

# **INDICATORS FOR IMCI AT FIRST-LEVEL FACILITIES**

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## **CONTENTS**

Priority Indicators for IMCI at Health-Facility Level

Proposed Supplemental Measures for IMCI at Health-Facility Level

**DEPARTMENT OF CHILD AND ADOLESCENT  
HEALTH AND DEVELOPMENT**



**World Health Organization  
Geneva**

In collaboration with

**The Interagency Working Group on IMCI Monitoring and Evaluation**  
(BASICS, CDC, UNICEF, USAID, WHO)

## PRIORITY INDICATORS FOR IMCI AT HEALTH FACILITY LEVEL

*(A validated classification is a classification made by an IMCI-trained expert clinician after re-examining the child. The indicators listed below refer to children two months up to five years of age, unless otherwise stated)*

1. *Child checked for three general danger signs.* The proportion of children checked for the three general danger signs.

**Numerator:** Number of sick children aged 2 months up to five years seen who are checked for three danger signs (is the child able to drink or breastfeed, does the child vomit everything, has the child had convulsions)

**Denominator:** Number of sick children aged 2 months up to five years seen
2. *Child checked for the presence of cough, diarrhoea and fever.* The proportion of children checked for the presence of cough, diarrhoea, and fever.

**Numerator:** Number of sick children seen whose caretakers were asked about the presence of cough, diarrhoea, and fever

**Denominator:** Number of sick children seen
3. *Child weight checked against a growth chart.* The proportion of children who have been weighed the same day and have their weight checked against a recommended growth chart.

**Numerator:** Number of sick children seen who have been weighed the same day and have their weight checked against a recommended growth chart

**Denominator:** Number of sick children seen
4. *Child vaccination status checked.* The proportion of children who have their vaccination status checked.

**Numerator:** Number of sick children seen who have their vaccination card or vaccination history checked.

**Denominator:** Number of sick children seen

5. *Index of integrated assessment.* Mean of assessment tasks performed per sick child assessed (need further fieldtest)

**Definition:** Arithmetic mean of 10 assessment tasks performed for each child (checked for three danger signs, checked for the three main symptoms, child weighed and weight checked against a growth chart, checked for palmar pallor, and checked for vaccination status divided by ten).

**Calculation:**

- checked for “ability to drink or breastfeed”, “vomits everything”, and convulsions”, 1 point each
- checked for presence of “cough & fast/difficult breathing”, “diarrhoea”, and “fever”, 1 point each
- child weighed the same day and child’s weight used against a recommended growth chart, 1 point each
- child checked for palmar pallor, 1 point
- child vaccination status checked (card or history), 1 point

6. *Child under two years of age assessed for feeding practices.* The proportion of children under two years of age whose caretakers are asked about breastfeeding, complementary foods, and feeding practices during this episode of illness.

**Numerator:** Number of sick children under two years of age whose caretakers are asked if they breastfeed this child, whether the child takes any other food or fluids other than breastmilk, and if during this illness the child’s feeding has changed.

**Denominator:** Number of sick children under two years of age seen

7. *Child needing an oral antibiotic and/or an antimalarial is prescribed the drug correctly.* The proportion of children who do not need urgent referral, who need an oral antibiotic and/or an antimalarial who are prescribed the drug(s) correctly.

**Numerator:** Number of sick children with validated classifications, who do not need urgent referral, who need an oral antibiotic and/or an antimalarial (pneumonia, and/or dysentery, and/or malaria, and/or acute ear infection, and/or anaemia in high malaria risk areas) who are correctly prescribed them, including dose, number of times per day, and number of days

**Denominator:** Number of sick children with validated classifications who do not need urgent referral, who need an oral antibiotic and/or an antimalarial.

8. *Child not needing antibiotic leaves the facility without antibiotic.* The proportion of children who do not need urgent referral and who do not need an antibiotic for one or more IMCI classifications who leave the facility without having received or having been prescribed antibiotics.

**Numerator:** Number of children with validated classification who do not need urgent referral and do not need an antibiotic for one or more IMCI classifications (no pneumonia: cough or cold, diarrhoea with or without dehydration, persistent diarrhoea, malaria, fever-malaria unlikely, measles, chronic ear infection, no ear infection, anaemia or very low weight, and/or no anaemia and not very low weight) who leave the facility without receiving antibiotics or a prescription for antibiotics for those validated classifications.

**Denominator:** Number of children seen who do not need urgent referral and who do not need an antibiotic for one or more IMCI classifications

9. *Caretaker of sick child is advised to give extra fluids and continue feeding.* The proportion of sick children whose caretakers are advised to give extra fluid and continue feeding.

**Numerator:** Number of sick children with validated classifications, who do not need urgent referral, whose caretakers are advised to give extra fluid **and** continue feeding

**Denominator:** Number of sick children with validated classifications, who do not need urgent referral

10. *Child needing vaccinations leaves facility with all needed vaccinations.* The proportion of children needing vaccinations (based on vaccination card or history) who leave the HF with all needed vaccinations (according to national immunization schedule).

**Numerator:** Number of children who need vaccinations (based on vaccination card or history) who leave the HF with all needed vaccinations

**Denominator:** Number of children seen who need vaccinations (based on vaccination card or history)

11. *Caretaker of child who is prescribed ORS, and/or an oral antibiotic and/or an oral antimalarial knows how to give the treatment.* The proportion of children prescribed ORS, and/or an oral antibiotic and/or an oral antimalarial whose caretakers can describe correctly how to give the treatment.

**Numerator:** Number of sick children prescribed ORS, and/or an oral antibiotic and/or an oral antimalarial whose caretakers can describe how to give the correct treatment including the amount, number of times per day, and number of days

**Denominator:** Number of sick children prescribed ORS and/or an antibiotic and/or an antimalarial

12. *Child needing referral is referred.* The proportion of children needing referral who are referred by the health workers.

**Numerator:** Number of sick children with a validated classification of severe disease needing referral (one or more danger signs, severe pneumonia or very severe disease, and/or severe dehydration with any other severe classification, and/or severe persistent diarrhoea, and/or very severe febrile disease, and/or severe complicated measles, and/or mastoiditis, and/or severe malnutrition or severe anaemia) who were referred by the health workers

**Denominator:** Number of sick children with a validated classification of severe disease needing referral

13. *Health facility received at least one supervisory visit that included observation of case management during the previous six months.* The proportion of health facilities that received at least one visit of routine supervision that included the observation of case management during the previous six months.

**Numerator:** Number of health facilities that received at least one visit of routine supervision (excluding the follow-up visits to health workers shortly after their training that are part of IMCI training) that included the observation of case management during the previous six months

**Denominator:** Number of health facilities surveyed

14. *Index of availability of essential oral treatments.* Essential oral drugs for home treatment of sick children present the day of visit

**Definition:** Arithmetic mean of essential oral drugs recommended for home treatment of diarrhoea, dysentery, pneumonia, fever, malaria, and anaemia available at each facility the day of visit, divided by eight.

**Calculation:**

- ORS, 1 point
- recommended antibiotic for pneumonia, 1 point
- recommended antibiotic for dysentery, 1 point
- recommended antimalarial, 1 point
- vitamin A, 1 point
- iron, 1 point
- mebendazol, 1 point
- paracetamol/aspirin, 1 point

15. *Index of availability of injectable drugs for pre-referral treatment.* Injectable antibiotics and antimalarials for prereferral treatment of sick children and young infants that are available in each facility the day of visit.

**Definition:** Arithmetic mean of recommended injectable pre-referral treatment for children and young infant with severe classification needing immediate referral, divided by four.

**Calculation:**

- recommended intramuscular antibiotic for children, 1 point
- quinine, 1 point
- gentamicine, 1 point
- benzylpenicillin, 1 point

16. *Health facility has the equipment and supplies to support full vaccination services.* The proportion of health facilities that have the equipment and supplies to provide full vaccination services on the day of survey.

**Numerator:** Number of health facilities that have the equipment and supplies to support full vaccination services (functioning refrigerator or cold chain, and functioning sterilizer and needles/syringes or disposable needles/syringes available on the day of survey)

**Denominator:** Number of health facilities surveyed

17. *Index of availability of four vaccines.* Mean of four recommended antigens available at each facility the day of visit.

**Definition:** Arithmetic mean of recommended vaccines available at each facility the days of visits, divided by four.

**Calculation:**

- BCG, 1 point
- Polio, 1 point
- DPT, 1 point
- Measles, 1 point

18. *Health facilities with at least 60% of workers managing children trained in IMCI.* The proportion of first-level health facilities with at least 60% of health workers managing children trained in IMCI.

**Numerator:** Number of health facilities with at least 60% of health workers managing children who are trained in IMCI

**Denominator:** Number of health facilities surveyed

## PROPOSED LIST OF SUPPLEMENTAL MEASURES FOR IMCI AT HEALTH FACILITY LEVEL

*(A validated classification is a classification made by an IMCI-trained expert clinician after re-examining the child. The indicators listed below refer to children two months up to five years of age, unless otherwise stated)*

- S1.** *Child checked for other problems.* The proportion of children brought to the facility for an “other problem” who were checked for this “other problem”.

**Numerator:** Number of children brought to the facility for one or more of the main symptoms (cough/fast/difficult breathing, diarrhoea, fever) or for “ear problems” and for an “other problem” or who were brought to the facility for an “other problem” only, whose caretaker were asked to describe this other problem.

**Denominator:** Number of children brought to the facility for one or more of the main symptoms (cough/fast/difficult breathing, diarrhoea, fever) or for “ear problems” and for an “other problem” or who were brought to the facility for an “other problem” only.

- S2.** *All child symptoms identified.* Proportion of children with one or more main symptoms (fast or difficult breathing with or without cough, diarrhoea, fever) for whom all symptoms were identified.

**Numerator:** Number of children with validated symptoms of “fast and/or difficult breathing with or without cough” and/or “diarrhoea”, and/or “fever” for whom all symptoms were identified

**Denominator:** Number of children with validated symptoms of “fast and/or difficult breathing with or without cough” and/or “diarrhoea”, and/or “fever” seen

- S3.** *Child with very low weight is assessed for feeding problems.* The proportion of sick children with very low weight who are assessed for feeding problems.

**Numerator:** Number of sick children with a validated classification of very low weight and no severe classification whose caretaker are asked if the mother breastfeeds the child, if the child takes food or fluids other than breastmilk, and if during this illness the child’s feeding has changed.

**Denominator:** Number of sick children with a validated classification of very low weight

**S4.** *Child with very low weight is correctly classified.* The proportion of children with very low weight who are correctly classified.

**Numerator:** Number of children with a validated classification of very low weight who are classified as very low weight.

**Denominator:** Number of children with a validated classification of very low weight

**S5.** *Child is correctly classified.* Proportion of children whose classifications given by the health worker match all the classifications given by an IMCI-trained surveyor (validated classification)

**Numerator:** Number of children whose validated classifications matches the classifications given by the health worker.

**Denominator:** Number of children seen

**S6.** *Child with pneumonia correctly treated.* The proportion of children with pneumonia who are prescribed antibiotic treatment correctly.

**Numerator:** Number of children with a validated classification of pneumonia and no severe classification who are given/prescribed treatment with an appropriate antibiotic (including correct amount, times per day, and number of days)

**Denominator:** Number of children with a validated classification of pneumonia and no severe classification

**S7.** *Child with dehydration correctly treated.* The proportion of children with diarrhoea and some dehydration who receive ORS at the facility.

**Numerator:** Number of children with a validated classification of diarrhoea with some dehydration and no severe classification who receive ORS at the facility.

**Denominator:** Number of children with a validated classification of diarrhoea with some dehydration and no severe classification

**S8.** *Child with malaria correctly treated.* The proportion of children with malaria who are prescribed antimalarial treatment correctly.

**Numerator:** Number of children with a validated classification of malaria and no severe classification who are given/prescribed treatment with an appropriate antimalarial (including correct amount, times per day, and number of days).

**Denominator:** Number of children with a validated classification of malaria and no severe classification

**S9.** *Child with anaemia correctly treated.* The proportion of children with anaemia who are prescribed treatment correctly.

- Numerator:** Number of children with a validated classification of anaemia and no severe classification who are given/prescribed correct treatment including iron, mebendazole if over two years of age and did not receive mebendazole during the previous six months, and an antimalarial if high malaria risk area (including correct amount, times per day, and number of days for all drugs).
- Denominator:** Number of children with a validated classification of anaemia and no severe classification
- S10.** *Child receives first dose of treatment at facility.* The proportion of children, who do not need urgent referral, who need an antibiotic and/or an antimalarial who receive the correct first dose(s) at the facility.
- Numerator:** Number of children with validated classifications, who do not need urgent referral, who need an antibiotic and/or an antimalarial (pneumonia, dysentery, malaria, acute ear infection, anaemia<sup>a</sup>) who receive the correct first dose(s) at the health facility.
- Denominator:** Number of children with validated classifications, who do not need urgent referral, who need an antibiotic and/or an antimalarial
- S11.** *Child checked for lethargy.* The proportion of children not visibly awake (who are not playing, smiling, or crying with energy) who are checked for lethargy.
- Numerator:** Number of sick children not visibly awake when assessed by the health worker (who are not playing, smiling, or crying with energy) who are checked for lethargy.
- Denominator:** Number of sick children not visibly awake seen.
- S12.** *Child with severe illness correctly treated.* The proportion of children with severe classifications needing urgent referral who receive correct treatment and referral.
- Numerator:** Number of children with validated classifications of severe disease needing urgent referral (one or more danger signs and/or severe pneumonia or very severe disease, severe dehydration, severe persistent diarrhoea, very severe febrile disease, severe complicated measles, mastoiditis, severe malnutrition or severe anaemia) who receive correct first dose of all needed treatments (appropriate antibiotic and/or antimalarial and/or vitamin A and/or ORS) and referral
- Denominator:** Number of children with validated classifications of severe disease needing urgent referral
- S13.** *Child prescribed oral medication whose caretaker is advised on how to administer the treatment.* The proportion of children, who do not need urgent referral, who received or were prescribed an antibiotic and/or an antimalarial and/or ORS who received at least two treatment counselling messages.

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<sup>a</sup>In low- or no-risk area for malaria, anaemia is not treated with antimalarial.

**Numerator:** Number of children with validated classifications not needing referral, who do not need urgent referral, who received or were prescribed an antibiotic and/or an antimalarial and/or ORS who receive at least two treatment counseling messages (explanation on how to administer treatment, demonstration on how to administer treatment, open-ended question to check caretaker understanding).

**Denominator:** Number of children with validated classifications not needing urgent referral, who received or were prescribed an antibiotic and/or an antimalarial and/or ORS

**S14.** *Sick child whose caretaker is advised on when to return immediately..* The proportion of sick children whose caretakers received at least three counselling messages on when to return immediately.

**Numerator:** Number of sick children, who do not need urgent referral, whose caretakers received at least three of the following counseling messages on when to return immediately to a health facility: if the child is not able to drink or breastfeed, if the child becomes sicker, if the child develops fever, if the child has difficult breathing, if the child has fast breathing, if the child has blood in the stool, or if the child is drinking poorly.

**Denominator:** Number of sick children seen who do not need urgent referral

**S15.** *Child with very low weight whose caretaker received correct counseling.* The proportion of children with very low weight whose caretakers are provided with age-appropriate feeding messages.

**Numerator:** Number of children with a validated classification of very low weight, who do not need urgent referral, whose caretakers are provided with age-appropriate feeding messages<sup>b</sup> using a mothers' counselling card<sup>c</sup>.

**Denominator:** Number of children with a validated classification of very low weight, who do not need urgent referral

**S16.** *Child leaving the facility whose caretaker was given or shown a mother's card.* Proportion of children, who do not need urgent referral, whose caretakers have a mother's counselling card<sup>e</sup> with them at departure, or report having been shown a

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<sup>b</sup>A child has received age-appropriate feeding advice if the child is under four month of age and the caretaker has been advised to breastfeed only and at least eight times in 24 hours, or the child is 4-6 months of age and the caretaker has been advised to breastfeed at least eight times in 24 hours, or the child is 6-11 months of age and the caretaker is advised to breastfeed as often as the child wants and give food three times per day if breastfed or five times per day if not breastfed, or the child is 12-23 months of age and the caretaker is advised to give family food five times per day, or the child is 24 months of age or older and the caretaker is advised to give family food at least three times per day and to give nutritious food between meals. This description of age-appropriate feeding advices might require country adaptation.

<sup>c</sup>Counselling card given or shown to the caretaker during the counselling and that includes at least country-appropriate and age-specific feeding advices and the danger signs when to bring the child immediately back to a health facility.

mother's card by the health worker (Adaptation needed for sites where mothers' counselling cards are not distributed.)

**Numerator:** Number of children, who do not need urgent referral, whose caretakers have a mother's card<sup>e</sup> with them at departure or report having been shown a mother's card by the health worker during the visit.

**Denominator:** Number of sick children seen who do not need urgent referral.

**S17.** *Health facility has essential equipment and materials.* The proportion of health facilities that have all needed equipment and materials available on the day of the survey.

**Numerator:** Number of health facilities with all needed equipment and materials (accessible and working weighing scales for adults and children, timing device, child health cards, source of clean water, spoons, cups and jugs to mix and administer ORS) available on the day of the survey

**Denominator:** Number of health facilities surveyed

**S18.** *Health facility has IMCI chart booklet and mothers' counseling cards<sup>d</sup>.* The proportion of health facilities that have IMCI chart booklet available for use by health workers and mothers' counseling cards<sup>d</sup> for use during mothers' counseling and/or for distribution on the day of the survey.

**Numerator:** Number of health facilities with at least one legible IMCI chart booklet available for use by health workers managing children and at least one mother counselling card for use during counseling of caretakers of sick children.

**Denominator:** Number of health facilities surveyed

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d Counselling card given or shown to the caretaker during counselling and that includes at least country-appropriate and age-specific feeding advices and the danger signs when to bring the child immediately back to a health facility.