

ANNEX 18. FINDINGS: TABLES AND GRAPHS

REPORT OF BREATHING PROBLEMS AND PNEUMONIA

Table A1. Sensitivity and specificity of caretakers' report of breathing problems or 'pneumonia' for 35 children with "Very severe disease"/"Severe pneumonia" or "Pneumonia" (as classified by the surveyor) among 228 children with an acute respiratory condition

Symptom reported by caretakers	Classification of cases by surveyor	
	<i>Cases with pneumonia or Serious illness</i> n = 35	<i>Cases with only cough or cold (no pneumonia or serious illness)</i> n = 193
<i>Breathing problem/pneumonia reported</i>	Sensitivity 10 (28.6%) ¹	27 (14.0%)
<i>Only cough and no breathing problem/pneumonia reported</i>	25 (71.4%)	Specificity 166 (86.0%) ²
<i>Accuracy</i> ³ of symptom "breathing problem"/"pneumonia" in detecting pneumonia	(10+166)/(35+193) = 77.2%	

¹*Sensitivity* of local terms used for the symptom "breathing problem" or "pneumonia", as spontaneously reported by caretakers, for pneumonia or serious illness in this selected population of sick children taken to health facilities [true positives / (true positives + false negatives)]

²*Specificity* [true negatives / (true negatives + false positives)]

³*Accuracy* [(true positives + true negatives) / all]

- *Likelihood ratio: 2.0* [sensitivity / (1 - specificity)]

Table A2. Predictive values for pneumonia or severe illness of caretakers' report of fast or difficult breathing or 'pneumonia' (based on surveyor classification of 228 ARI cases)

Severity of illness by surveyor	Symptoms or condition reported by caretaker	
	<i>Breathing problem or 'pneumonia'</i> ³ n = 37	<i>Only cough</i> n = 191
<i>Severe illness or pneumonia</i> ¹	Positive predictive value 10 (27.0%) ⁴	25 (13.1%)
<i>No pneumonia</i> ²	27 (73.0%)	Negative predictive value 166 (86.9%) ⁵

¹*"Very severe disease", "severe pneumonia" or "pneumonia"*

²Cough or cold or other non-serious ARI

³Children in whom a breathing problem or 'pneumonia' was reported by the caretaker

⁴*Positive predictive value* [true positives / (true positives + false positives)]

⁵*Negative predictive value* [true negatives / (true negatives + false negatives)]

QUALITY OF CLINICAL CARE: ASSESSMENT

Table A3. Integrated assessment: proportion of sick children in whom selected assessment tasks were performed by the health providers (WHO “priority indicators” shown in italics)

ASSESSMENT TASKS	CASES (%) IN WHOM DONE <i>n = 397</i>	95% CONFIDENC E LIMITS
○ <i>Child checked for three general danger signs</i> ¹ (ability to drink, vomiting everything, convulsions)	183 (46.1%)	(34.1 - 58.0)
○ <i>Child checked for the presence of three main symptoms: cough, diarrhoea and fever</i>	329 (82.9%)	(75.6 - 90.1)
○ Child checked for the presence of an ear problem	302 (76.1%)	(67.4 - 84.8)
○ Child checked for palmar pallor	245 (61.7%)	(50.1 - 73.3)
○ Child checked for visible wasting	108 (27.2%)	(15.8 - 38.6)
○ Child checked for the presence of oedema of both feet	81 (20.4%)	(8.9 - 31.9)
○ Child temperature taken (by thermometer)	268 (67.5%)	(54.7 - 80.3)
○ Child weight taken and recorded	376 (94.7%)	(91.7 - 97.7)
○ <i>Child weight checked against a growth chart</i>	265 (66.8%)	--
○ “Carnet de santé” asked	363 (91.4%)	(86.6 - 96.2)
○ <i>Child vaccination status checked</i>	297 (74.8%)	(67.1 - 82.5)
○ Child checked for the presence of other problems	297 (74.8%)	(67.5 - 82.1)
• WHO INDEX OF INTEGRATED ASSESSMENT (mean of 10 assessment tasks performed) ²	7.7	(7.1 - 8.3)
• ADAPTED INDEX OF INTEGRATED ASSESSMENT - MOROCCO (mean of 14 assessment tasks performed) ³	9.6	(8.7 - 10.5)

¹ The three signs were checked with the following frequency: ability to drink in 238 (59.9%) cases, child vomiting everything in 246 (62.0%) and convulsions in relation to this episode of illness in 230 (57.9%). Lethargy or unconsciousness was checked in 10 (100%) of 10 children who looked sleepy or lethargic.

² Index calculated as the arithmetic mean of the following 10 assessment tasks: child checked for three danger signs (1,2,3), and the three main symptoms (4,5,6); child weighed and weight recorded (7) and checked against a growth chart (8); child checked for palmar pallor (9) and health card asked to check for vaccination status (10). All the 10 assessment tasks were performed in 125 (31.5%) of the 397 children observed.

³ The Morocco index adds the following 4 tasks: child’s temperature checked with thermometer (11) and child checked for the presence of ear problem (12), wasting (13), and oedema of both feet (14).

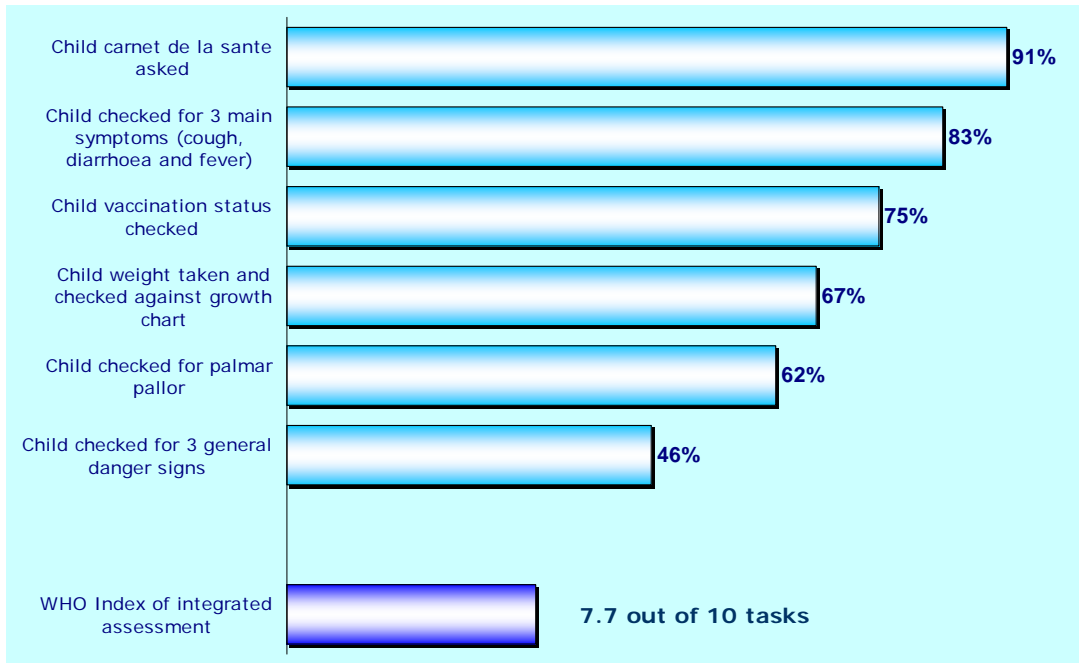


Fig. A1. Integrated assessment: Main tasks and WHO index ($n = 397$)

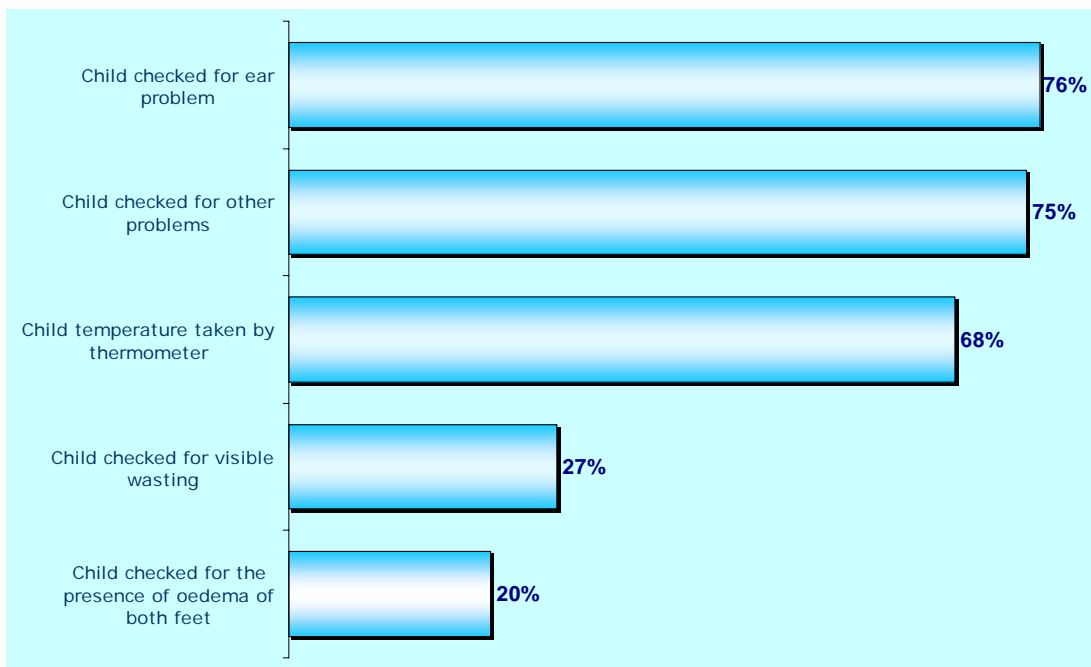


Fig. A2. Integrated assessment: other tasks ($n = 397$)

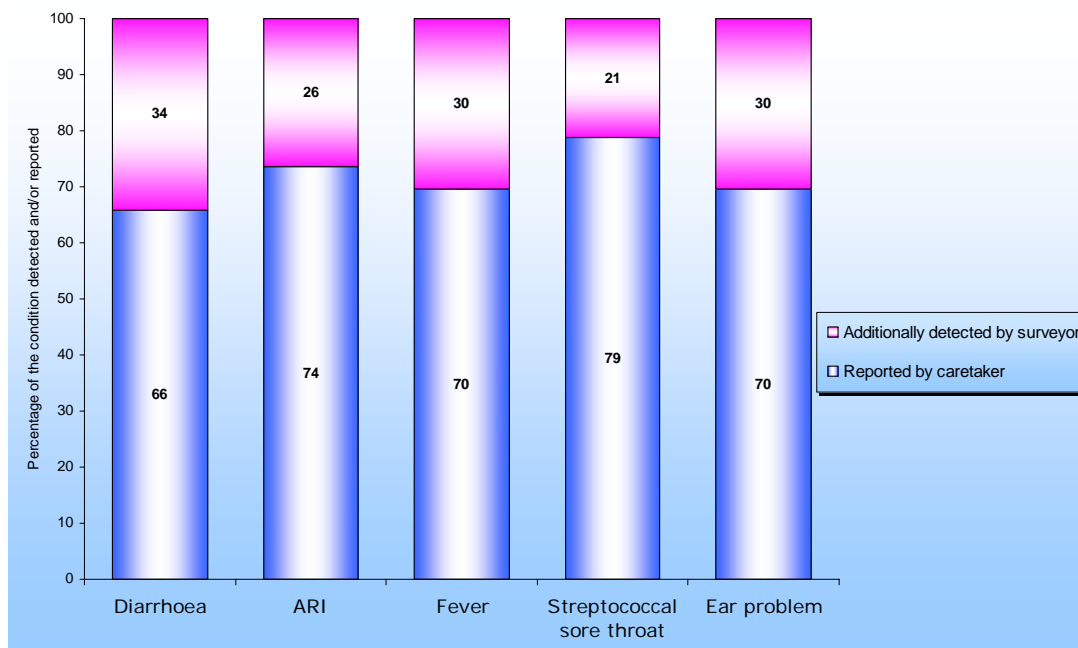


Fig. A3. Added value of IMCI: Additional conditions detected by surveyor following the IMCI systematic assessment of each child and not reported by caretaker

Table A4. Assessment of feeding practices in all children under two years old or in older children with anaemia and/or low weight and/or persistent diarrhoea

TARGET GROUPS FOR ASSESSMENT OF FEEDING PRACTICES	FEEDING PRACTICES ASSESSED
○ Children under 2 years old - not referred by provider - assessed for feeding practices: breastfeeding, complementary foods and changes in feeding during this episode of illness ($n = 224$) ^{1,2} :	130/224 (58.0%) (95% CI: 47.5 to 68.5)
> Children under 2 years old - not referred by provider - with low weight and/or anaemia and/or persistent diarrhoea assessed for feeding practices ($n = 28$)	17/28 (60.7%)
> Children under 2 years old - not referred by provider - without low weight and/or anaemia and/or persistent diarrhoea assessed for feeding practices ($n = 196$)	113/196 (57.7%)
○ Children 2 years old or older - not referred by provider - with low weight and/or anaemia and/or persistent diarrhoea assessed for feeding practices ($n = 17$) ³	2/17 (11.8%)
● IMCI target group for feeding assessment: <i>Children not referred by provider who are under 2 years old or older children with low weight and/or anaemia and/or persistent diarrhoea assessed for feeding practices</i> ($n = 241$) ³	132/241 (54.8%) (95% CI: 45.2 to 64.5)

¹ Two children less than 2 years old referred by the provider are excluded from this denominator

² Of the caretakers of the 224 children not referred by the provider, 190 (84.8%) were asked about breastfeeding, 183 (81.7%) were asked about complementary foods and 138 (61.6%) were asked whether feeding practices had changed during the illness

³ In this group of children 24 months old or older with low weight or anaemia or persistent diarrhoea, feeding practices were considered as assessed if caretakers were asked about complementary foods and changes in feeding practices during this episode of illness. All but one (94.1%) of children two years old or older with anaemia or low weight or persistent diarrhoea had been misclassified by the provider as cases with no anaemia or not low weight-for-age or no persistent diarrhoea and this may explain why they were not assessed for feeding problems. The major difficulty found was in correctly classifying anaemia.

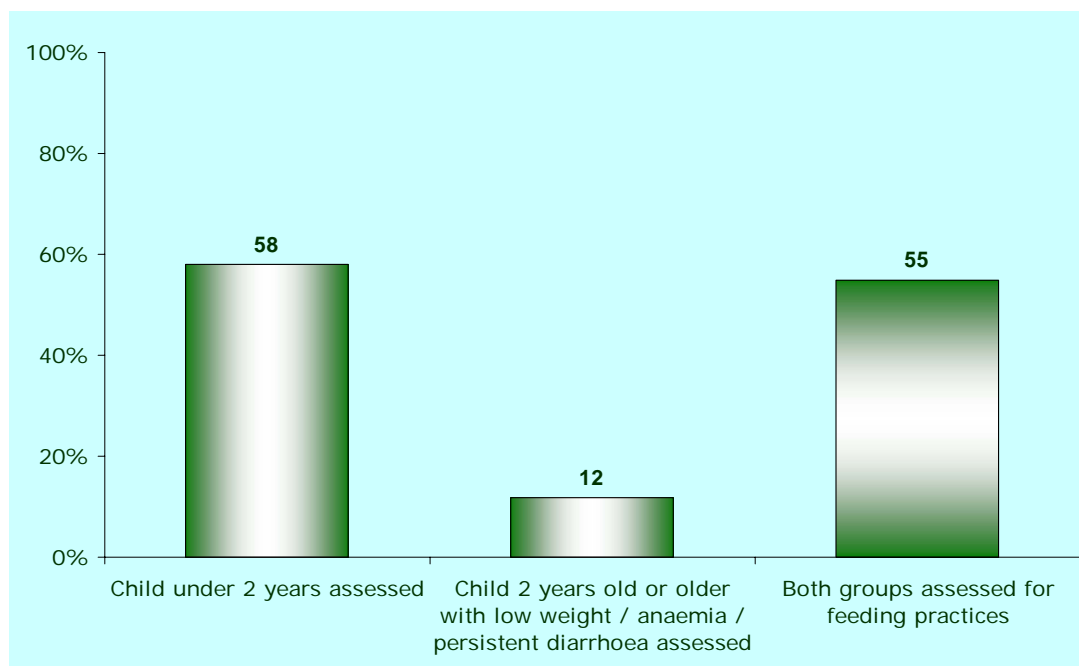


Fig. A4. Assessment of feeding practices: Children less than 2 years old ($n = 224$) and older children with low weight/anaemia/persistent diarrhoea ($n = 17$)

Table A5. Further assessment of feeding practices in all children under two years old or in older children with anaemia and/or low weight and/or persistent diarrhoea

FURTHER ASSESSMENT OF FEEDING PRACTICES	FEEDING PRACTICES ASSESSED <i>n</i> = 241 ¹
○ Asks how many times caretaker gives food to the child	171 (71.0%)
○ Asks about amount of food given to the child at each meal	149 (61.8%)
○ Asks if child receives his/her own portion	142 (58.9%)
○ Asks if child finishes his/her own portion	145 (60.2%)
○ Asks who feeds the child	151 (62.7%)

¹ Children not referred by provider who are under 2 years old or older children with low weight and/or anaemia and/or persistent diarrhoea assessed for feeding practices by a doctor or nurse.

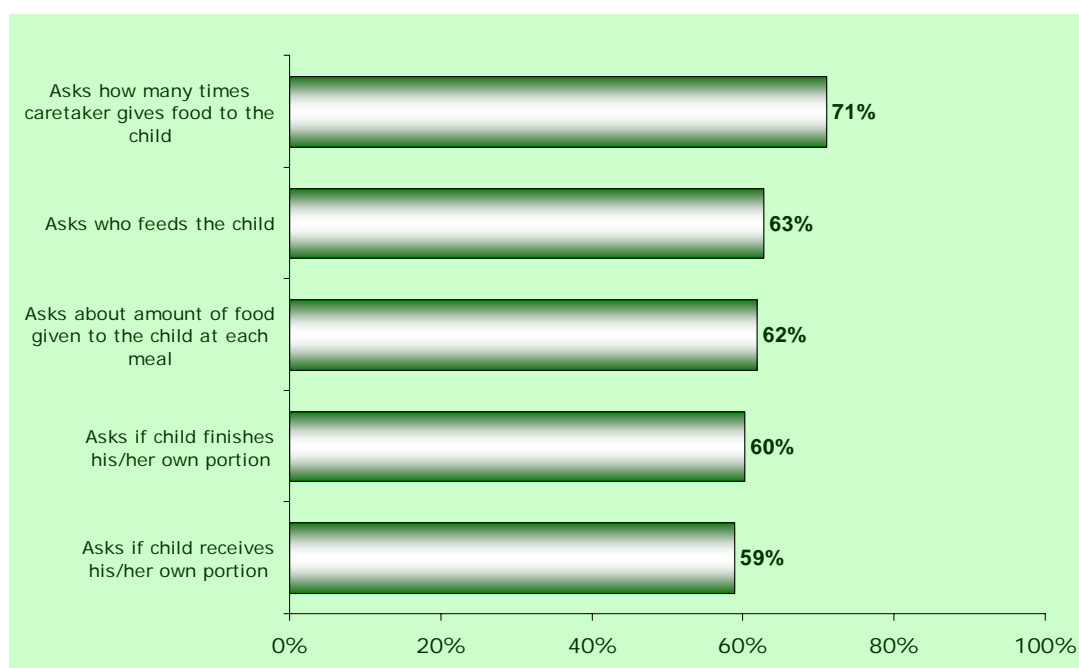


Fig. A5. Assessment of feeding practices: Children less than 2 years old and older children with low weight/anaemia/persistent diarrhoea (*n* = 241)

Table A6. Most common feeding problems identified by surveyors

MOST COMMON FEEDING PROBLEMS IDENTIFIED	CHILD AGE			TOTAL
	Less than 6 months old <i>n</i> = 39	6 to 11 months old <i>n</i> = 76	12 to 23 months old <i>n</i> = 111	
Use of teats or bottle feeding	22 (56.4%)	40 (52.6%)	44 (39.6%)	106 (46.9%)
Food not varied	2 (5.1%)	9 (11.8%)	10 (9.0%)	21 (9.3%)
Given no individual portion	0 (0.0%)	3 (3.9%)	13 (11.7%)	16 (7.1%)
Inadequate food amount	0 (0.0%)	3 (3.9%)	9 (8.1%)	12 (5.4%)
No active feeding	0 (0.0%)	2 (2.6%)	7 (6.3%)	9 (4.0%)

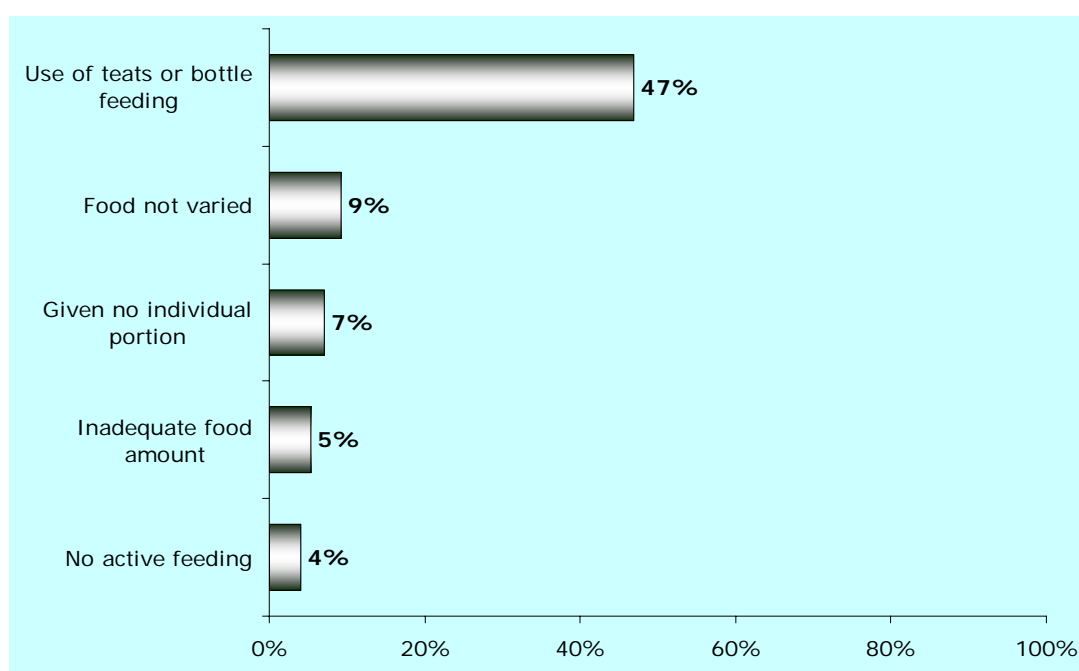


Fig. A6. Most common feeding problems identified in children less than 24 months old (n = 226)

Table A7. Use of correct methodology for selected assessment tasks by the observed providers

TASK	CHILDREN IN WHOM TASK TO BE PERFORMED	CHILDREN IN WHOM TASK PERFORMED	CHILDREN IN WHOM TASK <CORRECTLY> PERFORMED
Child weighed ¹	<i>n</i> = 397	388 (97.7%)	54 (13.6%)
Child's weight recorded		376 (94.7%)	
Child weighed and weight recorded		376 (94.7%)	
Child's temperature taken ²	<i>n</i> = 397	268 (67.5%)	161 (40.6%)
Child assessed for ability to drink	<i>n</i> = 397	238 (59.9%)	236 (59.4%)
Child assessed for sign "vomiting everything"		246 (62.0%)	239 (60.2%)
Children with cough or difficult breathing:	<i>n</i> = 228		
> Duration of symptom asked		201 (88.2%)	
> Presence of TB cases in the family asked		127 (55.7%)	
> Respiratory rate counted ³		163 (71.5%) ⁴	142 (62.3%)
Children with diarrhoea:	<i>n</i> = 82 ⁶		
> Duration of episode asked		77 (93.9%)	
> Presence of blood in stools asked		64 (78.0%)	
> Something to drink offered		35 (42.7%)	
> Abdomen skin pinched ⁵		58 (70.7%)	45 (54.9%)
> Agreement on conclusion on assessment of skin pinch			44 (53.7%)
Children with ear problem:	<i>n</i> = 33 ⁷		
> Presence of pain asked		26 (78.8%)	
> a. Both ears looked at		22 (66.7%)	
> b. Tender swelling behind ear looked for		20 (60.6%)	
> Both signs looked for (a. and b.)		19 (57.6%)	
> Presence of ear discharge asked		24 (72.7%)	
If ear discharge reported:	<i>n</i> = 9		
> Duration of discharge asked		9 (100%)	
Children with fever:	<i>n</i> = 247 ⁸		
> Duration of fever asked		196 (79.4%)	-
> Measles within the last 3 months checked for		130 (52.6%) ⁹	
Palmar pallor looked for	<i>n</i> = 397	245 (61.7%)	220 (55.4%)
Agreement on conclusion on palmar pallor			226 (56.9%)
Oedema of both feet looked for	<i>n</i> = 397	81 (20.4%)	50 (12.6%)

¹ Weight considered as taken correctly if child weighed undressed or lightly clothed.

² Temperature taken correctly if thermometer shaken first, then gently inserted in the child's rectum and kept in place for at least 2 minutes. A thermometer was not available at the facility in 61 (47.3%) of the 129 children in whom the temperature was not taken.

³ Respiratory rate considered as counted correctly if the child was calm and the count was for a full minute. Of the 163 children with ARI in whom the respiratory rate was counted, it was counted when the child was calm in 144 (63.2%) children and for a full minute in 159 (69.7%) children.

⁴ Of the 65 cases in whom the respiratory rate was not counted by the provider: caretakers of 17 children told the provider that the child had no cough, while in 6 the provider did not check for the presence of cough.

⁵ Skin pinched correctly if abdomen skin pinched halfway between the umbilicus and the side of abdomen, skin held firmly for one second between the thumb and the 1st finger in line up and down the child's body.

⁶ The caretakers of 2 children with diarrhoea - identified by the surveyor - had told the provider that the child had no diarrhoea; in other 2 cases, the provider did not check for the presence of diarrhoea.

⁷ In 7 cases in whom the ear problem was not assessed: 5 caretakers told the provider that the child had no ear problem, while in the other 2 cases the provider did not check for the presence of the ear problem.

⁸ The provider missed to check about fever in 10 children.

⁹ The caretakers of 23 out of the 117 cases with fever in whom measles was not checked told the provider that the child had no fever; in other 84 cases the provider missed to ask about measles and in the remaining 10 the provider had missed to check about fever.

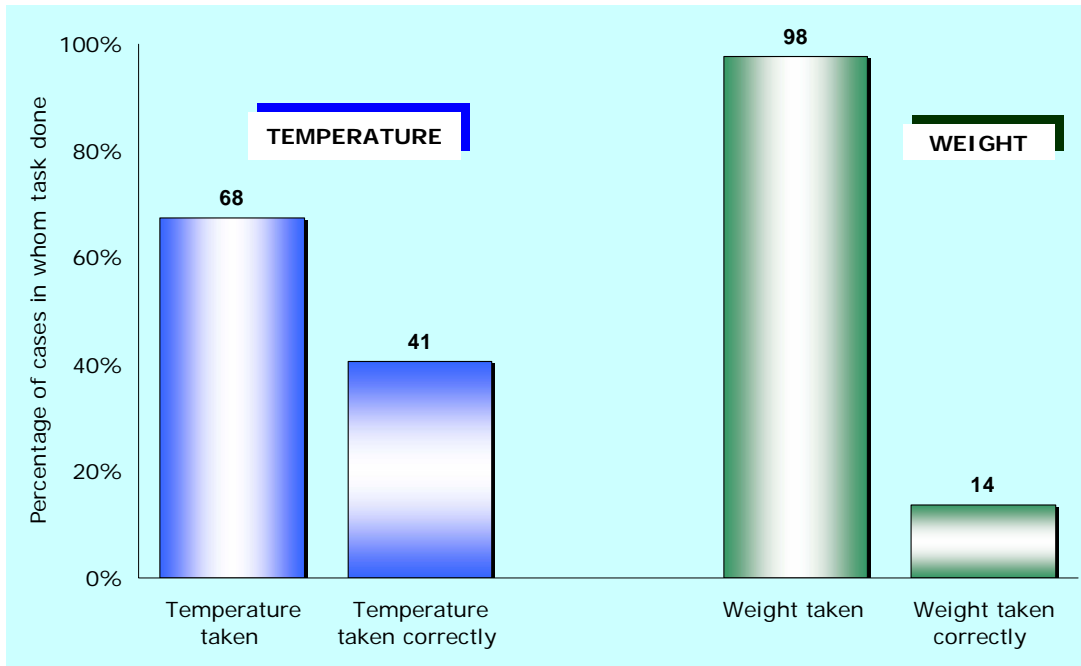


Fig. A7. Performance of selected tasks: taking temperature and weight ($n = 397$)

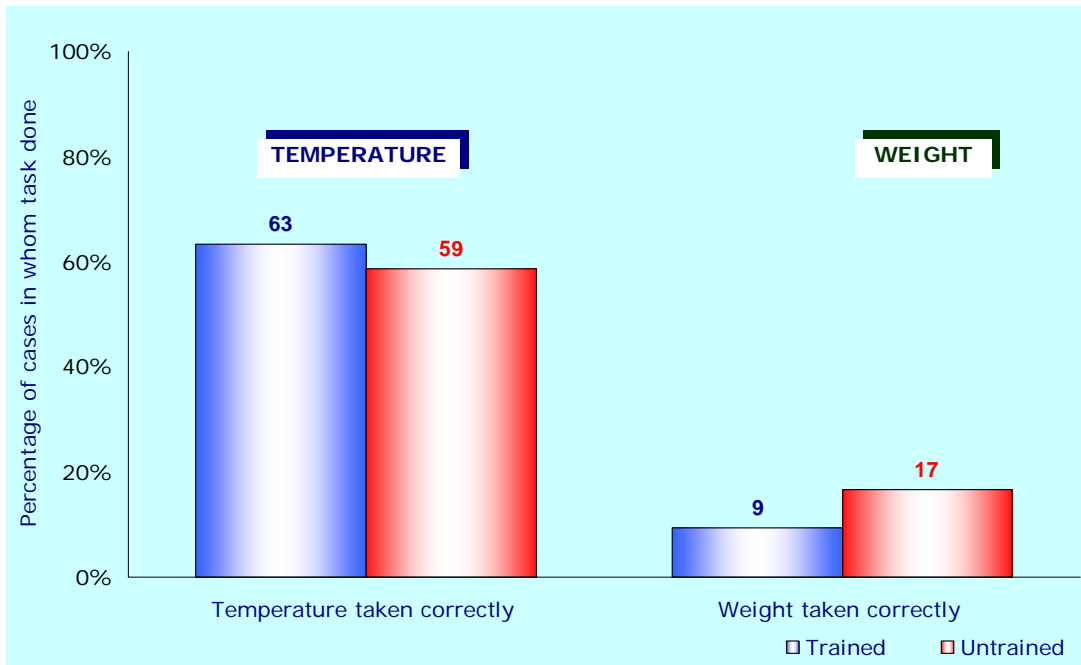


Fig. A8. Performance of selected tasks: taking the temperature and weight
Trained Vs untrained

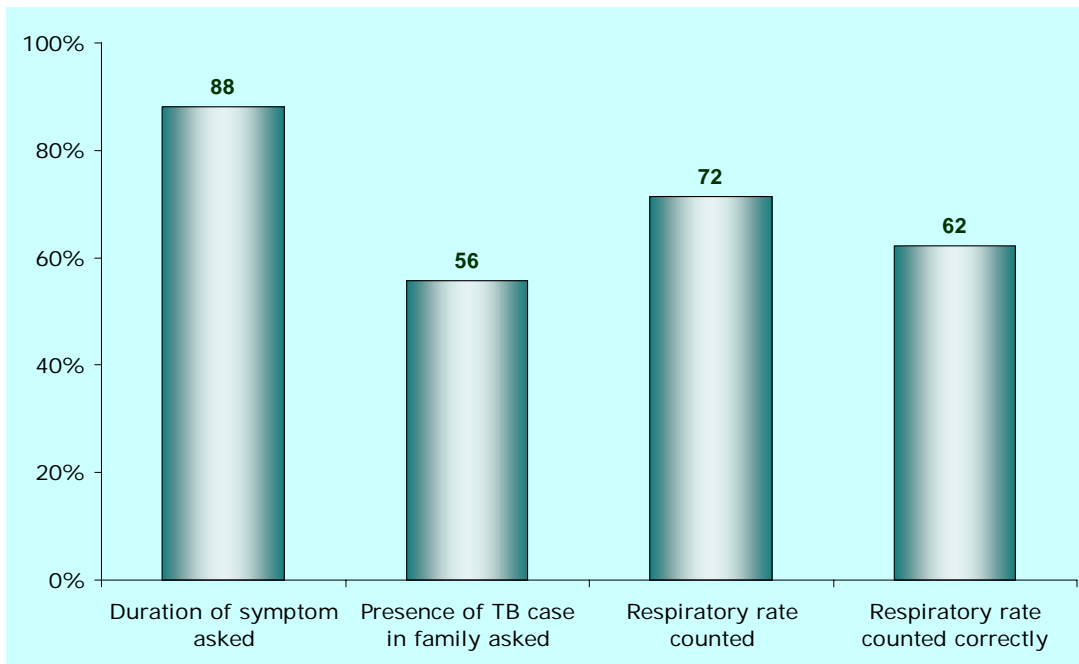


Fig. A9. Performance of selected assessment tasks: children with ARI ($n = 228$)

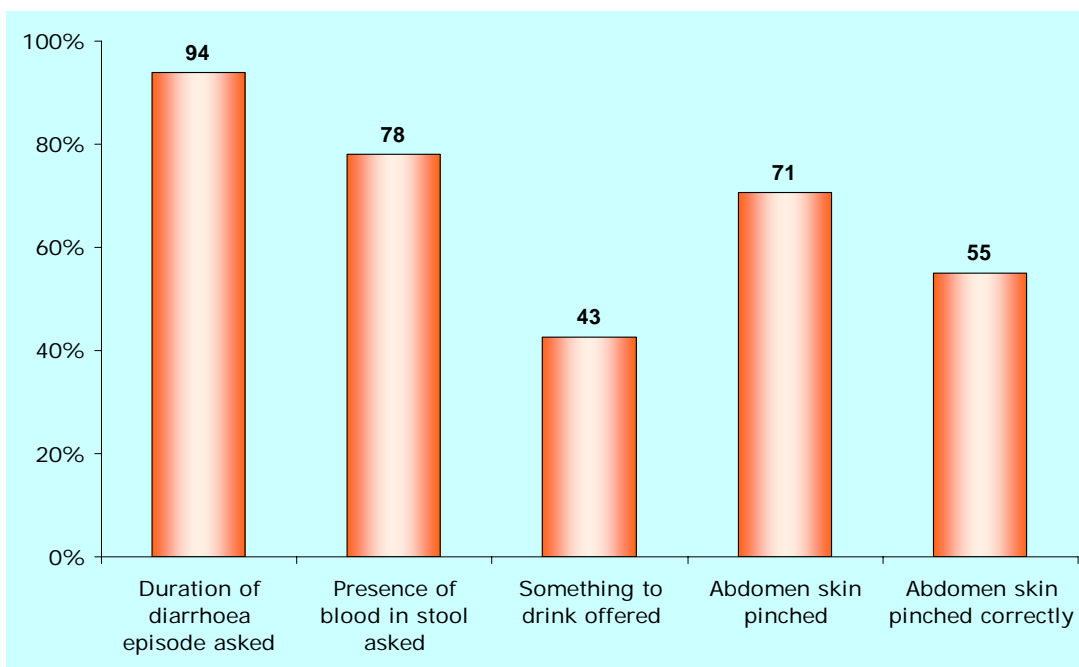


Fig. A10. Performance of selected assessment tasks: children with diarrhoea ($n = 82$)

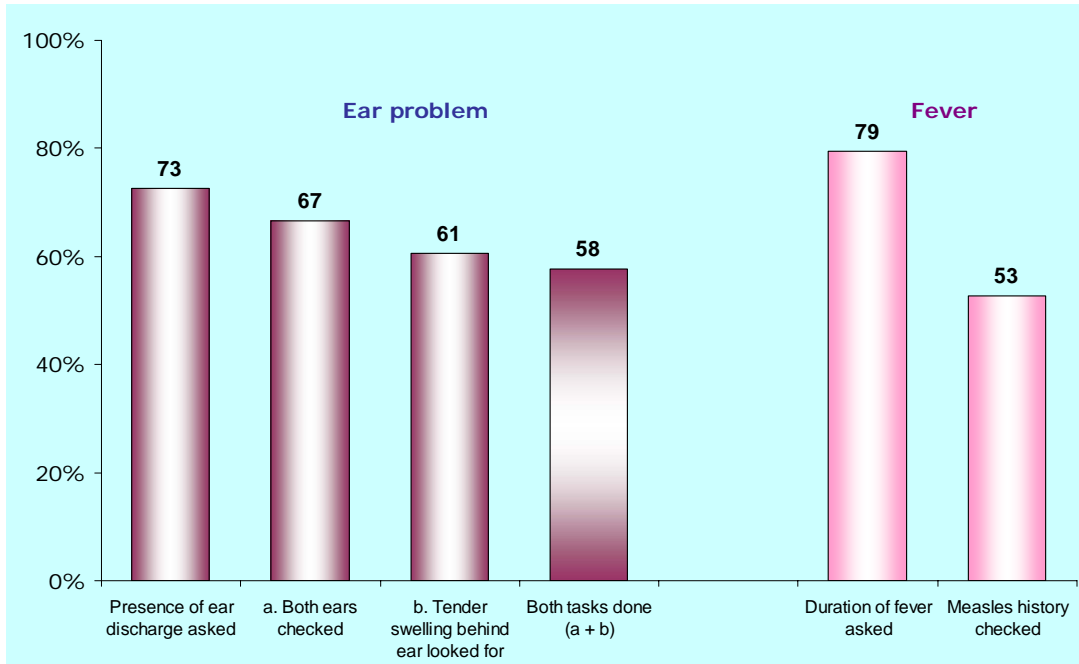


Fig. A11. Performance of selected assessment tasks: children with ear problem ($n = 33$) and fever ($n = 247$)

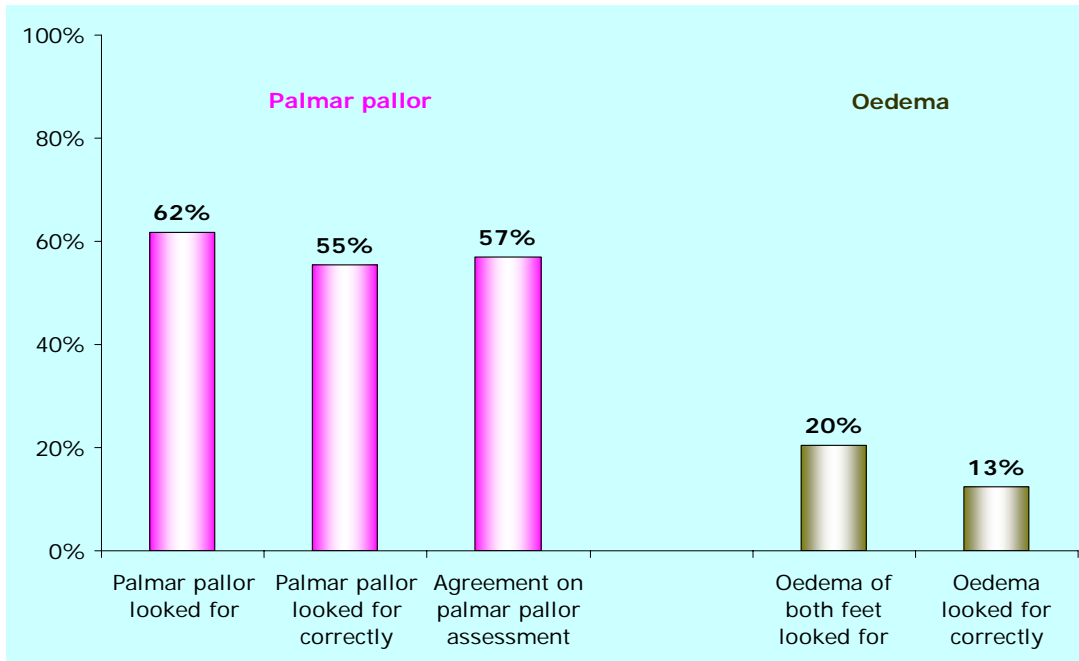


Fig. A12. Performance of selected assessment tasks: checking palmar pallor and oedema of both feet in all children ($n = 397$)

Table A8. Counting the respiratory rate in children with cough or difficult breathing: reliable counts and implications for classification of non-severe pneumonia

RELIABLE COUNTS	
> Children in whom the respiratory rate was counted by both surveyor and provider	<i>n</i> = 161 ¹
• Respiratory rate counts considered as:	
> Reliable ¹	85 (52.8%)
> Unreliable ¹	76 (47.2%)
Differences in counts of 10 or more breaths per minute (range from 10 to 28)	45 (27.9%)
IMPLICATIONS OF UNRELIABLE COUNTS	
• “Pneumonia” cases that would have been incorrectly classified as “no pneumonia” by the provider based on his/her “unreliable” count (“ <u>under-classification</u> ”):	
- In infants (less than 12 months old)	9/35 ² (25.7%)
- In older children	4 5
• “No pneumonia” cases that would have been incorrectly classified as “pneumonia” by the provider based on his/her unreliable count (“ <u>over-classification</u> ”):	
- In infants (less than 12 months old)	18/193 ³ (9.3%)
- In older children	4 14

¹ Exclusively for the purpose of this analysis, “reliable” count was considered each count for which the difference in count between the provider and the surveyor for the same child was not greater than 5 breaths per minute. This arbitrary level was based on experience from previous health facility surveys on acute respiratory infections. The difference in counting the respiratory rate between health providers and surveyors was in the range between -28 (i.e., the provider counted 28 breaths per minute less than the surveyor for the same child) and +26 (i.e., the provider counted 26 breaths per minute more than the surveyor for the same child).

² The denominator is the total number of “pneumonia” cases

³ The denominator is the total number of cases with “no pneumonia”

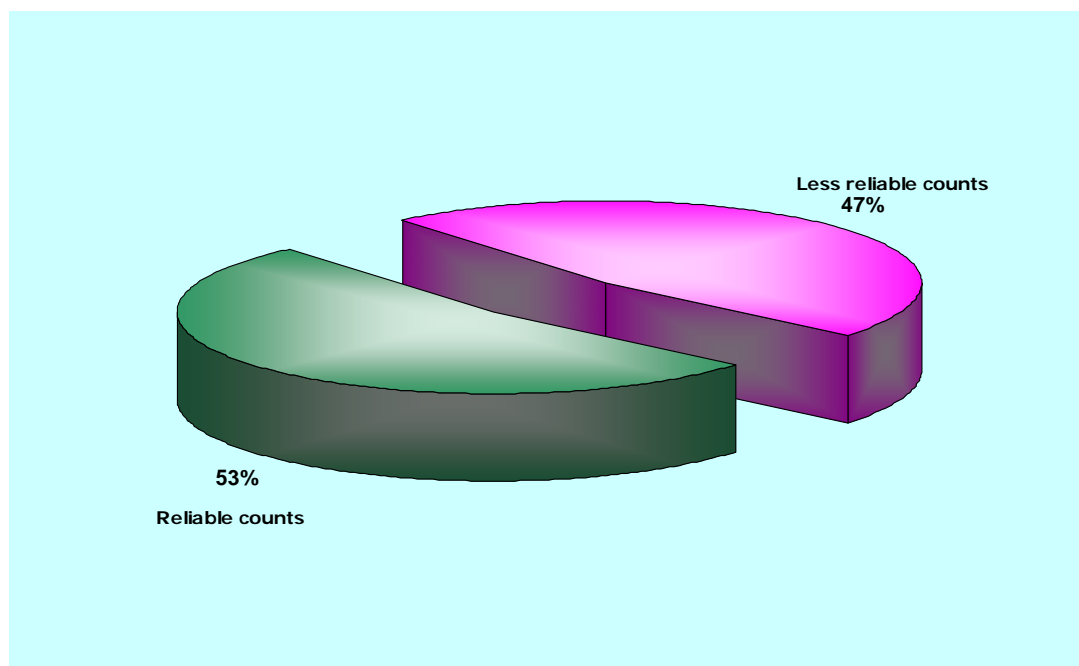


Fig. A13. Counting the respiratory rate reliably (*n* = 161)

QUALITY OF CLINICAL CARE: CLASSIFICATION

The only child found to have **danger signs** by the surveyor was correctly classified by the provider

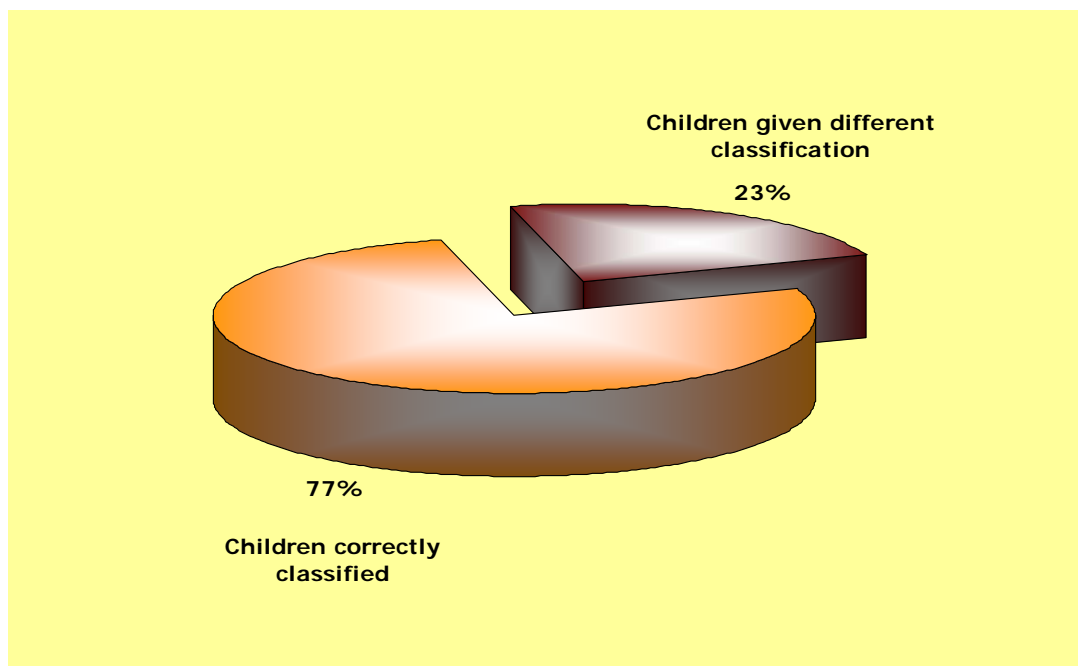


Fig. A14. Children correctly classified by the provider for the conditions related to the main symptoms of cough or difficult breathing, diarrhoea and fever ¹ ($n = 397$)

¹ This indicator refers to the agreement of provider classification with surveyor's on the following conditions: very severe disease or severe pneumonia or pneumonia, and/or diarrhoea with severe dehydration or some dehydration, and/or severe persistent diarrhoea or persistent diarrhoea, and/or dysentery, and/or very severe febrile disease or fever-possible bacterial infection, and/or measles with or without complications.

Table A9. Agreement of provider’s case classifications with surveyor’s classifications on identified conditions requiring urgent referral, treatment or special counselling (mostly “red” and “yellow” rows of the IMCI chart).

CONDITION	IDENTIFIED BY		AGREEMENT (%)	UNDERCLASSIFIED (OUT OF MISCLASSIFIED)
	Provider	Surveyor		
<i>Danger signs (very severe disease)</i>	1	1	100%	0
<i>Very severe disease/severe pneumonia or pneumonia</i>	18	35	51%	17/17
<i>Diarrhoea with severe or some dehydration</i>	1	3	33%	2/2
<i>Severe and non-severe persistent diarrhoea</i>	1	5	20%	4/4
<i>Dysentery</i>	1	1	100%	0
<i>Very severe febrile disease or fever-possible bacterial infection</i>	51	71	72%	20/20
<i>Measles (with and without complications)</i>	2	6	33%	4/4
<i>Mastoiditis or acute or chronic ear infection</i>	13	21	62%	7/8
<i>Streptococcal sore throat</i>	28	33	85%	5/5
<i>Severe malnutrition or low weight</i>	4	18	22%	14/14
<i>Severe anaemia or anaemia</i>	6	29	21%	23/23
TOTAL	126	223	56.0%	96/97 (99.0%)

The denominator is the total number of “IMCI conditions” identified in the 397 children examined; a sick child often had more than one condition. "Under-classified" here includes also cases given no classification for the concerned condition.

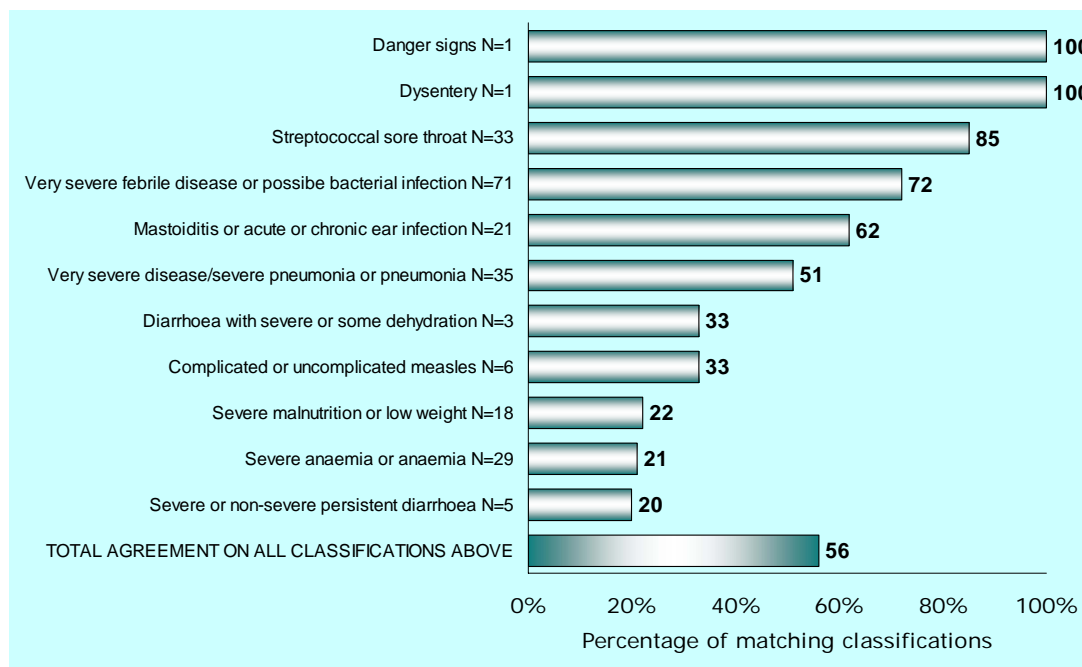


Fig. A15. Agreement of provider's classifications with surveyor's classifications by main conditions

Agreement of provider's case classification with surveyor's classification on "**Not low weight / no anaemia**"
(n = 379): 331 (**87.3%**)

Provider agreement with surveyor on children with **eye infections**: 16/22 (**72.7%**)

Provider's correct identification of a **feeding problem** using surveyor's identification of feeding problems as a
reference: 81/198 (**40.9%**)

QUALITY OF CLINICAL CARE: MANAGEMENT OF SEVERE CASES AND USE OF INJECTABLE DRUGS

Table A10. Management of severe cases needing urgent referral and use of injectable drugs

TYPE OF CASES	No. (%)
• Cases needing urgent referral:	6/397 (1.5%)
> <i>Referred</i> (correctly identified by the provider)	2/6 (33.3%)
> <i>Administered appropriate pre-referral treatment</i>	
○ <i>Severe pneumonia</i> administered parenteral thiamphenicol or ampicillin or recommended oral antibiotic at the facility	0/3 (0.0%) ¹
○ <i>Severe dehydration</i> started receiving ORS at the facility	1/1 (100%)
○ <i>Severe persistent diarrhoea</i> with some dehydration started receiving ORS at the facility and administered vitamin A	0/1 (0.0%) ²
○ <i>Severe malnutrition</i> administered vitamin A	0/1 (0.0%) ³
> <i>Correctly managed</i> (referred and given appropriate pre-referral treatment)	1/6 (16.6%)
• Cases needing urgent referral	<i>n</i> = 6
> <i>Given explanation about the need for referral</i>	2 (33.3%)
> <i>Accepting referral</i>	1 (16.7%)
> <i>Given referral note</i>	1 (16.7%) ⁴

¹ One of the three facilities in which these 3 cases were seen had no recommended oral antibiotics (cotrimoxazole and amoxicillin) nor parenteral antibiotics (thiamphenicol and ampicillin) available at the time of the visit.

² This child was given ORS but no vitamin A. Vitamin A was available in the facility at the time the child was seen.

³ Vitamin A was available in the facility were this child with severe malnutrition was seen.

⁴ One of the cases referred by the provider refused referral and therefore no referral note was prepared in this case. The denominator for this item should then exclude that case and be 5 children needing urgent referral (1/5=20%).

Table A11. Use of injectable drugs

TYPE OF CASES	No. (%)
• Cases prescribed or administered an injectable drug at the facility:	<i>n</i> = 5
- Cases referred by the provider	0 (0.0%)
- Cases not referred by provider and unlikely to need an injectable drug	3 (60.0%)

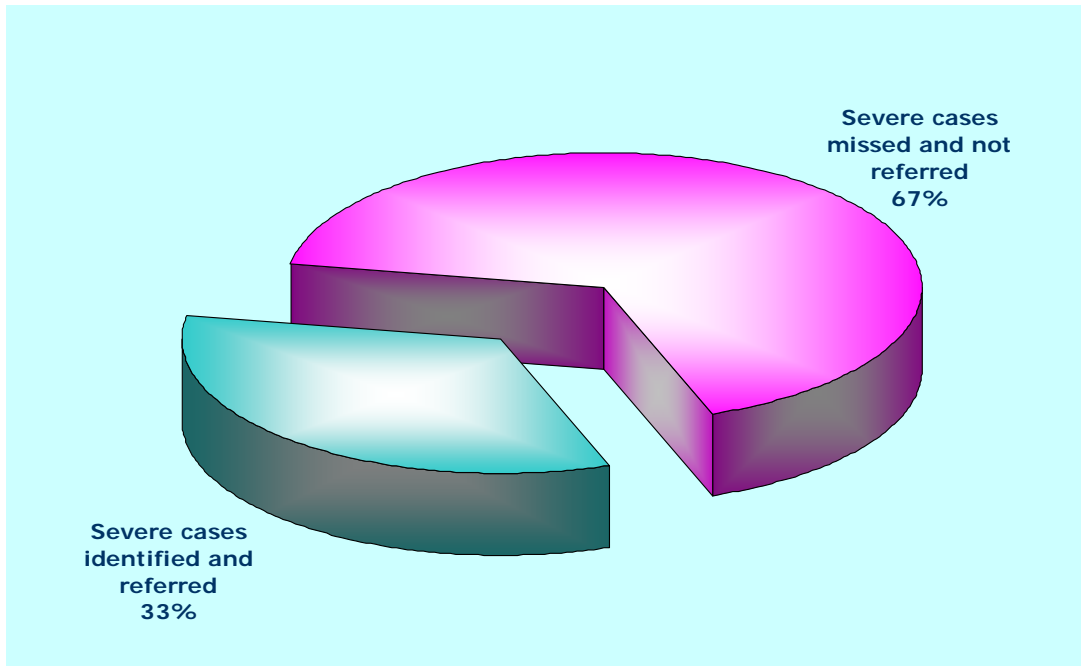


Fig. A16. Management of severe cases needing urgent referral ($n = 6$): severe cases identified and referred

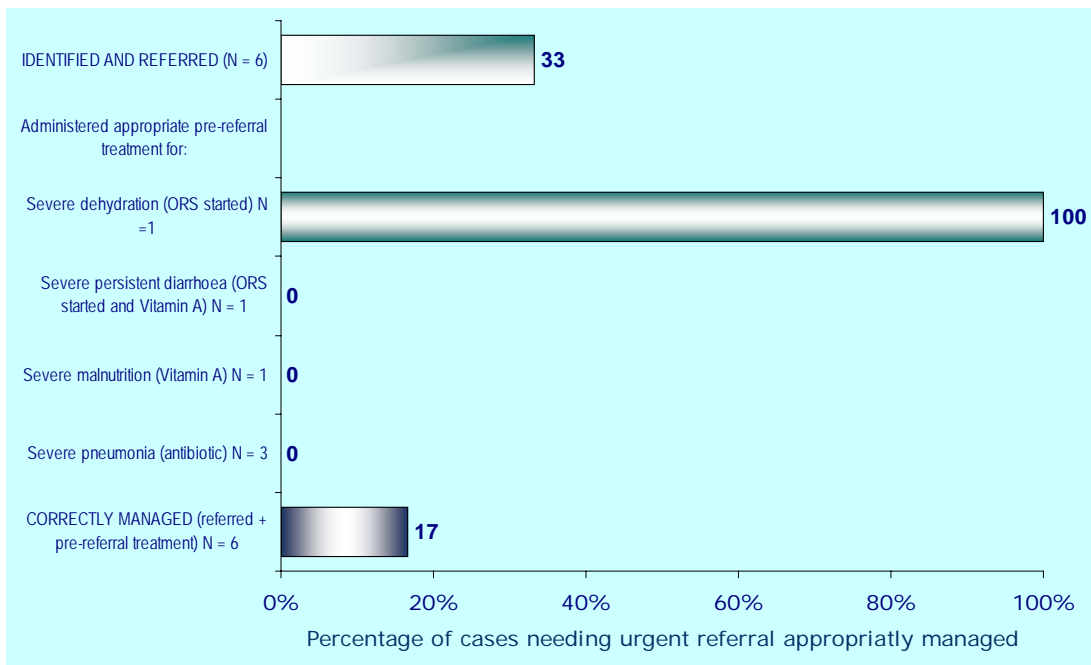


Fig. A17. Management of severe cases needing urgent referral ($n = 6$): severe cases properly managed

QUALITY OF CARE: ORAL ANTIBIOTIC TREATMENT

Table A12. Oral antibiotic treatment prescribed correctly for children with an “IMCI condition” not requiring urgent referral and needing oral antibiotics, and caretaker recall of the instructions

CASES	No. (%)
• Children with an IMCI condition not requiring urgent referral and needing oral antibiotics:	<i>n</i> = 81
> Prescribed oral antibiotics	69 (85.2%)
> Prescribed a recommended oral antibiotic	63 (77.8%)
- Of those prescribed recommended oral antibiotics:	<i>n</i> = 63
> 1. Prescribed correct amount (dose)	49 (77.8%)
> 2. Prescribed correct number of times per day (frequency)	47 (74.6%)
> 3. Prescribed correct number of days (duration)	37 (58.7%)
> Prescribed antibiotics correctly (all 3 above)	25 (39.7%)
• Caretakers of children prescribed recommended oral antibiotics:	<i>n</i> = 63
> 1. Knowing the dose to be given each time	39 (61.9%)
> 2. Knowing the number of times a day to be given	38 (60.3%)
> 3. Knowing for how many days to be given	26 (41.3%)
> Able to describe correctly how to give antibiotics (i.e., knowing all 3 above)	17 (27.0%)
• Pneumonia cases (not requiring urgent referral):	<i>n</i> = 32
> Prescribed oral antibiotics	25 (78.1%) ¹
> Prescribed recommended oral antibiotics	23 (71.9%)
- Of those prescribed recommended oral antibiotics:	<i>n</i> = 23
> Prescribed oral antibiotics correctly	7 (30.4%)
• Dysentery cases (not requiring urgent referral):	<i>n</i> = 1
> Prescribed oral antibiotics	1 (100%)
> Prescribed recommended oral antibiotics	1 (100%)
> Prescribed recommended oral antibiotics correctly	0 (0.0%)
• Children not needing antibiotics (for an IMCI or non-IMCI reason) and not requiring urgent referral:	<i>n</i> = 301
> Prescribed no antibiotics	230 (76.4%)
> Prescribed antibiotics unnecessarily	71 (23.6%) ²

¹ All the 7 “pneumonia” cases that were not prescribed an oral antibiotic had been misclassified by the provider as “no pneumonia” cases.

² 47 (66.2%) of these 71 cases that were prescribed antibiotics unnecessarily had been misclassified by the provider as cases with “pneumonia” (16 cases), “dysentery” (1), streptococcal sore throat (26) or “acute ear infection” (4), all of which would have required antibiotics had the classifications been correct.

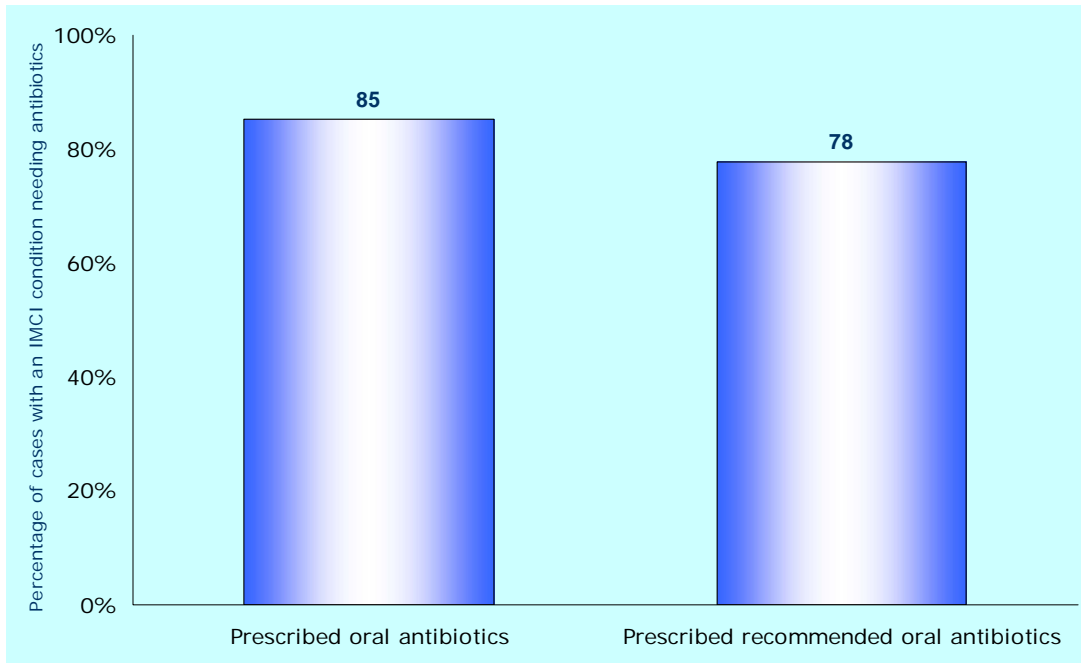


Fig. A18. Prescription of recommended oral antibiotic treatment ($n = 81$ cases with "IMCI conditions" needing oral antibiotics)

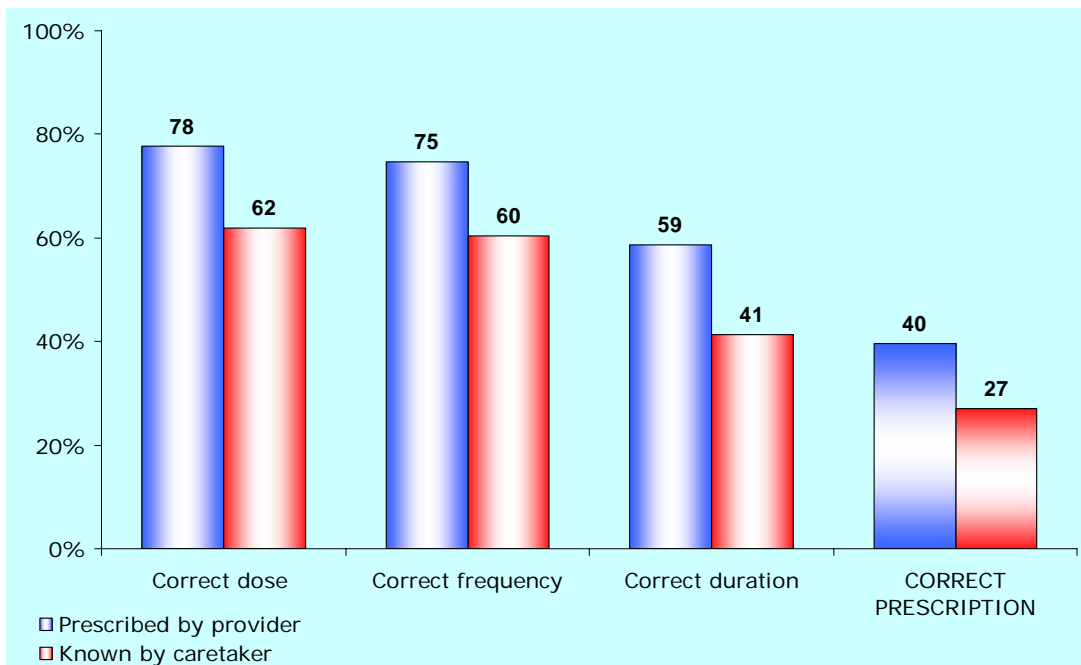


Fig. A19. Prescription of IMCI recommended antibiotics by provider and caretaker correct recall ($n = 63$)

Table A13. Relationship of provider's correct advice on treatment with a recommended oral antibiotic with caretaker correct recall of the advice (for children not referred by the provider and for whom information is available)

ADVICE	ADVICE CORRECTLY GIVEN AND CORRECTLY RECALLED BY CARETAKER	ADVICE INCORRECTLY OR NOT GIVEN BUT CORRECTLY MENTIONED BY CARETAKER	TOTAL CORRECT RECALL OF ADVICE BY CARETAKER (n = 63) ¹
Dose	38/49 (77.6%)*	1/14 (7.1%)*	39 (61.9%)
Frequency	34/47 (72.3%)**	4/16 (25.0%)**	38 (60.3%)
Duration	26/37 (70.3%)	0/25 (10.9%)	26 (41.3%)
All 3 above	17/25 (68%)	0/38 (0.0%)	17 (27.0%)

¹ Children needing an antibiotic for an IMCI condition and prescribed a recommended oral antibiotic (children not needing urgent referral)

* RR 10.5; 95% CI: 1.4 to 76.3

** RR 2.9; 95% CI: 1.1 to 7.6

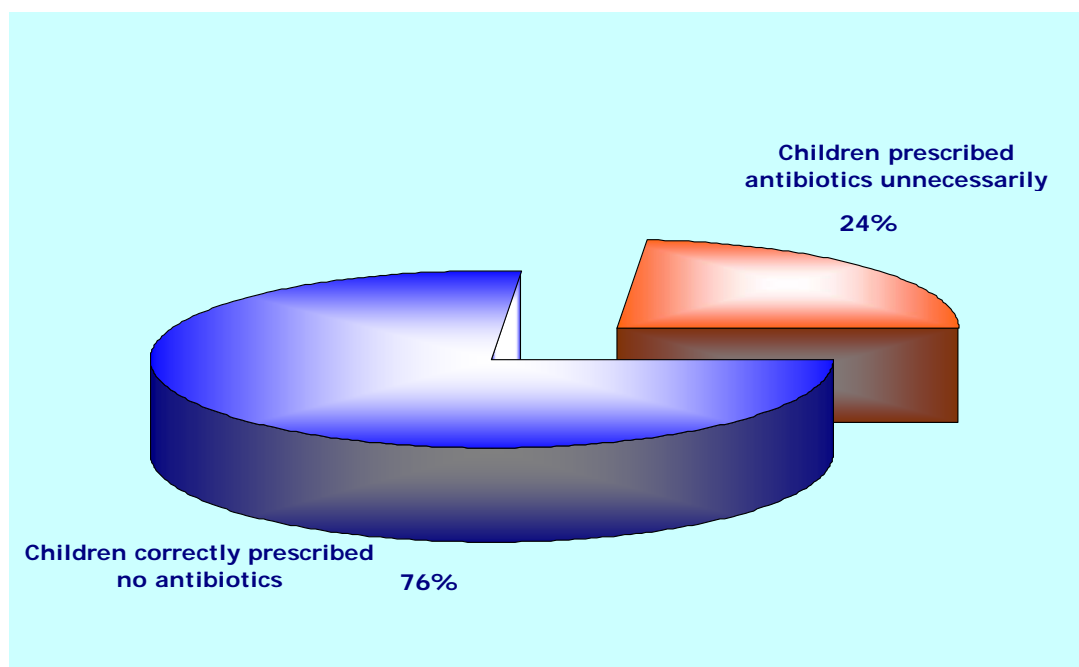


Fig. A20. Rational use of drugs: children not needing antibiotics given no antibiotics (n = 301)

Table A14. Potential compliance with advice on duration of treatment with a recommended oral antibiotic

CASES PRESCRIBED AN ANTIBIOTIC	<i>n</i> = 123 ¹ (%)
• Caretaker intention to continue treatment in case child gets better:	
- Would continue as advised	83 (67.5%)
- Would stop treatment	26 (21.1%)
- Would continue but reduce the dose	4 (3.2%)
- Other options	2 (1.6%)
- Would not know	7 (5.7%)
- Information missing ¹	2 (1.6%)

¹ A total of 123 caretakers were identified during the exit interview as having been prescribed an IMCI antibiotic for their sick child; information was missing in two cases on provider's advice on duration of treatment.

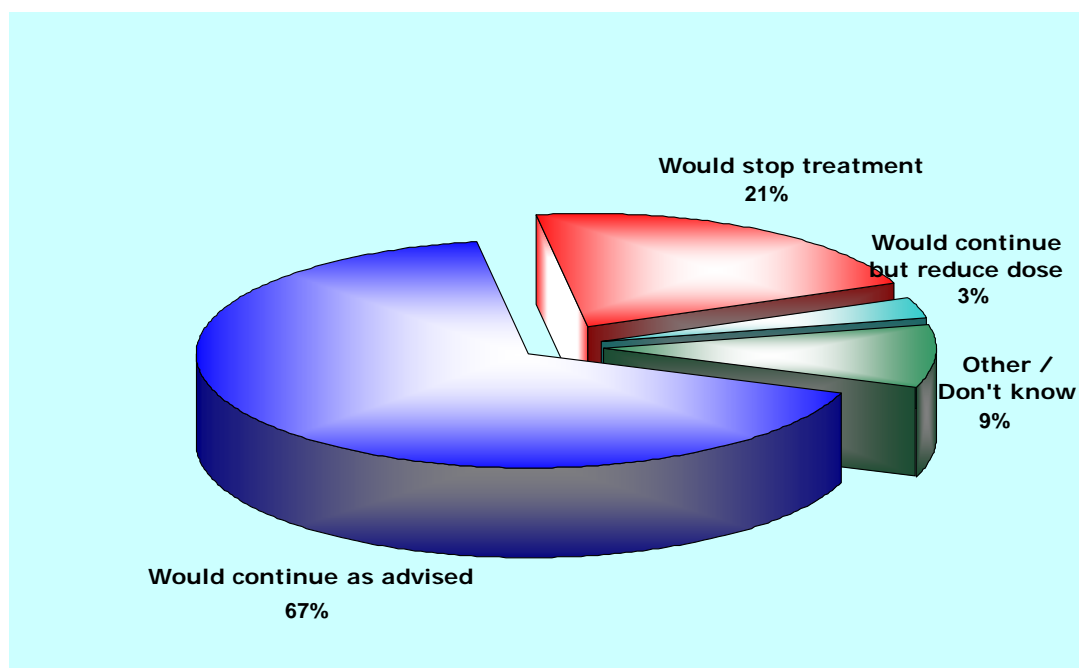


Fig. A21. Caretaker potential compliance with provider advice on duration of oral antibiotic treatment should child get better before completing treatment course (*n* = 123)

Table A15. Oral rehydration salts (ORS) prescribed correctly for children with diarrhoea not requiring urgent referral and caretaker recall of advice

CASES	
• Children with diarrhoea not needing urgent referral ¹ :	
> <i>No signs of dehydration</i> : given ORS sachets	65/78 ^{1,2} (83.3%)
> <i>Some dehydration</i> : administered the ORS solution at the facility	2/2 ¹ (100%)
- Of those given ORS:	<i>n</i> = 67 ³
> 1. Correctly advised on <i>amount of water</i> to mix with 1 ORS sachet to prepare the solution	57 (85.1%)
> 2. Correctly advised on <i>when to give</i> ORS to the child each day	25 (37.3%)
> 3. Correctly advised on <i>how much</i> ORS to give to the child each time	23 (34.3%)
<i>Given correct instructions on ORS, including its preparation</i> (all three above):	21 (31.3%)
• Caretakers of children prescribed ORS:	<i>n</i> = 67 ³
> 1. <i>Knowing how much water</i> to mix with 1 ORS sachet to prepare solution	63 (94.0%)
> 2. <i>Knowing when to give</i> ORS to the child each day	16 (23.9%)
> 3. <i>Knowing how much</i> ORS to give to the child each time	27 (40.3%)
Able to describe correctly how to give ORS (i.e., knowing all 3 above)	11 (16.4%)

¹ A total of 82 children with diarrhoea were identified. Two of these were excluded from this analysis as they had severe conditions requiring urgent referral. Included in this analysis were then 80 cases, of which 78 with no signs of dehydration and 2 with some dehydration.

² Only 57 (73.1%) of the 78 children with no signs of dehydration were correctly classified as such by the provider and 51 (89.5%) of these 57 cases were prescribed or given ORS packets for home use; ORS was available at the facility in the remaining six cases which were not given it.

³ The denominator of 67 cases refers to the 65 cases with no dehydration and the 2 cases with some dehydration given ORS sachets.

Table A16. Relationship of provider's correct advice on ORS (oral rehydration salts) treatment with caretaker correct recall of the advice (for cases not referred by the provider and for whom information is available)

ADVICE	ADVICE CORRECTLY GIVEN AND CORRECTLY RECALLED BY CARETAKER	ADVICE INCORRECTLY OR NOT GIVEN BUT CORRECTLY MENTIONED BY CARETAKER	TOTAL CORRECT RECALL OF ADVICE BY CARETAKER (<i>n</i> = 67)
How much water to use to prepare ORS	56/57 (98.2%)*	6/9 (66.7%)*	63 (94.0%)
When to give ORS	15/25 (60.0%)**	1/42 (2.4%)**	16 (23.9%)
How much ORS to give each time	13/23 (56.5%***)	14/44 (31.8%***)	27 (40.3%)
<i>All 3 above</i>	9/21 (42.9%****)	2/46 (4.3%****)	11 (16.4%)

¹ Children with diarrhoea and not needing urgent referral prescribed or given ORS.

* RR 1.5; 95% CI: 0.8 to 2.6

** RR 25.5; 95% CI: 3.11 to 208.9

*** RR 1.8; 95% CI: 0.9 to 3.7

****RR 9.8; 95% CI: 2.1 to 44.7.

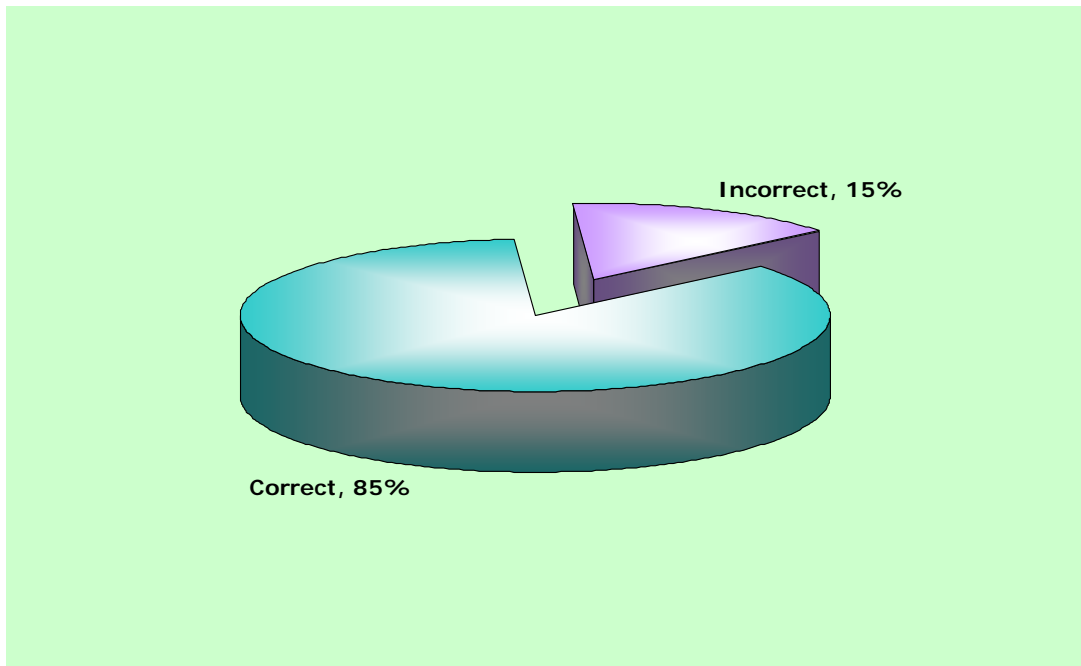


Fig. A22. Provider advice on amount of water to prepare ORS ($n = 67$)

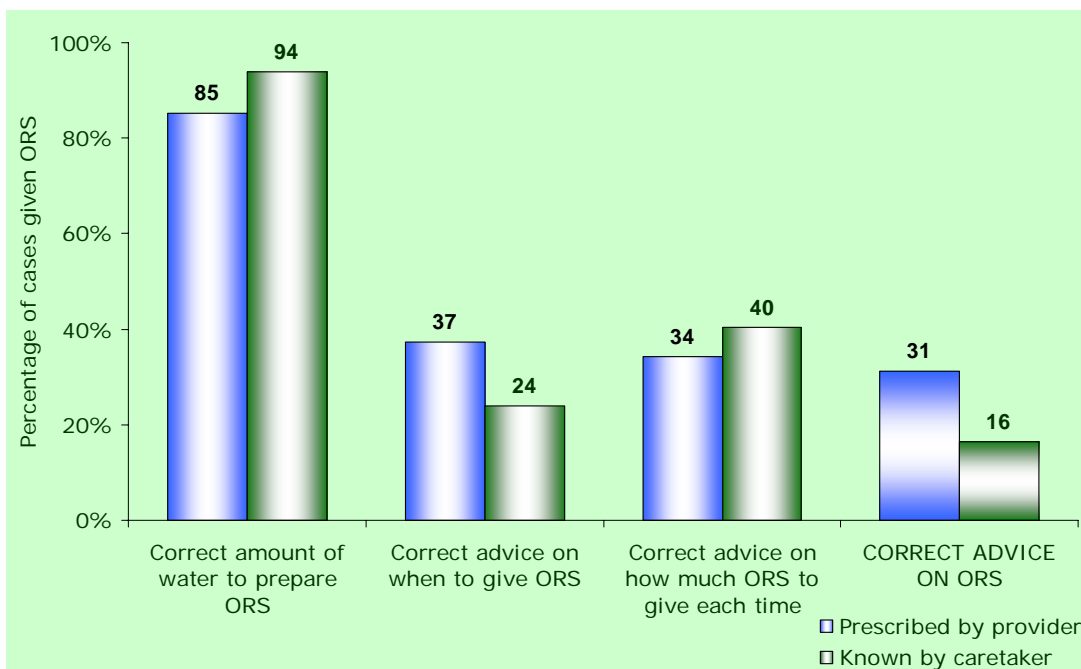


Fig. A23. Provider correct advice on ORS and caretaker correct knowledge about ORS treatment ($n = 67$)

Table A17. Antibiotic and/or ORS treatment: provider communication tasks in giving advice

ADVICE	No. (%)
• Caretakers of children not needing urgent referral, requiring an antibiotic for an IMCI condition and prescribed recommended oral <u>antibiotics</u> :	<i>n</i> = 63
> 1. <i>Given advice on dose, frequency and duration of treatment</i>	50 (79.4%)
> 2. <i>Given demonstration on how to give it</i>	18 (28.6%)
> 3. <i>Asked open-ended question to check for understanding</i>	7 (11.1%)
> For whom at least 2 of the above 3 counselling tasks were performed	24 (38.1%)
> Given first dose of antibiotic at the facility	1 (1.6%) ¹
• Caretakers of children with diarrhoea not needing urgent referral given <u>ORS</u> :	<i>n</i> = 67
> 1. <i>Given advice on preparation, dose and frequency of treatment</i>	11 (16.4%)
> 2. <i>Given demonstration on how to give it</i>	6 (9.0%) ²
> 3. <i>Asked open-ended question to check for understanding</i>	10 (14.9%)
> For whom at least 2 of the above 3 counselling tasks were performed	13 (19.4%)

¹ Many of the facilities in which the provider made no demonstration on how to give the antibiotic and gave no first dose had the antibiotic available (e.g., 54 of these cases had cotrimoxazole and amoxicillin)

² Many of the facilities in which the provider made no demonstration about ORS preparation had ORS available (49 of these 61 cases=80.3%). In any case, demonstration did not require actual opening of the ORS sachet and preparation of the solution.

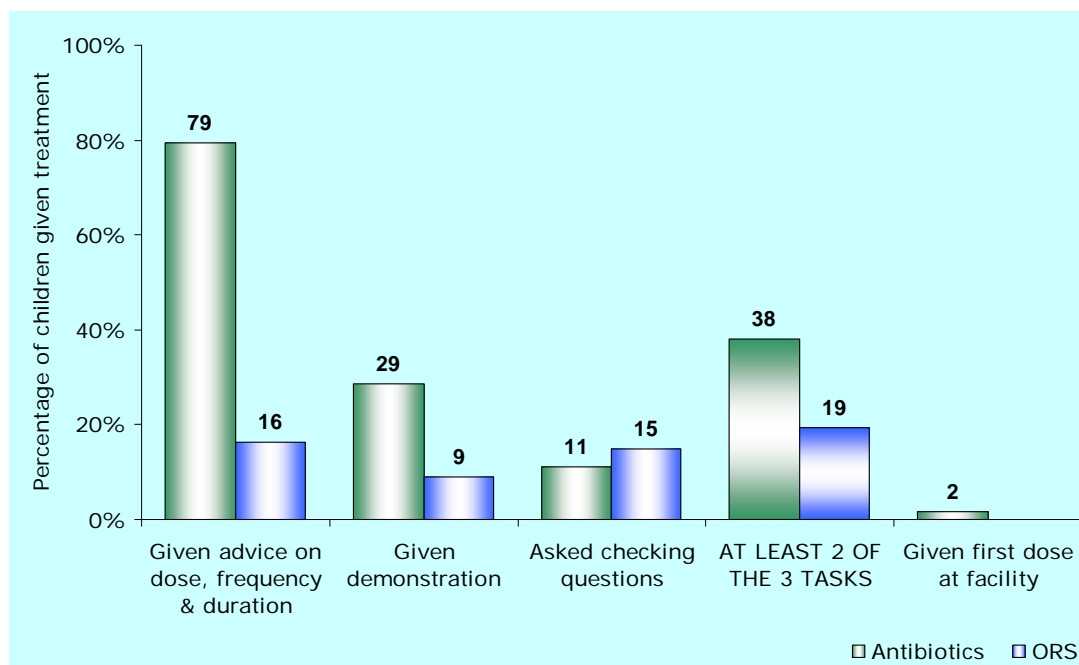


Fig. A24. Antibiotic (*n* = 63) and ORS (*n* = 67) treatment: provider communication skills

QUALITY OF CLINICAL CARE: OTHER TREATMENT AND IMMUNIZATION

Table A18. Other curative and preventive treatments#

CASES	No. (%)
• Children with wheezing given salbutamol (any form ¹)	5 ¹ /6 (83.3%)
• Children given paracetamol (not needing urgent referral):	49/391 (12.5%)
> Of those with a rectal temperature $\geq 39.0^{\circ}C$	5/11 (45.5%)
> Of those with streptococcal sore throat or acute ear infection with a rectal temperature $< 39.0^{\circ}C$	8/49 (16.3%)
> Of those with a rectal temperature $< 39.0^{\circ}C$ and no streptococcal sore throat and no acute ear infection	36/331 (10.9%)
• Children with an eye infection ("pus draining from the eye") not needing urgent referral given tetracycline ointment	14 ² /22 (63.6%) ³
• Children with anaemia not needing urgent referral prescribed iron	8/29 (27.6%) ⁴
• Children needing vitamin A:	<i>n</i> = 53
> Given vitamin A	29/53 (54.7%) ⁵
> Given vitamin A or told to come back on another day to receive vitamin A	41/53 (77.4%)
• Children needing vaccinations (not referred by provider):	<i>n</i> = 44
> Leaving the facility with all needed vaccinations given	29 (65.9%)
> Leaving the facility with all needed vaccinations given or advice to come back for vaccination on scheduled vaccination day	39 (88.6%)

¹ All of them were prescribed oral salbutamol. The remaining child needed urgent referral.

² Tetracycline ointment was not available in the facilities where 6 of the 8 children with an eye infection who were not prescribed it were seen.

³ The provider had missed the eye infection in 5 of the 8 children not prescribed tetracycline ointment.

⁴ The main reason for not prescribing iron for these 21 children with anaemia is most likely related to the provider misclassifying all of them as with no anaemia.

⁵ The facilities in which these 24 children needing vitamin A but not given it were seen had vitamin A available.

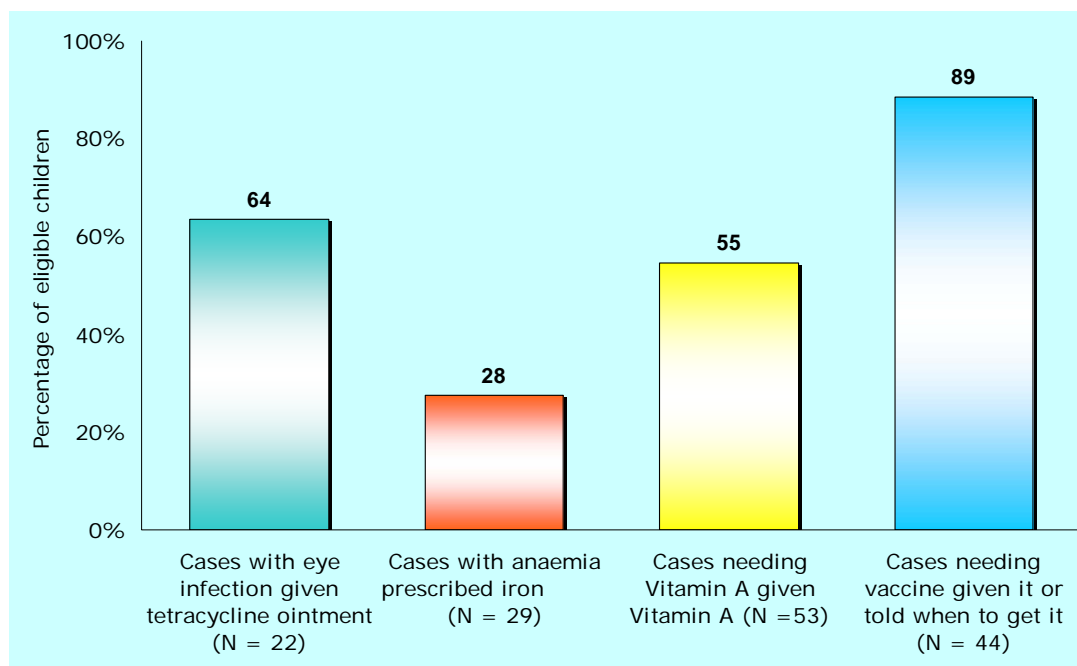


Fig. A25. Other curative and preventive treatments and opportunities for immunization for non-referred cases

QUALITY OF CLINICAL CARE: ADVICE ON FOLLOW-UP AND CARETAKER RECALL

Table A19. Advice on follow-up (definite follow-up)

CASES	No. (%)
• Caretakers of children not needing urgent referral who require definite follow-up: > Advised to come back for follow-up by definite time by the provider	215/391 (55.0%) 108/215 (50.2%)
• Overall agreement of provider's advice on number of days caretaker should come back for definite follow-up with surveyor's advice (for children not needing urgent referral and requiring definite follow-up)	52/215 (24.0%)
• Agreement of provider's advice with the following surveyor's advice on definite follow-up	
- In 2 days	29/58 (50.0%)
- In 7 days	34/150 (22.7%)
- In 14 days	0/3 (0.0%)

Table A20. Relationship of provider's advice on follow-up with caretaker correct recall of the advice¹

DAYS WITHIN WHICH FOLLOW-UP ADVISED BY PROVIDER	CARETAKER RECALL OF FOLLOW-UP ADVICE ON DAYS
Any advice on follow-up	120/151 ¹ (79.5%)
Follow-up within 2 days	54/83 (64.3%)
Follow-up within 7 days	37/49 (75.5%)
Follow-up within 14 days	4/4 (100%)
Follow-up within other number of days	11/15 (73.3%)

151 children not needing urgent referral advised on definite follow-up by provider

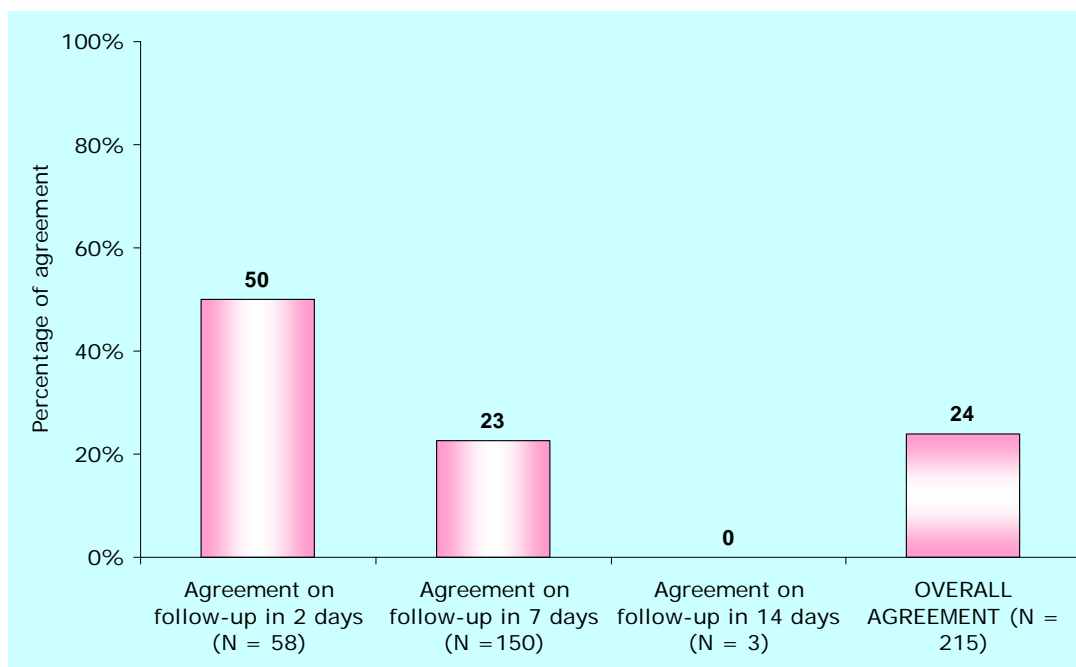


Fig. A26. Agreement of provider's advice on definite follow-up with surveyor's (n = 215)

QUALITY OF CLINICAL CARE: ADVICE ON HOME CARE AND CARETAKER KNOWLEDGE

Table A21. Advice on home care: advice given by provider

CASES	
• Caretakers of children not needing urgent referral advised by the provider:	<i>n</i> = 391 ¹
> To give extra fluids	187 (47.8%)
> To continue feeding	180 (46.0%)
> Both messages on extra fluids and continue feeding	172 (44.0%)

¹ Three of the children who were not advised on fluids and food were referred by the provider but did not need urgent referral according to the surveyor. These children are included in the denominator.

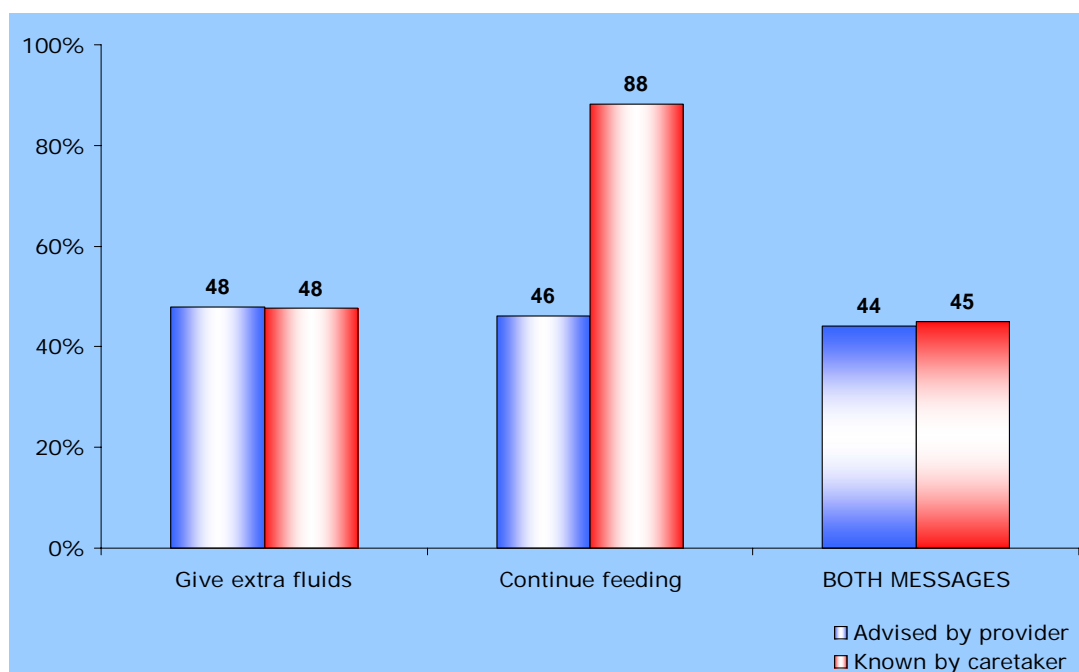


Fig. A27. Provider advice and caretaker knowledge about home care for children not needing urgent referral (*n* = 391)

Table A22. Caretaker knowledge about home care

CASES	No. (%)
Caretakers of children not referred by the provider knowing about the need:	<i>n</i> = 391 ¹
> <i>To give extra to drink</i> to their sick children	186 (47.6%)
> <i>To continue feeding</i> their sick children	345 (88.2%)
> <i>To give extra fluids and continue feeding</i> their sick children during illness	176 (45.0%)
• Caretakers of children not referred by the provider knowing the signs that indicate the need to seek care immediately:	<i>n</i> = 391 ¹
> 1. <i>Child is unable to drink or breastfeed</i>	69 (17.6%)
> 2. <i>Child becomes sicker</i>	198 (50.6%)
> 3. <i>Child develops a fever</i>	295 (75.4%)
> 4. <i>Develops fast breathing</i>	25 (6.4%)
> 5. <i>Develops difficult breathing</i>	96 (24.5%)
> 6. <i>Develops wheezing</i>	6 (1.5%)
> 7. <i>Has blood in stools</i>	12 (3.1%)
> 8. <i>Drinks poorly</i>	7 (1.8%)
• Caretakers of children not referred by the provider knowing at least two signs to seek care immediately	223 (57.0%)
• Caretakers of children not referred by the provider knowing the three rules of home care (give extra to drink, continue feeding and at least three signs on when to seek care immediately)	<i>n</i> = 391 ¹ 54 (13.8%) ²
Other signs mentioned by caretakers which would worry them and prompt them to seek care for a sick child ³ :	<i>n</i> = 391 ¹
- Diarrhoea	53 (13.6%)
- Vomiting	41 (10.5%)
- Sore throat	21 (5.4%)
- Skin problem	21 (5.4%)
- Cough	17 (4.4%)
- Crying continuously	15 (3.8%)

¹ Six children needing urgent referral were excluded from this analysis.

² If only 2 signs on when to seek care had been used as a criterion for this compound indicator, the rate about caretaker knowledge of the three home care rules would have been: 114/391 = 29.2%

³ In many cases, caretakers were unable to “switch” to this hypothetical, general question and tended to simply mention the reasons why they had actually taken their sick children to the facility.

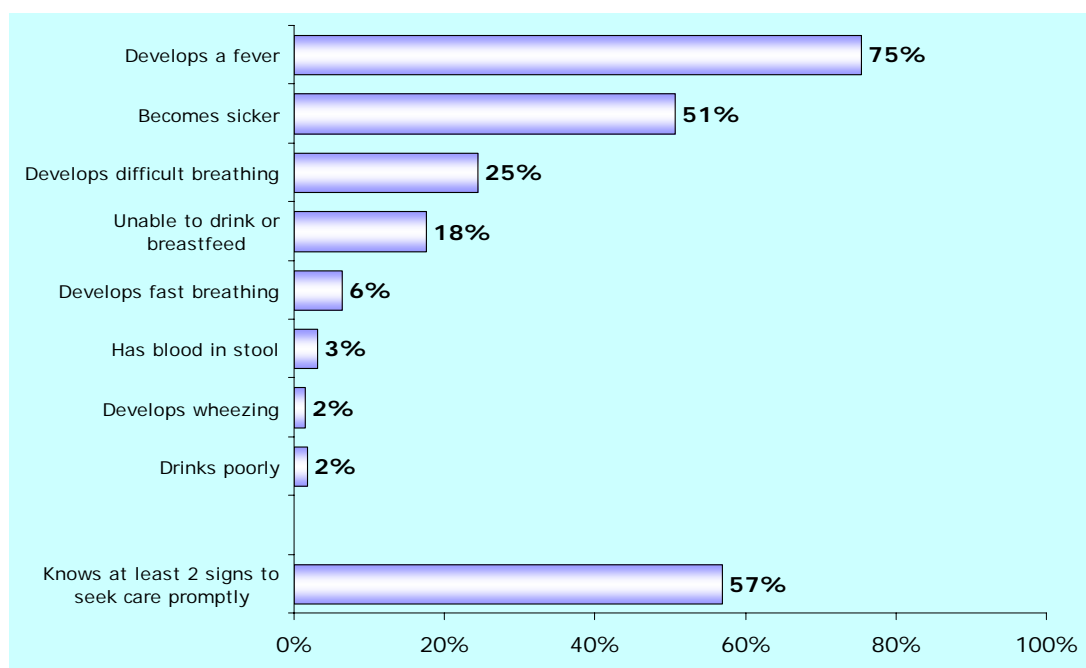


Fig. A28. Caretaker knowledge about signs to seek care promptly ($n = 391$)

Caretakers, mothers of children not referred by provider, advised on their health: 24/350 (6.9%)

Child visits during which providers consulted the IMCI chart: 271/397 (68.3%)

QUALITY OF CARE: PROVIDER COMMUNICATION

Table A23. Caretakers of children not referred by provider advised on home care by use of the mother home care counselling card and communication techniques

TASK/SKILL	No. (%)
• Caretaker of children not referred by provider with whom provider:	<i>n</i> = 392
- Used the home care card;	11 (2.8%) ¹
- Used the home card and good communication techniques ²	6 (1.5%)
• Caretakers of children not referred by provider who recalled being shown home care card	96 (27.7%)
• Use of good communication techniques in cases in which the home care card was used:	<i>n</i> = 11
> Holding card properly	10 (90.9%)
> Pointing at pictures	9 (81.8%)
> Checking for caretaker understanding	6 (54.5%)
• Caretakers who recalled being shown the card among those with whom the provider actually used the card	11 (100%)

¹ The card was not available at the facility in 276 (72.4%) of the 381 cases in whom the home care card was not used by the provider.

² This indicator includes cases in whom all the following occurred: a) the home care card was used; b) the card was either held properly facing the caretaker or the pictures on the card were pointed at while counselling; and c) caretaker understanding of the advice given was checked by open-ended questions.

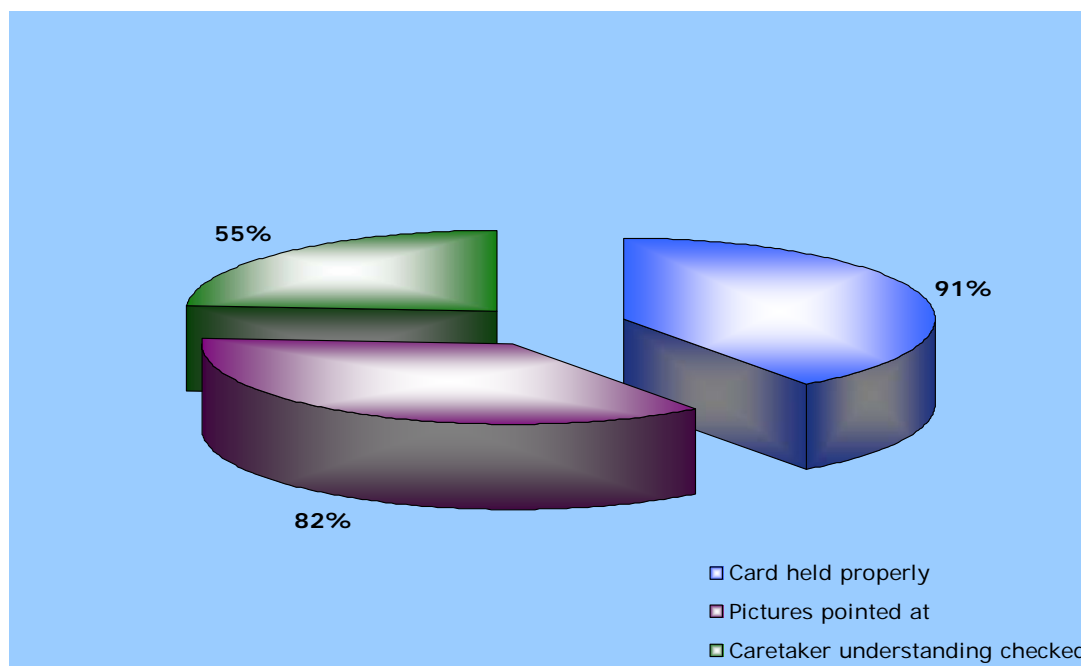


Fig. A29. Use of appropriate communication techniques (*n* = 11)

QUALITY OF CLINICAL CARE: ADVICE ON FEEDING

Table A24. Age-appropriate advice on feeding (cases not needing urgent referral whose caretakers were advised on appropriate frequency of feeding)

AGE GROUPS	CASES GIVEN AGE- APPROPRIATE FEEDING ADVICE
	No. (%)
Children less than 6 months old:	2/37 (5.4%)
> <i>Breastfed</i>	2/33 (6.0%)
> <i>Not breastfed</i>	0/4 (0%)
Children 6 to 11 months old	27/76 (35.5%)
> <i>Breastfed</i>	13/47 (44.8%)
> <i>Not breastfed</i>	14/29 (29.8%)
Children 12 to 23 months old	32/110 (29.1%)
Children 2 years old or older with low weight and/or anaemia	0/16 (0%)
<i>Children less than 2 years old and those with low weight and/or anaemia and/or persistent diarrhoea</i>	61/239 (25.5%)

This table was prepared according to the Morocco IMCI guidelines on feeding and some practical considerations. The advice on feeding given by the provider was considered appropriate in this survey as follows:

- > Children less than 6 months old breastfed¹: advised to breastfeed at least 8 times a day and not to give any complementary foods (i.e. advised to exclusively breastfeed);
- > Children less than 6 months old not breastfed: advised to give complementary foods 5 or more times a day (this practical approach was considered acceptable when re-lactation would appear less feasible);
- > Child 6 to 11 months old breastfed: advised to continue to breastfeed (as much as the child wants) and to give complementary foods as small frequent meals 3 times a day;
- > Child 6 to 11 months old not breastfed: advised to give complementary foods 5 times a day or more;
- > Child 12 to 23 months old, or child 2 years old and older with low weight and/or anaemia and/or persistent diarrhoea: advised to give complementary foods 5 times a day or more.

¹ Information on whether the child was breastfed exclusively or not exclusively was not available in this survey

QUALITY OF CARE: HEALTH SYSTEMS

CARETAKER SATISFACTION WITH HEALTH SERVICES

Table A25. Caretaker satisfaction with services (cases not referred by provider)

CARETAKER SATISFACTION WITH SERVICES	No. (%)
	<i>n</i> = 392 ¹
Satisfied (very satisfied or satisfied)	285 (72.7%)
Unsatisfied (little satisfied or unsatisfied)	106 (27.0%)
Does not know	1 (0.3%)
Reasons for satisfaction (mentioned by more than 10% of caretakers) ³	<i>n</i> = 285 ²
- Health provider's good attitude	131 (46.0%)
- Availability of medicines	100 (35.1%)
- Examination of the child	99 (34.7%)
- Availability of health provider	75 (26.3%)
- Treatment provided	50 (17.5%)
- Time spent for the consultation	41 (14.4%)
- Organization of services	17 (6.0%)
What caretakers would like to see improved (mentioned by more than 10% of caretakers) ³	<i>n</i> = 392 ¹
- Availability of medicines	167 (42.6%)
- Better reception	102 (26.0%)
- Organization of services	56 (14.3%)
- Examination of the child	49 (12.5%)

¹ The denominator refers to the caretakers of all children not referred by the provider; this differs from those not needing urgent referral based on the surveyor's findings.

² The denominator is the 285 caretakers who said to be very satisfied or satisfied.

³ More than one reason may have been mentioned by the same caretaker.

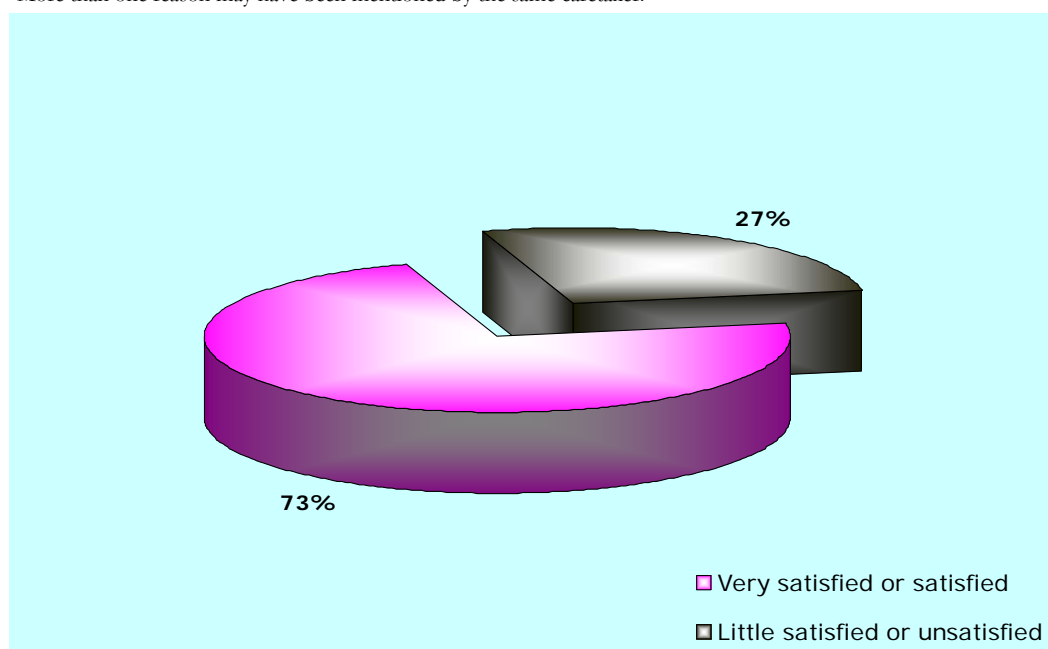


Fig. A30. Caretaker satisfaction with care and services (*n* = 392 children not referred by the health facility provider)

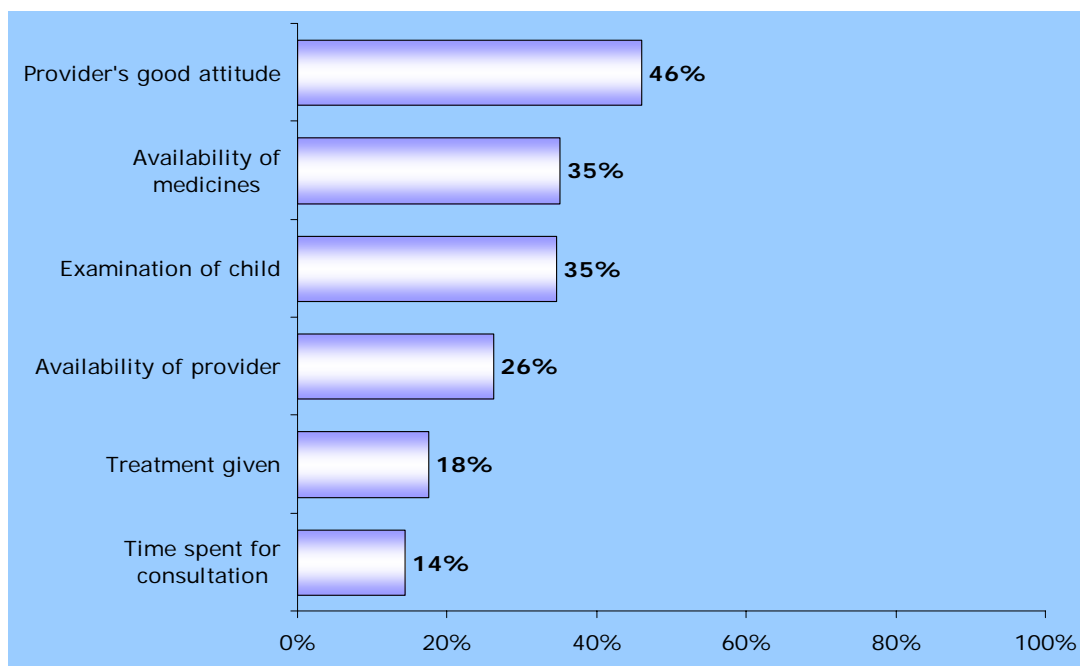


Fig. A31. Reasons for caretaker satisfaction ($n = 285$ caretakers of children not referred by provider who reported being satisfied with the services)

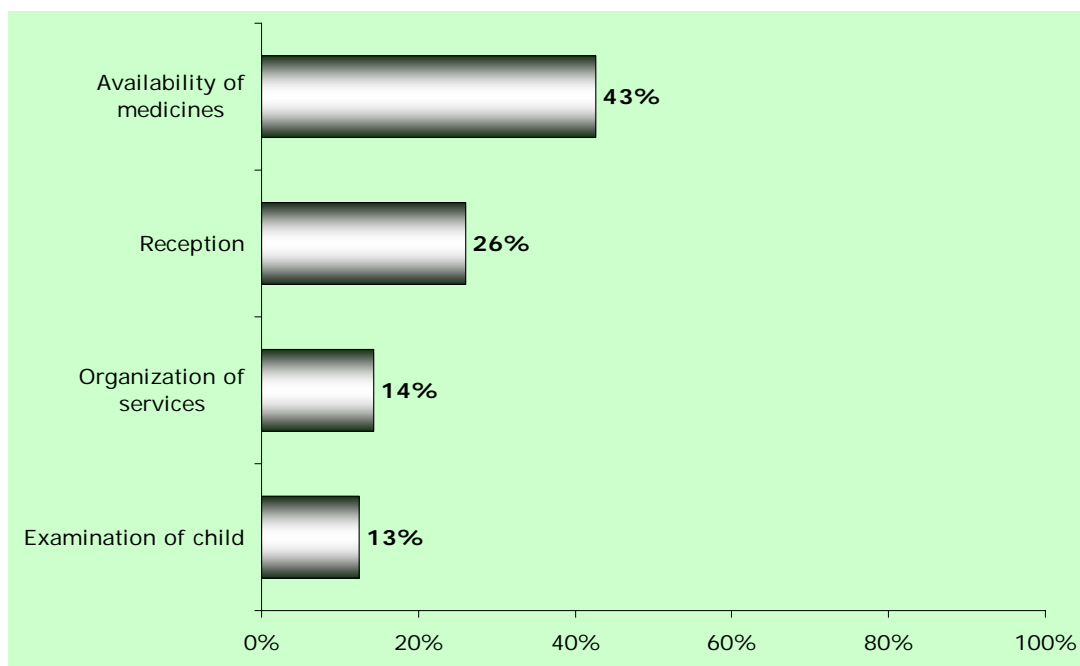


Fig. A32. What caretakers would like to see improved ($n = 392$ caretakers of children not referred by provider)

QUALITY OF CARE: HEALTH SYSTEMS

ORGANIZATION OF WORK AT THE FACILITY

Table A26. Distribution of tasks among doctors and nurses: taking the weight and temperature and assessing feeding

TASK	TASK PERFORMED BY	
	DOCTORS	NURSES
Child weighed ¹	58/388 (14.9%)	330/388 (85.1%)
Child's temperature taken ²	40/268 (14.9%)	228/268 (85.1%)
Child's weight taken and checked against the growth chart ³	250/265 (94.3%)	15/265 (5.7%)
Child's breastfeeding status checked ⁴	160/183 (87.4%)	23/183 (12.6%)
Child's other feeding practices (foods and fluids) assessed ⁵	162/185 (87.6%)	23/185 (12.4%)
Child's feeding practices during illness assessed ⁶	126/140 (90.0%)	14/140 (10.0%)

¹ The denominator refers to the 388 children who were weighed.

² The denominator refers to the 268 children who had their temperature taken.

³ The denominator refers to the 265 children whose weight was taken and checked against the growth chart.

⁴ The denominator refers to the 183 children not referred by the provider and less than 24 months old in whom the breastfeeding status was checked (34 children who were not assessed and other 7 children for whom the provider category had not been specified were excluded in this analysis).

⁵ The denominator refers to the 185 children not referred by the provider who were less than 24 months old and/or with low weight and/or anaemia and/or persistent diarrhoea in whom the feeding practices were assessed (56 children were not assessed and were excluded from this analysis).

⁶ The denominator refers to the 140 children not referred by the provider who were less than 24 months old and/or with low weight and/or anaemia and/or persistent diarrhoea in whom the feeding practices were assessed (101 children were not assessed and were excluded from this analysis).

QUALITY OF CARE: HEALTH SYSTEMS

HUMAN RESOURCES: TRAINING

Table A27. Staff trained in IMCI at health facilities by residence

Category	Percentage of staff trained in IMCI	Urban facilities n = 29 (%)	Rural facilities n = 16 (%)	All facilities n = 45 (%)
Doctors	100%	12 (41.4%)	15 (93.8%)	27 (60.0%)
	66% - 99%	6 (20.7%)	0 (0%)	6 (13.3%)
	33% - 65%	6 (20.7%)	1 (6.3%)	7 (15.6%)
	0% - 32%	5 (17.2%)	0 (0%)	5 (11.1%)
Nurses	100%	2 (6.9%)	0 (0%)	2 (4.5%)
	66% - 99%	1 (3.4%)	0 (0%)	1 (2.2%)
	33% - 65%	7 (24.1%)	3 (18.8%)	10 (22.2%)
	0% - 32%	19 (65.5%)	13 (81.3%)	32 (71.1%)
All health providers (doctors and nurses)	100%	1 (3.4%)	0 (0%)	1 (2.2%)
	66% - 99%	6 (20.7%)	1 (6.3%)	7 (15.6%)
	33% - 65%	12 (41.4%)	15 (93.8%)	27 (60.0%)
	0% - 32%	10 (34.5%)	0 (0%)	10 (22.2%)

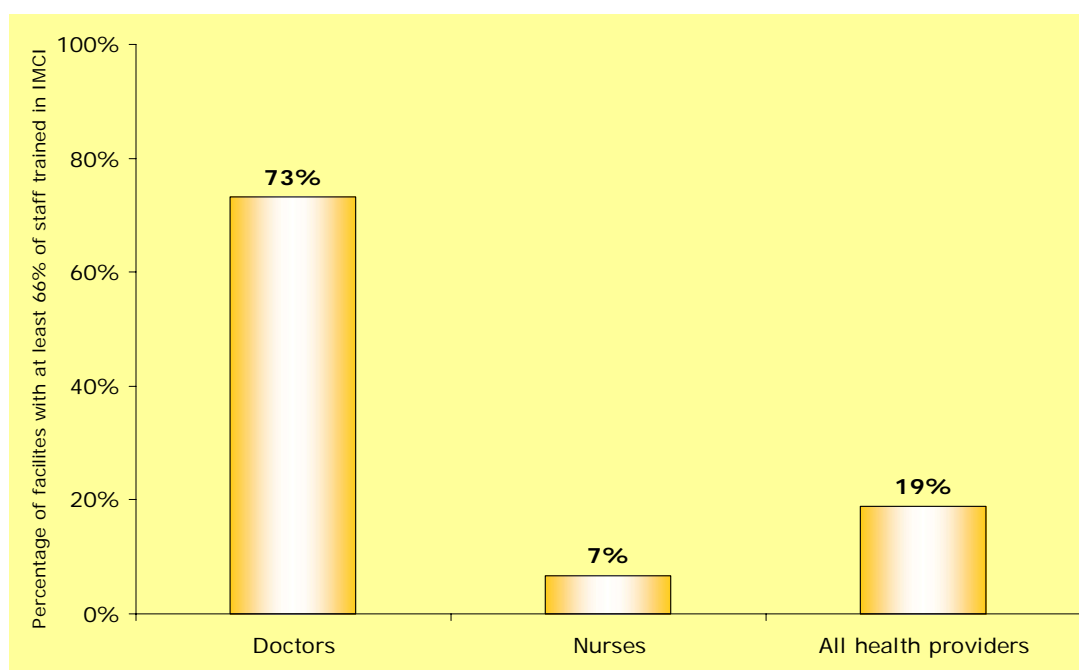


Fig. A33. Facilities with at least 66% of staff managing children trained in IMCI, by provider category (n = 45)

Table A28. Children managed by providers by year of IMCI training ($n = 395$)¹

YEAR OF IMCI TRAINING	CASES MANAGED BY IMCI-TRAINED PROVIDERS	
	No.	(%)
2007	70	(17.7%)
2006	120	(30.4%)
2005	66	(16.7%)
2004	33	(8.3%)
2003	18	(4.6%)
2002	51	(12.9%)
2001	9	(2.3%)
2000	--	--
1999	20	(5.1%)
1998	8	(2.0%)

¹ Information on time of IMCI training missing for two doctors, not included in this denominator.

Table A29. Children managed by doctors by period of IMCI training and by residence

PERIOD OF IMCI TRAINING	URBAN FACILITIES	RURAL FACILITIES	ALL FACILITIES
	$n = 323$	$n = 72$	$n = 395$ ¹
Less than 36 months ago	235 (72.8%)	72 (100%)	307 (77.7%)
36 or more months ago	88 (27.2%)	0 (0%)	88 (22.3%)

¹ Information on time of IMCI training missing for two doctors, not included in this denominator.

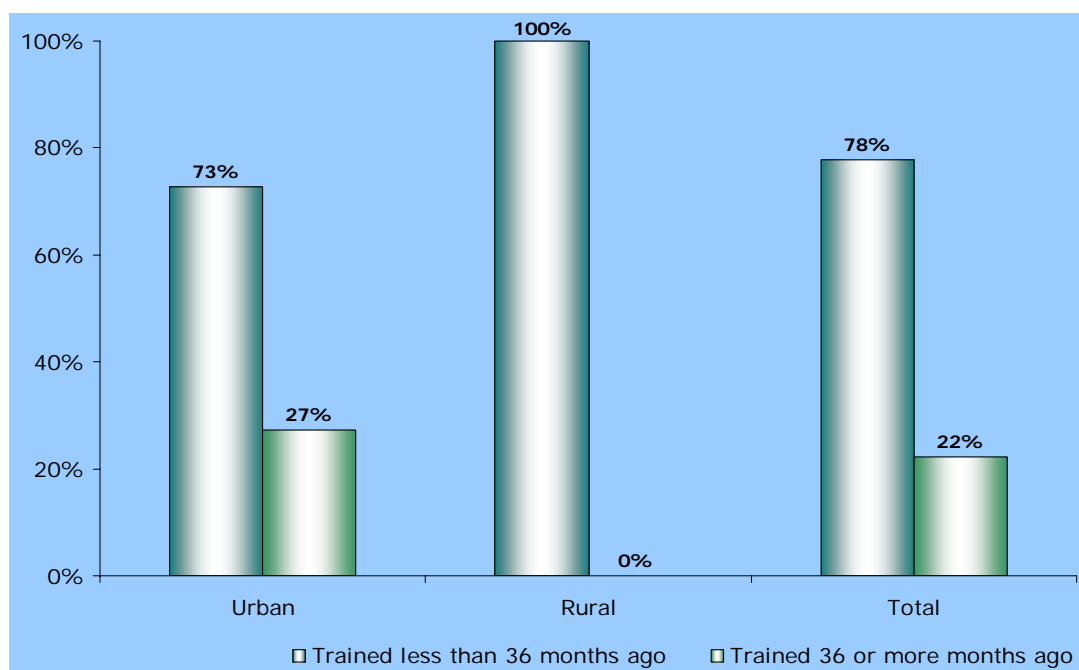


Fig. A34. Children managed by doctor IMCI training time and residence ($n = 395$)

COMPARATIVE FINDINGS BY PROVIDER FOLLOW-UP STATUS

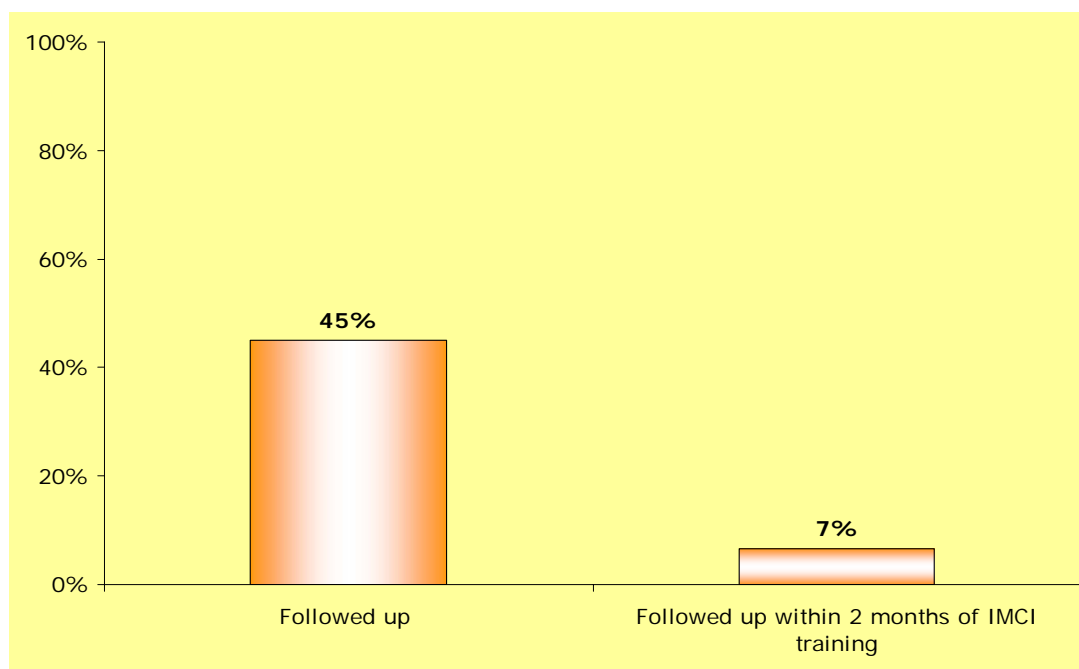


Fig. A35. Children managed by doctors who had received a follow-up visit after IMCI training ($n = 397$)

Table A30. Assessment by provider follow-up status: proportion of sick children in whom selected assessment tasks were performed

TASK	CASES (%) IN WHOM TASK DONE		
	PROVIDER FOLLOWED UP	PROVIDER NOT FOLLOWED UP	TOTAL
ASSESSMENT OF CLINICAL SIGNS	(n = 179)	(n = 218)	(n = 397)
Child checked for three general danger signs (ability to drink, vomiting everything, convulsions)	91 (50.8%)	92 (42.2%)	183 (46.1%)
Child checked for the presence of three main symptoms: cough, diarrhoea and fever	159 (88.8%)	170 (78.0%)	329 (82.9%)
Child weight taken, recorded and checked against the growth chart	128 (71.5%)	130 (59.6%)	258 (65.0%)
Child vaccination status checked	145 (81.0%)	152 (69.7%)	297 (74.8%)
<i>Index of integrated assessment</i>	8.1	7.4	7.7
FEEDING ASSESSMENT	(n = as shown below for each indicator)		
Children less than 24 months old not referred by provider assessed for feeding practices	67/107 (62.6%)	63/117 (53.8%)	130/224 (58.0%)
Children with low weight and/or anaemia not referred by provider assessed for feeding practices	2/8 (25.0%)	2/9 (22.2%)	4/17 (23.5%)
Children less than 24 months old and/or low weight and/or with anaemia not referred by provider assessed for feeding practices	69/115 (60.0%)	65/126 (51.6%)	134/241 (55.6%)

Table A31. Treatment and advice by provider follow-up status: proportion of sick children not needing urgent referral prescribed correct treatment and caretakers properly advised

TASK	CASES (%) IN WHOM CORRECT TREATMENT PRESCRIBED AND ADVICE GIVEN		
	PROVIDER FOLLOWED UP	PROVIDER NOT FOLLOWED UP	TOTAL
TREATMENT			
(n = as shown below for each indicator)			
Child needing an antibiotic for an IMCI condition given a recommended antibiotic correctly	11/30 (36.7%)	14/33 (42.4%)	25/63 (39.7%)
Child with non-severe pneumonia prescribed antibiotics correctly	4/18 (22.2%)	3/14 (21.4%)	7/32 (21.9%)
Child not needing antibiotics prescribed no antibiotics	107/135 (79.3%)	123/166 (74.1%)	230/301 (76.4%)
Child with non-severe anaemia prescribed iron	4/19 (21.1%)	4/10 (40.0%)	8/29 (27.6%)
Caretakers of children needing antibiotic treatment for an IMCI condition and prescribed a recommended antibiotic, provided with at least 2 counselling tasks on antibiotic treatment	13/30 (43.3%)	11/33 (33.3%)	24/63 (38.1%)
Caretakers of children with diarrhoea and given ORS provided with at least 2 counselling tasks on ORS	6/33 (18.2%)	7/34 (20.6%)	13/67 (19.4%)
Child needing vitamin A (not to be referred) prescribed vitamin A	14/27 (51.9%)	15/26 (57.7%)	29/53 (54.7%)
Child needing a vaccination given the vaccination before leaving the facility	13/24 (54.2%)	16/20 (80.0%)	29/44 (65.9%)
Child needing a vaccination given the vaccination before leaving the facility or advised on when to come back for the scheduled vaccination session	19/24 (79.2%)	20/20 (100%)	39/44 (88.6%)
ADVICE ON HOME CARE			
(n = as shown below for each indicator)			
Caretakers of children advised on giving extra fluids and continued feeding	79/176 (44.9%)	93/215 (43.3%)	172/391 (44.0%)

Table A32. Treatment and advice: caretaker knowledge and correct recall by provider follow-up status (caretakers of children not needing urgent referral)

TASK	CARETAKERS (%) WITH ADEQUATE KNOWLEDGE OR CORRECT RECALL		
	CASES SEEN BY PROVIDER FOLLOWED UP	CASES SEEN BY PROVIDER NOT FOLLOWED UP	TOTAL
TREATMENT			
(n = as shown below for each indicator)			
Caretakers of children with an IMCI condition prescribed a recommended antibiotic who correctly describe antibiotic treatment	8/30 (26.7%)	9/33 (27.3%)	17/63 (27.0%)
Caretakers of children with diarrhoea given ORS who correctly describe how to give ORS	7/33 (21.2%)	4/34 (11.8%)	11/67 (16.4%)
HOME CARE			
Caretakers knowing at least 2 signs to seek care promptly	99/176 (56.3%)	124/215 (57.7%)	223/391 (57.0%)
Caretakers knowing about home care (giving extra fluids and continuing feeding)	70/176 (39.8%)	106/215 (49.3%)	176/391 (45.0%)
Caretakers knowing about all the three home care rules (fluids, feeding and when to return)	24/176 (13.6%)	30/215 (14.0%)	54/391 (13.8%)
Caretakers knowing about all the three home care rules (fluids, feeding and when to return)	24/176 (13.6%)	30/215 (14.0%)	54/391 (13.8%)

QUALITY OF CARE: HEALTH SYSTEMS

AVAILABILITY OF MEDICINES

Table A33. Indexes of availability of at least a treatment course of medicines for IMCI

CATEGORY OF MEDICINES	INDEX
○ Index of availability of <i>essential oral treatments</i> , namely cotrimoxazole, ORS, vitamin A and iron (Max index = 4)	3.3 ¹ out of 4
○ Index of availability of the <i>12 non-injectable</i> drugs for IMCI, including the 4 drugs listed above and the following: amoxicillin, paracetamol (or aspirin), diazepam (or medazolam), vitamin D, penicillin V (or erythromycin), tetracycline eye ointment, salbutamol (or terbutaline) by inhalation and oral (Max index = 12)	9.1 ² out of 12
○ Index of availability of <i>injectable drugs for pre-referral treatment</i> for children and young infants needing urgent referral, namely thiamphenicol (or ampicillin), gentamicin, benzylpenicillin (or ampicillin) (Max index = 3)	1.7 ³ out of 3

¹ Arithmetic mean of the 4 essential oral drugs recommended for home treatment of pneumonia, dysentery, diarrhoea and anaemia. Twenty (44%) of the 45 facilities had all the 4 drugs available; another 18 (40%) had 3 of the 4 drugs available.

² Arithmetic mean of the 12 non-injectable drugs required for IMCI. Six (13%) of the 45 facilities had all the 12 drugs; another 6 (13%) had 11. More than a quarter (28.8%) had less than 9 drugs.

³ Arithmetic mean of the 3 recommended injectable drugs for pre-referral treatment of children under five years old with severe classification. Fifteen facilities (33%) had all the 3 drugs; 6 facilities (13.3%) had none.

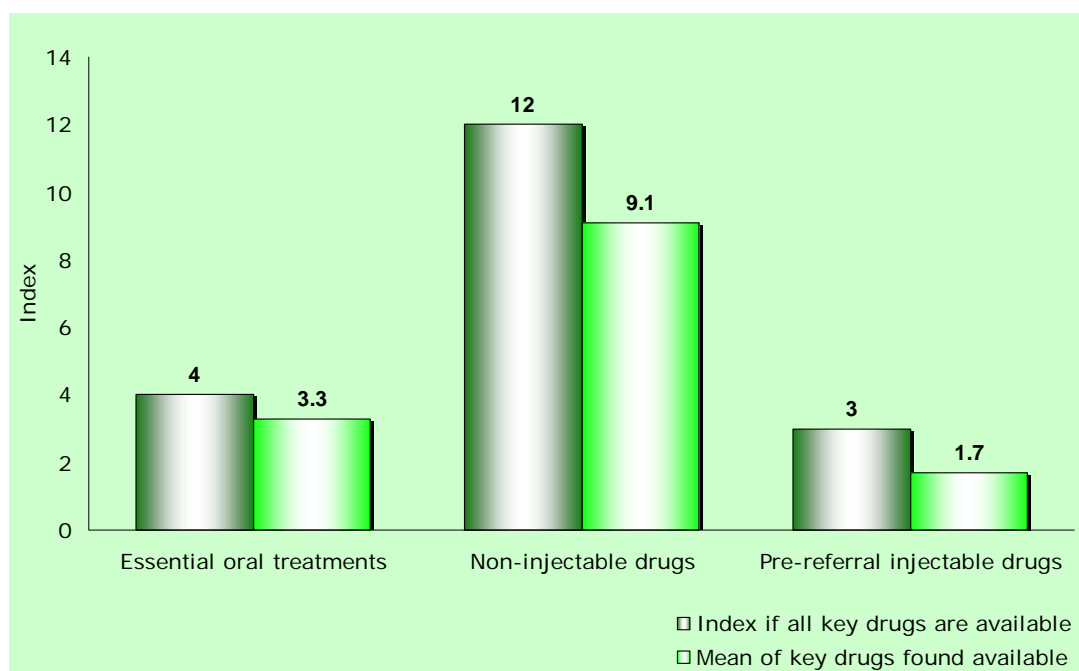


Fig. A36. Index (mean) of drug availability: availability of at least 1 treatment course (n = 45 facilities)

Table A34. Availability of individual medicines recommended for IMCI at the 45 facilities surveyed

MEDICINES	AVAILABLE
	No. (%)
Cotrimoxazole	36 (80.0%)
ORS	38 (84.4%)
Vitamin A	44 (97.8%)
Iron	29 (64.4%)
Paracetamol or acid acetylsalicylic	43 (95.6%)
Amoxicillin	35 (77.8%)
Penicillin V	7 (15.6%)
Erythromycin	23 (51.1%)
Vitamin D	43 (95.6%)
Tetracycline eye ointment	33 (73.3%)
Salbutamol or Terbutaline metered dose inhaler	34 (75.6%)
Salbutamol or Terbutaline syrup or tablets	28 (62.2%) ¹
Medazolam or Diazepam	23 (51.1%) ^{1,2}
Thiamphenicol (inj)	4 (8.9%)
Ampicillin (inj)	15 (33.3%) ³
Benzylpenicillin (inj)	27 (60.0%)
Benzathine penicillin (inj)	37 (82.2%) ²
Gentamicin (inj)	33 (73.3%)
Sterile water for injections	45 (100%)
Saline ²	20 (44.4%)

¹ Information missing for one facility.

² Drug expired in one facility.

³ Drug expired in two facilities.

² Acceptable IV solution for rehydration of diarrhoea cases with severe dehydration.

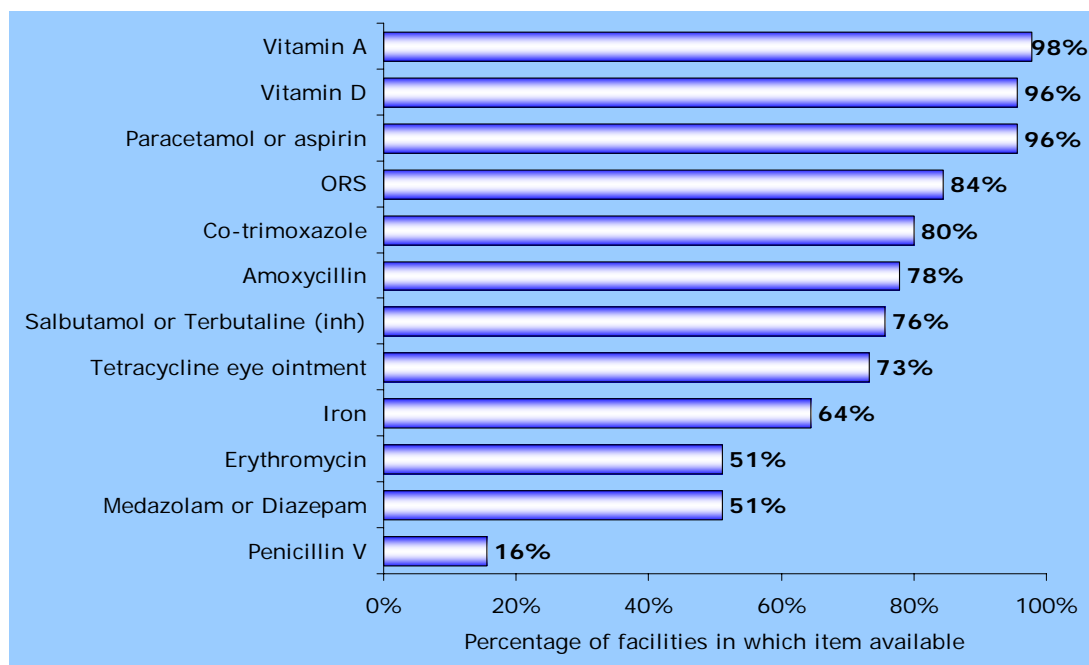


Fig. A37. Availability of individual drugs recommended for IMCI (n = 45 facilities)

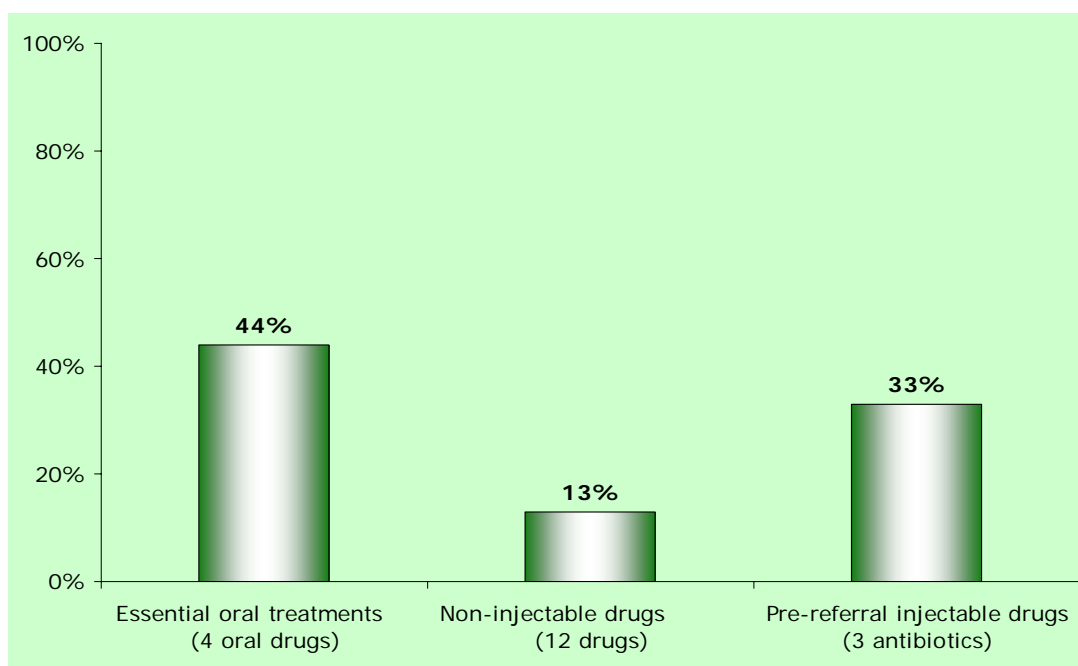


Fig. A38. Percentage of facilities having drugs recommended for IMCI (included in the Essential List of Medicines) ($n = 45$ facilities)

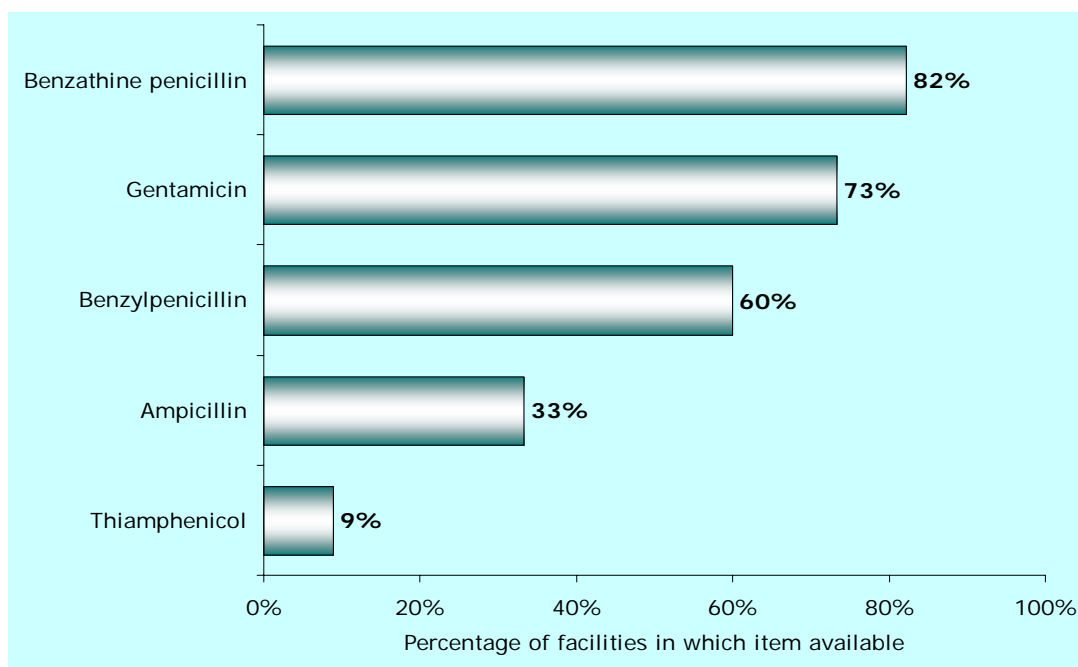


Fig. A39. Availability of injectable antibiotics ($n = 45$ facilities)

QUALITY OF CARE: HEALTH SYSTEMS

AVAILABILITY OF EQUIPMENT AND SUPPLY

Table A35. Availability of equipment and supply for vaccination

ITEMS	AVAILABILITY <i>n</i> = 45
Facilities with availability of:	
1. Needles and syringes for vaccinations	37 (82%)
- Safety box to dispose of used needles and syringes	22 (49%)
2. Functioning refrigerator with correct temperature inside	38 (84%)
3. Cold box and all ice packs frozen	34 (76%)
Availability of equipment and supply for vaccination (1. and either 2. or 3. above)	34 (76%)

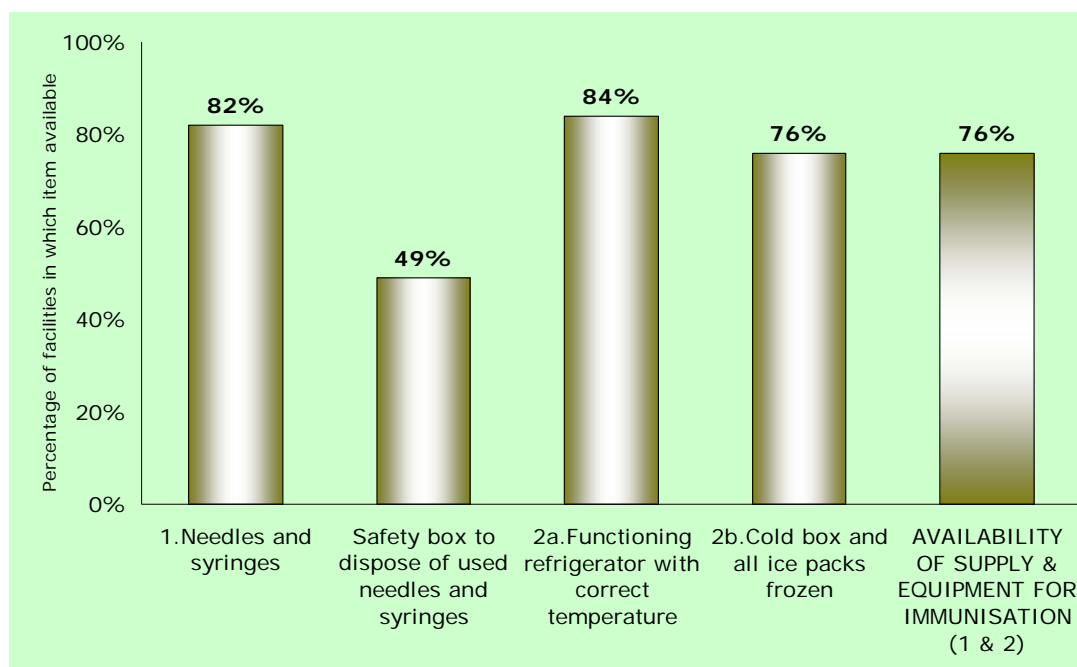


Fig. A40. Availability of supply and equipment for immunization (*n* = 45 facilities, all providing immunization services)

Table A36. Availability of equipment and supply items for IMCI at the 45 facilities surveyed

ITEMS	AVAILABLE
	No. (%)
Accessible and working adult scale*	44 (98%)
Accessible and working baby scale*	43 (96%)
Watch or other working timing device *	44 (98%)
Supplies to mix ORS (cups, spoons)*	23 (51%)
Space deviser for bronchodilator	20 (44%)
Thermometer*	38 (84%)
Source of heating	26 (58%)
Improved source of water	43 (96%)
Drug stock cards	25 (56%)
Vaccination register	45 (100%)
Mother counselling card on home care for use by provider#	14 (31%)
IMCI chart booklet#	43 (96%)
Integrated child health register	43 (96%)
IMCI recording form	37 (82%)
IMCI daily register	26 (58%)
IMCI monthly report	26 (58%)
IMCI referral form	20 (44%)

* Facilities with basic equipment and materials (items marked with *): 18/45 (40%).

Facilities with mother counselling card and IMCI chart booklet: 14/45 (31%).

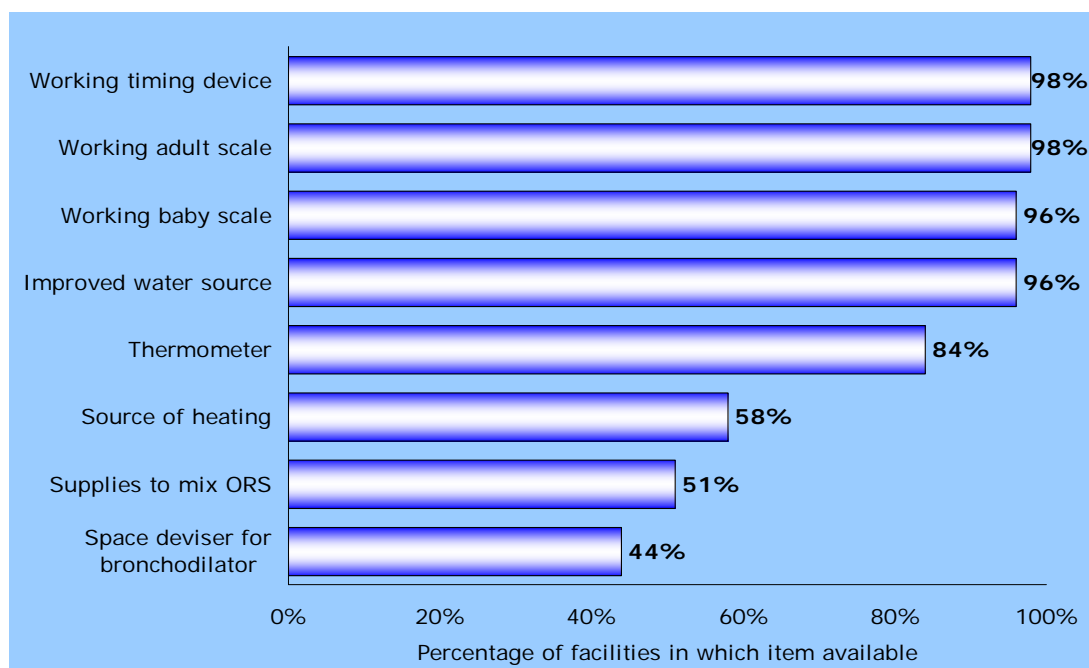


Fig.A41. Availability of supply and equipment for IMCI (n = 45 facilities)

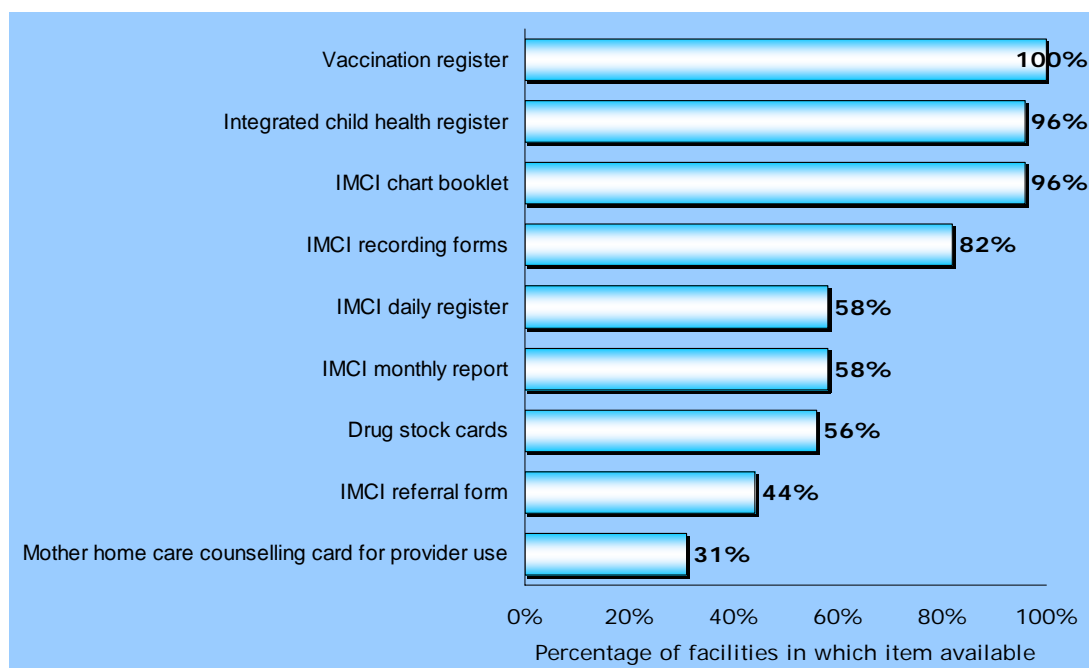


Fig. A42. Availability of IMCI records, counselling cards, chart booklet and other records ($n = 45$ facilities)

QUALITY OF CARE: HEALTH SYSTEMS

IMMUNIZATION SERVICES

Table A37. Availability of immunization services and vaccines

VACCINE	AVAILABILITY <i>n</i> = 45 (%)
o Facilities which reported holding immunization sessions ¹	45 (100%) ¹
o Facilities following 'open vial' policy	37 (82%)
o Facilities with availability of:	
- BCG	44 (98%) ²
- OPV	44 (98%) ²
- DPT	44 (98%) ²
- Measles	44 (98%) ²
- Hib	42 (93%) ^{2,3}
- Hepatitis B	44 (98%) ²
- Tetanus toxoid	44 (98%) ²

¹ Three facilities (7%) reported holding immunization sessions once a week, 18 (40%) 2 to 4 times a week and 24 (53%) 5 or more times a week.

² One rural facility had none of the seven antigens available.

³ Unavailable in two urban and one rural facilities.

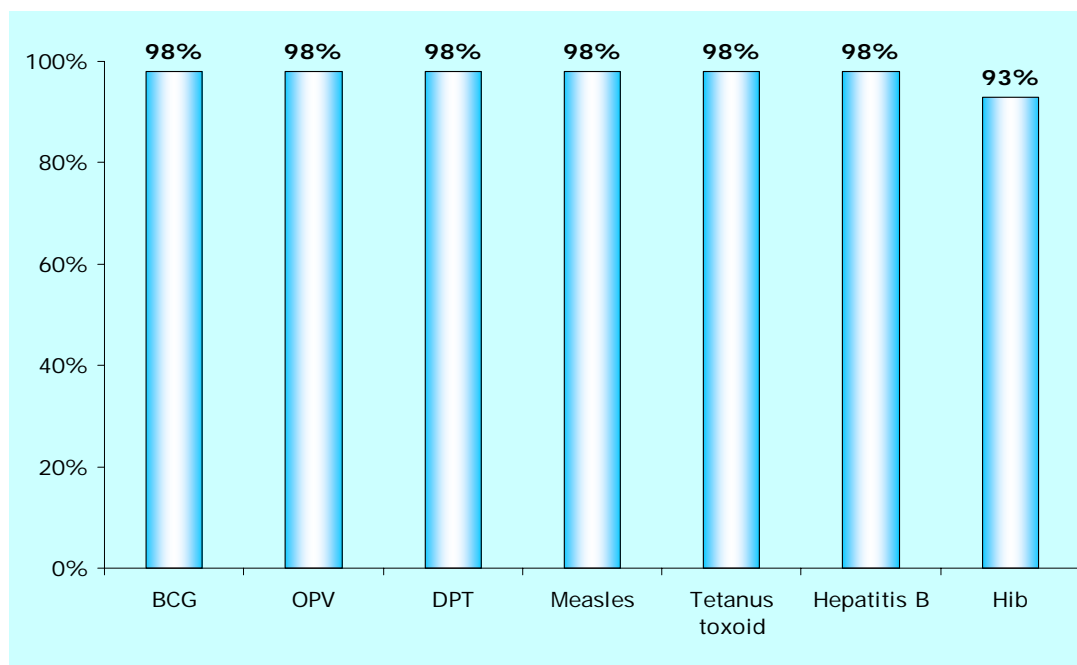


Fig. A43. Availability of vaccines (*n* = 45 facilities providing immunization services)

QUALITY OF CARE: HEALTH SYSTEMS

FACILITY SERVICES AND SUPERVISION

Table A38. Referral ($n = 45$ health facilities surveyed)

	URBAN ($n = 29$)	RURAL ($n = 16$)	TOTAL ($n = 45$)
Availability of transportation to reach the referral facility ¹	21 (72.4%)	13 (81.3%)	34 (75.6%)
> <i>Time to go to the referral hospital:</i>			
- Less than 30 minutes	21 (72.4%)	5 (31.3%)	26 (57.8%)
- 30 to 59 minutes	7 (24.1%)	5 (31.3%)	12 (26.7%)
- 60 minutes or more	1 (3.4%)	6 (37.5%)	7 (15.5%)
Average time	30.6 minutes	37.7 minutes	33 minutes
Facilities reporting problems with referral ²	2 (6.9%)	5 (31.3%)	7 (15.6%)
Likelihood of children to be taken to the referral facility if referred, according to facility staff:			
- 100% of children referred	18 (62.1%)	8 (50.0%)	26 (57.8%)
- 70% to 90% of children referred	8 (27.6%)	5 (31.2%)	13 (28.9%)
- Less than 70% of children referred	3 (10.3%)	2 (12.5%)	5 (11.1%)
- No information available	0 (0%)	1 (6.3%)	1 (2.2%)

¹ Any means of transportation available to, and affordable by, the population living in the area covered by the facility.

² The main reason reported was lack of financial means.

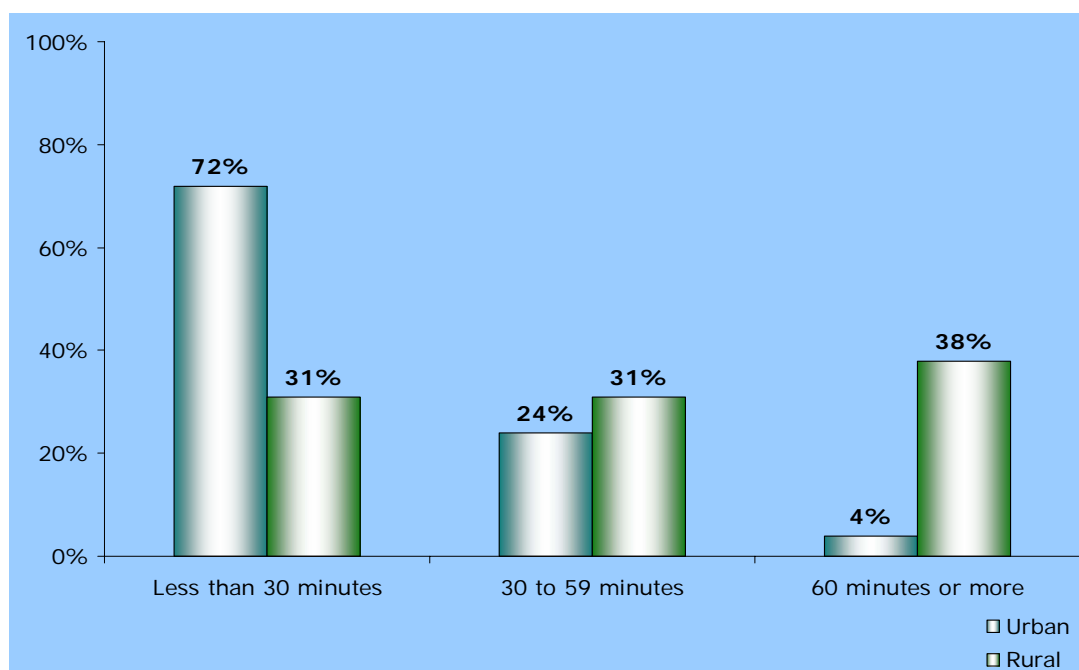


Fig. A44. Time to reach referral facility by residence ($n = 45$ facilities)

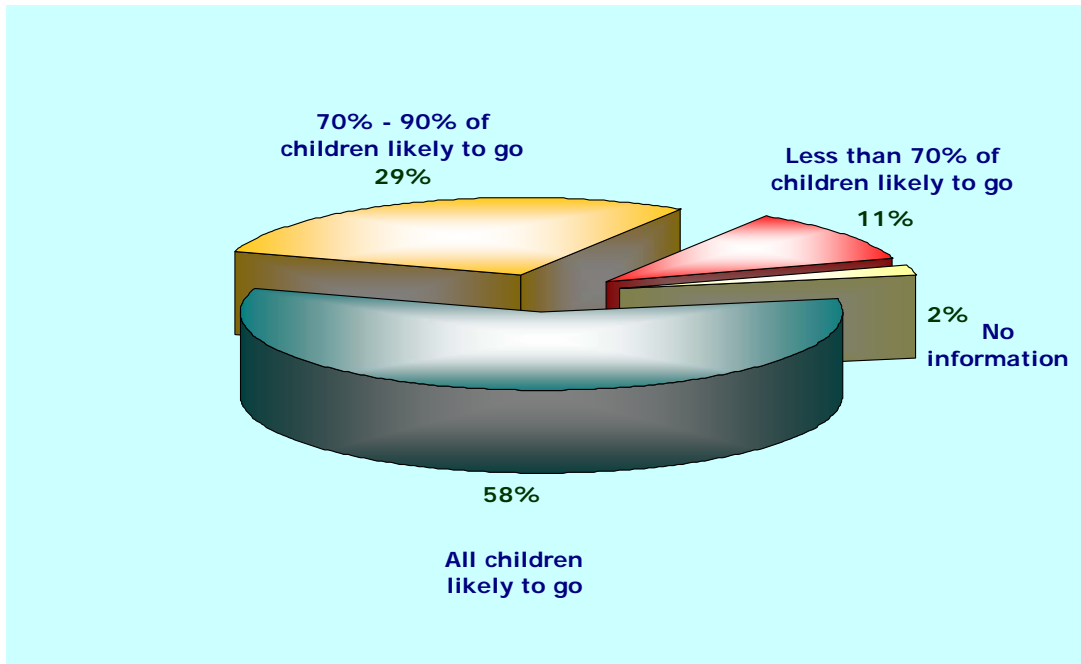


Fig. A45. Likelihood of children with severe conditions referred to be taken to referral facility ($n = 45$ facilities)

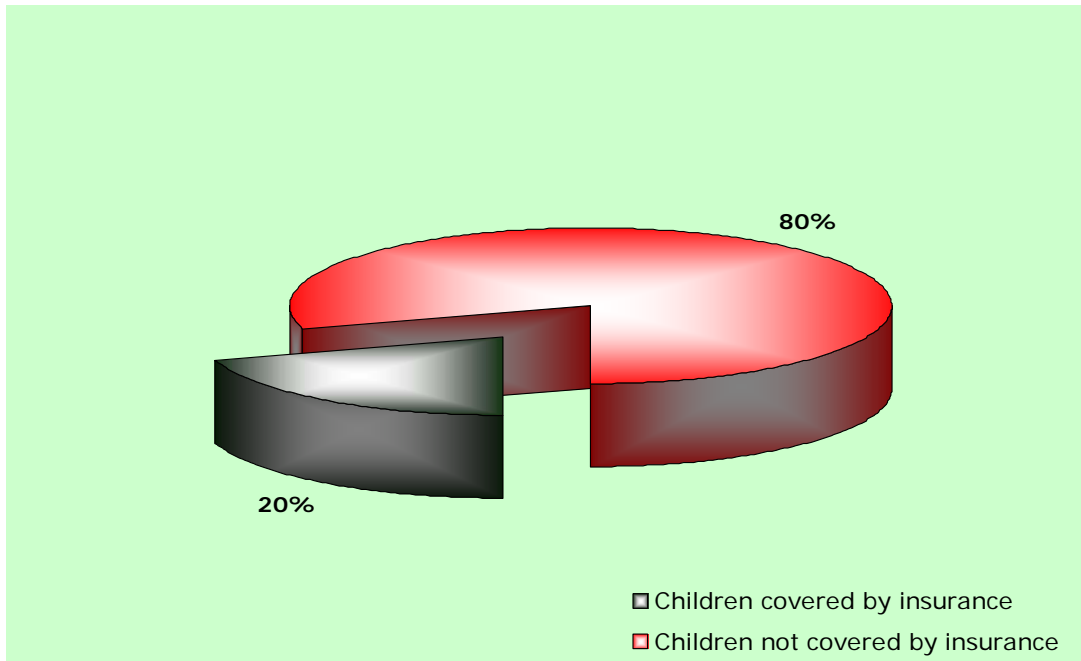


Fig. A46. Percentage of children seen covered by insurance ($n = 397$ children)

Table A39. Time to reach facility today

TIME TO REACH FACILITY	URBAN <i>n</i> = 325 ¹	RURAL <i>n</i> = 72 ¹	TOTAL <i>n</i> = 397 ¹
- Less than 30 minutes	220 (67.7%)	27 (37.5%)	247 (62.2%)
- 30 to 59 minutes	80 (24.6%)	23 (31.9%)	103 (25.9%)
- 60 to 119 minutes	24 (7.4%)	18 (25.0%)	42 (10.6%)
- 120 to 240 minutes	1 (0.3%)	4 (5.6%)	5 (1.3%)
Average time	20.6 minutes ²	38 minutes ²	23.8 minutes ²

¹ The denominator is all children's caretakers.

² The difference between urban and rural areas is -17.4 minutes (95% CI: -26.3 to -8.4).

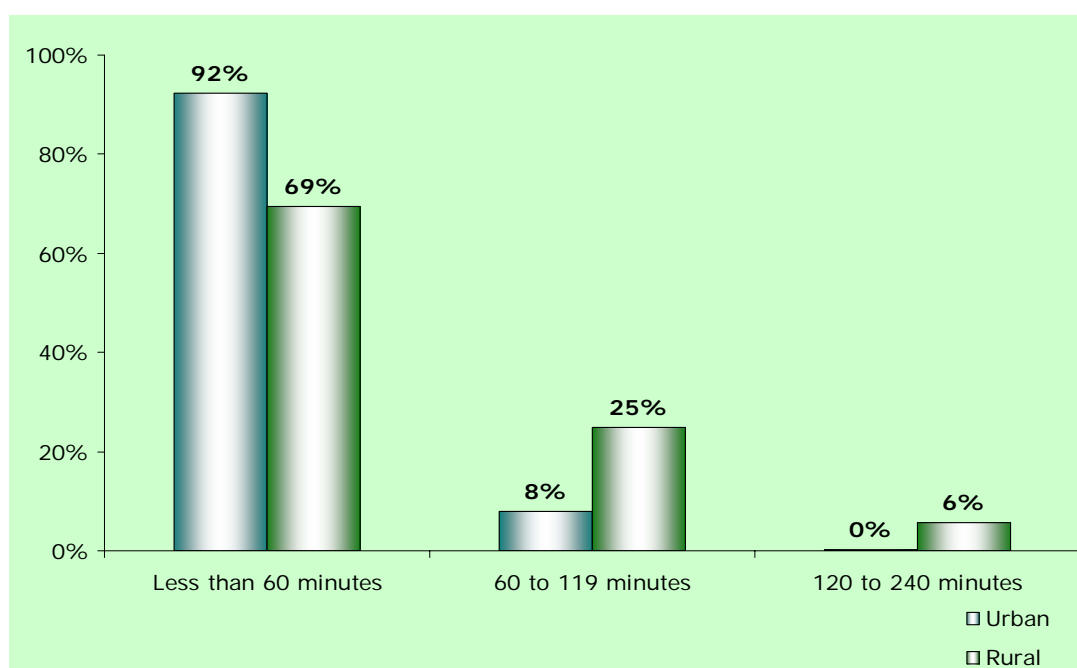


Fig. A47. Time to reach this facility today by residence (*n* = 397)

Table A40. Mobile team (“*equipe mobile*”) services ($n = 45$ health facilities surveyed)

SERVICE	N (%)
Facilities providing outreach services through <i>equipe mobile</i>	13/45 (28.9%) ¹
Services provided by <i>equipe mobile</i> :	$n = 13$
- Preventive	13 (100%)
- Curative	11 (84.6%)
- Promotive	12 (92.3%)
<i>Equipe mobile</i> reported to include a physician all the times	6 (46.2%) ²
Facilities which originally planned the following outreach sessions in 2006:	
- up to 4	8 (61.5%)
- 5 to 8	1 (7.7%)
- more than 8	4 (30.8%)
Facilities which reported conducting:	
- 100% of planned sessions	6 (46.2%) ³
- 51% to 99% of planned visits	4 (30.8%) ³
- less than 50% of planned visits	3 (23.0%) ³

¹ It includes 10 rural and 3 urban facilities.

² Reasons for the lack of the regular presence of a physician in the team included the lack/unavailability of a doctor in 5 of these 6 cases.

³ One facility carried out no mobile service in the year out of the 9 sessions originally planned, 1 facility did only 1 session, 4 did 2 sessions, 2 did 3, 2 did 4, 1 did 9, 1 did 12 (out of 20 planned) and 1 did 14 (out of 22 originally planned).

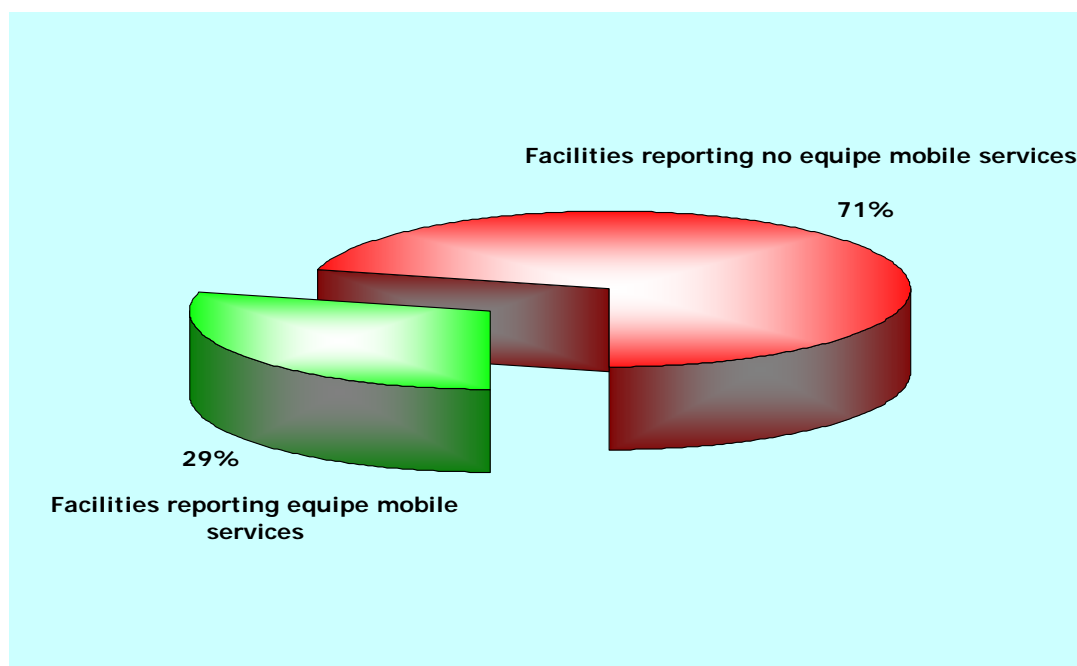


Fig. A48. Facilities reporting provision of ‘*equipe mobile*’ services ($n = 45$)

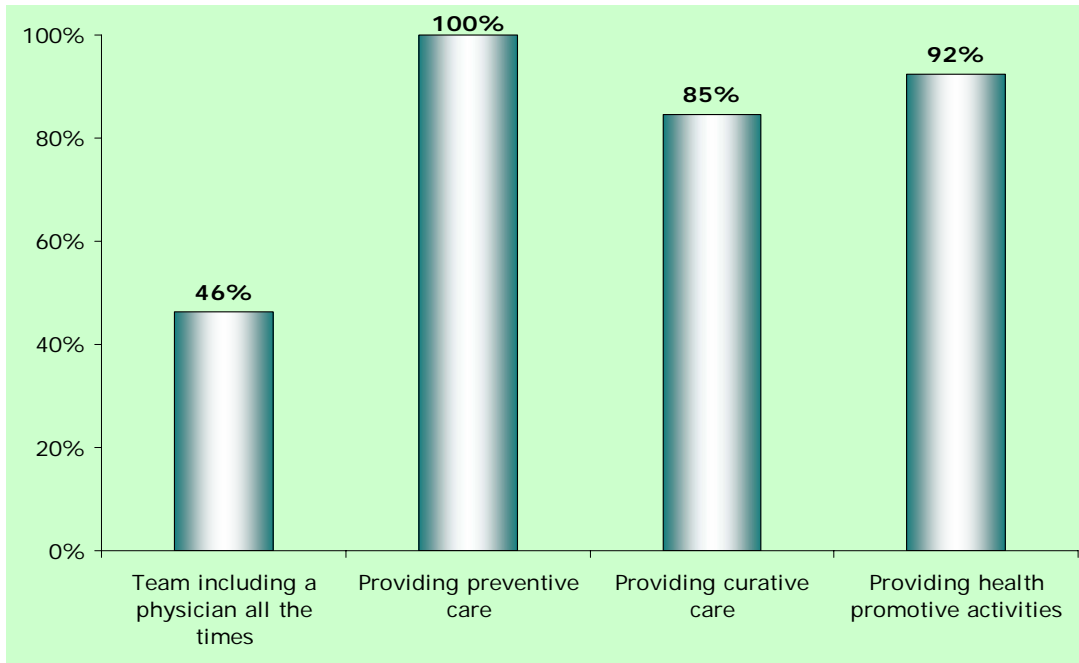


Fig. A49. *Equipe mobile*: type of services provided ($n = 13$ facilities which reported provision of *équipe mobile* services)

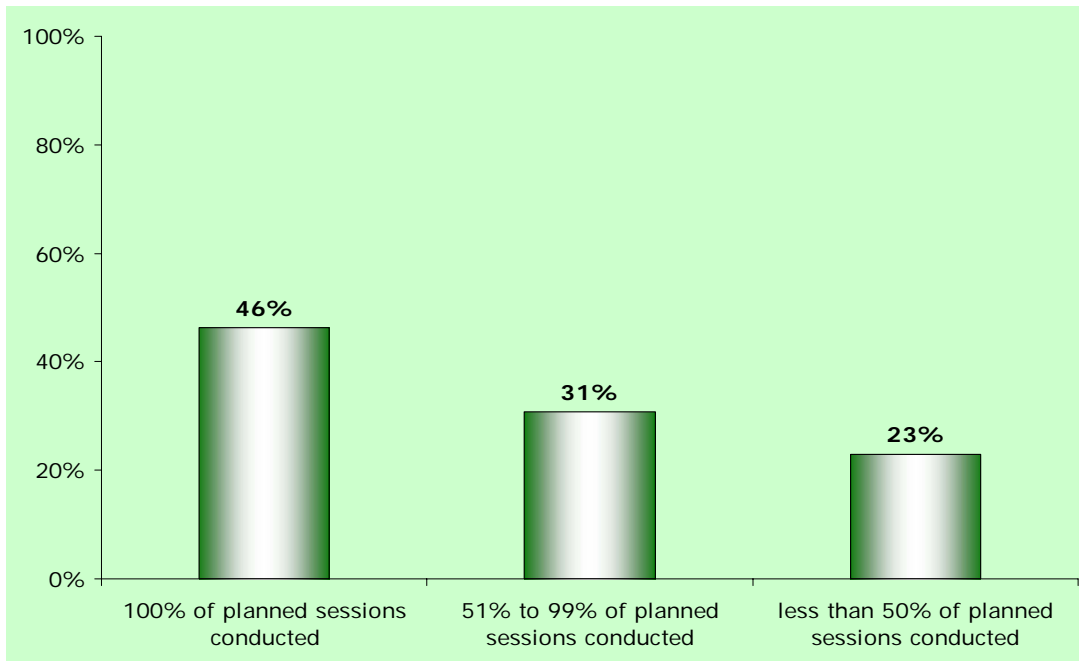


Fig. A50. *Equipe mobile*: conducted Vs planned sessions ($n = 13$ facilities which reported provision of *équipe mobile* services)

Table A41. Facility services and supervision (*n* = 45 health facilities surveyed)

SERVICE	N = 45
Clinical services for children available:	
- 5 days a week	35 (77.8%)
- 6 days a week	2 (4.4%)
- 7 days a week	8 (17.8%)
Facilities which reported receiving at least one routine supervisory visit in the past 6 months	22 (48.9%)
Facilities which reported that case management of a sick child was observed as part of supervisory visit (in the past 6 months)	3 (6.7%) ¹
Facilities with a supervisory book	41 (91.1%)
Facilities with last visit's recommendations recorded in the book	35 (77.8%) ²
Time of the latest record of supervisory visit (with or without recommendations noted) in the supervisory book:	<i>n</i> = 37 ³
- less than 6 months ago	18 (48.7%)
- 6 to 11 months ago	10 (27.0%)
- One year or more ago	9 (24.3%)

¹ Information missing for 5 facilities.

² Information missing for 1 facility.

³ Supervisory book not available in 4 facilities and information missing for other 4 facilities.

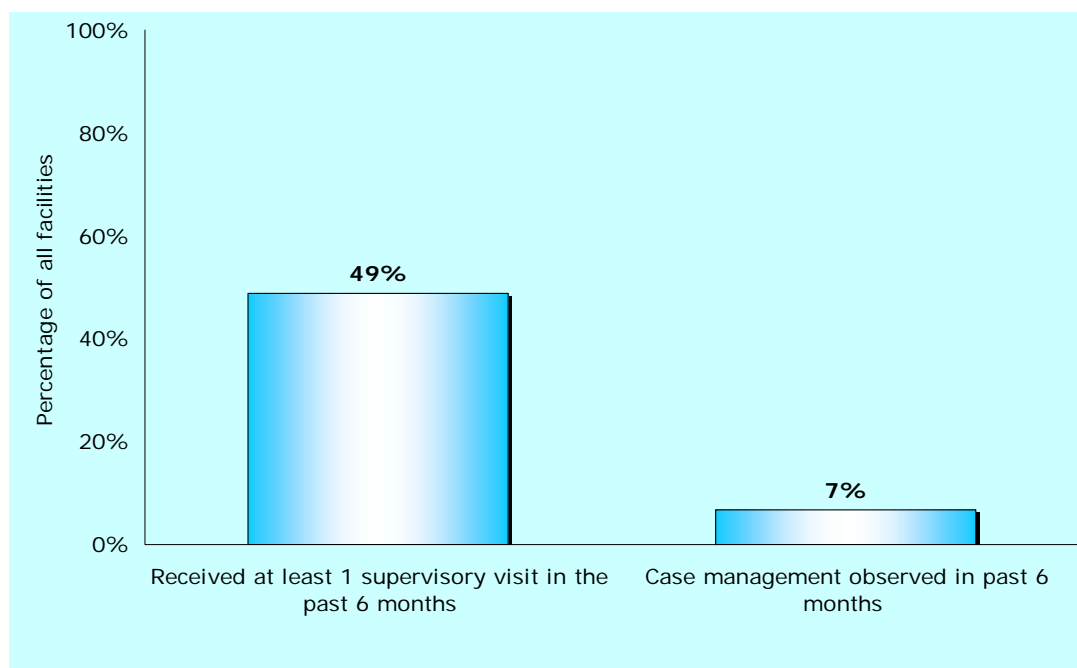


Fig. A51. Supervision in the 45 facilities visited