and has a tender swelling behind the ear? (circle only ONE option)**

- a. MASTOIDITIS
- b. ACUTE EAR INFECTION
- c. CHRONIC EAR INFECTION
- d. NO EAR INFECTION

### • ACUTE EAR INFECTION

**B99. How do you classify a two-year-old child with an axillary temperature of 37.5°C, pus seen coming from the ear and no tender swelling behind the ear whose mother says that pus has been coming for 5 days? (circle only ONE option)**

- a. MASTOIDITIS
- b. ACUTE EAR INFECTION
- c. CHRONIC EAR INFECTION
- d. NO EAR INFECTION

**B100. How do you classify a 20-month-old child whose mother reports that her child has been having ear pain for 5 days with discharge for 3 days, and in whom you observe pus draining from the right ear and find no tender swelling behind the ear? (circle only ONE option)**

- a. MASTOIDITIS
- b. ACUTE EAR INFECTION
- c. CHRONIC EAR INFECTION
- d. NO EAR INFECTION

**B101. How do you classify a 7-month-old child, who keeps crying and is irritable, whose mother reports she is worried that her child might have been having ear pain for 2 days and in whom you find no tender swelling behind the ear and no pus draining from either ear? (circle only ONE option)**

- a. MASTOIDITIS
- b. ACUTE EAR INFECTION
- c. CHRONIC EAR INFECTION
- d. NO EAR INFECTION

**B102. How do you classify a 4-year-old child whose mother reports that her child has been having ear pain with discharge from the right ear for 13 days, and in whom you observe pus draining from the right ear and find no tender swelling behind the ear? (circle only ONE option)**

- a. MASTOIDITIS
- b. ACUTE EAR INFECTION
- c. CHRONIC EAR INFECTION
- d. NO EAR INFECTION

• **CHRONIC EAR INFECTION**

**B103. How do you classify a 10-month-old child whose mother reports that pus has been coming out of her child's left ear for 16 days, has an axillary temperature of 38.1°C, has no tender swelling behind the ear, has yellow discharge from the left ear upon examination and no other signs? (circle only ONE option)**

- a. MASTOIDITIS
- b. ACUTE EAR INFECTION
- c. CHRONIC EAR INFECTION
- d. NO EAR INFECTION

**B104. How do you classify an 8-month-old child whose mother reports that pus has been coming out of her child's right ear for 14 days, has an axillary temperature of 37.7°C, has no tender swelling behind the ear, has yellow discharge from the right ear upon examination and no other signs? (circle only ONE option)**

- MASTOIDITIS
- ACUTE EAR INFECTION
- CHRONIC EAR INFECTION
- NO EAR INFECTION

### NUTRITIONAL STATUS

**B105. Which children brought to an outpatient clinic should be checked for malnutrition and anaemia? (circle only ONE option)**

- Children with feeding problem(s) only
- Children who are less than 12 months of age only
- All children from 2 months up to 5 years
- Only children who are not breastfed

#### • Signs

**B106. Which of the following signs are used to check for malnutrition? (circle all the correct options)**

- Weight for age
- Mouth ulcers
- Oedema of both feet
- Skin pigmentation
- Visible severe wasting

#### • SEVERE MALNUTRITION <sup>10</sup>

**B107. How do you classify a 25-month-old child who has oedema of both feet and is not low weight for age? (circle only ONE option)**

- SEVERE MALNUTRITION
- LOW WEIGHT
- NOT LOW WEIGHT

**B108. How do you classify a 6-month-old boy who has oedema of both feet and whose weight-for-age is between  $< - 2$  and  $> - 3$  Z-score? (circle only ONE option)**

- SEVERE MALNUTRITION
- LOW WEIGHT
- NOT LOW WEIGHT

<sup>10</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

• **LOW WEIGHT**<sup>11</sup> (WITH OR WITHOUT ANAEMIA)

**B109. How do you classify a 19-month-old child who has oedema only of the left foot and who is low weight for age? (circle only ONE option)**

- a. SEVERE MALNUTRITION
- b. LOW WEIGHT
- c. NOT LOW WEIGHT

**B110. How do you classify a 10-month-old girl who weighs 6.5 kg and has some palmar pallor? (circle all the correct options)**

- a. SEVERE MALNUTRITION
- b. LOW WEIGHT
- c. SEVERE ANAEMIA
- d. NO ANAEMIA
- e. ANAEMIA
- f. NOT LOW WEIGHT

**B111. How do you classify an 11-month-old boy whose weight is between  $< - 2$  and  $> - 3$  Z-score and who has some palmar pallor? (circle only ONE option)**

- a. SEVERE MALNUTRITION, SEVERE ANAEMIA
- b. LOW WEIGHT, SEVERE ANAEMIA
- c. SEVERE MALNUTRITION, ANAEMIA
- d. LOW WEIGHT, ANAEMIA
- e. NOT LOW WEIGHT, ANAEMIA

**B112. How do you classify a 7-month-old girl whose weight is 5 kg? (circle only ONE option)**

- a. SEVERE MALNUTRITION
- b. LOW WEIGHT
- c. NOT LOW WEIGHT

**B113. How do you classify a 7-month-old girl whose weight is between  $< - 2$  and  $> - 3$  Z-score and who has some palmar pallor? (circle only ONE option)**

- a. SEVERE MALNUTRITION, SEVERE ANAEMIA
- b. MARASMUS, ANAEMIA
- c. LOW WEIGHT, ANAEMIA
- d. NOT LOW WEIGHT, ANAEMIA
- e. NOT LOW WEIGHT, NO ANAEMIA

<sup>11</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

**B114. How do you classify a 9-month-old boy whose weight is between  $< - 2$  and  $> - 3$  Z-score and who has no palmar pallor? (circle only ONE option)**

- SEVERE MALNUTRITION, NO ANAEMIA
- LOW WEIGHT, NO ANAEMIA
- LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, NO ANAEMIA

**B115. How do you classify a 9-month-old boy weighing 5 kg who has severe palmar pallor and no other signs? (circle only ONE option)**

- SEVERE MALNUTRITION, SEVERE ANAEMIA
- LOW WEIGHT, SEVERE ANAEMIA
- LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, SEVERE ANAEMIA
- NOT LOW WEIGHT, ANAEMIA

## ANAEMIA

### • SEVERE ANAEMIA

**B116. How do you classify a 12-month-old child who has severe palmar pallor? (circle only ONE option)**

- SEVERE ANAEMIA
- ANAEMIA
- NO ANAEMIA

### • ANAEMIA

**B117. How do you classify a 4-month-old child who has some palmar pallor? (circle only ONE option)**

- SEVERE ANAEMIA
- ANAEMIA
- NO ANAEMIA

**B118. How do you classify an 8-month-old male child who has some palmar pallor and weighs 7.2 kg? <sup>12</sup> (circle only ONE option)**

- SEVERE ANAEMIA, LOW WEIGHT
- ANAEMIA, LOW WEIGHT
- ANAEMIA, NOT LOW WEIGHT
- NO ANAEMIA, LOW WEIGHT
- NO ANAEMIA, NOT LOW WEIGHT

<sup>12</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

### SEVERAL CONDITIONS PRESENT AT THE SAME TIME

**B119. In a 12-month-old child with cough and diarrhoea, which of the following signs is an indication for urgent referral? (circle only ONE answer)**

- a. Restless, irritable
- b. Respiratory rate of 65 per minute
- c. Axillary temperature  $\geq 39.0^{\circ}\text{C}$
- d. Thirsty
- e. Child unable to breastfeed

**B120. In a 20-month-old child with cough and diarrhoea, which of the following signs are an indication for urgent referral? (circle all the correct options)**

- a. Vomiting everything
- b. Respiratory rate of 55 per minute
- c. Thirsty
- d. Child unable to drink
- e. Axillary temperature  $\geq 39.0^{\circ}\text{C}$

**B121. How do you classify a 2-year-old child with cough and diarrhoea who has a respiratory rate of 55 breaths/ minute, chest indrawing, sunken eyes, in whom the skin pinch goes back slowly, has no general danger signs and no other signs or symptoms <sup>13</sup> ? (circle only ONE answer)**

- a. SEVERE PEUMONIA OR VERY SEVERE DISEASE, SEVERE DEHYDRATION
- b. SEVERE PEUMONIA OR VERY SEVERE DISEASE, SOME DEHYDRATION
- c. SEVERE PEUMONIA OR VERY SEVERE DISEASE, NO DEHYDRATION
- d. PNEUMONIA, SEVERE DEHYDRATION
- e. PNEUMONIA, SOME DEHYDRATION
- f. PNEUMONIA, NO DEHYDRATION

**B122. How do you classify an 8-month-old child who has had diarrhoea for 7 days and difficulty breathing since this morning, has no general danger signs, has a respiratory rate of 39 breaths per minute, has sunken eyes, in whom the skin pinch goes back very slowly and has no other signs or symptoms <sup>14</sup> ? (circle only ONE option)**

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE, SEVERE DEHYDRATION
- b. SEVERE PNEUMONIA OR VERY SEVERE DISEASE, SOME DEHYDRATION
- c. PNEUMONIA, SEVERE DEHYDRATION
- d. PNEUMONIA, SOME DEHYDRATION
- e. NO PNEUMONIA: COUGH OR COLD, SEVERE DEHYDRATION
- f. NO PNEUMONIA: COUGH OR COLD, SOME DEHYDRATION

<sup>13</sup> "No other signs or symptoms" here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>14</sup> "No other signs or symptoms" here refers to the absence of signs and symptoms listed in the IMCI guidelines.



**B123. How do you classify a 4-year-old child who has had cough, an ear problem and has often been crying for 2 days, has no general danger signs, has a respiratory rate of 54 breaths per minute, has ear pain and no other signs or symptoms <sup>15</sup> ? (circle only ONE option)**

- SEVERE PNEUMONIA OR VERY SEVERE DISEASE, ACUTE EAR INFECTION
- SEVERE PNEUMONIA OR VERY SEVERE DISEASE, NO EAR INFECTION
- PNEUMONIA, ACUTE EAR INFECTION
- PNEUMONIA, NO EAR INFECTION
- NO PNEUMONIA: COUGH OR COLD, ACUTE EAR INFECTION
- NO PNEUMONIA: COUGH OR COLD, NO EAR INFECTION

**B124. How do you classify a 12-month-old child who has had cough and diarrhoea for 4 days, has no general danger signs, is irritable, has a respiratory rate of 44 breaths per minute, has sunken eyes, drinks eagerly, in whom the skin pinch goes back slowly and has no other signs or symptoms <sup>16</sup> ? (circle only ONE option)**

- SEVERE PNEUMONIA OR VERY SEVERE DISEASE, SEVERE DEHYDRATION
- SEVERE PNEUMONIA OR VERY SEVERE DISEASE, SOME DEHYDRATION
- PNEUMONIA, SEVERE DEHYDRATION
- PNEUMONIA, SOME DEHYDRATION
- NO PNEUMONIA: COUGH OR COLD, SEVERE DEHYDRATION
- NO PNEUMONIA: COUGH OR COLD, SOME DEHYDRATION

**B125. How do you classify a 45-month-old child who has been having diarrhoea for 9 days, has no general danger signs, has ear pain, has vomited once last night and eaten a small snack this morning, has sunken eyes, in whom the skin pinch goes back slowly and has no other signs or symptoms <sup>17</sup> ? (circle only ONE option)**

- SEVERE DEHYDRATION, SEVERE PERSISTENT DIARRHOEA, NO EAR INFECTION
- SEVERE DEHYDRATION, NO EAR INFECTION
- SEVERE DEHYDRATION, ACUTE EAR INFECTION
- SOME DEHYDRATION, SEVERE PERSISTENT DIARRHOEA, NO EAR INFECTION
- SOME DEHYDRATION, ACUTE EAR INFECTION
- SOME DEHYDRATION, NO EAR INFECTION

<sup>15</sup> "No other signs or symptoms" here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>16</sup> "No other signs or symptoms" here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>17</sup> "No other signs or symptoms" here refers to the absence of signs and symptoms listed in the IMCI guidelines.

**B126. How do you classify a 9-month-old boy who has been having diarrhoea for 2 days, weighs 6 kg, has no general danger signs, has no sunken eyes, drinks eagerly, in whom the skin pinch goes back slowly and has no other signs or symptoms<sup>18</sup> ? (circle only ONE option)**

- SEVERE DEHYDRATION, LOW WEIGHT<sup>19</sup>
- SEVERE DEHYDRATION, NOT LOW WEIGHT
- SOME DEHYDRATION, LOW WEIGHT
- SOME DEHYDRATION, NOT LOW WEIGHT
- NO DEHYDRATION, LOW WEIGHT
- NO DEHYDRATION, NOT LOW WEIGHT

**B127. How do you classify a 7-month-old girl who has been having diarrhoea for 2 days, weighs 5 kg, has no general danger signs, vomited 2 times the day she started having diarrhoea, has sunken eyes, drinks normally, in whom the skin pinch goes back immediately and has no other signs or symptoms<sup>20</sup> ? (circle only ONE option)**

- SEVERE DEHYDRATION, LOW WEIGHT<sup>21</sup>
- SEVERE DEHYDRATION, NOT LOW WEIGHT
- SOME DEHYDRATION, LOW WEIGHT
- SOME DEHYDRATION, NOT LOW WEIGHT
- NO DEHYDRATION, LOW WEIGHT
- NO DEHYDRATION, NOT LOW WEIGHT

**B128. How do you classify a 7-month-old child who has had cough for 6 days and diarrhoea with blood in the stools since yesterday when he vomited 3 times, has no general danger signs, breastfed this morning, has a respiratory rate of 44 breaths per minute, has no chest indrawing, has sunken eyes, drinks normally, in whom the skin pinch goes back immediately and has no other signs or symptoms<sup>22</sup> ? (circle only ONE option)**

- PNEUMONIA, SEVERE DEHYDRATION, DYSENTERY
- PNEUMONIA, SOME DEHYDRATION, DYSENTERY
- PNEUMONIA, NO DEHYDRATION, DYSENTERY
- NO PNEUMONIA: COUGH OR COLD, SEVERE DEHYDRATION, DYSENTERY
- NO PNEUMONIA: COUGH OR COLD, SOME DEHYDRATION, DYSENTERY
- NO PNEUMONIA: COUGH OR COLD, NO DEHYDRATION, DYSENTERY

<sup>18</sup> "No other signs or symptoms" here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>19</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>20</sup> "No other signs or symptoms" here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>21</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>22</sup> "No other signs or symptoms" here refers to the absence of signs and symptoms listed in the IMCI guidelines.

**B129. How do you classify a 27-month-old child living in a high malaria risk area who has a history of fever and diarrhoea for 4 days, has an axillary temperature of 38.0°C, has sunken eyes, drinks eagerly, in whom the skin pinch goes back immediately and has no other signs or symptoms <sup>23</sup> ? (circle only ONE option)**

- SOME DEHYDRATION, VERY SEVERE FEBRILE DISEASE
- SOME DEHYDRATION, MALARIA
- SOME DEHYDRATION, FEVER – MALARIA UNLIKELY
- NO DEHYDRATION, VERY SEVERE FEBRILE DISEASE
- NO DEHYDRATION, MALARIA
- NO DEHYDRATION, FEVER – MALARIA UNLIKELY

**B130. How do you classify an 11-month-old child living in a high malaria risk area who has a history of fever and cough for 3 days, has an axillary temperature of 39.5°C, has a respiratory rate of 66 breaths/ minute, has no chest indrawing and no other signs or symptoms <sup>24</sup> ? (circle only ONE option)**

- SEVERE PNEUMONIA OR VERY SEVERE DISEASE, VERY SEVERE FEBRILE DISEASE
- SEVERE PNEUMONIA OR VERY SEVERE DISEASE, MALARIA
- PNEUMONIA, VERY SEVERE FEBRILE DISEASE
- PNEUMONIA , MALARIA
- NO PNEUMONIA: COUGH OR COLD, VERY SEVERE FEBRILE DISEASE
- NO PNEUMONIA: COUGH OR COLD, MALARIA

**B131. How do you classify a 27-month-old child living in a low malaria risk area who has a history of fever and cough for 2 days, has an axillary temperature of 38.8°C, has no general danger signs, has a respiratory rate of 54 breaths/ minute and no other signs or symptoms <sup>25</sup> ? (circle only ONE option)**

- PNEUMONIA, MALARIA
- PNEUMONIA, FEVER – MALARIA UNLIKELY
- NO PNEUMONIA: COUGH OR COLD, MALARIA
- NO PNEUMONIA: COUGH OR COLD, FEVER – MALARIA UNLIKELY

<sup>23</sup> “No other signs or symptoms” here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>24</sup> “No other signs or symptoms” here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>25</sup> “No other signs or symptoms” here refers to the absence of signs and symptoms listed in the IMCI guidelines.

**B132. How do you classify a 39-month-old child living in a no malaria risk area who has a history of cough, diarrhoea and fever for 5 days, has an axillary temperature of 37.8°C, has no general danger signs, is irritable, has a respiratory rate of 31 breaths/ minute, has sunken eyes, is thirsty, in whom the skin pinch goes back immediately and has no other signs or symptoms<sup>26</sup> ? (circle only ONE option)**

- PNEUMONIA, SOME DEHYDRATION, FEVER – POSSIBLE BACTERIAL INFECTION
- PNEUMONIA, SOME DEHYDRATION, FEVER – BACTERIAL INFECTION UNLIKELY
- NO PNEUMONIA: COUGH OR COLD, SOME DEHYDRATION, FEVER – POSSIBLE BACTERIAL INFECTION
- NO PNEUMONIA: COUGH OR COLD, SOME DEHYDRATION, FEVER – BACTERIAL INFECTION UNLIKELY
- NO PNEUMONIA: COUGH OR COLD, NO DEHYDRATION, FEVER – BACTERIAL INFECTION UNLIKELY

**B133. How do you classify a two-year-old child living in a high malaria risk area who has an axillary temperature of 38.2°C, pus seen coming from the ear and no tender swelling behind the ear, whose mother says that pus has been coming for 5 days and who has no other signs or symptoms<sup>27</sup> ? (circle only ONE option)**

- MALARIA, ACUTE EAR INFECTION
- MALARIA, CHRONIC EAR INFECTION
- MALARIA, NO EAR INFECTION
- FEVER – MALARIA UNLIKELY, ACUTE EAR INFECTION
- FEVER – MALARIA UNLIKELY, CHRONIC EAR INFECTION
- FEVER – MALARIA UNLIKELY, NO EAR INFECTION

**B134. How do you classify a 14-month-old child with cough and diarrhoea, who has an axillary temperature of 37.4°C, is lethargic, has a respiratory rate of 38 breaths/ minute, chest indrawing and sunken eyes? (circle only ONE option)**

- VERY SEVERE FEBRILE DISEASE, SEVERE PNEUMONIA OR VERY SEVERE DISEASE, SEVERE DEHYDRATION
- FEVER – POSSIBLE BACTERIAL INFECTION, SEVERE PNEUMONIA OR VERY SEVERE DISEASE, SEVERE DEHYDRATION
- FEVER – POSSIBLE BACTERIAL INFECTION, SEVERE PNEUMONIA OR VERY SEVERE DISEASE, NO DEHYDRATION
- FEVER – POSSIBLE BACTERIAL INFECTION, PNEUMONIA, NO DEHYDRATION
- FEVER – POSSIBLE BACTERIAL INFECTION, NO PNEUMONIA: COUGH OR COLD, NO DEHYDRATION
- FEVER – BACTERIAL INFECTION UNLIKELY, NO PNEUMONIA: COUGH OR COLD, NO DEHYDRATION

<sup>26</sup> “No other signs or symptoms” here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>27</sup> “No other signs or symptoms” here refers to the absence of signs and symptoms listed in the IMCI guidelines.

**B135. How do you classify a 22-month-old child living in a no malaria risk area who has had diarrhoea and fever for 2 days, whose mother reports that he had an episode of convulsions with fever last month, who has sunken eyes, in whom the skin pinch goes back immediately and has no other signs or symptoms <sup>28</sup> ? (circle only ONE option)**

- SEVERE DEHYDRATION, VERY SEVERE FEBRILE DISEASE
- SEVERE DEHYDRATION, FEVER – POSSIBLE BACTERIAL INFECTION
- SEVERE DEHYDRATION, FEVER – BACTERIAL INFECTION UNLIKELY
- SOME DEHYDRATION, FEVER – POSSIBLE BACTERIAL INFECTION
- NO DEHYDRATION, FEVER – POSSIBLE BACTERIAL INFECTION
- NO DEHYDRATION, FEVER – BACTERIAL INFECTION UNLIKELY

**B136. How do you classify a 7-month-old child living in a low malaria risk area who has had diarrhoea for 4 days and developed difficult breathing in the past 2 days, who has an axillary temperature of 38.8°C, who is irritable, has a respiratory rate of 58 breaths/minute, has no chest indrawing, in whom the skin pinch goes back slowly and who has no other signs or symptoms <sup>29</sup> ? (circle only ONE option)**

- PNEUMONIA, SOME DEHYDRATION, MALARIA
- PNEUMONIA, SOME DEHYDRATION, FEVER – MALARIA UNLIKELY
- PNEUMONIA, NO DEHYDRATION, MALARIA
- PNEUMONIA, NO DEHYDRATION, FEVER – MALARIA UNLIKELY
- NO PNEUMONIA: COUGH OR COLD, SOME DEHYDRATION, MALARIA
- NO PNEUMONIA: COUGH OR COLD, NO DEHYDRATION, FEVER – MALARIA UNLIKELY

**B137. How do you classify a 25-month-old boy living in a low malaria risk area who has been having diarrhoea for 8 days, has an axillary temperature of 37.6°C weighs 9.5 kg, is thirsty, has sunken eyes, in whom the skin pinch goes back slowly, has oedema of both feet, has some palmar pallor and has no other signs or symptoms <sup>30</sup> ? (circle only ONE option)**

- SEVERE DEHYDRATION, MALARIA, SEVERE MALNUTRITION, ANAEMIA
- SEVERE DEHYDRATION, MALARIA, LOW WEIGHT, ANAEMIA
- SEVERE DEHYDRATION, FEVER – BACTERIAL INFECTION UNLIKELY, SEVERE MALNUTRITION, ANAEMIA
- SOME DEHYDRATION, MALARIA, SEVERE MALNUTRITION, ANAEMIA
- SOME DEHYDRATION, MALARIA, LOW WEIGHT, ANAEMIA
- SOME DEHYDRATION, FEVER – BACTERIAL INFECTION UNLIKELY, SEVERE MALNUTRITION, ANAEMIA

<sup>28</sup> “No other signs or symptoms” here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>29</sup> “No other signs or symptoms” here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>30</sup> “No other signs or symptoms” here refers to the absence of signs and symptoms listed in the IMCI guidelines.

**B138. How do you classify an 18-month-old girl living in a no malaria risk area who has been having diarrhoea for 12 days, has an axillary temperature of 37.6°C weighs 7.0 kg, is thirsty, looks severely wasted, has sunken eyes, in whom the skin pinch goes back slowly, has some palmar pallor and has no other signs or symptoms<sup>31</sup>? (circle only ONE option)**

- SEVERE DEHYDRATION, FEVER – POSSIBLE BACTERIAL INFECTION, SEVERE MALNUTRITION, ANAEMIA
- SEVERE DEHYDRATION, FEVER – POSSIBLE BACTERIAL INFECTION, LOW WEIGHT,<sup>32</sup> ANAEMIA
- SEVERE DEHYDRATION, FEVER – BACTERIAL INFECTION UNLIKELY, SEVERE MALNUTRITION, ANAEMIA
- SOME DEHYDRATION, FEVER – POSSIBLE BACTERIAL INFECTION, SEVERE MALNUTRITION, ANAEMIA
- SOME DEHYDRATION, FEVER – POSSIBLE BACTERIAL INFECTION, LOW WEIGHT, ANAEMIA
- SOME DEHYDRATION, FEVER – BACTERIAL INFECTION UNLIKELY, SEVERE MALNUTRITION, ANAEMIA

### IMMUNIZATION STATUS<sup>33</sup>

**B139. Which of the following statements are true?**

- A child who has epilepsy should be given DPT vaccine
- A child who is immunocompromised should not be given BCG vaccine
- A child who has fever should not be immunized
- A child who is being referred for severe classification should be immunized before referral.
- A child who is LOW WEIGHT should not be immunized<sup>34</sup>

**B140. Which of the following immunizations should a 9-month-old child classified as diarrhoea with SOME DEHYDRATION receive today? Her immunization card shows that she has already received the following vaccinations: BCG, OPV-2, DPT-2, HIB-2, Hepatitis B-3. (circle all the correct options)**

- OPV-0
- OPV-3
- DPT-3
- HIB-3
- Measles

<sup>31</sup> "No other signs or symptoms" here refers to the absence of signs and symptoms listed in the IMCI guidelines.

<sup>32</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>33</sup> Some countries may not yet have introduced some immunizations in their national immunization schedule (e.g. HIB, Hepatitis B). MCQs (both the stem and options) should be adapted according to the immunizations recommended in the national guidelines.

<sup>34</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

**B141. Which of the following immunizations should a 6-month-old child classified as PNEUMONIA receive today? His immunization card shows that he has already received the following vaccinations: BCG, OPV-2, DPT-3, HIB-3, Hepatitis B-2. (circle all the correct options)**

- a. OPV-3
- b. DPT-3
- c. HIB-3
- d. Hepatitis B-3
- e. Measles

**B142. Which of the following immunizations should a 10-week-old child classified as ACUTE EAR INFECTION receive today? Her immunization card shows that she has already received the following vaccinations: BCG, OPV-1, Hepatitis B-1. (circle all the correct options)**

- a. OPV-2
- b. DPT-1
- c. HIB-1
- d. Hepatitis B-2
- e. Measles

**B143. Which of the following immunizations should an 11-week-old child with fever (axillary temperature of 38.0°C) classified as FEVER – MALARIA UNLIKELY and LOW WEIGHT<sup>35</sup> receive today? His immunization card shows that he has already received the following vaccinations: BCG, OPV-2, DPT-1, HIB-1, Hepatitis B 1. (circle all the correct options)**

- a. OPV-3
- b. DPT-2
- c. HIB-2
- d. Hepatitis B-2
- e. Measles

**B144. Which of the following immunizations should a 13-week-old child classified as diarrhoea with NO DEHYDRATION and SEVERE ANAEMIA receive today? He is being seen at a primary health care facility and his immunization card shows that he has already received the following vaccinations: BCG, OPV-2, DPT-2, HIB-2, Hepatitis B-2. (circle only ONE option)**

- a. OPV-3, DPT-3 and HIB-3
- b. OPV-3, DPT-3, HIB-3 and Hepatitis B-3
- c. OPV-3 and measles
- d. Measles
- e. No immunization needed before referral

<sup>35</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

**B145. Which of the following immunizations should an 11-week-old child classified as diarrhoea with NO DEHYDRATION, NOT LOW WEIGHT and NO ANAEMIA receive today? He is being seen at a primary health care facility and his immunization card shows that he has already received the following vaccinations: BCG, OPV-1, DPT-1, HIB-1, Hepatitis B-1. The child had convulsions 2 days after receiving DPT-1. (circle all the correct options)**

- a. OPV-2
- b. DPT-2
- c. HIB-2
- d. Measles
- e. Hepatitis B-2



## C. ASSESS FEEDING PROBLEMS

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**C1. You should assess the feeding of children who are:** *(circle all the correct options)*

- a. Classified as having VERY SEVERE DISEASE
- b. Less than 2 years old
- c. Classified as having ANAEMIA OR LOW WEIGHT <sup>36</sup>
- d. Classified as having SEVERE PERSISTENT DIARRHOEA

**C2. Which of the following classifications require assessment for feeding practices?** *(circle all the correct options)*

- a. SEVERE MALNUTRITION
- b. SEVERE ANAEMIA
- c. LOW WEIGHT <sup>37</sup>
- d. ANAEMIA <sup>38</sup>
- e. SEVERE PERSISTENT DIARRHOEA

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<sup>36</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>37</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>38</sup> The IMCI guidelines of many countries in the Region recommend assessment of feeding for children with some palmar pallor classified as "ANAEMIA". The MCQ options should be based on the national IMCI guidelines.

## D. IDENTIFY TREATMENT

### VERY SEVERE DISEASE

#### • GENERAL DANGER SIGNS

**D1. Which treatment should be given to a 2-year-old child who is having convulsions at the health facility?** (circle all the correct options)

- a. Diazepam (or sodium valproate or paraldehyde) rectally
- b. First dose of an appropriate antibiotic
- c. First dose of IV calcium
- d. Sugar water to prevent low blood sugar
- e. Diazepam orally

**D2. Which of the following should be included in the treatment plan at the health facility for a 4-month-old child who is lethargic, not able to breastfeed but able to swallow and has no other main symptoms (no diarrhoea, cough or difficult breathing, fever, throat or ear problem)?** (circle all the correct options)

- a. Diazepam rectally
- b. First dose of an appropriate antibiotic
- c. Refer urgently to hospital
- d. Sugar water to prevent low blood sugar
- e. Diazepam orally

### COUGH OR DIFFICULT BREATHING

#### • SEVERE PNEUMONIA OR VERY SEVERE DISEASE

**D3. Which of the following actions should be included in the treatment plan for a 3-month-old child classified as SEVERE PNEUMONIA OR VERY SEVERE DISEASE?** (circle all the correct options)

- a. Refer urgently to hospital
- b. Treat the child to prevent low blood sugar
- c. Give oral antibiotic for 7 days
- d. Give first dose of an appropriate antibiotic
- e. Give vitamin A treatment

## • PNEUMONIA

**D4. Which of the following actions should be included in the treatment plan for a 5-month-old child classified as PNEUMONIA? (circle all the correct options)**

- a. Refer urgently to hospital
- b. Follow-up in 2 days
- c. Give oral antibiotic for 3 days <sup>39</sup>
- d. Follow-up in 5 days if no improvement
- e. Give oral antibiotic for 7 days

**D5. Which of the following actions should be included in the treatment plan for a 4-month-old child with 58 breaths per minute, no general danger signs, no chest indrawing and no stridor? (circle all the correct options)**

- a. Follow-up in 5 days if no improvement
- b. Give oral antibiotic for 7 days
- c. Follow-up in 2 days
- d. Refer urgently to hospital
- e. Give oral antibiotic for 3 days <sup>39</sup>

**D6. Which of the following actions should be included in the treatment plan for a 10-month-old child classified as PNEUMONIA? (circle all the correct options)**

- a. Refer urgently to hospital
- b. Relieve the cough with a safe remedy
- c. Give oral antibiotic for 5 days
- d. Follow-up in 3 days if not improving
- e. Give oral antibiotic for 3 days <sup>39</sup>

## • NO PNEUMONIA: COUGH OR COLD <sup>40</sup>

**D7. Which of the following actions should be included in the treatment plan for an 8-month-old child classified as NO PNEUMONIA: COUGH OR COLD? (circle all the correct options)**

- a. Soothe the throat with a safe remedy
- b. Follow-up in 5 days
- c. Give oral antibiotic for 3 days <sup>41</sup>
- d. Follow-up in 5 days if not improving
- e. Give oral antibiotic for 7 days

<sup>39</sup> The WHO generic IMCI guidelines revised in 2008 recommend 3-day treatment of pneumonia with an appropriate oral antibiotic. If the national IMCI guidelines recommend a different duration of treatment (e.g. 5 days), this option should be revised accordingly.

<sup>40</sup> Although the classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines, it is reported in full in these MCQs as countries in the Region are still using it. MCQ options should be adapted according to the national IMCI guidelines.

<sup>41</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for pneumonia (e.g. "for 5 days"), if the recommended duration of treatment is different.

**D8. Which of the following actions should be included in the treatment plan for a 15-month-old child with cough and wheezing classified as NO PNEUMONIA: COUGH OR COLD?** (circle all the correct options)

- a. Relieve the cough with a safe remedy
- b. Do not give bronchodilator if wheezing disappeared after rapid-acting bronchodilator trial
- c. Give oral antibiotic for 3 days <sup>41</sup>
- d. Follow-up in 2 days
- e. Give inhaled or oral bronchodilator for 5 days

### DIARRHOEA

**D9. Which of the following are included in the rules of home treatment for diarrhoea?** (circle all the correct options)

- a. Give extra fluids
- b. Stop feeding during illness
- c. Give zinc
- d. Reduce breastfeeding
- e. Continue feeding

### • ZINC

**D10. How can a zinc tablet be given?** (circle all the correct options)

- a. Dissolved in small amount of expressed breastmilk
- b. Dissolved in ORS
- c. Dissolved in clean water
- d. Let the child chew it if 12 month old or older

### • SOME DEHYDRATION

**D11. How much ORS should be given to a 12-month-old child with acute diarrhoea with SOME DEHYDRATION weighing 11 kg?** (circle only ONE option) <sup>42</sup>

- a. As much as the child wants
- b. 50 ml of ORS after each loose stool
- c. 200 ml of ORS after each loose stool
- d. 400 – 700 ml over 4 hours
- e. 700 – 900 ml over 4 hours

<sup>41</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for pneumonia (e.g. "for 5 days"), if the recommended duration of treatment is different.

<sup>42</sup> The range of ORS amounts by age groups for PLAN B ("Treat some dehydration with ORS") has been revised in the 2008 version of the WHO generic IMCI guidelines. The options for this question should be based on the national IMCI guidelines.

**D12. How much ORS should be given to a 12-month-old child weighing 11 kg with diarrhoea for 4 days, no general danger signs, who drinks eagerly and in whom the skin pinch goes back slowly? (circle only ONE option)** <sup>42</sup>

- a. As much as the child wants
- b. 50 ml of ORS after each loose stool
- c. 200 ml of ORS after each loose stool
- d. 400 – 700 ml over 4 hours
- e. 700 – 900 ml over 4 hours

**D13. Which of the following plans should be selected for a 14-month-old child with acute diarrhoea with **SOME DEHYDRATION**? (circle only ONE option)**

- a. PLAN A
- b. PLAN B
- c. PLAN C

**D14. Which of the following actions should be included in the treatment of a 20-month-old child with acute diarrhoea with **SOME DEHYDRATION** and blood in the stool? (circle all the correct options)**

- a. PLAN A
- b. PLAN B
- c. PLAN C
- d. Give antibiotic for 3 days <sup>43</sup>
- e. Follow up in 2 days if not improving

**D15. Which of the following actions should be included in the treatment of a 20-month-old child with diarrhoea for 6 days without blood in the stools, no general danger signs, who is irritable, drinks eagerly and in whom the skin pinch goes back promptly? (circle only ONE option)**

- a. PLAN A
- b. PLAN B
- c. PLAN C
- d. Give antibiotic for 3 days <sup>44</sup>
- e. Follow up in 2 days if not improving

<sup>42</sup> The range of ORS amounts by age groups for PLAN B ("Treat some dehydration with ORS") has been revised in the 2008 version of the WHO generic IMCI guidelines. The options for this question should be based on the national IMCI guidelines.

<sup>43</sup> The WHO generic IMCI guidelines revised in 2008 recommend a 3-day ciprofloxacin treatment course for dysentery. If the national IMCI guidelines recommend a different antibiotic and duration of treatment (e.g. 5 days), this option should be revised accordingly.

<sup>44</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for dysentery (e.g. "for 5 days"), if the recommended duration of treatment is different.

**D16. Which of the following actions should be included in the treatment of a 13-month-old child with acute diarrhoea with SOME DEHYDRATION, no blood in the stool and PNEUMONIA? (circle only ONE option)**

- Give first dose of an antibiotic and refer urgently to hospital
- PLAN C and give first dose of an antibiotic
- PLAN B and give antibiotic for 3 days <sup>45</sup>
- PLAN A and give antibiotic for 3 days <sup>46</sup>
- Follow up in 2 days if not improving

• **NO DEHYDRATION**

**D17. Which of the following actions should be included in the treatment plan for a 7-month-old non-exclusively breastfed child classified as acute diarrhoea with NO DEHYDRATION? (circle all the correct options)**

- Continue breastfeeding
- Give oral zinc supplement for 14 days
- Give 50 to 100 ml of ORS after each loose stool
- Stop feeding if the child vomits
- If child vomits, stop giving ORS until diarrhoea stops

**D18. Which of the following actions should be included in the treatment of a 7-month-old child with diarrhoea for 6 days without blood in the stools, with no general danger signs, NO DEHYDRATION and PNEUMONIA? (circle only ONE option)**

- Refer urgently to hospital with ORS on the way
- Give first dose of an antibiotic and refer urgently to hospital
- PLAN C and give first dose of an antibiotic
- PLAN B and give antibiotic for 3 days <sup>47</sup>
- PLAN A and give antibiotic for 3 days <sup>48</sup>

**D19. How much ORS should be given at home to a 6-month-old child with acute diarrhoea with NO DEHYDRATION weighing 8 kg? (circle only ONE option) <sup>49</sup>**

- As much as the child wants
- 50 to 100 ml of ORS after each loose stool
- 200 ml of ORS after each loose stool
- 400 – 700 ml over 4 hours
- 700 – 900 ml over 4 hours

<sup>45</sup> The duration of antibiotic treatment in this option should be that recommended by the national IMCI guidelines for PNEUMONIA.

<sup>46</sup> The duration of antibiotic treatment in this option should be that recommended by the national IMCI guidelines for PNEUMONIA.

<sup>47</sup> The duration of antibiotic treatment in this option should be that recommended by the national IMCI guidelines for PNEUMONIA.

<sup>48</sup> The duration of antibiotic treatment in this option should be that recommended by the national IMCI guidelines for PNEUMONIA.

<sup>49</sup> The range of ORS amounts by age groups for PLAN B ("Treat some dehydration with ORS") has been revised in the 2008 version of the WHO generic IMCI guidelines. The options for this question should be based on the national IMCI guidelines.

**D20. Which of the following actions should be included in the treatment plan for a 10-month-old breastfed child classified as acute diarrhoea with NO DEHYDRATION? (circle all the correct options)**

- a. Breastfeed frequently
- b. Give oral zinc supplement for 14 days
- c. Give 50-100 ml of ORS after each loose stool
- d. Follow-up in 3 days
- e. Give less food than usual

**D21. Which of the following actions should be included in the treatment plan for a 4-month-old breastfed female child weighing 4 kg with acute diarrhoea with NO DEHYDRATION and with some palmar pallor? (circle all the correct options)**

- a. Refer urgently to hospital
- b. Give iron
- c. Treat the child to prevent low blood sugar
- d. Follow-up in 14 days
- e. Follow up in 30 days

• **SEVERE PERSISTENT DIARRHOEA**

**D22. Which of the following actions should be included in the treatment plan for a 7-month-old child classified as SEVERE PERSISTENT DIARRHOEA with SOME DEHYDRATION and no other severe classification? (circle all the correct options)**

- a. Refer to hospital immediately without attempting any treatment
- b. Give oral zinc supplement
- c. Give 50 ml of ORS after each loose stool
- d. Instruct mother to give frequent sips of ORS on the way to the hospital
- e. Treat dehydration and then refer to hospital

**D23. Which of the following actions should be included in the treatment plan for a 7-month-old child who has been having diarrhoea with mucus in the stools for 16 days, has no general danger signs, has sunken eyes and in whom the skin pinch goes back slowly? (circle all the correct options)**

- a. Refer to hospital immediately without attempting any treatment
- b. Give oral zinc supplement for 14 days
- c. Give 50 ml of ORS after each loose stool
- d. Give an antibiotic for 3 days <sup>50</sup>
- e. Treat dehydration and then refer to hospital

<sup>50</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for dysentery (e.g. "for 5 days"), if they recommend a different duration of treatment.

### • PERSISTENT DIARRHOEA

**D24. Which of the following actions should be included in the treatment plan for a 5-month-old child who has been having diarrhoea for 20 days, has no dehydration and no other severe classification? (circle all the correct options)**

- a. Refer to hospital
- b. Give oral antibiotic for 3 days <sup>51</sup>
- c. Give oral zinc supplements for 5 days
- d. Give multivitamins and minerals for 14 days
- e. Follow up in 5 days

**D25. Which of the following actions should be included in the treatment plan for a 4-month-old child who is breastfed and also receives infant formula, has been having diarrhoea for 25 days, has no dehydration and no other severe classification? (circle all the correct options)**

- a. Replace infant formula with increased breastfeeding
- b. Give oral antibiotic for 3 days <sup>51</sup>
- c. Replace infant formula with yoghurt
- d. Give multivitamins and minerals for 14 days
- e. Follow up in 5 days

### • DYSENTERY

**D26. Which of the following actions should be included in the treatment plan for an 18-month-old child who has been having diarrhoea with blood in the stools for 2 days, has no dehydration and no other severe classification? (circle all the correct options)**

- a. Oral antibiotic based on stool culture
- b. Ciprofloxacin for 3 days <sup>52</sup>
- c. A recommended oral antibiotic for 10 days
- d. First dose of vitamin A
- e. Follow up in 2 days

**D27. Which of the following actions should be included in the treatment plan for an 18-month-old child with acute diarrhoea classified as DYSENTERY WITH NO DEHYDRATION? (circle all the correct options)**

- a. Oral antibiotic based on stool culture
- b. Ciprofloxacin for 3 days <sup>52</sup>
- c. A recommended oral antibiotic for 10 days
- d. First dose of vitamin A
- e. Follow up in 2 days

<sup>51</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for dysentery (e.g. "for 5 days"), if they recommend a different duration of treatment.

<sup>52</sup> The revised WHO generic IMCI guidelines recommend this treatment for dysentery. If the national IMCI guidelines recommend a different antibiotic, this option should be revised accordingly.



**FEVER****• VERY SEVERE FEBRILE DISEASE****Malaria risk area**

**D28. Which of the following actions should be included in the treatment plan for a 32-month-old child, living in a low malaria risk area, who has an axillary temperature of 37.8°C and is lethargic? (circle all the correct options)**

- a. Give injectable antimalarial (first dose)
- b. Refer urgently to hospital
- c. Give first dose of an appropriate antibiotic
- d. Give oral antimalarial (first dose)
- e. Give vitamin A

**D29. Which of the following actions should be included in the treatment plan for a 29-month-old child, living in a low malaria risk area, who has VERY SEVERE FEBRILE DISEASE? (circle all the correct options)**

- a. Give injectable antimalarial (first dose)
- b. Refer urgently to hospital
- c. Give first dose of an appropriate antibiotic
- d. Give oral antimalarial (first dose)
- e. Give vitamin A

**D30. Which of the following actions should be included in the treatment plan for a 40-month-old child, living in a high malaria risk area, who has an axillary temperature of 37.8°C and a stiff neck? (circle all the correct options)**

- a. Refer urgently to hospital
- b. Give first dose of an appropriate antibiotic
- c. Treat the child to prevent low blood sugar
- d. Give oral antimalarial (first dose)
- e. Give injectable antimalarial (first dose)

**D31. Which of the following actions should be included in the treatment plan for an 11-month-old child, living in a high malaria risk area, classified as MALARIA? (circle all the correct options)**

- a. Oral antimalarials for 7 days
- b. Paracetamol if axillary temperature is 38.5°C or more
- c. Follow-up in 3 days
- d. Oral antibiotics for 3 days
- e. Advise mother when to return immediately

**No malaria area**

**D32. Which of the following actions should be included in the treatment plan for a 32-month-old child, living in a no malaria area, who has an axillary temperature of 37.8°C and is lethargic? (circle all the correct options)**

- a. Treat the child to prevent low blood sugar
- b. Give one dose of paracetamol for fever
- c. Give first dose of an appropriate antibiotic
- d. Refer urgently to hospital
- e. Give vitamin A

**D33. Which of the following actions should be included in the treatment plan for a 40-month-old child, living in a no malaria risk area, who has an axillary temperature of 37.9°C and a stiff neck? (circle all the correct options)**

- a. Refer urgently to hospital
- b. Give first dose of an appropriate antibiotic
- c. Give vitamin A
- d. Give one dose of paracetamol for fever
- e. Treat the child to prevent low blood sugar

**• MALARIA****Malaria risk area**

**D34. Which of the following actions should be included in the treatment plan for a 28-month-old child, living in a high malaria risk area, who has an axillary temperature of 38.3°C? (circle all the correct options)**

- a. Give one dose of paracetamol for high fever
- b. Refer urgently to hospital
- c. Follow up in 5 days
- d. Give oral antimalarial (first dose)
- e. Advise mother when to return immediately

**D35. Which of the following actions should be included in the treatment plan for a 28-month-old child who has an axillary temperature of 39.1°C, living in a high malaria risk area, whose illness is classified as MALARIA? (circle all the correct options)**

- a. Give one dose of paracetamol for high fever
- b. Refer urgently to hospital
- c. Follow up in 5 days
- d. Give oral antimalarial (first dose)
- e. Advise mother when to return immediately

• **FEVER – MALARIA UNLIKELY or FEVER – BACTERIAL INFECTION UNLIKELY**

**Malaria risk area OR No malaria area**

**D36. Which of the following actions should be included in the treatment plan for a 41-month-old child, who has an axillary temperature of 37.6°C, has no general danger signs and no severe classification, has a runny nose, has no measles nor measles history and has no apparent bacterial cause of fever? (circle all the correct options)**

- Give paracetamol for fever
- Follow up in 5 days
- Give an appropriate antibiotic for 3 days
- Advise the mother when to return immediately
- Follow up in 2 days if fever persists

**EAR PROBLEM**

• **MASTOIDITIS**

**No malaria area**

**D37. Which of the following actions should be included in the treatment plan for a 48-month-old child, complaining of ear pain for 3 days, who has an axillary temperature of 39.3°C, has no general danger signs, has no other severe classification and has a swelling behind the ear which hurts when touched? (circle all the correct options)**

- Give an antibiotic for 5 days
- Refer urgently to hospital
- Follow up in 2 days if fever persists
- Give first dose of paracetamol for pain and high fever
- Give first dose of an appropriate antibiotic

**D38. Which of the following actions should be included in the treatment plan for a 48-month-old child with ear pain whose illness is classified as MASTOIDITIS? (circle all the correct options)**

- Give first dose of paracetamol for pain and high fever
- Refer urgently to hospital
- Give first dose of an appropriate antibiotic
- Follow up in 2 days if fever persists
- Give an antibiotic for 5 days

### • ACUTE EAR INFECTION

**D39. Which of the following actions should be included in the treatment plan for a 46-month-old child, complaining of ear pain for 4 days, who has no general danger signs, has no severe classification, has no tender swelling behind the ear, has a history of ear discharge for 2 days and has pus draining from her right ear? (circle all the correct options)**

- a. Give an antibiotic for 5 days
- b. Refer urgently to hospital
- c. Dry the ear by wicking
- d. Give paracetamol for pain
- e. Follow up in 5 days if not improving

**D40. Which of the following actions should be included in the treatment plan for a 46-month-old child whose illness is classified as ACUTE EAR INFECTION? (circle all the correct options)**

- a. Give paracetamol for pain
- b. Refer urgently to hospital
- c. Follow up in 5 days if not improving
- d. Dry the ear by wicking
- e. Give an antibiotic for 5 days

**D41. For how long should a child classified as ACUTE EAR INFECTION be treated with a recommended oral antibiotic? (circle only ONE option)**

- a. For 3 days
- b. For 5 days
- c. For 7 days
- d. For 10 days
- e. For 14 days

### • ACUTE EAR INFECTION AND PNEUMONIA

**D42. Which of the following actions should be included in the treatment plan for a 40-month-old child with cough and a respiratory rate of 44 breaths per minute, complaining of ear pain for 4 days, who has no other signs? (circle all the correct options)**

- a. Give an antibiotic for 5 days <sup>53</sup>
- b. Give an antibiotic for 3 days <sup>53</sup>
- c. Dry the ear by wicking
- d. Give paracetamol for pain
- e. Follow up in 2 days

<sup>53</sup> Make sure that one option includes the duration of treatment for pneumonia and another option includes the duration of treatment for acute ear infection based on the national IMCI guidelines. If duration of treatment for the two conditions is the same in the national guidelines, then make sure that one option is the correct one and the other option is the "distractor" (incorrect option) with a relatively plausible duration.

**• CHRONIC EAR INFECTION**

**D43. Which of the following actions should be included in the treatment plan for a 31-month-old child with a history of ear discharge for 15 days, in whom you see pus draining from the left ear and who has no other signs? (circle all the correct options)**

- a. Give an antibiotic for 5 days
- b. Follow up in 5 days
- c. Dry the ear by wicking
- d. Give paracetamol for pain
- e. No treatment

**D44. Which of the following actions should be included in the treatment plan for a 31-month-old child whose illness is classified as CHRONIC EAR INFECTION? (circle all the correct options)**

- a. Give an antibiotic for 5 days
- b. Follow up in 5 days
- c. Dry the ear by wicking
- d. Give paracetamol for pain
- e. No treatment

**D45. Which of the following actions should be included in the treatment plan for a 46-month-old child whose illness is classified as CHRONIC EAR INFECTION? (circle all the correct options)**

- a. Give an antibiotic for 5 days
- b. Follow up in 5 days
- c. Dry the ear by wicking
- d. Refer to ENT (ear-nose-throat) specialist <sup>54</sup>
- e. No treatment

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<sup>54</sup> Guidelines in some countries recommend that children with chronic ear infection should be referred to a specialist if accessible.

## E. COUNSEL: CHECKING QUESTIONS, FEEDING PROBLEMS AND WHEN TO RETURN

### CHECKING QUESTIONS

**E1. Which of the following questions are good checking questions when counselling a mother of an 8-month-old child on complementary feeding? (circle all the correct options)**

- Would you tell me which foods you will give to your child?
- Will you give good food like meat, chicken, fish or eggs to your child?
- How will you prepare food for your child?
- Is it good to give meat to your child?

**E2. Which of the following questions are good checking questions to ensure that a mother has understood your treatment instructions well? (circle all the correct options)**

- Do you know when to give the antibiotic to your child?
- Did you understand my instructions?
- Could you tell me when you will bring back your child to the health facility immediately?
- For how many days will you give the antibiotic to your child?
- Will you give the antibiotic to your child 3 times a day?

### FEEDING PROBLEMS

**E3. Which of the following statements are true?**

- Children should be given fewer feeds during illness
- A 3-month old child should be exclusively breastfed
- A very thin cereal gruel is a nutritious complementary food.
- A 3-year old child needs 2 feeds each day of family foods.
- A 5-month old child should be breastfed as often as he wants, day and night.

### WHEN TO RETURN

**E4. For which of the following signs should the mother of a 5-month-old child with cough and no fever, no general danger signs, classified as "NO PNEUMONIA: COUGH OR COLD", "NOT LOW WEIGHT" and "NO ANAEMIA" bring the child back immediately? (circle all the correct options)**

- Develops a fever
- Unable to drink or breastfeed
- Drinking poorly
- Becomes sicker
- Fast breathing

**E5. For which of the following signs should the mother of a 4-month-old child with fever, no cough or difficult breathing and no diarrhoea bring the child back immediately? (circle all the correct options)**

- a. Not able to drink or breastfeed
- b. Becomes sicker
- c. Fast breathing
- d. Drinking poorly
- e. Blood in stool

**E6. For which of the following signs should the mother of a 6-month-old child with diarrhoea and no fever bring the child back immediately? (circle all the correct options)**

- a. Not able to drink or breastfeed
- b. Becomes sicker
- c. Fast breathing
- d. Drinking poorly
- e. Blood in stool

**E7. For which of the following signs should the mother of an 11-month-old child with cough and no fever bring the child back immediately? (circle all the correct options)**

- a. Not able to drink or breastfeed
- b. Becomes sicker
- c. Fast breathing
- d. Drinking poorly
- e. Difficult breathing

**E8. Which of the following statements are true?**

- a. A five-month-old child who has PNEUMONIA and has been given an antibiotic should come for follow up after 5 days.
- b. A ten-month-old child who has diarrhoea with SOME DEHYDRATION should come for follow up in 2 days.
- c. A two-year-old child who has ACUTE EAR INFECTION and has been given an antibiotic should come for follow up after 5 days.
- d. An eighteen-month-old child who has ANAEMIA should come for follow up in 14 days.

**E9. What is the earliest time that a mother of a 4-month-old child with PNEUMONIA should come for a follow-up visit? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

**E10. What is the earliest time that a mother of a 7-month-old child with DYSENTERY should come for a follow-up visit? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

**E11. What is the earliest time that a mother of a 4-month-old child with PERSISTENT DIARRHOEA should come for a follow-up visit? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

**E12. What is the earliest time that a mother of an 18-month-old child with ACUTE EAR INFECTION should come for a follow-up visit? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

**E13. What is the earliest time that a mother of an 18-month-old child with CHRONIC EAR INFECTION should come for a follow-up visit? <sup>55</sup> (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

**E14. What is the earliest time that a mother of a 10-month-old child with ANAEMIA should come for a follow-up visit? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

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<sup>55</sup> Guidelines in some countries recommend that children with chronic ear infection should be referred to a specialist if accessible.



**E15. What is the earliest time that a mother of an 18-month-old child with LOW WEIGHT FOR AGE <sup>56</sup> and no feeding problem should come for a follow-up visit? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

**E16. What is the earliest time that a mother of a 3-month-old child with PNEUMONIA and LOW WEIGHT FOR AGE <sup>57</sup> should come for a follow-up visit? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

**E17. What is the earliest time that a mother of a 3-month-old child with PNEUMONIA and ACUTE EAR INFECTION should come for a follow-up visit? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

**E18. What is the earliest time that a mother of a 3-month-old child with PNEUMONIA, ACUTE EAR INFECTION and LOW WEIGHT should come for a follow-up visit? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

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<sup>56</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>57</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

**E19. What is the earliest time that a mother of a 9-month-old child with MALARIA should come for a follow-up visit if fever persists? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

**E20. What is the earliest time that a mother of a 7-month-old child with PNEUMONIA and MALARIA should come for a follow-up visit? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 14 days
- e. 30 days

## Sick young infant age up to 2 months

### F. ASSESS AND CLASSIFY

#### VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION<sup>58</sup>

##### • Respiratory rate

**F1. Which of the following respiratory rates are "fast breathing" if the infant is 2 weeks old?** (circle all the correct options)

- a. 42 breaths per minute
- b. 50 breaths per minute
- c. 54 breaths per minute
- d. 62 breaths per minute
- e. 70 breaths per minute

**F2. Which of the following respiratory rates are "fast breathing" if the infant is 7 weeks old?** (circle all the correct options)

- a. 50 breaths per minute
- b. 52 breaths per minute
- c. 55 breaths per minute
- d. 61 breaths per minute
- e. 75 breaths per minute

**F3. What is "fast breathing" in a 5-week-old infant?** (circle only ONE option)

- a. 30 breaths per minute or more
- b. 40 breaths per minute or more
- c. 50 breaths per minute or more
- d. 60 breaths per minute or more
- e. 70 breaths per minute or more

**F4. What is "fast breathing" in a 6-week-old infant?** (circle only ONE option)

- a. 30 breaths per minute or more
- b. 40 breaths per minute or more
- c. 50 breaths per minute or more
- d. 60 breaths per minute or more
- e. 70 breaths per minute or more

<sup>58</sup>The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted.

**F5. How long should the respiratory rate be counted for in a 7-week-old infant? (circle only ONE option)**

- For 10 seconds and then multiplied by 6
- For 15 seconds and then multiplied by 4
- For 20 seconds and then multiplied by 3
- For 30 seconds and then multiplied by 2
- For 60 seconds

**F6. What should you do after a first count of the respiratory rate of 68 breaths per minute in a calm 3-week-old child with no other signs? (circle only ONE option) <sup>59</sup>**

- Classify the child as VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION
- Classify the child as LOCAL BACTERIAL INFECTION
- Classify the child as BACTERIAL INFECTION UNLIKELY
- Repeat the count for 30 seconds before classifying the child
- Repeat the count for 60 seconds before classifying the child

#### • Temperature

**F7. Which of the following axillary temperatures, if measured in a 4 week-old infant, are consistent with the classification of VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION <sup>60</sup> ? (circle all the correct options)**

- 35.3°C
- 35.8°C
- 37.2°C
- 37.5°C
- 37.7°C

<sup>59</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

<sup>60</sup> The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted. The MCQ options should be adapted according to the national IMCI guidelines.

**F8. Which of the following axillary temperatures, if measured in a 7 week-old infant, are consistent with the classification of VERY SEVERE DISEASE or possible serious bacterial infection ? (circle all the correct options) <sup>61</sup>**

- a. 35.8°C
- b. 36.9°C
- c. 37.8°C
- d. 38.0°C
- e. 38.6°C

• **Other signs**

**F9. Which of the following signs are used in the IMCI guidelines to classify a 2 week-old infant as having VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION and to refer him/her urgently to hospital? (circle all the correct options) <sup>62</sup>**

- a. Respiratory rate of 60 breaths per minute or more
- b. Restless, irritable
- c. Skin pustules <sup>63</sup>
- d. Unable to feed
- e. Axillary temperature of less than 35.5°C

**F10. Which of the following signs, if present in a 5-week-old infant, are consistent with the classification of VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION? (circle all the correct options) <sup>64</sup>**

- a. Unable to feed
- b. Axillary temperature of 35.3°C
- c. Chest indrawing
- d. Respiratory rate of 55 per minute
- e. Some skin pustules <sup>65</sup>

<sup>61</sup> The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted. MCQ options should be adapted according to the national IMCI guidelines.

<sup>62</sup> The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted. MCQ options should be adapted according to the national IMCI guidelines.

<sup>63</sup> The previous version of the generic IMCI guidelines referred to "Many or severe skin pustules" and "(some) skin pustules" in differentiating between conditions classified in the "pink" and "yellow" rows, respectively. The new version refers only to "Skin pustules" (yellow row). MCQ options should be adapted according to the national IMCI guidelines.

<sup>64</sup> The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted. MCQ options should be adapted according to the national IMCI guidelines.

<sup>65</sup> The previous version of the generic IMCI guidelines referred to "Many or severe skin pustules" and "(some) skin pustules" in differentiating between conditions classified in the "pink" and "yellow" rows, respectively. The new version refers only to "Skin pustules" (yellow row). MCQ options should be adapted according to the national IMCI guidelines.

**F11. Which of the following signs, if present in a 5-week-old infant, is consistent with the classification of VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION? (circle only ONE option) <sup>66</sup>**

- a. Axillary temperature of 35.5°C
- b. Respiratory rate of 58 per minute
- c. Some skin pustules <sup>67</sup>
- d. Not suckling effectively
- e. Chest indrawing

**F12. Which of the following signs, if present in a 3-week-old infant, are consistent with the classification of VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION? (circle all the correct options) <sup>68</sup>**

- a. Respiratory rate of 65 breaths per minute
- b. Axillary temperature of 37.4°C
- c. Chest indrawing
- d. Umbilicus draining pus
- e. Movement only when stimulated

**F13. Which of the following signs, if present in a one-week-old infant, are consistent with the classification of VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION? (circle all the correct options) <sup>69</sup>**

- a. Severe chest indrawing
- b. Axillary temperature of 37.4°C
- c. Respiratory rate of 58 breaths per minute
- d. Umbilicus draining pus
- e. Skin pustules <sup>70</sup>

<sup>66</sup> The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted. MCQ options should be adapted according to the national IMCI guidelines.

<sup>67</sup> The previous version of the generic IMCI guidelines referred to "Many or severe skin pustules" and "(some) skin pustules" in differentiating between conditions classified in the "pink" and "yellow" rows, respectively. The new version refers only to "Skin pustules" (yellow row). MCQ options should be adapted according to the national IMCI guidelines.

<sup>68</sup> The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted. MCQ options should be adapted according to the national IMCI guidelines.

<sup>69</sup> The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted. MCQ options should be adapted according to the national IMCI guidelines.

<sup>70</sup> The previous version of the generic IMCI guidelines referred to "Many or severe skin pustules" and "(some) skin pustules" in differentiating between conditions classified in the "pink" and "yellow" rows, respectively. The new version refers only to "Skin pustules" (yellow row). MCQ options should be adapted according to the national IMCI guidelines.

**F14. How do you classify a 4-day-old newborn who is hot to the touch (with an axillary temperature of 38.0°C) and has some skin pustules<sup>71,72</sup> ? (circle only ONE option)**

- a. VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION
- b. LOCAL BACTERIAL INFECTION
- c. BACTERIAL INFECTION UNLIKELY

**F15. How do you classify a 14-day-old infant who has a respiratory rate of 62 breaths per minute on two counts, an axillary temperature of 37.4°C, a red umbilicus and no other signs? (circle only ONE option)<sup>73</sup>**

- a. VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION
- b. LOCAL BACTERIAL INFECTION
- c. BACTERIAL INFECTION UNLIKELY

**F16. How do you classify a 5-day-old infant who has severe chest indrawing and an axillary temperature of 36.8°C? (circle only ONE option)<sup>74</sup>**

- a. VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION
- b. LOCAL BACTERIAL INFECTION
- c. BACTERIAL INFECTION UNLIKELY

<sup>71</sup> The previous version of the generic IMCI guidelines referred to "Many or severe skin pustules" and "(some) skin pustules" in differentiating between conditions classified in the "pink" and "yellow" rows, respectively. The new version refers only to "Skin pustules" (yellow row). MCQ options should be adapted according to the national IMCI guidelines.

<sup>72</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

<sup>73</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

<sup>74</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

• **BACTERIAL INFECTION UNLIKELY** <sup>75</sup>

**F17. How do you classify an 8-day-old newborn who has a respiratory rate of 56 breaths per minute, mild chest indrawing and no other signs? (circle only ONE option)** <sup>76</sup>

- a. VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION
- b. LOCAL BACTERIAL INFECTION
- c. BACTERIAL INFECTION UNLIKELY

**JAUNDICE** <sup>77</sup>

• **SEVERE JAUNDICE**

**F18. How do you classify a 4-day-old newborn who has yellow palms and soles? (circle only ONE option)**

- a. SEVERE JAUNDICE
- b. JAUNDICE
- c. NO JAUNDICE

**F19. How do you classify a 12-hour-old newborn who has jaundice not extending to palms and soles? (circle only ONE option)**

- a. SEVERE JAUNDICE
- b. JAUNDICE
- c. NO JAUNDICE

**F20. How do you classify a 12-hour-old newborn who has jaundice extending to palms and soles? (circle only ONE option)**

- a. SEVERE JAUNDICE
- b. JAUNDICE
- c. NO JAUNDICE

<sup>75</sup> The previous generic version of the WHO IMCI guidelines had no "green row" classification in the box for "Check for possible bacterial infection". In the regional adaptation, countries therefore added the "green row" classification "BACTERIAL INFECTION UNLIKELY". A "green row" has then been added also in the new generic version of the WHO IMCI guidelines ("SEVERE DISEASE OR LOCAL BACTERIAL INFECTION UNLIKELY"). MCQ options should be adapted according to the national IMCI guidelines.

<sup>76</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

<sup>77</sup> The classifications reported here for jaundice are based on the 2008 version of the WHO IMCI chart booklet. Some countries may use different classifications (e.g. "SIGNIFICANT JAUNDICE" instead of "SEVERE JAUNDICE"). MCQs should be adapted based on country guidelines.



**F21. How do you classify jaundice extending to arms and legs in a newborn born after 35 weeks of gestation (preterm young infant)?<sup>78</sup> (circle only ONE option)**

- a. SEVERE JAUNDICE
- b. JAUNDICE
- c. NO JAUNDICE

• **JAUNDICE**

**F22. How do you classify jaundice appearing in a 48-hour-old newborn not extending to yellow palms and soles? (circle only ONE option)**

- a. SEVERE JAUNDICE
- b. JAUNDICE
- c. NO JAUNDICE

**DIARRHOEA**

• **SEVERE DEHYDRATION**

**F23. Which of the following 5-week-old infants with diarrhoea are classified as having “SEVERE DEHYDRATION”? (circle all the correct options)**

- a. Skin pinch goes back very slowly and sunken eyes
- b. Skin pinch goes back slowly and sunken eyes
- c. Skin pinch goes back very slowly and irritable
- d. Skin pinch goes back very slowly and child moves only when stimulated
- e. Skin pinch goes back slowly and child moves only when stimulated

**F24. How do you classify a 15-day-old infant who has been having diarrhoea for 3 days, has no general danger signs, is restless, has sunken eyes and in whom the skin pinch goes back in 3 seconds? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

**F25. How do you classify a 3-week-old infant who has been having diarrhoea for 6 days, has no movements at all, has sunken eyes and in whom the skin pinch goes back slowly? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

<sup>78</sup> This question refers to adaptations introduced in the Region.

• **SOME DEHYDRATION**

**F26. Which of the following infants less than 2 months old with diarrhoea are classified as having **SOME DEHYDRATION**? (circle all the correct options)**

- a. Infant with sunken eyes and lethargic
- b. Infant with sunken eyes and irritable
- c. Infant with sunken eyes and blood in the stool
- d. Infant with sunken eyes and restless
- e. Infant with sunken eyes and skin pinch goes back very slowly

**F27. How do you classify a 7-week-old infant who has been having diarrhoea for 2 days, has sunken eyes and in whom the skin pinch goes back slowly? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

**F28. How do you classify a 5-week-old infant who has been having diarrhoea for 3 days, is irritable, has sunken eyes and in whom the skin pinch goes back immediately? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

• **NO DEHYDRATION**

**F29. How do you classify a one-month-old infant who has been having diarrhoea for 3 days, has no general danger signs, is restless, has no sunken eyes and in whom the skin pinch goes back immediately? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

**F30. How do you classify a 10-day-old infant who has been having diarrhoea for 3 days, has no general danger signs, is awake and alert, has sunken eyes and in whom the skin pinch goes back immediately? (circle only ONE option)**

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

**FEEDING PROBLEM OR LOW WEIGHT FOR AGE**

**F31. Which of the following are criteria for good attachment to the breast? (circle all the correct options)**

- a. Chin touching the breast
- b. Mouth wide open
- c. More areola is visible below than above the infant's mouth
- d. Lower lip turned in.

**F32. Which of the following signs indicate good attachment to the breast during breastfeeding? (circle all the correct options)**

- a. More areola seen below infant's top lip than above
- b. Chin touching breast
- c. Lower lip turned outwards
- d. Mouth partially open
- e. Lower lip turned inwards

**F33. How do you classify a 45-day-old exclusively breastfed infant who is well attached to the breast and suckle effectively while feeding and weighs 2.5 kg? (circle only ONE option)**

- a. BACTERIAL INFECTION UNLIKELY
- b. FEEDING PROBLEM OR LOW WEIGHT FOR AGE
- c. NO FEEDING PROBLEM
- d. NOT LOW WEIGHT FOR AGE

**F34. How do you classify a 4-week-old breastfed infant who weighs 5.5 kg and has white patches in the mouth? (circle only ONE option)**

- a. FEEDING PROBLEM OR LOW WEIGHT FOR AGE
- b. NO FEEDING PROBLEM
- c. NOT LOW WEIGHT FOR AGE

**F35. How do you classify a 5-week-old breastfed infant who is well attached to the breast, takes slow deep sucks while breastfeeding and is commonly given water during hot days? (circle only ONE option)**

- a. FEEDING PROBLEM OR LOW WEIGHT FOR AGE
- b. NO FEEDING PROBLEM
- c. NOT LOW WEIGHT FOR AGE

## G. IDENTIFY TREATMENT

### VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION <sup>79</sup>

**G1. Which of the following classifications or signs in a sick young infant less than 2 months old require urgent referral? (circle all the correct options)**

- a. Blood in stools
- b. SEVERE JAUNDICE
- c. Diarrhoea lasting 14 days or more
- d. FEEDING PROBLEM OR LOW WEIGHT
- e. VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION

**G2. Which of the following actions should be included in an outpatient facility in the treatment plan for a 5-week-old infant whose illness is classified as VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION? (circle all the correct options) <sup>80</sup>**

- a. Refer urgently to hospital without attempting any pre-referral treatment to avoid delays
- b. Give pre-referral treatment to prevent low blood sugar
- c. Keep infant at facility under close observation for the first 24 hours
- d. Provide oxygen
- e. Advise the mother how to keep the infant warm on the way to the hospital

**G3. Which of the following actions should be included in the treatment plan for a 5-week-old infant whose illness is classified as VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION? (circle only ONE option) <sup>81</sup>**

- a. Refer urgently to hospital without attempting any pre-referral treatment to avoid delays
- b. Provide oxygen
- c. Keep infant at facility under close observation for the first 24 hours
- d. Give appropriate pre-referral treatment and refer urgently to hospital
- e. Follow up in 2 days

<sup>79</sup> The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted. MCQ options should be adapted according to the national IMCI guidelines.

<sup>80</sup> The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted. MCQ options should be adapted according to the national IMCI guidelines.

<sup>81</sup> The previous generic version of the WHO IMCI guidelines referred to the classification of "POSSIBLE SERIOUS BACTERIAL INFECTION" in the "pink row" of the box for "Check for possible bacterial infection", while the new version has renamed it "VERY SEVERE DISEASE". In the regional adaptation, the revised classification "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION" has been adopted. MCQ options should be adapted according to the national IMCI guidelines.

**G4. Which of the following actions should be included in the treatment plan for a 5-week-old infant with difficult breathing and a respiratory rate of 70 breaths per minute (confirmed after second count for a full minute)? (circle all the correct options)**

- a. Refer urgently to hospital
- b. Give an appropriate oral antibiotic
- c. Give first dose of intramuscular antibiotics
- d. Give pre-referral treatment to prevent low blood sugar
- e. Follow up in 2 days

**G5. Which of the following actions should be included in the treatment plan for a 7-day-old newborn who moves only when stimulated and has an axillary temperature of 35.3°C? (circle all the correct options)**

- a. Keep the newborn warm on the way to the hospital
- b. Give first dose of intramuscular antibiotics
- c. Give an appropriate oral antibiotic
- d. Give pre-referral treatment to prevent low blood sugar
- e. Refer urgently to hospital

**G6. Which of the following actions should be included in the treatment plan for a 3-week-old newborn who has an axillary temperature of 37.8°C and severe chest indrawing? (circle all the correct options)**

- a. Refer urgently to hospital after providing pre-referral treatment
- b. Refer urgently to hospital without attempting to provide pre-referral treatment to avoid delays
- c. Give an appropriate oral antibiotic
- d. Give pre-referral treatment to prevent low blood sugar
- e. Give first dose of intramuscular antibiotics

**G7. Which of the following actions should be included in the treatment plan for a 2-day-old newborn who has been sick for 2 days, had fits last night and now has an axillary temperature of 37.8°C? (circle all the correct options)**

- a. Refer urgently to hospital
- b. Give paracetamol for fever
- c. Give an appropriate oral antibiotic
- d. Give pre-referral treatment to prevent low blood sugar
- e. Give diazepam

**G8. Which of the following actions should be included in the treatment plan for a 4-week-old breastfed infant who feeds poorly?** (circle all the correct options)

- a. Treat to prevent low blood sugar
- b. Treat with oral antibiotics
- c. Counsel the mother about feeding
- d. Refer urgently to hospital

• **LOCAL BACTERIAL INFECTION**

**G9. Which of the following actions should be included in the treatment plan for a 10-day-old breastfed newborn taken to the health facility because of a few skin pustules, who has an axillary temperature of 37.1°C, is well attached to the breast and suckles well, and has no other signs or conditions?** (circle all the correct options) <sup>82</sup>

- a. Refer to skin specialist
- b. Give intramuscular antibiotics
- c. Refer to hospital urgently
- d. Counsel mother to treat local infections at home
- e. Follow up in 2 days

**G10. Which of the following actions should be included in the treatment plan for a 2-day-old breastfed newborn taken to the health facility because of pus draining from the umbilicus, who has an axillary temperature of 37.2°C, is well attached to the breast and suckles well, and has no other signs or conditions?** (circle all the correct options)

- a. Refer to hospital urgently
- b. Give intravenous antibiotics
- c. Refer to skin specialist
- d. Counsel mother to treat local infections at home
- e. Give an appropriate oral antibiotic

**G11. Which of the following actions should be included in the treatment plan for a 2-day-old breastfed newborn whose illness is classified as LOCAL BACTERIAL INFECTION?** (circle all the correct options)

- a. Counsel mother to treat local infections at home
- b. Refer to hospital urgently
- c. Refer to skin specialist
- d. Give intravenous antibiotics
- e. Give an appropriate oral antibiotic

<sup>82</sup> The previous version of the generic IMCI guidelines referred to "Many or severe skin pustules" and "(some) skin pustules" in differentiating between conditions classified in the "pink" and "yellow" rows, respectively. The new version refers only to "Skin pustules" (yellow row). MCQs should be adapted according to the national IMCI guidelines.

**G12. Which of the following actions should be included in the treatment plan for a 3-day-old breastfed newborn taken to the health facility because of redness of the umbilicus, who has an axillary temperature of 36.9°C, suckles well and has no other signs? (circle all the correct options)**

- a. Refer to hospital urgently
- b. Apply a topical antibiotic
- c. Refer to skin specialist
- d. Give an appropriate oral antibiotic
- e. Counsel mother to treat local infections at home

**G13. Which of the following actions should be included in the treatment plan for a 3-day-old newborn taken to the health facility because of redness of the umbilicus and no other signs? (circle all the correct options)**

- a. Treat local infection once daily for one week
- b. Gently wash off the umbilicus with soap and water
- c. Gently apply alcohol to the umbilicus
- d. Wash hands before and after treating the umbilicus
- e. Treat local infection twice daily for 2 days

• **FEEDING PROBLEM OR LOW WEIGHT FOR AGE**

**G14. Which of the following actions should be included in the treatment plan for a 4-week-old breastfed baby boy who weighs 3 kg and does not suckle effectively? (circle all the correct options)**

- a. Refer to hospital urgently
- b. Teach mother to provide extra feeding through formula
- c. Follow up in 2 days
- d. Teach mother correct attachment
- e. Advise the mother how to keep the infant warm at home

**G15. Which of the following actions should be included in the treatment plan for a 6-week-old breastfed baby girl who also receives other fluids and weighs 3.0 kg? (circle all the correct options)**

- a. Counsel the mother about breastfeeding more
- b. Advise the mother to give water in between breastfeeds but no food
- c. Follow up in 5 days
- d. Teach mother to provide extra feeding through formula
- e. Follow up in 14 days



## Case scenario bank

### List of cases by age group

Note: The WHO IMCI guidelines refer to the classification of VERY LOW WEIGHT for age. Many countries in the Region use the LOW WEIGHT classification instead, as VERY LOW WEIGHT is less common. MCQ options should be adapted according to the national IMCI guidelines. More information on how to adapt the case scenarios in respect of weight-for-age classifications is given after the list of cases in "Weight-for-age classifications used in the case scenarios".

#### Child age 2 months up to 5 years

1. Fatima, 25 months old: Lethargy, diarrhoea (severe dehydration)
2. Ahmed, 18 months old: Cough (pneumonia), low weight
3. Sumaia, 36 months old: Diarrhoea (some dehydration, severe persistent diarrhoea, dysentery), low weight
4. Mohammed, 36 months old: *No malaria risk area* – Cough (pneumonia), fever (measles), very low weight
5. Rania, 32 months old: Cough, ear pain (no ear infection), severe malnutrition, severe anaemia
6. Ghulam, 24 months old: Cough (severe pneumonia or very severe disease), anaemia
7. Eman, 16 months old: Anaemia, immunization, feeding problems
8. Samar, 8 months old: Fever (very severe febrile disease)
9. Nageeb, 36 months old: Difficult breathing with fever (pneumonia)
10. Nadia, 48 months old: *No malaria risk area* – Cough with fever (pneumonia), ear pain (acute ear infection)
11. Youssef, 8 months old: Diarrhoea (some dehydration), very low weight, anaemia, feeding problem
12. Aziza, 9 months old: Cough, acute diarrhoea (some dehydration) and anaemia
13. Atif, 15 months old: *No malaria risk area* – Cough (pneumonia), fever (possible bacterial infection), very low weight and anaemia, feeding \ problems
14. Mona, 10 months old: *Low malaria risk area* – Fever (very severe febrile disease), anaemia
15. Wafaa, 7 months old: *Low malaria risk area* – Fever (malaria), cough (pneumonia), very low weight and anaemia
16. Nabil, 11 months old: *High malaria risk area* – Fever (very severe febrile disease), low weight and anaemia
17. Iman, 16 months old: *High malaria risk area* – Fever (malaria), severe malnutrition and anaemia
18. Asad, 23 months old: *High malaria risk area* – Fever (malaria), immunization, feeding problems
19. Refaat, 7 months old: Diarrhoea (some dehydration), immunization, feeding problem
20. Tamer, 29 months old: Diarrhoea (no dehydration, dysentery)
21. Ghada, 8 months old: Cough, diarrhoea (no dehydration, persistent diarrhoea), very low weight
22. Fakher, 16 months old: *No malaria risk area* – General danger sign (convulsions), difficult breathing (severe pneumonia) with fever (very severe febrile disease)
23. Samah, 37 months old: Ear pain (chronic ear infection), cough, low weight, feeding problems



24. Arwa, 20 months old:	Convulsions with fever (very severe febrile disease), immunization
25. Amira, 15 months old:	Unable to drink, cough (severe pneumonia or very severe disease), fever (very severe febrile disease)
26. Walaa, 8 months old:	Convulsions, cough (severe pneumonia or very severe disease), fever (very severe febrile disease), low weight
27. Doaa, 28 months old:	Diarrhoea (severe dehydration, cholera), low weight
28. Ali, 10 months old:	Cough (pneumonia), diarrhoea (no dehydration), fever (measles), low weight, anaemia
29. Kamel, 4 months old:	<i>High malaria risk area</i> – Lethargy, cough, fever (very severe febrile disease), anaemia
30. Suhaib, 3 months old:	Diarrhoea (no dehydration), anaemia, very low weight

### Sick young infant age up to 2 months

1. Karim, 21 days old:	Skin pustules (local bacterial infection), diarrhoea (some dehydration), low weight, feeding problem
2. Karima, 5 days old:	Difficult breathing and low temperature (very severe disease or possible serious bacterial infection), low weight, feeding problem
3. Nejb, 2 weeks old:	Diarrhoea (no dehydration), low weight, feeding problem
4. Afraa, 10 days old:	Red umbilicus (local bacterial infection); needs immunization
5. Jamil, 3 days old:	Jaundice
6. Wedad, 14 days old:	Not feeding well, fever (very severe disease or possible serious bacterial infection)
7. Jalaa, 16 days old:	Red umbilicus (local bacterial infection), low weight, feeding problem
8. Manal, 5 weeks old:	Difficult breathing and fever (very severe disease or possible serious bacterial infection)
9. Shaikh, 4 weeks old:	Not feeding well, low temperature, fast breathing (very severe disease or possible serious bacterial infection)
10. Abir, 22 days old:	No signs or problems

*In answering the questions of each case scenario, students should assume that they are responsible to make any treatment decisions and all the drugs needed and intravenous facilities are available at the health facility, unless otherwise stated.*

### Weight-for-age classifications used in the case scenarios

The generic WHO IMCI guidelines for children age 2 months up to 5 years old refer to the classification of VERY LOW WEIGHT for age. However, many countries in the Region use the LOW WEIGHT classification, as VERY LOW WEIGHT is less common in their setting. MCQs' options should be adapted according to the national IMCI guidelines. To help in the adaptation of the case scenarios, the term LOW WEIGHT has been used to label cases with weight-for-age Z-score  $< -2$  and VERY LOW WEIGHT for those with weight-for-age Z-score  $< -3$ , as shown in the table on the next page:

- If the classification LOW WEIGHT is used in your setting, the case scenarios can be used as they are, no change is needed;
- If the classification VERY LOW WEIGHT is used in your setting, the weight of children in case scenarios with weight-for-age Z-score  $< -2$  (labelled as LOW WEIGHT in the table below) need to be changed to lower values compatible with weight-for-age Z-score  $< -3$ .

Case scenario no.	Child's name	Sex	Age	Weight	Weight-for-age Z-score (conclusion on classification)
1	Fatima	Female	25 months	10.5 kg	≥ -2
2	Ahmed	Male	18 months	8.5 kg	< -2 (LOW WEIGHT)
3	Sumaia	Female	36 months	10.0 kg	< -2 (LOW WEIGHT)
4	Mohammed	Male	36 months	9.4 kg	< -3 (VERY LOW WEIGHT)
5	Rania	Female	32 months	7.9 kg	< -3 (VERY LOW WEIGHT)
6	Ghulam	Male	24 months	10.0 kg	≥ -2
7	Eman	Female	16 months	10.5 kg	≥ -2
8	Samar	Female	8 months	6.5 kg	≥ -2
9	Nageeb	Male	36 months	12.2 kg	≥ -2
10	Nadia	Female	48 months	17.2 kg	≥ -2
11	Youssef	Male	8 months	5.8 kg	< -3 (VERY LOW WEIGHT)
12	Aziza	Female	9 months	8.6 kg	≥ -2
13	Atif	Male	15 months	7.0 kg	< -3 (VERY LOW WEIGHT)
14	Mona	Female	10 months	7.0 kg	≥ -2
15	Wafaa	Female	7 months	4.5 kg	< -3 (VERY LOW WEIGHT)
16	Nabil	Male	11 months	7.2 kg	< -2 (LOW WEIGHT)
17	Iman	Female	16 months	6.5 kg	< -3 (VERY LOW WEIGHT)
18	Asad	Male	23 months	10.1 kg	≥ -2
19	Refaat	Female	7 months	6.5 kg	≥ -2
20	Tamer	Male	29 months	11.1 kg	≥ -2
21	Ghada	Female	8 months	5.2 kg	< -3 (VERY LOW WEIGHT)
22	Fakher	Male	16 months	10.0 kg	≥ -2
23	Samah	Female	37 months	10.5 kg	< -2 (LOW WEIGHT)
24	Arwa	Female	20 months	9.6 kg	≥ -2
25	Amira	Female	15 months	10.5 kg	≥ -2
26	Walaa	Female	8 months	6.0 kg	< -2 (LOW WEIGHT)
27	Doaa	Female	28 months	9.0 kg	< -2 (LOW WEIGHT)
28	Ali	Male	10 months	7.0 kg	< -2 (LOW WEIGHT)
29	Kamel	Male	4 months	6.1 kg	≥ -2
30	Suhaib	Male	3 months	4.1 kg	< -3 (VERY LOW WEIGHT)

## Child age 2 months up to 5 years

### Case scenario 1 (Fatima)

#### *Lethargy, diarrhoea (severe dehydration)*

Fatima is a 25-month-old baby girl. She is brought to the facility because she has been asleep since the morning and very difficult to wake up. This is an initial visit for this problem. When asked, her mother says that Fatima has not vomited and had no convulsions, has no cough, no throat problem, no ear problem, but has had watery diarrhoea for about 6 days. There is no blood in the stools. She weighs 10.5 kg. Her axillary temperature is 37.0°C. You assess Fatima: she has no convulsions during your assessment<sup>83</sup>; she does not watch your face when you talk, does not look at the mother either and shows no interest in what is happening around her. Her eyes look sunken. When you offer her some water with a spoon, the water runs out of her mouth. Her mother says that she has been like that since this morning. You also pinch Fatima's skin and see that it goes back very slowly. There is no cholera in the area. You complete your assessment and find no other problems.

#### **S.1.1 Which general danger signs does Fatima have?** (circle all the correct options)

- a. Unable to drink or breastfeed
- b. Vomiting everything
- c. History of convulsion
- d. Convulsing now
- e. Lethargic or unconscious

#### **S.1.2 What is your classification for dehydration?** (circle only ONE option)

- a. SEVERE DEHYDRATION
- b. SOME DEHYDRATION
- c. NO DEHYDRATION

#### **S.1.3 Which treatment plan is indicated for Fatima?** (circle only ONE option)

- a. Plan A
- b. Plan B
- c. Plan C

<sup>83</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

## Case scenario 2 (Ahmed)

### *Cough (pneumonia), low weight*

Ahmed is an 18-month-old baby boy. His mother says that Ahmed has had a cough for 3 days. This is an initial visit for this problem. He weighs 8.5 kg and his axillary temperature is 37.0°C. Ahmed is awake and alert. When asked, Ahmed's mother says that he is able to drink, has not vomited, has had no convulsions, has no diarrhoea, no throat problem and no ear problem. He has no convulsions during your assessment either <sup>84</sup>. You count 44 breaths per minute. You find no chest indrawing. You do not hear stridor or wheeze. He has no visible severe wasting or oedema of both feet. He has no palmar pallor. His immunizations are up to date. You complete your assessment and you find no other signs or other problems.

**S.2.1 What is your classification for Ahmed's cough? (circle only ONE option)**

- SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- PNEUMONIA
- NO PNEUMONIA: COUGH OR COLD <sup>85</sup>

**S.2.2 What is your classification for Ahmed's nutritional status? (circle only ONE option) <sup>86</sup>**

- SEVERE MALNUTRITION
- LOW WEIGHT
- NOT LOW WEIGHT

**S.2.3 Which of the following should be included in the treatment plan for Ahmed? (circle all the correct options)**

- Paracetamol
- Oral antibiotics for 3 days <sup>87</sup>
- Safe remedy for cough
- Follow-up in 2 days
- Follow up in 5 days if not improving

<sup>84</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>85</sup> The classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines. MCQ options should be adapted according to the national IMCI guidelines.

<sup>86</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>87</sup> The WHO generic IMCI guidelines revised in 2008 recommend 3-day treatment of pneumonia with an appropriate oral antibiotic. If the national IMCI guidelines recommend a different duration of treatment (e.g. 5 days), the MCQ options should be revised accordingly.

### Case scenario 3 (Sumaia)

#### *Diarrhoea (some dehydration, severe persistent diarrhoea, dysentery), low weight*

Sumaia is a 36-month-old baby girl. She has been brought to the clinic because she has been having diarrhoea for 18 days and has blood in the stools. This is an initial visit for this problem. She weighs 10 kg. Her axillary temperature is 37.0°C. Sumaia has no general danger signs, no cough or difficult breathing. She is irritable during the visit, her eyes are not sunken. When you offer her some water to drink, she is able to drink but is not thirsty. The skin pinch goes back slowly. There is no cholera in the area. Sumaia has no throat problem and no ear problem. She has no visible severe wasting or oedema of both feet. She has no palmar pallor. Her immunizations are up to date. You complete your assessment and you find no other signs or other problems.

#### **S.3.1 How do you classify Sumaia's illness?** (*circle only ONE option*)

- SEVERE DEHYDRATION, SEVERE PERSISTENT DIARRHOEA, DYSENTERY
- SOME DEHYDRATION, SEVERE PERSISTENT DIARRHOEA, DYSENTERY
- SOME DEHYDRATION, PERSISTENT DIARRHOEA, DYSENTERY
- SOME DEHYDRATION, DYSENTERY
- NO DEHYDRATION, SEVERE PERSISTENT DIARRHOEA, DYSENTERY

#### **S.3.2 Which of the following should be included in the treatment plan for Sumaia?** (*circle all the correct options*)

- Ciprofloxacin for 3 days <sup>88</sup>
- Intravenous (IV) fluids
- ORS at the facility
- Referral to hospital
- Follow-up in 5 days

<sup>88</sup> The WHO generic IMCI guidelines revised in 2008 recommend a 3-day ciprofloxacin treatment course for dysentery. If the national IMCI guidelines recommend a different antibiotic and duration of treatment (e.g. 5 days), this option should be revised accordingly.

### Case scenario 4 (Mohammed)

#### No malaria risk area

#### Cough (pneumonia), fever (measles), very low weight

Mohammed is a 36-month-old baby boy. His mother says that he has been coughing for 3 days and felt hot to the touch during this period; he had an episode of convulsions a month ago. This is an initial visit for this problem. He weighs 9.4 kg. His axillary temperature is 38.1°C. Mohammed is not lethargic or unconscious; he has no convulsions during your assessment<sup>89</sup>. When asked, his mother says that he is able to drink and has not vomited. You count 51 breaths per minute; you find no chest indrawing; you hear no stridor or wheezing. Mohammed has no diarrhoea, no throat problem and no ear problem; he has a runny nose. He has no stiff neck but has a generalized rash. There is no clouding of the cornea, no pus draining from the eyes or mouth ulcers. He has no visible severe wasting or oedema of both feet. He has no palmar pallor or mucous membrane pallor. You complete your assessment and find no other signs.

#### S.4.1 Which general danger signs, if any, does Mohammed have? (circle only ONE option)

- No general danger signs
- Unable to drink or breastfeed
- Vomiting everything
- History of convulsion
- Lethargic or unconscious

#### S.4.2 What is your classification for Mohammed's cough? (circle only ONE option)

- SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- PNEUMONIA
- NO PNEUMONIA: COUGH OR COLD<sup>90</sup>

#### S.4.3 What is/are your classification/s for Mohammed's fever? (circle all the correct options)

- VERY SEVERE FEBRILE DISEASE
- MEASLES
- FEVER- POSSIBLE BACTERIAL INFECTION
- FEVER- BACTERIAL INFECTION UNLIKELY
- SEVERE COMPLICATED MEASLES

<sup>89</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>90</sup> The classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines. MCQ options should be adapted according to the national IMCI guidelines.

**S.4.4 What is/are your classification/s for Mohammed's nutritional status and anaemia?** <sup>91</sup>  
(circle all the correct options)

- a. ANAEMIA
- b. VERY LOW WEIGHT
- c. NO ANEMIA
- d. SEVERE MALNUTRITION
- e. NOT VERY LOW WEIGHT

**S.4.5 Which of the following should be included in the treatment plan for Mohammed?**  
(circle all the correct options)

- a. Oral antibiotic for 3 days <sup>92</sup>
- b. Assess the child's feeding and counsel the mother on feeding
- c. Follow-up in 5 days if no improvement
- d. Paracetamol
- e. Vitamin A

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<sup>91</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>92</sup> The WHO generic IMCI guidelines revised in 2008 recommend 3-day treatment of pneumonia with an appropriate oral antibiotic. If the national IMCI guidelines recommend a different duration of treatment (e.g. 5 days), the MCQ options should be revised accordingly.

### Case scenario 5 (Rania)

#### *Cough, ear pain (no ear infection), severe malnutrition, severe anaemia*

Rania is a 32-month-old baby girl. Rania is very irritable and her mother has taken her to the facility because she has been crying and rubbing her ears for two days. This is an initial visit for this problem. She weighs 7.9 kg. Her axillary temperature is 36.2°C. Rania coughs during the visit and her mother confirms that she has been having cough for 3 days. She has not had any fever. She had no convulsions during this illness and has no other general danger signs. When you assess Rania, you count her respiratory rate and find it is 37 breaths per minute. You find no chest indrawing, no stridor, no wheezing. She does not have diarrhoea or throat problem. She has no swelling behind the ears and you see no pus draining from the ear. She has visible severe wasting. You find no oedema on both feet. Her palms appear very pale, almost white. Rania received vitamin A supplementation when she was 23 months old.

#### **S.5.1 What is your classification for Rania's cough?** (circle only ONE option)

- SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- PNEUMONIA
- NO PNEUMONIA: COUGH OR COLD <sup>93</sup>

#### **S.5.2 What is your classification for Rania's ear problem?** (circle only ONE option)

- MASTOIDITIS
- ACUTE EAR INFECTION
- CHRONIC EAR INFECTION
- NO EAR INFECTION

#### **S.5.3 What is your classification for Rania's nutritional status?** (circle only ONE option) <sup>94</sup>

- SEVERE MALNUTRITION
- VERY LOW WEIGHT
- NOT VERY LOW WEIGHT

#### **S.5.4 What is your classification for Rania's anaemia?** (circle only ONE option)

- SEVERE ANAEMIA
- ANAEMIA
- NO ANAEMIA

<sup>93</sup> The classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines. MCQ options should be adapted according to the national IMCI guidelines.

<sup>94</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.



**S.5.5 Which of the following should be included in the treatment plan for Rania?** (circle all the correct options)

- a. Oral antibiotic for 5 days
- b. Ask mother to breastfeed Rania to prevent low blood sugar
- c. Paracetamol
- d. Vitamin A
- e. Urgent referral to hospital

It is also learnt from Rania's mother that she breastfeeds Rania 3 times in 24 hours, gives her diluted cow's milk by feeding bottle two times per day, gives no other food and her feeding has not changed during the illness.

**S.5.6 Which of the following are Rania's feeding problems?** (circle all the correct options)

- a. Infrequent breastfeeding
- b. Giving no other food
- c. Feeding by bottle
- d. Using cow's milk
- e. Giving no other fluids

## Case scenario 6 (Ghulam)

### *Cough (severe pneumonia or very severe disease), anaemia*

Ghulam is a 24-month-old baby boy. His mother has brought him to the health centre because he has been coughing for 2 days and has had difficulty breathing since this morning. He has also had less appetite and has eaten less than usual during this illness. This is an initial visit for this problem. Ghulam's axillary temperature is 37.3°C. He weighs 10 kg. He is sleepy but wakes up readily when her mother calls him. He had an episode of vomiting last night; today, he had some food and water and did not vomit. He has had no convulsions and has no convulsions during your assessment <sup>95</sup>. You count his respiratory rate and find it is 52 breaths per minute. You notice mild chest indrawing. You hear no stridor or wheezing. Ghulam has no diarrhoea, no throat problem, no ear problem, no recent history of fever. When you gently hold the palms of his hands, you decide that he has some palmar pallor. Ghulam does not look severely wasted and has no oedema of his feet.

#### **S.6.1 How do you classify Ghulam's at this stage of assessment? (circle only ONE option)**

- SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- PNEUMONIA
- NO PNEUMONIA: COUGH OR COLD <sup>96</sup>

#### **S.6.2 How do you classify Ghulam's nutritional status and anaemia?**

(circle only ONE option) <sup>97</sup>

- LOW WEIGHT, SEVERE ANAEMIA
- LOW WEIGHT, ANAEMIA
- LOW WEIGHT, NO ANAEMIA
- NOT LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, NO ANAEMIA

Ghulam has no other problems. His vaccination card shows that he received BCG and OPV at birth, then 3 doses of DPT, OPV, HIB and Hepatitis B vaccine. He also received measles immunization when he was 12 months old.

#### **S.6.3 Which of the following actions should be included in the treatment plan for Ghulam?**

(circle all the correct options)

- Give an appropriate oral antibiotic for 3 days <sup>98</sup>
- Treat Ghulam to prevent low sugar
- Assess feeding practices
- Refer urgently to hospital
- Give iron

<sup>95</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>96</sup> The classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines. MCQ options should be adapted according to the national IMCI guidelines.

<sup>97</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>98</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for pneumonia (e.g. "for 5 days"), if they recommend a different duration of treatment.

## Case scenario 7 (Eman)

### *Anaemia, immunization, feeding problems*

Eman is a 16-month-old baby girl. Her mother has brought her to the health centre because she is worried that she has not been eating well in the last two weeks. This is an initial visit for this problem. Eman's axillary temperature is 36.8°C. She is alert and active. She has no danger signs and none of the following: cough, difficult breathing, diarrhoea, throat problem, ear problem or recent history of fever. Her palms are somewhat pale but not very pale. She weighs 10.5 kg, does not look severely wasted and has no oedema of her feet. Her vaccination card shows that she received BCG and OPV at birth, then 3 doses of DPT, OPV, HIB and Hepatitis B vaccine. Eman received one dose of vitamin A when she was 8 months old <sup>99</sup>. She continues to breast feed and usually eats one regular meal with the rest of the family.

#### **S.7.1 How do you classify Eman? (circle only ONE option) <sup>100</sup>**

- LOW WEIGHT, SEVERE ANAEMIA
- LOW WEIGHT, ANAEMIA
- LOW WEIGHT, NO ANAEMIA
- NOT LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, NO ANAEMIA

#### **S.7.2 What should Eman be given as part of her management plan? (circle all the correct options)**

- Measles vaccine <sup>101</sup>
- Vitamin A
- Vitamin D
- Iron
- Zinc

#### **S.7.3 Which of the following feeding recommendations would you give to Eman's mother? (circle all the correct options)**

- Continue to breastfeed
- Give Eman family food 1-2 times a day plus snacks
- Give Eman family food 3-4 times a day plus snacks
- Stop breastfeeding Eman and give her family foods 3-4 times a day plus snacks
- Stop breastfeeding Eman and give her family foods 5 or more times a day

<sup>99</sup> The WHO generic IMCI guidelines recommend the administration of vitamin A from the age of 6 months. If the national guidelines are different, the case scenario can be modified accordingly.

<sup>100</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>101</sup> Some countries may use MMR. In this case, modify the text of the case scenario and this option accordingly.

## Case scenario 8 (Samar)

### High malaria risk area

#### Fever (very severe febrile disease)

Samar is an 8-month-old baby girl. Her mother has brought her to the health centre because she has had fever for 2 days and looked very quiet and sleepy since this morning. Samar lives in a high malaria risk area. This is an initial visit for this problem. Samar's axillary temperature is 37.4°C. She weighs 6.5 kg. She looks very sleepy; when her mother calls her or you clap your hands to wake her up, she does not open her eyes. She has had no convulsions and has no convulsions during your assessment; she vomited once last night. Samar has no cough, no difficult breathing, no diarrhoea, no throat problem, no ear problem, no runny nose; she does not look severely wasted and has no oedema of her feet. Her palms do not look pale. Samar received one dose of vitamin A when she was 6 months old <sup>102</sup>.

#### S.8.1 How do you classify Samar? (circle only ONE option) <sup>103</sup>

- VERY SEVERE FEBRILE DISEASE, LOW WEIGHT, NO ANAEMIA
- VERY SEVERE FEBRILE DISEASE, NOT LOW WEIGHT, NO ANAEMIA
- MALARIA, LOW WEIGHT, NO ANAEMIA
- MALARIA, NOT LOW WEIGHT, NO ANAEMIA
- FEVER – MALARIA UNLIKELY, NOT LOW WEIGHT, NO ANAEMIA

#### S.8.2 Which of the following actions should be included in the treatment plan for Samar? (circle all the correct options)

- Give a recommended oral antimalarial
- Refer urgently to hospital
- Advise the mother to keep Samar warm
- Give first dose of quinine
- Give one dose of vitamin A

<sup>102</sup> The WHO generic IMCI guidelines recommend the administration of vitamin A from the age of 6 months. If the national guidelines are different, the case scenario can be modified accordingly.

<sup>103</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

## Case scenario 9 (Nageeb)

### No malaria risk area

#### Difficult breathing with fever (pneumonia)

Nageeb is a 36-month-old baby boy. His mother has brought him to the health centre because he has had difficult breathing since this morning. This is an initial visit for this problem. Nageeb's axillary temperature is 38.8°C. He weighs 12.2 kg. He looks sleepy; when his mother calls him, he opens his eyes, looks around and remains alert. He had an episode of convulsions when he was 2 years old and had high fever. He has no vomiting and is able to drink. Nageeb has no convulsions during your assessment <sup>104</sup>. He has no cough, no diarrhoea, no stiff neck, no throat problem, no ear problem. His respiratory rate is 46 breaths per minute. He has no chest indrawing, no stridor, no wheezing. He does not look severely wasted and has no oedema of his feet. His palms do not look pale. His immunizations are up to date. You complete your assessment and find no other problems.

**S.9.1 Which of the following classifications applies to Nageeb's illness? (circle only ONE option)**

- SEVERE PNEUMONIA/VERY SEVERE DISEASE, VERY SEVERE FEBRILE DISEASE
- SEVERE PNEUMONIA/VERY SEVERE DISEASE, FEVER-POSSIBLE BACTERIAL INFECTION
- PNEUMONIA, FEVER-POSSIBLE BACTERIAL INFECTION
- NO PNEUMONIA: COUGH OR COLD <sup>105</sup>, FEVER-BACTERIAL INFECTION UNLIKELY

**S.9.2 How do you classify Nageeb's nutritional status and anaemia? (circle only ONE option) <sup>106</sup>**

- LOW WEIGHT, ANAEMIA
- LOW WEIGHT, NO ANAEMIA
- NOT LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, NO ANAEMIA

<sup>104</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>105</sup> The classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines. MCQs' options should be adapted according to the national IMCI guidelines.

<sup>106</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

**S.9.3 Which of the following actions should be included in the treatment plan for Nageeb?**  
(circle all the correct options)

- a. Refer urgently to hospital
- b. Give an appropriate oral antibiotic for 3 days <sup>107</sup>
- c. Advise mother when to return immediately
- d. Follow up in 2 days
- e. Give paracetamol

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<sup>107</sup> The WHO generic IMCI guidelines revised in 2008 recommend 3-day treatment of pneumonia with an appropriate oral antibiotic. If the national IMCI guidelines recommend a different duration of treatment (e.g. 5 days), this option should be revised accordingly.

## Case scenario 10 (Nadia)

### No malaria risk area

#### Cough with fever (pneumonia), ear pain (acute ear infection)

Nadia is a 48-month-old baby girl. Her mother has brought her to the health centre because she has had ear pain for 3 days. This is an initial visit for this problem. Nadia's axillary temperature is 37.8°C. She weighs 17.2 kg. She has no general danger signs; she is a little irritable. Nadia has cough. You count her respiratory rate and find that it is 41 breaths per minute. Nadia has no stridor, no wheezing, no chest indrawing. She has no diarrhoea, no throat problem. Nadia moves her neck easily up and down when you ask her to look at her feet and at the ceiling. You notice pus draining from her right ear. She has no swelling behind the ear. She does not look severely wasted and has no oedema of her feet. Her palms do not look pale. Her immunizations are up to date. You complete your assessment and find no other problems.

#### S.10.1 How do you classify Nadia's illness? (circle only ONE option)

- SEVERE PNEUMONIA/VERY SEVERE DISEASE, VERY SEVERE FEBRILE DISEASE, ACUTE EAR INFECTION
- PNEUMONIA, FEVER-POSSIBLE BACTERIAL INFECTION, ACUTE EAR INFECTION
- NO PNEUMONIA: COUGH OR COLD, FEVER-POSSIBLE BACTERIAL INFECTION, ACUTE EAR INFECTION

#### S.10.2 How do you classify Nadia's nutritional status and anaemia?

(circle only ONE option) <sup>108</sup>

- LOW WEIGHT, ANAEMIA
- LOW WEIGHT, NO ANAEMIA
- NOT LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, NO ANAEMIA

#### S.10.3 Which of the following actions should be included in the treatment plan for Nadia?

(circle all the correct options)

- Dry the ear by wicking
- Give paracetamol
- Give an appropriate oral antibiotic for 5 days <sup>109</sup>
- Give an appropriate oral antibiotic for 3 days <sup>110</sup>
- Refer urgently to hospital

<sup>108</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>109</sup> Nadia needs antibiotic treatment for PNEUMONIA and ACUTE EAR INFECTION. This and next option should be adapted based on the national IMCI guidelines.

<sup>110</sup> The WHO generic IMCI guidelines revised in 2008 recommend 3-day treatment of pneumonia with an appropriate oral antibiotic. If the national IMCI guidelines recommend a different duration of treatment (e.g. 5 days), the MCQ options should be revised accordingly.

### Case scenario 11 (Youssef)

#### *Diarrhoea (some dehydration), very low weight <sup>111</sup>, anaemia, feeding problem*

Youssef is an 8-month-old baby boy. His mother has brought him to the health centre because he has been passing many watery stools for 4 days and looks weak. This is an initial visit for this problem. Youssef's axillary temperature is 37.4°C. He weighs 5.8 kg. He is awake and restless. He has no vomiting. He has had no convulsions and has no convulsions during your assessment <sup>112</sup>. Youssef has no cough. His eyes look sunken and the skin pinch goes back slowly. When you offer him some water, he grabs the cup and drinks eagerly; he cries when you take the cup away from him. His mother reports no blood in the stools. Youssef has no ear problem and no throat problem. He does not look severely wasted and has no oedema of his feet. He has some palmar pallor. He received one dose of vitamin A last month <sup>113</sup>. His immunizations are up to date.

#### **S.11.1 How do you classify Youssef's illness? (circle only ONE option)**

- SEVERE DEHYDRATION, VERY LOW WEIGHT, ANAEMIA
- SEVERE DEHYDRATION, NOT VERY LOW WEIGHT, ANAEMIA
- SOME DEHYDRATION, VERY LOW WEIGHT, ANAEMIA
- SOME DEHYDRATION, NOT VERY LOW WEIGHT, ANAEMIA
- NO DEHYDRATION, NOT VERY LOW WEIGHT, ANAEMIA

#### **S.11.2 Which of the following actions should be included in the treatment plan for Youssef? (circle all the correct options)**

- PLAN C
- PLAN B
- PLAN A
- Give iron
- Give vitamin A

Youssef usually breastfeeds 2-3 times a day and receives family staple food (mostly bread) with some vegetables 2 times a day, with no additional snacks. Since diarrhoea started, his mother breastfeeds him 1-2 times a day and gives him some home-made soup by a bottle instead of family food.

<sup>111</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>112</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>113</sup> The WHO generic IMCI guidelines recommend the administration of vitamin A from the age of 6 months. If the national guidelines are different, the case scenario can be modified accordingly.



**S.11.3 About which of the following items would you counsel his mother, when Youssef is ready to go home? (circle all the correct options)**

- a. Breastfeeding more frequently and for longer
- b. Offering frequent, small feeds / meals
- c. Giving cow's milk instead of vegetables during diarrhoea
- d. Stopping using the bottle and using a cup instead
- e. Giving only breastmilk and fluids during diarrhoea

**S.11.4 In how many days should the mother bring back Youssef for follow-up? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 15 days
- e. 30 days

## Case scenario 12 (Aziza)

### *Cough, acute diarrhoea (some dehydration) and anaemia*

Aziza is a 9-month-old baby girl. Her mother has taken her to the health centre reporting that she has been having cough and diarrhoea with no blood in the stools for 5 days. This is an initial visit for this problem. Her axillary temperature is 37.0°C. She weighs 8.6 kg. You assess Aziza: she has no general danger signs, no stridor, no chest indrawing. Her respiratory rate is 35 breaths / minute; she has no wheezing. Aziza is calm, has sunken eyes, drinks very eagerly when you offer her some water; the skin pinch goes back normally. She has no ear or throat problem; she is not severely wasted and has no oedema at her feet. When you gently hold the palms of her hands, you decide that she has some palmar pallor. Her immunization and vitamin A supplementation status are up to date. Aziza has no other problems.

**S.12.1 How do you classify Aziza for her cough?** (circle only ONE option)

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. NO PNEUMONIA: COUGH OR COLD <sup>114</sup>

**S.12.2 How do you classify Aziza for her diarrhoea?** (circle only ONE option)

- a. SEVERE PERSISTENT DIARRHOEA, SEVERE DEHYDRATION
- b. PERSISTENT DIARRHOEA, SOME DEHYDRATION
- c. SEVERE DEHYDRATION
- d. SOME DEHYDRATION
- e. NO DEHYDRATION

**S.12.3 How do you classify Aziza's nutritional status and anaemia?**  
(circle only ONE option) <sup>115</sup>

- a. SEVERE MALNUTRITION, ANAEMIA
- b. VERY LOW WEIGHT, ANAEMIA
- c. NOT VERY LOW WEIGHT, ANAEMIA
- d. VERY LOW WEIGHT, NO ANAEMIA
- e. NOT VERY LOW WEIGHT, NO ANAEMIA

**S.12.4 Which of the following actions should be included in the treatment plan for Aziza at the health facility?** (circle all the correct options)

- a. Give an appropriate antibiotic for 5 days
- b. Follow PLAN A
- c. Follow PLAN B
- d. Give iron
- e. Give mebendazole

<sup>114</sup> The classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines. MCQ options should be adapted according to the national IMCI guidelines.

<sup>115</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

## Case scenario 13 (Atif)

### No malaria risk area

*Cough (pneumonia), fever (possible bacterial infection), very low weight and anaemia, feeding problems*

Atif is a 15-month-old baby boy. His mother has brought him to the health centre reporting fever and cough for 2 days. This is an initial visit for this problem. There is no malaria risk in this area and Atif has not travelled outside. His axillary temperature is 37.2°C. He weighs 7.0 kg. Atif has been living in a no malaria risk area since he was born. Atif has no general danger signs, no stridor, no chest indrawing. His respiratory rate is 48 breaths/minute; he has no wheezing. He has no ear or throat problem; he is not severely wasted and has no oedema at his feet. When you gently hold the palms of his hands, you decide that he has some palmar pallor. His immunization and vitamin A supplementation status are up to date. His mother breastfeeds him 2 times a day. Atif also eats family food 2 times a day with the rest of the family, not on a separate plate.

#### S.13.1 How do you classify Atif's cough and fever reported by his mother?

(circle only ONE option)

- SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- PNEUMONIA and FEVER-MALARIA UNLIKELY
- PNEUMONIA and FEVER-POSSIBLE BACTERIAL INFECTION
- PNEUMONIA
- NO PNEUMONIA: COUGH OR COLD <sup>116</sup>

#### S.13.2 How do you classify Atif's nutritional status and anaemia?

(circle only ONE option) <sup>117</sup>

- SEVERE MALNUTRITION, ANAEMIA
- VERY LOW WEIGHT, ANAEMIA
- VERY LOW WEIGHT, NO ANAEMIA
- NOT VERY LOW WEIGHT, ANAEMIA
- NOT VERY LOW WEIGHT, NO ANAEMIA

#### S.13.3 Which of the following feeding recommendations would you give to Atif's mother?

(circle all the correct options)

- No feeding recommendation
- Give family food 3–4 times a day plus snacks
- Continue breastfeeding
- Stop breastfeeding
- Help feed Atif with a spoon and give him his own plate

<sup>116</sup> The classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines. MCQ options should be adapted according to the national IMCI guidelines.

<sup>117</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

**S.13.4 Which of the following actions should be included in the management plan for Atif? (circle all the correct options)**

- a. Give an appropriate antibiotic for 3 days <sup>118</sup>
- b. Give bronchodilator for 5 days
- c. Give paracetamol
- d. Give iron
- e. Advise Atif's mother when to return immediately

**S.13.5 In how many days should the mother bring back Atif for follow-up? (circle only ONE option)**

- a. 2 days
- b. 5 days
- c. 7 days
- d. 15 days
- e. 30 days

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<sup>118</sup> The WHO generic IMCI guidelines revised in 2008 recommend 3-day treatment of pneumonia with an appropriate oral antibiotic. If the national IMCI guidelines recommend a different duration of treatment (e.g. 5 days), this option should be revised accordingly.

**Case scenario 14 (Mona)****Low malaria risk area****Fever (very severe febrile disease), anaemia**

Mona is a 10-month-old baby girl. Her mother has brought her to the health centre reporting fever for 2 days. This is an initial visit for this problem. Her axillary temperature is 38.7°C. She weighs 7.0 kg. Mona lives in a low malaria risk area. She has no general danger signs. When you try to bend her neck forward toward her chest, you find resistance. She has not had measles in the last 3 months; she has no generalized rash, no running nose, no red eyes. She is not severely wasted and has no oedema at her feet; she has some palmar pallor. Mona has no other problems.

**S.14.1 How do you classify Mona's conditions? (circle only ONE option)**

- a. VERY SEVERE FEBRILE DISEASE, ANAEMIA
- b. VERY SEVERE FEBRILE DISEASE, NO ANAEMIA
- c. MALARIA, ANAEMIA
- d. MALARIA, NO ANAEMIA
- e. FEVER-MALARIA UNLIKELY, ANAEMIA

**S.14.2 Which of the following actions should be included in the management plan for Mona? (circle all the correct options)**

- a. Give an appropriate oral antibiotic
- b. Give first dose of quinine
- c. Give one dose of paracetamol
- d. Refer urgently to hospital
- e. Treat to prevent low blood sugar

## Case scenario 15 (Wafaa)

### Low malaria risk area

#### Fever (malaria), cough (pneumonia), very low weight and anaemia

Wafaa is a 7-month-old baby girl. Her mother reports that she has had fever and cough for 3 days. This is an initial visit for this problem. Her axillary temperature is 39.1°C. She weighs 4.5 kg. Wafaa lives in a low malaria risk area. She is sleepy but wakes up when you clap your hands; she has no general danger signs. Her respiratory rate is 58 breaths per minute. There is no resistance when you try to bend her neck forward toward her chest. She has no skin rash, no running nose, no red eyes and has not had measles in the last 3 months. She is not severely wasted and has no oedema at her feet; she has some palmar pallor. Her immunizations are up to date. She receives only breastmilk.

#### S.15.1 How do you classify Wafaa for her cough and fever problems? (circle only ONE option)

- VERY SEVERE DISEASE/SEVERE PNEUMONIA, MALARIA
- SEVERE PNEUMONIA, MALARIA
- PNEUMONIA, MALARIA
- PNEUMONIA, FEVER-MALARIA UNLIKELY
- NO PNEUMONIA: COUGH OR COLD <sup>119</sup>, MALARIA

#### S.15.2 How do you classify Wafaa's nutritional status and anaemia? (circle only ONE option)<sup>120</sup>

- VERY LOW WEIGHT, SEVERE ANAEMIA
- VERY LOW WEIGHT, ANAEMIA
- LOW WEIGHT, SEVERE ANAEMIA
- LOW WEIGHT, ANAEMIA
- NOT VERY LOW WEIGHT, NO ANAEMIA

#### S.15.3 Which of the following actions should be included in the management plan for Wafaa? (circle all the correct options)

- Refer urgently to hospital
- Give an appropriate oral antibiotic for 3 days <sup>121</sup>
- Give a recommended antimalarial
- Treat to prevent low blood sugar
- Give one dose of paracetamol

<sup>119</sup> The classification of "NO PNEUMONIA: COUGH OR COLD" is shown simply as "COUGH OR COLD" in the revised WHO IMCI guidelines. MCQ options should be adapted according to the national IMCI guidelines.

<sup>120</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>121</sup> The WHO generic IMCI guidelines revised in 2008 recommend 3-day treatment of pneumonia with an appropriate oral antibiotic. If the national IMCI guidelines recommend a different duration of treatment (e.g. 5 days), this option should be revised accordingly.

**S.15.4 Which of the following feeding recommendations should Wafaa's mother receive?**  
(circle all the correct options)

- a. Breastfeed Wafaa as often as she wants
- b. Breastfeed Wafaa 4 times a day
- c. Stop breastfeeding Wafaa
- d. Give Wafaa family food 3 times a day plus snacks
- e. Give Wafaa family food 5 times a day plus snacks

## Case scenario 16 (Nabil)

### High malaria risk area

#### *Danger signs (lethargic), fever (very severe febrile disease), low weight and anaemia*

Nabil is an 11-month-old baby boy. His mother reports that he has been unwell and sleepy for a day and felt hot to the touch. This is an initial visit for this problem. His axillary temperature is 39.3°C. He weighs 7.2 kg. Nabil lives in a high malaria risk area. He looks sleepy; when you clap your hands several times, sometimes he opens his eyes for a short while and then closes them again right away. He has had no convulsions and has no convulsions during your assessment <sup>122</sup>. He has a runny nose. There is no resistance when you try to bend his neck forward toward his chest. He had measles 4 months ago. He is not severely wasted and has no oedema at his feet; he has some palmar pallor. Nabil has no other problems.

#### **S.16.1 How do you classify Nabil for his fever? (circle only ONE option)**

- VERY SEVERE FEBRILE DISEASE
- VERY SEVERE FEBRILE DISEASE and MEASLES
- MALARIA
- MALARIA and MEASLES
- FEVER – MALARIA UNLIKELY

#### **S.16.2 How do you classify Nabil's nutritional status and anemia?**

*(circle only ONE option)* <sup>123</sup>

- SEVERE MALNUTRITION, ANAEMIA
- VERY LOW WEIGHT, SEVERE ANAEMIA
- VERY LOW WEIGHT, ANAEMIA
- NOT VERY LOW WEIGHT, ANAEMIA

#### **S.16.3 Which of the following actions should be included in the management plan for Nabil? (circle all the correct options)**

- Refer urgently to hospital
- Give iron
- Give first dose of quinine
- Treat to prevent low blood sugar
- Give vitamin A

<sup>122</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>123</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.



## Case scenario 17 (Iman)

### High malaria risk area

#### Fever (malaria), severe malnutrition and anaemia

Iman is a 16-month-old baby girl. Her mother reports that he has been unwell for 3 days and felt hot to the touch yesterday. This is an initial visit for this problem. Her axillary temperature is 37.4°C. She weighs 6.5 kg. Iman lives in a high malaria risk area. She has no general danger signs. There is no resistance when you try to bend her neck forward toward her chest. She has no generalized skin rash or history of measles. Iman looks thin and her ribs are easily seen. Her hips are small compared with the chest and abdomen. She has no oedema at her feet; she has some palmar pallor. Iman has no other problems.

#### S.17.1 How do you classify Iman for her fever? (circle only ONE option)

- VERY SEVERE FEBRILE DISEASE
- MALARIA
- FEVER - MALARIA UNLIKELY
- No classification for fever as her axillary temperature upon assessment is 37.4°C

#### S.17.2 How do you classify Iman's nutritional status and anaemia? (circle only ONE option) <sup>124</sup>

- SEVERE MALNUTRITION, SEVERE ANAEMIA
- SEVERE MALNUTRITION, ANAEMIA
- VERY LOW WEIGHT, SEVERE ANAEMIA
- VERY LOW WEIGHT, ANAEMIA
- NOT VERY LOW WEIGHT, ANAEMIA

#### S.17.3 Which of the following actions should be included in the management plan for Iman? (circle all the correct options)

- Refer urgently to hospital
- Give iron
- Follow up in two days if fever persists
- Treat to prevent low blood sugar
- Give intramuscular quinine

<sup>124</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

## Case scenario 18 (Asad)

### High malaria risk area

#### Fever (malaria), immunization, feeding problems

Asad is a 23-month-old baby boy. His mother reports that he has been unwell with fever for 4 days. This is an initial visit for this problem. His axillary temperature is 37.8°C. He weighs 10.1 kg. Asad lives in a high malaria risk area. He has no general danger signs. There is no resistance when you try to bend his neck forward toward her chest. He has no generalized skin rash nor history of measles. Asad does not look severely wasted, has no oedema at his feet and has no palmar pallor. Asad has no other signs.

**S.18.1 How do you classify Asad's condition?** (circle only ONE option)

- a. VERY SEVERE FEBRILE DISEASE
- b. MALARIA
- c. FEVER – MALARIA UNLIKELY

**S.18.2 Which of the following actions should be included in the management plan for Asad?** (circle all the correct options)

- a. Refer urgently to hospital
- b. Give a recommended oral antibiotic
- c. Advise mother when to return immediately
- d. Give a recommended oral antimalarial
- e. Give multivitamins and minerals

**S.18.3 When should Asad be followed up?** (circle all the correct options)

- a. In 2 days
- b. In 2 days if fever persists
- c. In 5 days
- d. In 5 days if fever persists
- e. In 7 days

Asad's vaccination card shows that he received BCG and OPV at birth, then 2 doses of DPT, 3 doses of OPV, Hib and Hepatitis B vaccine, and measles. His mother remembers that the last time Asad received an immunization was at age 18. Asad received one dose of vitamin A four months ago.

**S.18.4 Which of the following combinations of immunization and vitamin A supplementation should Asad receive today?** (circle only ONE option)

- a. OPV-3 and vitamin A supplementation
- b. OPV-3 and no vitamin A supplementation
- c. DPT-3 and vitamin A supplementation
- d. DPT-3 and no vitamin A supplementation
- e. No immunization and no vitamin A supplementation

Asad stopped breastfeeding when he was one year old. He eats family food 2 times a day and has two snacks in between.

**S.18.5 Which of the following feeding recommendations should you give to Asad's mother?** (circle all the correct options)

- a. Give family foods 2 times a day plus snacks
- b. Give family foods 3 times a day plus snacks
- c. Dilute cereals and add oil
- d. Give legumes and add oil
- e. Give thick cereal and do not add oil

### Case scenario 19 (Refaat)

#### *Diarrhoea (some dehydration), feeding problem*

Refaat is a 7-month-old baby girl. Her mother has brought her to the health centre because she has been passing watery stools for 2 days. This is an initial visit for this problem. Refaat's axillary temperature is 36.6°C. She weighs 6.5 kg. She is awake and somewhat irritable; her mother is unable to calm her. She has no vomiting. Refaat has had no convulsions and has no convulsions during your assessment <sup>125</sup>. She has no cough. Her eyes look sunken; the skin pinch goes back quickly. When you offer her some water, she drinks eagerly. Her mother reports no blood in the stools. Refaat has no throat problem and no ear problem. She does not look severely wasted and has no oedema of her feet. She has no palmar pallor. Refaat has no other signs.

**S.19.1 How do you classify Refaat's illness and nutrition status? (circle only ONE option) <sup>126</sup>**

- SEVERE DEHYDRATION, VERY LOW WEIGHT, ANAEMIA
- SEVERE DEHYDRATION, NOT VERY LOW WEIGHT, NO ANAEMIA
- SOME DEHYDRATION, VERY LOW WEIGHT, ANAEMIA
- SOME DEHYDRATION, NOT VERY LOW WEIGHT, NO ANAEMIA
- NO DEHYDRATION, NOT VERY LOW WEIGHT, NO ANAEMIA

**S.19.2 Which of the following should be included in the treatment plan for Refaat at this stage? (circle all the correct options)**

- Intravenous fluids for rehydration at health centre
- ORS administered at the health centre over 4 hours
- Sent home with advice on giving more fluids and continuing feeding
- Oral zinc for 14 days
- Multivitamins

Refaat has received no dose of vitamin A before. Her immunization card shows that she has received BCG, OPV-3, DPT-3, HIB-3, Hepatitis-2 and no measles immunization.

**S.19.3 Which of the following should be given to Refaat when she is ready to go home? (circle all the correct options)**

- Vitamin A
- Hepatitis-3
- OPV-4
- Measles vaccine

<sup>125</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>126</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

She is breastfed and her mother has reduced breastfeeding since diarrhoea started. She receives family food two times a day, although she has been eating less since diarrhoea started.

**S.19.4 About which of the following items would you counsel her mother, when Refaat is ready to go home?** (circle all the correct options)

- a. Breastfeed more frequently
- b. Stop breastfeeding during diarrhoea
- c. Give only breastmilk and stop giving any other fluids or foods during diarrhoea
- d. Give 3 meals a day
- e. Avoid adding oil to food until diarrhoea stops

### Case scenario 20 (Tamer)

#### *Diarrhoea (no dehydration, dysentery)*

Tamer is a 29-month-old baby boy. His mother has brought him to the health centre because he has been passing many loose stools for 4 days. This is an initial visit for this problem. Tamer's axillary temperature is 37.1°C. He weighs 11.1 kg. He has no general danger signs. Tamer has no cough. He is awake and crying, but his mother is able to calm him. His eyes look sunken. When you offer him some water, he drinks a little bit, but then his lips move away from the cup. The skin pinch goes back quickly. When asked, his mother says that his stools are bloody. Tamer has no throat problem and no ear problem. He does not look severely wasted and has no oedema of his feet. He has no palmar pallor. He received a dose of vitamin A four months ago. His immunizations are up to date. Tamer has no other signs and no other problems.

#### **S.20.1 How do you classify Tamer's illness? (circle only ONE option)**

- SOME DEHYDRATION, DYSENTERY
- NO DEHYDRATION, DYSENTERY
- NO DEHYDRATION

#### **S.20.2 How do you classify Tamer's nutrition status and anaemia? (circle only ONE option)<sup>127</sup>**

- VERY LOW WEIGHT, ANAEMIA
- VERY LOW WEIGHT, NO ANAEMIA
- NOT VERY LOW WEIGHT, ANAEMIA
- NOT VERY LOW WEIGHT, NO ANAEMIA

#### **S.20.3 Which of the following should be included in the treatment plan for Tamer at this stage? (circle all the correct options)**

- Ciprofloxacin for 3 days <sup>128</sup>
- ORS administered at the health centre over 4 hours
- Oral zinc for 14 days
- Vitamin A
- Sent home with advice on giving more fluids and continuing feeding

#### **S.20.4 When should Tamer be followed up? (circle all the correct options)**

- In 2 days
- In 3 days
- In 5 days
- In 7 days

<sup>127</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>128</sup> The revised WHO generic IMCI guidelines recommend this treatment for dysentery. If the national IMCI guidelines recommend a different antibiotic, this option should be revised accordingly.

## Case scenario 21 (Ghada)

### *Cough, diarrhoea (no dehydration, persistent diarrhoea), very low weight*

Ghada is an 8-month-old baby girl. Her mother has brought her to the health centre because she has been passing loose stools for 18 days. This is an initial visit for this problem. Ghada's axillary temperature is 36.3°C. She weighs 5.2 kg. She has no general danger signs. Ghada has cough. You hear no stridor and no wheezing. Her respiratory rate is 38 breaths per minute and you see no chest indrawing. She is calm and has sunken eyes. When you offer her some water, she does not appear thirsty. The skin pinch goes back quickly. Ghada has no throat problem and no ear problem. She does not look severely wasted and has no oedema of her feet. She has no palmar pallor. She received a dose of vitamin A one month ago. Ghada has no other signs.

#### **S.21.1 How do you classify Ghada's illness? (circle only ONE option)**

- PNEUMONIA, SOME DEHYDRATION, PERSISTENT DIARRHOEA
- PNEUMONIA, NO DEHYDRATION, PERSISTENT DIARRHOEA
- NO PNEUMONIA: COUGH OR COLD, SOME DEHYDRATION, PERSISTENT DIARRHOEA
- NO PNEUMONIA: COUGH OR COLD, NO DEHYDRATION, PERSISTENT DIARRHOEA
- NO PNEUMONIA: COUGH OR COLD, NO DEHYDRATION

#### **S.21.2 How do you classify Ghada's nutrition status and anaemia?**

(circle only ONE option) <sup>129</sup>

- VERY LOW WEIGHT, ANAEMIA
- VERY LOW WEIGHT, NO ANAEMIA
- NOT VERY LOW WEIGHT, ANAEMIA
- NOT VERY LOW WEIGHT, NO ANAEMIA

#### **S.21.3 Which of the following should be included in the treatment plan for Ghada?**

(circle all the correct options)

- A recommended oral antibiotic for 3 days <sup>130</sup>
- ORS administered at the health centre over 4 hours
- Oral zinc for 14 days
- Vitamin A
- Multivitamins and minerals

<sup>129</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>130</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for pneumonia (e.g. "for 5 days"), if the recommended duration of treatment is different.

Ghada is not breastfed. She is given cow's milk two times a day, rice with some soup once a day, and 1–2 snacks per day with crackers. Occasionally, she eats a few pieces of chicken mixed with the rice.

**S.21.4 Which of the following feeding recommendations are appropriate for Ghada at this stage of her illness? (circle all the correct options)**

- a. Replace cow's milk with yoghurt
- b. Replace cow's milk with semi-solid food with added vegetable oil
- c. Mix milk with cereals
- d. Dilute milk
- e. Give other foods appropriate for her age

**S.21.5 When should Ghada be followed up? (circle only ONE option)**

- a. In 2 days
- b. In 3 days
- c. In 5 days
- d. In 14 days
- e. In 30 days



## Case scenario 22 (Fakher)

### No malaria risk area

*General danger sign (history of convulsions), difficult breathing (severe pneumonia) with fever (very severe febrile disease)*

Fakher is a 16-month-old baby boy. His mother has brought him to the health centre because he has been very quiet since yesterday when he was hot to the touch, started having difficult breathing and had fits. There is no malaria risk in the area and Fakher has not travelled outside the area. This is an initial visit for this problem. Fakher's axillary temperature is 38.3°C. He weighs 10.0 kg. He had no vomiting and is able to drink. He is sleepy but looks at you and his mother when you clap your hands. Fakher has no convulsions during your assessment<sup>131</sup>. You hear no stridor and no wheezing. His respiratory rate is 44 breaths per minute and you see chest indrawing. Fakher has no diarrhoea, no throat problem and no ear problem. When you try to bend his neck forward toward his chest, you find resistance. He had no measles in the last 3 months and has no skin rash. He does not look severely wasted and has no oedema of his feet. He has no palmar pallor.

#### S.22.1 Which of the following classifications apply to Fakher's illness?

(circle all the correct options)

- a. SEVERE PNEUMONIA OR VERY SEVERE DISEASE
- b. PNEUMONIA
- c. VERY SEVERE FEBRILE DISEASE
- d. FEVER-POSSIBLE BACTERIAL INFECTION
- e. FEVER-BACTERIAL INFECTION UNLIKELY

#### S.22.2 How do you classify Fakher's nutrition status and anaemia?

(circle only ONE option)<sup>132</sup>

- a. VERY LOW WEIGHT, ANAEMIA
- b. VERY LOW WEIGHT, NO ANAEMIA
- c. NOT VERY LOW WEIGHT, ANAEMIA
- d. NOT VERY LOW WEIGHT, NO ANAEMIA

#### S.22.3 Which of the following actions should be included in the treatment plan for Fakher's illness? (circle all the correct options)

- a. Give first dose of an antibiotic and refer urgently to hospital
- b. Give oral antibiotic for 5 days<sup>133</sup>
- c. Follow up in 2 days
- d. Give paracetamol for high fever
- e. Advise the mother when to return immediately

<sup>131</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>132</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>133</sup> To make this incorrect option ("distractor") more plausible, indicate here the duration of treatment recommended by the national IMCI guidelines for pneumonia.

### Case scenario 23 (Samah)

#### *Ear pain (chronic ear infection), cough, low weight, feeding problems*

Samah is a 37-month-old baby girl. Her mother has brought her to the health centre because of cough and discharge from her left ear for 20 days. This is an initial visit for this problem. Samah's axillary temperature is 36.6°C. She weighs 10.5 kg. She has had no vomiting and no convulsions. Her mother reports that she is able to drink. Samah is alert; she has no convulsions during your assessment<sup>134</sup>. As you assess her, you hear no stridor and no wheezing. Her respiratory rate is 30 breaths per minute and you see no chest indrawing. Samah has no diarrhoea and no throat problem. You notice pus draining from her left ear. There is no swelling behind the ear. She does not look severely wasted and has no oedema of her feet. She has no palmar pallor. She received a dose of vitamin A five months ago. Samah has no other signs.

#### **S.23.1 How do you classify Samah's illness? (circle only ONE option)**

- ACUTE EAR INFECTION, PNEUMONIA
- ACUTE EAR INFECTION, NO PNEUMONIA: COUGH OR COLD
- CHRONIC EAR INFECTION, PNEUMONIA
- CHRONIC EAR INFECTION, NO PNEUMONIA: COUGH OR COLD
- NO EAR INFECTION, NO PNEUMONIA: COUGH OR COLD

#### **S.23.2 How do you classify Samah's nutritional status and anaemia? (circle only ONE option)<sup>135</sup>**

- SEVERE MALNUTRITION, ANAEMIA
- LOW WEIGHT, ANAEMIA
- LOW WEIGHT, NO ANAEMIA
- NOT LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, NO ANAEMIA

#### **S.23.3 Which of the following actions should be included in the treatment plan for Samah? (circle all the correct options)**

- Give an appropriate oral antibiotic for 3 days<sup>136</sup>
- Give paracetamol
- Relieve the cough with a safe remedy
- Dry the ear by wicking
- Vitamin A

<sup>134</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>135</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>136</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for pneumonia (e.g. "for 5 days"), if the recommended duration of treatment is different. If the national guidelines advise the use of oral antibiotics for chronic ear infections, include either the recommended duration of treatment or one that is not recommended, depending on whether this option is treated as a distractor or correct option.

Samah eats family food at 2 meals a day. Food mostly consists of some bread and beans, sometimes with a spoonful of vegetables. From time to time, one egg is shared with the six-member family. Samah occasionally receives crackers as a snack once a day. During the past week or so, Samah's appetite has decreased.

**S.23.4 Which of the following feeding recommendations are appropriate for Samah?** (circle all the correct options)

- a. Give family food at 3 meals each day
- b. Give small, frequent meals
- c. Give large, thin feeds
- d. Feed Samah cow's milk by bottle
- e. Add vegetable oil to food

**S.23.5 When should Samah be followed up?** (circle only ONE option)

- a. In 2 days
- b. In 5 days
- c. In 7 days
- d. In 14 days
- e. In 30 days

## Case scenario 24 (Arwa)

### No / low / high malaria risk area <sup>137</sup>

#### Convulsions with fever (very severe febrile disease), immunization

Arwa is a 20-month-old baby girl. Her mother has brought her to the health centre because last night Arwa first lost consciousness, then her body became stiff and her arms and legs started twitching for about 3 minutes. She became pale and was hot to the touch at the time this happened. This is an initial visit for this problem. Arwa's axillary temperature is 38.7°C. She weighs 9.6 kg. Arwa is awake, alert, looks at the room, is able to move her head around and looks at the ceiling and at her shoes; she is able to drink and has had no vomiting. She has no convulsions during your assessment <sup>138</sup>. She has no cough or difficult breathing, no diarrhoea. She has had no measles in the last 3 months and has no skin rash. She has no throat problem and no ear problem. She does not look severely wasted and has no oedema of her feet. She has no palmar pallor. Arwa has no other problems.

#### S.24.1 Which of the following classifications apply to Arwa's illness?

(circle all the correct options)

- VERY SEVERE DISEASE
- VERY SEVERE FEBRILE DISEASE
- FEVER-POSSIBLE BACTERIAL INFECTION
- FEVER- BACTERIAL INFECTION UNLIKELY

#### S.24.2 How do you classify Arwa's nutritional status and anaemia?

(circle only ONE option) <sup>139</sup>

- LOW WEIGHT, ANAEMIA
- LOW WEIGHT, NO ANAEMIA
- NOT LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, NO ANAEMIA

#### S.24.3 Which of the following should be included in the treatment plan for Arwa?

(circle all the correct options)

- Give diazepam for convulsions
- Give one dose of paracetamol at the health centre
- Give an oral antibiotic for 3 days <sup>140</sup>
- Observe Arwa for 6 hours to see if convulsions re-occur
- Refer urgently to hospital

<sup>137</sup> Irrespective of the malaria risk, the classification for fever in this case scenario would be VERY SEVERE FEBRILE DISEASE. However, if the option 'low' or 'high' malaria risk is chosen for this case scenario, the fact that the child lives in a 'low' or 'high' malaria risk area should be added to the text of the case scenario.

<sup>138</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>139</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>140</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for pneumonia (e.g. "for 5 days"), if they recommend a different duration of treatment.

## Case scenario 25 (Amira)

### **No / low / high malaria risk area** <sup>141</sup>

*Unable to drink, cough (severe pneumonia or very severe disease), fever (very severe febrile disease)*

Amira is a 15-month-old baby girl. Her mother has brought her to the health centre because she has been coughing for 4 days and is not eating well. This is an initial visit for this problem. Amira's axillary temperature is 38.5°C. She weighs 10.5 kg. Asked whether Amira is able to drink or breastfeed, her mother answers that Amira does not want to breastfeed. You offer Amira some water: she is too weak to lift her head and is not able to drink. Amira has had no vomiting and no convulsions; she has no convulsions during your assessment <sup>142</sup>. While talking to her mother, you notice that Amira does not watch her mother and you, does not look around the room and is not interested in what is going on around her. When you assess her, you hear no stridor and no wheezing. Her respiratory rate is 40 breaths per minute and you see chest indrawing. Amira has no diarrhoea, no throat problem, no ear problem. She does not look severely wasted and has no oedema of her feet. She has no palmar pallor. She received a dose of vitamin A 5 months ago. Amira has no other problems.

**S.25.1 Which general danger signs, if any, does Amira have?** (circle only ONE option)

- No general danger signs
- Unable to drink or breastfeed
- History of convulsions
- Lethargic or unconscious

**S.25.2 How do you classify Amira's illness?** (circle only ONE option)

- VERY SEVERE DISEASE/ SEVERE PNEUMONIA, VERY SEVERE FEBRILE DISEASE
- VERY SEVERE DISEASE/ SEVERE PNEUMONIA, FEVER-POSSIBLE BACTERIAL INFECTION
- PNEUMONIA, VERY SEVERE FEBRILE DISEASE
- PNEUMONIA, FEVER-POSSIBLE BACTERIAL INFECTION

**S.25.3 How do you classify Amira's nutritional status and anaemia?**

(circle only ONE option) <sup>143</sup>

- LOW WEIGHT, ANAEMIA
- LOW WEIGHT, NO ANAEMIA
- NOT LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, NO ANAEMIA

<sup>141</sup> Irrespective of the malaria risk, the classification for fever in this case scenario would be VERY SEVERE FEBRILE DISEASE. However, if the option 'low' or 'high' malaria risk is chosen for this case scenario, the fact that the child lives in a 'low' or 'high' malaria risk area should be added to the text of the case scenario.

<sup>142</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>143</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

**S.25.4 Which of the following should be included in the treatment plan for Amira?**  
(circle all the correct options)

- a. Treat to prevent low blood sugar
- b. Follow up in 2 days
- c. Give an oral antibiotic for 3 days <sup>144</sup>
- d. Give first dose of an appropriate antibiotic
- e. Refer urgently to hospital

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<sup>144</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for pneumonia (e.g. "for 5 days"), if they recommend a different duration of treatment.

## Case scenario 26 (Walaa)

### **No / low / high malaria risk area** <sup>145</sup>

*Cough (severe pneumonia or very severe disease), fever (very severe febrile disease), low weight*

Walaa is an 8-month-old baby girl. Her mother has brought her to the health centre because she has had cough for 3 days, had fits 2 days ago and is weak. This is an initial visit for this problem. Walaa's axillary temperature is 39.0°C. She weighs 6.0 kg. Asked about feeding, Walaa's mother says that she is not breastfed but is able to drink. She has had no vomiting. Walaa is awake, looks around the room. She has no convulsions during your assessment <sup>146</sup>. You hear a harsh noise when she breathes in. You count 55 breaths per minute and you see chest indrawing. Walaa has no diarrhoea, no throat problem, no ear problem. She does not look severely wasted and has no oedema of her feet. She has no palmar pallor. She received no dose of vitamin A.

**S.26.1 Which of the following signs present in Walaa would make you circle an IMCI "pink row" classification for Walaa? (circle all the correct options)**

- History of convulsions during this episode of illness
- Breathing 55 breaths per minute
- Stridor
- Wheezing
- Chest indrawing

**S.26.2 How do you classify Walaa's illness? (circle only ONE option)**

- VERY SEVERE DISEASE/ SEVERE PNEUMONIA, VERY SEVERE FEBRILE DISEASE
- VERY SEVERE DISEASE/ SEVERE PNEUMONIA, FEVER-POSSIBLE BACTERIAL INFECTION
- PNEUMONIA, VERY SEVERE FEBRILE DISEASE
- PNEUMONIA, FEVER-POSSIBLE BACTERIAL INFECTION

**S.26.3 How do you classify Walaa's nutritional status and anaemia? (circle only ONE option)** <sup>147</sup>

- LOW WEIGHT, ANAEMIA
- LOW WEIGHT, NO ANAEMIA
- NOT LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, NO ANAEMIA

<sup>145</sup> Irrespective of the malaria risk, the classification for fever in this case scenario would be VERY SEVERE FEBRILE DISEASE. However, if the option 'low' or 'high' malaria risk is chosen for this case scenario, the fact that the child lives in a 'low' or 'high' malaria risk area should be added to the text of the case scenario.

<sup>146</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>147</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

**S.26.4 Which of the following should be included in the treatment plan for Walaa?**  
(circle all the correct options)

- a. Give an oral antibiotic for 3 days <sup>148</sup>
- b. Give diazepam for convulsions
- c. Refer urgently to hospital
- d. Treat to prevent low blood sugar
- e. Give first dose of an appropriate antibiotic

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<sup>148</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for pneumonia (e.g. "for 5 days"), if they recommend a different duration of treatment.



## Case scenario 27 (Doaa)

### *Diarrhoea (severe dehydration, cholera), low weight*

Doaa is a 28-month-old baby girl. Her mother has brought her to the health centre because she has had many bouts of watery diarrhoea in the past 3 hours, has vomited repeatedly and is weak. This is an initial visit for this problem. Doaa's axillary temperature is 37.4°C. She weighs 9.0 kg. Doaa is able to drink, has had no convulsions and has no convulsions during your assessment<sup>149</sup>. She is very sleepy but opens her eyes and looks at the surroundings when you clap your hands. Although she has vomited, she does not have the general danger sign of "vomiting everything". Doaa has no cough or difficult breathing. There is no blood in her stools. Her eyes look sunken. When you pinch her skin, this goes back in 3-4 seconds. Other children and adults have been brought to the clinic with diarrhoea recently and you have been notified that cholera has been reported in the area. Doaa has no throat problem and no ear problem. She does not look severely wasted and has no oedema of her feet. She has no palmar pallor. Doaa has no other signs and no other problems.

#### **S.27.1 How do you classify Doaa's illness? (circle only ONE option)**

- VERY SEVERE DISEASE
- SEVERE DEHYDRATION
- SOME DEHYDRATION
- NO DEHYDRATION

#### **S.27.2 How do you classify Doaa's nutritional status and anaemia? (circle only ONE option)**<sup>150</sup>

- LOW WEIGHT, ANAEMIA
- LOW WEIGHT, NO ANAEMIA
- NOT LOW WEIGHT, ANAEMIA
- NOT LOW WEIGHT, NO ANAEMIA

#### **S.27.3 Which of the following should be included in the treatment plan for Doaa? (circle all the correct options)**

- PLAN C
- PLAN B
- PLAN A
- An antibiotic for cholera
- An antidiarrhoeal

<sup>149</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>150</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

## Case scenario 28 (Ali)

### No malaria risk area

*Cough (pneumonia), diarrhoea (no dehydration), fever (measles)<sup>151</sup>, low weight, anaemia*

Ali is a 10-month-old baby boy. His mother has brought him to the health centre because he has had cough and runny nose for 5 days and is hot to the touch. There is no malaria in the area and Ali has been living there since birth. This is an initial visit for this problem. Ali's axillary temperature is 38.4°C. He weighs 7.0 kg. Ali is able to drink, has had no convulsions and no vomiting, is awake and alert. He has no convulsions during your assessment<sup>152</sup>. You hear no stridor nor wheeze. You count 58 breaths per minute and see no chest indrawing. When you ask Ali's mother whether he has diarrhoea, she answers that he has been passing three to five loose stools with no blood for two days. Ali is not irritable or restless. He has sunken eyes. When you offer him some water, he drinks a few sips and then does not want any more. The skin pinch goes back quickly.

#### S.28.1 How do you classify Ali's illness at this stage of your assessment?

(circle only ONE option)

- PNEUMONIA, SEVERE DEHYDRATION, VERY SEVERE FEBRILE DISEASE
- PNEUMONIA, SOME DEHYDRATION, FEVER-POSSIBLE BACTERIAL INFECTION
- PNEUMONIA, NO DEHYDRATION, FEVER-POSSIBLE BACTERIAL INFECTION
- COUGH OR COLD, SOME DEHYDRATION, FEVER-POSSIBLE BACTERIAL INFECTION
- COUGH OR COLD, NO DEHYDRATION, FEVER-BACTERIAL INFECTION UNLIKELY

You notice that Ali has a generalized rash. You see no clouding of the cornea, no pus draining from his eyes, no ulcers in his mouth. Ali has no throat problem and no ear problem. He does not look severely wasted and has no oedema of his feet. He has some palmar pallor. His immunizations are up to date, except for measles vaccination which Ali has not received yet. Ali has no other signs and no other problems.

#### S.28.2 How do you classify Ali's skin rash? (circle only ONE option)<sup>153</sup>

- SEVERE COMPLICATED MEASLES
- MEASLES WITH EYE OR MOUTH COMPLICATIONS
- MEASLES
- NO MEASLES

<sup>151</sup> When a child with measles has also pneumonia, some country adaptations use the classification of "SEVERE COMPLICATED MEASLES", which requires urgent referral. The generic WHO IMCI guidelines require a serious complication of measles (i.e. a pink-coded classification) for the classification of measles to be SEVERE COMPLICATED MEASLES. MCQ options should be adapted according to the national IMCI guidelines.

<sup>152</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

<sup>153</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

**S.28.3 How do you classify Ali's nutritional status and anaemia? (circle only ONE option) <sup>154</sup>**

- a. LOW WEIGHT, ANAEMIA
- b. LOW WEIGHT, NO ANAEMIA
- c. NOT LOW WEIGHT, ANAEMIA
- d. NOT LOW WEIGHT, NO ANAEMIA

**S.28.4 Which of the following should be included in the treatment plan for Ali? (circle all the correct options)**

- a. Refer urgently to hospital
- b. Oral antibiotic for 3 days <sup>155</sup>
- c. PLAN B
- d. Vitamin A and iron
- e. PLAN A

**S.28.5 When should Ali be followed up? (circle all the correct options)**

- a. In 30 minutes
- b. In 4-6 hours
- c. In 2 days
- d. In 3 days
- e. In 5 days

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<sup>154</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>155</sup> The WHO generic IMCI guidelines revised in 2008 recommend 3-day treatment of pneumonia with an appropriate oral antibiotic. If the national IMCI guidelines recommend a different duration of treatment (e.g. 5 days), this option should be revised accordingly.

## Case scenario 29 (Kamel)

### High malaria risk area

#### Lethargy, cough, fever (very severe febrile disease), anaemia

Kamel is a 4-month-old baby boy. His mother has brought him to the health centre because he has had fever for 3 days and looks very sick. This is an initial visit for this problem. Kamel lives in a high malaria risk area. Kamel's axillary temperature is 39.4°C. He weighs 6.1 kg. Kamel looks drowsy. When you clap your hands or his mother calls him by name, he keeps staring at one point in front of him and looks not interested in the surroundings. Attempts of her mother to breastfeed him fail, as he does not suck. He has had no vomiting or convulsions. He has cough. You hear no stridor or wheeze. You count 57 breaths per minute. There is no chest indrawing. Kamel has no ear problem, no skin rash. There is no resistance when you try to bend his neck forward toward his chest.

#### S.29.1 How do you classify Kamel's illness at this stage of your assessment?

(circle only ONE option) <sup>156</sup>

- SEVERE PNEUMONIA/VERY SEVERE DISEASE, VERY SEVERE FEBRILE DISEASE
- SEVERE PNEUMONIA/VERY SEVERE DISEASE, MALARIA
- PNEUMONIA, VERY SEVERE FEBRILE DISEASE
- PNEUMONIA, MALARIA
- COUGH OR COLD, MALARIA

Kamel does not look severely wasted and has no oedema of his feet. He has some palmar pallor. Kamel has no other problems.

#### S.29.2 How do you classify Kamel's nutritional status and anaemia? (circle only ONE option)

- VERY LOW WEIGHT, ANAEMIA
- VERY LOW WEIGHT, NO ANAEMIA
- NOT VERY LOW WEIGHT, NO ANAEMIA

#### S.29.3 Which of the following should be included in the treatment plan for Kamel?

(circle all the correct options)

- Give first dose of quinine
- Give first dose of an appropriate antibiotic
- Give a recommended oral antibiotic for 3 days <sup>157</sup>
- Refer urgently to hospital
- Treat to prevent low blood sugar

<sup>156</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>157</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for pneumonia (e.g. "for 5 days"), if they recommend a different duration of treatment.

### Case scenario 30 (Suhaib)

#### *Diarrhoea (no dehydration), very low weight <sup>158</sup>, anaemia*

Suhaib is a 3-month-old baby boy. His mother has brought him to the health centre because he has been passing 3-4 watery stools a day for the past 2 days. This is an initial visit for this problem. Suhaib's axillary temperature is 36.3°C. He weighs 4.1 kg. He is awake and calm. He has no vomiting and is able to breastfeed. He has had no convulsions and has no convulsions during your assessment <sup>159</sup>. Suhaib has no cough and no difficult breathing. His eyes do not look sunken. The skin pinch goes back slowly. When you offer him some water, he takes few sips and then stops. His mother reports no blood in the stools. Suhaib has no ear problem and no throat problem. He does not look severely wasted and has no oedema of his feet. He has some palmar pallor. His immunizations are up to date.

#### **S.30.1 How do you classify Suhaib's illness? (circle only ONE option)**

- SEVERE DEHYDRATION, VERY LOW WEIGHT, ANAEMIA
- SOME DEHYDRATION, VERY LOW WEIGHT, ANAEMIA
- SOME DEHYDRATION, NOT VERY LOW WEIGHT, ANAEMIA
- NO DEHYDRATION, VERY LOW WEIGHT, ANAEMIA
- NO DEHYDRATION, NOT VERY LOW WEIGHT, ANAEMIA

#### **S.30.2 Which of the following actions should be included in the treatment plan for Suhaib? (circle all the correct options)**

- PLAN C
- PLAN B
- PLAN A
- Give iron
- Give vitamin A

<sup>158</sup> The WHO IMCI guidelines refer to the classification of "VERY LOW WEIGHT" for age. Many countries in the Region use the "LOW WEIGHT" classification instead, as "VERY LOW WEIGHT" is less common. MCQ options should be adapted according to the national IMCI guidelines.

<sup>159</sup> In addition to a history of convulsions related to this episode of illness, many countries in the Region have added among the danger signs the sign of having convulsions at the time of the assessment (child "is convulsing now"). This is the reason why this information is reported separately from checking for history of convulsions in the case scenario.

## Sick young infant age up to 2 months

### Case scenario 1 (Karim)

*Skin pustules (local bacterial infection), diarrhoea (some dehydration), low weight, feeding problem*

Karim, a 21-day-old baby boy, is brought to the health centre because of passing watery stools in the past 2 days. This is an initial visit for this problem. He weighs 2.7 kg. His axillary temperature is 37.2°C. Karim has mild chest indrawing. His respiratory rate is 55 breaths per minute. He has had no convulsions and has no difficulty in feeding. He is sleepy but wakes up when you clap your hands, stays awake and often moves his arms and legs while you assess him. You find many skin pustules<sup>160</sup>. His umbilicus is not red and not draining pus.

**S.01.1 How would you classify Karim's illness at this stage of your assessment?**  
(circle only ONE option)

- VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION<sup>161</sup>
- PNEUMONIA
- LOCAL BACTERIAL INFECTION
- BACTERIAL INFECTION UNLIKELY
- NO PNEUMONIA: COUGH OR COLD

When you look for jaundice, you conclude that Karim has "NO JAUNDICE". Karim has sunken eyes and the skin pinch goes back slowly.

**S.01.2 How would you classify Karim for his diarrhoea?** (circle only ONE option)

- SEVERE DEHYDRATION
- SOME DEHYDRATION
- NO DEHYDRATION

**S.01.3 What would you assess next in Karim, according to the IMCI guidelines?**  
(circle all the correct options)

- Anaemia
- Feeding problem or low weight
- Fever
- Ear problem
- Sore throat

<sup>160</sup> In the revised WHO IMCI guidelines, the sign "Many or severe skin pustules" no longer appears in the pink-coded row under the column of "Signs". The sign "Skin pustules" has been retained in the yellow-coded row for the classification "LOCAL BACTERIAL INFECTION". MCQ options should be adapted according to the national IMCI guidelines. For example, if the previous version of the guidelines is used, then the sign "Many pustules" of this case scenario can be changed to "Skin pustules".

<sup>161</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

Karim's mother breastfeeds him 6 times a day and gives him also plain water 2-3 times a day, "as it is hot", but no other fluids or foods. You find that Karim is well attached while breastfeeding and suckles with slow deep sucks. <sup>162</sup>

**S.01.4 How would you classify Karim when checking for feeding problems and weight for age?** (circle only ONE option)

- a. VERY LOW WEIGHT FOR AGE
- b. FEEDING PROBLEM OR LOW WEIGHT FOR AGE
- c. NO FEEDING PROBLEM
- d. NOT LOW WEIGHT FOR AGE

**S.01.5 Which of the following actions should be included in the management plan for Karim?** (circle all the correct options)

- a. Advice to increase frequency of breastfeeding
- b. Treatment to prevent low blood sugar
- c. Follow-up in 2 days
- d. Administration of 200 – 450 ml of ORS during the first 4 hours
- e. Keeping Karim warm at home

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<sup>162</sup> According to the revised WHO IMCI Guidelines, this baby does not have a pink-coded severe classification and should therefore be checked for feeding problem or low weight for age. See the previous footnote about the sign "skin pustules" Vs "many skin pustules".

## Case scenario 2 (Karima)

### *Difficult breathing and low temperature (very severe disease), low weight, feeding problem*

Karima, a 5-day-old baby girl, is brought to the health centre because she had difficulty breathing since early this morning. Her axillary temperature is 35.4°C. She weighs 3.0 kg. This is an initial visit for this problem. She has had no convulsions and her mother says that she has difficulty feeding. You count her respiratory rate and find it is 68 breaths per minute. You repeat the count and obtain 63 breaths per minute. While you count, you see that Karima has mild chest indrawing. She is sleepy but wakes up when her mother talks to her and moves normally. The umbilicus is normal; there are no skin pustules. She has no jaundice.

#### **S.02.1 How would you classify Karima's illness at this stage of your assessment?**

*(circle only ONE option)* <sup>163</sup>

- VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION, NO JAUNDICE
- SEVERE PNEUMONIA, NO JAUNDICE
- LOCAL BACTERIAL INFECTION, NO JAUNDICE
- PNEUMONIA, NO JAUNDICE
- BACTERIAL INFECTION UNLIKELY, NO JAUNDICE

Karima has received BCG and OPV-0 at birth. She has no other problems.

#### **S.02.2 Which of the following actions should you take to manage Karima's illness?**

*(circle all the correct options)*

- Advise mother how to keep Karima warm on the way to the hospital
- Give DPT-1
- Give first dose of intramuscular antibiotic
- Give an appropriate oral antibiotic for 3 days <sup>164</sup>
- Refer urgently to the hospital

<sup>163</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

<sup>164</sup> To make this incorrect option ("distractor") more plausible, replace "for 3 days" with the duration of treatment recommended by the national IMCI guidelines for dysentery (e.g. "for 5 days"), if they recommend a different duration of treatment.



### Case scenario 3 (Nejib)

#### *Diarrhoea (no dehydration), low weight, feeding problem*

Nejib, a 2-week-old baby boy, is brought to the health centre because he has been passing watery stools for 1 day. This is an initial visit for this problem. His axillary temperature is 36.6°C. He weighs 2.1 kg. He has had no convulsions. His mother says he feeds normally. You count 52 breaths per minute as his respiratory rate. You see mild chest indrawing. Nejib is calm and moves his arms and legs while you assess him. His umbilicus is normal and there is no rash. He has no jaundice. Nejib's eyes look sunken. You pinch his skin and it goes back quickly.

#### **S.03.1 How would you classify Nejib's illness at this stage of your assessment?**

*(circle only ONE option)*

- LOCAL BACTERIAL INFECTION <sup>165</sup>, SOME DEHYDRATION, NO JAUNDICE
- LOCAL BACTERIAL INFECTION, NO DEHYDRATION, NO JAUNDICE
- BACTERIAL INFECTION UNLIKELY, SOME DEHYDRATION, NO JAUNDICE
- BACTERIAL INFECTION UNLIKELY, NO DEHYDRATION, NO JAUNDICE
- VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION, NO DEHYDRATION, NO JAUNDICE

Nejib receives breastmilk, 4 times during the day and once during the night, often plain water and lemon juice.

#### **S.03.2 How would you classify Nejib's feeding and nutritional status?**

*(circle only ONE option)*

- FEEDING PROBLEM OR VERY LOW WEIGHT FOR AGE
- FEEDING PROBLEM OR LOW WEIGHT FOR AGE
- FEEDING PROBLEM OR NOT LOW WEIGHT FOR AGE
- NO FEEDING PROBLEM and LOW WEIGHT FOR AGE
- NO FEEDING PROBLEM

Nejib has no oral thrush. You observe Nejib while he is breastfeeding for 5 minutes. You see more areola above his top lip than below his bottom lip, his mouth is not wide open, his lower lip is turned inward and the chin touching the breast. You conclude that Nejib is not well attached.

<sup>165</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

**S.03.3 Which of the following signs are among the signs of good attachment while breastfeeding?** (circle all the correct options)

- a. More areola seen below his top lip than above top lip
- b. Lower lip turned outward
- c. Chin touching the breast
- d. Lower lip turned inward
- e. More areola above his top lip than below his bottom lip

**S.03.4 Which of the following advice would you give to Nejib's mother?** (circle all the correct options)

- a. Increase number of times of breastfeeding
- b. Continue giving breastmilk and water but stop giving lemon juice
- c. Continue giving breastmilk but stop giving water and lemon juice
- d. Teach correct attachment
- e. Advise how to keep Nejib warm at home

### Case scenario 4 (Afraa)

#### *Red umbilicus (local bacterial infection); needs immunization*

Afraa, a 10-day-old baby girl, is brought to the health centre because her mother has noticed that her umbilicus has been red for 2 days. This is an initial visit for this problem. Her axillary temperature is 37.0°C. She weighs 3.1 kg. She has had no convulsions. Her mother says she feeds normally; she has no diarrhoea. Her respiratory rate is 48 breaths per minute, she has no chest indrawing and moves quite often on her own. You find her umbilicus is red with some pus on its tip; there are no skin pustules. Afraa has no jaundice. She is exclusively breastfed—on average 10 times per day, suckles with slow deep sucks and is well attached while feeding. She was delivered at home and has received no immunization to date. Neither Afraa nor her mother have received any vitamin A dose.

#### **S.04.1 How would you classify Afraa's condition? (circle only ONE option) <sup>166</sup>**

- VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION, NO JAUNDICE
- LOCAL BACTERIAL INFECTION, NO JAUNDICE
- BACTERIAL INFECTION UNLIKELY, NO JAUNDICE

#### **S.04.2 Which of the following immunizations should Afraa receive today?**

*(circle all the correct options)*

- BCG
- OPV-0
- DPT-1
- OPV-1
- Hepatitis B-1

#### **S.04.3 Which of the following actions should be included for her mother and in the management plan for Afraa? (circle all the correct options)**

- Vitamin A to Afraa
- Vitamin A to Afraa's mother
- First dose of intramuscular antibiotics
- An appropriate oral antibiotic
- Follow up in 5 days

<sup>166</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

## Case scenario 5 (Jamil)

### Jaundice

Jamil, a 3-day-old baby boy, is brought to the health centre by his mother because his skin has been yellowish since yesterday. This is an initial visit for this problem. His axillary temperature is 36.3°C. He weighs 2.9 kg. He has had no fits and feeds normally. His umbilicus is not red and not draining pus. His respiratory rate is 54 breaths per minute. He is sleeping. After being waken up by his mother, Jamil moves his arm and legs and turns his body towards her. You find no skin pustules. Jamil's skin is yellowish; his palms are neither pale nor yellow. He has no diarrhoea. He is breastfed 8–10 times in the 24 hours, exclusively, and has no oral thrush. He is put to his mother's breast. While he breastfeeds, you can see that more areola is above his top lip than below the bottom lip, his lower lip turned outward and his chin is touching the breast. Jamil received BCG and OPV-0 at birth.

#### S.05.1 How would you classify Jamil's condition? (circle only ONE option) <sup>167</sup>

- VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION, SEVERE JAUNDICE
- LOCAL BACTERIAL INFECTION, JAUNDICE
- LOCAL BACTERIAL INFECTION, NO JAUNDICE
- BACTERIAL INFECTION UNLIKELY, JAUNDICE
- BACTERIAL INFECTION UNLIKELY, NO JAUNDICE

#### S.05.2 Which of the following actions should be included in the management plan for Jamil? (circle all the correct options)

- Refer urgently to hospital
- Give an appropriate antibiotic
- Advise the mother to give home care
- Advise to bring back Jamil immediately if his palms and soles look yellow
- Treat to prevent low blood sugar

<sup>167</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. A 'box' to check for jaundice has also been added (with the classifications of "SEVERE JAUNDICE", "JAUNDICE" AND "NO JAUNDICE"). The MCQ options should be adapted according to the national IMCI guidelines.

### Case scenario 6 (Wedad)

#### *Not feeding well, fever (very severe disease)*

Wedad is a 14-day-old baby girl. Her mother has brought her to the health centre because she has not been feeding well for the past 2 days and is hot to the touch. This is an initial visit for this problem. Wedad weighs 3.0 kg; her axillary temperature is 37.5°C. She is breastfed exclusively but since she has become ill she has been feeding less than half of the usual amount, about 6 times a day but for a short time each time. She has had no fits. You count her breathing rate for a full minute and found it to be 62 breaths per minute. You decide to count a second time and count 53 breaths per minute. You see no chest indrawing. Wedad is sleeping. When her mother shakes her a little bit, she opens her eyes and then moves her arms and legs from time to time. Her umbilicus is not red, there is no pus draining from it and you see no pustules on her skin. Wedad has no jaundice and no diarrhoea. There are no ulcers or patches in her mouth.

#### **S.06.1 How would you classify Wedad's illness?** (circle only ONE option) <sup>168</sup>

- VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION
- LOCAL BACTERIAL INFECTION
- BACTERIAL INFECTION UNLIKELY

#### **S.06.2 Which of the following actions should be included in the management plan for Wedad at this stage?** (circle all the correct options)

- Give an appropriate oral antibiotic
- Advise Wedad's mother to give home care
- Follow up in 2 days
- Advise Wedad's mother to keep her warm
- Refer urgently to hospital

<sup>168</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

## Case scenario 7 (Jalaa)

### *Red umbilicus (local bacterial infection), low weight*

Jalaa is a 16-day-old baby boy. His mother has brought him to the health centre because she is worried that there may be a problem with his umbilicus. This is an initial visit for this problem. Jalaa weighs 2.6 kg. His mother said he was born prematurely at home; she has other 2 children older than Jalaa but Jalaa was born much smaller than them. Jalaa's axillary temperature is 36.4°C. He has had no convulsions. You count his breathing rate for a full minute and find it to be 49 breaths per minute. Jalaa has mild chest indrawing. He is awake and moves his arms and legs as you examine him. There is some redness at the tip of his umbilicus but there is no pus. You find no skin pustules. Jalaa has no jaundice and no diarrhoea.

**S.07.1 Which of the following signs does Jalaa have? (circle all the correct options)**

- a. Red umbilicus
- b. Fast breathing
- c. Severe chest indrawing
- d. Difficulty feeding

**S.07.2 How would you classify Jalaa's illness at this stage of your assessment?** <sup>169</sup>  
(circle only ONE option)

- a. VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION
- b. LOCAL BACTERIAL INFECTION
- c. BACTERIAL INFECTION UNLIKELY

**S.07.3 Which of the following actions should be included in the management plan for Jalaa at this stage? (circle all the correct options)**

- a. Give an appropriate oral antibiotic
- b. Advise Jalaa's mother to give home care
- c. Treat to prevent low blood sugar
- d. Advise Jalaa's mother to keep him warm
- e. Refer urgently to hospital

You assess Jalaa for feeding problems. His mother says that she breastfeeds him 5-6 times a day and gives him only breastmilk, except a few times when he cries and she gives him a few drops of water and lemon "to reduce his thirst and calm him". Jalaa fed half an hour ago. You examine his mouth and see no ulcers or patches.

<sup>169</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

**S.07.4 Which of the following conclusions on Jalaa's feeding are correct?**

(circle all the correct options)

- a. Has less than 8 breastfeeds in 24 hours
- b. Breastfeeds exclusively
- c. Receives other foods or drinks
- d. Has thrush
- e. Is low weight for age

**S.07.5 Which of the following feeding advice should be given to Jalaa's mother?**

(circle all the correct options)

- a. Breastfeed more often
- b. Don't give water and lemon
- c. Give water and lemon with a spoon
- d. Offer some family food once a day to increase weight
- e. Give also some milk formula to increase weight

**S.07.6 In how many days should Jalaa's mother bring him back for follow up?**

(circle only ONE option)

- a. In 2 days
- b. In 5 days
- c. In 7 days
- d. In 14 days
- e. In 30 days

### Case scenario 8 (Manal)

#### *Difficult breathing and fever (very severe disease)*

Manal is a 5-week-old baby girl. Her mother has brought her to the health centre because she has had fever for 3 days and has difficulty breathing. This is an initial visit for this problem. Manal weighs 4.1 kg. Manal's axillary temperature is 39.2°C. She has no difficulty in feeding and has had no convulsions. You count her breathing rate for a full minute and find it to be 78 breaths per minute. You repeat the count and find 80 breaths per minute. Manal has mild chest indrawing. She is awake and moves her arms and legs as you examine her. There is no redness at the tip of his umbilicus and no pus. You find no skin pustules. Manal has no jaundice and no diarrhoea.

**S.08.1 What is the cut-off point for the respiratory rate in a child of Manal's age?**  
(circle only ONE option)

- a. 40 breaths per minute
- b. 50 breaths per minute
- c. 60 breaths per minute
- d. 70 breaths per minute

**S.08.2 How would you classify Manal's illness?** (circle only ONE option) <sup>170</sup>

- a. VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION
- b. LOCAL BACTERIAL INFECTION
- c. BACTERIAL INFECTION UNLIKELY

**S.08.3 Which of the following actions should be included in the management plan for Manal?** (circle all the correct options)

- a. Give an appropriate oral antibiotic
- b. Advise Manal's mother to give home care
- c. Advise Manal's mother to keep her warm
- d. Refer urgently to hospital
- e. Follow up in 2 days

<sup>170</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE" and the green-coded classification "SEVERE DISEASE OR LOCAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.



### Case scenario 9 (Shaikh)

#### *Not feeding well, low temperature, fast breathing (very severe disease)*

Shaikh is a 4-week-old baby boy. His mother has brought him to the health centre because she noticed he has had difficulty breathing since yesterday. This is an initial visit for this problem. Shaikh weighs 4.3 kg. Shaikh's axillary temperature is 35.4°C. His mother reports that he is not able to breastfeed since this morning. He has had no convulsions. His fontanelle is not bulging. You count his breathing rate for a full minute and find it to be 71 breaths per minute. You repeat the count and find 65 breaths per minute. Shaikh has mild chest indrawing. There is no redness at the tip of his umbilicus and no pus. You find no skin pustules. Shaikh has no jaundice and no diarrhoea. Shaikh has no other signs or problems.

**S.09.1 What is the cut-off point for the respiratory rate in a child of Shaikh's age?**  
(circle only ONE option)

- a. 40 breaths per minute
- b. 50 breaths per minute
- c. 60 breaths per minute
- d. 70 breaths per minute

**S.09.2 Which of the following signs present in Shaikh are signs of severe illness (pink classification), if any?** (circle all the correct options)

- a. Unable to breastfeed
- b. Difficult breathing
- c. Mild chest indrawing
- d. Fast breathing

**S.09.3 Which of the following temperature values in a child of Shaikh's age are a general danger sign?** (circle all the correct options)

- a. Less than 35.0°C
- b. Less than 35.5°C
- c. 35.5°C or less
- d. 37.5°C or more
- e. More than 37.5°C

**S.09.4. How would you classify Shaikh's illness? (circle only ONE option) <sup>171</sup>**

- a. VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION
- b. LOCAL BACTERIAL INFECTION
- c. BACTERIAL INFECTION UNLIKELY

**S.09.5 Which of the following actions should be included in the management plan for Shaikh? (circle all the correct options)**

- a. Give an appropriate oral antibiotic
- b. Treat to prevent low blood sugar
- c. Advise Shaikh's mother to keep him warm
- d. Refer urgently to hospital
- e. Follow up in 2 days

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<sup>171</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

## Case scenario 10 (Abir)

### *No signs or problems*

Abir is a 22-day-old baby boy. His mother has brought him to the health centre because he passes soft stools every day. This is an initial visit for this problem. Abir weighs 3.7 kg. Abir's axillary temperature is 36.6°C. Abir is able to breastfeed. He has had no convulsions. His fontanelle is not bulging. You count his breathing rate for a full minute and find it to be 47 breaths per minute. You notice that he moves his arms and legs spontaneously. Abir has no chest indrawing. There is no redness at the tip of his umbilicus and no pus. You find no skin pustules. Abir has no jaundice and no diarrhoea. His mother breastfeeds him 9-10 times a day, on demand. She gives him no other food or fluid. You check his mouth and find no ulcers or white patches. While you talk to his mother, she puts him on her breast. You observe that there is more areola above his top lip than below the bottom lip, his mouth is wide open, his lower lip is turned outwards and chin touches the breast. Abir takes deep sucks and pauses from time to time. Abir has no other signs or problems.

#### **S.10.1 What is the cut-off point for the respiratory rate in a child of Abir's age?**

(circle only ONE option)

- 40 breaths per minute
- 50 breaths per minute
- 60 breaths per minute
- 70 breaths per minute

#### **S.10.2 How would you classify Abir's condition, apart from having no jaundice?**

(circle only ONE option)<sup>172</sup>

- VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION, SOME DEHYDRATION, FEEDING PROBLEM
- LOCAL BACTERIAL INFECTION, SOME DEHYDRATION, LOW WEIGHT FOR AGE
- BACTERIAL INFECTION UNLIKELY, SOME DEHYDRATION, NO FEEDING PROBLEM
- BACTERIAL INFECTION UNLIKELY, NO DEHYDRATION, LOW WEIGHT FOR AGE
- BACTERIAL INFECTION UNLIKELY, NO DEHYDRATION, NO FEEDING PROBLEM

#### **S.10.3 Which of the following actions should be included in the management plan for Abir? (circle all the correct options)**

- Give an appropriate oral antibiotic
- Treat to prevent low blood sugar
- Praise the mother for feeding the infant well
- Follow up in 2 days if not improving
- Reassure the mother about Abir's soft stools

<sup>172</sup> The revised WHO IMCI guidelines have changed some of the classifications for the young infant of the previous version. For example, the young infant section "Check for possible bacterial infection" has been changed into "Check for very severe disease and local bacterial infection". In this section, the regional adaptation is used, whereby the pink-coded classification "POSSIBLE SERIOUS BACTERIAL INFECTION" has been changed into "VERY SEVERE DISEASE OR POSSIBLE SERIOUS BACTERIAL INFECTION", the yellow-coded classification "LOCAL BACTERIAL INFECTION" has remained the same and the green-coded classification "BACTERIAL INFECTION UNLIKELY" has been added. The MCQ options should be adapted according to the national IMCI guidelines.

Medical and allied health professional schools play a key role in preparing the future cadres of health providers who will be providing child health care services in a country, whether in the public or private sector. Medical schools in the WHO Eastern Mediterranean Region have been taking steps in recent years to introduce the Integrated Management of Child Health (IMCI) approach into their undergraduate teaching programmes, in collaboration with the Regional Office for the Eastern Mediterranean. This IMCI pre-service education package proposes a standard approach to each phase, to assist teaching institutions in introducing, implementing and assessing undergraduate teaching programmes including IMCI.

**For further information contact:**

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