WHO-EM/CAH/188/E

National Health Facility Survey on the Quality of Outpatient Primary Child Health Care Services

IMCI Health Facility Survey Morocco October–December 2007

Royaume Du Maroc
Ministère De La Santé
Direction De La Population

World Health Organization
Regional Office for the Eastern Mediterranean

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WHO Library Cataloguing in Publication Data

World Health Organization. Regional Office for the Eastern Mediterranean

National health facility survey on the quality of outpatient primary child health care services: IMCI health facility survey Morocco October-December 2007 / World Health Organization. Regional Office for the Eastern Mediterranean

p.

WHO-EM/CAH/188/E

1. Quality of Health Care 2. Patient Care Management 3. Health Care Surveys - Morocco 4. Child, Hospitalized 5. Health Care Facilities, Manpower, and Services - Morocco I. Title II. Regional Office for the Eastern Mediterranean III. Ministry of Health

(NLM Classification: W 84.3)

Document WHO-EM/CAH/188/E/03.09/100

Printed by WHO Regional Office for the Eastern Mediterranean, Cairo

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ACKNOWLEDGEMENTS

This survey was a joint collaborative effort of the Ministry of Health, Morocco—with work coordinated by the Child Health Service of the 'Direction de la Population'—and the World Health Organization, Regional Office for the Eastern Mediterranean, which provided both technical and financial support. The commitment and dedication of all those who facilitated and participated in the survey, including survey teams, data entry staff and staff of services under the same or other directorates, is acknowledged with appreciation as is the support of provincial authorities. Thanks go to the staff of the health facilities surveyed and to all caretakers who consented to have their children enrolled and patiently participated in the survey.

EXECUTIVE SUMMARY

Background

Integrated management of childhood illness (IMCI) was introduced in Morocco in 1997 as an integrated strategy to address the most important causes of mortality and morbidity in line with the primary health care approach. After a pilot phase, IMCI implementation started expanding to new districts and provinces December 2000, covering 654 (26%) of the target outpatient primary health care facilities by the end of 2007.

Objectives

The main objective of this evaluation, conducted after seven years of IMCI expanded implementation, was to collect quantitative and qualitative information to assess the quality of outpatient health care services provided to sick children below 5 years old at health centres with IMCI-trained staff, including both the clinical and health system support components.

Methods

The management was observed of 397 sick children aged 2 months up to 5 years old seen at 45 health centres ('clusters'), randomly selected from 268 IMCI-implementing facilities reporting a daily case-load of at least four children below 5 years old and located in urban and rural areas of 20 provinces (sampling frame). The surveyor's independent re-examination of each child was used as the 'gold standard'. Interviews (391) with child caretakers were also conducted. Facilities, services and supplies were assessed in the 45 health centres visited and staff interviews were carried out in each of them.

Results

The proportion of female children seen in rural areas was lower than those in urban areas (38% vs 51%) and this is worth investigating further. Most caretakers (89%) were mothers of the sick children, offering a potential opportunity for checking maternal health; 45% of them were illiterate, the percentage being higher in rural than urban areas (68% vs 40%). This has implications for communication activities. While by survey criteria all children were managed by doctors trained in IMCI, less than half (45%) of them were seen by doctors who had received follow-up after IMCI training and as few as 7% by doctors followed up within 2 months of training. The IMCI training process, with its key follow-up feature, has therefore been incomplete in Morocco and the findings of this evaluation need to be interpreted within this context. Most children (78%) were seen by doctors trained in the past 3 years.

Patterns of illness: 30% of all children seen had 'moderate' conditions, requiring medicine treatment, and 6 (1.5%) children had a severe condition requiring urgent referral to hospital; 8% of children had pneumonia. Of the 81 non-severe cases with diarrhoea, 2 had some dehydration. The percentages of children with low weight-for-age (4%) or anaemia (7%) were low compared with the prevalence of these conditions among the general under-5 population reported in surveys at community level. Only 6 (1.5%) children had wheezing. In general, most of the conditions seen were mild, requiring home care.

Assessment: Out of 10 main assessment tasks included in this indicator, a mean of 7.7 tasks were performed in a child, the index being higher in children seen by doctors who had received follow-up after IMCI training than in those seen by doctors not followed up (8.1 vs 7.4). Most children (83%) were checked for the three main symptoms of cough, diarrhoea and fever. Signs assessed less frequently included presence of oedema of both feet (20% of cases) and visible severe wasting (27%) to detect clinical severe malnutrition. More than half (55%) of children below 2 years old and of children with low weight-for-age, anaemia and/or persistent diarrhoea were assessed for feeding practices. Most children were weighed (98%) and about two thirds (68%) had their temperature taken. However, these tasks, which are not specifically practised in IMCI training in Morocco as they are part of nursing basic education, were often performed incorrectly by nurses,

with likely implications for the overall management of the child. Most children (75%) were screened for their vaccination status to increase opportunities for immunization among sick children.

Caretakers were asked about duration of symptoms, to distinguish between acute and non-acute respiratory problems, in 88% of cases with cough or difficult breathing. Information on duration of the diarrhoea episode—to distinguish acute from persistent diarrhoea—was asked about in the large majority of cases with diarrhoea (94%) and on presence of blood—to identify dysentery cases—in 78% of cases. There was agreement between the provider's and surveyor's conclusions on skin turgor and palmar pallor in 76% and 92% of cases, respectively, in which these signs were checked. Caretakers of 75% of children were asked about the presence of any other problems to complete the assessment.

Classification: There was agreement between provider and surveyor on the classification of 77% of children for moderate and severe conditions related to the main symptoms of cough or difficult breathing, diarrhoea and fever which require urgent referral, treatment or specific nutrition advice.

Treatment and advice: Most (85%) of the children with an IMCI condition not requiring urgent referral and who needed oral antibiotics were prescribed them and, of these, 91% were prescribed an antibiotic recommended by the national IMCI guidelines, the provider thus complying with the national list of essential medicines. While antibiotic prescription practices were good in three quarters of cases in relation to the dose and frequency prescribed, the advice on duration of treatment was a weaker area, resulting in the end in 40% of children prescribed the antibiotic with complete, correct advice. As a result of the advice received, 27% of the caretakers whose child had been prescribed a recommended antibiotic were able to describe fully and correctly how to give it to the child; duration of treatment was, as expected, the weaker area. In terms of rational use of antibiotics, most children (76%) not needing antibiotics left the facility without being prescribed antibiotics unnecessarily. Both of the children with diarrhoea and some dehydration were treated with oral rehydration salts (ORS) at the facility, while most (83%) of the 78 diarrhoea cases with no clinical signs of dehydration were given ORS. Caretakers of 85% of children given ORS received the key advice on the correct amount of water to prepare the solution; most of them (94%) recalled it correctly.

Concerning other treatments, only 28% of children with anaemia were prescribed iron (as many of them had not been checked for anaemia), 64% of children with an eye infection were given tetracycline ointment, 55% of children needing vitamin A were given it and 89% of children needing vaccination were given it or advised to come back for a scheduled immunization session to receive it. Cough medicines and 'antidiarrhoeals'—discouraged by the national programme—were in fact used rarely: the majority of children (89%) were correctly prescribed no cough or cold medicines and only six children, all but one older than 1 year, were prescribed an 'antidiarrhoeal'. The caretakers of almost half (44%) of children seen were advised on home care (giving extra fluids and continuing feeding), the rate being higher for children with diarrhoea (58%) than without (41%); 45% of caretakers recalled both messages correctly before leaving the facility. Caretaker knowledge about care-seeking was low, and in most cases, limited to general signs, such as fever and worsening of the child's condition. The caretakers of one child in four (26%) below 2 years old or with low weight, anaemia and/or persistent diarrhoea were given appropriate advice on feeding according to the age of the child, including breastfeeding and frequency of complementary feeding. The advice was given only by IMCI-trained nurses, underlining the added value of IMCI training to basic nursing education in this area.

Health systems: The large majority of caretakers (73%) said they were satisfied with the health services provided, while at the same time 43% mentioned they would like to see the availability of medicines improve. Concerning the organization of work at the facility, there was no duplication of the tasks reviewed: each task was carried out either by the nurse (taking temperature and weight) or by the physician (checking the weight against the growth chart and assessing feeding practices), although not necessarily the same category performed the task in different facilities all the time. Qualitative interviews with health facility staff suggested the lack of a systematic flow of

patients in 29% of the facilities. Sixty percent (60%) of facilities reported 100% of the doctors working in that facility trained in IMCI. Findings on follow-up after IMCI training have been described earlier in this summary. Children assessed by doctors who had received a follow-up visit after training tended to be assessed more systematically than those who had not, although the difference did not reach statistical significance.

Concerning medicine availability, at least one treatment course of the following medicines was available as follows: all the 4 essential oral treatments were available in 44% of the health centres, all the 12 non-injectable medicines of the IMCI package in 13% of facilities and the three injectable medicines for pre-referral treatment in 33% of facilities. Problems in regular supply of medicines—whereby antibiotics had been out of stock in the previous 3 months—were reported by staff of at least a third of facilities. Only one child in five (20%) of those seen on the day of the survey was covered by health insurance, the percentage being lower in rural (11%) than urban (23%) areas. Availability of vaccines (BCG, OPV, DPT, measles, Hib, hepatitis B and tetanus toxoid) was very good; 76% of facilities had cold chain equipment and supplies for vaccination. Problems in the cold chain (vaccine exposure to heat) or expired vaccines were reported by survey teams in six facilities for all vaccines.

Forty percent (40%) of the facilities were provided with the basic supplies and equipment needed for IMCI, including adult and baby scales, timing devices to count the respiratory rate, supplies to mix ORS and thermometers. Medicine stock cards were available in only about half (56%) of the facilities, their unavailability making it difficult to manage medicine stocks. IMCI daily registers and monthly reports were available in 58% of facilities. Qualitative information on mobile teams (*'équipe mobile'*), which aim at increasing health care coverage to the underserved population especially in rural areas, suggests that planned mobile sessions were conducted irregularly and that these services may mostly have the objective of providing preventive care, rather than regular curative care. Finally, only about half (49%) of the facilities visited reported having received at least one supervisory visit in the past 6 months and only 3 facilities (7%) reported having received clinical supervision in the same period. Thus, routine supervision, both in terms of frequency and content, appeared largely inadequate to support clinical achievements made with IMCI training.

Conclusions

This national survey has provided useful information on the quality of outpatient primary child health care services provided to under-5 children at health centres in Morocco, identifying strengths and issues on a number of health system elements influencing the quality of care which need to be addressed to improve child care services at this level. The results relative to indicators for clinical and communication skills indicate that health providers trained in IMCI have the skills to conduct a systematic assessment of the child—although some of the signs of severe conditions tend to be overlooked—and identify and immunize (or refer for immunization) most of the sick children who are due or overdue for immunization, this representing a clear added value of IMCI. Basic nursing tasks, such as correctly taking the temperature and weighing the child—which are not included in IMCI training—had low performance. Most of the children requiring antibiotics received them and were prescribed an antibiotic recommended by the IMCI guidelines, with good compliance with the national essential medicines policy. Prescriptions were in line with the guidelines for dose and frequency of administration, but tended to overlook duration of treatment. The findings also suggest the need to improve health providers' communication skills, especially with regard to messages on care-seeking, to check maternal health as per the IMCI guidelines and to distribute selected tasks systematically between doctors and nurses to deliver the full scope of IMCI. The findings related to health system support, which affect provision of quality primary child health care services, raise important issues. These include use of (and access to) these services, policy to support child health, availability of essential medicines, lack of supportive and clinical supervision and functionality and reliability of the health information system.

Recommendations

The main recommendations aim to address the issues described above, to serve as the basis for policy decisions and to develop a plan to strengthen the quality of primary child health care services and reduce inequities in order to contribute to improving the health of Moroccan children

under 5 years. Recommendations on the tasks and skills to be emphasized during future IMCI training courses and follow-up visits are provided in detail in Annex 1.

To ensure equitable access of the child population to quality health promotive, preventive and curative primary child health care services and promote their effective use, the following recommendations are made.

1. Conduct a study on the utilization of primary health care services, including care-seeking practices, and on the coverage, efficiency and effectiveness of existing interventions providing curative child health care services to the underserved population (*équipe mobile*), in providing information for evidence-based policy decisions. Meanwhile, alternative community-based approaches should be encouraged.
2. Develop an evidence-based national child health policy, promoting IMCI as the primary child health care strategy (for under-5s), setting clear priorities and allocating the necessary resources to achieve its objectives, and by prioritizing child health in the Moroccan 'Vision 2020'.
3. As a policy on medicines, give consideration to:
   - increasing the budget allocation to medicines for key under-5 illnesses (paediatric formulations);
   - applying the national essential list of medicines for children in medicines procurement;
   - establishing a central medicine management system with a monitoring system for distribution of medicines to the health facility.
4. In plans for scaling up IMCI, include not only training but also follow-up visits after training and health system strengthening, and allocate the necessary resources to it. The efficiency and effectiveness of the current supervisory system should be carefully reviewed and the information system should be improved to provide reliable information for use for planning at all levels.
5. Accelerate efforts to introduce the child public health approach (IMCI) into pre-service education, as a sustainable long-term approach benefiting public health, and evaluate the outcomes of this approach.

1. OBJECTIVES

The Ministry of Health of Morocco, in collaboration with the Regional Office for the Eastern Mediterranean of the World Health Organization (WHO), conducted a national, cross-sectional survey from 28 October to 12 December 2007 on the quality of outpatient health care services provided to children below 5 years old at primary health care facilities in which the Integrated Management of Child Health (IMCI) strategy had been implemented.

More specifically, this health facility survey had the following objectives:

1. To assess the quality of outpatient care, including both clinical and counselling care, provided at primary health care facilities to sick children aged 2 months up to 5 years[1] by health providers trained in IMCI;
2. To describe organizational and other 'health systems support' elements influencing the quality of care and identify major constraints to it;
3. To measure key indicators of quality care to monitor progress of the IMCI strategy at health facilities; and
4. To recommend further approaches to improving the quality of outpatient child health care services.

[1] The expression 'up to 5 years old' in this report refers to children less than 5 years old (i.e. up to 59 months inclusive), therefore excluding the day of their 5th birthday. This expression, although not fully correct, is commonly used as it appears to be more easily understood by readers without epidemiological background.

2. BACKGROUND

This section summarizes some of the information that was reviewed to discuss survey objectives, adapt survey forms and develop country-specific survey rules. This information, complemented with the review of other documents, served also as useful, additional background to the analysis and interpretation of the results of the survey. An important reference was the report on the findings of the survey 'Evaluation of the management of childhood illness in public sector IMCI and non-IMCI facilities in four Moroccan provinces' conducted in April 2000 [2].

2.1 SETTING

The population of Morocco was estimated at about 30 million in 2003, with children below 5 years old representing about 10% of the total population. More than half (55%) of the population reside in urban areas and this proportion is expected to continue to increase, as urbanization continues [1]. The country is divided into 16 regions, comprising a total of 73 provinces and 1629 districts. The *circonscription sanitaire*, equivalent to the district, has represented until recently the operational base for the organization of health services provided to the local population. Health services are delivered through a network of 2552 primary health care facilities and through hospitals. The primary health care system, which represents the core of health care provision in the country, mainly includes:

a) *the rural dispensary*, which provides promotion and preventive services, when run only by a nurse, and also curative services, if staffed with a physician. In fact, a large proportion of dispensaries has recently been provided with doctors and upgraded, to deliver the same range of services of health centres;

b) *the health centre* (community health centre in rural areas and urban health centre in urban areas), staffed with doctors and providing promotion, preventive and curative services; and

c) *the outreach services provided by mobile teams ('équipe mobile')*, which are supposed to play an important role in the provision of health care, especially in rural areas. They covered some 30% of the population living at more than 10 km from a health facility in 2003, compared with 68% which was covered by facility-based services and 2% which was not covered, in the same year [2].

The referral hospital network includes general and specialized hospital facilities at different levels (provincial, regional and university hospitals).

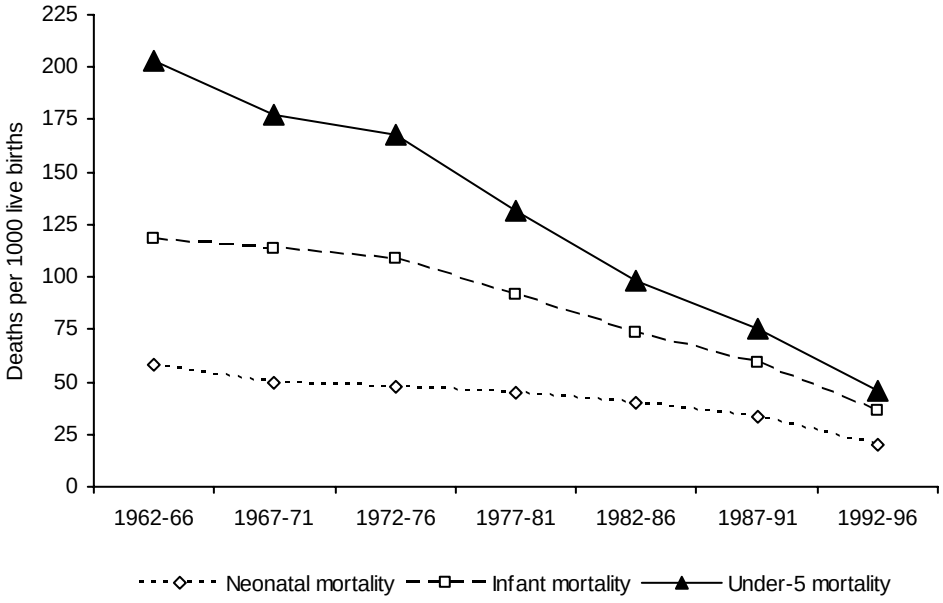
While health services provided by the Ministry of Health are free, large disparities exist with regard to population access and utilization of services by socioeconomic status between the lowest and highest quintiles. WHO estimates of national health accounts suggest that the percentage of the GDP (gross domestic product) for total expenditure on health increased slightly over the 5 years from 1999, to an estimated 5.1% in 2003 [3] and 5.3% in 2005. The general government expenditure on health as a percentage of total government expenditure increased in the same period, to reach 5.5% in 2005 from 4.4% in 1999. It is worth noting that two thirds (66.9%) of the total health expenditure is private and 76.1% of this is out-of-pocket [3]. Current efforts to expand coverage by health insurance are in principle expected to reduce the current level of direct household contribution to health expenses and improve financial access to care.

2.2 CHILD HEALTH INDICATORS

Infant and under-5 mortality rates have continued to decrease in Morocco over recent decades (Fig. 1). The decrease has been more marked in the post-neonatal period and older age groups, as in many other countries in the Eastern Mediterranean Region. Data from the Demographic and Health Survey (DHS) related to the period 1988-1992 showed neonatal deaths to account for 41% of all under-5 deaths, similar to the average in the Region. However, the national

[2] Evaluation of the management of childhood illness in public sector IMCI and non-IMCI facilities in four Moroccan provinces, April 2000, Ministry of Health, 29 May 2001

survey on population and family health (part of the League of Arab States' Pan Arab Project for Family Health or PAPFAM), conducted more recently in 2003-2004, indicated that this percentage



Source: Ministry of Health (based on demographic surveys)

Fig. 1. Trends in neonatal, infant and under-5 mortality rates in Morocco

may recently have become significantly higher[3] [4]. The Child Mortality Coordination Group, established by UNICEF, WHO, the World Bank and the United Nations Population Division to carry out collaborative assessments of under-5 mortality rates in countries, estimated the under-5 mortality rate in Morocco at the level of 43 deaths per 1000 live births for 2004[4]. Estimates for 2005 are under-5 and infant mortality rates of 40 and 36 deaths per 1000 live births, respectively [5]. This would suggest an approximate, average annual mortality reduction rate of more than 5% between 1990 and 2005. The possibility of Morocco reaching Millennium Development Goal no. 4 on reduction of under-5 mortality by two thirds by 2015 will depend on whether these trends are sustained, as greater efforts are required to reduce mortality further as rates fall.

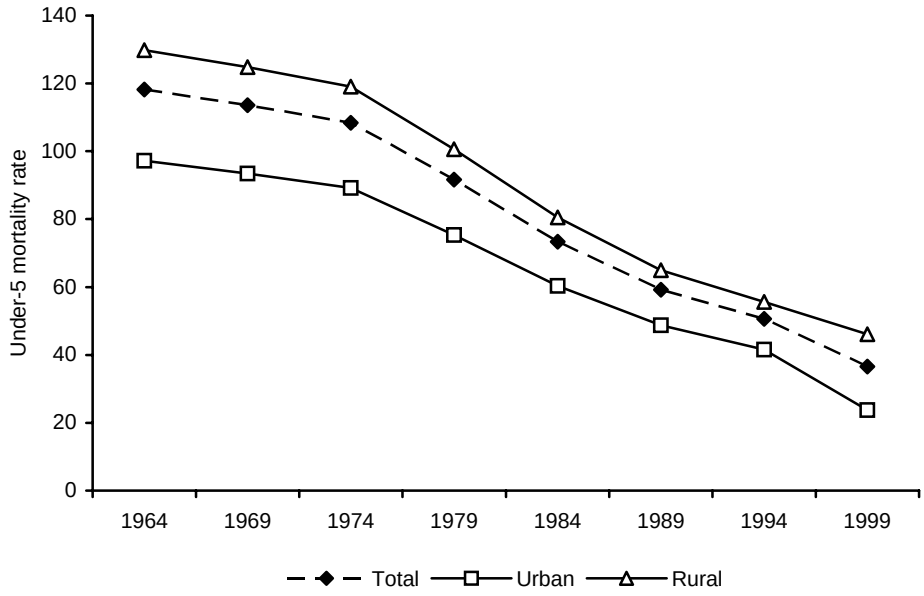
Typically, there are differences in under-5 mortality rates between: a) urban and rural areas[5], with the rate being almost twice as high in rural areas as in urban areas (Fig. 2); b) regions, with the highest rate in Meknès-Tafilalet being about four times as high as in Casablanca, in 1997 (Fig. 3); and c) mother's education level, with under-5 mortality being more than twice as high in children of illiterate mothers as in children of mothers with secondary or higher education (63 per 1000 live births vs 27 per 1000 live births) [4]. Disparities exist also in access to care, with urban areas reportedly having almost 100% access compared with 65% in rural areas [6].

These differences were taken into consideration when planning for the implementation of the Integrated Management of Child Health (IMCI) strategy in the country (see 2.3).

Common communicable diseases, including acute respiratory infections and diarrhoeal diseases, are the leading causes of under-5 mortality in the country: they are responsible for half

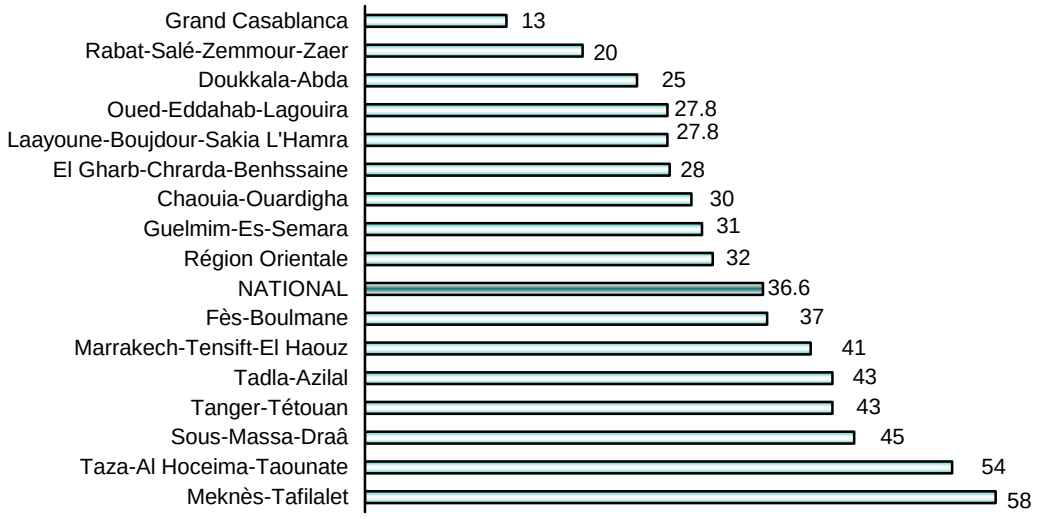
[3] The PAPFAM survey in 2003-2004 reported under-5 and neonatal mortality rates of 47.4 and 26.9 deaths per 1000 live births, respectively, for the mid-point of the 5-year reference period preceding the survey date, with deaths in the neonatal period thus representing 57% of all under-5 deaths.
[4] Mortality rates may differ according to the source and method used to measure them.
[5] The PAPFAM study reported under-5 mortality rates of 62.5 per 1000 live births in rural areas compared with 32.5 in urban areas. Maternal mortality ratios are also higher in rural than urban areas.

(50%) of all deaths in this age group, followed by perinatal causes (37%) [7]. Acute lower respiratory infections represented 37.8% of consultations for children under-5 in 1997 [8]. Protection at birth against tetanus was reported to have reached 87% in 2006 [9]. Nutrition indicators measured in the PAPFAM survey [4] showed 18.1% of children under-5 to be low height-for-age or stunted (more than two standard deviations below the median for the international reference population aged 0-59 months), 9.3% low weight-for-height or wasted and 10.2% low weight-for-age. There was a higher prevalence of malnutrition in rural than urban areas and substantial differential by economic quintiles: stunting was 24% in rural areas vs 13% in urban areas and 29% among the poorest (lowest quintile) vs 10% among the richest (highest quintile); wasting was 11% in rural children vs 8% in urban children and 13% among the poorest vs 6% among the richest; finally, low weight-for-age was 14% in rural children vs 7% in urban children and 17% among the poorest vs 4% among the richest.



Source: Ministry of Health

Fig. 2. Trends in under-5 mortality rates by residence in Morocco



Source: Ministry of Health

Fig. 3. Under-5 mortality rates by region, Morocco

According to the same study, the rate of exclusive breastfeeding for up to 6 months was 31%—with 52% of newborns put to the breast within an hour of delivery—and the rate of complementary feeding at 6-9 months was 66% in 2003 [4]. Bottle-feeding was introduced at 2 months of age in as many as 38% of infants and the rate of use of teats in children less than 6 months was 46%. A regional study carried out in 1996 found signs of sub-clinical (laboratory)[6] vitamin A-deficiency in 40.9% of children aged 6 to 71 months old [10]. The PAPFAM study reported that vitamin-A rich food was consumed by 62% of the under-5 children [4]. Finally, 31.6% of children aged 6 to 59 months were estimated to have anaemia (haemoglobin level < 11 g/dl) in 2001 [11].

2.3 THE RESPONSE: AN INTEGRATED CHILD HEALTH CARE STRATEGY (IMCI)

The selected child health indicators in Morocco described above showed that, while under-5 and infant mortality trends were downward, mortality rates still remained moderately high and child nutrition and feeding indicators warranted a more holistic approach to improve the child health situation in the country. The strategy on Integrated Management of Child Health (IMCI) was formally introduced in Morocco in 1997 as a strategy appropriate for the situation in the country: it addressed the most important causes of mortality and morbidity [7] and proposed an integrated approach that was in line with the primary health care approach. It was based also on the need to improve the quality of health services delivered at primary health care level and for an approach to strengthen health systems at that level, compensating for the weakness of child health-related vertical programmes implemented until then, including the need for better coordination. The strategy was included in the 5-year national health development plan for the period 2000–2004 and confirmed again also in the 2005–2009 plan.

The responsibility of coordinating the IMCI strategy was assigned to the Child Health Service in the Maternal and Child Health Division of the Population Directorate (*Direction de la Population*). The main steps of the IMCI process in Morocco from introduction through expansion are shown in Annex 2. Over the years, the strategy has expanded to cover over 654 health facilities (i.e. 26% of all target outpatient primary health care facilities) in 406 (25%) of 1629 districts located in 32 provinces, by the end of 2006 (Annex 3). Implementation was seriously slowed down by financial constraints in the years 2000 and 2003. Taking into due consideration the marked differentials in under-5 mortality rates between the provinces and the decision to prioritize those with higher mortality, the strategy was first introduced in two provinces with higher under-5 mortality rates (Meknès El Menzeh, located in Meknès Tafilalt region, and Agadir Ida Outanane, in Sous Massa Daraa region) in the period 1998–2000. Expansion first started with provinces in the same two regions, in 2000, and then covered provinces located in other regions, using the same criterion of higher mortality while prioritizing rural poor populations. The main targets for training have been doctors and paramedical staff (nurses) working at rural dispensaries and health centres: a total of 1836 doctors and nurses were trained in IMCI by the end of 2006 (Annex 4).

Among the main adaptations included in the Moroccan IMCI guidelines (revised in 2006), compared with the original, generic WHO/UNICEF clinical guidelines, are: the recent inclusion of the first week of life; the extension of routine feeding assessment to children with persistent diarrhoea (in addition to those less than 2 years old and those with anaemia and low weight), the inclusion of wheezing, the management of throat problems (with screening of all children for throat problems), the separation of the management of anaemia and malnutrition; the adaptation of the immunization schedule, with inclusion of hepatitis B and, very recently, Hib vaccines; the extension of the recommendation for exclusive breastfeeding to the first six months of life; the revision of first- and second-line treatment protocols based on local antibiotic susceptibility patterns and national guidelines; and the inclusion of referral forms. Furthermore, a 'healthy child' module and related training materials were developed and tested in July 2006.

[6] Retinol level ≤ 200 µ/l.

The main focus of the strategy was initially on the health system.

- *Improving health providers' skills*: 88 clinical training courses on IMCI were conducted for more than 1800 people from health centres and rural dispensaries by the end of 2006. Training centres had been set up to decentralize IMCI training at provincial level. The duration of training courses changed over time from 11 days for courses at national level to 12 days for those during the pilot phase, 10 days at the beginning of expansion and, more recently, 7 days for doctors and 4 days for nurses (Annex 5). When feasible, especially in relation to the availability of funding, trained staff were followed up through skill reinforcement visits after the training course ('IMCI follow-up visits'). In general, the visits showed that health providers were satisfied with the quality of training, used the IMCI guidelines and had reinforced their skills, including the identification of certain key signs, feeding assessment, identification of feeding problems and counselling of mothers (Annex 6, Fig. A1-A3). Also, mothers were shown to be satisfied with the services provided to their sick children. As mentioned earlier, one important issue was the lack of financial resources in 2000 and 2003 to support training courses and follow-up visits and the high attrition rate of trained staff, which made training efforts more demanding [2]. Finally, the IMCI outpatient approach was introduced in the teaching programmes of paediatric departments of four medical schools and child health and paediatrics of five nursing schools ('Training institutes for health career'), to address the issue of long-term sustainability.

- Improving *the health system*: The national list of essential medicines was reviewed to ensure that all medicines needed for IMCI were included. While medicines were provided free at health facilities, their availability was reportedly limited, this potentially reducing access to care for poor children when the facility ran out of the allotted medicines. As mentioned earlier, the expansion of the health insurance scheme was an attempt to address this issue, at least partly. A guide on therapeutic protocols was developed, including also the IMCI protocols, to rationalize the use of medicines. Efforts were made to ensure medicine supply especially to far-flung rural areas and improve referral, also through IMCI referral forms. Starting January 2003, the health information system was adapted to IMCI and introduced in 31 provinces implementing IMCI, after testing in Meknès El Menzeh province. One of the constraints was that at that time, IMCI had not yet been implemented throughout the country. As a result, two different information systems are in use until IMCI has been implemented in all health facilities.

- *Improving family and community practices*: The IMCI community component was started in 1999, during the early implementation phase. A guide on the community approach was developed and tested in three areas, 153 health providers from 9 provinces were trained, five baseline surveys to assess the community situation and plan were conducted in five provinces, respectively, and 89 community health workers were trained in health education.

2.4 CONSIDERATIONS TO UNDERSTAND THE OBJECTIVES OF THIS EVALUATION

A well structured health facility survey was conducted in Morocco in 2000, as part of the evaluation of the early implementation phase of IMCI. A sample of 32 health facilities in two provinces implementing IMCI was compared with 32 facilities in two other provinces not implementing IMCI; data from a total of 478 children aged 2 months up to 5 years old were included in the analysis. The overall conclusions of that survey were that IMCI-implementing facilities were performing significantly[7] better than non-IMCI implementing facilities for the majority of the indicators considered. This provided the basis for the Ministry of Health policy decision to expand the implementation of the IMCI strategy to the rest of the country. At the time of planning for a new survey, the fact that such a survey comparing IMCI vs non-IMCI implementing facilities had already been conducted was taken into account, as were considerations

[7] In statistical terms.

related to the intrinsic complexity of conducting similar studies again (with comparison with control areas), the requirement for more than doubling the facilities to be included in a new similar survey to enable meaningful comparisons between groups (because of the need to have narrow confidence limits to show differences), and the substantial resources and time involved. The survey in 2000 required 4 months of preparation (planning from November 1999 to March 2000) and 4 months of implementation (from surveyor training to preliminary analysis, carried out in July 2000). As that survey had already demonstrated the advantage of implementing IMCI, the focus of this survey was to evaluate the quality of outpatient child care provided by IMCI-trained doctors when implementing the strategy to scale in the country. It is acknowledged that, when strategies and their interventions are brought to scale under routine circumstances, resources—and, often, interest, commitment and support—may differ substantially from the initial phase and this influences overall performance. Studies on the impact of interventions on under-5 mortality are research undertakings, highly complex and require a different design. They were therefore out of the scope of this evaluation.

3. SURVEY METHODOLOGY

The survey consisted of the following main phases, in addition to planning (Annex 7): training of surveyors and supervisors (one week), data collection (two weeks), data entry (during data collection and for additional 3 days) and cleaning (2 days), preparation of tables and graphs for group data analysis (one week), group data analysis (one week), and presentation and discussion of the findings and recommendations. Box 1 summarizes the main features of the survey.

Box 1. Survey at a glance

Main objective: To assess the quality of outpatient health care services for sick children under-5 at IMCI-implementing primary health care facilities

When: 28 October to 12 December 2007

What survey: Cluster survey

Which facilities: Health centres with at least a physician trained in IMCI

Sampling frame: 268 health centres implementing IMCI in 20 provinces; 63.4% located in urban areas and the rest in rural areas

Sample: 45 health centres ('clusters')—located in 19 provinces—selected by systematic random sampling, with a total of 397 children 2 to 59 months old enrolled in the survey

Distribution of clusters: 64.4% located in urban areas and the rest in rural areas (similar distribution to the sampling frame)

Selection criteria:

- *health facilities*: implementation of IMCI, type of facility (health centre), facility case-load (at least 4 children below five years old per day), presence of physician trained in IMCI
- *children*: age 2 to 59 months old, any consultation for medical reasons, initial visit for the current episode of illness

How many survey teams: 5 teams, of which 4 consisting of 3 surveyors and 1 supervisor and 1 team consisting of 4 surveyors and 1 supervisor to survey facilities with high case-load, for a total of 21 persons

How many facilities per team: 1 facility per day, for a total of 9 facilities per team

3.1 SURVEY PLANNING TEAM

Plans for the survey were developed between 12 and 17 March 2007 (see schedule in Annex 8) by a planning team composed of central and provincial Ministry of Health staff, including staff of the Child Health Service, Nutrition and EPI of the Population Directorate, Family Planning Division, hospital services, health centres and hospital paediatric service (Annex 9), and WHO Regional Office staff of the Child and Adolescent Health and Development unit.

The planning team carried out the following tasks: discussed the survey objectives; reviewed the survey methodology; reviewed data on health facilities to prepare for their selection for the survey; discussed plans for surveyor training, data entry, data analysis and the national feedback meeting.

3.2 GEOGRAPHIC SCOPE OF THE SURVEY, SELECTION OF HEALTH FACILITIES TO SURVEY AND TARGET AGE GROUP

This survey was a cluster survey, with children taken to a health facility on the day of the survey forming a cluster. The survey was conducted in 45 health centres (45 'clusters') implementing the IMCI strategy and located in 19 provinces (Box 2). A total of 397 children were enrolled. Inclusion criteria for facilities and children and rationale for the selection and sampling of the health facilities are described below.

Box 2. Provinces with facilities included in the survey

1. Tanger Assilah
2. Tanger Fahs
3. Larache
4. Tétouan
5. Chefchaouen
6. Nador
7. Al Hoceima
8. Taounate
9. Taza
10. Fès
11. Sefrou
12. Meknès
13. Meknès El Hajeb
14. Rabat
15. Settat
16. Azilal
17. Essaouira
18. Agadir Ida Outanane
19. Taroudant

3.2.1 Inclusion criteria: facilities

All the following criteria were agreed upon to decide which facilities to cover in the survey (i.e. inclusion criteria for facilities):

- Public, outpatient health facilities implementing IMCI ('IMCI health facilities');
- Facilities with at least a physician trained in IMCI;
- Type: health centres;
- Facilities with a minimum case-load of four children under 5 years of age per day.

IMCI implementation: The presence of at least one physician trained in IMCI was used as a proxy for 'IMCI implementation' in a health facility, assuming that other aspects of IMCI would also be implemented, including the organization of work and patient flow, the availability of the required medicines and vaccines, the use of IMCI recording forms etc., as part of the policy of that facility.

Facilities staffed with a physician: Since the time IMCI was introduced in the country, many of the dispensaries staffed only with a nurse were upgraded, provided with at least a physician and expected to deliver the same type of services as health centres, thus potentially be in a position to deliver the whole scope of health care to under-5 children according to the IMCI guidelines. As there were only a few dispensaries with a physician trained in IMCI, it was decided to exclude them and include only health centres in the final sampling frame. Excluded also were the remaining dispensaries, staffed with only a nurse, providing only health promotion and preventive services.

Case-load: In selecting the sample, data on expected case-load of children below 5 years old per facility were needed to determine the sample size based on the chosen limits of precision. A minimum daily case-load per facility of four children below 5 years old was used as a criterion to include a facility in the list of facilities on which to draw the survey sample ('sampling frame'). This was done to enable the enrolment of an adequate number of children, assuring acceptable limits of precision (±10) while covering a manageable number of facilities in the two-week period of fieldwork. As the average daily case-load per facility was an estimate derived from reported monthly case-load figures for the previous year, some provisions were made for the possibility of finding fewer than the expected four children in some facilities during the actual conduct of the survey, as previous experience in this type of surveys had repeatedly shown.

3.2.2 Inclusion criteria: children

Children meeting all the following criteria were enrolled:

- Children aged 2 months to 59 months old
- Sick children taken for a medical condition
- First visit to that facility for the current episode if illness.

Children meeting all the above criteria and brought to the IMCI health facility on the day of the survey visit were enrolled in the survey. 'Sick children' refers to children presenting with any medical condition: they were enrolled irrespective of the specific reported complaint, since health providers trained in IMCI in Morocco are expected to follow the IMCI approach in the assessment of all sick children below 5 years of age with a medical condition (e.g. excluding injuries and surgical conditions). Children in coma or unconscious were excluded from the survey for ethical reasons as they would need to be managed immediately as appropriate. Children below 2 months old were excluded from this survey. Their case management is different from that of the older children. It would have been necessary to prepare and use a new set of forms specifically for this age group. A separate and adequate sample would have to have been selected for them in addition to that for older children—stratified sampling, hence substantially increasing the total number of facilities for the survey. This would have required increasing the number of surveyors and teams and prolonging surveyor training and fieldwork for this particular purpose by many weeks: this was against the quality standards recommended by WHO for these surveys. Furthermore, it is common observation that the number of infants aged less than 2 months old seen at outpatient health facilities is usually low. Therefore, to make meaningful conclusions on their management, the number of facilities to be surveyed and the duration of the survey would have to have been increased. Lastly, all these additional requirements would have led to a very remarkable increase in the survey budget. For all these reasons, including children below 2 months old was considered not feasible.

3.2.3 Sampling

A total of 45 health centres (45 clusters) were selected jointly by the Ministry of Health and WHO by one-stage systematic random sampling from the list of all IMCI-implementing health centres having an estimated minimum daily case-load of four cases below 5 years old, located in 20 provinces in which IMCI had been introduced—sampling frame (Annex 10). The region of Casablanca, with its 11 provinces, was excluded from the sampling frame as, while some staff had received IMCI training, the provincial levels had not yet been involved in IMCI and the IMCI health system component at health facilities had therefore not yet been addressed. As described under § 3.2.1, the case-load threshold and the number of facilities selected aimed to ensure the recruitment of a sufficient number of children below 5 years old in the survey, i.e. an adequate sample size, with limits of precision of the results for the main indicators referring to the whole sample not greater than ± 10. Selecting a larger number of facilities than 45 to improve the limits of precision would have further increased the duration of data collection, causing the surveyors to stay away for the whole survey from their routine responsibilities for too long. There was also concern about surveying facilities with very high daily case-load, which would require extra surveyors to reinforce the core survey team, and the need to use extra days of field-work to travel from one district to another district located far away from the former. Finally, increasing the total number of health facilities would have raised concerns about maintaining the quality of the survey throughout the extended field work. It was therefore not recommended.

When sampling the health facilities (primary sampling units), consideration was given to take into account the distribution of facilities in the sampling frame by residence (urban vs rural). Therefore, all the health facilities meeting the inclusion criteria described above were listed first by province—ordered by geographical location, from north to south, by district within each province, and separated into the urban and rural sub-groups. The final distribution of facilities in the sampling frame and sample is shown in Table 1 and Fig. 4. During fieldwork, there was a need to

Table 1. Final distribution of health centres by location: sampling frame and survey sample (facilities with an estimated minimum daily case-load of four children below 5 years old)

Location		Distribution		
		No.	Total	Percentage
Urban	*Sampling frame*	170	268	63.4
	Survey sample	**29**	**45**	**64.4**
Rural	*Sampling frame*	98	268	36.6
	Survey sample	**16**	**45**	**35.6**
Total	*Sampling frame*	268	268	100
	Survey sample	**45**	**45**	**100**

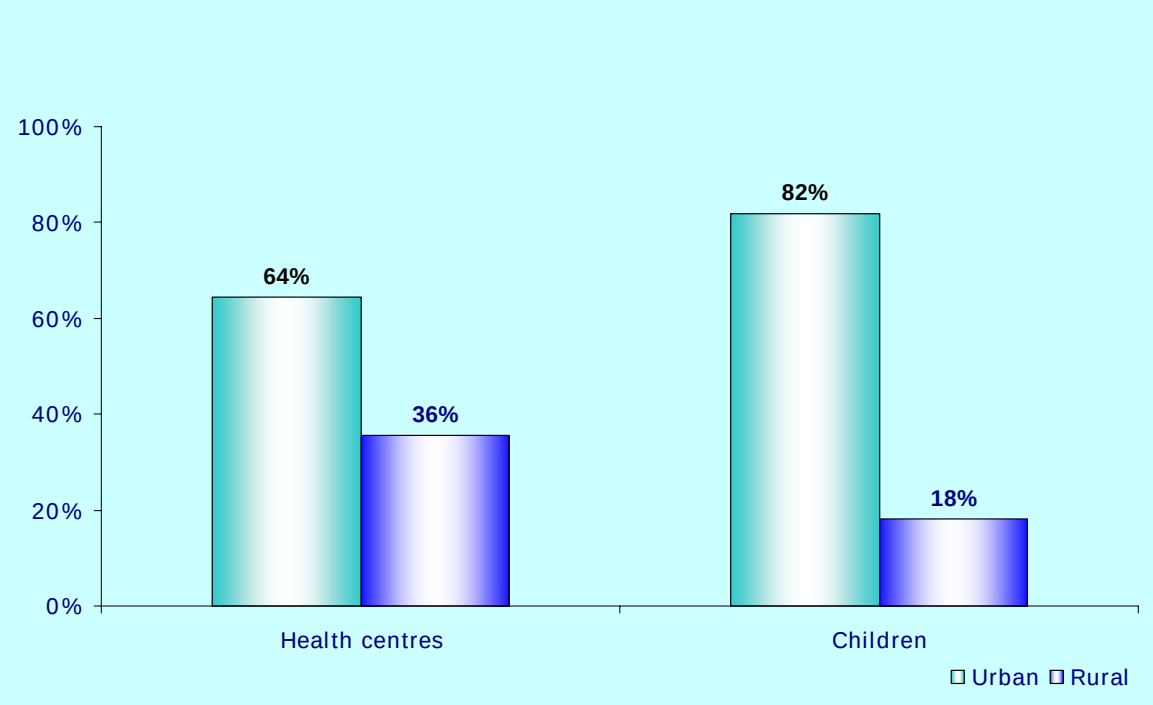


Fig. 4. Distribution of health facilities (*n* = 45) and children (*n* = 397) in the sample by urban and rural residence

replace six of the facilities originally selected with six other facilities, because IMCI-trained staff had moved leaving no physician trained in IMCI (four facilities), or because the facility was closed because it was under renovation (one facility) or because incorrect directions took the team to another facility in the same area (one facility). All the replacements belonged to the same type by residence (i.e. urban replacement for an urban health centre and rural replacement for a rural facility) and were taken from a list of pre-selected alternative facilities prepared beforehand at national level for this type of contingency.

A total of 413 children 2 to 59 months old meeting the inclusion criteria and brought to the IMCI health facility on the day of the survey visit were initially identified for enrolment. Two of them (both female) could not be enrolled as their caretakers gave no consent, while 14 other children (seven males and seven females) were excluded in the end as their caretakers withdrew before the completion of the survey, namely after the health facility physician's visit and before the re-examination by the surveyor (see also § 3.4). Thus, 397 children eventually completed the survey. The pattern of complaints reported in the 16 children not enrolled in the survey is presented in Table 2.

Table 2. Complaints reported by caretakers for 17 eligible children not enrolled in the survey

Cough	Fever	Vomiting	Diarrhoea	Sore throat	Dermatitis	Conjunctivitis	Other problems
8	9	3	3	1	1	1	3

Note: The total adds up to more than 16 as a child may have one or more complaints. Five of these 16 children were less than 1 year old.

3.3 TIMING OF THE SURVEY

Practical considerations during planning guided the decision to conduct the survey in November 2007. Conducting the survey earlier than November was shown not to be feasible. In fact, the finalization of the preparation for the survey required several months from the time of planning, as experience had shown repeatedly (need for validation of data on case-load from the provinces, adaptation of manual for surveyor training, revision of data entry and analysis programme, translation of survey-related instruments and training materials, etc.). Furthermore, the period from July to October was considered less suitable as it coincided traditionally with the vacation period in July-August, followed by the month of Ramadan in September/October .

3.4 SURVEY INSTRUMENTS AND PROCEDURES

The methodology used in this survey was based on the methodology described in the manual on the IMCI health facility survey prepared by WHO[8] and revised by the Regional Office based on survey experience. The final instruments are shown in the Appendix. Survey procedures agreed upon with the planning team are described below in detail and in § 3.7.

Two types of data were collected, as described below: *quantitative* and *qualitative*.

3.4.1 Quantitative data

Quantitative data were collected by a re-designed enrolment form and four other forms (see Appendix). These forms were carefully reviewed, adapted to the country situation and programme needs, and tested during the survey planning phase. Country-specific instructions on procedures and questions ('Question-by-question explanations and survey procedures') were revised to reflect all adaptations, serve as the basis for surveyor training and guide surveyors' fieldwork during the survey proper. The following forms were used:

EC: Enrolment form
Form 1: Observation of health facility provider's management of a sick child
Form 2: Exit interview with the caretaker of the sick child
Form 3: Re-examination of the sick child by a surveyor
Form 4: Assessment of facilities, services and supplies.

The main changes introduced in the forms are briefly described below.

- *Enrolment card*: The following criteria for enrolment of children in the survey were reported on the enrolment card to be completed by the supervisor:

  - Age (children 2 months up to 5 years old[9])
  - Complaint
  - Initial visit (i.e. repeat, follow-up visits were excluded).

  The enrolment card, as revised and re-designed by the Regional Office and adapted to this survey, has become a true form containing key information not only on the enrolment of children in the survey but also on some key aspects of care-seeking behaviour (local

[8] *Health facility survey for integrated child health services*, Geneva, WHO, 2002
[9] See footnote (1)

terminology for major illness entities and symptoms, such as fast and difficult breathing, delay in care-seeking since the appearance of key respiratory signs, and signs triggering the care-seeking process).

- *Observation of case management (Form 1)*: Further information on the health provider's IMCI training and follow-up after training was included in the form. The questions on case management in this survey aimed at collecting valuable information not only on whether a certain task was performed in a child by the health provider ('quantity'), but also on 'how' the task was carried out ('quality') and 'who' performed it (organization of work for taking the weight and temperature, checking the weight against the growth chart, assessing feeding practices). For selected tasks, information on the health provider's conclusion on an assessment task or the presence of certain signs was also recorded (respiratory rate, skin pinch, palmar pallor). Given the concern on malnutrition, the section on feeding assessment was given due attention and expanded. 'Eye infections' and 'skin problems' were pre-listed under 'other problems' to standardize the collection of information on these conditions, which in some settings are common causes of consultation at outpatient health facilities.

- *Exit interview (Form 2)*: A few questions on caretaker recall of the home care messages in Form 2 were added and harmonized with the observation of counselling on home care in Form 1, to enable relational analysis. A section relating to the use of the 'IMCI mother counselling card' to assess health provider communication skills and a short section on costs related to transportation to reach the facility were added.

- *Equipment and supply (Form 4)*: A short section was added on outreach, mobile services ('*équipe mobile*'), given the important role they are perceived to play in the provision of health care in Morocco. Another section was initially proposed on utilization of services by children under 5 years before and after the introduction of IMCI in each facility surveyed. However, the testing of forms showed the difficulty in retrieving the information required and the proposed section had to be excluded.

As mentioned above, the adapted forms were tested in a health facility in Rabat by the survey planning team on 15 March 2007. A few changes were suggested as a result of the testing and introduced in the forms on the same day.

3.4.2 Qualitative data

Qualitative data reflected surveyors' observations during the survey and the outcome of discussions with health facility staff during the feedback meeting at the end of each visit, that would otherwise have been missed in the other survey forms. This information was recorded on a separate form for each facility surveyed and used as an additional resource in data analysis to assist in the interpretation of the quantitative data. This form pre-listed a number of items on issues related to organization of work at health facilities, medicines (e.g. procurement, uninterrupted supply), referral, utilization of services, routine reporting and constraints to implementing IMCI. It also left room for any other relevant observation by the survey team.

3.5 ETHICAL CONSIDERATIONS

This survey, as the previous study carried out in April 2000, was considered an 'evaluation' rather than 'research' and as such it was reported not to require prior approval by the research committee on ethics in Morocco.

In any case, before enrolment in the survey, all caretakers were informed of the objectives of the survey, asked for their consent and reassured of the possibility of opting out at any time. It should be noted that the survey methodology did not involve any invasive procedures and was designed to ensure that no delay in the management of a sick child would occur as a result of the participation in the survey itself. As a measure of precaution, it was decided that children in coma or unconscious would immediately be attended to, managed by the health facility physician as required and excluded from the survey. As all children enrolled in the survey were re-examined by

an experienced physician from the survey team, this further contributed to providing good care to these children.

3.6 SELECTION AND TRAINING OF SURVEYORS AND SUPERVISORS

3.6.1 Selection criteria

A total of 16 surveyors, 5 supervisors and the survey coordinator participated in the survey (see § 3.7). The criteria chosen to select supervisors and surveyors were based on the following requirements: to be very familiar with the national IMCI guidelines and have excellent clinical skills and good field experience, with substantial exposure to, and involvement in, IMCI. The members of the survey teams were therefore selected among staff:

- Trained in a standard IMCI clinical course (supervisors and surveyors)
- Trained in IMCI facilitation skills (supervisors and surveyors)
- Trainers in IMCI (supervisors and surveyors)
- Trained in conducting follow-up visits after IMCI training (supervisors and possibly also surveyors)
- Involved in IMCI follow-up visits (supervisors and possibly also surveyors), and
- With previous survey experience (optional for both supervisors and surveyors).

3.6.2 Surveyor training

Surveyors and supervisors participated in a 45-hour 'surveyor training' from 28 November to 2 November 2007, with WHO facilitation (Annex 11). Training included: a) presentation and explanation of all forms, with classroom practice by extensive use of examples, reinforced by drills and role-plays and followed by active discussions; and b) practice with real cases in small groups in a busy health facility in Rabat not included in the sample. Practice at the health centre was conducted in two steps: first, demonstration (simulation), with a supervisor examining a real case and all the trainees observing and filling in Form 1 at the same time; and, then, surveyors' observation of hospital staff's management of actual cases, interview with the child caretaker, independent re-examination of the same child and assessment of facility support. Each practice session was followed by a review in small groups of the forms completed by the trainees. On the last day, a session was held to summarize all procedures and instructions using drills, with focus on those items that had caused more difficulties during practice. The manual with survey rules to complete the forms and on procedures was adapted to reflect the requirements of this survey and translated into French; it served as the guide to training, to standardize the survey methodology and surveyors' fieldwork. Reliability checks conducted during training to assess inter-surveyor agreement, yielded rates of 90% or more of agreement. Participants' evaluation of training was positive.

3.7 DATA COLLECTION

Field-work to collect data in the selected 45 facilities located in 19 provinces started on 5 November 2007 and continued for two weeks. It was carried out by five teams, four of which comprised three surveyors and one supervisor and one of which comprised four surveyors and one supervisor to survey facilities with a high case-load, with a total of 21 persons (Annex 12). Each team covered one facility each per day; additional time (three days per team) was allocated to account for internal travel to facilities located far apart from each other in different districts. The itinerary of each team is shown in Annex 13.

The procedures on data collection at each facility are illustrated in Annex 14. At each facility visited, the supervisor identified and, after obtaining caretaker's informed consent, enrolled children aged 2 months up to five years old taken to the facility on that day[10]. To standardize

[10] For ethical reasons, it was agreed that any child found by the supervisor to be 'unconscious' or in 'coma' would not be enrolled in the survey but would be urgently referred. If a child had any other confirmed severe condition requiring urgent referral, the exit interview with the caretaker would be skipped, to avoid delays in care.

procedures in all facilities and facilitate the holding of a meeting with facility staff at the end of the visit, only children seen by the health provider by 2.30 p.m. were enrolled in the survey. This period covered peak clinic hours in virtually all the facilities. One of the surveyors (‘*observateur’*) observed the management of these children performed by facility staff [Form 1]. In busy facilities with more than a health provider, a second surveyor helped in this task, observing case management in parallel, to reduce caretakers’ waiting time. Soon after each child had been managed, another surveyor (‘*validateur’*) interviewed the child caretaker in a separate place [‘exit interview’ Form 2], to assess her level of satisfaction with the care provided and her understanding of the advice just received on antibiotic use and/or home care. The same or another surveyor then examined the child independently, so that it would be possible later on to check health providers’ findings on each case against the surveyor’s findings (‘gold standard’) [Form 3]. Finally, the supervisor supervised the surveyors and collected information on facility services, facility staff’s IMCI training status, quality of supervision, case-load, outreach services, availability of antibiotics and other medicines needed for IMCI, and other supply and basic equipment and materials [Form 4]. At the end of the visit, feedback was provided to, and comments were discussed with, the staff of each facility and summarized together with other observations of the survey team on a separate open-ended form [Observation sheet].

3.8 DATA MANAGEMENT: DATA ENTRY, CLEANING AND ANALYSIS

Data were managed as follows:

- All forms were checked in the field by each supervisor during data collection.
- Arrangements were made to collect the forms from the field during fieldwork, so that data entry could already start from the third day of data collection when the first forms started reaching the central level.
- Forms were then cross-checked again at the Ministry of Health in Rabat by at least one person (survey coordinator or data entry supervisor) independently.
- Next, the data were entered into a computer program using EpiInfo Version 6.04d[11] by three two-member data entry teams at the Ministry of Health, Rabat, under the supervision of the data entry supervisor. The first team entered Form 1, the second team entered Form 2 and Form 3 and the third team entered Form 4. This approach helped to standardize and speed up data entry and reduce errors, as it had appeared clearly during planning that re-entering all the data independently (duplicate data entry) would not be feasible because of budget and time constraints. Data entry files were designed to enable to export the data set to other programs than EpiInfo (e.g. SPSS, SAS) for further analysis by local institutions if so desired.
- A data entry validation programme, revised and tested by the Regional Office to reflect the adaptations made in the forms, facilitated the data entry process and further helped detect and correct inconsistent data. The program had been designed also to create unique codes for each child in each file automatically, to enable all forms to be related to each other during the analysis.
- The data entered were further checked through a set of programs prepared to carry out cross-checks to detect potential inconsistencies as part of the data cleaning process and during the preparation of data summary tables.

Thus, quality control was ensured before, during and after data entry. Qualitative information, i.e. surveyors’ observations and health providers’ comments during the visit, were summarized to assist in the interpretation of the quantitative data and formulation of recommendations to improve child care at health facilities in the future. All the information collected was then analysed, presented in tables and graphs, reviewed and discussed by an analysis team at central level, including a meeting focused on findings on health systems with staff from different directorates of the Ministry of Health (Annex 15). 95% confidence intervals, provided in

[11] *Epi Info, Version 6.04d: A word processing, database and statistics program for epidemiology on microcomputers*, Centers for Disease Control and Prevention, Atlanta, Georgia, U.S.A. in collaboration with the Global Programme on AIDS, World Health Organization (WHO), Geneva, Switzerland, October 1997.

this report for the main indicators and for stratified analysis, were calculated on weighted data using the *Csample* facility of EpiInfo[12] for cluster sample analysis.

3.9 NATIONAL FEEDBACK MEETING

Major survey findings, conclusions and recommendations and their implications for future planning in the area of child health were presented at a national meeting in Rabat at the end of the survey, on 12 December 2007 (Annex 16). Forty-one people attended, including directors of the Ministry of Health directorates and heads of services, IMCI focal points from several provinces, staff from a medical school, Medicus Mundi Andalucia and WHO.

[12] See footnote (11)

4. FINDINGS

This section of the report presents the main findings of the survey. These findings are interpreted based on the background and reference documents reviewed and group discussions held at health facility and national level. A summary of results related to the generic list of WHO priority indicators and supplemental measures, with their definitions, is given in Annex 17. Detailed and additional findings are presented in tables and graphs in Annex 18.

4.1 SAMPLE CHARACTERISTICS

4.1.1 Characteristics of cases observed and of their caretakers

Forty-five (45) health centres were visited, located in 19 provinces implementing the IMCI strategy. The management of 397 children aged 2 months up to 5 years was observed. A total of 391 exit interviews with their caretakers was carried out and all 45 facilities were checked for health system support. Details of sample characteristics by residence are shown in Tables 3, 4 and 5.

Age More than half (57%) of the children enrolled and managed were under 2 years old, while all the six children classified as having a severe condition needing urgent referral were below three years old (Table 3).

Gender In rural facilities a statistically significantly higher proportion of children seen—almost two thirds—was male children (Table 3); the rate was higher especially in children less than 2 years old. It would be worthy investigating the reasons behind this higher care-seeking pattern from rural primary health care facilities for young male children than female children as observed in this sample.

Caretakers The large majority of caretakers accompanying the sick children recruited on the day of the visit was female (96%) and mothers of the children (89%). This represents an opportunity for maternal care, especially if the child has a mild condition and the consultation for the child requires less time. As many as 45% of the caretakers had no education, i.e. they were unable to read and write (Table 3). This rate is similar to the one reported in the general population [12]. The proportion was much higher, with a statistically significant difference, among caretakers of children seen in rural (68%) than urban facilities (40%) (Table 3). This finding has practical implications when designing health education materials and communication interventions on childcare in Morocco, as these would need to be preferably in the form of illustrations rather than text to be clearly understood by illiterate mothers, especially in rural areas where under-5 mortality rates and the needs for health care are higher. Furthermore, as reported in § 2.2, under-5 children of illiterate mothers carry a much higher risk of dying than children of mothers of secondary or higher education.

Providers All children enrolled were managed by a physician by definition. Nurses often performed selected tasks, which are described more in detail in § 4.3.2.

Training A little less than half (45%) of children enrolled in the survey was managed by health providers who had received follow-up visits after they had been trained in IMCI (Table 4). Follow-up visits are carried out as an integral part of IMCI training and have the objective of reinforcing trainees' skills in their working environment and strengthening those elements of the health system necessary to support the deliver of quality care. To be more effective, however, these follow-up visits should be carried out within 4–6 weeks after training. Despite the rate of follow-up described above, only about one child in 15 (7%) was seen by a provider who had received a follow-up visit within 2 months of IMCI training. It is possible that by then, in the absence of support, practices might tend to revert to the way they were before training.

Table 3. Sample characteristics by residence

Characteristics	Urban	Rural	Total
Health facilities surveyed	**29** (64.4%)	**16** (35.6%)	**45**
Children observed	**325** (81.9%)	**72** (18.1%)	**397**
Sex			
Girls	167 (51.4%)[a]	27 (37.5%)[a]	194 (48.9%)
Boys	158 (48.6%)	45 (62.5%)	203 (51.1%)
Age (both sexes)	***n* = 325**	***n* = 72**	***n* = 397**
<1 year (2–11 months)	91 (28.0%)	24 (33.3%)	115 (29.0%)
1 year (12–23 months)	91 (28.0%)	20 (27.8%)	111 (28.0%)
2 years (24–35 months)	45 (13.8%)	16 (22.2%)	61 (15.4%)
3 years (36–47 months)	45 (13.8%)	6 (8.3%)	51 (12.8%)
4 years (48–59 months)	53 (16.3%)	6 (8.3%)	59 (14.9%)
Average time of examination per case observed:			
Range (min–max)	2–60 minutes	6–42 minutes	2–60 minutes
Median	11 minutes	15 minutes	12 minutes
Mode	5 minutes	15 minutes	5 minutes
Caretakers (interviewed)[b]	***n* = 320**	***n* = 71**	***n* = 391**
Sex			
Female	314 (98.1%)	62 (87.3%)	376 (96.2%)
Male	6 (1.9%)	9 (12.7%)	15 (3.8%)
Relationship			
Mother	291 (90.9%)	58 (81.7%)	349 (89.3%)
Father	6 (1.9%)	8 (11.3%)	14 (3.6%)
Other	23 (7.2%)	5 (7.0%)	28 (7.1%)
Education level			
None	128 (40.0%)[c]	48 (67.6%)[c]	176 (45.0%)
Primary	87 (27.2%)	18 (25.4%)	105 (26.8%)
Secondary	84 (26.2%)	3 (4.2%)	87 (22.3%)
Higher	21 (6.6%)	2 (2.8%)	23 (5.9%)

[a] 95% confidence interval: urban facilities: 47.0 to 55.7; rural facilities: 30.6 to 44.4
[b] Interviews conducted with caretakers of 391 children not needing urgent referral
[c] 95% confidence interval: urban facilities: 34.1 to 46.5; rural facilities: 55.6 to 80.5

Visit length The average (median) time of examination per case observed was 11 minutes, ranging from 2 to 60 minutes, with the tendency to be longer in rural facilities (Table 3). In some settings, visit length has recently been proposed as a quality indicator in primary care, although the complexity of the case, facility case-load, provider's experience and organization of work at the facility are some of the factors which influence it[13,14]. The presence of the surveyor observing the health provider managing a child is also likely to make the provider examine the child more carefully and increase the duration of the consultation during a survey.

Residence Almost two thirds (64%) of health facilities surveyed were urban facilities (see §3.2.3). However, since urban facilities usually had a higher case-load than rural facilities, only 72 (18%) of the 397 children enrolled in the survey were seen in rural facilities. Therefore, the performance of urban health centres tends to influence the overall results of this survey.

[13] Druss, B, Mechanic D, Should visit length be used as a quality indicator in primary care?, *The Lancet* 2003, 361:1148.
[14] Wilson A, Childs S., The relationship between consultation length, process and outcomes in general practice: a systematic review, *British Journal of General Practice* 2002, 52:1012-20

Table 4. Sample characteristics: cases seen, by provider's training status and residence

Characteristics	Urban	Rural	Total
Cases managed by IMCI-trained doctors:	***n* = 325**	***n* = 72**	***n* = 397**
Female	195 (60.0%)	23 (31.9%)	218 (54.9%)
Male	130 (40.0%)	49 (68.1%)	179 (45.1%)
Cases managed by:	***n* = 323** [1]	***n* =72**	***n* = 395** [a]
Doctors trained in IMCI within the past 3 years	235 (72.8%)	72 (100%)	307 (77.7%)
Doctors trained in:			
12-day IMCI course	23 (7.1%)	0 (0.0%)	23 (5.8%)
10-day IMCI course	51 (15.7%)	8 (11.1%)	59 (14.9%)
7-day IMCI course	251 (77.2%)	64 (88.9%)	315 (79.3%)
Doctors followed up after IMCI training	140 (43.1%)	39 (54.2%)	179 (45.1%)
Doctors followed up within 2 months of IMCI training	24 (7.4%)	2 (2.8%)	26 (6.6%)

[a] Missing information on training status for the management of two children

4.1.2 Patterns of illness

The pattern of illness of children enrolled in the survey based on surveyor's examination is shown in Table 5. A child on average had 1.7 'IMCI conditions'; one child in five (20%) had 3 or more 'IMCI classifications'. More than half of children (57%) had an acute respiratory (ARI) condition, 62% were febrile or had a history of fever, a fifth of children (21%) had diarrhoea, 8% had an ear problem and the same percentage (8%) had a throat problem (Fig. 5). When looking at the conditions by severity, only 32% of children had a condition requiring treatment[15], with no difference between urban and rural areas[16] (Table 5; Fig. 6); non-severe conditions requiring action by a qualified health provider—e.g., antibiotics, oral rehydration salts—are those expected to be seen and managed commonly at primary health care level. Fifteen percent (15%) of the children with ARI had pneumonia or severe pneumonia[17], while wheezing was identified in just 1% of cases. The percentages of children with diarrhoea who had dehydration or persistent diarrhoea were also low (4% and 5%, respectively), while only one child had dysentery[18]. Six children had measles. Eye infections—defined as the presence of pus draining from the eye—and skin problems were found in 5% and 21% of children, respectively. Interestingly, 61% of the 52 children who did not have an 'IMCI condition' (i.e., a condition specifically addressed in the IMCI guidelines) had a skin problem. Four percent (4%) of all children were low weight-for-age (< 2 SD) and 7% had anaemia. These rates are way below those found in the general under-5 population in the community while one would expect the opposite, with more concentration of these conditions in the population of sick children seen at health centres.

[15] For the purpose of this analysis, the following conditions were included: presence of danger signs, severe or non-severe pneumonia, wheezing, diarrhoea with severe or some dehydration, severe persistent diarrhoea, dysentery, streptococcal sore throat, mastoiditis, acute or chronic ear infection, 'very severe febrile disease' or 'fever–possible bacterial infection', measles with eye/mouth complications, severe or non-severe anaemia, severe malnutrition, low weight-for-age.

[16] The percentage of children with IMCI conditions requiring treatment or urgent referral in a similar survey conducted on 364 children in Sudan (2003) was 52%.

[17] The percentage of the children with ARI who had pneumonia or severe pneumonia in the survey in Sudan was 28%.

[18] This was not a diarrhoea peak season.

Table 5. Sample characteristics by residence: classification of cases enrolled according to surveyor's re-examination findings

Classifications[a] Cases observed for management[b]	Urban *n* = 325	Rural *n* = 72	Total *n* = 397
Acute respiratory infection	187[d] (57.5%)	41 (56.9%)	228[d] (57.4%)
Severe pneumonia/very severe disease	3 (0.9%)	0 (0.0%)	3 (0.8%)
Pneumonia	25 (7.7%)	7 (9.7%)	32 (8.1%)
No pneumonia (cough or cold)	156 (48.0%)	34 (47.2%)	190 (47.9%)
Wheezing[c, d]	6[d] (1.8%)	0 (0.0%)	6[d] (1.5%)
Diarrhoeal diseases	67 (20.6%)	15 (20.8%)	82 (20.7%)
Diarrhoea with severe dehydration	0 (0.0%)	1 (1.4%)	1 (0.3%)
Diarrhoea with some dehydration	2 (0.6%)	0 (0.0%)	2 (0.5%)
Diarrhoea with no dehydration	65 (20.0%)	14 (19.4%)	79 (19.9%)
Severe persistent diarrhoea	1 (0.3%)	0 (0.0%)	1 (0.3%)
Persistent diarrhoea	4 (1.2%)	0 (0.0%)	4 (1.0%)
Dysentery	1 (0.3%)	0 (0.0%)	1 (0.3%)
Fever	203 (62.5%)	44 (61.1%)	247 (62.2%)
Very severe febrile disease	0 (0.0%)	0 (0.0%)	0 (0.0%)
Possible bacterial infection	58 (17.8%)	13 (18.1%)	71 (17.9%)
Bacterial infection unlikely	145 (44.6%)	31 (43.1%)	176 (44.3%)
Measles	5 (1.5%)	1 (1.4%)	6 (1.5%)
Measles with eye/mouth complications	0 (0.0%)	1 (1.4%)	1 (0.3%)
Measles	5 (1.5%)	0 (0.0%)	5 (1.3%)
Throat problem			
Streptococcal sore throat	28 (8.6%)	5 (6.9%)	33 (8.3%)
No streptococcal sore throat	297 (91.4%)	67 (93.1%)	364 (91.7%)
Ear problem	26 (8.0%)	7 (9.7%)	33 (8.3%)
Mastoiditis	0 (0.0%)	0 (0.0%)	0 (0.0%)
Acute ear infection	17 (5.2%)	4 (5.6%)	21 (5.3%)
Chronic ear infection	0 (0.0%)	0 (0.0%)	0 (0.0%)
No ear infection	9 (2.8%)	3 (4.2%)	12 (3.0%)
Severe malnutrition	1 (0.3%)	0 (0.0%)	1 (0.3%)
Low weight	10 (3.1%)	7 (9.7%)	17 (4.3%)
Not low weight	314 (96.6%)	65 (90.3%)	379 (95.4%)
Severe anaemia	0 (0.0%)	0 (0.0%)	0 (0.0%)
Anaemia	25 (7.7%)	4 (5.6%)	29 (7.3%)
No anaemia	300 (92.3%)	68 (94.4%)	368 (92.7%)
Eye infection	17 (5.2%)	5 (6.9%)	22 (5.5%)
Skin problems	69 (21.2%)	15 (20.8%)	84 (21.2%)
Feeding problems	153 (47.1%)	45 (62.5%)	198 (49.9%)
Children with IMCI conditions requiring treatment or urgent referral ('yellow' and 'red' row classifications of the IMCI chart)	103 (31.7%)	23 (31.9%)	126 (31.7%)

Note: Items in *italics* are IMCI classifications.

[a] A child may have more than one classification. Data in this table are unweighted.

[b] According to surveyor classification ('gold standard'). The distribution of classifications refers to the month in which the survey was conducted, which is usually a low season for such conditions as diarrhoeal diseases.

[c] Children with wheezing are first given a rapid-acting bronchodilator and then re-assessed 20 minutes later; if symptoms persist, another dose is given before classifying the child after 40 minutes.

[d] Three of the 6 children with wheezing had also another ARI classification and are therefore counted only once in the total of ARI cases (187 cases instead of 200 for urban facilities and 228 instead of 231 for total).

All the 6 children requiring urgent referral (1.5%) were children less than 3 years old

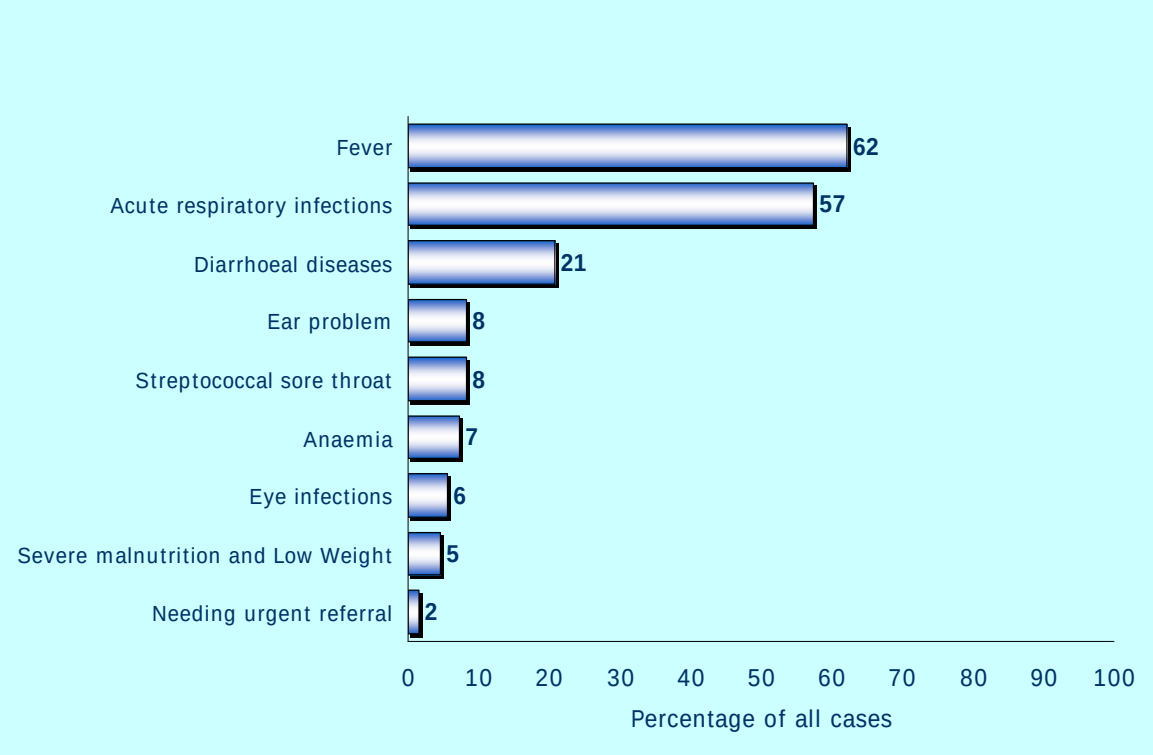


Fig. 5. Distribution of main conditions in the sample (*n* = 397)

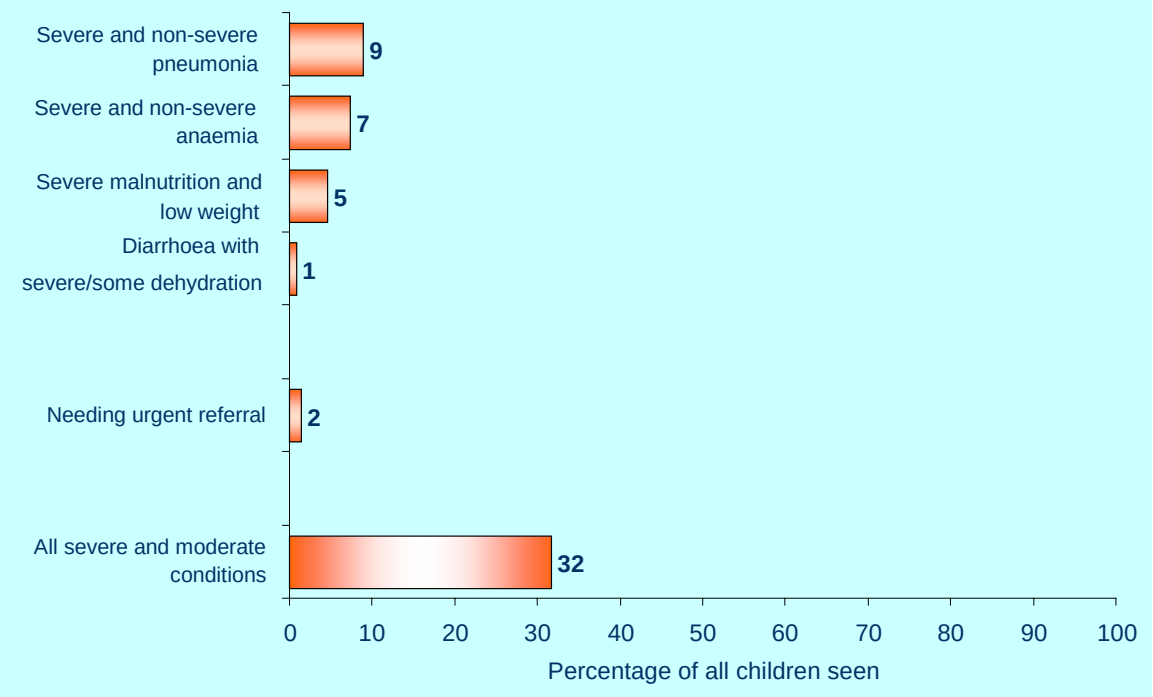


Fig. 6. Distribution of selected severe and moderate conditions in the sample (*n* = 397)

Only 6 (1.5%) children enrolled in the survey had a *severe* condition requiring urgent referral. Given the under-5 mortality rate in Morocco and the fact that pneumonia and diarrhoea are the reported leading causes of death in these children, the data above when interpreted together with other information from this survey and other sources would suggest a possible sub-optimal utilization of primary health care services for the conditions which would be expected to require

them most. Low utilization of public health centres has been reported in Morocco, with rates in rural areas being half of those in urban areas[19]. However, only a community survey investigating care-seeking patterns for young children could confirm this interpretation, which could be due to a number of factors, including among others caretaker inadequate knowledge about when to seek care (see § 4.2.3.7), limited access to primary health care services—especially in rural areas where a higher proportion of under-5 deaths occur (see § 4.3.9), quality of primary health care services (§ 4.3.4) and caretaker satisfaction level with services (see § 4.3.1), and care-seeking from other sources. If some of these children were taken to hospitals directly, hence using hospitals as if they were outpatient facilities such as health centres, then this would raise the issue of optimal use of resources. However, not only does the rural population have more difficult access to health centres than the urban population in Morocco, it has even more difficult access to hospitals [12]. Unfortunately, it was not feasible to collect data to document patterns of utilization of child health care services over the years, to see whether any changes had occurred before and after the introduction of IMCI in each of the facilities surveyed, as this meant retrieving data from many years before and these were not readily available.

4.1.3 Relationship of caretakers' report of fast or difficult breathing with pneumonia and care-seeking

Difficult breathing, fast breathing or 'pneumonia' (referred to in this paragraph as 'breathing problems' all together) were spontaneously reported by caretakers in 37 (16%) of the 228 children who had an acute respiratory condition. Although the survey was not an ethnographic study designed to identify the local terminology used by caretakers to refer to 'breathing problems', the relationship of caretakers' report of breathing problems with pneumonia or severe pneumonia was briefly reviewed (Annex 18, Table A1 and A2[20]). In fact, these surveys offer the unique opportunity of comparing the local term used by caretakers with the actual illness of the child examined by the surveyor (medical classification). One of the key home care messages for families, promoted first by the ARI[21] control programme and then by IMCI, is for families to seek care promptly from an adequate health provider if a sick child develops a breathing problem. In this survey, caretakers reported a breathing problem only in 10 (29%) of the 35 children classified by the surveyors as having pneumonia or severe pneumonia (low *sensitivity*), although all of them had by definition an increased respiratory rate and/or chest in-drawing on examination (Table A1)[22]. The *specificity* was somewhat higher (86%): if caretakers did not report breathing problems, their children were then less likely to have pneumonia. Examining whether caretaker's report of breathing problems had a good predictive value for pneumonia or severe pneumonia, it was found that about a quarter (27%) of the children with reported breathing problems actually had pneumonia or severe pneumonia (Table A2)[23]. Children with a breathing problem spontaneously reported by caretakers were 2 times more likely to have pneumonia or severe pneumonia than those in whom the symptom had not been reported. As the predictive value also depends on the prevalence of the disease in the population under study (children taken to health centres in this case), some care is needed in interpreting these results, especially if children with 'breathing problems' are taken straight to the hospital (only household surveys on care-seeking can provide this information). Thus, in this particular sample of children taken to a health centre and found to have pneumonia or severe pneumonia, most caretakers had either missed the breathing problem or simply not given particular importance to this sign alone. The local term most often used by caretakers was '*makhnouq*' (مخنوق), mentioned in 27 (73%) of the 37 cases in which a breathing problem was reported. The breathing problem was the symptom triggering care-seeking in 21

[19] 0.5 consultations per person per year at public health centres in 2002, with the rates being 0.6 in urban areas and 0.3 in rural areas [12].
[20] All tables starting with the letter A (e.g. Table A1) are available in Annex 18 of this report.
[21] ARI: acute respiratory infections.
[22] It should be noted that this sample consisted of children taken to a health facility, rather than children at home. The classification of cases as 'pneumonia' or 'severe pneumonia' was based on clinical signs such as general danger signs, chest indrawing and fast breathing.
[23] 27.0% was the *positive predictive value* for pneumonia or more severe illness of caretakers' report of fast or difficult breathing or pneumonia in this sample; the *negative predictive value* for absence of pneumonia or more severe illness of caretakers' not reporting breathing problems was 86.9%.

(57%) of these 37 cases, followed by cough in 43% of cases. In this survey, information was collected from 33 of the 37 caretakers who had spontaneously complained of a breathing problem in their child with ARI on how long they had waited before seeking care from this facility since the time they had realized the child had difficult breathing or a chest problem. Only 9% answered that they had taken the child within a day, while 27% had waited for 2 days and the remaining 64% for 3 or more days; the median time was 3 days[24]. Although caretakers might have consulted other sources of care first or may have delayed seeking advice because of reasons other than lack of knowledge, *the findings suggest that additional work needs to be done to improve family care-seeking practices for children with ARI in Morocco*. Data from the recently conducted Multiple-Indicator Cluster Survey (MICS) may provide some information on this aspect of care, once they become available, although a care-seeking study would appear to be still appropriate.

4.2 QUALITY OF CLINICAL CARE

A summary of results on selected indicators on the quality of clinical care is shown in Table 6. The next sections present the findings on the key components of case management in detail, namely assessment, classification, treatment and counselling, to describe the quality of integrated care that children received at health facilities. Confidence limits are given for the main indicators. It is acknowledged that compound performance indicators, largely used in this analysis, are very demanding as they require compliance with each of the individual indicators of which they consist. The analysis therefore provides information also on each individual indicator to highlight where the specific performance issue may lie.

4.2.1 Assessment

The guidelines on integrated child health care (IMCI) require that a number of key assessment tasks should be performed in any sick child, irrespective of the specific complaint. This helps identify conditions that are not reported by the caretaker. To measure how complete the assessment that each child received was, an *index of integrated assessment* was used in the analysis. The index consists of many key tasks and gives equal weight to each task done (score per task done = 1): it is expressed as the mean of the number of tasks performed in each child (out of those that should have been performed). The ten assessment tasks of the WHO index are: child checked for three danger signs (1,2,3), checked for the three main symptoms (4,5,6), child weighed (7) and weight checked against a growth chart (8), child checked for palmar pallor (9) and for vaccination status (10). This index is preferred to compound indicators as the latter result just in a 'yes' answer for the indicator if all and only all component tasks of which it consists are done: even if only one task is missed out of many, the compound indicator would result in a 'no' answer. This prevents documentation of changes in some of the compound indicators' component tasks in future. The index of integrated assessment, instead, enables follow-up of improvements in care and progress over time, taking into account each of the tasks of which it consists: the higher the number of tasks performed, the higher the index. It also allows comparisons with other surveys in different countries.

[24] The median was 2 days for the group of 8 children who did have pneumonia as assessed by the surveyor. In this group, 5 (62%) of the 8 caretakers who reported a breathing problem in their child had sought care from this health centre within 2 days.

Table 6. Summary table on selected indicators on the quality of clinical care[a]

Quality of clinical care: tasks	Findings	Confidence intervals
❖ **Assessment**		
• Index of integrated assessment (mean of the 10 main assessment tasks)	7.7	(7.1 - 8.3)
• Children below 2 years old and those with low weight and/or anaemia and/or persistent diarrhoea assessed for feeding practices	54.8%	(45.2 - 64.5)
❖ **Classification**		
• Agreement between provider's and surveyor's classifications of the conditions related to the three main symptoms of cough or difficult breathing, diarrhoea and fever requiring urgent referral, treatment or specific counselling	76.6%	(72.0 - 81.1)
❖ **Treatment and advice**		
• Severe cases correctly managed	1 out of 6	--
• Children needing an oral antibiotic for an IMCI condition prescribed a recommended antibiotic correctly	30.9%	--
• Children not needing antibiotics leaving the facility without antibiotics	76.4%	(69.3 - 83.5)
• Children needing vaccinations who leave the facility with all needed vaccinations or advice on when to come back for scheduled vaccination session	88.6%	(74.7 - 102.5)
• Children prescribed oral antibiotic and/or oral rehydration salts (ORS) whose caretakers knew how to give the treatment before leaving the facility:		
– Antibiotic	27.0%	(14.1 - 39.8)
– ORS	16.4%	(7.5 - 25.7)
• Children whose caretakers were advised to give extra fluids and continued feeding during the child illness	44.0%	(33.6 - 54.6)
• Children whose caretakers knew all the three home care rules before leaving the facility	13.8%	(6.0 - 21.8)
• Proportion of children less than 2 years old and those with low weight-for-age and/or anaemia and/or persistent diarrhoea whose caretakers were given age-appropriate feeding advice	25.5%	--

[a] For definitions, see text and tables in annexes.

Note on results: Rather than describe health providers' '*practices*', the survey results provide some information on providers' '*skills*'. Health providers knew that they were being observed by the surveyor; therefore, what they did may not necessarily reflect what they would do under routine circumstances (i.e. their routine practices). However, if they carried out a task and did it correctly while being observed, this would indicate at least that they would have the skills to do that task properly. The IMCI chart was consulted by the providers in two thirds (68%) of the cases observed.

❖ *Index of integrated assessment* (Fig. 7): the index was 7.7, meaning a mean of 7.7 assessment tasks were performed on average in each child out of 10 tasks to be performed. Apart from the index, the tasks which were often missed in the assessment of a child were those related to the clinical assessment of severe malnutrition, namely checking for visible wasting and presence of oedema of both feet, possibly because of the rarity of this condition observed at health centres in Morocco. Interestingly, the index was 1.5 lower for children assessed in urban facilities (7.4 out of 10) than in rural facilities (8.9 out of 10)[25, 26] (Fig. 8). It was also higher, although to a much less extent and without reaching statistical significance, for children seen by providers who had received a follow-up visit after IMCI training (8.1 out of 10) than those who had not (7.4 out of 10)[27].

[25] Difference of –1.5, 95% CI: –2.5 to –0.4. The 95% CIs for the index are: urban facilities: 8.1 to 9.7; rural facilities: 6.7 to 8.1. The complexity of cases, defined by the presence of conditions requiring treatment (labelled as 'pink' and ''yellow' in the IMCI chart), was similar in the two groups, although 5 of the 6 cases needing urgent referral were seen in urban areas.

[26] Although a higher percentage of children were seen by doctors who had received follow-up visits in rural areas (54.2%) than urban areas (43.1%), the difference in follow-up between the two areas is not statistically significant.

[27] Difference of 0.7, 95% CI: –0.3 to 1.8.

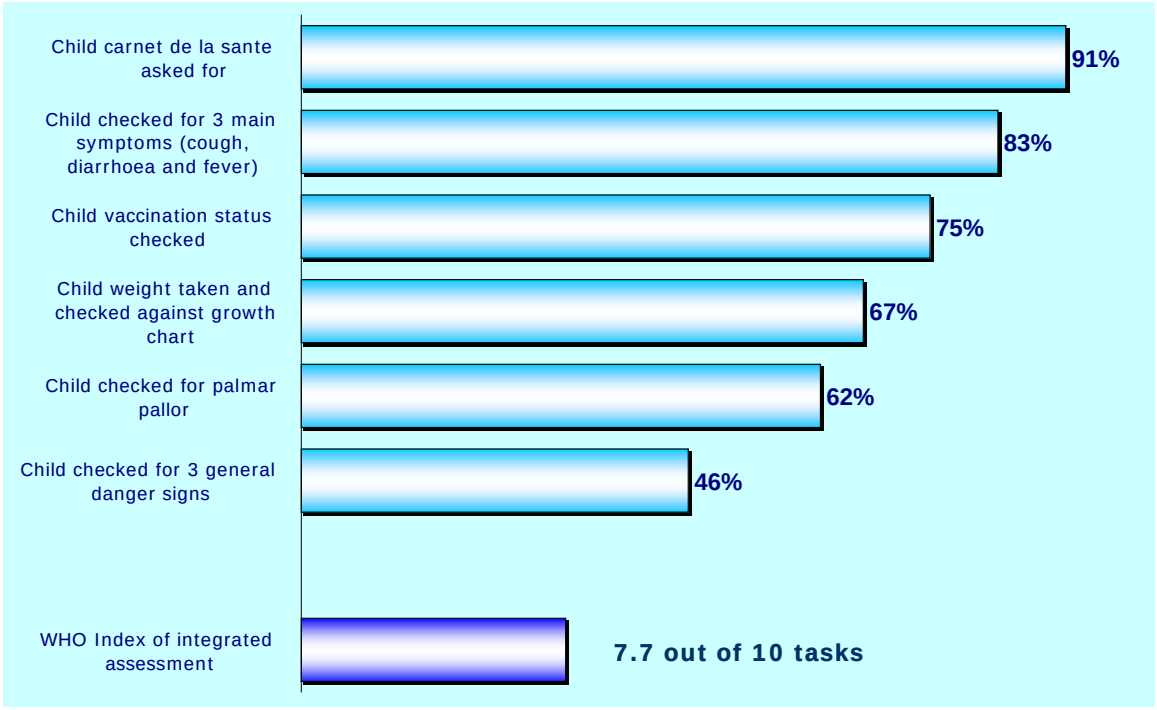


Fig. 7. Integrated assessment: main tasks and WHO index (*n* = 397)

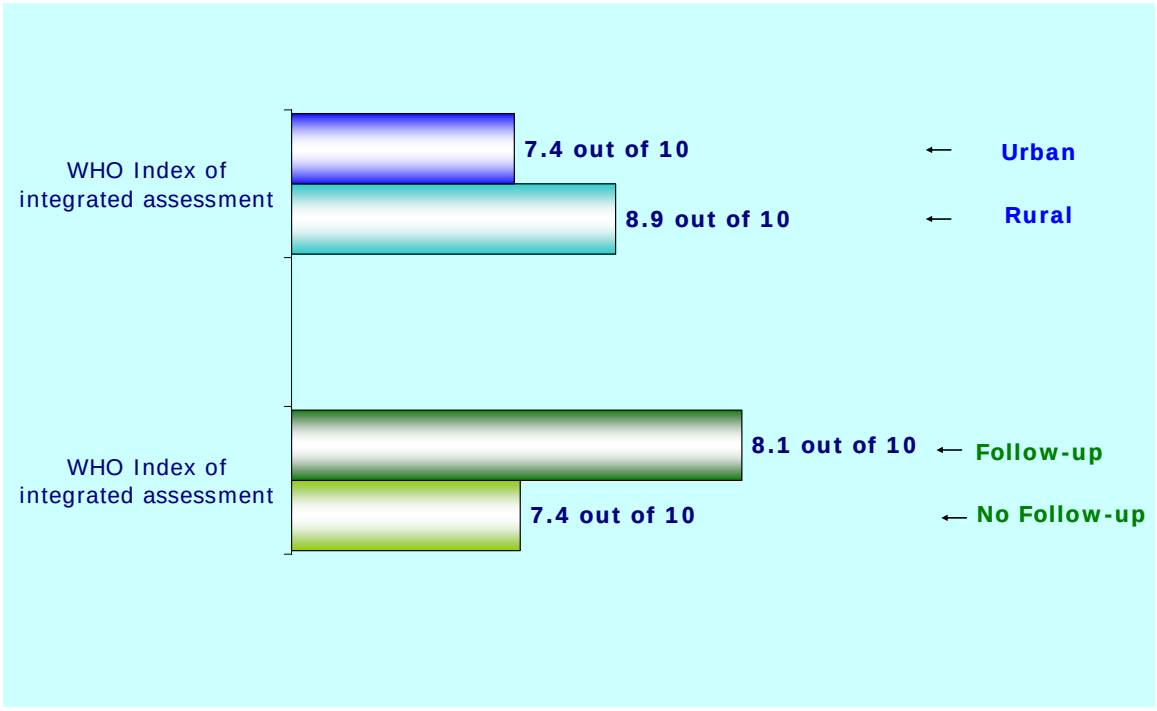


Fig. 8. WHO index of integrated assessment: urban versus rural areas and follow-up versus no follow-up

- An index of integrated assessment adjusted to Morocco was also considered, to include additional four tasks to the 10 of the WHO index, namely: temperature checked with thermometer (11) and child checked for the presence of ear problem (12), wasting (13) and oedema of both feet (14). The Moroccan index was 9.6 (9.6 tasks performed out of 14) (Table A3).

- *Assessment tasks* (Table A3): the tasks evaluated included the following:
  - **Taking weight and temperature**: the large majority of children was weighed (98%) and the weight was checked against the growth chart in two thirds (67%) of the children to determine the weight-for-age and classify the child according to it. The temperature was taken with the thermometer in two thirds (68%) of children. While weight and temperature were usually taken by the nurse (85% of cases in which they were taken), checking the weight against the growth chart was performed in the vast majority of cases by the physician (94%) (see also § 4.3.2).
  - **Checking vaccination status**: asking for the child's 'carnet de santé' (91%) and checking the child vaccination status (75%) to identify opportunities to provide the recommended vaccinations were also tasks commonly carried out.
  - **Checking for danger signs**: fewer than half (46%) of children were checked for the presence of the three general danger signs (inability to drink, vomiting everything and convulsions[28]) to detect cases with a very severe disease requiring urgent referral. One possible explanation is the pattern of cases commonly seen at health centres, mostly mild cases, with the physician losing the habit of including this systematically among the routine tasks, unless the child did look particularly sick. In fact, the only child who did have danger signs was assessed for them and correctly classified as a severe case to be urgently referred. Furthermore, all the 10 children (100%) who did not look alert were checked for lethargy or unconsciousness and 8 of them were checked also for all the other general danger signs to identify severe cases.
  - **Checking for main symptoms**: most children (83%) were systematically checked for the presence of the three main symptoms of cough, diarrhoea and fever, irrespective of the initial complaints, in order not to miss key and common conditions not reported spontaneously by caretakers.
  - **Checking for ear problem**: three quarters (76%) of children were checked for the presence of an ear problem.
  - **Checking throat**: while the child's throat was assessed systematically (96% of cases), lymph nodes were checked less often (56%), with both tasks then performed in about one child in two (55%).
  - **Checking for palmar pallor**: 62% of children were checked for the presence of palmar pallor, one of the signs usually not taught in medical schools and specifically introduced with IMCI in-service training.
  - **Checking for severe malnutrition**: Tasks that were performed much less frequently included: checking visible wasting (27%) and presence of oedema of both feet (20%), both aiming at detecting clinical severe malnutrition, a condition seen less commonly at health centres in Morocco nowadays.
  - **Checking for other problems**: What completes the IMCI protocol is checking for any other problems in the sick child: this task, which often tends to be overlooked in countries because it is less specific than the others, was instead accomplished in as many as 75% of children.

  Note: The value of the IMCI protocol of systematically checking a sick child for a number of common, key conditions, whether or not those are reported by the child caretaker, is clearly illustrated by the number of children in whom the provider detected a condition that the caretaker had not spontaneously reported. The surveyor identified 28 (34%) of the 88 children with diarrhoea in whom the caretakers had not reported diarrhoea as a complaint, 60 (26%) of the 228 children with ARI in whom caretakers had not reported cough or a breathing problem, and 75 (30%) of the

[28] This sign refers in this analysis to 'history of convulsions related to this episode of illness' and 'convulsing now'.

247 children with fever, 7 (21%) of the 33 children with streptococcal sore throat and 10 (30%) of the 33 children with an ear problem in whom the caretakers had not reported the problem (Fig. A3). These findings are similar to those found in previous surveys in Sudan and Egypt, further confirming the validity of the integrated child care (IMCI) guidelines when properly implemented for a more systematic examination of the sick child, not limited to the main complaint initially reported by the caretakers.

- *Feeding assessment* (Table A4): More than half (55%) of children under 2 years old or with low weight or anaemia or persistent diarrhoea not referred by the provider were assessed for feeding practices as recommended by the IMCI guidelines (including assessing breastfeeding for those less than 2 years old and complementary feeding and feeding changes during this episode of illness for all)[29]. All but one (94%) of 17 children two years old or older with anaemia, low weight or persistent diarrhoea had been misclassified by the provider as cases with no anaemia or not very low weight-for-age or no persistent diarrhoea; based on the provider's wrong classification, these children would not have required feeding assessment. When feeding practices were assessed, the assessment tended to be systematic, made it simpler by the clear instructions in the IMCI case recording form adapted in Morocco (Table A5). One of the most common feeding problems identified was the use of bottle-feeding, found in 47% of the children assessed (Table A6).

- *Quality of assessment and additional findings*: As part of the adaptation of the survey instrument, attention was paid in this survey to checking not only whether a certain number ('quantity') of key tasks was carried out for *any* sick child, but also how ('quality') they were performed and whether the provider conclusion on the assessment of certain signs matched the surveyor conclusion (Table A7).

  - **Weight and temperature** for all children: although the weight was taken and also recorded in the majority of children (95%), it was taken *correctly*[30] only in 14% of the cases (Fig. A7). The main reason beyond it is that children were often weighed with their clothes and shoes on. When taken, the temperature was taken with the thermometer *correctly*[31] in 60% of children. However, a thermometer was unavailable at the facility in 47% of the cases in whom the temperature was not taken. As taking the temperature and weight are routine tasks for nurses included in their basic pre-service training, they have not been the focus in IMCI training in Morocco to date and this explains why nurses trained in IMCI did not perform better than those not trained in IMCI (Fig. A8).
  - **Danger signs**, such as inability to drink or breastfeed and 'vomiting everything': these signs, when reported by the caretaker, were usually *correctly* checked by offering some water to the child. In the end, therefore, the presence of these two danger signs was correctly checked in 59% and 60% of children, respectively (see also 'Assessment tasks' above).
  - **History and respiratory rate** in children with cough or difficult breathing: duration of symptoms was asked in 88% of children and presence of a tuberculosis case in the family in 56% of children with ARI (Fig. A9). The respiratory rate was counted in almost three quarters (72%) of children with cough or difficult breathing and, when it was counted, it was counted with *correct methodology*[32] in 87% of cases. In this

[29] See definitions at bottom of Table A4. If the indicator is limited to children under 2 years of age, as proposed in the WHO general list of priority indicators for ease of calculation, the proportion of these children assessed for feeding in this survey rises slightly to 58%.
[30] Weight was considered as taken correctly if the child was weighed undressed or lightly clothed.
[31] Temperature was considered as taken correctly if the thermometer had been shaken first, then gently inserted in the child's rectum and kept in place for at least two minutes.
[32] The respiratory rate was considered as counted correctly if the child was calm and the count was for a full minute. The count was carried out in a calm child in 88% of cases and for a full minute in 98% of cases.

analysis, the counts were considered 'reliable'[33] in 53% of cases in which they were taken (Table A8). Ample differences in counts were found between the provider and the surveyor, ranging from–28 breaths/min. to +26 breaths/min. This analysis showed that 'unreliable' counts might directly have been responsible for providers' under-classifying as 'no pneumonia' 9 children who actually had fast breathing ('pneumonia') and over-classifying as 'pneumonia' 18 children with 'no pneumonia' (Table A8).

- **Wheezing** in children with cough or difficult breathing: in two thirds (68%) of children with cough and/or difficult breathing the provider leaned towards the child's mouth or chest to assess 'audible' wheezing.
- **History, offering water and skin pinch** in cases with diarrhoea: information on duration of the diarrhoea episode—necessary to distinguish acute from persistent diarrhoea cases—was asked in the large majority of cases (94%) and on presence of blood—to identify dysentery cases—in 78% of cases (Fig. A10). Offering the child something to drink to objectively check thirst was carried out in less than half (43%) of cases. In more than two thirds (71%) of children with diarrhoea the abdomen skin was pinched to check skin turgor. When the skin was pinched, the technique used was *correct*[34] in 78% of children[35]. Finally, the provider's conclusion on the assessment of skin turgor agreed with the surveyor's in 76% of cases in which the assessment was carried out[35].
- **History and checking both ears** in children with an ear problem: whether ear pain was present was asked in 26 (79%) of the 33 children with an ear problem (Fig. A11). Both ears and tender swelling behind the ear were checked in 67% and 61% of cases, respectively, with both tasks performed in 58% of children with an ear problem. Presence of ear discharge was asked in 73% of the children and, when reported, its duration was enquired from the caretakers in all cases.
- **History of fever and checking for measles**: duration of fever was asked in 79% of children with fever or history of fever and a history of measles within the last 3 months was checked in 53% of them (Fig. A11).
- **Palmar pallor**: when palmar pallor was looked for, the technique used was *correct* in 90% of cases and there was agreement of the provider's conclusion on the presence of palmar pallor with the surveyor's in 92% of children in whom the sign was checked (Fig. A12).
- **Oedema of both feet**: the sign was looked for in a minority of children (20%), rather than systematically. When it was checked, the technique was correct in 62% of cases in which it was performed (Fig. A12)[36].

[33] Exclusively for the purpose of this analysis, a count was considered 'reliable' if 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: about two-thirds of all counts would usually lie within this difference.

[34] Skin pinch was considered correctly performed if the abdomen skin was pinched halfway between the umbilicus and the side of abdomen, the skin was held firmly for one second between the thumb and the first finger and in line up and down the child's body.

[35] If the total number of children with diarrhoea is considered, rather than only those in whom the task was performed, as presented in Table A7, then the skin was pinched correctly in 54.9% of cases and there was agreement on the conclusion on the assessment of the skin pinch in 53.7% of cases.

[36] If the total number of children is considered, rather than only those in whom the task was performed, as presented in Table A7, then oedema of both feet was looked for correctly in 12.6% of cases.

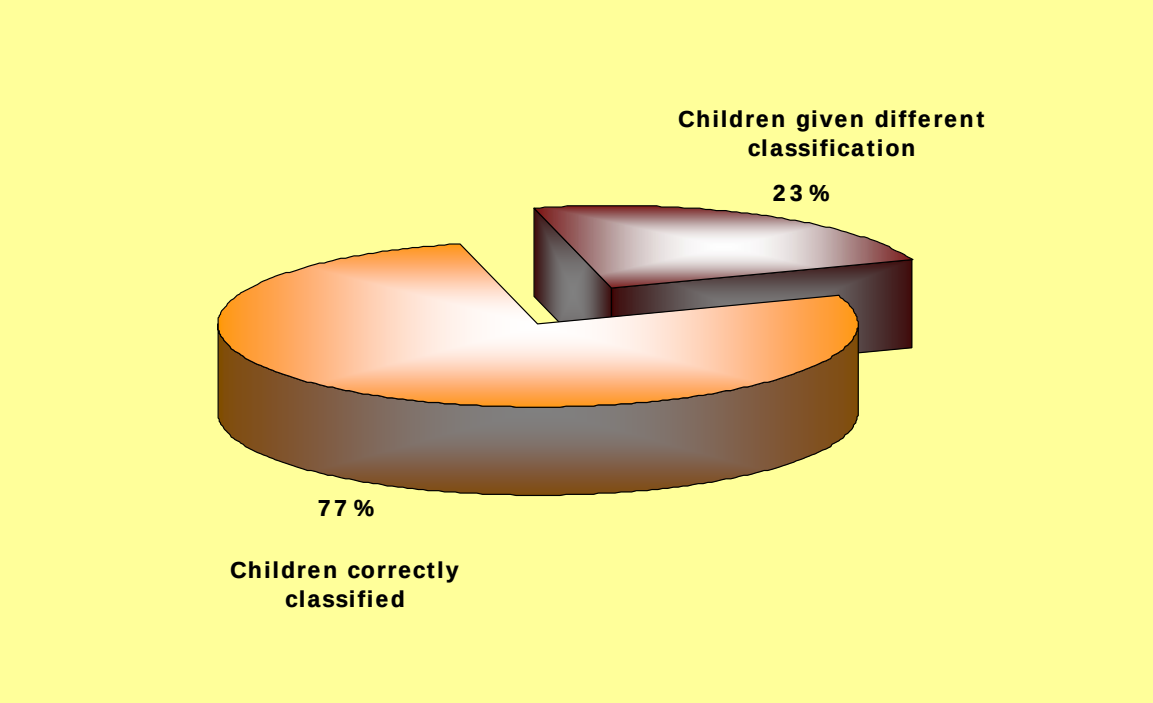


Fig. 9. Children correctly classified by the provider for the conditions related to the main symptoms of cough or difficult breathing, diarrhoea and fever [1] (*n* = 397)

[1] This indicator refers to the agreement of provider's classification of children 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.

4.2.2 Classification

Seventy-seven percent (77%) of children were correctly classified by the health provider for moderate to severe conditions related to the main symptoms of cough or difficult breathing, diarrhoea and fever, meaning that the provider classification matched the surveyor's in these cases (Fig. 9). This rate is relatively high, considering that this analysis took into account only moderate and severe classifications, excluding the mild ones. It referred to the classifications included in the 'pink-coded' and 'yellow-coded' classification areas of the IMCI chart and measles without complications[37]. In fact, it is widely recognized that more skills are required to correctly classify a moderate or severe condition when present ('positive classification') than a condition which is mild or not present, when a good guess would often be sufficient (e.g. a child with a simple cough).

To understand which conditions were misclassified, an analysis was conducted by classification, covering all the 223 classifications requiring urgent referral, medicine treatment or specific counselling found in the 397 children examined. The analysis showed that provider's classification agreed with the surveyor's classification ('gold standard') in 56% of cases[38, 39]. The breakdown by condition is presented in Table A9. All but one of the misclassified conditions were 'under-classified', i.e. considered as milder cases than they actually were or given no classification. This would in principle have clinical implications for their management. However, the data also

[37] The classifications include 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.

[38] A total of 223 conditions requiring urgent referral, treatment or specific counselling were identified, falling in the following eight main categories: 1) Very severe disease or severe pneumonia or pneumonia; 2) Diarrhoea with severe or some dehydration, severe and non-severe persistent diarrhoea, dysentery; 3) Very severe febrile disease or fever-possible bacterial infection; 4) measles with or without eye and mouth complications; 5) Mastoiditis or acute or chronic ear infection; 6) Streptococcal sore throat; 7) Severe malnutrition or low weight; and 8) Severe anaemia or anaemia.

[39] 'Correct' is used in this report when health provider's case management practices agree with surveyor's (the 'gold standard'), i.e. if they comply with the national, standard IMCI case management guidelines.

suggests that there were many instances in which the provider, although not using a proper IMCI classification for the case, decided treatment based on his/her judgement rather than his/her clinical findings or classification made. The results are described below. Although the samples by illness or by condition are small for some conditions, the data may help understand whether an inadequate assessment of the child (inaccurate history, or incomplete or incorrect physical examination) was responsible for the under-classification of the condition.

- **Very severe disease/severe pneumonia and pneumonia** (*n* = 35): there was agreement on these classifications in 18 (51%) of the 35 cases identified by the surveyor. All the 17 conditions that were misclassified by the provider were under-classified. This resulted in two cases of severe pneumonia not being referred by the provider. Although the provider under-classified 15 of the 32 children with non-severe pneumonia, nine of these children were then prescribed an antibiotic by the provider, who thus appeared to have followed his/her clinical judgement rather than clinical findings. This in the end left six children with pneumonia about to be sent home by the provider with no antibiotic treatment[40]. Reasons for missing non-severe pneumonia included provider's inaccurate count of the respiratory rate or, in a few cases, not taking the count or not classifying the child. Also, six children were found by the surveyor to have wheezing: five of them were picked up also by the provider. Only one of the six children also had fast breathing; this child was not administered a rapid-acting bronchodilator to interpret fast breathing correctly before being classified—as recommended by the national IMCI guidelines—but this was because the provider had missed the sign in the child.
- **Diarrhoea with persistent diarrhoea, dysentery and severe or some dehydration** (*n* = 9): there was agreement on the classification of one of the three children with diarrhoea and dehydration[41], one of the five children with persistent diarrhoea[42] and the child with dysentery. Three of the four children with persistent diarrhoea were given no classification, despite the fact that for two of them the provider had asked about the duration of the diarrhoeal episode, a key question to classify these cases. Concerning the group of mild diarrhoea cases (other 79 children, having diarrhoea and no dehydration), 11 (14%) of these children were over-classified by the provider as cases with dehydration. The reasons for the misclassification of children with diarrhoea lied in assessment tasks incorrectly carried out, findings not taken into account for the classification or no classification given.
- **Fever-possible bacterial infection** (*n* = 71): there was agreement in 51 (72%) of these 71 cases. The 20 children with fever that were misclassified by the provider were all under-classified: in one third, no classification for fever was given. Eleven of the 20 children misclassified by the provider were however given antibiotics by the provider. Concerning the group of mild cases with fever, 31 (18%) of the 176 children with 'fever-bacterial infection unlikely' were over-classified as with 'fever-bacterial infection' and 37 were then given antibiotics by the provider.
- **Measles (with or without complications)** (*n* = 6): two of the six children with measles were correctly classified. Of the remaining four, all of whom under-classified, the only child who had measles and complications was classified as with measles only, while the other three children with measles were given no classification. In two of these three children given no classification, the provider had specifically asked the caretaker whether the child had had measles in the last 3 months[43].
- **Acute ear infection** (*n* = 21): provider and surveyor classifications agreed with each other on the classification of 13 (37%) of the 21 children with an acute ear infection. The

[40] These cases were advised correct treatment by the survey team in the end before leaving the facility. In fact, the survey team supervisor reviewed these cases with the facility provider, after they had been examined by the provider and re-examined by the surveyor, who detected the condition.

[41] The child with severe dehydration was under-classified as with some dehydration and one of the two children with some dehydration as with no dehydration.

[42] Question on the duration of the diarrhoea episode was asked in four of these children.

[43] None of these three children received vitamin A.

reasons for missing the other cases included not giving a classification or making an incomplete assessment.

- **Streptococcal sore throat** (*n* = 33): there was good agreement between provider and surveyor classification for these cases (28 or 85% of the 33 children with the condition). Although four of the remaining five children with streptococcal sore throat were under-classified as no streptococcal sore throat, yet they were given antibiotics.
- **Severe malnutrition or low weight** (*n* = 18): the provider classification agreed with the surveyor classification only in four (22%) of the 18 cases with the condition. This was therefore one of the areas with lowest performance. Issues related to correct weighing of the child have been described earlier. The only child classified as severe malnutrition in the survey was under-classified as low weight, as it was not assessed for visible wasting and oedema of both feet. Thirteen of the 17 low weight children who were misclassified were either under-classified as 'no low weight' or given no classification.
- **Anaemia** (*n* = 29): this was another weak area identified in this survey (as noted also in other surveys). There was agreement between provider's and surveyor's classification in 6 (21%) of the 29 cases with clinically detected anaemia. Three of the 23 cases missed were given no classification (the provider missed to check palmar pallor in two of them). The main reasons for misclassifying the other 20 children with anaemia were: missing to check the child for palmar pallor (11 cases); and/or interpreting the findings of palmar pallor—when checked—differently from the surveyor (8 cases); and/or, for two cases, checking palmar pallor incorrectly.
- **Other problems: eye infections** (*n* = 22)**:** although not specifically included in the IMCI protocol among the main conditions to be checked routinely in each sick child, the prevalence of eye infections ('pus draining from the eye') in the sample was a little lower (6%) than ear problem and streptococcal sore throat. Although not included in the IMCI assessment protocol, there was agreement between the provider and the surveyor in 16 (73%) of the 22 children with an eye infection, according to the working definition used in the survey. In three of the six children in which the condition was missed, the provider had not checked for other problems at the end of the examination, a task instead recommended in the IMCI guidelines.
- **Identification of feeding problems:** feeding problems were common, as found in other surveys, and were found by the surveyors in 198 (50%) of the 397 children: providers were able to identify them in 81 (41%) of these cases. The main task missed by the provider in the feeding assessment of most of these children was asking whether child feeding practices had changed during the current episode of illness.

4.2.3 Treatment and advice

4.2.3.1 Management of severe cases

A total of six children (1.5%) of the 397 enrolled in the survey were classified by the surveyor as cases with a severe condition warranting urgent referral to hospital: three children had 'severe pneumonia', one had 'diarrhoea with severe dehydration', one had 'severe persistent diarrhoea' (with some dehydration) and one 'severe malnutrition' (Table A10). All of them were under 3 years old. Two of these six severe cases were correctly identified as severe and referred to hospital by the provider with explanations given to the caretaker on the reasons for the urgent referral, although only one of the two caretakers accepted referral. A referral note was therefore prepared only for the child whose caretaker had accepted referral. Eventually, only one child received pre-referral treatment as advised by the IMCI guidelines. This meant receiving a first dose of a recommended antibiotic (children with severe pneumonia) and/or ORS (children with dehydration) and vitamin A as applicable (child with severe persistent diarrhoea and child with severe malnutrition). In conclusion, only one child (with severe pneumonia) of the six with a severe condition was correctly managed, that is, was identified *and* managed according to the

IMCI guidelines[44]. The main reason explaining this result is provider's failure to identify the severity of the cases.

4.2.3.2 Use of injectable medicines

Injectable medicines were prescribed only in five (1%) of the 397 children (Table A11). Two of them had a streptococcal sore throat while in the other two cases the provider had wrongly classified the child as having this condition. In general, injectable medicines do not seem to be over-prescribed.

4.2.3.3 Rational use of oral antibiotics

- *Prescription:* Most (85%) of the 81 children with an IMCI condition not requiring urgent referral and who needed oral antibiotics were prescribed them, while for the other children not given them the provider had usually misclassified the child[45] (Table A12). The large majority (91%) of these children—needing and prescribed an antibiotic—was prescribed an antibiotic recommended by the national IMCI guidelines, the provider thus complying with the national list of essential medicines. Of these, 40% was given a complete, correct prescription (Fig. 10). For the antibiotic to be prescribed correctly[46], the provider had to state the dose, frequency and duration of treatment clearly in the prescription. While dose and frequency were prescribed correctly in three quarters of cases, the main reason for an incomplete or incorrect overall prescription was providing no or incorrect information about the duration of treatment. This has often been found a weak area in physician's prescribing practices also in surveys in other countries. On the other hand, 76% of children not needing antibiotics were not prescribed antibiotics unnecessarily (Fig. 11). The most common reason for giving antibiotics in the other 24% of children not needing them was that the provider had misclassified them as having conditions (mostly pneumonia) that would have required antibiotics had their classification been correct.

- **Non-severe pneumonia** (n = 32): 25 (78%) of these cases were prescribed an oral antibiotic and 23 (72%) given a recommended oral antibiotic[47]. All the 17 children that the provider had correctly classified as having 'pneumonia' were prescribed an oral antibiotic—94% were given a recommended one. On the other hand, all the seven children with 'pneumonia' who were not prescribed an antibiotic had been misclassified by the provider (six as 'no pneumonia' cases and one given no classification).
- **Dysentery**: only one child had dysentery and was prescribed a recommended oral antibiotic, although not correctly (incorrect dose).
- **Acute ear infection** (n = 21): 19 (91%) of these children were prescribed an oral antibiotic, mostly (15 cases) a recommended one.
- **Streptococcal sore throat** (n = 33): all but three children (91%) with this condition received an oral antibiotic (all but one of them a recommended one). The three children with this condition who received no oral antibiotic were misclassified by the provider as 'no streptococcal sore throat'.

[44] One out of six severe cases needing urgent referral was properly managed in the survey in Egypt, 2002, and none of the 14 severe cases in the survey in Sudan, 2003.
[45] For example, all the seven pneumonia cases that were not prescribed an oral antibiotic had been misclassified by the provider as cases with 'no pneumonia'.
[46] According to the national IMCI guidelines.
[47] Only 7 (30%) of these 23 children were prescribed the recommended antibiotic correctly.

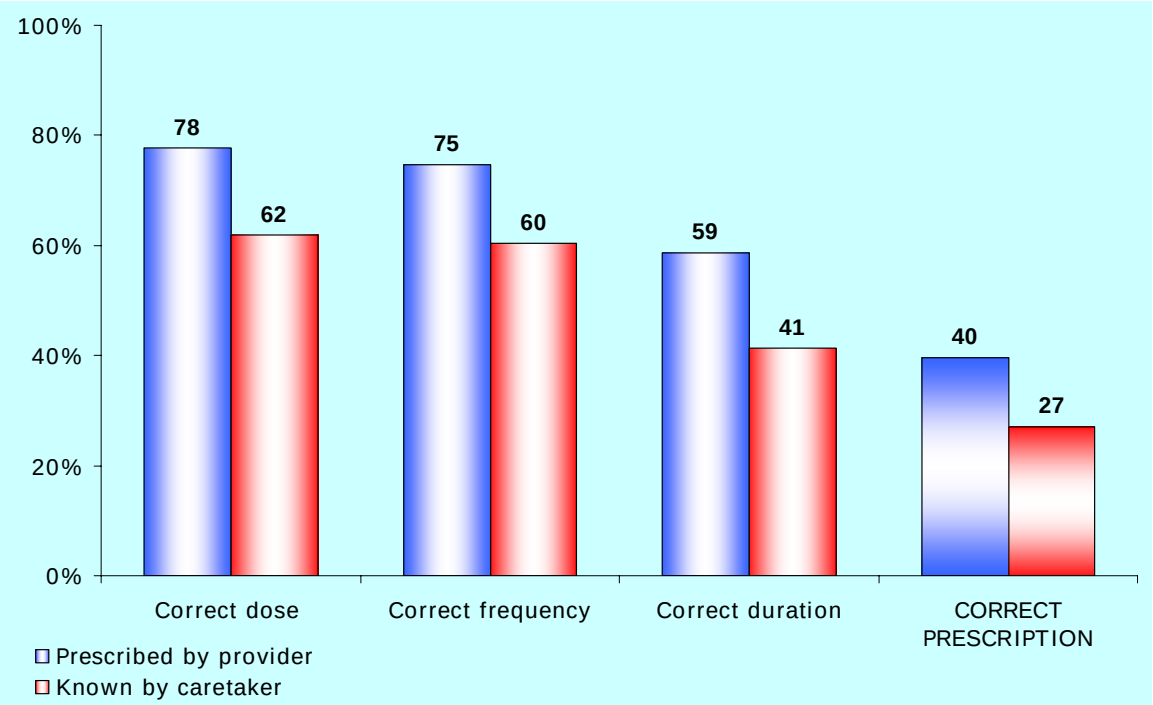


Fig. 10. Prescription of IMCI recommended antibiotics for IMCI condition by provider and caretaker correct recall (*n* = 63)

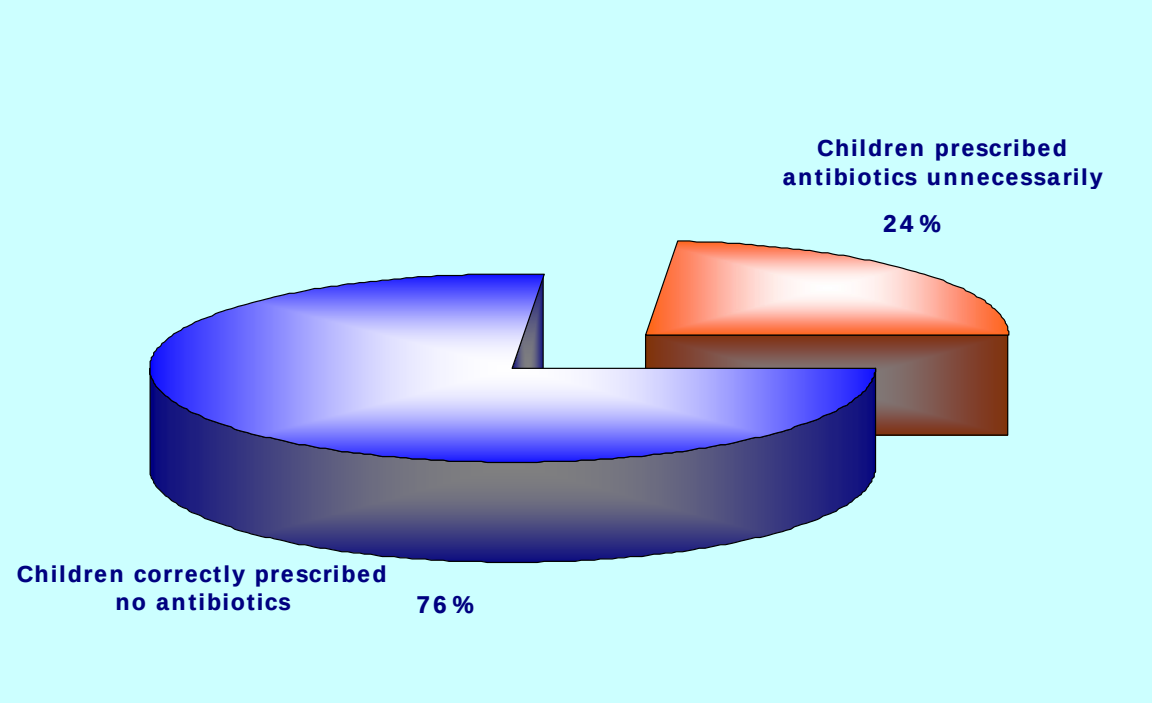


Fig. 11. Rational use of drugs: children not needing antibiotics given no antibiotics (*n* = 301)

❖ *Advice and caretaker recall*: Caretakers of children to whom an oral antibiotic is prescribed should be: a) given advice on how much, how many times per day and for how many days they should give the antibiotic to the child; b) shown how to give it to the child; and c) asked open-ended questions to check for their understanding of the instructions received. It can be assumed that if caretakers are given incorrect or no advice on treatment or are unclear about it, they may be less likely to administer it correctly to the child at home. The third task above (c) is therefore a key task, as oral antibiotic treatment is delegated to families: checking for caretaker comprehension of the instructions given is a good way to ascertain whether the caretaker has clearly understood all the instructions and to clarify any doubt before she leaves the facility. It should be noted that almost half of caretakers in this sample—about two thirds in rural areas—were illiterate, unable to read physician's written prescription, and would be likely to rely on the verbal advice received from the provider. In this survey, most (79%) caretakers were advised on antibiotic treatment[48] (item (a) above), 29% were shown how to give it (b), and only about one in ten (11%) was asked checking questions (c) (Table A17). Only one child was administered the first dose of the antibiotic at the facility[49].

As a result of the advice received, about one in four (27%) of the caretakers who had been prescribed a recommended antibiotic for their sick child was able to describe correctly to the surveyor during exit interviews how to give the antibiotic to the child (Table A12). This means that 27% of caretakers correctly knew *all* the following three items before going home: a) the dose (62% recalled this individual message correctly), the frequency (60%), and the duration of treatment (41%). The lower level of knowledge about the duration of treatment was consistent with between providers' tendency to overlook this advice. In fact, there was a direct relationship between provider's advice on dose, frequency and duration of treatment, and caretaker's correct knowledge about treatment: caretakers correctly advised on these items were more likely to recall them correctly at exit interview than those not advised (Table A13).

❖ *Potential compliance with advice*: Caretakers of children who had been prescribed an oral antibiotic for any reason by the provider were asked what they would do if their child got better before completing the treatment course as advised by the provider. Two thirds of them (68%) replied that they would continue treatment as advised, while one in five (21%) stated that they would stop treatment (Table A14; Fig. 12). The message about continuing treatment even if the child's condition improves should therefore be emphasized.

[48] This means that these caretakers were given some advice, whether correct or not. This item was included to know whether providers would as a routine practice explain treatment to caretakers or simply write the prescription or dispense the medicine with no verbal instructions.

[49] In studies on compliance with follow-up advice in Sudan and Brazil, providing the first dose of the antibiotic (Sudan) or prescribing antibiotics (Brazil) were associated with a higher compliance with follow-up advice (Al Fadil SM, Alrahman SH, Cousens S et al. *Integrated Management of Childhood Illnesses strategy: compliance with referral and follow-up recommendations in Gezira State, Sudan* Bulletin of the World Health Organization, 2003, 81(10): 708–16; Cunha AJ, dos Santos SR, Martines J. *Integrated care of childhood disease in Brazil: mothers' response to the recommendations of health workers.* Acta Paediatrica, 2005;94 (8): 1116–21).

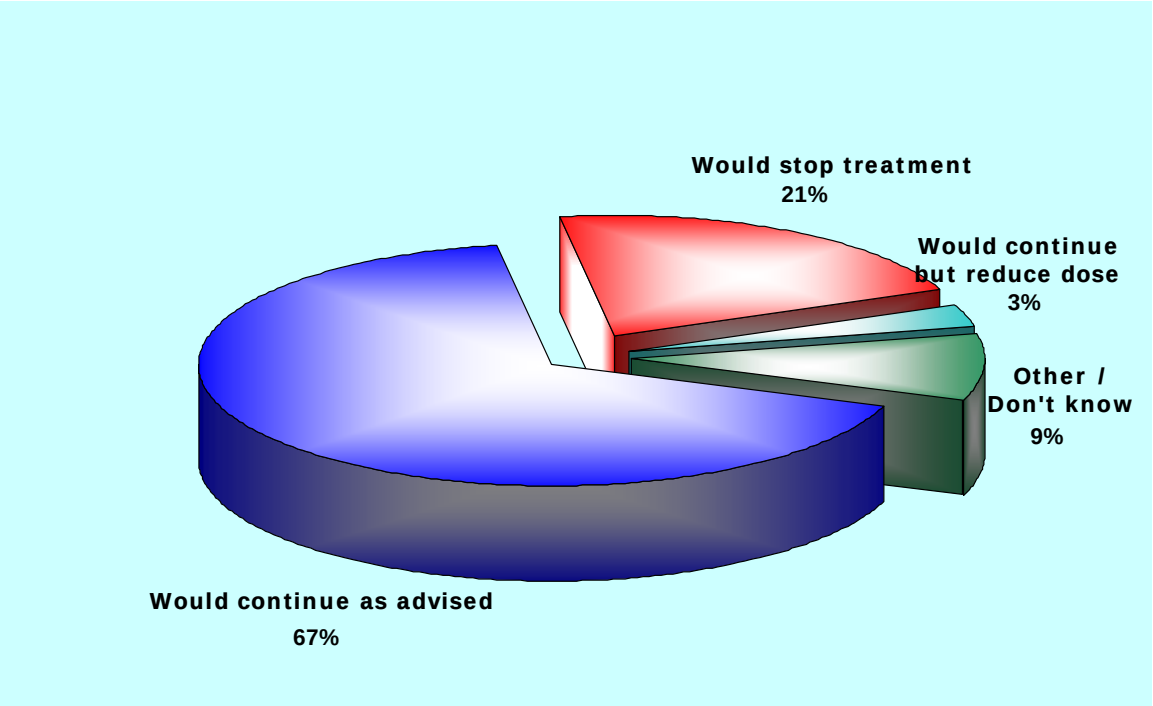


Fig. 12. Caretaker potential compliance with provider advice on duration of oral antibiotic treatment should child get better before completing treatment course (*n* = 123)

In conclusion, the chances that a child with an IMCI condition requiring oral antibiotics would receive them were high (85%), while those of the child's being given the antibiotic at home correctly, based on caretaker's knowledge, were lower, i.e. one in four (27%).

4.2.3.4 Oral rehydration salts (ORS)

❖ *Prescription*: Both children with diarrhoea and some dehydration were treated with ORS at the facility (Table A15). Most (83%) of the 78 diarrhoea cases with no clinical signs of dehydration were given ORS. Eleven (14%) of these children had been over-classified by the provider as children with some dehydration and would then have required oral rehydration at the facility if the provider's classification had been correct, but only three of them were actually started on ORS therapy at the facility. When ORS is prescribed, providers should state to caretakers how to prepare and administer it, since the solution will be prepared and used at home. The advice given most often (85% of cases) by the provider was the key advice on the amount of water to use to prepare the solution. When the complete advice is considered, less than a third (31%) of the caretakers of children with diarrhoea given ORS were fully and correctly advised on ORS, as they were provided with incorrect or no advice on when and how much solution to give to the child each time (Fig. 13).

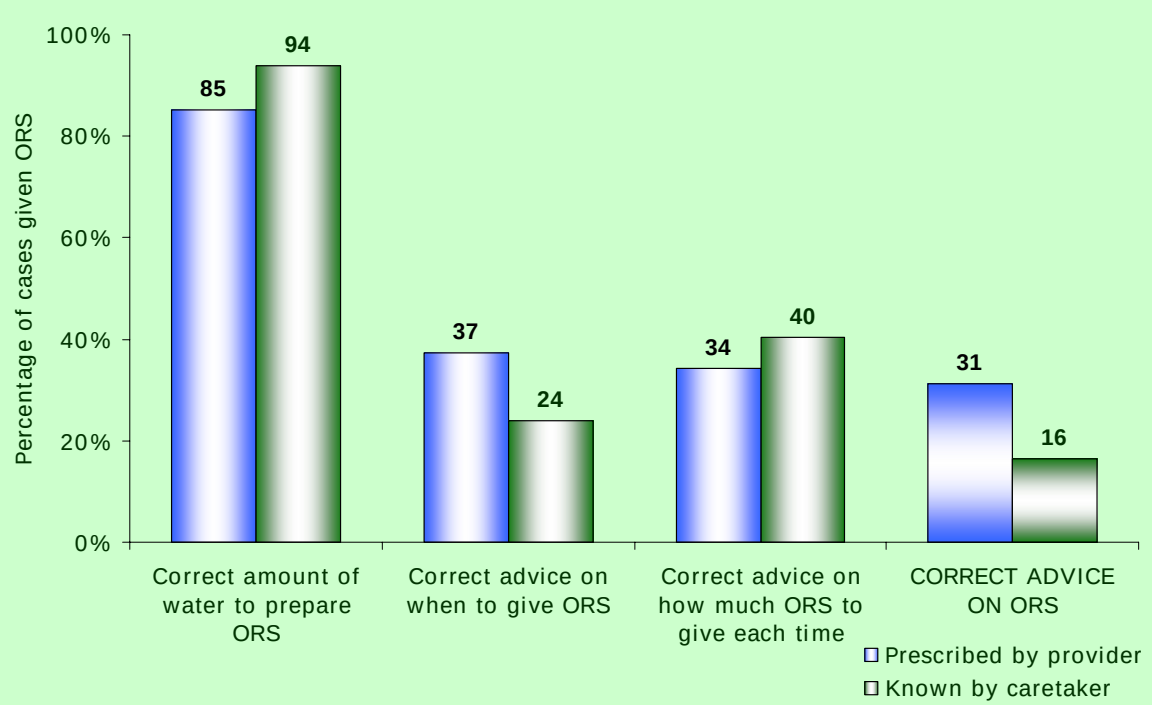


Fig. 13. Provider correct advice on ORS and caretaker correct knowledge about ORS treatment (*n* = 67)

❖ *Advice and caretaker recall*: As noted also for antibiotic treatment, caretakers of children with diarrhoea given ORS for home use should be advised on treatment (dose, frequency and duration), given a demonstration or explained how to prepare ORS referring to containers commonly available at home, and checked for their understanding of the advice received. The caretakers of 16% of children with diarrhoea given ORS were advised on the three items of ORS treatment, 9% were shown how to give it to the child and 15% were asked checking questions (Table A17).

When asked how they would prepare ORS, and when and how much solution they would give to the child, caretakers of 16% of the children with diarrhoea who were prescribed ORS were able to describe *all* the following items correctly: a) how much water to mix with an ORS sachet to prepare the solution (94% responded correctly on this critical item), b) when to give ORS to the child each day (24%), and how much ORS to give the child each time (40%) (Table A15; Fig. 13). A direct relationship was noted of provider advice on ORS preparation and administration with caretaker correct knowledge about it (Table A16). Interestingly, while only 85% of the caretakers of children given ORS were correctly advised by the provider on how much water to mix with one sachet, a higher proportion of the caretakers (94%) mentioned the correct amount, including therefore those who had not been told about it by the provider during this encounter at the facility. This finding, noted also in other surveys, most likely reflects caretaker's pre-existing knowledge in some cases, probably acquired through earlier, effective promotion activities for control of diarrhoeal disease.

In conclusion, the chances of a child with diarrhoea receiving a correctly prepared ORS at home based on caretaker's knowledge were high (94%), while those of being administered the solution correctly were low, i.e. one in six (16%)—although these children were not dehydrated.

4.2.3.5 Other treatment and opportunities for immunization

Data are shown in Table A18.

- **Paracetamol or aspirin** for children with high fever, sore throat and ear pain: a total of 49 (12%) children not needing urgent referral was prescribed paracetamol or aspirin: about half (46%) of children with high fever (i.e. a rectal temperature of 39.0ºC or above) and 16% of those with an acute ear infection or streptococcal sore throat were given these medicines, as recommended by the national IMCI guidelines. Paracetamol or aspirin were also given to 11% of children without those conditions.
- **Salbutamol** for children with wheezing: all the five children with wheezing not needing urgent referral—as per surveyor's examination—were prescribed oral salbutamol by the provider, as recommended by the IMCI guidelines. Interestingly, another five cases were prescribed salbutamol, although the provider had not reported wheezing. Providers reported wheezing in five additional children who had no wheezing according to the surveyor: two of them were prescribed oral salbutamol. One of the three children having wheezing and fast breathing according to the provider's assessment—not confirmed by the surveyor—was given a rapid-acting bronchodilator.
- **Cough medicines** use in children with ARI: The majority of children (89%) were correctly prescribed no cough or cold medicines by the provider (only 25 received them), in line with the national guidelines.
- **'Antidiarrhoeal'** use in children with diarrhoea: the use of these medicines is strongly discouraged in the management of diarrhoea diseases in young children, because of their potential harmful effects, especially in infants. Only six children, all but one older than one year, were prescribed an antidiarrhoeal/antimotility medicine in this survey: this very low rate is a positive finding, sustained over time.
- **Mebendazole**: four children, including a child with diarrhoea, were prescribed it for intestinal helminthic infection (oxyuriasis).
- **Iron** for children with anaemia: only 28% of children with clinical pallor were prescribed iron, as the rest had been misclassified by the provider as cases with no anaemia[50].
- **Vitamin A** for children 6 months old or older with persistent diarrhoea, measles (with or without complications), severe malnutrition, severe anaemia and low weight-for-age and as supplementation for children aged 6 months or older who had not received it in the previous 6 months: 41 (77%) of the 53 children who needed vitamin A were given it (29 children) or advised to come back on another day to receive it (12 children). It should be noted that vitamin A was available at the facility in all the 24 cases that did not receive it.
- **Tetracycline** for children with eye infection[51]: about two thirds (64%) of children identified by the surveyor as having an eye infection were prescribed tetracycline ointment. For those who did not receive it, the eye infection had been missed by the provider in more than half (63%) of the cases.
- **Immunization**: one (11%) in 10 children was found to be due or overdue for vaccinations on the day of consultation. Of them, two thirds (66%) were given the vaccination before leaving the facility, while almost a quarter (23%) were advised on when to come back to receive it on the scheduled vaccination day. Thus, overall, the large majority (89%) of children needing vaccination were either vaccinated or given proper advice, a good example of the added value of the IMCI protocol in utilizing these opportunities for immunization by systematically screening all sick children taken for a consultation and not needing urgent referral.

4.2.3.6 Advice on follow-up

The national IMCI guidelines recommend that caretakers of children found to have some specific conditions should be advised to take the child back to the facility for follow-up within a

[50] Three of these children had been given no classification for anaemia by the provider.
[51] Defined in this survey as 'pus draining from the eye'

certain number of days ('definite follow-up'), which may vary according to the condition. In this survey, more than half (55%) of all children seen would have needed definite follow-up based on the guidelines[52] and one in two (50%) of these were actually advised by the provider. As observed in other settings, the shorter the interval is of days the child should be taken back to the facility for follow-up, the higher the agreement is of provider's advice on definite follow-up with surveyor's: providers correctly advised follow-up in 50% of the children who needed to return in two days, in 23% of those needing to return in seven days and in none of the three children needing to come back in two weeks for follow-up (Table A19). When caretakers were advised to take the child back for follow-up, they recalled the advice in most cases (80%) and usually did so correctly (70%) (Table A20).

4.2.3.7 Provider advice and caretaker knowledge about home care

Two basic messages on home care during illness—'home care rules'—should be given to the caretakers of all sick children: giving extra fluids and continuing feeding. In this survey, the caretakers of almost half (44%) of children seen and not needing urgent referral were advised by the provider on both the fluids and feeding messages[53] (Table A21; Fig. 14). It is worth mentioning that caretakers of children with diarrhoea, a target group which would most benefit from this advice, were 1.4 times as likely to be advised on these messages as those without diarrhoea (58% vs 41%)[54].

When the caretakers were interviewed before leaving the facility and asked about the three home care rules, one in seven caretakers (14%) was able to mention *all* the three rules above (Table A22). What was missed in most cases was knowledge of the specific early danger signs that should prompt a caretaker to take the child back to the facility without delay, a finding which is common to many other surveys. It is important to note that this was the caretaker knowledge level *after* provider advice and this was a specific population of caretakers who had already sought care. Also, the median time waited before taking the child to the health centre since caretakers had recognized a breathing problem was as many as 3 days (§ 4.1.3). The issue then exists that the level of knowledge about when to seek care may be lower in the community and may be a factor influencing care-seeking practices negatively (see § 4.1.2). This information needs to be checked in household surveys which include data on care-seeking practices and sources of care. Receiving advice made a difference also in this case: the proportion of caretakers who mentioned they would give more fluids *and* continue feeding was higher among those who had received this advice than those who had not[55]. However, some of the knowledge pre-existed this specific encounter with the health provider, as clearly indicated by a high percentage of caretakers (88%) responding that they would continue feeding the child during illness, when only about half of them (46%) had been given this advice by the provider in this particular circumstance (Fig. 14). Finally, it is important to emphasize that a gap between knowledge and practice should be expected.

Although there are methodological issues related to the way a generic, hypothetical question on knowledge about care-seeking is formulated in these surveys, caretakers tended to miss the key signs for care-seeking while mentioning others that are much more generic as 'triggers' to care-seeking (e.g. fever, child becomes sicker) (Table A22). For example, a smaller proportion of caretakers of children with cough and no pneumonia mentioned respiratory signs as

[52] This rate is high and there is some concern that it may not be practical and feasible to advise the caretakers of such a high proportion of children to return for follow-up and expect them to do so.

[53] Data on provider advice on care-seeking were removed from the analysis because of some methodological issues identified during data collection on this particular item.

[54] RR 1.4, 95% CI: 1.12 to 1.80. Concerning the specific messages: caretakers of children with diarrhoea were 1.5 times as likely to be advised to give increased fluids during the episode as those without diarrhoea (65% vs 44%, RR 1.48, 95% CI: 1.16 to 1.90) and 1.4 times as likely to be advised to continue feeding (61% vs 43%, RR 1.4 , 95% CI: 1.15 to 1.80).

[55] 68.6% vs 26.5%, respectively. RR: 2.6; 95% CI: 1.8 to 3.7. The proportion of caretakers who mentioned that they would offer more to drink to the sick child was higher for those who had received this advice from the provider than those who had not (71% vs 26%). Likewise, there was a difference in the advice on continuing feeding, whereby 96% of caretakers who had been given the correct advice mentioned it compared to 82% of those who had not.

signs to watch out for at home than those who mentioned fever (i.e. 7% mentioned fast breathing and 37% difficult breathing vs 79% who mentioned fever). *In conclusion, the level of caretaker knowledge about some of the signs to seek care remains low and calls for more efforts in this area.*

4.2.3.8 Provider communication skills

Giving correct advice to caretakers of sick children is undoubtedly important, as shown in the above sections: it is the caretakers who will be caring for children at home and even treating them with medicines, so they become the actual providers of care to their children in most cases. Delivering child care messages using good communication techniques gives this action more chance of being effective. In this survey, some information was collected on the use of the 'home care card', which is a standardized IMCI home care counselling card with illustrated messages meant for providers' use when advising caretakers of sick children[56]. It should be noted, however, that the same illustrations and messages of the card are incorporated in the 'carnét de santé' in Morocco. This may explain why the card was used only in 3% of cases and was not available at the facility in 72% of cases in which it was not used by the provider. All the caretakers who were shown the card by the provider recalled being shown it. In 6 of the 11 cases in which the card was used, it was used properly with good communication techniques (Table A23). The card was held properly—in such a way that the caretaker could see the pictures and text, with the pictures pointed to while referring to the related messages in most cases and with caretaker's understanding of the messages checked less frequently. This latter aspect was expected as the use of effective communication techniques has not yet been the focus of IMCI training in Morocco and this information, collected on a small sample, may just serve as a reference for future training and follow-up visits.

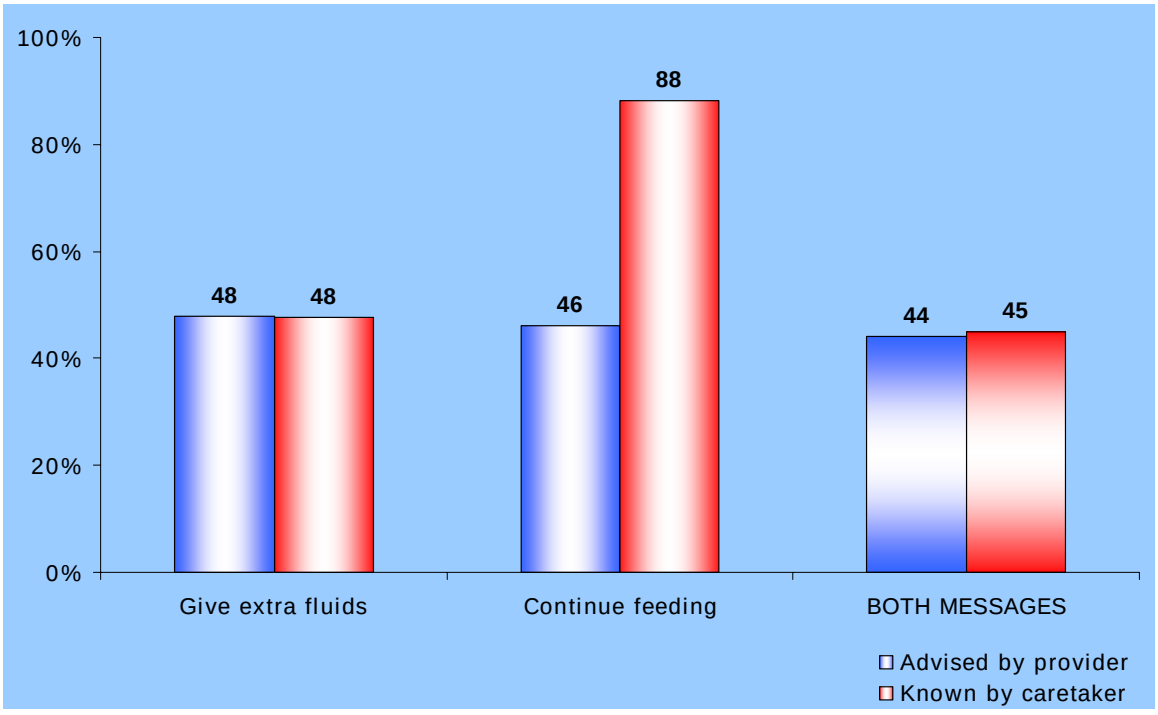


Fig. 14. Provider advice and caretaker knowledge about home care for children not needing urgent referral (*n* = 391)

[56] Also commonly known as 'mother card'.

4.2.3.9 Age-appropriate advice on feeding

The caretakers of only one child in four (26%) below 2 years old and those with low weight and/or anaemia and/or persistent diarrhoea not needing urgent referral were given appropriate advice on feeding according to the age of the child, including breastfeeding and frequency of complementary feeding (for the working definition of appropriate feeding in this survey, please refer to the box at the bottom of Table A24). It is worth noting that in all instances in which the caretakers were advised on feeding, the advice was given by a nurse who had received training in IMCI; no advice on feeding was provided by nurses not trained in IMCI. While this is an added value of IMCI training, it also suggests that feeding advice either may not be part of their basic training or, if it is, may be rather inadequate. It may also be a weak aspect in supervision. The groups of children in which the feeding advice was more often inadequate were those of children less than 6 months old and those 2 years old or older with low weight and/or anaemia and/or persistent diarrhoea. *Feeding advice therefore appeared inadequate*.

4.2.3.10 Advice on mother's health

Only 24 (7%) of the 350 caretaker-mothers of children not referred by the provider received some advice on their health[57]. The IMCI guidelines recommend that health providers should counsel the mother of the sick child about her own health. The low rate of counselling on mother's health was expected, as training courses in Morocco—as in other countries in the Region—have to date not provided emphasis on maternal health during trainees' clinical practice. At this stage, this may be considered an opportunity to pursue, as 88% of all children in this survey had mothers as their caretakers. For children seen at health facilities having mild conditions, IMCI would help build a bridge between child and maternal health by reminding health providers that the child's mother, and not only the child, is also there.

4.3 HEALTH SYSTEMS

The survey reviewed some key aspects of health systems support that are required for the provision of quality services and affect their utilization, namely: organization of work at the facility; provider's IMCI training status; availability of essential medicines, basic supplies and equipment—including immunization, transportation facilities for referred cases and transportation costs to reach the health centre; mobile services; supervision of providers; and records. Caretaker satisfaction is also described in this section as clients' satisfaction and perceived quality of services influence their use of health services. The main findings are summarized in Table 7.

Table 7. Main findings on health system support [a]

Health system component	Findings	Confidence intervals
• Caretakers satisfied with the child health care services	72.7%	(64.6 – 81.4)
• Health facilities with at least 66% of doctors managing children trained in IMCI	73.3%	(61.4 – 85.9)
• Health facilities with essential oral treatments available (4 oral medicines)	44.4%	(30.0 – 59.2)
• Health facilities with 12 non-injectable medicines available	13.3%	(3.2 – 23.6)
• Health facilities with injectable medicines for pre-referral treatment available	33.3%	(19.3 – 47.5)
• Facilities providing immunization services with vaccination supply and equipment available at the time of visit	75.6%	(62.9 – 88.4)
• Facilities with basic equipment and materials for IMCI available	40.0%	(25.4 – 54.7)
• Facilities that received at least one supervisory visit in the last 6 months that included observation of case management	6.7%	(-0.8 – 14.2)

[a] For definitions, see text and annexes.

[57] Any of the following: counselling on how to care for herself if sick or if she has a breast problem; advising to eat well; checking her tetanus toxoid immunization status; and ensuring access to reproductive health services.

4.3.1 Caretaker satisfaction

About three quarters (73%) of the caretakers interviewed reported being satisfied or very satisfied with the health services provided at the facility (Table A25). The aspects of care that were most appreciated by the caretakers included, without prompting, the health provider's attitude (46%), the availability of medicines (35%) and the way their child had been examined by the provider (35%). Caretakers were also asked what aspects of health services and care they would like to see improved. As many as 43% of caretakers answered that they would like to have medicines available. As expected, the percentage was higher in those who reported not being satisfied with services (59%) than in those who were satisfied (37%)[58]. The issue of availability of medicines was also the single most cited reason for caretakers' dissatisfaction with the services, mentioned by one in two (47%) of the caretakers who were little satisfied or unsatisfied. Even accepting that availability of medicines is often indicated as one parameter for caretaker perceived quality of health services and caretaker expectations and demands may be high, the fact that this item was mentioned by so many caretakers raises the issue about the actual, regular availability of medicines at health facilities. This is supported by data on availability of essential medicines (see § 4.3.4). It should be noted that these aspects of care which were perceived by the caretakers as an indication of good services are an integral part of the IMCI approach. According to the IMCI protocol, all children are to be examined thoroughly, treatment is standardized and medicines should be available in facilities implementing IMCI. It may be inferred that, if IMCI is properly introduced in a health facility, it should help make services more attractive to the clients and contribute to improving their reputation, as it has been shown in studies in some countries. Unfortunately, as records were not readily available to review service utilization trends for children under 5 years old over the years in the facility visited, there was lack of data to provide supporting evidence for that.

4.3.2 Organization of work

The tasks reviewed were those concerning taking the child's weight and temperature, checking the weight against the growth chart and assessing feeding practices. There was no duplication of tasks: the individual tasks were carried out either by the physician or by the nurse (Table A26). Weight and the temperature were, as expected, taken in most cases (85%) by the nurse, although doctors did it themselves in 15% of cases. On the other hand, checking the child's weight against the growth chart was a task performed mostly (94%) by doctors. Also, the assessment of feeding practices (breastfeeding, complementary feeding and feeding during illness) was carried out by the physician in the majority of cases, while nurses did it in about one in 10 children. Standardization of procedures to be performed by doctors and nurses, adequately trained in the task, may help, as the survey showed that these tasks were often carried out incorrectly and not necessarily by the same category of providers. Qualitative interviews with health facility staff also suggested the lack of a systematic flow of patients in 29% of the facilities.

4.3.3 IMCI training

4.3.3.1 IMCI training coverage

By definition, all children enrolled in this survey were seen by health providers who had received IMCI training. Thus, each facility included in the survey had to have at least one physician trained in IMCI. In fact, MOH had aimed at training 100% of doctors dealing with under-5 children in a facility, in order for all children to have an equal chance of being managed by an IMCI-trained provider at any time in facilities which had introduced IMCI. Sixty percent (60%) of facilities reported 100% of the doctors working in that facility trained in IMCI: this in principle means that all children taken to those facilities were likely to be seen by a physician trained in IMCI (Table A27). This level of training coverage was highest in rural facilities (94%, all but one facilities) and lower in urban areas (41%). It is possible that the latter tend to be staffed

[58] RR for those satisfied 0.6, 95% CI: 0.4, 0.8.

with more doctors, making it more difficult to reach 100% training coverage. The situation was very different for nurses. Only two facilities, both of them urban, had all nurses dealing with under-5 children trained in IMCI; 22% had between one third and two thirds of nurses trained. This survey has shown how important the role of nurses is in carrying out certain specific tasks—and correctly, potentially contributing to the smooth delivery of the whole scope of IMCI care at the facility. More than three quarters (78%) of children were seen by doctors who had been trained within the previous 3 years, the percentage being 100% in rural areas (Tables A28 and A29). The higher rate for recently trained providers in rural facilities may be due to: a lower training coverage in rural areas in the previous years of IMCI implementation; or, as viewed by the national team, a higher turnover in rural than urban facilities, which may make it unlikely for a physician trained in IMCI to stay in the same facility for a few years; or both. However, turnover of trained staff was not measured in the survey and this remains therefore only a possible interpretation. The fact that as many as 22% of children in this survey were seen by doctors trained more than 3 years ago (as far back as in 1998) suggests also that IMCI was active throughout most of the years, although it had faced difficulties in planning additional training to address turnover of trained staff, especially in rural areas.

4.3.3.2 Quality of child care by provider training and follow-up status

The findings on taking the weight and temperature by nurses' IMCI training status have been reported under § 4.2.1. *Those findings call for more emphasis during nursing basic training and consideration on reviewing them also during IMCI training for nurses.* As follow-up visits after IMCI training are an integral part of training and are a powerful instrument to strengthen performance of services, the findings are reported here. Less than half of all children managed were seen by an IMCI-trained physician who had received a follow-up visit after training to reinforce skills and strengthen health system support (see § 4.1.1, Fig A35). This and the following findings have implications for planning. Children assessed by doctors who had received a follow-up visit after training tended to be assessed more systematically than those who had not, including assessment of feeding practices, with the index of integrated assessment being higher for the former (8.1) than the latter (7.4), as described in § 4.2.1 (Fig. 8 and Table A30), although the difference did not reach statistical significance. However, no difference from a practical point of view was noticed for most of the treatment and advising tasks or caretakers' correct recall of messages on treatment and home care given by doctors followed up and those not followed up (Tables A31 and A32). It should be noted that, even if 45% of children were managed by doctors who had received follow-up, only 7% were managed by doctors who had been followed up within 2 months of training, thus reducing the potential impact of the follow-up visit (see § 4.1.1). These findings may suggest that, while follow-up visits have the potential to improve performance (see results on assessment), they may have less effect if they are carried out too long after IMCI training. *The findings call for improved planning, including allocation of resources, to include follow-up visits to trained staff for any IMCI training activity which is planned.* Weak supervision also adds to this situation (see § 4.3.11). Unfortunately, the small number of children seen by doctors followed up within 2 months of training prevented any further analysis to compare this group with those seen by doctors followed up after a longer period and those not followed up.

4.3.4 Availability of medicines

Three measures—indexes[59]—to assess the availability at health facilities of medicines required to manage under-5 children according to the national IMCI clinical guidelines (Table A33) were used, namely the indexes of availability of:

- **Essential oral treatments**, that is four oral medicines recommended for home management of pneumonia, dysentery, diarrhoea and anaemia upon physician's advice (i.e. *cotrimoxazole*[60],

[59] As observed for the index on integrated assessment, each index of medicine availability represents the mean of the total number of medicines considered in each category.
[60] Used also as first-line antibiotic for the treatment of ear infections.

ORS, *vitamin A* and *iron*). The index was 3.0, that is a mean of 3.3 medicines available out of the four medicines. Twenty (44%) of the 45 facilities had all the four medicines available (Fig. 15).

- **12 non-injectable medicines**, including the four above and another eight medicines (shown in *italics* in this paragraph) for the management of cases with pneumonia and dysentery not responding to first-line treatment (*amoxicillin*), ear infections (cotrimoxazole[61] and, as second-line, amoxicillin), streptococcal sore throat (*penicillin V* or *erythromycin*), wheezing (*salbutamol* or[62] *terbutaline by inhalation* and *oral*), eye infections (*tetracycline ointment*), convulsions (*diazepam* or *medazolam*), fever (*paracetamol* or *acid acetylsalicylic*) and *vitamin D* as supplementation. The index was a mean of 9.1 out of 12 medicines. Six (13%) of the 45 facilities had all the 12 medicines available (Fig. 15).
- **Injectable medicines for one-dose pre-referral treatment** for children with severe classifications needing urgent referral, namely thiamphenicol (*or* ampicillin), gentamicin and benzylpenicillin (*or* ampicillin). The index was 1.7 out of 3 medicines. One in three (33%) facilities had all the three pre-referral medicines (Fig. 15). This meant that two thirds of these primary health care facilities would have been unable to provide pre-referral treatment as recommended in the IMCI guidelines if children below 5 years old with severe conditions requiring it had been taken there on the day of the survey.

The availability of individual medicines is shown in Table A34. Facilities which had a bronchodilator by inhalation available were 1.4 times more likely to have a space deviser than those which did not (90% vs 64%)[63]. Saline, as an acceptable solution for intravenous rehydration of children with diarrhoea and severe dehydration, was available in 44% of the facilities visited.

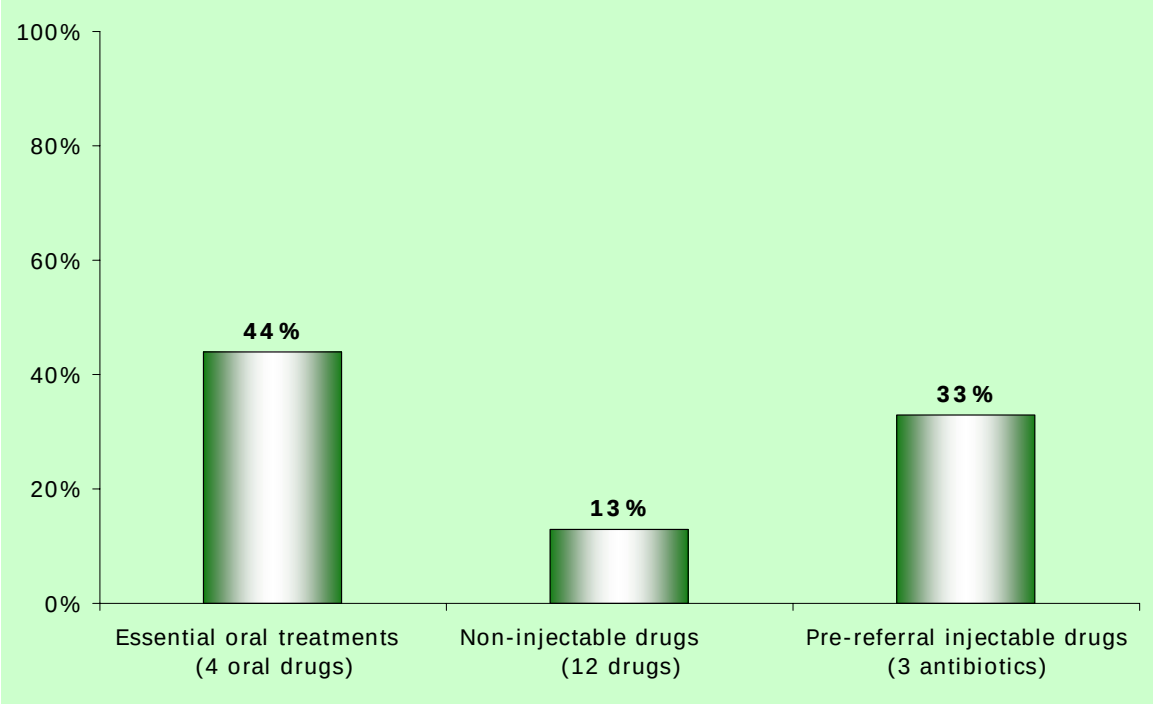


Fig. 15. Percentage of facilities having medicines recommended for IMCI (included in the Essential List of Medicines) (*n* = 45 facilities)

[61] Already included in the list of essential oral treatments.
[62] Either of the two as a requirement for this indicator.
[63] RR 1.4, 95% CI: 1.0 to 2.0.

The definition of medicine availability used in this and similar surveys required only the presence of just one full course of treatment for each of the medicines per facility. Alternative, better approaches to measuring availability of medicines based on case-load required medicine stock cards duly filled in, reliable case-load data, estimated time of medicine procurement etc., were explored but proved not to be feasible. This also suggested that facilities might be unable to calculate their own medicine requirements reliably, in the absence of this information. Medicine stock cards and registers were reported to be not available by staff of more than half of the facilities visited. These observations were confirmed during the discussion of findings with the data analysis group at national level, from which it emerged that there was a need for health facility staff to have standard tools and guidelines on how to estimate medicine requirements for children's conditions to order the necessary amounts based on needs regularly. Thus, also in this survey, non-availability of a medicine meant lack of even a single treatment course of that medicine. This situation would prevent the administration of pre-referral treatment to severe cases and, in general, force families to buy the medicines elsewhere at a cost. This situation has to be interpreted also in light of the difficult access to pharmacies in rural areas [12]. This would put further strain on the meagre resources of indigent families, affect the quality of care they would be able to provide to their children and contribute to inequitable access to services. Problems in regular supply of medicines were reported in this survey, with antibiotic stock-out situations in the previous 3 months reported by staff of at least a third of facilities during interviews. *To conclude, facility capacity to provide direct treatment to moderate and severe cases was low.*

4.3.5 Availability of supplies and equipment for vaccination

All facilities reported providing immunization services, most of them (93%) two or more times a week. The majority (82%) followed the 'open vial' policy. Availability of vaccines (BCG, OPV, DPT, Measles, Hib, Hepatitis B and tetanus toxoid) was very good (all but one facility had all vaccines available except for Hib, a vaccine introduced rather recently and which was unavailable in three facilities). Of all facilities, 76% had cold chain equipment and supplies for vaccination (Table A35). Safety boxes or containers to safely dispose of used needles were available in half (49%) of the facilities. All facilities but one of the 44 which were supplied with a refrigerator had a functioning thermometer inside and in 39 (89%) of the 44 refrigerators the temperature was kept within the range of 2ºC to 8ºC as recommended by the national EPI[64], based on the thermometer reading. Monitoring of the cold chain was also done through vaccine vial monitors as time temperature indicators. Problems in the cold chain (vaccine exposure to heat) or expired vaccines were in this way identified for all vaccines in six of the facilities visited (five urban and one rural). *To conclude, there was good availability of vaccines with usually available supplies and good vaccine storage and some issues on the cold chain in a few cases.*

4.3.6 Availability of other basic supplies and equipment for IMCI

Forty percent (40%) of the facilities were provided with the basic supply and equipment needed for IMCI, including all the following: adult and baby scales, timing devices to count the respiratory rate, supplies to mix ORS and thermometers (Table A36). Thermometers were not available in all facilities. Supplies to mix ORS were available only in half (51%) of the facilities, thus making it difficult to prepare and administer the ORS solution at the facility should a child with some dehydration be in need for it. Fourteen percent (14%) of the children with diarrhoea who were classified by the provider as having 'some dehydration' were not rehydrated at the facility but simply handed over ORS sachets. As noted on medicine availability (§ 4.3.4), *this finding contributes to raising issues about the capacity of PHC facilities to manage children with moderate conditions*. Medicine stock cards were available in about half (56%) of the facilities, this making it difficult to manage medicine stocks (see § 4.3.4).

IMCI recording forms, used also as an aid to the consultation to record information on the individual child and classify the case according to the IMCI guidelines, were available in most (82%) facilities. This is a rather positive finding. On the other hand, IMCI daily registers and

[64] Expanded Programme on Immunization

monthly reports, to summarize and report such information, were available in fewer facilities (58%). Forty-four percent (44%) of facilities had the IMCI referral form available, to record basic information on the severe case for the referral facility and receive feedback through the same form. This reflects part of the efforts by the MOH child health service to improve referral.

4.3.7 Access to referral facilities

People living in the catchment area of 76% of the facilities visited were estimated by facility staff to have access both physically (e.g. distance) and economically to a means of transportation to take referred cases to the referral facility. For most (84%) of the facilities, it was estimated that the referral hospital could be reached within an hour. All but one of the seven facilities which reported a longer time to reach the referral facility were rural facilities. (Table A38). Based on qualitative interviews, staff of 16% of facilities reported experiences with problems with referral and, in as many as 40% of cases, believed that not all children needing urgent referral could be taken to the referral facility. Problems were reported more in rural than urban facilities. The reason most often cited for referral problems was family's lack of financial means. *It may be inferred from this qualitative information that access to referral facilities for severe cases may be constrained especially for underprivileged families, which are likely to be the most vulnerable, especially in rural areas*. It was not within the scope of this survey to assess how functional the referral system was, as this would have required a different design.

4.3.8 Transportation expenses

An attempt was made in the survey to obtain some information on direct, 'hidden' costs borne by families to access services, namely transportation costs. As the large majority of caretakers came from nearby areas, it is no surprise that the majority of them (83%) reported no expenses for transportation. Nevertheless, the average cost for transportation was higher in rural than urban areas. The maximum amount paid in urban areas for transport was MAD 25 (about US$ 3.20) and in rural areas MAD 60 (about US$ 7.70)[65]. These costs add to those for medicines when the latter are not available at health facilities (see § 4.3.4). Inability to afford costs was also mentioned among referral problems as the most common reason for caretakers' not taking a child with a severe condition to a referral facility (see § 4.3.7).

4.3.9 Access to health centres and mobile team services

The large majority of the caretakers who used health centres' services in this survey had come from nearby areas, on average 24 minutes away, with 88% of them reaching the facility within an hour (Table A39). The population which had used these services on the day of the survey was therefore mostly the one which had good access to the facility, with only five caretakers (1%) having taken more than an hour to get there. *One question would then be where the population with more difficult access would go for care and whether it would have access to, and use, PHC services*. The issue was stronger in rural areas, which typically have higher under-5 mortality rates (§ 2.2): it took on average 20.6 minutes for caretakers to reach the facilities in urban areas compared with 38 minutes in rural areas. Furthermore, only one child in five (20%) of those seen was covered by health insurance (Fig. 16), the percentage being lower in rural (11%) than urban (23%) areas. It should be noted that, as the health insurance system works on a reimbursement basis, even those covered by health insurance would need to have the financial resources available to advance payment for health-related expenses, e.g. medicines. Most private care is provided in urban areas.

[65] One US dollar corresponded approximately to MAD 7.8 at the time of the survey. This rate in given only as indicative.

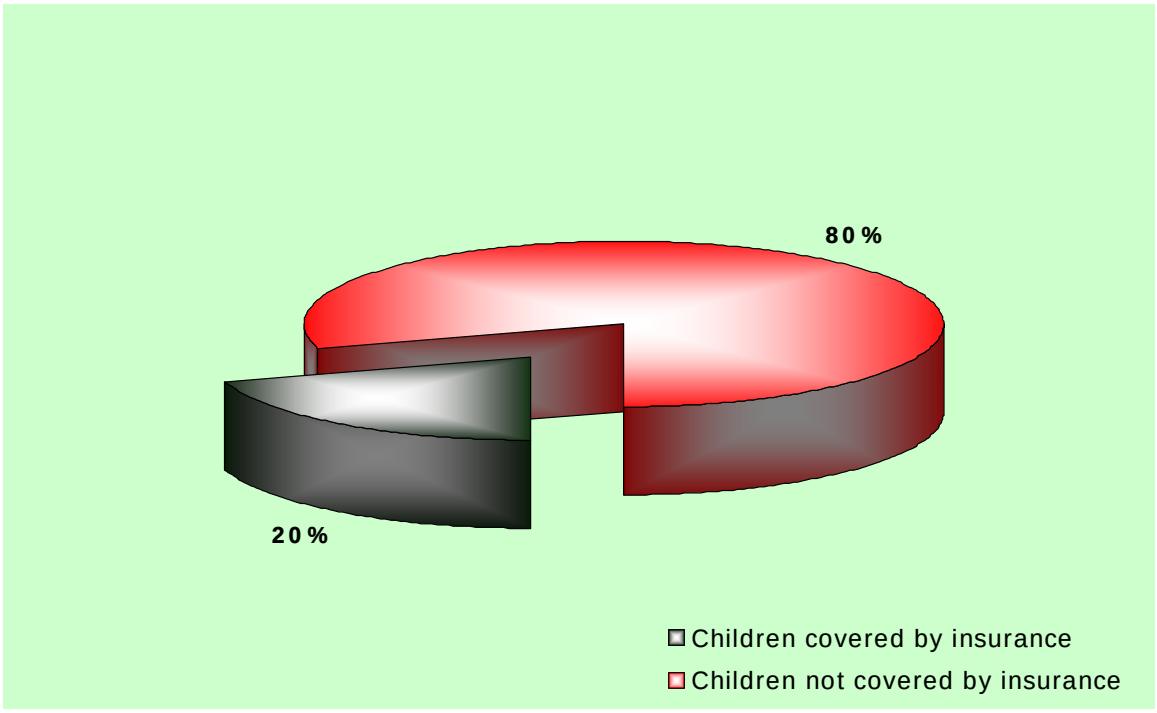


Fig. 16. Percentage of children seen covered by insurance (*n* = 397 children)

Mobile teams (‘*équipe mobile*’) are supposed to play an important role in the provision of health care in Morocco, especially in rural areas. They were reported to cover some 30% of the population living at more than 10 km of a health facility in 2003 (§ 2.1). Qualitative information was therefore collected in this survey on the type and frequency of services provided by the ‘*équipe mobile*’. Overall, 29% of all facilities reported providing the service while 38% of the 16 rural facilities, those more likely to need them, reported not providing the service. In interviews with facility staff, ‘*équipe mobile*’ was reported to provide not only preventive care (100% of cases)—as expected, given its original aim—and promotive activities (e.g. health education) (92%), but also curative services (85%) (Table A40). However, the presence of a physician in the team was reported only in 46% of cases. The frequency of missions also raised issues about the validity of the service to provide curative care. In fact, 62% of facilities reported planning only for up to 4 sessions in 2006, a frequency which would prevent regular provision of curative care, and less than half of facilities reported that they were able eventually to conduct all the sessions originally planned (Fig. 17). Thus, based on this qualitative information, not all rural facilities reported providing mobile services, not all of these services included curative services and the availability of a physician and an important proportion of planned sessions was not conducted. Although the sample of facilities providing ‘*équipe mobile*’ services was small in this survey and the aim was not an evaluation of these services, the information collected is in line with previous reports of low coverage and performance of these services. *The information collected suggests that these services may mostly have the objective of providing preventive care, rather than regular curative care to the underserved population. In fact, curative care should be provided regularly (and by a physician). A review of ‘équipe mobile’ services and their scope would be warranted.*

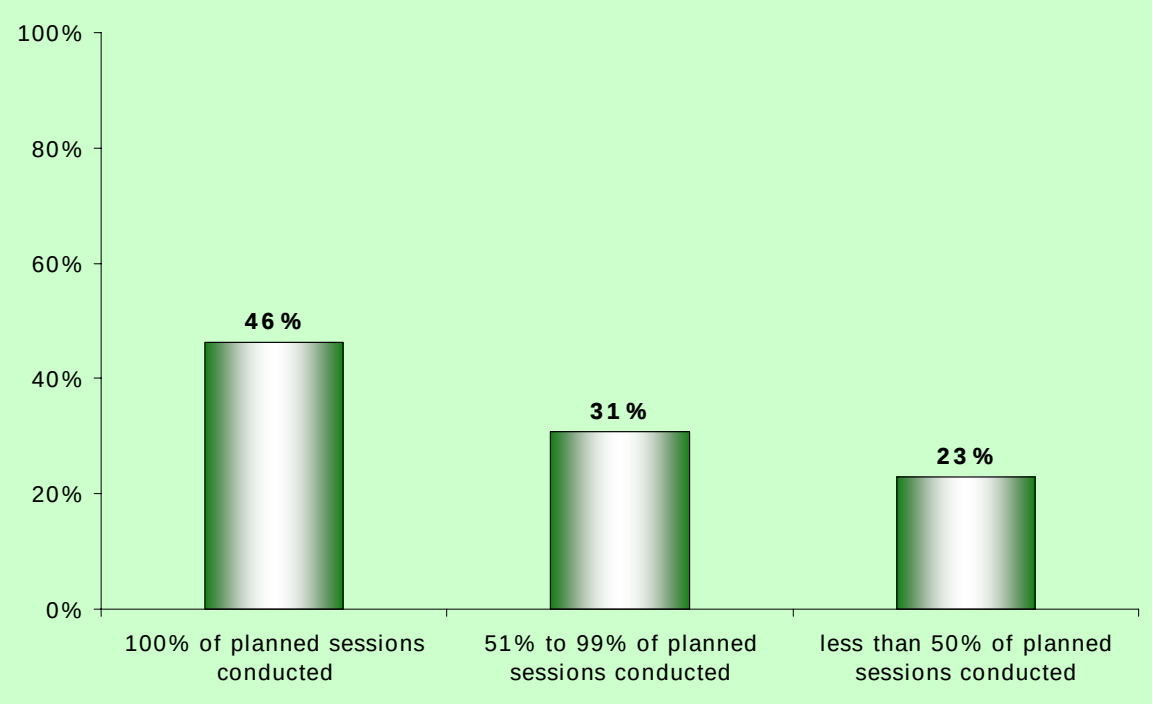


Fig. 17. *Equipe mobile*: conducted versus planned sessions (*n* = 13 facilities which reported provision of *équipe mobile* services)

4.3.10 Observations on access and utilization of PHC facilities

Some of the information collected in this survey raises issues about access to PHC facilities and their optimal utilization. While these are often observations and interpretations of the information collected, they tend to point to the same direction. Therefore, these observations are described in this report as an issue worth investigating, clearly acknowledging that this survey tool (used at health facility level) is not designed to collect conclusive information on accessibility and utilization of health services at PHC facilities. The data and information coming more specifically from this survey in this respect concern the pattern of cases seen (§ 4.1.2) and caretakers' low level of knowledge about care-seeking—in this selected population which had used the services (§ 4.2.3.7), caretaker satisfaction level with services (§ 4.3.1) and quality of services especially in relation to availability of medicines (§ 4.3.4), health insurance coverage (§ 4.3.9), the type of population using health centres in terms of accessibility (§ 4.3,.9), referral-related problems (§ 4.3.7) and coverage of underserved populations with mobile team services ('*équipe mobile*') (§ 4.3.9).

4.3.11 Supervision

About half (49%) of the facilities visited reported having received at least one supervisory visit in the past 6 months and only 3 (7%) reported having received clinical supervision in the same period, including observation of case management (Table A41; Fig. 18). *Supervision, both in terms of frequency and content, appeared therefore largely inadequate to support clinical achievements made with IMCI training and follow-up visits.* Supervisory books to record information were available in most (91%) facilities. For one facility in four (24%), the latest record of a supervisory visit dated back to a year or more ago; the percentage was higher in rural (36%) than urban (19%) facilities, although the difference did not reach statistical significance, possibly because of the small numbers involved in both groups. Routine supervision was therefore among the weakest health system areas identified in this survey.

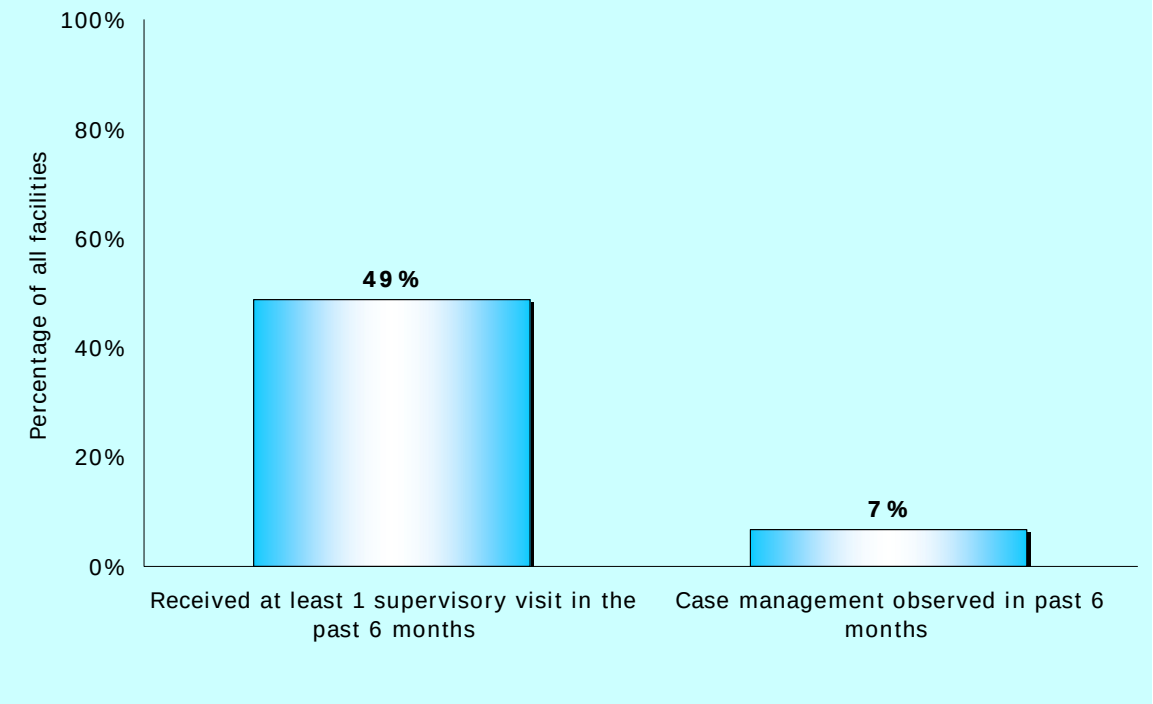


Fig. 18. Supervision in the 45 facilities visited

4.3.12 Records

An attempt was made to collect some additional information on patterns of cases by age and sex by reviewing routine outpatient records for the month of September 2007 at the facilities visited. All facilities had an outpatient logbook. Unfortunately, the survey teams had difficulty in retrieving basic information in many cases. For example, summary information on outpatients was readily available only in 69% of facilities. There were some problems also in reconciling the figures in many instances. It would therefore be challenging to use these data effectively for estimating medicine needs and planning purposes in general. *This is another area which requires substantial strengthening to ensure effective planning.*

4.4 LIMITATIONS OF THIS SURVEY

In any study, it is very important to identify and describe its limitations and take into account the original objectives, so that the findings can be interpreted and used properly. No study is exempt from limitations. Below are the main limitations found for this survey.

- *Sampling frame*: the case-load criterion of at least 4 cases below 5 years old, used to include health facilities in the sampling frame inevitably meant the exclusion of facilities with lower case-load. Within the time and financial resources allocated, however, this was unavoidable and enabled the results to be within the acceptable limits of precision originally planned for the main indicators. As urban facilities tend to have higher average case-load than rural facilities, the sampling frame included a higher proportion of urban facilities than rural facilities and, hence, more urban facilities were included in the survey sample to reflect the same proportional distribution (§ 3.2.3).
- *Surveyors and supervisors*: the criteria for selection of surveyors and supervisors included previous training in IMCI and facilitation skills, experience in IMCI training as trainers, training and involvement in IMCI follow-up visits after training and, as a desirable option, previous experience in similar surveys (§ 3.6.1). This enabled the selection of staff who were very familiar with IMCI and who needed to be trained only in the survey procedures. The limitation of this choice is in that people fully involved in IMCI may in principle be unintentionally more biased than people not involved in it. However, it would have been

almost impossible to conduct a survey of this type—requiring excellent familiarity with the IMCI clinical guidelines as a prerequisite for surveyors—using staff not trained in IMCI. To reduce the effects of this bias, attention was placed on the supervision of survey activities, assigning teams to provinces different from the ones they were originally based in, and interpretation of the data.

- *IMCI implementation*: implementation of the IMCI strategy at health facilities, as recommended by WHO, goes beyond the one-event of the IMCI training course, to include as a requirement a follow-up visit within a certain time after IMCI training and health system support. In this survey, very few children were seen by doctors who had been followed up within 2 months of IMCI training, as described in § 4.3.3.2, and health system support was weak. This has to be considered when interpreting the results.
- *Generalization of results:* for any survey, it must be very clear to which population the results apply, to avoid inappropriate generalizations for which the data would be unsuitable. The results of this survey apply to the population from which the sample was drawn, consisting of all facilities meeting the enrolment criteria. The sample was not stratified by province or district, to limit it to a manageable size. Based on the objectives of this survey, *the results refer to the quality of care provided to children aged 2 months up to 5 years old by doctors trained in IMCI in facilities with an estimated daily case-load of four or more cases.*
- *Availability of medicines:* the presence of just one course of treatment was sufficient to meet the definition of medicine availability in this survey, given the constraints of applying improved definitions (§ 4.3.4). Attempts to relate medicine stocks to case-load failed, due to lack of stock cards and incomplete or inconsistent records in many facilities (§ 4.3.6 and 4.3.12).

5. CONCLUSIONS AND RECOMMENDATIONS

This survey provided useful quantitative and qualitative information on the quality of outpatient primary child health care services provided to under-5 children at health centres in Morocco. It helps to highlight strengths and to identify issues on a number of health system elements influencing the quality of care which need to be addressed to improve child care services at this level.

The results relative to indicators for clinical and communication skills indicate that health providers, trained in IMCI, have the skills to conduct a systematic assessment of the child, including the assessment of feeding problems. Some of the signs of severe conditions (e.g. checking for general danger signs and signs of severe malnutrition) tend to be overlooked. This may partly be due to the fact that most children currently seen at health centres are mild cases. Basic nursing tasks, such as correctly taking the temperature and weighing the child—which are not included in IMCI training—also had low performance. IMCI-trained providers' performance was excellent in screening children for the identification of missed immunization opportunities and taking action, i.e. administering the vaccine or advising when to come back for the related scheduled immunization session at the facility. This represents a clear added value of IMCI training, as it is one of the essential elements of the guidelines. The doctors usually prescribed antibiotics when indicated, based on their classification of the child's illness, and selected antibiotics recommended by IMCI, thus showing good compliance with the national list of essential medicines. While providers gave advice on antibiotic treatment in most cases, they often tended to miss instructions on its duration, a weak area commonly found in surveys in many other countries. Similarly, the advice on ORS treatment focused on the amount of water to prepare the solution correctly, but often tended to be incomplete in the instructions on administration. The findings suggest the need to improve health providers' communication skills, especially on messages on care-seeking, check maternal health as per the IMCI guidelines and systematically distribute selected tasks between doctors and nurses to deliver the full scope of IMCI. Suggestions on tasks and skills to be emphasized during future training courses and follow-up visits, together with the evidence from this survey, are provided in detail separately and form part of the recommendations (Annex 1).

The findings related to health system support, which affect a child's right to quality health care are important. The issues raised relate to the use of (and access to) primary child health care services, policy to support child health, availability of essential medicines, lack of supportive and clinical supervision and functionality and reliability of the health information system.

The recommendations given below, together with a brief rationale, address these issues and serve as the basis for policy decisions and to develop a plan to strengthen the quality of primary child health care services and reduce inequities.

5.1 UTILIZATION OF PRIMARY HEALTH CARE SERVICES: COLLECTING INFORMATION FOR POLICY DECISIONS

One of the critical prerequisites to further reduce under-5 mortality and improve child health is to ensure equitable access of the child population to quality promotive, preventive and curative primary child health care services and promote their effective utilization. The findings of this survey, including qualitative information, suggest sub-optimal utilization of child care services at primary health care level (health centres) for the conditions which would most require them and also raise issues on the accessibility to these services and on current approaches (i.e. '*équipe mobile*') to reaching out to underserved populations.

Recommendation 1. A study should be conducted on the utilization of primary health care services, including care-seeking practices, and on the coverage, efficiency and effectiveness of existing interventions to provide curative child health care services to the underserved populations

(*équipe mobile*), to provide information for evidence-based policy decisions. Meanwhile, alternative community-based approaches should be encouraged.

5.2 EQUITABLE ACCESS TO MEDICINES FOR CHILDREN: IMPROVING POLICY ON MEDICINES

Equitable access to quality child health services implies also access to treatment. Availability of essential medicines for the most common and life-threatening child conditions at health facilities is an indicator of quality of service from both the provider and client satisfaction perspectives. The proportion of the child health population covered by health insurance is currently low and the system is based on reimbursement, requiring the family to advance the amount of money needed to purchase medicines if these are not available at the health facility.

Recommendation 2. As a policy on medicines, consideration should be given to the following:
- increasing budget allocation to medicines for key under-5 illnesses (paediatric formulations);
- applying the national essential list of medicines for children in medicine procurement;
- establishing a central medicine management system with a monitoring system for distribution of medicines to the health facility.

5.3 COMMITMENT TO MILLENNIUM DEVELOPMENT GOAL 4: DEVELOPING A NATIONAL CHILD HEALTH POLICY AND SCALING UP IMCI

Political commitment to reaching the Millennium Development Goal no. 4 on reduction of child mortality at this stage requires a comprehensive, supportive action-oriented child health policy to scale up IMCI, identify priorities, including the human and financial resources necessary for achieving and sustaining its objectives. IMCI training coverage is low and the process of strengthening and supporting health providers' IMCI skills through follow-up and supervisory visits is incomplete, with inadequate resources allocated to it; child health information is often incomplete and unreliable.

Recommendation 3. An evidence-based national child health policy should be developed, promoting IMCI as the primary child health care strategy (for under-5s), setting clear priorities and allocating the necessary resources to achieve its objectives, also by prioritizing child health in the Moroccan 'Vision 2020'.

Recommendation 4. Plans for scaling up IMCI should include not only training but also follow-up visits after training and health system strengthening, and allocation of the necessary resources to it; the efficiency and effectiveness of the current supervisory system should be carefully reviewed and the information system should be improved to provide reliable information for use for planning at all levels.

Recommendation 5. Efforts should be accelerated to introduce the child public health approach (IMCI) into pre-service education, as a sustainable long-term approach benefiting public health, and outcomes of this approach should be evaluated.

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ANNEX 1. AREAS TO BE EMPHASIZED IN FUTURE IMCI CLINICAL TRAINING AND FOLLOW-UP VISITS

Step	Targeted children	Condition	Areas to emphasize	Evidence from survey (cases managed by IMCI-trained providers)
Assessment	All children	Severe conditions	*General danger signs* should be routinely checked in all children	The three general danger signs were not checked in 53.9% of children
	All children	All	The *temperature* and *weight* should be taken correctly by nurses	The temperature and weight were not taken or not taken correctly in 59.4% and 86.4% of children, respectively
	Children with cough or difficult breathing	ARI	The *respiratory rate* should be counted carefully; more supervised practice is needed	Respiratory rate considered unreliable in 47.2% of children in whom taken
	Children with fever	Fever	*History of measles* within the last three months should be asked in all children with fever or history of fever	History of measles within the last three months was not checked in 47.4% of children with fever or history of fever.
	All children	All	*Palmar pallor* should be checked routinely in all children	Palmar pallor was not checked in 38.3% of children
	All children	All	*Visible wasting* and *oedema of both feet* should be checked properly in all children	Visible wasting and presence of oedema of both feet were checked for in 72.8% and 79.6% of children, respectively
	Children ≥ 2 years old with low weight, anaemia or persistent diarrhoea	Feeding practices	These children should be assessed for feeding practices	Although 58% of children less than 2 years old was assessed for feeding practices, 88.2% of older children with low weight, anaemia or persistent diarrhoea was not
Treatment and counselling	Children needing urgent referral	Severe classification	All children with a severe classification needing urgent referral to hospital should receive the *first dose of 'pre-referral treatment'*	Only one of the six severe cases needing urgent referral received a first dose of pre-referral treatment (antibiotic, ORS, vitamin A -- as appropriate)
	Children needing oral antibiotics	IMCI conditions requiring antibiotics	When prescribing antibiotics, doctors should advise caretakers also on the *duration of the treatment course* and emphasize the importance of completing the whole course even the child gets better earlier	Correct advice on duration of treatment was not given to 41.3% of children prescribed oral antibiotics for an IMCI condition and 24% of caretakers of these children said they would stop or reduce treatment in case the child would get better before completing the full treatment course
			Giving (or demonstrating how to give) the *first dose of treatment* at the facility should be practised during training courses	All children but one received no first dose of treatment at the facility

Step	Targeted children	Condition	Areas to emphasize	Evidence from survey (cases managed by IMCI-trained providers)
Treatment and counselling (continued)	Children with diarrhoea	Diarrhoea	*Advise on ORS treatment* should be enhanced through more supervised practice	Caretakers of 62.7% of children given ORS were not told when to give the solution to the child and 65.7% were not told about how much to give each time.
	Children needing oral antibiotics or ORS	IMCI conditions requiring antibiotics and diarrhoea	*Providers' communication skills* when advising on treatment should be strengthened with more practice in training	71.4% of caretakers children prescribed an antibiotic for an IMCI condition and 91% of those prescribed ORS were given no demonstration, respectively; caretaker understanding was not checked with open-ended questions in 88.9% and 85.1% of children prescribed antibiotics or ORS, respectively
	All children	Any non-severe condition	*Advice on giving extra fluids and continue feeding*	Caretakers of 56.0% of children not needing urgent referral were given no advice on *both* home care rules
	Children less than 2 years old and children with low weight and/or anaemia and/or persistent diarrhoea	Feeding	*Age-appropriate feeding advice* should be strengthened during training and follow-up visits	Caretakers of 74.5% of children less than 2 years old and those with very low weight and/or anaemia and/or persistent diarrhoea were not given age-appropriate advice on breastfeeding and frequency of complementary foods
	Caretaker-mother	Children not needing urgent referral, drug or ORS treatment, or specific advice (i.e., 'green row' conditions)	Training should start emphasizing the need to *counsel on their health mothers* of sick children who have only a mild illness	99% of caretaker-mothers of children not needing urgent referral were asked no questions on their health

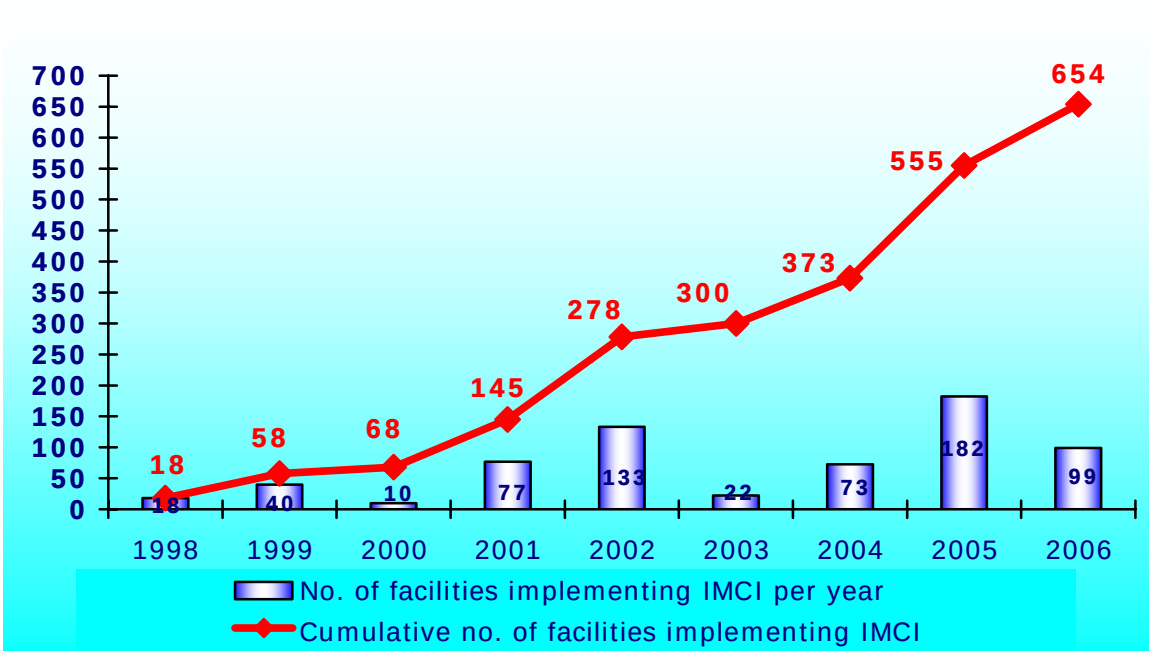
ANNEX 2. MAIN STEPS OF THE IMCI PROCESS IN MOROCCO
March 1997 – March 2007

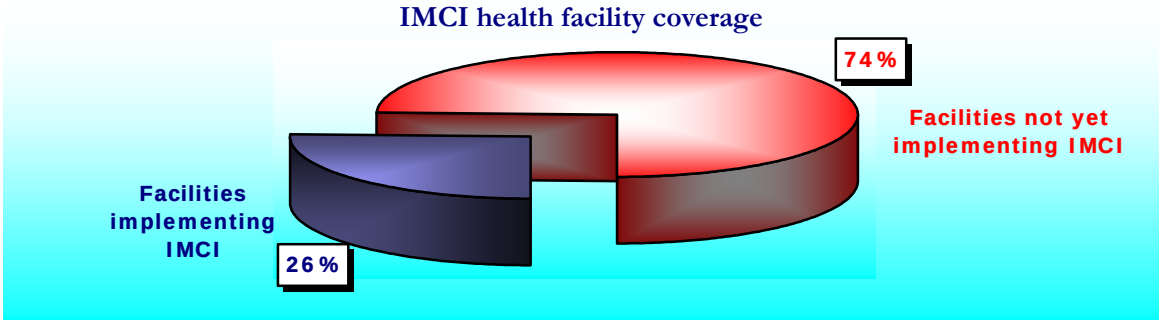
1997	
INTRODUCTION PHASE	
IMCI strategy formally endorsed by the Minister of Health and National IMCI Task Force established with national IMCI coordinator appointed	**March 1997**
National IMCI Orientation Meeting and Preliminary Planning Workshop conducted	November 1997
EARLY IMPLEMENTATION PHASE	
National IMCI Planning and Adaptation Workshop	December 1997
1998-2000	
Adaptation of IMCI clinical guidelines completed	**June 1998**
First 11-day IMCI case management course at central level for doctors conducted	July 1998
IMCI clinical guidelines revised	December 1998
IMCI early implementation phase started at district level	**February 1999**
First IMCI follow-up visits after training conducted	April 1999
Early implementation phase in 2 districts completed	September 1999
Review of Early Implementation Phase and planning for the Expansion Phase conducted	October 1999
Health facility survey to evaluate the introduction of the IMCI strategy (comparing the 2 'IMCI provinces' with a control group of 2 provinces without IMCI)	April 2000
EXPANSION PHASE	
Beginning of expansion to new districts and provinces	**December 2000**
2001-2006	
Introduction of IMCI in pre-service education	**January 2001**
Establishment of IMCI information system	2003
Inclusion of first week of life in the IMCI guidelines	**July 2005**
Report on the child health situation analysis released as part of the child health policy initiative	**October 2005**
Developing of referral reporting system	2006
Preparation and testing of first training course on the 'healthy child'	**July 2006**

DRUGS: Drugs needed for IMCI are included in the national Essential Drug List (EDL).

ANNEX 3. HEALTH FACILITY COVERAGE
(as of the end of 2006)

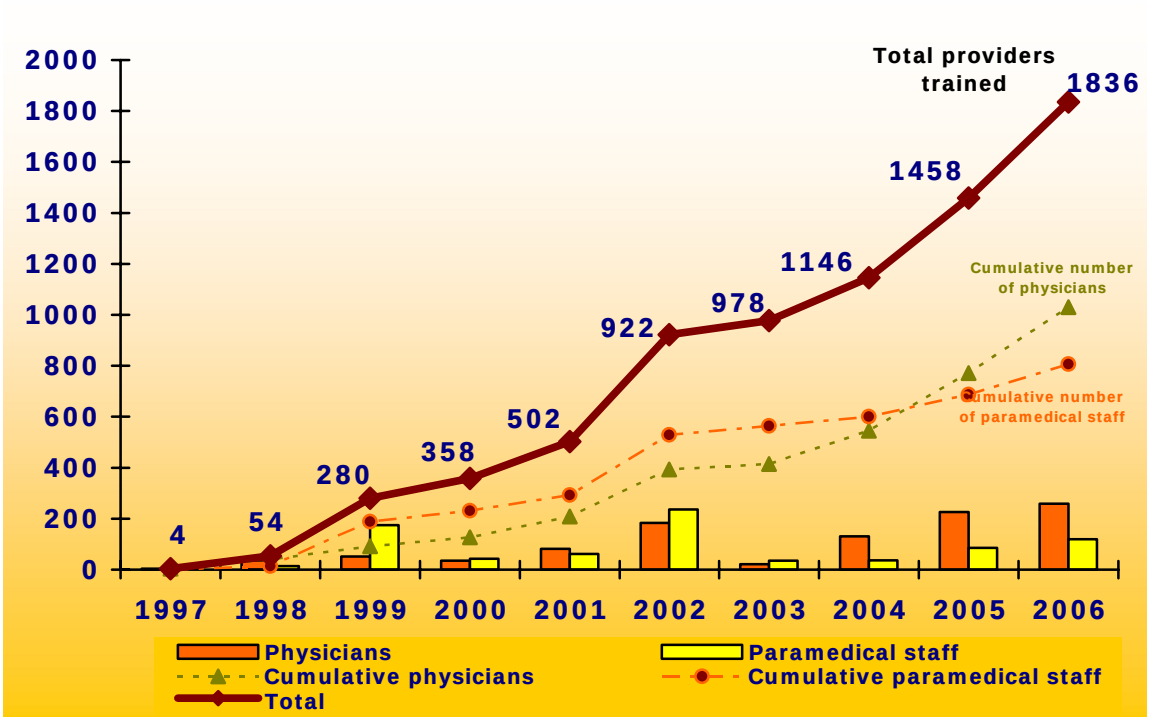
Primary health care facilities with health providers trained in IMCI#





Primary health care facilities implementing IMCI: 654 (25.6%) out of 2553 outpatient health facilities. This excludes emergency and outpatient departments of hospitals. This rate refers to facilities with at least a health provider trained in IMCI. Data on number of 'health facilities' are from the Ministry of Health, 2003. Source: Service de Protection de la santé de l'Enfant, Direction de la Population, Ministry of Health, Morocco.

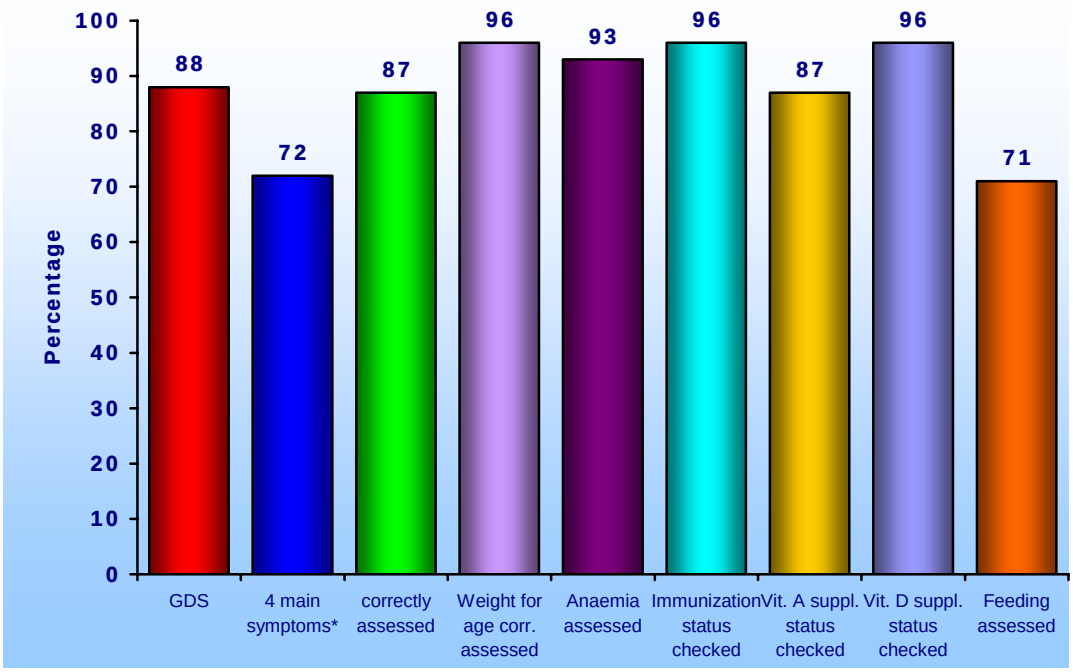
ANNEX 4. NUMBER OF HEALTH PROFESSIONALS TRAINED IN IMCI 1997–2006



ANNEX 5. IMCI TRAINING AND FOLLOW-UP

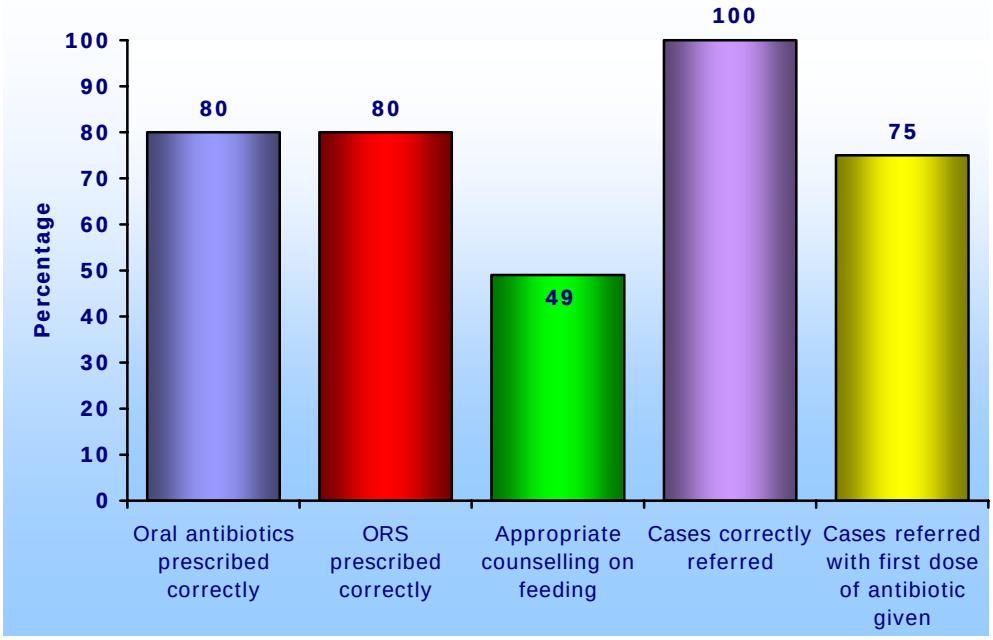
Region	Province	Dates			
		First IMCI course conducted	**Most recent IMCI course conducted**	**First rounds of follow-up visits**	**Last round of follow-up visits**
Grand Casablanca	1. Casa Anfa	From 13 to 24 July 1998 (11-12 day course)	From 22 to 27 May 2006 (7-day course)	No follow-up	No follow-up
	2. Casa Nouaceur				
	3. Casa Hay Mohammadi				
	4. Casa Ain Chok				
	5. Casa El Fida				
	6. Mohammedia				
	7. Casa Ben M'sick				
	8. Casa Bernoussi				
	9. Casa Mediouna				
	10. Casa Hay Hassani				
	11. Cas My Rchid				
Marrakech-Tensift-Elhaouz	12. Essaouira	From 22/10 to 1/11 -2001 (10-day course)	From 21 to 27 November 2004 (7-day course)	From 21 to 26 April 2003	From 30 October to 6 November 2006
Sous-Massa-Daraa	13. Agadir Ida Outanane	From 15 to 27 February 1999 (11-12 day course)	From 23 to 29 July2006 (7-day course)	From 31 May to 05 June 1999	From 06-1 May to 05 June 1999
	14. Tiznit	From 8 to 18 -2002 (10-day course)	From 17 to 23 September 2006 (7-day course)	No follow-up	No follow-up
	15. Taroudant	From 8 to 18 -2002 (10-day course)	From 21 to 31 October 2002 (7-day course)	No follow-up	No follow-up
Chaouia-Ourdiga	16. Settat	From 22/10 to 1/11/2001 (10-day course)	From 21 to 28 December 2002 (7-day course)	From 10 to 14 March 2003	No follow-up
Tadla-Azilal	17. Azilal	From 04 to 10 September 2005 (7-day course)	Only one session planned	No follow-up	No follow-up
Rabat-Salé-Zemmour-Zaer	18. Rabat	From 28 to 9 September 1998 (11-12 day course)	From 07 to 03 May 2006 (7-day course)	From 27 to 31 January 2003	No follow-up
Meknès Tafilalt	19. Meknès	From 8 to 20 February 1999 (11-12 day course)	From 24 /9 to 04/10 2001 (11-12 day course)	From 28 March to 03 April 1999	No follow-up
	20. El Hajeb	From 24/9 to 4/10 -2001 February 1999 (11-12 day course)	From 30/9 to 10/10 -2002 February 1999 (10-day course)	No follow-up	No follow-up
Fes-Boulmane	21. Sefrou	From 22/10 to 1/11/2001 (10-day course)	From 15 au23 March 2002 (7-day course)	From 24 to 29 March 2003	No follow-up
Taza-Alhouceima-Taounate	22. Al Hoceima	From 08 to 14 May -2005 (7-day course)	From 26/11 to 2/12 -2006 (7-day course)	No follow-up	No follow-up
	23. Taounate	From 08 to 14 May -2005 (7-day course)	From 26/11 to 2/12 -2006 (7-day course)	No follow-up	No follow-up
	24. Taza	From 05 to 11 June -2005 (7-day course)	From 17 to 23 June -2006 (7-day course)	No follow-up	No follow-up
Tanger-Tétouan	25. Chefchouen	From 22/10 to 1/11/2001 (10-day course)	From 19 to 25 November 2006 (7-day course)	From 23 to 28 December 2002	From 5 to 10 December 2005
	26. Tanger Assilah	From 8 to 18 April -2002 (10-day course)	From 28 May to 3 June 2006 (7-day course)	No follow-up	No follow-up
	27. Tanger Fahs	From 8 to 18 April -2002 (10-day course)	From 07 to 13 May 2006(7-day course)	No follow-up	No follow-up
	28. Tétouan	From 8 to 18 -2002 (10-day course)	From 03 to 10 February 2007 (7-day course)	No follow-up	No follow-up
	29. Larache	From 20 to 26 November 2005 (7-day course)	From 07 to 13 May 2006 (7-day course)	No follow-up	No follow-up
Région de l'Oriental	30. Nador	From 20 to 24 June 2005 (7-day course)	From 11 to 17 June 2006 (7-day course)	No follow-up	No follow-up
	31. Berkane	From 20 to 24 June 2005 (7-day course)	From 11 to 17 June 2006 (7-day course)	No follow-up	No follow-up

ANNEX 6. RESULTS FROM FOLLOW-UP VISITS



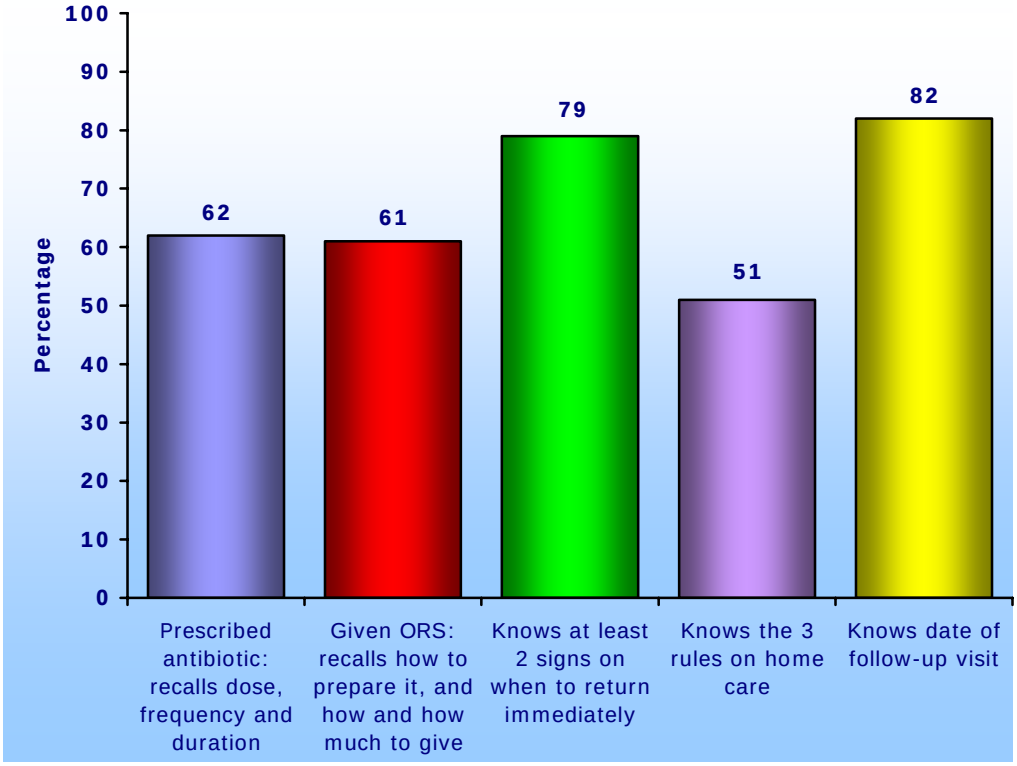
Abbreviations: GDS = General danger signs; 4 main symptoms = Cough, diarrhoea, ear problem and fever; Vit. = vitamin. Note: throat examination refers to children 18 months old or older

Fig A1. Health provider performance: Assessment – First follow-up visit (October 1999–August 2003)



ORS = Oral rehydration salts

Fig A2. Health provider performance: Treatment and counselling – First follow-up visits (October 1999–August 2003)



ORS = Oral rehydration salts

Fig A3. Mother's knowledge about home care (exit interviews) – First follow-up visits (October 1999–August 2003)

ANNEX 7. SCHEDULE OF SURVEY ACTIVITIES

March 2007; November – December 2007

- **PLANNING**

Planning meeting 12 – 17 March 2007

Final selection of health facilities October 2007

- **TRAINING**

Surveyor training 28 October - 2 November 2007

- **FIELD WORK**

Data collection 5 – 19 November 2007

- **DATA ENTRY AND ANALYSIS**

Completion of data entry and cleaning 20 – 26 November 2007

Preparation of tables and graphs for group analysis 27 November - 3 December 2007

Group data analysis, conclusions and recommendations 4 - 7 December 2007

- **PRESENTATION OF MAIN FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

Preparation of presentation for feedback meeting and further analysis 8 - 10 December 2007

National feedback meeting 12 December 2007

October				November																
28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	
Surveyor training				***Data collection***																
										Data entry										

November														December						
17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7
Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr
		cont																		
Data entry						***Data cleaning***				***Data analysis: preparation of tables and graphs***							***Group analysis, with conclusions and recommendations***			

ANNEX 8. PLANNING FOR THE SURVEY

Ministry of Health, Rabat
12 – 17 March 2007
08.30 – 18.30 hours

Monday, 12 March

- Meeting of the survey planning team:
  - Review of tentative schedule of planning visit
  - Review of checklist of information required for planning
  - Survey manager and co-ordinator
  - Objectives of the survey
  - Review of draft notes on background on the child health situation in the country (e.g., DHS/PAPFAM survey data, health facility data), rationale for the IMCI strategy and progress in implementation; summary results of follow-up visits, observations and lessons
  - Geographic scope and sampling, including criteria for health facilities to survey (options and related issues, data required)
  - Surveyors, supervisors (responsibilities, requirements)

Tuesday, 13 March

- Meeting of the survey planning team (continued):
  - Technical support for the survey (from surveyor training to analysis)
  - Review of survey forms (and plans for translation of selected sections): Form 1—to be cont'd—
  - Initial list of country-specific health facility surve-y rules –to be cont'd-

Wednesday, 14 March

- Review of survey forms (and plans for translation of selected sections): Forms 1, 2, 3, 4 and observation form—continued—
- List of country-specific health facility survey rules—continued—

Thursday, 15 March

- Visit to a nearby health centre implementing IMCI (in Rabat):
  - Pre-test of forms
  - Patient flow, outpatient logbooks, drug stock cards
  - Revision of forms and survey rules

Friday, 16 March

- Meeting with partners and WHO country office staff on plans for the survey
- Review of computer facilities and logistics
- Plans for revision of EpiInfo data entry and analysis files based on revised forms
- List of potential surveyors and supervisors
- Review of plans for data entry and analysis
- Estimate of number of sets of forms, summary comment sheets and surveyor instructions needed for the survey; instruments to translate (survey procedure manual, checklist of tasks, forms)

Saturday, 17 March

- Planning for:
  - Surveyor training (responsibility, language, schedule)
  - Data collection (survey itinerary)
  - Delivering the forms completed by each team to the central level daily, for data review and entry
  - Data entry and analysis; data entry operators (and their training); drug classification; labels for 'health facility envelopes'
  - Dissemination of findings and 'Feedback meeting' (presentation of preliminary findings and recommendations)
- Finalization of survey schedule
- Planning for remaining survey tasks

ANNEX 9. SURVEY NATIONAL PLANNING TEAM
12 – 17 March 2007

Name	*Title and affiliation*		*Province*
Dr CHEKLI Hamid	Public health specialist	Chief, Child Health Service, Direction de la Population	Ministry of health, Rabat
Dr LYAGHFOURI Aziza	Pediatrician	National IMCI focal point, Child Health Service, Direction de la Population	Ministry of health, Rabat
Dr BRAIKAT M'Hamed	Public health specialist	Responsible for the National EPI programme, Direction de la Population	Ministry of health, Rabat
M. RJIMATI Larbi	Nutritionist	Programme on the control of micronutrient deficiencies, Child Health Service, Direction de la Population	Ministry of health, Rabat
Dr YARTAOUI Hafida	Physician	Chief, Planning Service, Family Planning Division, Direction de la population	Ministry of health, Rabat
DR GHOLBZOURI Karima	Public health specialist	Chief, Health coverage service, Direction des Hôpitaux et des Soins Ambulatoires	Ministry of health, Rabat
Dr FILALI Abdelilah	Physician	Chief, Urban health centre, Jnanat	Prefecture (province) of Fès
Dr KHALFAOUI Omar	Paediatrician	Head, Paediatric service, Hôpital Provincial Ibn Baja	Prefecture (province) of Taza
Dr BAHIJ Abderrahmane	Physician	Chief, Urban health centre, SEBBAH	Prefecture (province) of Sekhirat- Témara
Dr ESSAMADI Abdelilah	Physician	Chief, Urban health centre, El Haouta	Prefecture (province) of Chefchaouen
Dr AJANA Med Kamal	Pediatrician	Paediatric service, Höpital Civil Tetouan	Prefecture (province) of Tétouan

ANNEX 10. LIST OF HEALTH FACILITIES SELECTED, BY RESIDENCE AND PROVINCE
Urban facilities

Health facility no.	'Circonscription sanitaire'	Health facility name
Province: 1. Tanger Asilah		
1	BENDIBANE	Bendibane
2	AMAL	Amal
3	M'SALLAH	M'sallah
4	SAID NOUSSAIRI	Said Noussairi
Province: 3. Larache		
5	HAYJADID	Hayjadid
Province: 4. Tétouan		
6	BOUJARRAH	Boujarrah
7	MHANNECH	Mhannech
8	BEN KARRICH	Ben Karrich
Province: 6. Nador		
9	ALMASJID	Al Masjid
Province: 7. Al Hoceima		
10	A HAMMOU	Abdellah Hammou
Province: 8. Taounate		
11	TAOUNATE	Taounate
Province: 9. Taza		
12	GUERCIF	S.M.Ben Ahmed
13	BAB ZITOUNA	Bab Zitouna
Province: 10. Fès		
14	AIN KADOUS	Ain Kadous
15	LALLA SOUKAINA	Lalla Soukaina
16	SIDI BRAHIM	Sidi Brahim
Province: 12. Meknès		
17	ACHOUBIK	Achoubik
18	IZDIHAR	Izdihar
19	RIAD	Riad
Province: 13. Meknès El Hajeb		
20	AIN TAOUJDATE	Ain Taoujdate
Province: 14. Rabat		
21	TAKADDOUM	Takaddoum
22	SIDI FATAH	Sidi fatah 1
23	EL MELK	El Melk
24	EL FATH	El Fath
Province: 15. Settat		
25	EL GARA	Csua El Gara
Province: 17. Essaouira		
26	ESSAOUIRA VILLE	Allal ben Ahmed Amkik
Province: 18. Agadir Ida outanane		
27	BOUARGANE	Bouargane
28	TIKIOUINE	Tikiouine
Province: 19. Taroudant		
29	EL GUERDANE	El Guerdane

Rural facilities

Health facility no.	'Circonscription sanitaire'	Health facility name
Province: 1. Tanger Assilah		
30	DAR CHAOUI	Dar Chaoui
Province: 2. Tanger Fahs		
31	MALLOUSSA	Malloussa
Province: 3. Larache		
32	RISSANA	Rissana Cham
33	KSAR BJIR	Ksar Bjir
Province: 4. Tétouan		
34	COELMA	Azla
Province: 5. Chefchaouen		
35	BRIKCHA	Asjen
Province: 6. Nador		
36	ZEGANGAN	Ouixane
37	MIDAR	Tafersit
Province: 7. Al Hoceima		
38	BNI AMART	Bni Amart
Province: 8.Taounate		
39	BOUHOUDA	Bouhouda
40	AIN GDAH	Ain gdah
Province: 9. Taza		
41	TAHLA	Matmata
Province: 11. Sefrou		
42	Bni Sadden	Bir Tamtam
Province: 13. Meknès El Hajeb		
43	AIT YAAZEM	Ait Yaazem
Province: 16. Azilal		
44	AZILAL	Agoudid
Province: 17. Essaouira		
45	TAFETACHT	Tafetacht

ANNEX 11. SURVEYOR TRAINING SCHEDULE

28 October – 2 November 2007

Sunday, 28 October

- Welcome, purpose of the training and introduction of participants
- Administrative information
- Introduction to the survey: survey objectives and training agenda
- Survey methodology
- Introduction to survey procedures and forms
- Introduction to survey Q-by-Q instructions
  - ➢ *Enrolment card*
  - ➢ Form 1: *Observation of case management*
    - Classroom practice with exercises and role-plays
    - Briefing on 1st practice with outpatients at health facility

Monday, 29 October

- 1st practice with outpatients: using Enrolment Form and Form 1
- Review of practice in groups

❖ *Meeting with team supervisors*:
- ✓ Supervisor responsibilities
- ✓ Enrolment Form and Form 1

Tuesday, 30 October

- Plenary on 1st practice
  - ➢ Form 2: *Exit interview*

  Classroom practice
  - ➢ Form 3: *Re-examination of child*

  Classroom practice
  - ➢ Form 4: *Equipment and supply*
- Briefing on 2nd practice with outpatients at health facility

❖ *Meeting with team supervisors*:
- ✓ Forms 2, 3 & 4
- ✓ Checking forms in the field
- ✓ Providing feedback to health facility staff
- ✓ Supervisors' daily meetings with teams

Wednesday, 31 October

- 2nd practice with outpatients: using all forms
- Review of practice in groups and plenary
- Briefing on 3rd visit to health facility

❖ *Meeting with team supervisors*:
- ✓ Checking surveyor reliability and forms
- ✓ Summarising qualitative observations

Thursday, 1 November

- 3rd practice at health facility: using all forms
- Review of practice in groups and plenary

Friday, 2 November

- Drills on Q-by-Q instructions and survey procedures
- Training evaluation

❖ *Meeting with team supervisors:*
- ✓ Survey itinerary
- ✓ Team composition
- ✓ Forms and supplies
- ✓ Final arrangements

ANNEX 12. LIST OF SURVEYORS AND SUPERVISORS BY TEAM

5 – 16 November 2007

Teams	'Observateurs'	'Validateurs'	Supervisors #	Provinces in which health facilities located
Team A	4. Dr Mohamed Faouzi (Agadir) 5. Dr Ahmed Ouardani (Al Hoceima)	2. Dr Ettini Asmaa (Essaouira) 3. Dr Mohamed Mozariahi (Al Hoceima)	1. Dr Nadir Kandoussi (Meknès)	Rabat –-Chefchaouen - Tétouan-Tanger Assilah - Tánger Fahs
Team B	8. Dr Mohamed Ragala (Larache) 9. Dr Anouar Sadat Mohamed (Rabat /DP)	7. Dr Khadija Benabdejlil (Agadir)	6. Dr Hafida Yartaoui (Rabat/DP)	Fès – Sefrou – El Hajeb – Taza
Team C	13. Dr Bahij Abderrahmane (Témara) 14. Dr Loubna Ben Salah (Nador)	11. Dr El Khalfaoui Omar (Casa) 12. Dr Farida Babnou (Chefchaouen)	10. Dr Mezzine Abdennour (Mdik Fnidek)	Rabat – Settat – Azilal- Meknès – Larache
Team D	17. Dr M'Barek Rafaai (Larache) 18. Dr Karim Imari (Tétouan)	16. Dr Houssain Azouz (Chefchaouen)	15. Dr Filali Abdelilah (Fès)	Rabat – Nador – Al Hoceima – Taounate
Team E	21. Dr Abderrahim Houari (Nador)	20. Dr Manee Driss (Taza)	19. Dr Amal Benkirane (Larache)	Rabat –Tétouan – Essaouira – Agadir- Taroudante

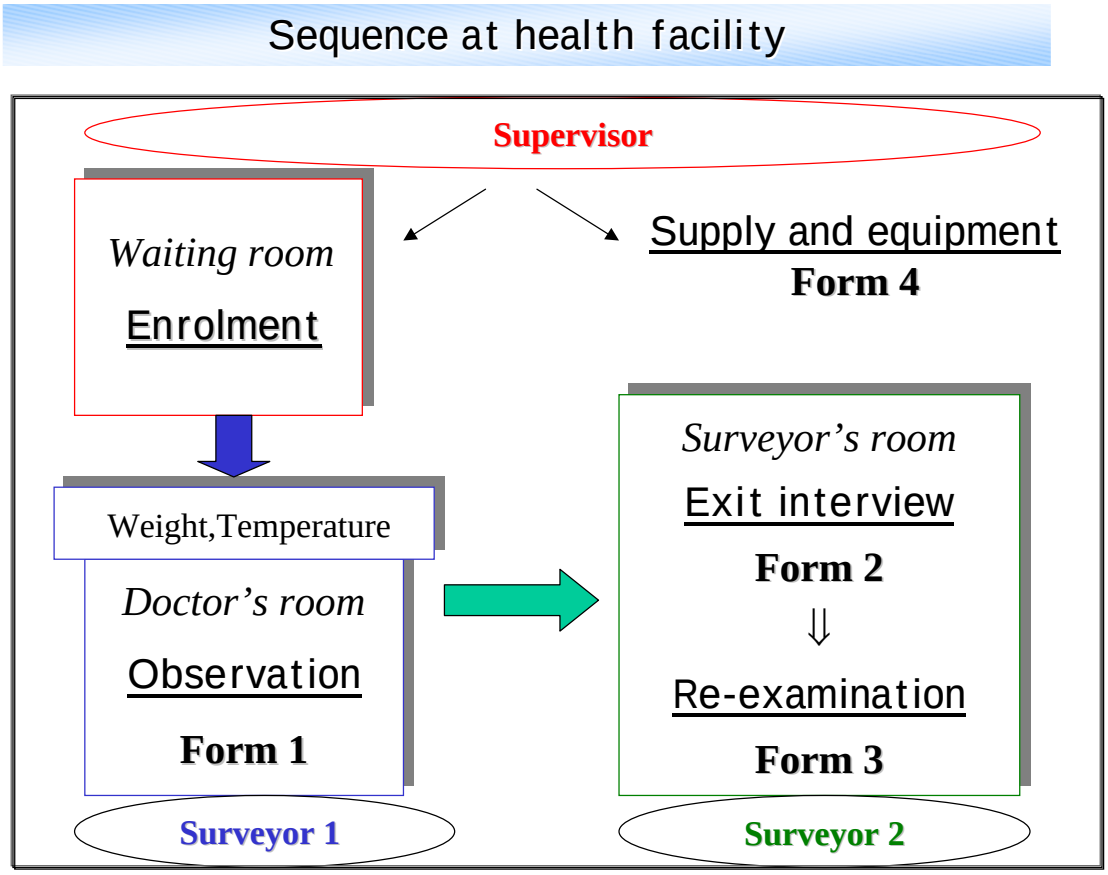
Supervisors were assigned to provinces different from their original place of work. The number before the surveyor and supervisor name in the table refers to the number assigned and as entered in the database in case of queries.

ANNEX 13: SURVEY TEAMS ITINERARY

HF no.	Urban/Rural	Circoscription sanitaire	Health facility name	Date of visit
		TEAM A		
		Province: 14. Rabat		
23	Urban	EL MELK	El Melk	05/11/2007
		Province: 5. Chefchaouen		
35	Rural	BRIKCHA	Asjen	07/11/2007
		Province: 4. Tétouan		
8	Urban	BEN KARRICH	Ben Karrich	08/11/2007
		Province: 1. Tanger Assilah		
1	Urban	BENDIBANE	Bendibane	09/11/2007
2	Urban	AMAL	Amal	12/11/2007
3	Urban	M'SALLAH	M'sallah	13/11/2007
4	Urban	SAID NOUSSAIRI	Said Noussairi	14/11/2007
30	Rural	DAR CHAOUI	Dar Chaoui	15/11/2007
		Province: 2. Tanger Fahs		
31	Rural	MALLOUSSA	Malloussa	16/11/2007
		TEAM B		
		Province: 10. Fès		
14	Urban	AIN KADOUS	Ain Kadous	05/11/2007
15	Urban	LALLA SOUKAINA	Lalla Soukaina	07/11/2007
16	Urban	SIDI BRAHIM	Sidi Brahim	08/11/2007
		Province: 11. Sefrou		
42	Rural	Bni Sadden	Bir Tamtam	09/11/2007
		Province: 13. Meknès El Hajeb		
20	Urban	AIN TAOUJDATE	Ain Taoujdate	12/11/2007
43	Urban	AIT YAAZEM	Ait Yaazem	13/11/2007
		Province: 9. Taza		
13	Urban	BAB ZITOUNA	Bab Zitouna	14/11/2007
41	Rural	TAHLA	Matmata	15/11/2007
12	Urban	GUERCIF	S.M.Ben Ahmed	16/11/2007
		TEAM C		
		Province: 14. Rabat		
22	Urban	SIDI FATAH	Sidi fatah 1	05/11/2007
		Province: 15. Settat		
25	Urban	EL GARA	Csua El Gara	07/11/2007
		Province: 16. Azilal		
44	Rural	AZILAL	Agoudid	08/11/2007
		Province: 12. Meknès		
17	Urban	ACHOUBIK	Achoubik	09/11/2007
18	Urban	IZDIHAR	Izdihar	12/11/2007
19	Urban	RIAD	Riad	13/11/2007
		Province: 3. Larache		
5	Urban	HAYJADID	Hayjadid	14/11/2007
32	Rural	RISSANA	Rissana Cham	15/11/2007
33	Rural	KSAR BJIR	Ksar Bjir	16/11/2007

HF no.	Urban/Rural	Circoscription sanitaire	Health facility name	Date of visit
		TEAM D		
		Province: 14. Rabat		
24	Urban	EL FATH	El Fath	05/11/2007
		Province: 6. Nador		
9	Urban	ALMASJID	Al Masjid	07/11/2007
36	Rural	ZEGANGAN	Ouixane	08/11/2007
37	Rural	MIDAR	Tafersit	09/11/2007
		Province: 7. Al Hoceima		
10	Urban	A HAMMOU	Abdellah Hammou	12/11/2007
38	Rural	BNI AMART	Bni Amart	13/11/2007
		Province: 8.Taounate		
11	Urban	TAOUNATE	Taounate	14/11/2007
39	Rural	BOUHOUDA	Bouhouda	15/11/2007
40	Rural	AIN GDAH	Ain gdah	16/11/2007
		TEAM E		
		Province: 14. Rabat		
21	Urban	TAKADDOUM	Takaddoum	05/11/2007
		Province: 4. Tétouan		
6	Urban	BOUJARRAH	Boujarrah	07/11/2007
7	Urban	MHANNECH	Mhannech	08/11/2007
34	Rural	COELMA	Azla	09/1/2007
		Province: 17. Essaouira		
26	Urban	ESSAOUIRA VILLE	Allal ben Ahmed Amkik	12/11/2007
45	Rural	TAFETACHT	Tafetacht	13/11/2007
		Province: 18. Agadir Ida outanane		
27	Urban	BOUARGANE	Bouargane	14/11/2007
28	Urban	TIKIOUINE	Tikiouine	15/11/2007
		Province: 19. Taroudant		
29	Urban	EL GUERDANE	El Guerdane	16/11/2007

ANNEX 14. SURVEY PROCEDURES FOR DATA COLLECTION AT HEALTH FACILITY



ANNEX 15. PARTICIPANTS IN THE GROUP ANALYSIS

Direction de la Population, Ministry of Health, Rabat
3–7 December 2007

Name	Title / Position	Province
Ministry of health		
Dr Khadija Banabdeljalil	Head, Urban Health Centre 'Bouargane'	Agadir
Dr Asmâa Ettini	Emergency department, Provincial Hospital	Essaouira
Dr Abdelilah Filali	Urban Health Centre 'Jnanate'	Fès
Dr Omar Khalfaoui Hassani	Pediatrician, Paediatrics department, Provincial Hospital 'Ben Msik Sidi Othmane'	Casablanca
Dr Nadir Kandoussi	Public Health Specialist, IMCI Focal Point	Health directorate, Meknès
Dr Abderrahmane Bahij	Urban Health Centre 'Skhirat'	Skhirat
Dr Hafida Yertaoui	Head, Planning service, Population Directorate[1]	Ministry of Health, Rabat
Dr Hassan Akhaddam	Head, Planning Service, Planning and Finance Directorate[2]	Ministry of Health, Rabat
Dr Mohammed Yassine	Economist, Planning and Finance Directorate[2]	Ministry of Health, Rabat
Mme Samira Jabal	Point Focal B.E.D, Directorate of Hospitals and Outpatient Services[3]	Ministry of Health, Rabat
Mme Fouzia Benabdelouahid	Head, Procurement Division[4]	Ministry of Health, Rabat
Dr Zohra Benbihi	Pharmacist, Procurement Division[4]	Ministry of Health, Rabat
Dr Karima Gholbzouri	Head, Division of Family Planning, 'Direction de la Population'	Ministry of Health, Rabat
Dr Hamid Chekli	Head, Child Health Service, Population Directorate[1]	Ministry of Health, Rabat
Dr Aziza Lyaghfouri	National IMCI focal point, Child Health Service, Population Directorate[1]	Ministry of Health, Rabat
Dr Habiba Ben Ali Laroussi	Child Health Service, Population Directorate[1]	Ministry of Health, Rabat
M. Abdenbi Khonfi	Information, Education and Communication Division, Population Directorate[1]	Ministry of Health, Rabat
Mlle Naima Rachih	Sociologist, Information, Education and Communication, Population Directorate[1]	Ministry of Health, Rabat
World Health Organization		
Dr Suzanne Farhoud	Regional adviser, Child and adolescent health and development (CAH)	WHO/EMRO[5]
Dr Sergio Pièche	Medical officer, Child and adolescent health and development (CAH)	WHO/EMRO[5]
Dr Zoulikha Faraj	Medical officer	WHO/Morocco

[1] Direction de la Population
[2] Direction de Planification et des Ressources Finnacières
[3] Direction Hôpitaux et Soins Ambulatoires
[4] Division de l'Approvisionnement
[5] World Health Organization, Regional Office for the Eastern Mediterranean

ANNEX 16. NATIONAL FEEDBACK MEETING: LIST OF PARTICIPANTS

Direction de la Population, Ministry of Health, Rabat
12 December 2007

Name	Position	Organization/Province/ Prefecture
Ministry of health		
Dr Ismaali El Alaoui	Inspector General	Ministry of Health, Rabat
Dr Alaoui Belghiti	Director, Hospitals and Outpatient Services[1]	Ministry of Health, Rabat
Dr Nada Darkaoui	Head, Outpatient Services Division, Directorate of Hospitals and Outpatient Services[1]	Ministry of Health, Rabat
Mme Samira Jabal	BDN Focal Point, Directorate of Hospitals and Outpatient Services[1]	Ministry of Health, Rabat
Dr Mohamed Charradi	Head, Division of School and University Health, Population Directorate[2]	Ministry of Health, Rabat
Dr Bourquia Nabil	Head, School Health Service, Division of School and University Health, Population Directorate[2]	Ministry of Health, Rabat
Dr A. Jaziri	Head, University Health Service, Population Directorate	Ministry of Health, Rabat
Mr Mohamed Laadissi	Division of School and University Health, Population Directorate[2]	Ministry of Health, Rabat
Dr Sadat Mohamed Anouar	National Programme on Immunization, Population Directorate	Ministry of Health, Rabat
Dr Hamid Checkli	Head, Child Health Service, Population Directorate[3]	Ministry of Health, Rabat
Dr Aziza Lyaghfouri	National IMCI focal point, Child Health Service, Population Directorate[3]	Ministry of Health, Rabat
Dr Habiba Ben Ali Laroussi	Child Health Service, Population Directorate[3]	Ministry of Health, Rabat
Dr Karima Gholbzouri	Head, Family Planning Division, Population Directorate[3]	Ministry of Health, Rabat
Dr Ali Ben Salah	Head, Maternal Health Service, Population Directorate[3]	Ministry of Health, Rabat
Dr Fatima Tsouli Chmiyale	Maternal Health Service, Division of Maternal and Child Health, Population Directorate[3]	Ministry of Health, Rabat
Mme Jamila El Mendili	Statistician, Maternal Health Service, Population Directorate[3]	Ministry of Health, Rabat
Abdelilah Lakssir	Family Planning Division, Population Directorate[3]	Ministry of Health, Rabat
M Mohamed El Filahi	Division of Maternal and Child Health, Population Directorate[3]	Ministry of Health, Rabat
M. Tahar Ouaourir	Adolescent and Youth Health Programme, Population Directorate[3]	Ministry of Health, Rabat
Mr Baze Sifdine	Information Unit, Population Directorate[3]	Ministry of Health, Rabat
Mr Elkeir Fathe	Information unit, Population Directorate[3]	Ministry of Health, Rabat
Dr Noureddine Chaouki	Director, Epidemiology and Disease Control[4]	Ministry of Health, Rabat
Dr Abderrahmane Ben Mamoun	Head, Division of Communicable Diseases, Epidemiology and Disease Control Division[4]	Ministry of Health, Rabat
M. Mohamed Maadi	Head, 'Service de Conception', Information, Education and Communication Division, Population Directorate[3]	Ministry of Health, Rabat
Mme Fatima Temmar	Training Division	Ministry of Health, Rabat
Ahmed El Fathi	Engineer, Service Coordination, Population Directorate[3]	Ministry of Health, Rabat
Mr Mohammed Yassine	Studies and Health Information Service, Directorate of Planning and Financing[5]	Ministry of Health, Rabat
Dr Ghizlane Roudies	Paediatrician, IMCI Focal Point	Health Directorate, Rabat
Dr Meryem Chkirate	Paediatrician, Urban Health Centre 'Douar Al Hajja'	Rabat
Dr Amal Benkirane	Head, Health Centre 'Al Kolla'	Larache
Dr Abderrahmane Bahij	Urban Health Centre, Skhirat	Temara
Dr Nadir Kandoussi	IMCI Focal Point	Health Directorate, Meknès
Dr Abdeilalah Filali	Urban Health Centre, Jnanate	Fès
M' Fatima Hiyaoui	Facilitator, PNI	Health Directorate, Rabat

Name	Position	Organization/Province/Prefecture
Medical schools		
Prof Mostapha Hida	Paediatrics	Faculty of Medicine and Pharmacy, Fès
Prof Samir Atmani	Paediatrics	Faculty of Medicine and Pharmacy, Fès
Non-governmental Organizations		
Mme Sylvia Kaissy	Training officer	Medicus Mundi Andalucia (MMA), Tanger Maroc
World Health Organization		
Dr Said Youssef	Representative	World Health Organization, Morocco
Dr Suzanne Farhoud	Regional adviser, Child and Adolescent Health and Development	World Health Organization, Regional Office for the Eastern Mediterranean
Dr Sergio Pièche	Medical officer, Child and Adolescent Health and Development	World Health Organization, Regional Office for the Eastern Mediterranean
Dr Faraj Zoulikha	Medical officer	World Health Organization, Morocco

[1] Direction Hôpitaux et Soins Ambulatoires
[2] Division de la Santé Scolaire et Universitaire (DSSU), Direction de la Population
[3] Direction de la Population
[4] Direction de l'Epidémiologie et de la Lutte contre les Maladies
[5] Service des Etudes et de l'Information Sanitaire (SEIS), Direction de la Planification et des Ressources Financières

ANNEX 17. FINDINGS RELATED TO THE WHO GENERIC LIST OF IMCI PRIORITY INDICATORS (P) AND SUPPLEMENTAL MEASURES (S) AT HEALTH FACILITY LEVEL

A validated classification is a classification made by the surveyor after re-examining the child.
The indicators listed below refer to children two months up to five years of age

CASE MANAGEMENT

❖ ASSESSMENT

P1. **Child checked for three general danger signs: 46.1%** (C.I. 34.1 - 58.0) *of children were checked for the three general danger signs.*

Numerator: Number of sick children age 2 months up to five years seen who are checked for all the three danger signs (child able to drink or breastfeed, child vomits everything, child had convulsions)

Denominator: Number of sick children age 2 months up to five years seen

S11. **Child not visibly awake checked for lethargy:** *All* (**100%**) *the ten children who were not visibly awake were checked for lethargy.*

Numerator: Number of sick children not visibly awake when assessed by the health provider (who look sleepy, are not playing, smiling, or crying with energy) who are checked for lethargy.

Denominator: Number of sick children not visibly awake seen.

P2. **Child checked for the presence of the three main symptoms of cough, diarrhoea and fever: 82.9%** (C.I. 75.6 - 90.1) *of children were 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

P3. **Child weight checked against a growth chart: 66.8%** *of children were weighed the same day and had 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

P4. **Child vaccination status checked: 74.8%** (C.I. 67.1 - 82.5) *of children had 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

P5. **WHO Index of integrated assessment**: *mean of* **7.7** (C.I. 7.1 - 8.3) *assessment tasks performed out of 10 tasks per sick child assessed*

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

Calculation: - checked for 'ability to drink or breastfeed', 'vomits everything', and 'convulsions': 1 point each
- checked for presence of 'cough and 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

P6. **Child under two years of age assessed for feeding practices**: *Caretakers of* **58.0%** (C.I. 47.5 - 68.5) *of children under two years of age were 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

S3. **Child with low weight and/or anaemia and/or persistent diarrhoea assessed for feeding problems** (**adapted definition* to include also children with persistent diarrhoea)**: 42.2%** *of sick children with low weight and/or anaemia and/or persistent diarrhoea were assessed for feeding problems.*

Numerator: Number of sick children with a validated classification of low weight and/or anaemia and/or persistent diarrhoea and no severe classification whose caretakers 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 low weight and/or anaemia and/or persistent diarrhoea not referred by the provider

S1. **Child checked for other problems: 74.8%** (C.I. 67.5 - 82.1) *of children brought to the facility were checked for 'other problems'.*

Numerator: Number of children brought to the facility for one or more of the symptoms covered by the IMCI guidelines (e.g. cough/fast/difficult breathing, diarrhoea, fever, ear problem, sore throat) or for another problem, whose caretaker were asked to describe this other problem.

Denominator: Number of children brought to the facility for one or more of the symptoms covered by the IMCI guidelines (e.g. cough/fast/difficult breathing, diarrhoea, fever, ear problem, sore throat) or for another problem.

❖ CLASSIFICATION

S4. **Child with low weight correctly classified: 23.5%** *of children with low weight were correctly classified.*

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

Denominator: Number of children with a validated classification of low weight.

S5. **Child correctly classified: 76.6%** (C.I. 72.0 - 81.1) *of children were correctly classified by the health provider for the conditions related to the main symptoms (cough or difficult breathing, diarrhoea and fever).*

Numerator: Number of children whose validated positive classifications[#] for the main conditions (very severe disease or severe pneumonia or pneumonia, diarrhoea with severe dehydration or some dehydration, severe persistent diarrhoea or persistent diarrhoea, dysentery, very severe febrile disease or fever-possible bacterial infection, measles with or without complications) match the classifications given by the health provider.

Denominator: Number of children seen

[#] 'Positive classifications' refer to the classifications included in the 'pink-coded' and ' yellow-coded' classification areas of the IMCI chart and the 'green-coded' classification of measles without complications. It is widely recognized that more skills are required to correctly classify a condition when present ('positive classification') than when it is not present and, i.e. when a good guess would then often be sufficient.

❖ TREATMENT AND ADVICE

S12. **Child with severe illness correctly treated:** (***adapted definition* to refer only to those children with severe illness whose caretakers accepted referral) *One of the 6 children with severe classifications needing urgent referral and whose caretakers accepted referral received correct pre-referral treatment and referral.*

Numerator: Number of children with validated classifications of severe disease needing urgent referral (very severe disease or severe pneumonia, severe dehydration, severe persistent diarrhoea, very severe febrile disease, mastoiditis, severe malnutrition or severe anaemia) whose caretakers accept referral and who receive correct pre-referral dose of the recommended antibiotic and/or ORS and/or vitamin A and referral

Denominator: Number of children with validated classifications of severe disease needing urgent referral

P7. **Child needing an oral antibiotic prescribed the drug correctly:** *(***adapted definition* to refer only to children requiring antibiotics for IMCI conditions, as the IMCI guidelines on treatment can be used as a standard reference only for those conditions) **30.9%** *of children who did not need urgent referral and who needed an oral antibiotic for an IMCI condition were prescribed a recommended oral antibiotic correctly.*

Numerator: Number of sick children with validated classifications, who do not need urgent referral, who need an oral antibiotic for an IMCI condition (pneumonia, dysentery, acute ear infection, streptococcal sore throat) who are correctly prescribed an antibiotic recommended by the IMCI guidelines, including dose, number of times per day, and number of days.

Denominator: Number of sick children with validated classifications not needing urgent referral who need an oral antibiotic for an IMCI condition.

S6. **Child with pneumonia correctly treated:** *(***adapted definition* to refer to the use of an appropriate antibiotic as recommended by the IMCI guidelines) **21.9%** *of children with pneumonia were prescribed recommended 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 according to the IMCI guidelines (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:** *Both* **(100%)** *the two children with diarrhoea and some dehydration received 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.

S9. **Child with anaemia correctly treated:** *(*adapted definition* to refer only to children not needing urgent referral*)* **27.6%** *of children with anaemia were prescribed iron treatment.*

Numerator: Number of children with a validated classification of anaemia and no severe classification who are given/prescribed iron treatment.

Denominator: Number of children with a validated classification of anaemia and no severe classification.

S10. **Child receives first dose of oral treatment at facility:** *(*adapted definition* to refer only to recommended antibiotics required for IMCI conditions*) One* (**1.6%**) *of the children not needing urgent referral who needed an oral antibiotic for an IMCI condition received the first dose at the facility.*

Numerator: Number of children with validated classifications, who do not need urgent referral, who need an oral antibiotic for an IMCI condition (pneumonia, dysentery, streptococcal sore throat, acute ear infection) who receive the first dose at the health facility.

Denominator: Number of children with validated classifications, who do not need urgent referral, who need an oral antibiotic for an IMCI condition.

P8. **Child not needing antibiotic leaves the facility without antibiotic: 76.4%** (C.I. 69.3 - 83.5) *of children who did not need urgent referral and who did not need an antibiotic left the facility without having received or having been prescribed antibiotics unnecessarily.*

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 or other problems (no pneumonia: cough or cold, diarrhoea with or without dehydration, persistent diarrhoea, fever-bacterial infection unlikely, measles, chronic ear infection, no ear infection, anaemia or no anaemia, low weight or no low weight, and/or other problems) 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 or other problems.

S13. **Child prescribed oral medication whose caretaker is advised on how to administer the treatment:** *(*adapted definition* to refer to recommended antibiotics required for IMCI conditions*)* **26.4%** *of children not needing urgent referral and who received or were prescribed an antibiotic for an IMCI condition and/or ORS, received at least two treatment counselling messages.*

Numerator: Number of children with validated classifications not needing urgent referral and who receive or are prescribed an antibiotic for an IMCI condition and/or an ORS, who receive at least two treatment counselling 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 receive or are prescribed an antibiotic for an IMCI condition and/or ORS.

P10. **Child needing vaccinations leaves facility with all needed vaccinations:** *(*adapted definition* to include also children advised on when to come back for a scheduled vaccination session*)*[#] **88.6%** (C.I. 74.7 - 102.5) *of children needing vaccinations (based on vaccination card or history) left the health facility with all needed vaccinations or advice to come back for vaccination on the scheduled vaccination day*.

Numerator: Number of children who need vaccinations (based on vaccination card or history) and are not referred by provider who leave the health facility with all needed vaccinations or advice to come back on the scheduled vaccination day

Denominator: Number of children seen who need vaccinations (based on vaccination card or history) and are not referred by provider

[#] **65.9%** *of children needing vaccination and not referred by the provider left the facility with all needed vaccination* (original global indicator). The adapted indicator includes also those children who were properly advised on when to come back for a scheduled vaccination session, acknowledging that not all facilities provide vaccines on a daily basis.

❖ ADVICE ON HOME CARE

P9. **Caretaker of sick child is advised to give extra fluids and continue feeding:** *the caretakers of* **44.0%** (C.I. 33.6 - 54.6) *of sick children were 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

S15. **Child less than two years old or with low weight or anaemia or persistent diarrhoea whose caretaker received correct age-appropriate feeding counselling:** *(*adapted definition) The caretakers of* **25.5%** *of children less than two years old or with low weight and/or anaemia and/or persistent diarrhoea were provided with age-appropriate feeding messages*[#].

Numerator: Number of children less than two years old or with a validated classification of very low weight and/or anaemia and/or persistent diarrhoea, who do not need urgent referral, whose caretakers are provided with age-appropriate feeding messages[#].

Denominator: Number of children less than two years old or with a validated classification of low weight and/or anaemia and/or persistent diarrhoea, who do not need urgent referral.

[#] For definition of age-appropriate feeding advice used in this survey see note under Table A24.

❖ REFERRAL

P12. **Child needing referral is referred:** *Two* **(33.3%)** *of the 6 children needing referral were referred by the health providers.*

Numerator: Number of sick children with a validated classification of severe disease needing referral (very severe disease, severe pneumonia, diarrhoea with severe dehydration and any other severe classification, severe persistent diarrhoea, very severe febrile disease, mastoiditis, severe malnutrition and/or severe anaemia) who are referred by the health provider.

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

HEALTH SYSTEM SUPPORT

P13. Health facility received at least one supervisory visit that included observation of case management during the previous six months: 6.7% (C.I. -0.8 - 14.2) *of health facilities 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 during the previous six months at least one visit of routine supervision (excluding the follow-up visits to health providers shortly after their training that are part of IMCI training) that included the observation of case management.

Denominator: Number of health facilities surveyed

P14. Index of availability of essential oral treatments: *a mean of* **3.3** *out of 4 essential oral drugs for home treatment of sick children were present on the day of visit.*

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

Calculation:
- ORS, 1 point
- recommended antibiotic for pneumonia and dysentery, 1 point
- vitamin A, 1 point
- iron, 1 point

P15. Index of availability of injectable drugs for pre-referral treatment: *a mean of* **1.7** *out of 3 injectable antibiotics for pre-referral treatment of sick children and young infants were available in each facility on the day of visit.*

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

Calculation:
- thiamphenicol (or ampicillin), 1 point
- gentamicin, 1 point
- benzylpenicillin (or ampicillin), 1 point

P16. Health facility has the equipment and supplies to support full vaccination services: *(*adapted definition)* **75.6%** (C.I. 62.9 - 88.4) *health facilities providing immunisation services had the equipment and supplies to provide full vaccination services on the day of survey.*

Numerator: Number of health facilities providing immunisation that have the equipment and supplies to support full vaccination services (functioning refrigerator with correct temperature inside or cold box with ice packs frozen, and needles/syringes for vaccination) available on the day of survey (vaccines not included)

Denominator: Number of health facilities surveyed

P17. Index of availability of vaccines: *(*adapted definition* to include 7 antigens*) A mean of* **6.8** *out of 7 antigens were available at each facility the day of visit.*

Definition: Arithmetic mean of seven recommended antigens available at each facility the day of visit.

Calculation:
- BCG, 1 point
- OPV, 1 point
- DPT, 1 point
- Measles, 1 point
- Hib, 1 point
- Hepatitis B, 1 point
- Tetanus toxoid, 1 point

S17. **Health facility has essential equipment and materials**: **40.0%** (C.I. 25.4 - 54.7) *of health facilities had basic equipment and materials available on the day of the survey.*

Numerator: Number of health facilities with all needed basic equipment and materials (working weighing scales for adults and children, timing device, thermometer, spoons, cups and jugs to mix and administer ORS) available on the day of the survey

Denominator: Number of health facilities surveyed

P18. **Health facilities with at least 60% of providers managing children trained in IMCI:** *(*adapted definition* to refer to doctors as providers*)* **73.3%** (C.I. 61.4 - 85.9) *of first-level health facilities had at least 60% of doctors managing children trained in IMCI.*

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

Denominator: Number of health facilities surveyed.

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	
	Cases with pneumonia or Serious illness *n* = 35	*Cases with only cough or cold (no pneumonia or serious illness)* *n* = 193
Breathing problem/pneumonia reported	**Sensitivity** 10 **(28.6%)**[1]	27 (14.0%)
Only cough and no breathing problem/ pneumonia reported	25 (71.4%)	**Specificity** 166 **(86.0%)**[2]
Accuracy[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	
	Breathing problem or 'pneumonia'[3] *n* = 37	*Only cough* *n* = 191
Severe illness or pneumonia[1]	**Positive predictive value** 10 **(27.0%)**[4]	25 (13.1%)
No pneumonia[2]	27 (73.0%)	**Negative predictive value** 166 **(86.9%)**[5]

[1]*"Very severe disease", "severe pneumonia" or "pneumonia"*
[2]Cough or cold or other non-serious ARI
[3]Children 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 *n* = 397	95% CONFIDENCE LIMITS
o	*Child checked for three general danger signs*[1] (ability to drink, vomiting everything, convulsions)	183 (46.1%)	(34.1 - 58.0)
o	*Child checked for the presence of three main symptoms: cough, diarrhoea and fever*	329 (82.9%)	(75.6 - 90.1)
o	Child checked for the presence of an ear problem	302 (76.1%)	(67.4 - 84.8)
o	Child checked for palmar pallor	245 (61.7%)	(50.1 - 73.3)
o	Child checked for visible wasting	108 (27.2%)	(15.8 - 38.6)
o	Child checked for the presence of oedema of both feet	81 (20.4%)	(8.9 - 31.9)
o	Child temperature taken (by thermometer)	268 (67.5%)	(54.7 - 80.3)
o	Child weight taken and recorded	376 (94.7%)	(91.7 - 97.7)
o	*Child weight checked against a growth chart*	265 (66.8%)	--
o	"Carnet de santé" asked	363 (91.4%)	(86.6 - 96.2)
o	*Child vaccination status checked*	297 (74.8%)	(67.1 - 82.5)
o	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).

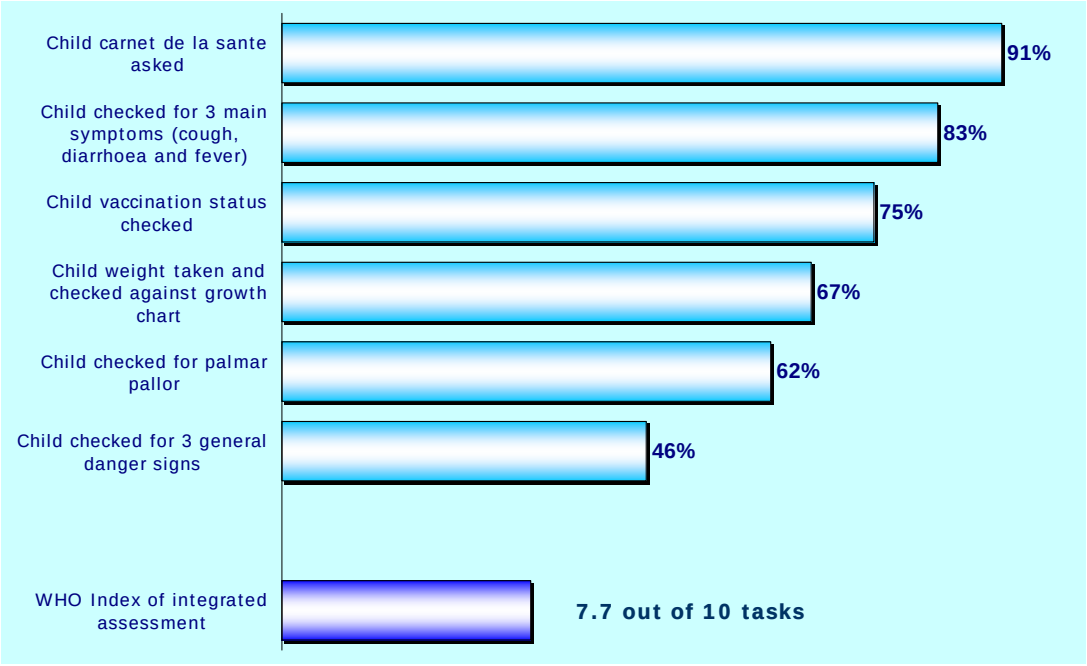


Fig. A1. Integrated assessment: Main tasks and WHO index (*n* = 397)

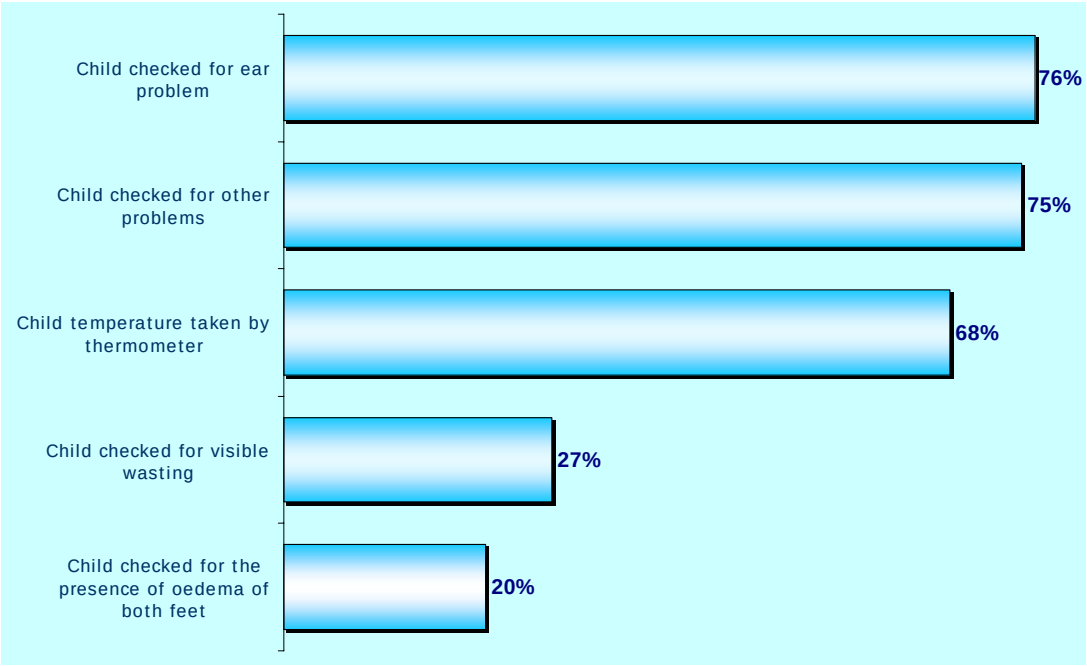


Fig. A2. Integrated assessment: other tasks (*n* = 397)

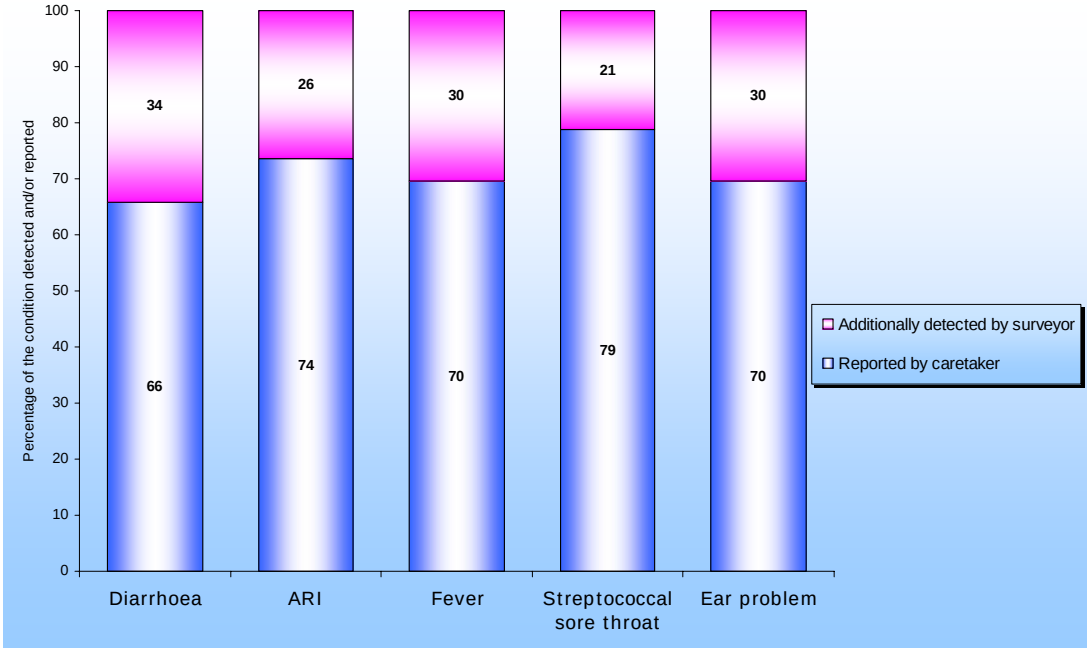


Fig. A3. Added value of IMCI: Additional conditions detected by surveyor following the IMCI systematic assessment of each child and not reported by caretaker

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
o 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%)
o 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*: 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* (*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.

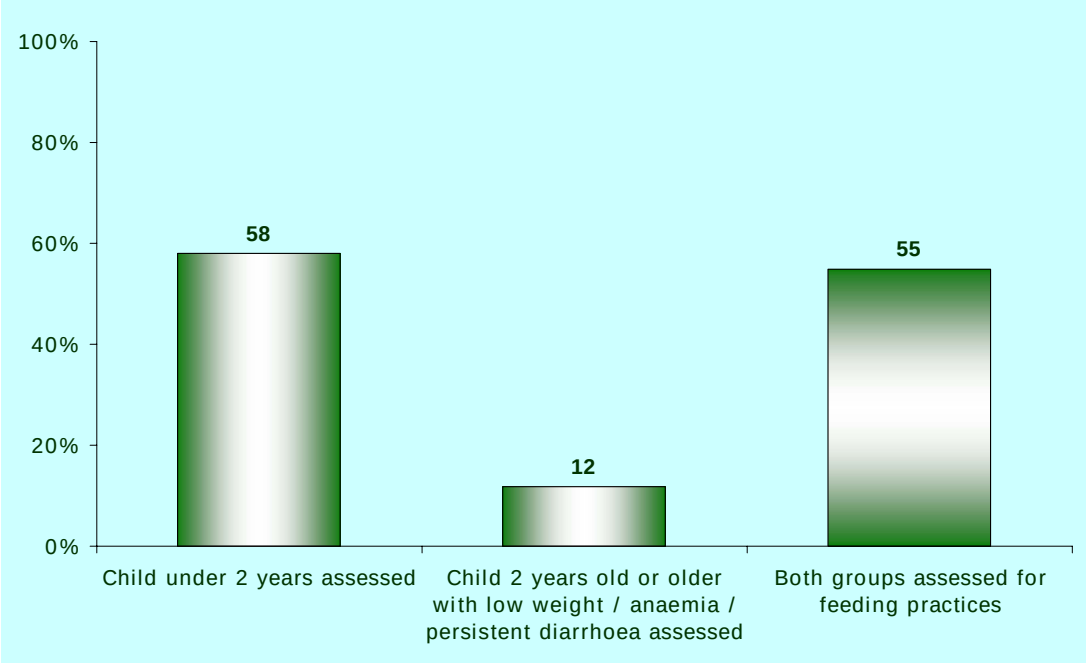


Fig. A4. Assessment of feeding practices: Children less than 2 years old (*n* = 224) and older children with low weight/anaemia/persistent diarrhoea (*n* = 17)

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 $n = 241$[1]
o Asks how many times caretaker gives food to the child	171 (71.0%)
o Asks about amount of food given to the child at each meal	149 (61.8%)
o Asks if child receives his/her own portion	142 (58.9%)
o Asks if child finishes his/her own portion	145 (60.2%)
o 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.

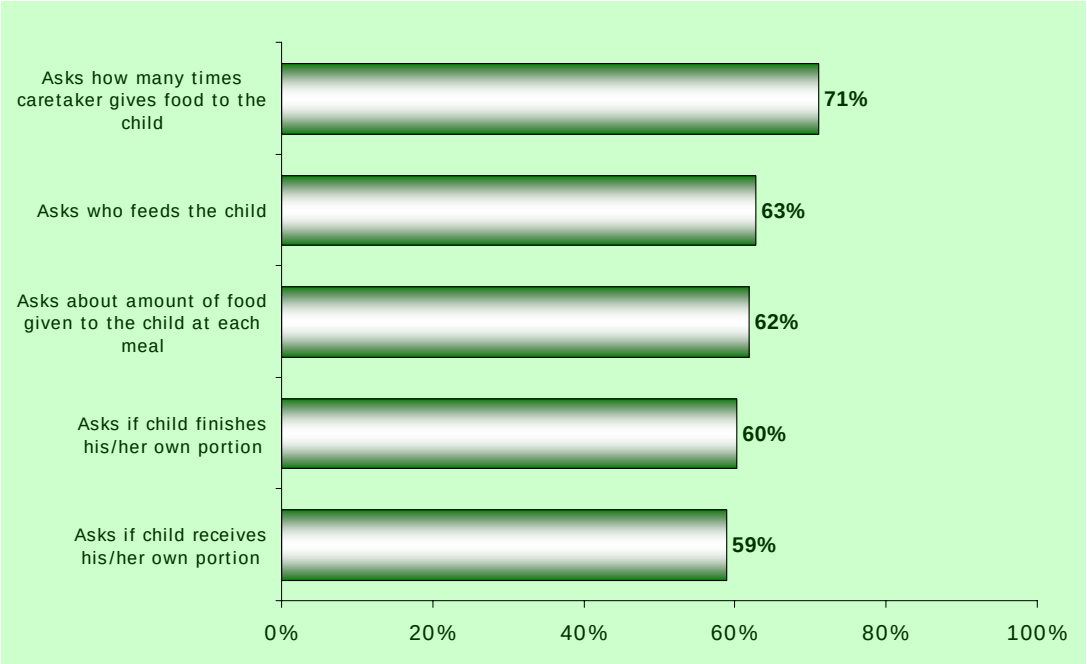


Fig. A5. Assessment of feeding practices: Children less than 2 years old and older children with low weight/anaemia/persistent diarrhoea ($n = 241$)

Table A6. Most common feeding problems identified by surveyors

MOST COMMON FEEDING PROBLEMS IDENTIFIED	CHILD AGE			TOTAL
	Less than 6 months old *n* = 39	6 to 11 months old *n* = 76	12 to 23 months old *n* = 111	Children less than 2 years old *n* = 226
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%)

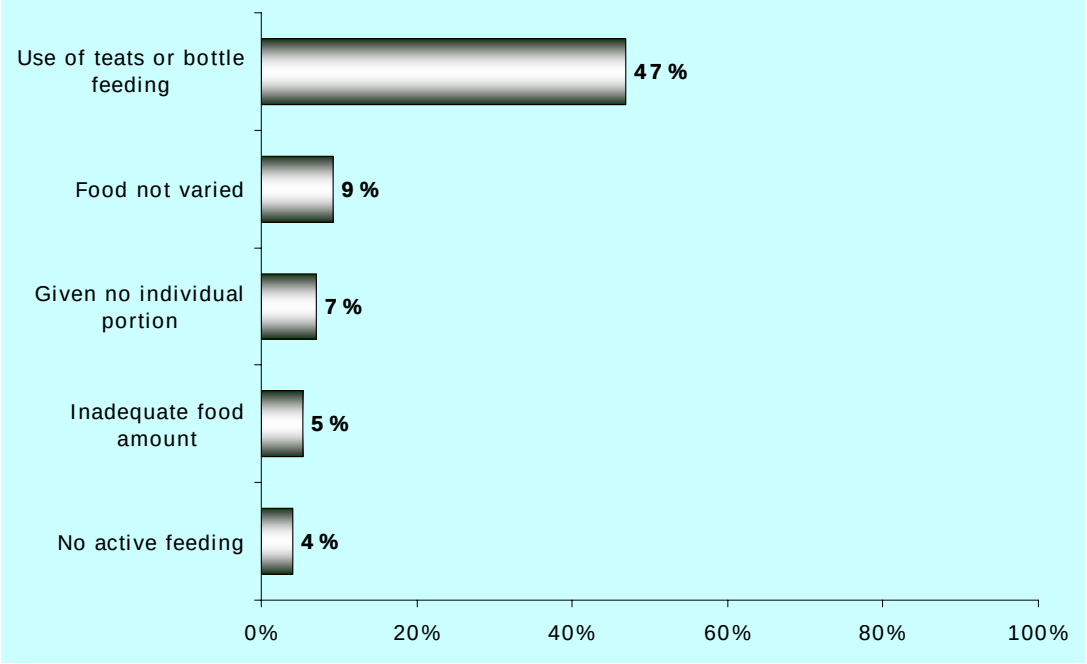


Fig. A6. Most common feeding problems identified in children less than 24 months old (*n* = 226)

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]	*n* = 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]	*n* = 397	268 (67.5%)	**161 (40.6%)**
Child assessed for ability to drink	*n* = 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:	*n* = 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:	*n* = 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:	*n* = 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:	*n* = 9		
> Duration of discharge asked		9 (100%)	
Children with fever:	*n* = 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	*n* = 397	245 (61.7%)	**220 (55.4%)**
Agreement on conclusion on palmar pallor			**226 (56.9%)**
Oedema of both feet looked for	*n* = 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.

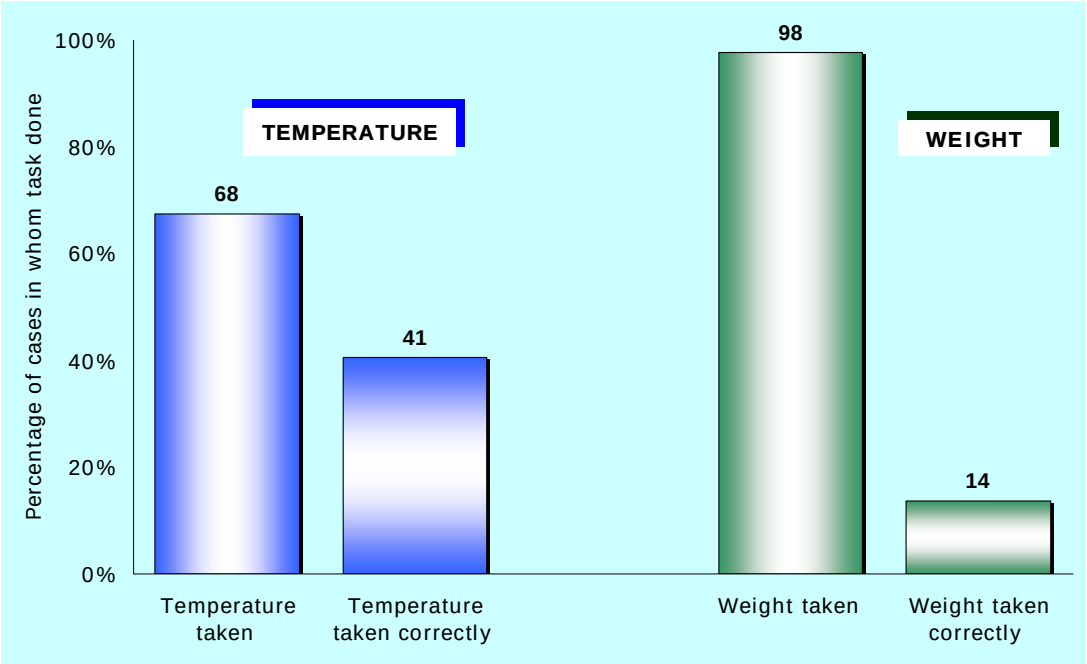


Fig. A7. Performance of selected tasks: taking temperature and weight (*n* = 397)

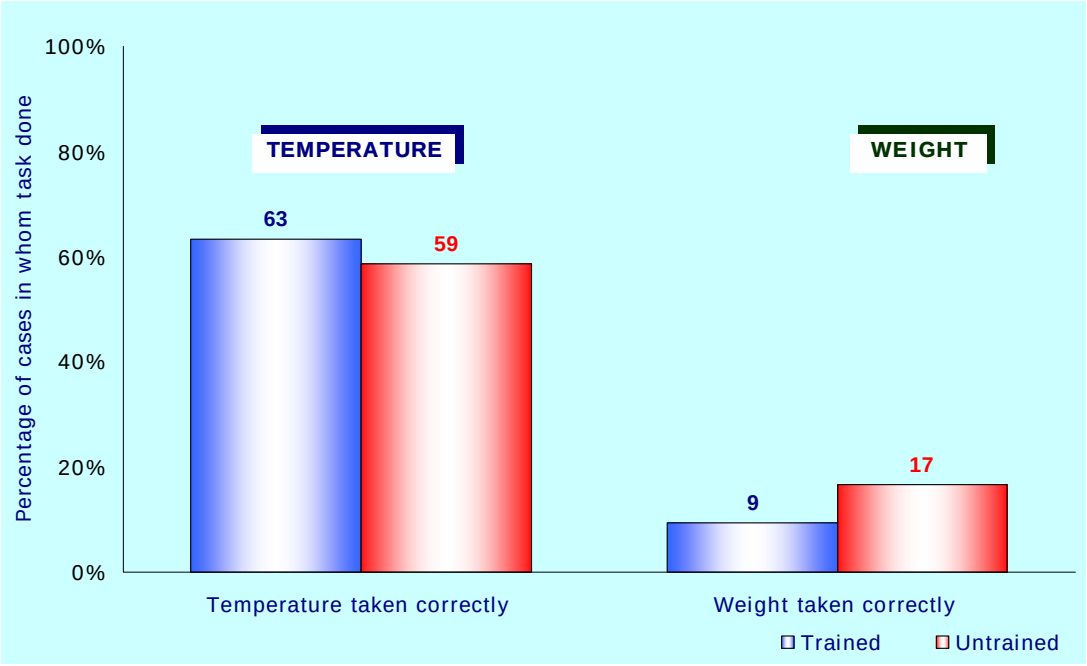


Fig. A8. Performance of selected tasks: taking the temperature and weight
Trained Vs untrained

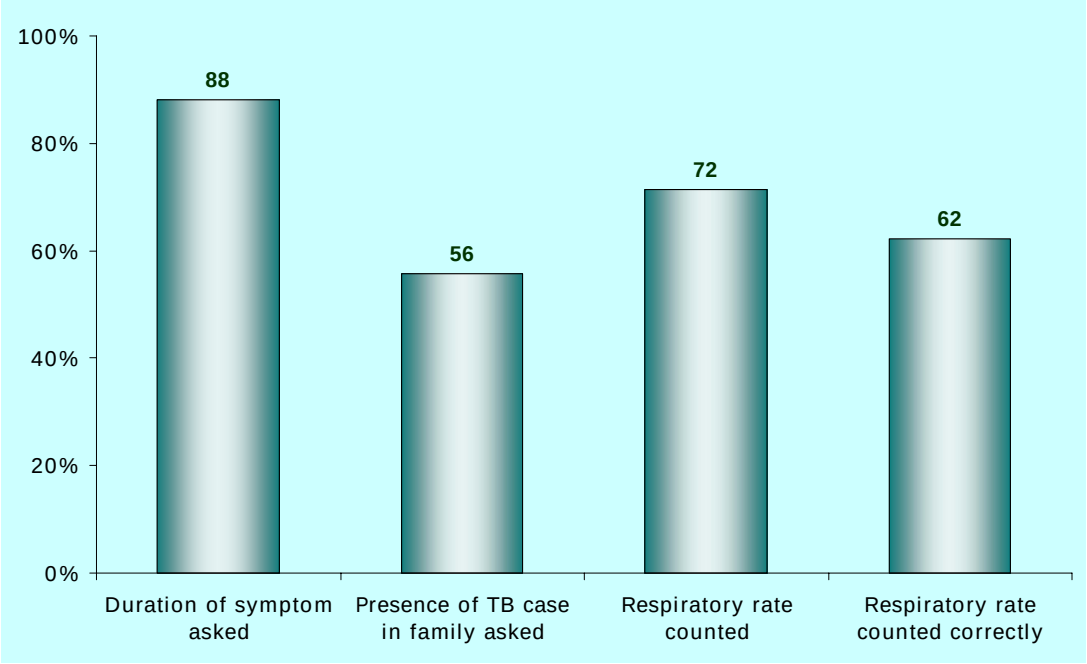


Fig. A9. Performance of selected assessment tasks: children with ARI (*n* = 228)

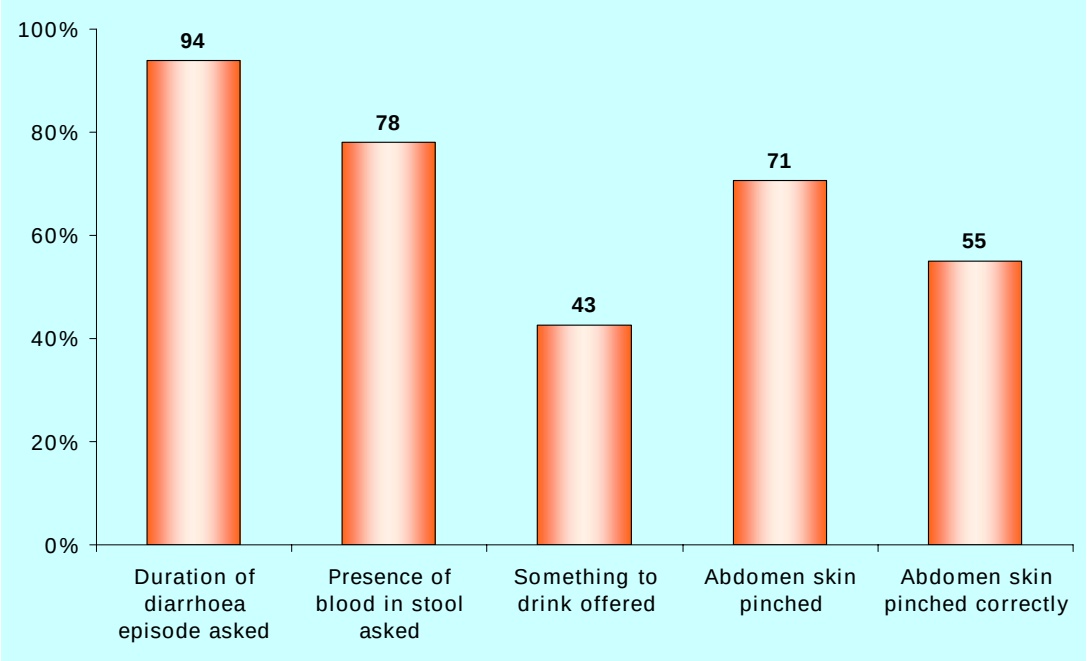


Fig. A10. Performance of selected assessment tasks: children with diarrhoea (*n* = 82)

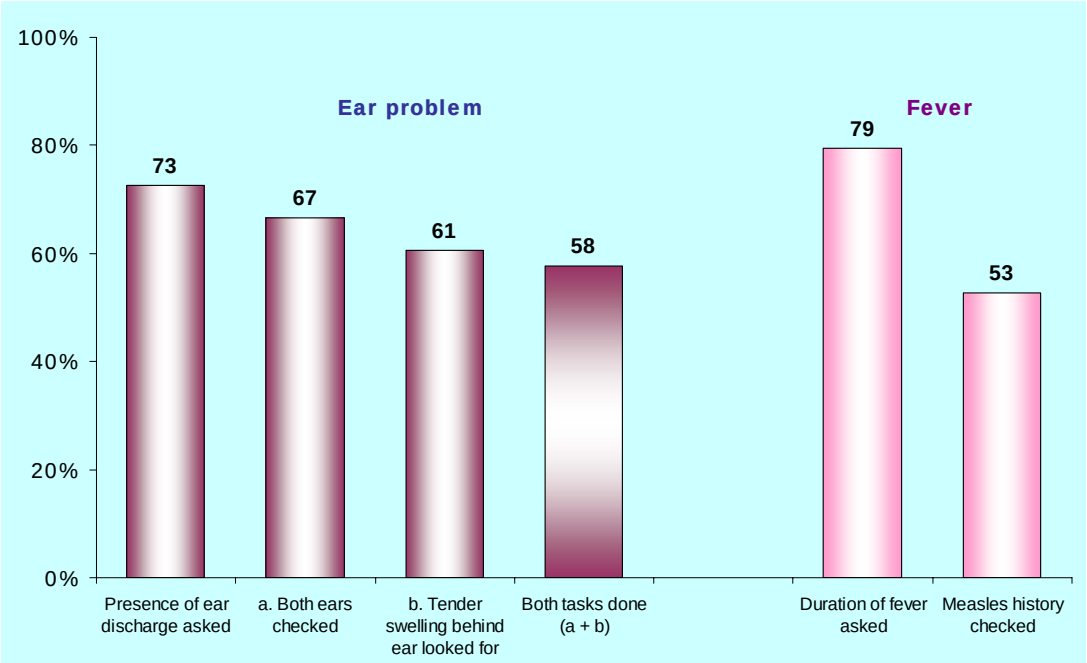


Fig. A11. Performance of selected assessment tasks: children with ear problem (*n* = 33) and fever (*n* = 247)

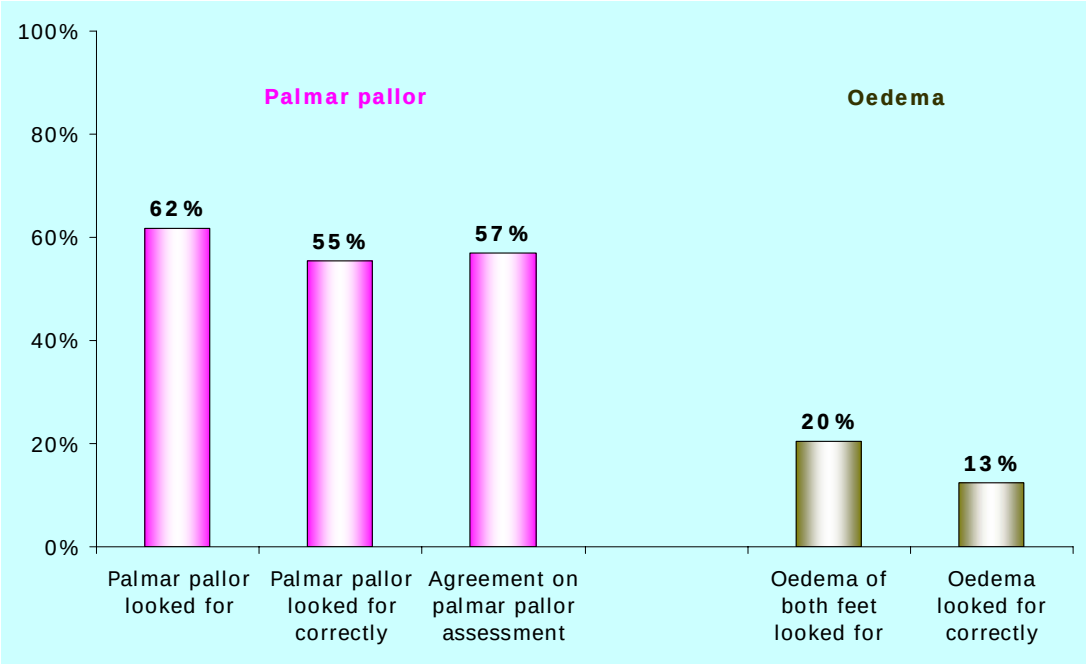


Fig. A12. Performance of selected assessment tasks: checking palmar pallor and oedema of both feet in all children (*n* = 397)

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	*n* = 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 ("under-classification"):	
- 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 ("over-classification"):	
- 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"

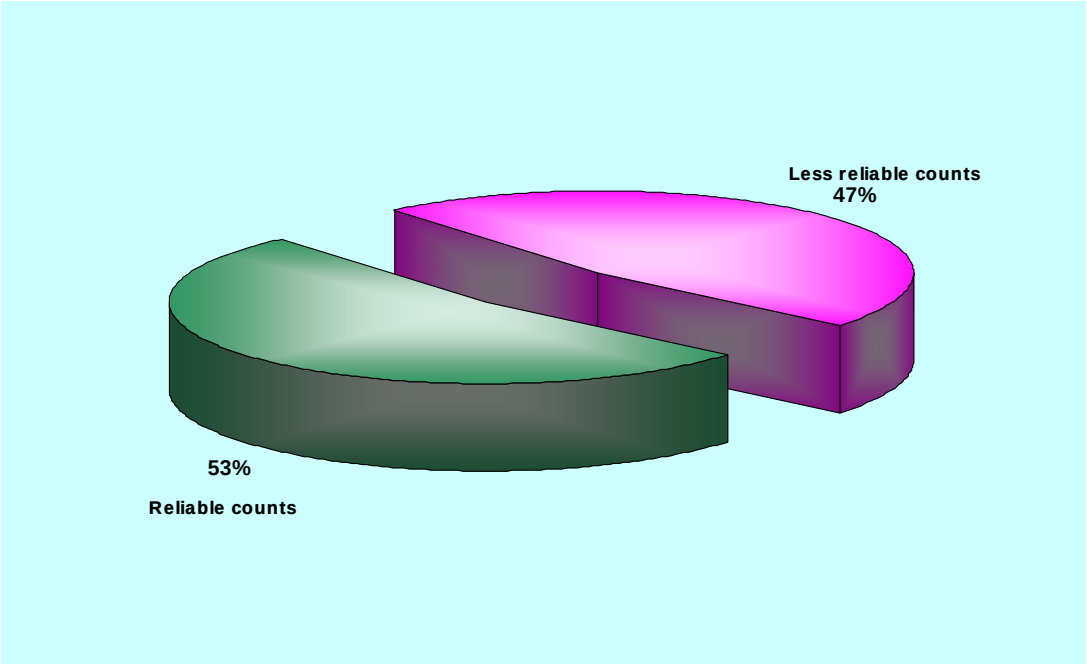


Fig. A13. Counting the respiratory rate reliably (*n* = 161)

QUALITY OF CLINICAL CARE: CLASSIFICATION

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

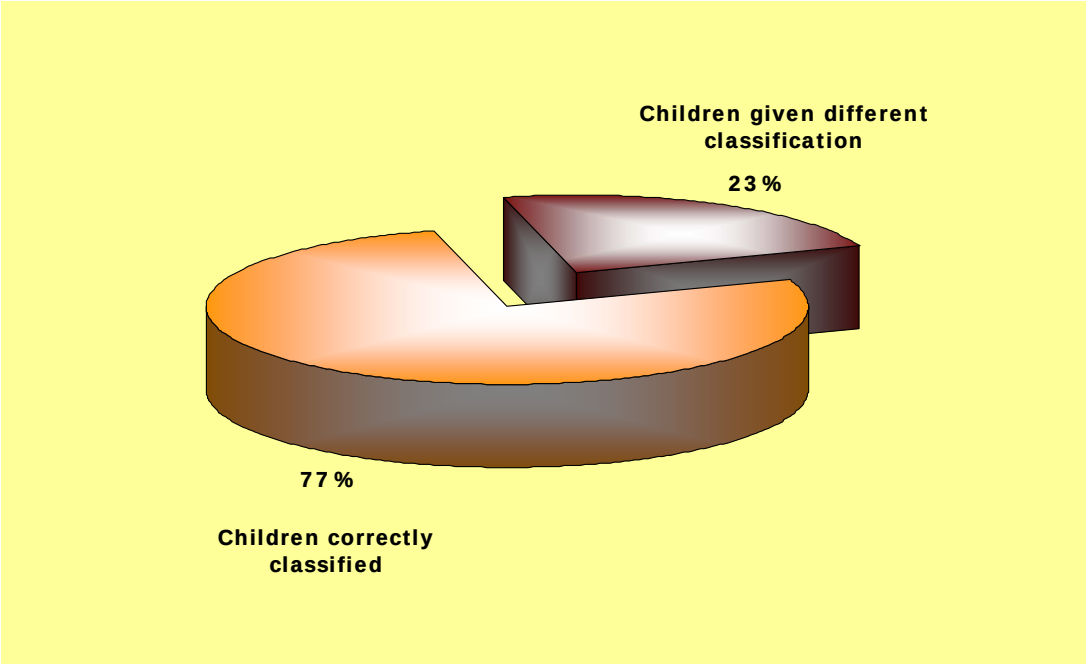


Fig. A14. Children correctly classified by the provider for the conditions related to the main symptoms of cough or difficult breathing, diarrhoea and fever [1] (*n* = 397)

[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		
Danger signs (very severe disease)	1	1	**100%**	0
Very severe disease/severe pneumonia or pneumonia	18	35	**51%**	17/17
Diarrhoea with severe or some dehydration	1	3	**33%**	2/2
Severe and non-severe persistent diarrhoea	1	5	**20%**	4/4
Dysentery	1	1	**100%**	0
Very severe febrile disease or fever-possible bacterial infection	51	71	**72%**	20/20
Measles (with and without complications)	2	6	**33%**	4/4
Mastoiditis or acute or chronic ear infection	13	21	**62%**	7/8
Streptococcal sore throat	28	33	**85%**	5/5
Severe malnutrition or low weight	4	18	**22%**	14/14
Severe anaemia or anaemia	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.

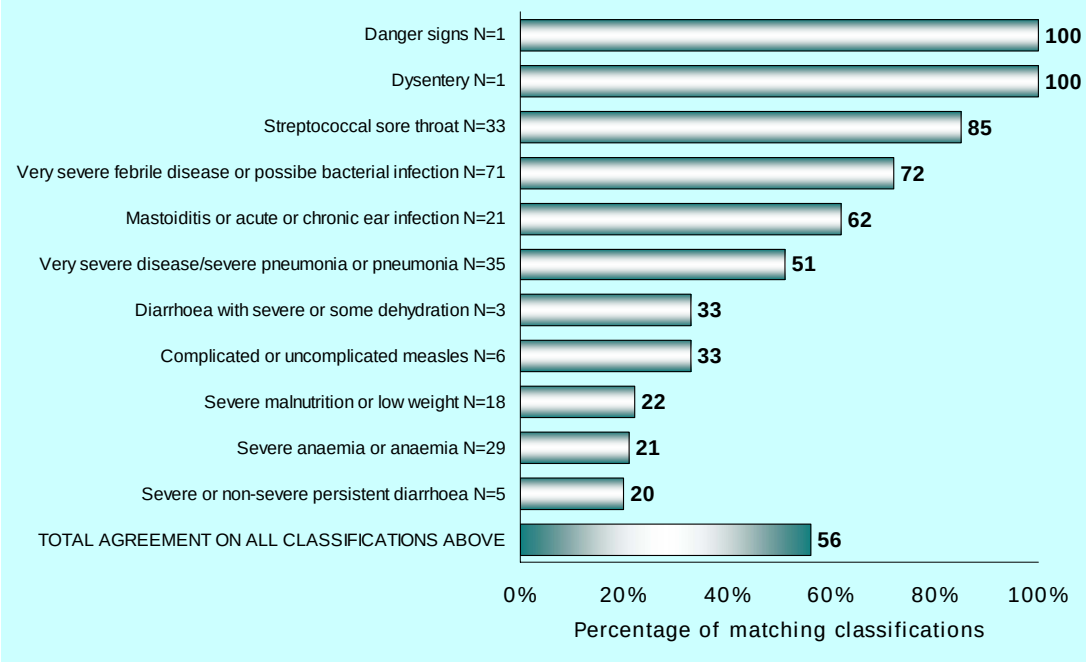


Fig. A15. Agreement of provider's classifications with surveyor's classifications by main conditions

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%)**
> *Referred* (correctly identified by the provider)	**2/6 (33.3%)**
> *Administered appropriate pre-referral treatment:*	
o *Severe pneumonia* administered parenteral thiamphenicol or ampicillin or recommended oral antibiotic at the facility	0/3 (0.0%)[1]
o *Severe dehydration* started receiving ORS at the facility	1/1 (100%)
o *Severe persistent diarrhoea* with some dehydration started receiving ORS at the facility and administered vitamin A	0/1 (0.0%)[2]
o *Severe malnutrition* administered vitamin A	0/1 (0.0%)[3]
> *Correctly managed* (referred and given appropriate pre-referral treatment)	**1/6 (16.6%)**
• Cases needing urgent referral	*n* = 6
> *Given explanation about the need for referral*	2 (33.3%)
> *Accepting referral*	1 (16.7%)
> *Given referral note*	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:	*n* = 5
- Cases referred by the provider	0 (0.0%)
- Cases not referred by provider and unlikely to need an injectable drug	3 (60.0%)

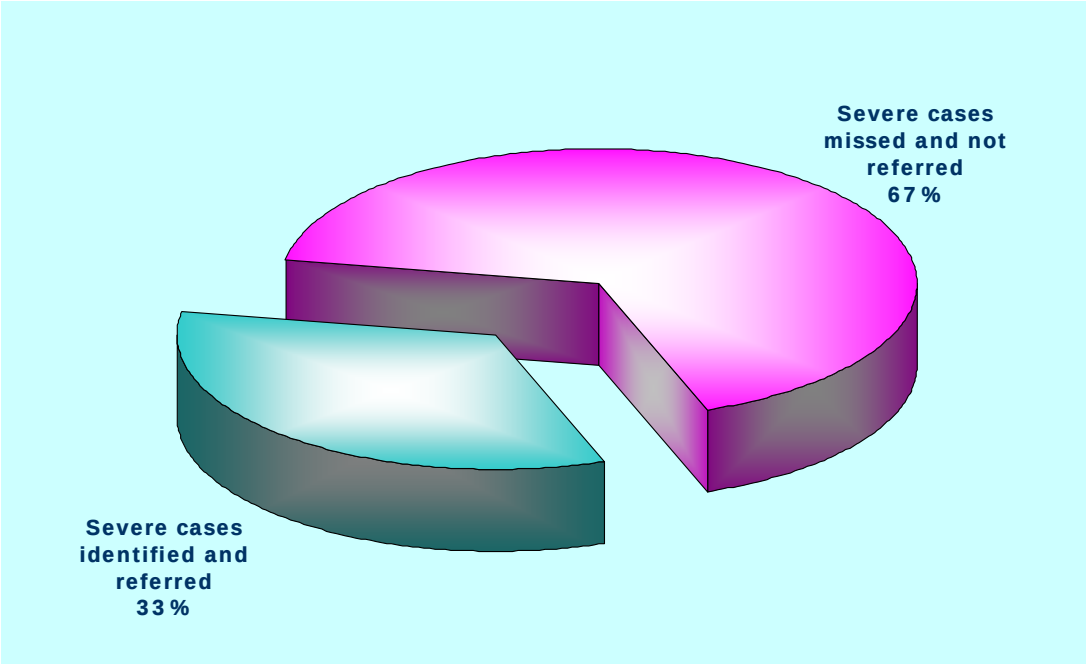


Fig. A16. Management of severe cases needing urgent referral (*n* = 6): severe cases identified and referred

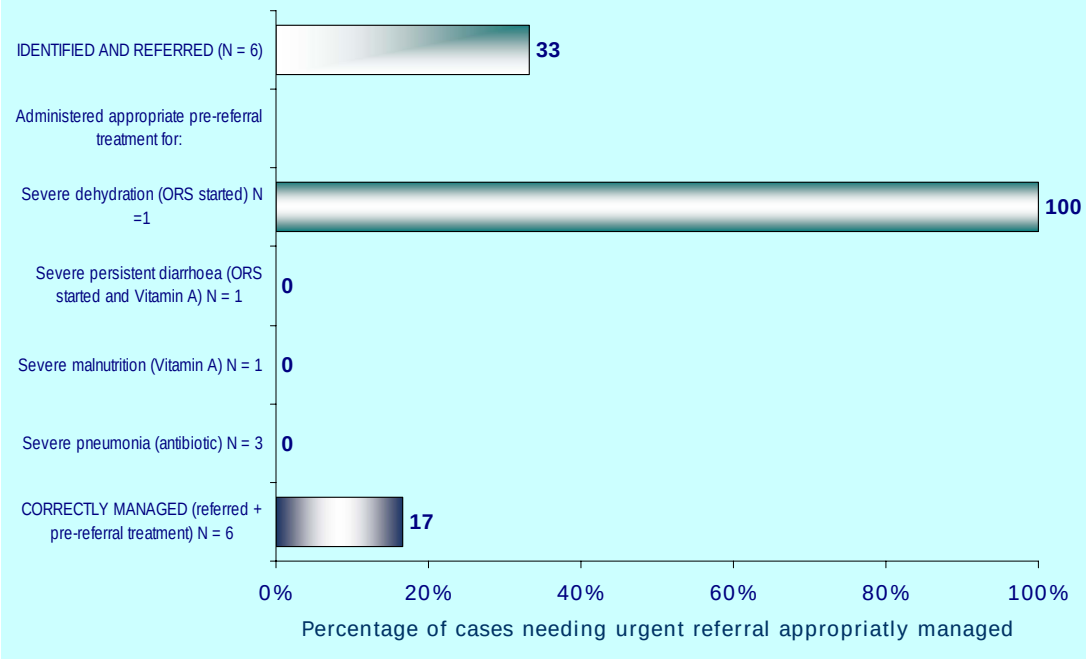


Fig. A17. Management of severe cases needing urgent referral (*n* = 6): severe cases properly managed

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:	*n* = 81
> *Prescribed oral antibiotics*	69 (85.2%)
>*Prescribed a recommended oral antibiotic*	63 (77.8%)
- Of those prescribed recommended oral antibiotics:	*n* = 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:	*n* = 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):	*n* = 32
> *Prescribed oral antibiotics*	25 (78.1%)[1]
>*Prescribed recommended oral antibiotics*	23 (71.9%)
- Of those prescribed recommended oral antibiotics:	*n* = 23
> *Prescribed oral antibiotics correctly*	7 (30.4%)
• Dysentery cases (not requiring urgent referral):	*n* = 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:	*n* = 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.

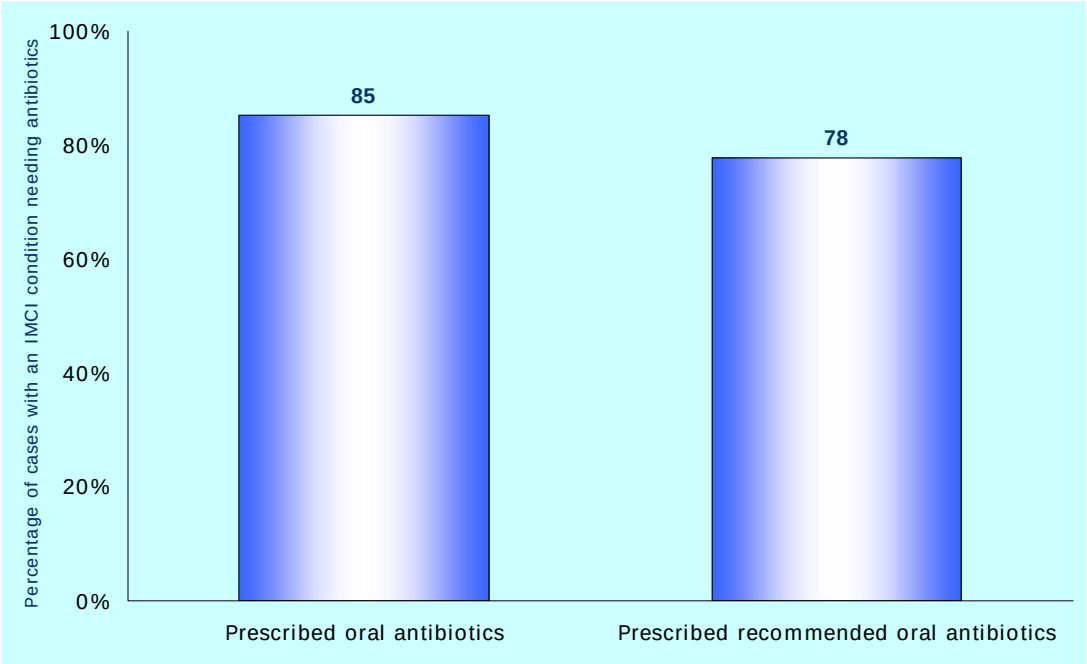


Fig. A18. Prescription of recommended oral antibiotic treatment (*n* = 81 cases with "IMCI conditions" needing oral antibiotics

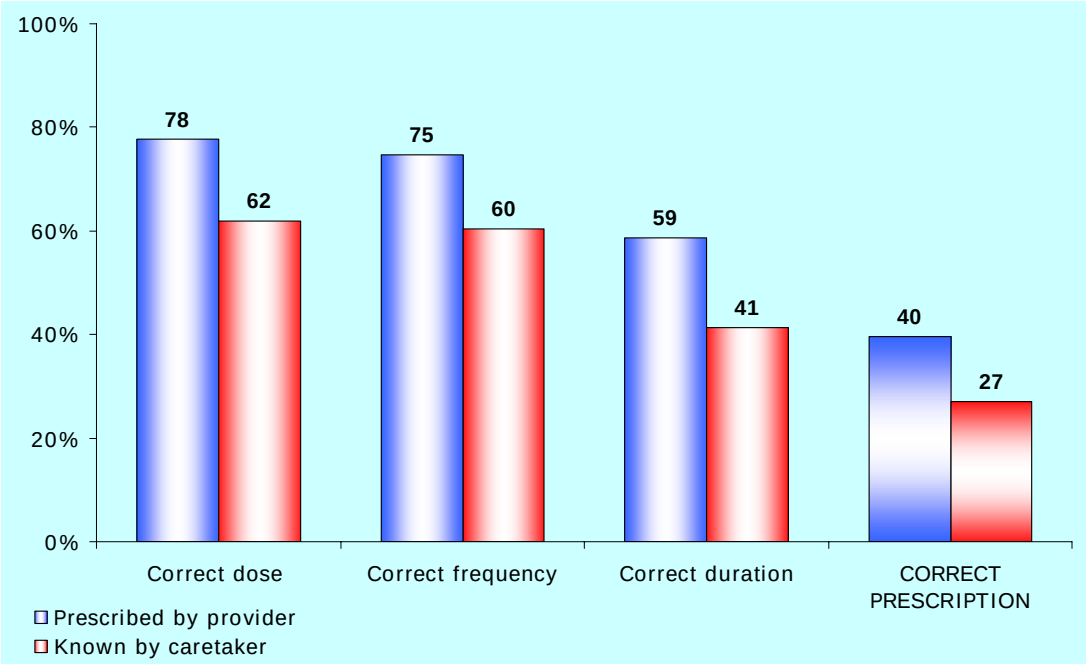


Fig. A19. Prescription of IMCI recommended antibiotics by provider and caretaker correct recall (*n* = 63)

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

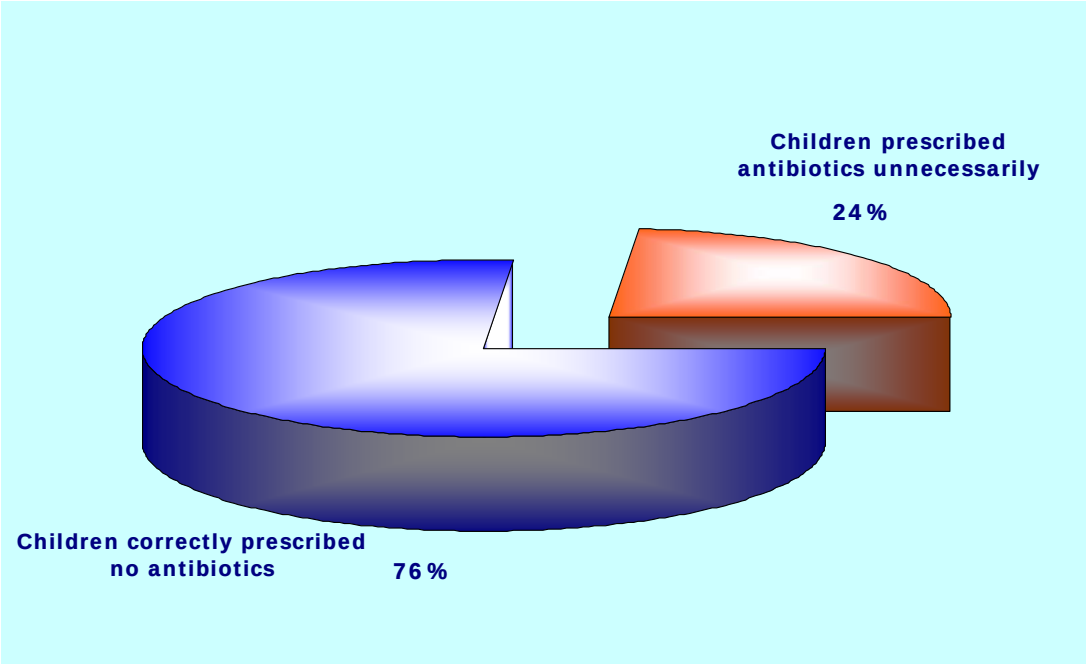


Fig. A20. Rational use of drugs: children not needing antibiotics given no antibiotics (*n* = 301)

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

CASES PRESCRIBED AN ANTIBIOTIC	*n* = 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.

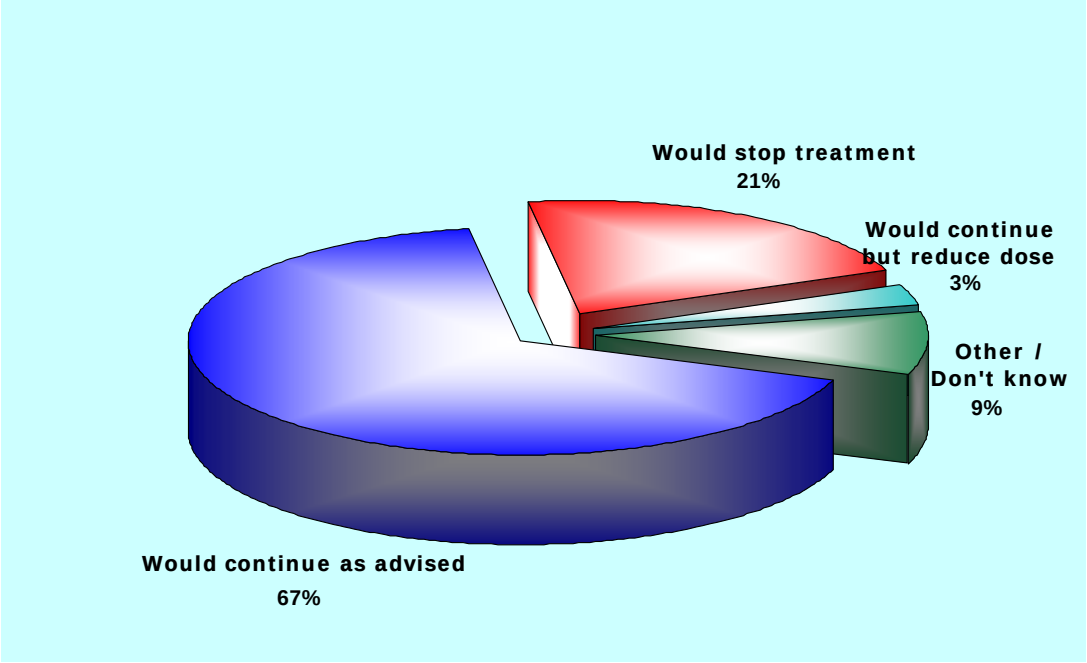


Fig. A21. Caretaker potential compliance with provider advice on duration of oral antibiotic treatment should child get better before completing treatment course (*n* = 123)

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]:	
> *No signs of dehydration*: given ORS sachets	65/78[1,2] (83.3%)
> *Some dehydration*: administered the ORS solution at the facility	2/2[1] (100%)
- Of those given ORS:	*n* = 67[3]
> 1. Correctly advised on *amount of water* to mix with 1 ORS sachet to prepare the solution	57 (85.1%)
> 2. Correctly advised on *when to give* ORS to the child each day	25 (37.3%)
> 3. Correctly advised on *how much* ORS to give to the child each time	23 (34.3%)
Given correct instructions on ORS, including its preparation (all three above):	21 (31.3%)
• Caretakers of children prescribed ORS:	*n* = 67[3]
> 1. *Knowing how much water* to mix with 1 ORS sachet to prepare solution	63 (94.0%)
> 2. *Knowing when to give* ORS to the child each day	16 (23.9%)
> 3. *Knowing how much* 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 (*n* = 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%)
All 3 above	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.

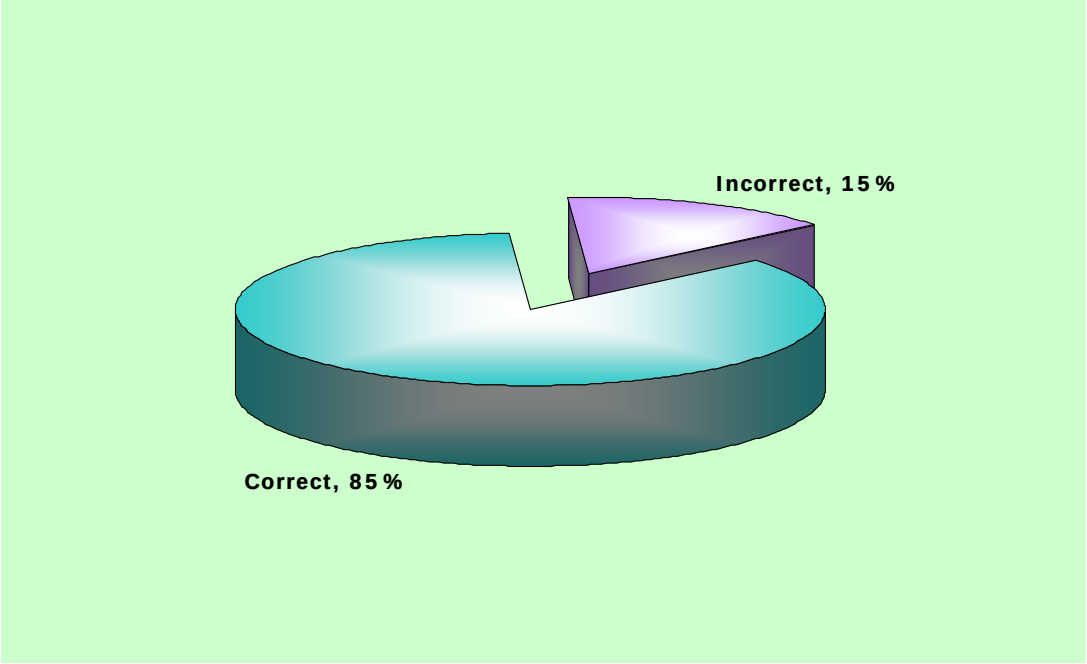


Fig. A22. Provider advice on amount of water to prepare ORS (*n* = 67)

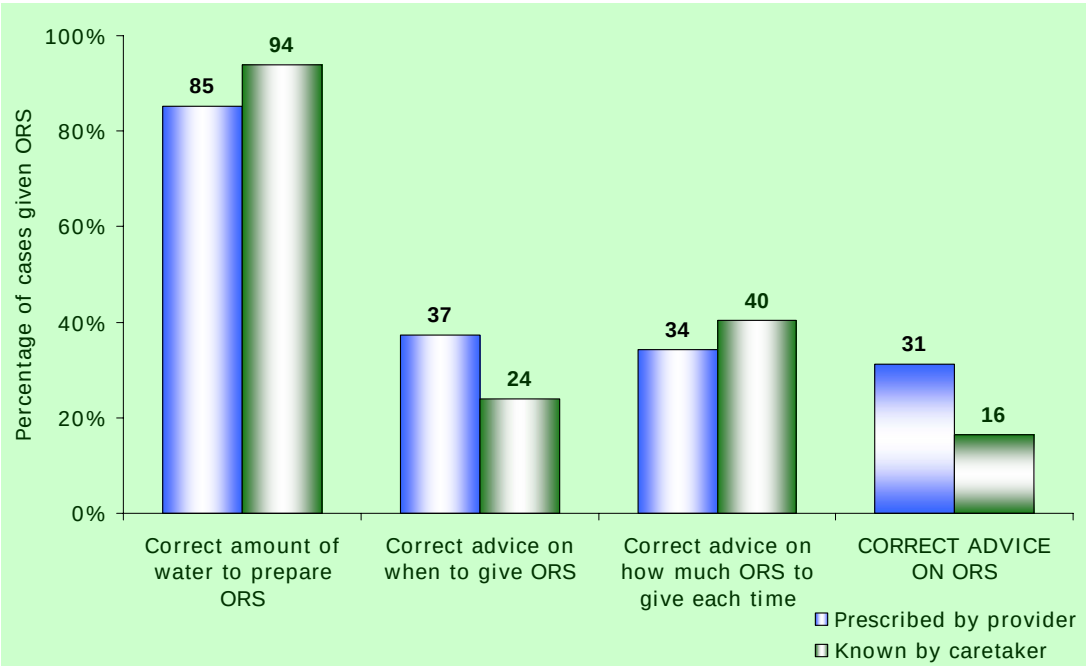


Fig. A23. Provider correct advice on ORS and caretaker correct knowledge about ORS treatment (*n* = 67)

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 antibiotics:	*n* = 63
> 1. *Given advice on dose, frequency and duration of treatment*	50 (79.4%)
> 2. *Given demonstration on how to give it*	18 (28.6%)
> 3. *Asked open-ended question to check for understanding*	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 ORS:	*n* = 67
> 1. *Given advice on preparation, dose and frequency of treatment*	11 (16.4%)
> 2. *Given demonstration on how to give it*	6 (9.0%)[2]
> 3. *Asked open-ended question to check for understanding*	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 amoxycillin)

[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.

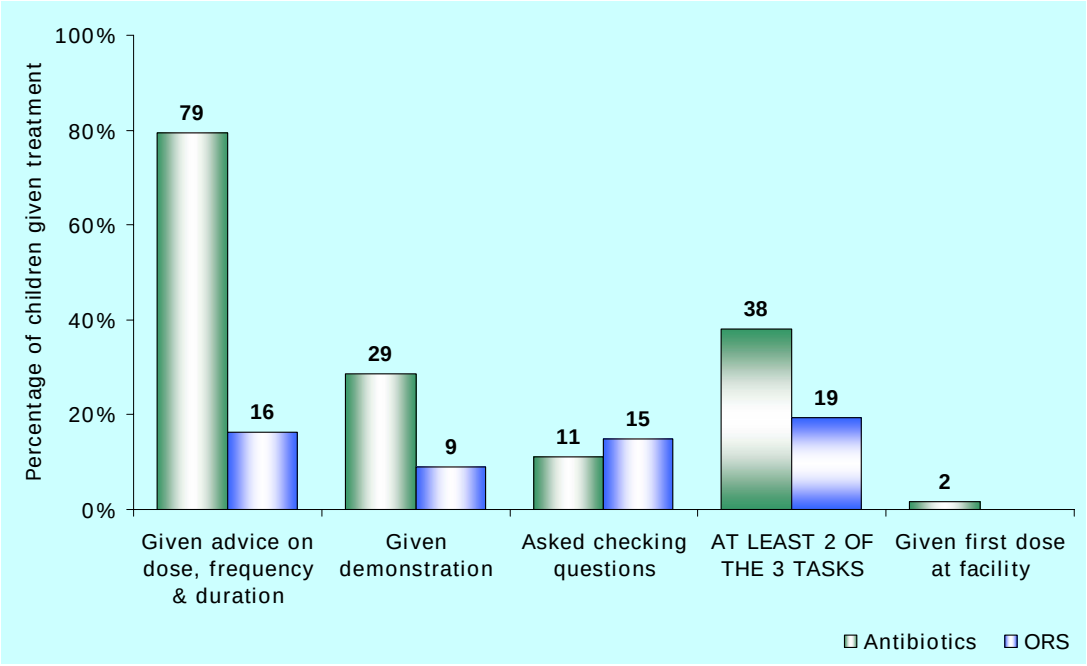


Fig. A24. Antibiotic (*n* = 63) and ORS (*n* = 67) treatment: provider communication skills

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 ≥39.0°C*	5/11 (45.5%)
> *Of those with streptococcal sore throat or acute ear infection with a rectal temperature <39.0°C*	8/49 (16.3%)
> *Of those with a rectal temperature <39.0°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:	*n* = 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):	*n* = 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.

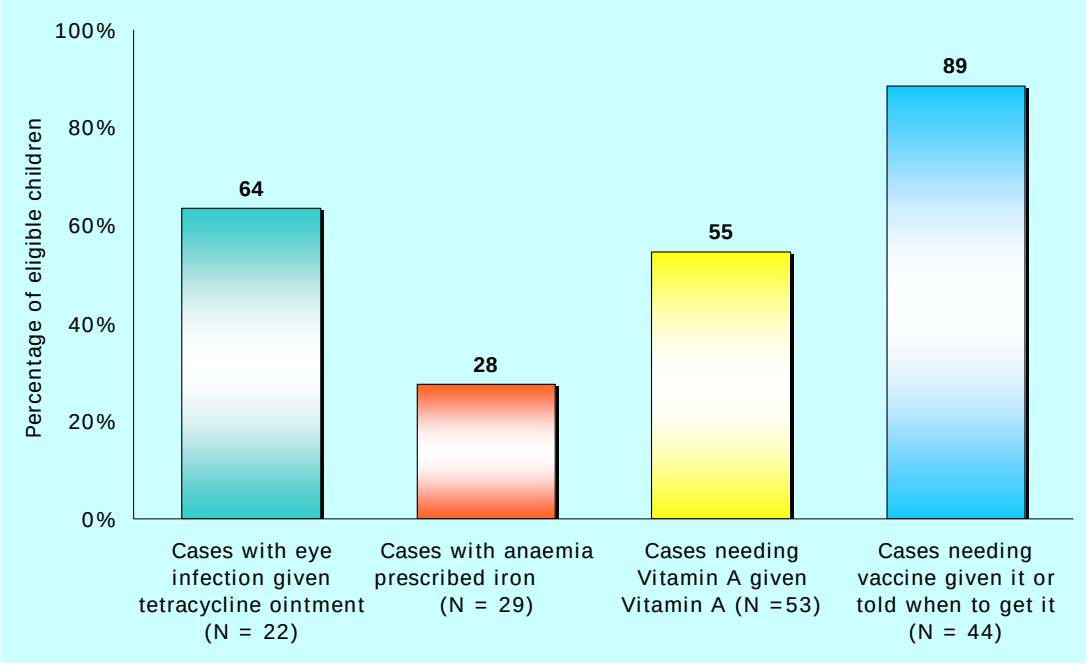


Fig. A25. Other curative and preventive treatments and opportunities for immunization for non-referred cases

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:	215/391 (55.0%)
> Advised to come back for follow-up by definite time by the provider	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 advice[1]

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

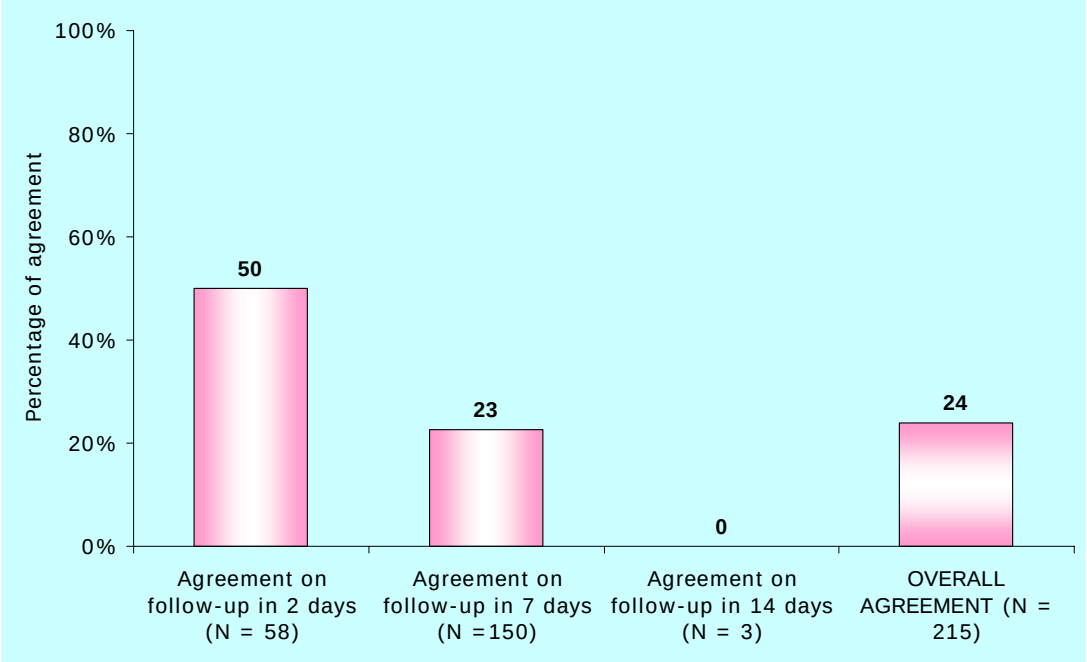


Fig. A26. Agreement of provider's advice on definite follow-up with surveyor's (*n* = 215)

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:	*n* = 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.

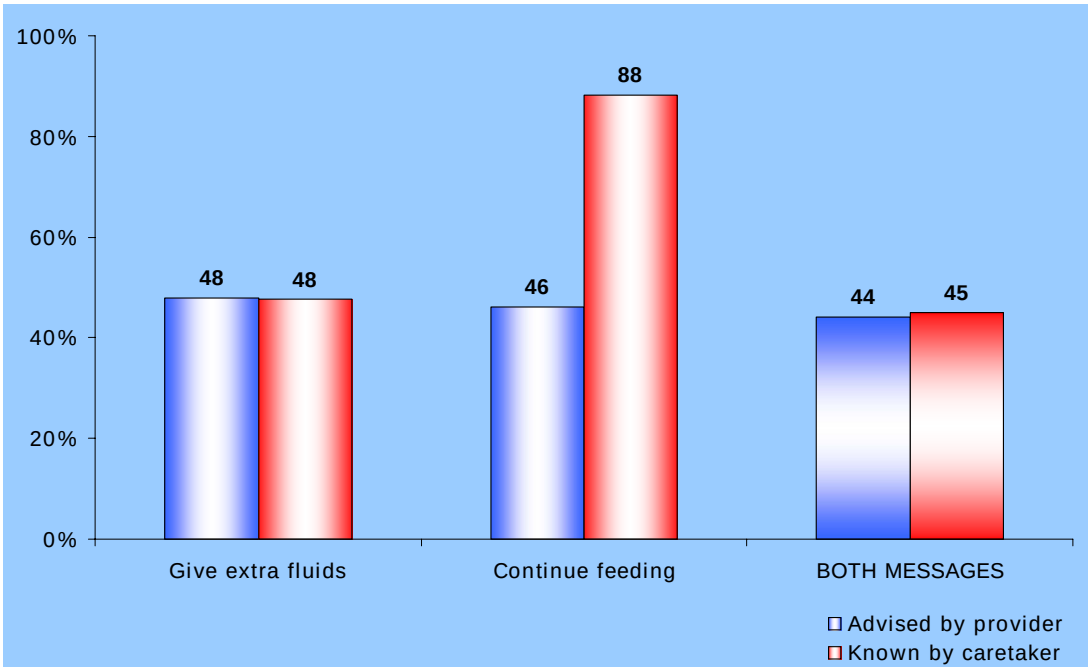


Fig. A27. Provider advice and caretaker knowledge about home care for children not needing urgent referral (*n* = 391)

Table A22. Caretaker knowledge about home care

CASES	No. (%)
Caretakers of children not referred by the provider knowing about the need:	*n* = 391[1]
> *To give extra to drink* to their sick children	186 (47.6%)
> *To continue feeding* their sick children	345 (88.2%)
> To give extra fluids *and* continue feeding 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:	*n* = 391[1]
> 1. *Child is unable to drink or breastfeed*	69 (17.6%)
> 2. *Child becomes sicker*	198 (50.6%)
> 3. *Child develops a fever*	295 (75.4%)
> 4. *Develops fast breathing*	25 (6.4%)
> 5. *Develops difficult breathing*	96 (24.5%)
> 6. *Develops wheezing*	6 (1.5%)
> 7. *Has blood in stools*	12 (3.1%)
> 8. *Drinks poorly*	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)	*n* = 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]:	*n* = 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.

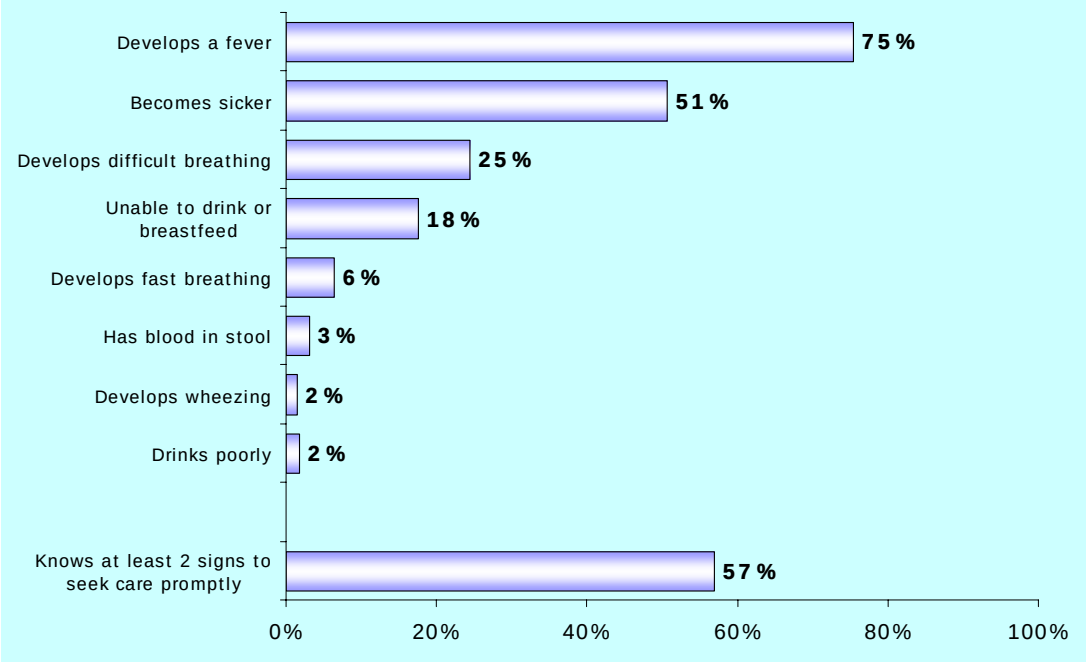


Fig. A28. Caretaker knowledge about signs to seek care promptly (*n* = 391)

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:	*n* = 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:	*n* = 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.

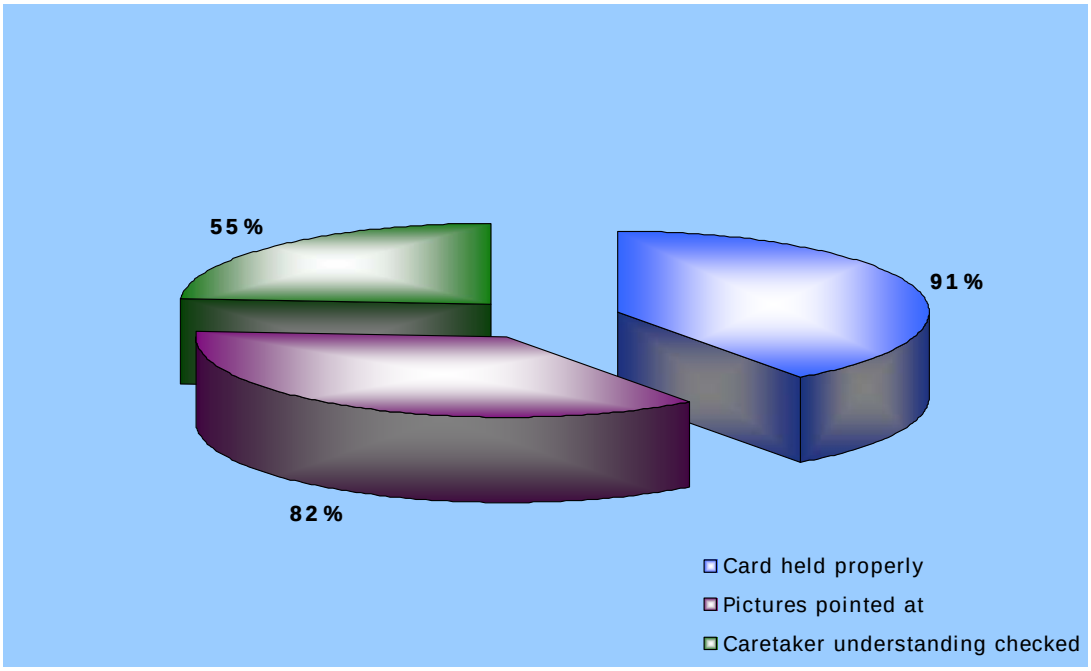


Fig. A29. Use of appropriate communication techniques (*n* = 11)

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%)
> *Breastfed*	2/33 (6.0%)
> *Not breastfed*	0/4 (0%)
Children 6 to 11 months old	27/76 (35.5%)
> *Breastfed*	13/47 (44.8%)
> *Not breastfed*	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%)
Children less then 2 years old and those with low weight and/or anaemia and/or persistent diarrhoea	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 breastfed[1]: 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. (%)
	n = 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]	*n* = 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]	*n* = 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.

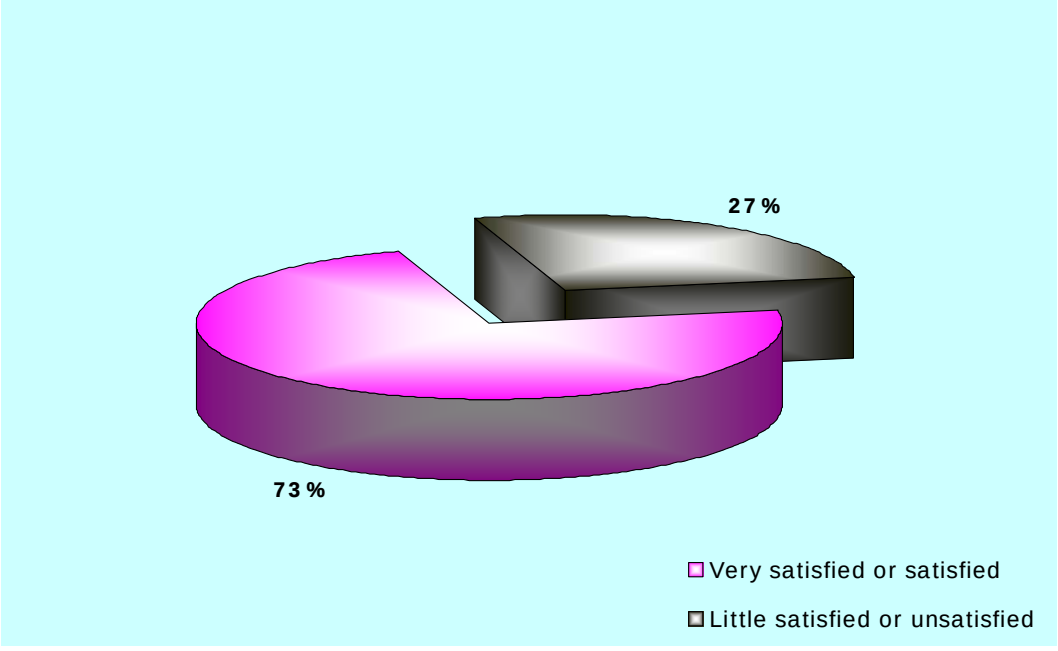


Fig. A30. Caretaker satisfaction with care and services (*n* = 392 children not referred by the health facility provider)

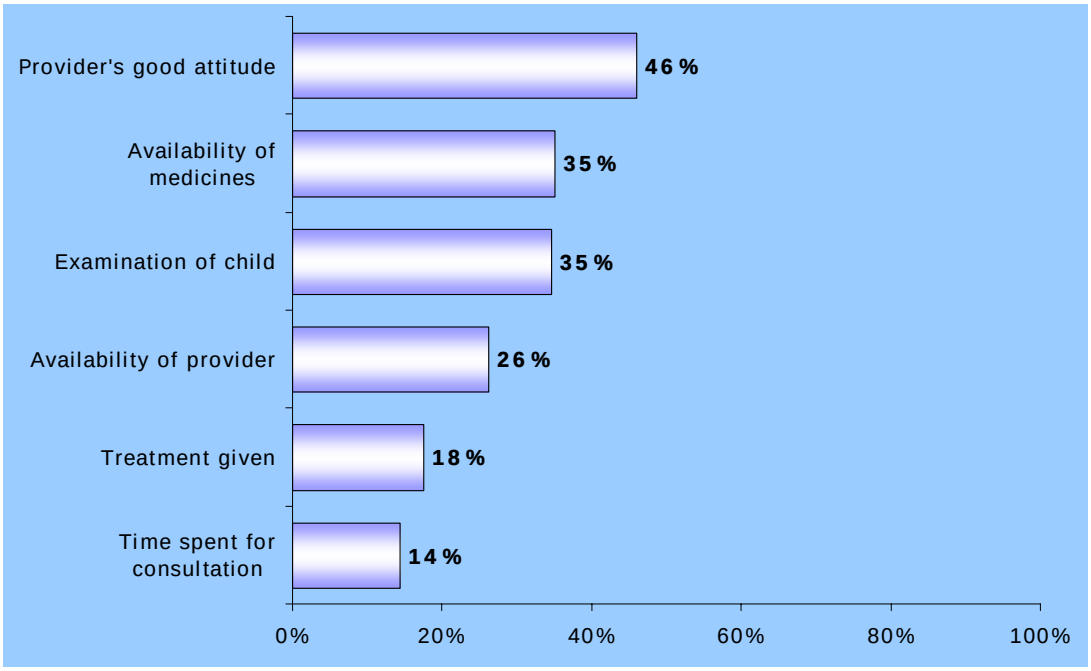


Fig. A31. Reasons for caretaker satisfaction (*n* = 285 caretakers of children not referred by provider who reported being satisfied with the services)

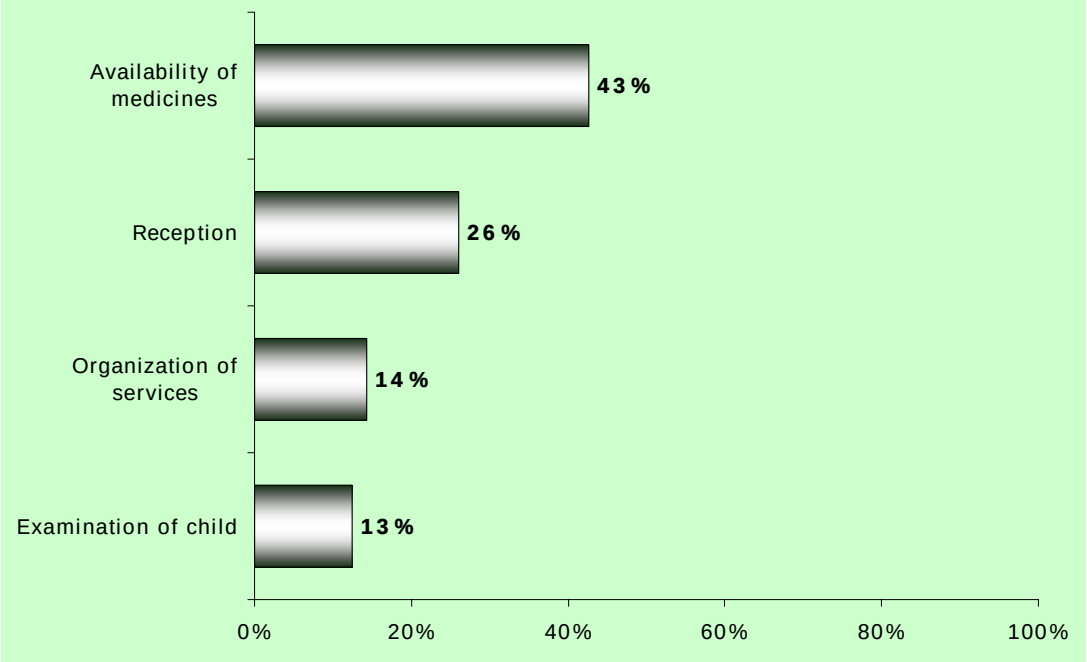


Fig. A32. What caretakers would like to see improved (*n* = 392 caretakers of children not referred by provider)

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%)

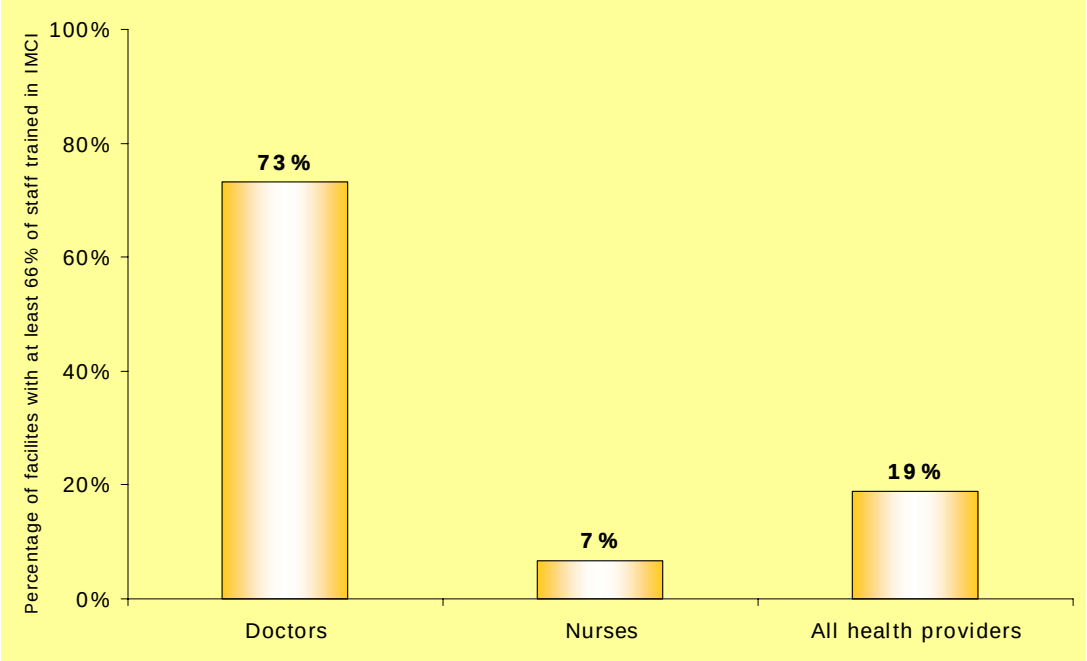


Fig. A33. Facilities with at least 66% of staff managing children trained in IMCI, by provider category (*n* = 45)

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 *n* = 323	RURAL FACILITIES *n* = 72	ALL FACILITIES *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.

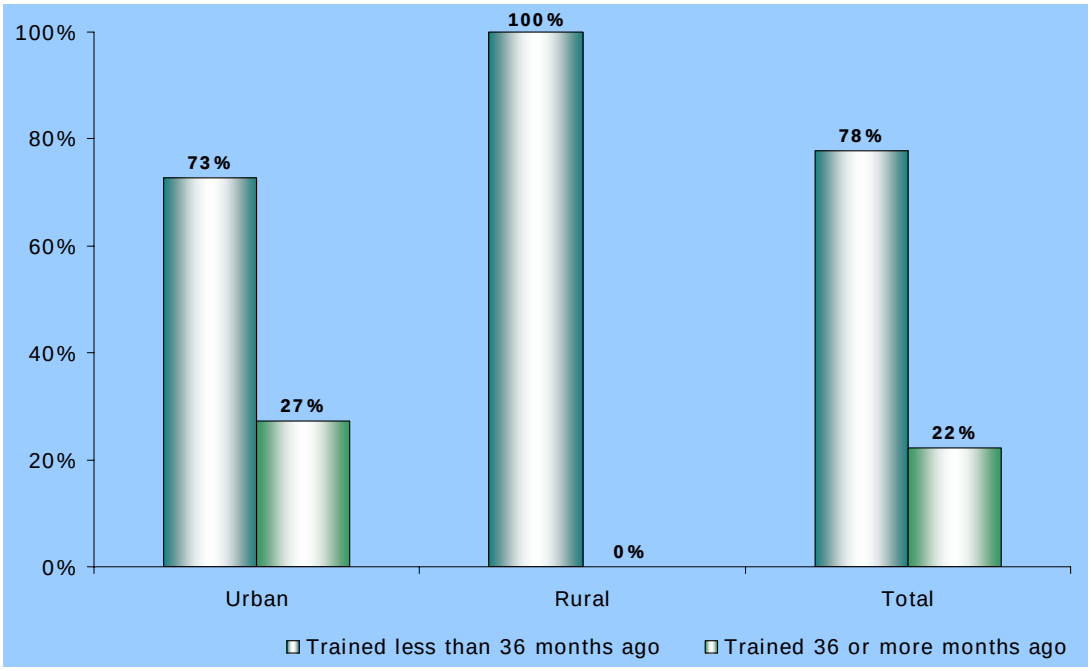


Fig. A34. Children managed by doctor IMCI training time and residence (*n* = 395)

COMPARATIVE FINDINGS BY PROVIDER FOLLOW-UP STATUS

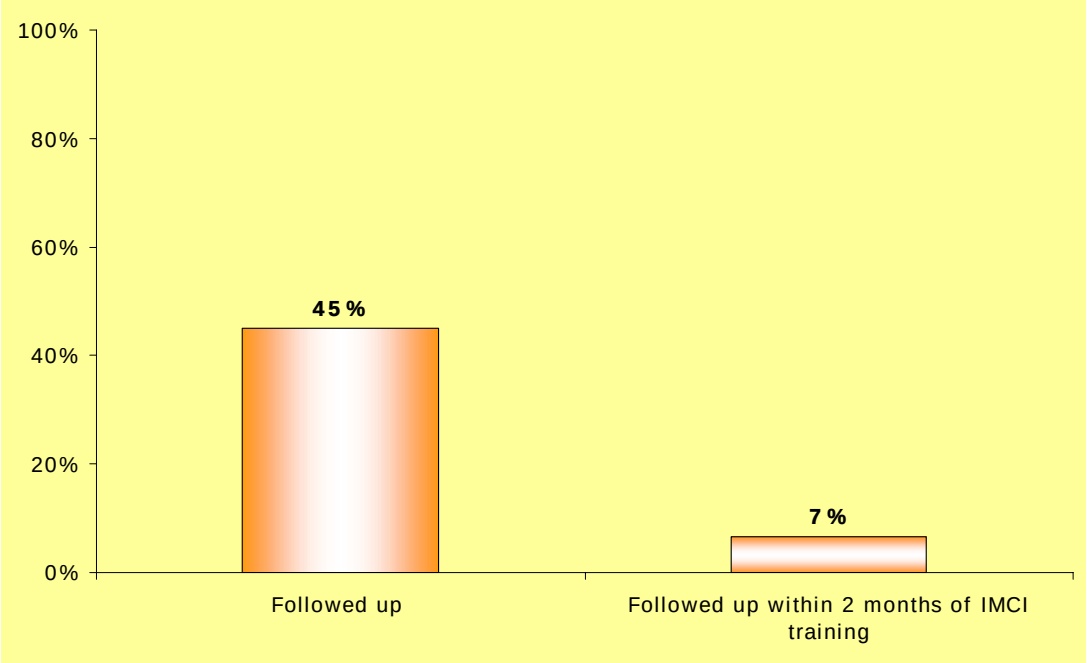


Fig. A35. Children managed by doctors who had received a follow-up visit after IMCI training (*n* = 397)

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%)
Index of integrated assessment	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
o	Index of availability of *essential oral treatments*, namely cotrimoxazole, ORS, vitamin A and iron (Max index = 4)	3.3[1] out of 4
o	Index of availability of the *12 non-injectable* drugs for IMCI, including the 4 drugs listed above and the following: amoxycillin, 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
o	Index of availability of *injectable drugs for pre-referral treatment* 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.

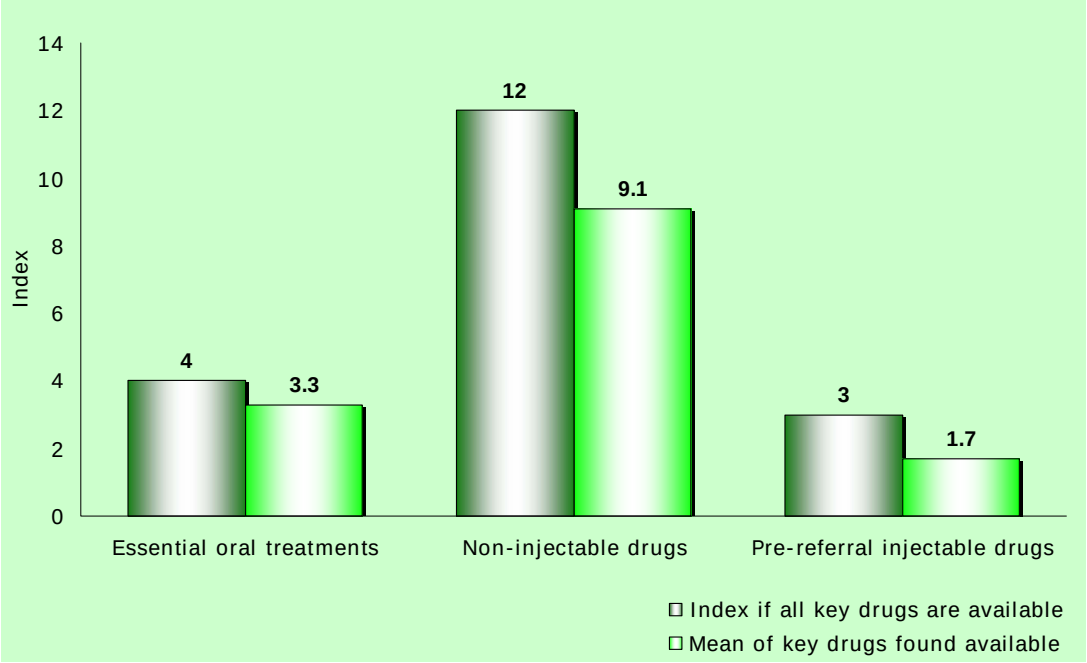


Fig. A36. Index (mean) of drug availability: availability of at least 1 treatment course (*n* = 45 facilities)

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 acetylsalycilic	43 (95.6%)
Amoxycillin	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.

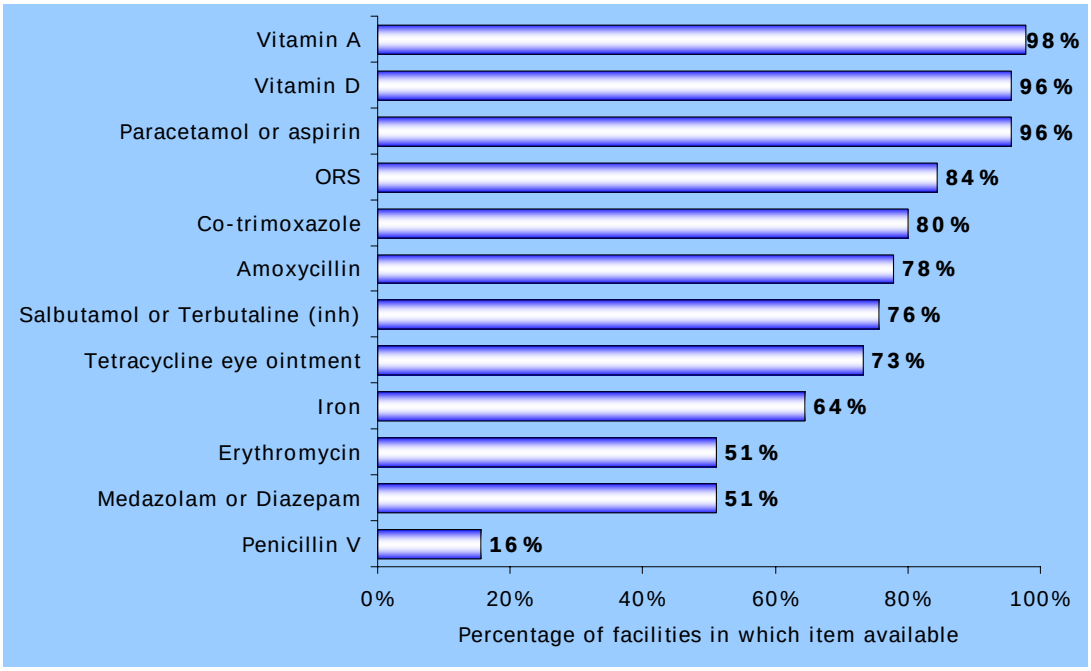


Fig. A37. Availability of individual drugs recommended for IMCI (*n* = 45 facilities)

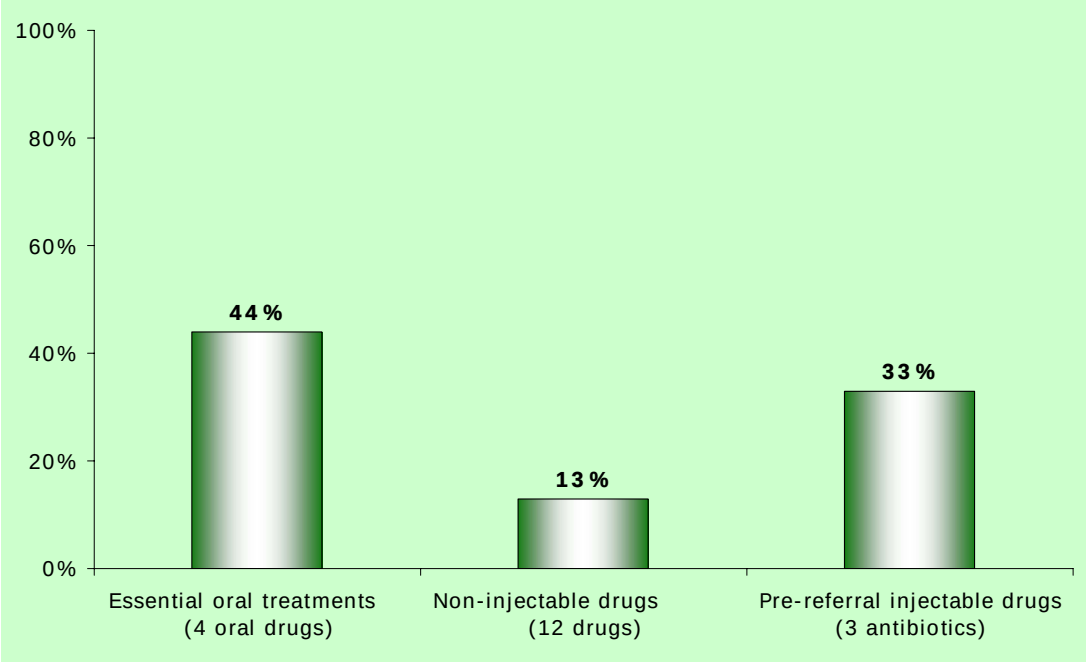


Fig. A38. Percentage of facilities having drugs recommended for IMCI (included in the Essential List of Medicines) (*n* = 45 facilities)

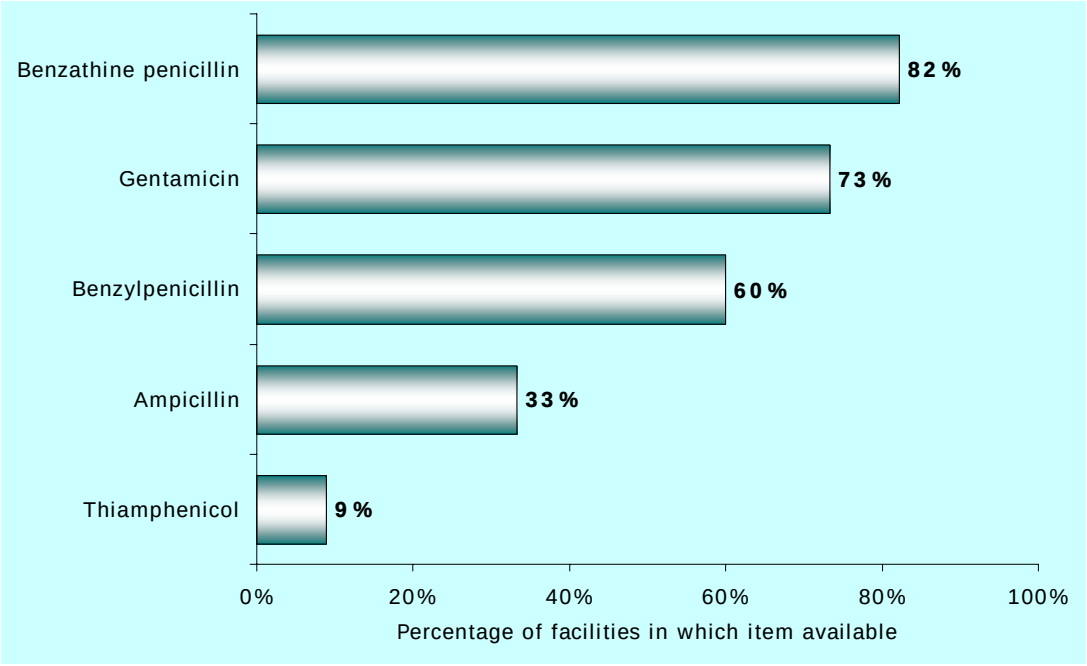


Fig. A39. Availability of injectable antibiotics (*n* = 45 facilities)

QUALITY OF CARE: HEALTH SYSTEMS

AVAILABILITY OF EQUIPMENT AND SUPPLY

Table A35. Availability of equipment and supply for vaccination

ITEMS	AVAILABILITY *n* = 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%)

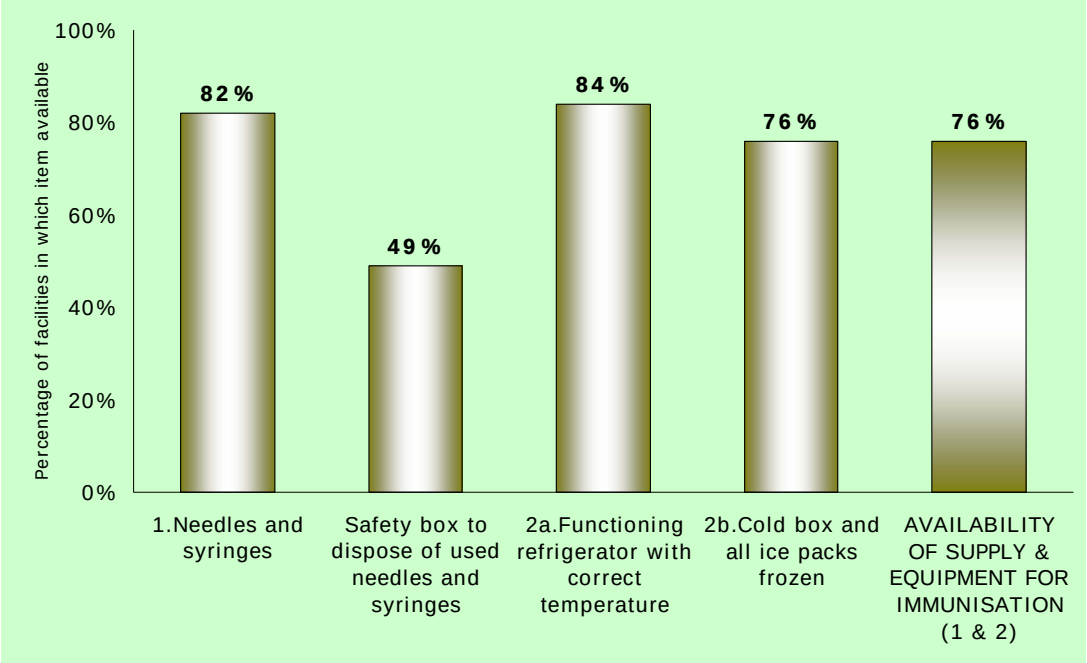


Fig. A40. Availability of supply and equipment for immunization (*n* = 45 facilities, all providing immunization services)

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%).

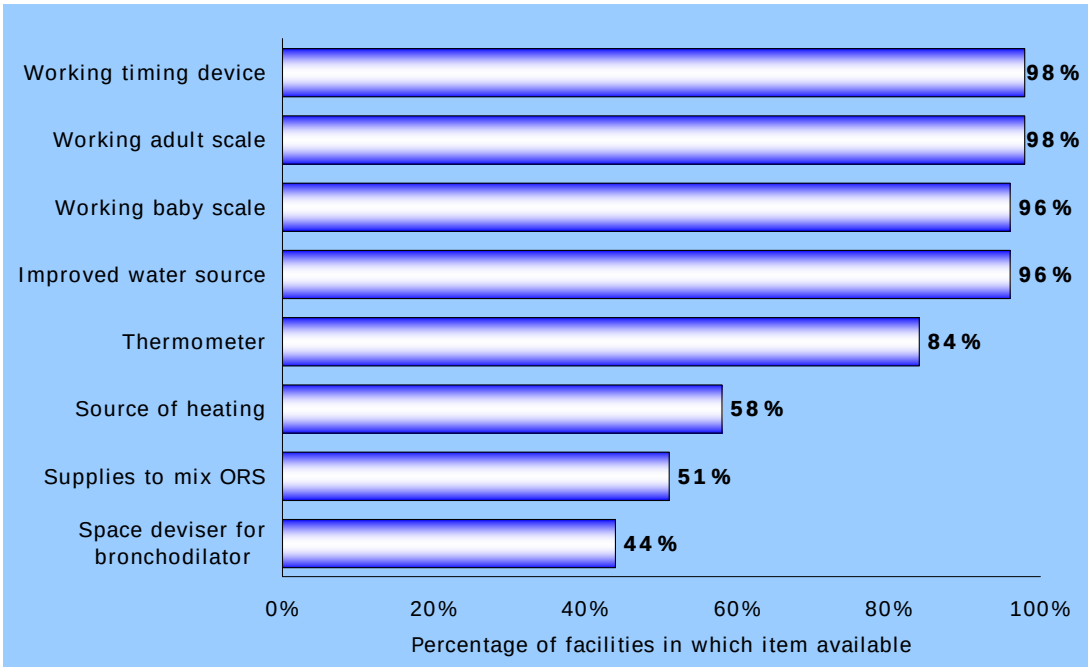


Fig.A41. Availability of supply and equipment for IMCI (*n* = 45 facilities)

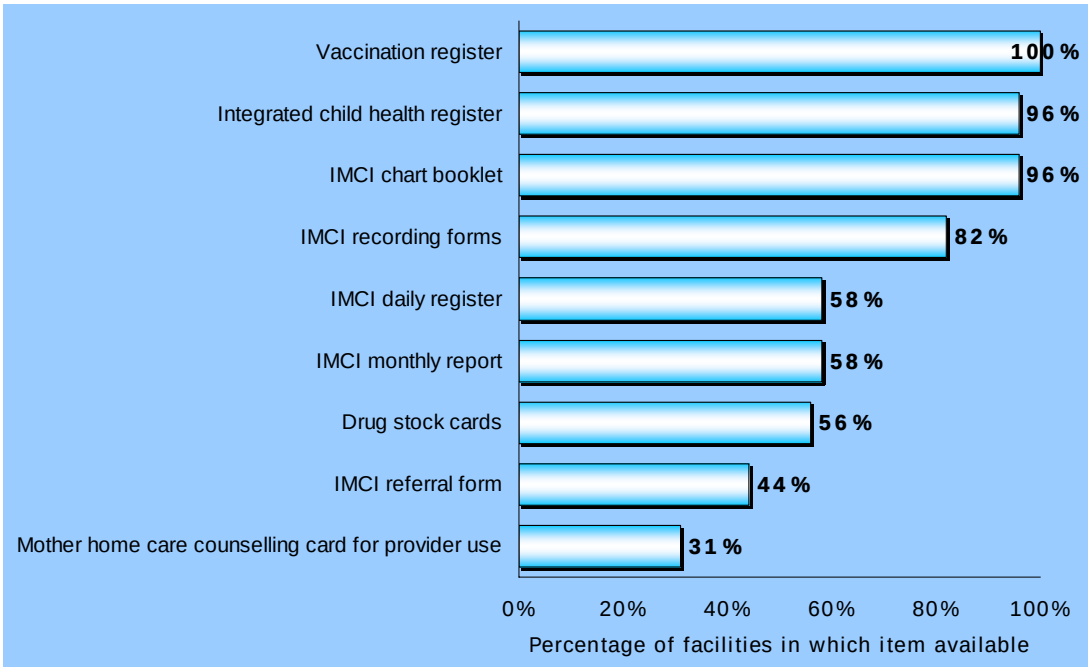


Fig. A42. Availability of IMCI records, counselling cards, chart booklet and other records (*n* = 45 facilities)

QUALITY OF CARE: HEALTH SYSTEMS

IMMUNIZATION SERVICES

Table A37. Availability of immunization services and vaccines

	VACCINE	AVAILABILITY *n* = 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.

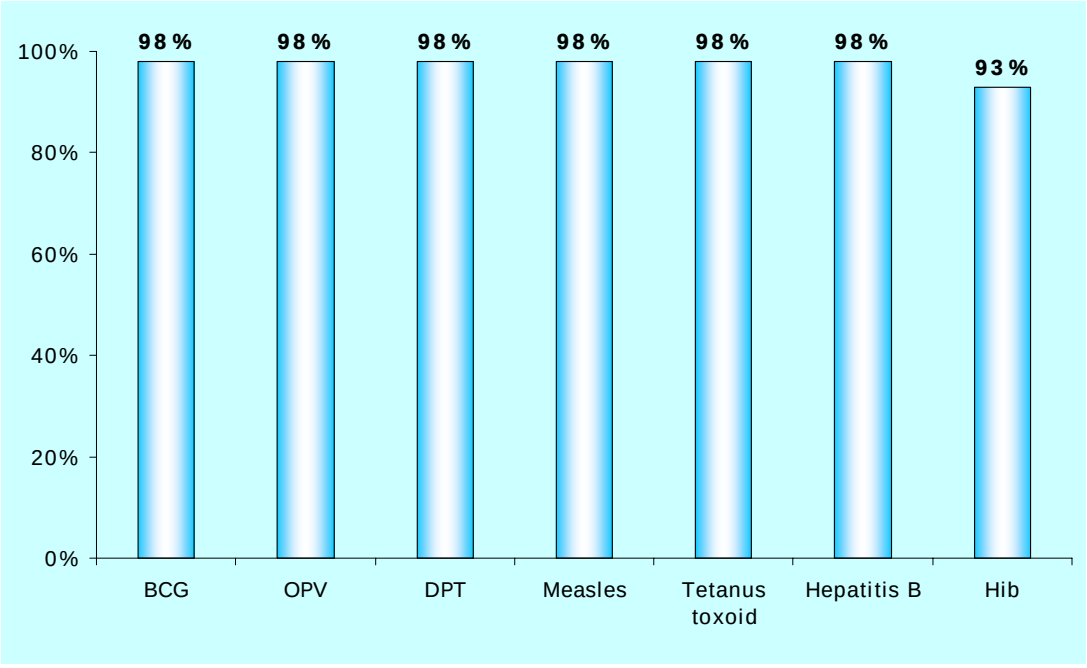


Fig. A43. Availability of vaccines (*n* = 45 facilities providing immunization services)

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%)
> *Time to go to the referral hospital*:			
- 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.

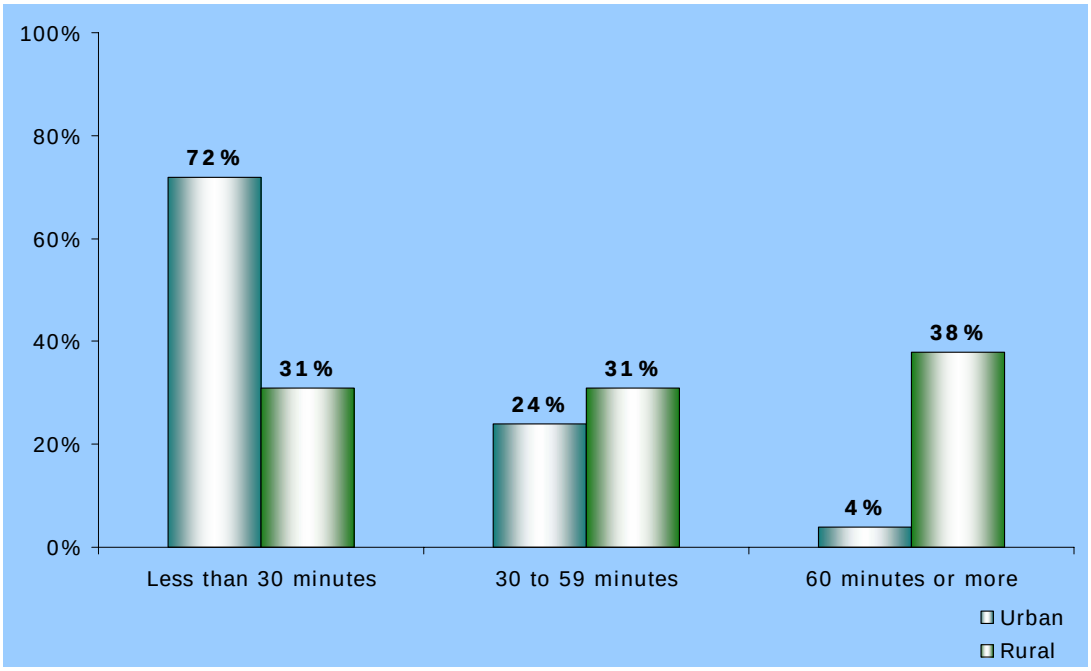


Fig. A44. Time to reach referral facility by residence (*n* = 45 facilities)

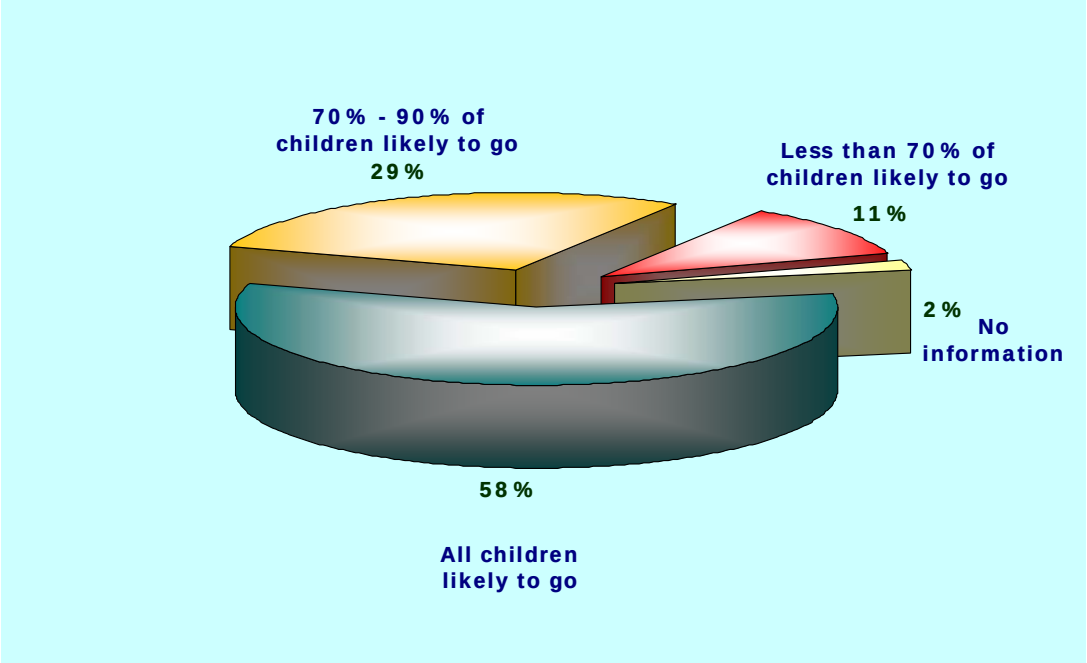


Fig. A45. Likelihood of children with severe conditions referred to be taken to referral facility (*n* = 45 facilities)

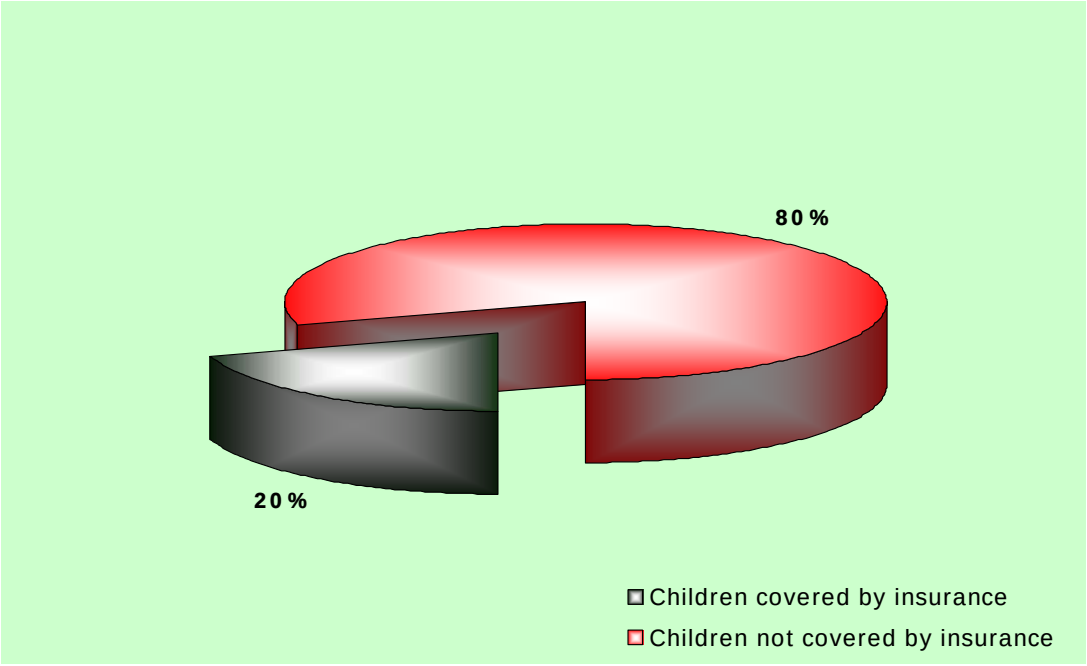


Fig. A46. Percentage of children seen covered by insurance (*n* = 397 children)

Table A39. Time to reach facility today

TIME TO REACH FACILITY	URBAN *n* = 325[1]	RURAL *n* = 72[1]	TOTAL *n* = 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).

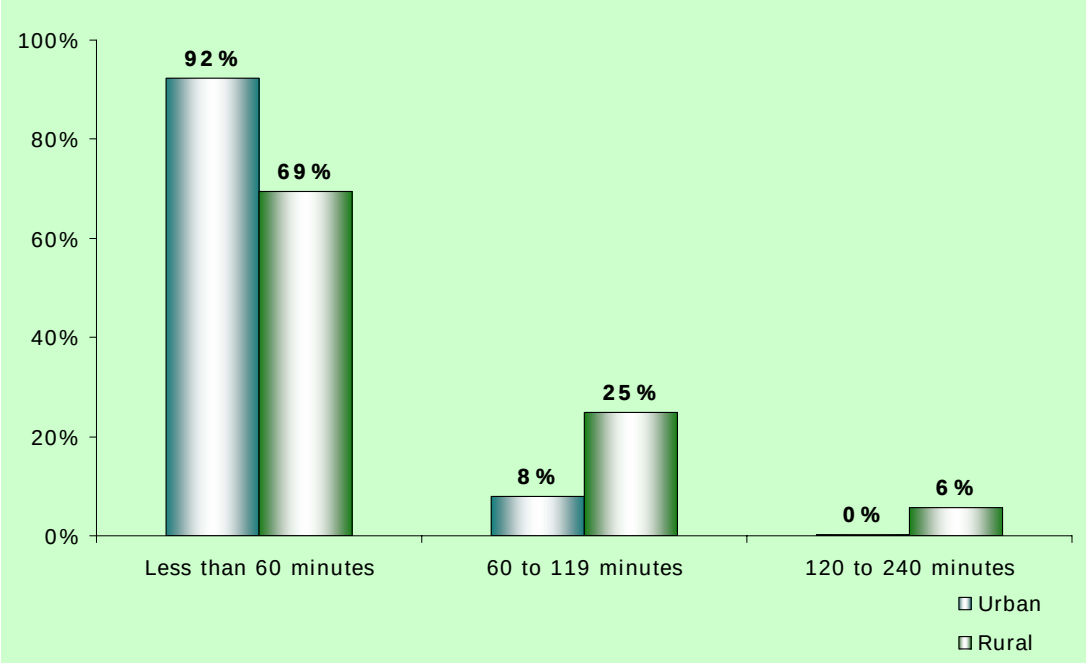


Fig. A47. Time to reach this facility today by residence (*n* = 397)

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

SERVICE	*N* (%)
Facilities providing outreach services through *equipe mobile*	13/45 (28.9%) [1]
Services provided by *equipe mobile*:	*n* = 13
- Preventive	13 (100%)
- Curative	11 (84.6%)
- Promotive	12 (92.3%)
Equipe mobile 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).

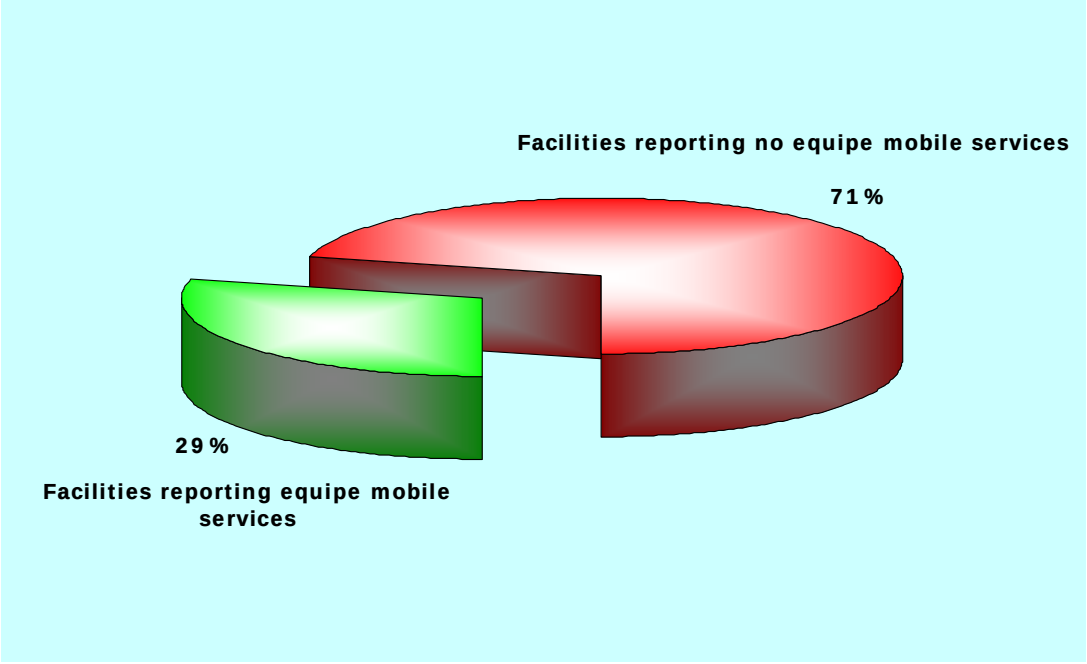


Fig. A48. Facilities reporting provision of '*équipe mobile*' services (*n* = 45)

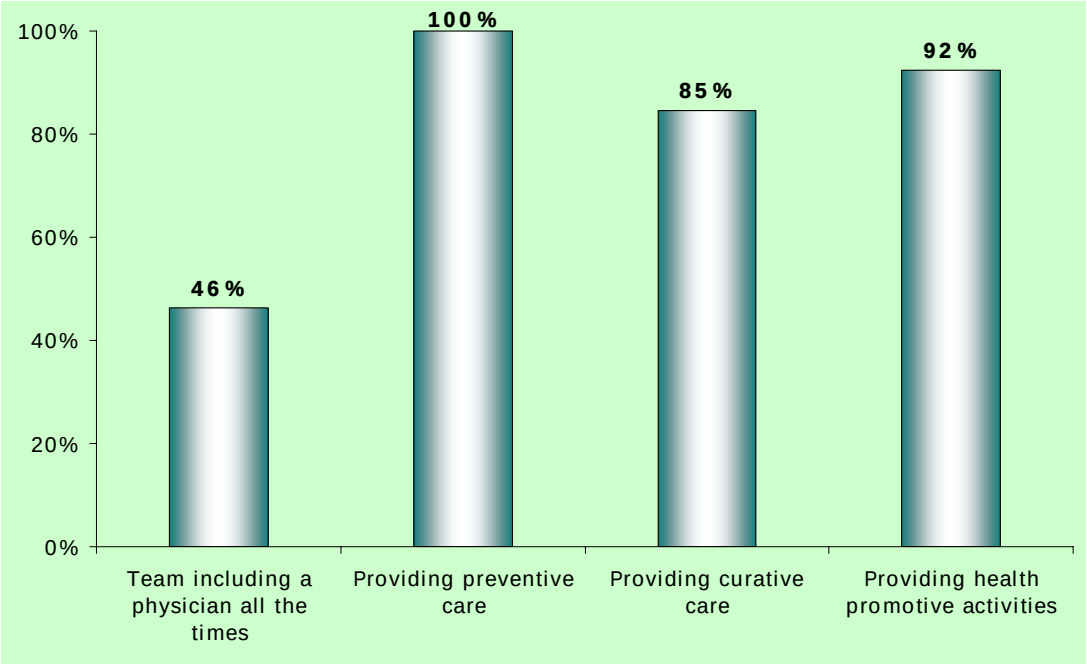


Fig. A49. *Equipe mobile*: type of services provided (*n* = 13 facilities which reported provision of *équipe mobile* services)

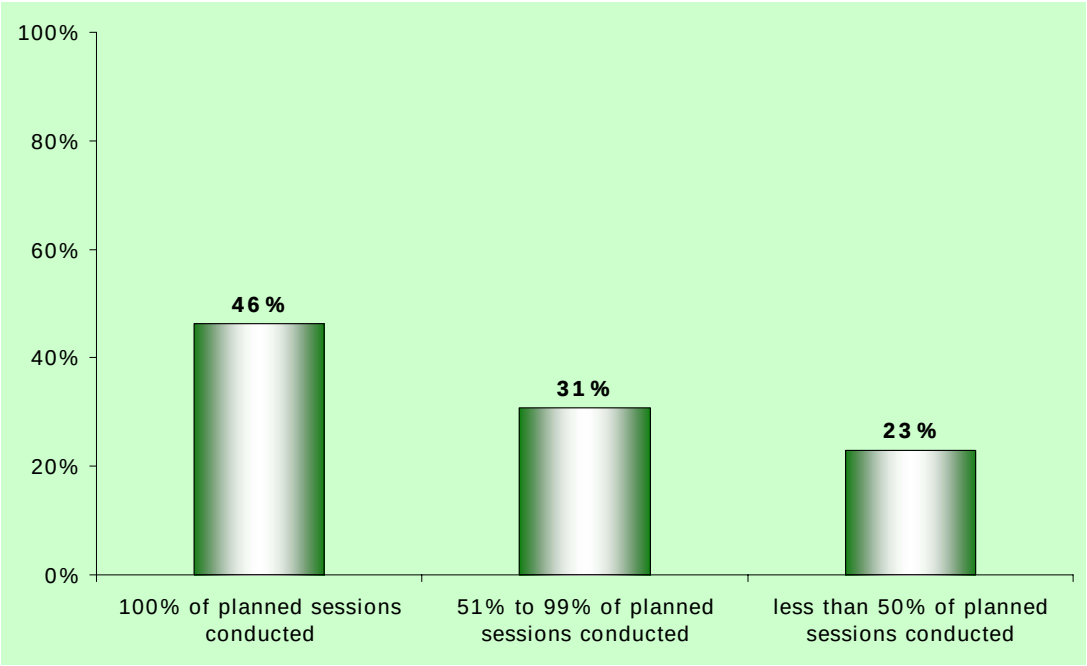


Fig. A50. *Equipe mobile*: conducted Vs planned sessions (*n* = 13 facilities which reported provision of *équipe mobile* services)

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:	*n* = 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.

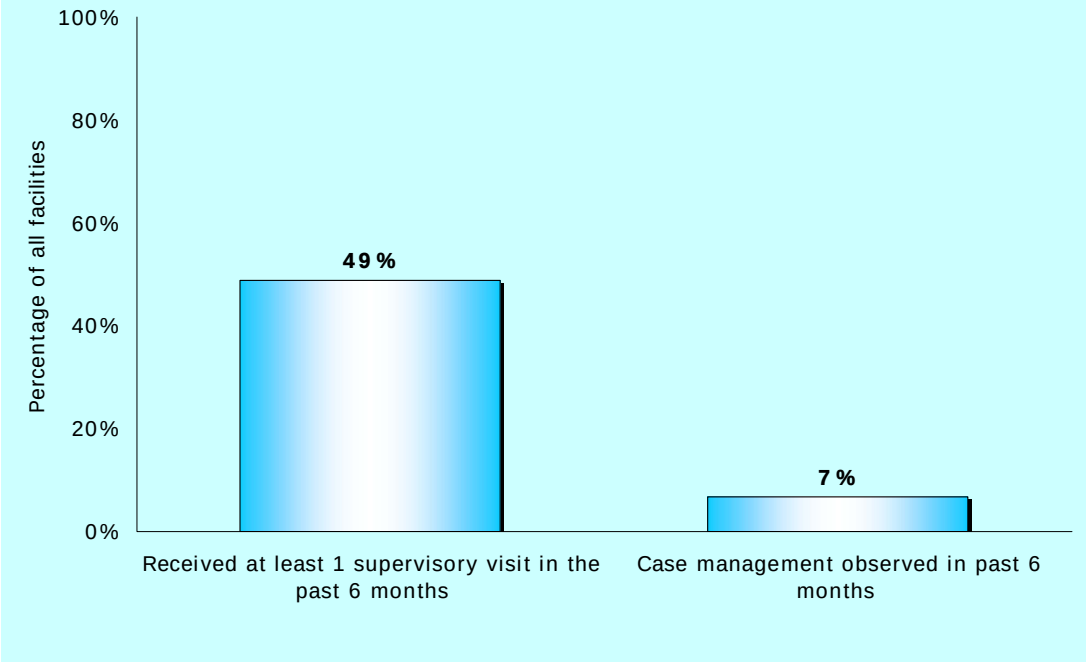


Fig. A51. Supervision in the 45 facilities visited

A P P E N D I X

SURVEY FORMS

[English and French versions]

Enrolment Form

Date: _____/_____/ 2007 Province: _____ Residence: Urban:…**1** Rural:… **2**

Facility code: |___|___| Facility Name: _____ Facility type: HC:…**1** D:... **2**

Child's Name: _____ Child's ID: |___|___|___| **Questionnaire #** |__|__|__|__|
HF code | Child ID

Child's birthdate: |___|___| /|___|___| /|___|___|___|___| Age (months):|___|___| Child sex: M:…**1** F:…**2**

Include *only* children from 2 to 59 months old.

EC1. Ask caretaker whether this is the first (initial) visit for this illness of the child at this facility. DO NOT INCLUDE follow-up visits for the same episode of illness.

1st visit?: Yes:…**1** No:…**2** → ⊖ STOP here

EC2. Ask reasons for bringing child to health facility and circle all signs mentioned (then probe, asking: '*Any other problems?*').

A. Diarrhoea..... Yes:...**1** No:...**2**

B. Fever ..... Yes:…**1** No:…**2**

C. Cough..... Yes:…**1** No:…**2**

D. Fast/difficult breathing/ pneumonia. Yes:…**1** No:…**2** → *go to E.*

D1. If Yes: *write term/s used*:_____

D2. ***Ask*** *how long caretaker waited to seek care since she realised child had this sign:* days |___|

E. Throat problem ..... Yes:…**1** No:…**2**

F. Ear problem ..... Yes:…**1** No:…**2**

G. Unable to drink/breastfeed, vomiting everything, convulsions, lethargic/unconscious Yes:…**1** No:…**2**

H. Other ..... Yes:…**1** (If Yes: *specify* _____) No:…**2**

EC3. Ask: "*What symptom worried you most that made you decide to take your child here?"*

_____ (_____)
(write local term as mentioned by caretaker) (write meaning in English)

_____ (_____)
(write local term as mentioned by caretaker) (write meaning in English)

Read statement on this survey to caretaker and ask for her/his consent: Consent given: Yes:... 1 No:... 2

(Supervisor initials: _____) If consent *not* given, add "9" in front of the child ID

If weight and temperature are taken and taken correctly (Form 1: A1b and A4b) by facility staff, record them here. If they are taken incorrectly, do not enter them.

Weight: |___|___|.|___||___||___| **Temperature**: |___|___|.|___| ^{0}C

Form 1:Observation [ ] **Form 2**:Caretaker interview [ ] **Form 3**:Re-examination [ ]

CHILD REFERRED URGENTLY BY HEALTH PROVIDER [ ]

Form 1. OBSERVATION CHECKLIST—CHILD (2 months - 5 years)

Circle the code for the answer which applies (e.g., if the answer is YES, circle 1: YES..(1) NO… **2**)

Date: ____/____/ 2007 Facility: Code: |___|___| Type: HC:…**1** D:… **2**

Child: Name_____ ID:|___|___| Birth date: _____/_____/_____ Age (months)|___|___|

Surveyor ID: |___|___| Health provider: Name _____ ID: |___| Sex: M…. **1** F…. **2**

Type: Doctor:… **1** Nurse:… **2** Years managing children: |___|___|

❖ **I1. Provider trained in IMCI?**

Yes:... **1** No:… **2** ➔ *Skip to question # A1*

If YES (trained in IMCI):

☞ **I2. When trained in IMCI?** |_0_|_0_||___|___||___|___|___|___|
Day || Month || Year

☞ **I2a. How long (days):** 12 days:... **1** 11 days:... **2** 10 days:... **3** 7 days:... **4**

☞ **I3. Followed up after IMCI training?**

Yes:… **1** No:… **2** ➔ *Skip to question # A1*

If YES (followed up):

☞ **I4. How many follow-up** (not supervisory) **visits after the IMCI training course?**

|___|___| visits

☞ **I5. How long after the training course the 1st follow-up visit?**

< 2 months:… **1** 2 or more months:… **2** Doesn't remember:… **8**

ASSESSMENT MODULE
(*Record what you hear or see, including what is recorded in the case recording form by the provider*)

➢ **WEIGHT**

A1. Does the provider, or another staff, weigh the child today?

Yes:... **1** No:… **2** ➔ *Skip to question # A4* Don't know:… **8** ➔ *Skip to question # A4*

If YES (weight taken):

☞ **A1a. Who has taken the weight?**

Doctor:…**1** Nurse:…**2** ➔ **A1at. Trained in IMCI?** Yes:… **1** No:… **2**

☞ **A1b. Is the weight taken correctly?**

Yes:… **1** No:… **2** Don't know:… **8**

☞ **A1c. Is the weight recorded?**

Yes:…**1** No:…**2** ***Record the weight, if taken correctly, on the enrolment form***

➢ **TEMPERATURE**

A4. Does the provider, or another staff, check the temperature of the child today (with thermometer)?

Yes:….**1** No:… **2** ➔ *Skip to* **Ω** Don't know:… **8** ➔ *Skip to* **Ω**

If YES (temperature taken):

☞ **A4a. Who has taken the temperature?**

Doctor:…**1** Nurse:…**2** ➔ **A4at. Trained in IMCI?** Yes:… **1** No:… **2**

☞ **A4b. Is the temperature taken correctly?**

Yes:… **1** No:… **2** Don't know:… **8**

Record the temperature, if taken correctly, on the enrolment form

Ω ➔ Starting time of examination of child by health provider: |___|___| hours |___|___| min

➢ **DANGER SIGNS**

A6. Does the provider ask whether the child is unable to drink or breastfeed?

Yes (or child breastfeeding now):… **1** No:… **2** ➔ *Skip to question # A7*

☞ **A6a.** *If YES:* **Does the mother answer that the child is unable to drink or breastfeed?**

Yes:… **1** No:… **2** ➔ *Skip to question # A7* Don't know:… **8** ➔ *Skip to question # A7*

☞ **A6b.** *If YES, mother reports child is unable to drink:* **Does the provider offer water to the child to check whether the child is unable to drink?**

Yes:… **1** No:… **2**

A7. Does the provider ask whether the child vomits everything?

Yes:… **1** No:… **2** ➔ *Skip to question # A8*

☞ **A7a.** *If YES:* **Does the mother answer that the child vomits everything?**

Yes:… **1** No:… **2** ➔ *Skip to question # A8* Don't know:… **8** ➔ *Skip to question # A8*

☞ **A7b.** *If YES, mother reports child vomits everything:* **Does the provider offer water to the child to check whether the child vomits everything?**

Yes:… **1** No:… **2**

A8. Does the provider ask whether the child has convulsions (related to this episode of illness)?

Yes (or child convulsing now):… **1** No:… **2**

A9. Does the child look sleepy, lethargic or unconscious?

Yes:… **1** No:… **2** ➔ *Skip to question # A11*

☞ **A10.** 🔔 *If YES, child looks sleepy:* **Does the provider check for lethargy or unconsciousness (try to wake up the child)?**

Yes:… **1** No:… **2**

A11. Does the provider ask for COUGH or DIFFICULT BREATHING?

Yes:… **1** No:… **2** ➔ *Skip to question # A12*

☞ **A11a.** 🔔 *If YES:* **Does the child have cough or difficult breathing?**

Yes:… **1** No:… **2** ➔ *Skip to question # A12* Don't know:... **8** ➔ *Skip to question # A12*

If YES, child has cough or difficult breathing:

☞ **A11b. Does the provider ask how long the child has been coughing?**

Yes:… **1** No:… **2**

☞ **A11c. Does the provider ask if anyone in the household has TB?**

Yes:… **1** No:… **2**

☞ **A11d. Does the provider lean towards the child with his/her ear?**

Yes:… **1** No:… **2**

☞ **A11e. Does the provider count the respiratory rate?**

Yes:… **1** No:… **2** ➔ *Skip to question # A12*

If YES, rate is counted:

☞ **A11f. Child calm before and during the count?**

Yes:… **1** No:… **2**

☞ **A11g. Count for a full minute?**

Yes:… **1** No:… **2**

☞ **A11i. Write the respiratory rate/min counted by the provider**:

|___|___|

A12. Does the provider ask for DIARRHOEA?

Yes:… **1** No:… **2** ➔ *Skip to question # A120*

☞ **A12a.** 🔔 *If YES:* **Does the child have diarrhoea?**

Yes:… **1** No:… **2** ➔ *Skip to question # A120* Don't know:… **8** ➔ *Skip to question #A120*

🔔 *If YES, child has diarrhoea:*

☞ **A12b. Does the provider ask for how long the child has been having diarrhoea?**

Yes:... **1** No:... **2**

☞ **A12c. Does the provider ask if there is blood in the stools?**

Yes:... **1** No:... **2**

☞ **A12d. Does the provider offer the child something to drink or observe** breastfeeding?

Yes:... **1** No:... **2**

☞ **A12e. Does the provider pinch the abdomen skin?**

Yes:... **1** No:... **2** ➔ *Skip to question # A120*

☞ **A12f.** 🔔 *If YES*: **Does the provider pinch the skin correctly?**

Yes:... **1** No:... **2**

☞ **A12g. Circle provider's conclusion on skin pinch going back:**

Fast:… **1** Slowly:… **2** Very slowly:… **3**

A120. Does the provider check the child's THROAT?

Yes:... **1** No:... **2**

A120a. Does the provider check the child's lymph-nodes on the front of the neck?

Yes:... **1** No:... **2**

A121. Does the provider ask if the child has an EAR PROBLEM?

Yes:... **1** No:... **2** ➔ *Skip to question # A13*

☞ **A121a.** 🔔 *If YES*: **Does the child have an ear problem?**

Yes:... **1** No:... **2** ➔ *Skip to question # A13* Don't know:... **8** ➔ *Skip to question # A13*

If YES, child has an ear problem:

☞ **A121b. Does the provider ask if the child has ear pain?**

Yes:... **1** No:... **2**

☞ **A121c. Does the provider ask if the child has ear discharge?**

Yes:... **1** No:... **2** ➔ *Skip to question # A121f*

☞ **A121d** 🔔 *If YES*: **Does the mother say the child has ear discharge?**

Yes:... **1** No:... **2** ➔ *Skip to question # A121f*

☞ **A121e.** 🔔 *If YES*: **Does the provider ask for how long (discharge)?**

Yes:... **1** No:... **2**

☞ **A121f. Does the provider look at both ears of the child?**

Yes:... **1** No:... **2**

☞ **A121g. Does the provider feel for swelling behind <u>both</u> ears of the child?**

Yes:... **1** No:... **2**

A13. Does the provider ask/feel for <u>FEVER</u> (or refer to temperature if taken previously)?

Yes:... **1** No:... **2** ➔ *Skip to question # A14*

☞ **A13a.** 🔔 *<u>If YES</u>*: **Does the child have fever (≥ 38.0^{0}C) or history of fever?**

Yes:... **1** No:... **2** ➔ *Skip to question # A14* Don't know:... **8** ➔ *Skip to question # A14*

🔔 *<u>If YES</u>, child <u>has</u> fever:*

☞ **A13b. Does the provider ask how long the child has been having fever for?**

Yes:... **1** No:... **2**

☞ **A13c. Does the provider ask if child had MEASLES within the last 3 months?**

Yes:... **1** No:... **2**

A14. Does the provider check for visible severe <u>WASTING</u>?

Yes:... **1** No:... **2** Don't know:… **8**

A15. Does the provider look for <u>PALMAR PALLOR</u>?

Yes:... **1** No:... **2** ➔ *Skip to question # A16*

☞ **A15a.** 🔔 *<u>If YES</u>*: **Does the provider look for palmar pallor correctly?**

Yes:... **1** No:... **2** Don't know:… **8**

☞ **A15b. Circle provider's conclusion on palmar pallor:**

No pallor:… **1** Some pallor:… **2** Severe pallor:… **3**

A16. Does the provider look for <u>OEDEMA</u> of <u>both</u> feet?

Yes:... **1** No:... **2** ➔ *Skip to question # A17* Don't know:… **8** ➔ *Skip to question # A17*

☞ **A16a.** 🔔 *<u>If YES</u>*: **Does the provider look for oedema of both feet correctly?**

Yes:... **1** No:... **2** Don't know:… **8**

A17. Does any provider check the child's <u>WEIGHT against a growth chart</u>?

Yes:... **1** No:... **2** ➔ *Skip to question # A18a* Don't know:... **8** ➔ *Skip to question # A18a*

☞ **A17a.** 🔔 *<u>If YES</u> (weight checked against the growth chart)*: **Who has checked the weight against a growth chart?**

Doctor:…**1** Nurse:…**2**

A18a. Does the provider ask for the child's <u>"carnet de la sante"</u>?

Yes:... **1** No:... **2** ➔ *Skip to question # A20*

☞ **A19. Does the caretaker have the child's "carnet de la sante"?**

Yes:... **1** No:... **2** ➔ *Skip to question # A20*

☞ **A19a. Does the provider check the child's "carnet de la sante"?**

Yes:... **1** ➔ *Skip to question # A21* No:... **2**

A20. *If caretaker does NOT have the "carnet de la sante" or health worker does not ask for or check it:*
Does the provider try to find out from the caretaker whether the child has ever received:

a.	An injection in the forearm against tuberculosis (BCG)? .... a.	Yes:... **1**	No:... **2**		
b.	Drops against polio? ..... b.	Yes:... **1**	No:... **2**		
c.	An injection against DPT (thigh)? ..... c.	Yes:... **1**	No:... **2**		
c1.	An injection against HB (thigh)? ..... c1.	Yes:... **1**	No:... **2**		
d.	An injection against meningitis (Hib)..... d.	Yes:... **1**	No:... **2**		
e.	A '9 months injection' against measles (arm)? ..... e.	Yes:... **1**	No:... **2**	NA:… **3**	
f.	An "18 months injection" against DPT (arm) ..... f.	Yes:... **1**	No:... **2**	NA:… **3**	
g.	Vitamin A blue/red capsule with nipple?..... g.	Yes:... **1**	No:... **2**	NA:… **3**	
h.	Vitamin D ..... h.	Yes:... **1**	No:... **2**	NA:… **3**	

A21. Does the provider ask whether the child is BREASTFED?

Yes:... **1** No:... **2** ➔ *Skip to question # A22* NA:... **3** ➔ *Skip to question # A22*
(child ≥ 24 months old)

☞ *If YES*: **A21a. Does the mother say child is breastfed?**

Yes:... **1** No:... **2** ➔ *Skip to question # A22*

If YES (child is breastfed):

☞ **A21b. Does the provider ask how many times child is breastfed in the 24 hours?**

Yes:... **1** No:... **2**

☞ **A21c.** Does the provider ask if there is any difficulty or problem in breastfeeding the child**?**

Yes:... **1** No:... **2** NA (caretaker is not the mother):… **3**

A22. Does the provider ask what FOODS/FLUIDS are given to the child?

Yes:... **1** No:... **2**

A22a. Does the provider ask how many times a day the mother gives food to the child?

Yes:... **1** No:... **2**

A22b. Does the provider ask about the amount given at each meal?

Yes:... **1** No:... **2**

A22c. Does the provider ask whether the child receives his/her own portion?

Yes:... **1** No:... **2**

A22d. Does the provider ask whether the child finishes his/her portion?

Yes:... **1** No:... **2**

A22e. Does the provider ask who feeds the child?

Yes:... **1** No:... **2**

A23. Does the provider ask whether child FEEDING CHANGED DURING ILLNESS?

Yes:... **1** No:... **2**

A23a. Who has asked these questions on feeding? *(Circle all that apply)*

Doctor:…**1** Nurse:…**2**

A23at. Trained in IMCI?

Yes:… **1** No:… **2**

A24. Does the provider ask whether the child has "OTHER PROBLEMS"?

Yes:... **1** No:... **2**

CLASSIFICATION MODULE

Circle all the classifications given by the provider and by you to the child: if the provider does not say anything spontaneously, probe by asking what his/her conclusions are about the child.

*Classifications given by **provider***

	YES	NO
C05. Very severe disease	1	2
C10. Severe pneumonia	1	2
C11. Pneumonia	1	2
C12. No pneumonia (cough or cold)	1	2
C13. Wheezing	1	2
C14. Classification held (see T2)	1	2
C20a. Severe dehydration	1	2
C20b. Some dehydration	1	2
C20c. No dehydration	1	2
C21. Severe persistent diarrhoea	1	2
C22. Persistent diarrhoea	1	2
C23. Dysentery	1	2
C24. Streptococcal sore throat	1	2
C25. No streptococcal sore throat	1	2
C40. Mastoiditis	1	2
C41. Acute ear infection	1	2
C42. Chronic ear infection	1	2
C43. No ear infection	1	2
C30. Very severe febrile disease	1	2
C31. Fever- possible bacterial infection	1	2
C32. Fever- bacterial infection unlikely	1	2
C35. Measles with complications	1	2
C36. Measles	1	2
C50a. Severe malnutrition	1	2
C51a. Low weight	1	2
C52a. Not low weight	1	2
C50b. Severe anaemia	1	2
C51b. Anaemia	1	2
C52.b No anaemia	1	2
C63. Feeding problems	1	2
C60. Other: **Eye infection**	1	2
C61. Other: **Skin problem:** _____	1	2
C62. Other (specify) _____	1	2

NOTE: IF CHILD HAS AN EYE PROBLEM, CIRCLE 1 IN C60.
IF CHILD HAS A SKIN PROBLEM, CIRCLE 1 IN C61 AND SPECIFY.
IF CHILD HAS OTHER PROBLEMS, CIRCLE 1 IN C62 AND SPECIFY

*Classifications given by **surveyor***

Based on the re-examination of the child (Form 3) tick surveyor classifications:

	YES	NO
105. Very severe disease	1	2
110. Severe pneumonia	1	2
111. Pneumonia	1	2
112. No pneumonia (cough or cold)	1	2
113. Wheezing	1	2
120a. Severe dehydration	1	2
120b. Some dehydration	1	2
120c. No dehydration	1	2
121. Severe persistent diarrhoea	1	2
122. Persistent diarrhoea	1	2
123. Dysentery	1	2
124. Streptococcal sore throat	1	2
125. No streptococcal sore throat	1	2
140. Mastoiditis	1	2
141. Acute ear infection	1	2
142. Chronic ear infection	1	2
143. No ear infection	1	2
130. Very severe febrile disease	1	2
131. Fever- possible bacterial infection	1	2
132. Fever- bacterial infection unlikely	1	2
135. Measles with complications	1	2
136. Measles	1	2
150. a Severe malnutrition	1	2
151. a Low weight	1	2
152. a Not low weight	1	2
150. b Severe anaemia	1	2
151. b Anaemia	1	2
152. b No anaemia	1	2
163. Feeding problems	1	2
*160. Other: **Eye infection***	1	2
*161. Other: **Skin problem:** _____*	1	2
162. Other (specify) _____	1	2
164. Child needs urgent referral?	1	2
164a. Child to be under observation at facility?	1	2
165. Follow-up visit required in ____days [if not required, enter 0]		
166. Any non-IMCI reason for antibiotics? (e.g. skin infection, urinary tract infection, etc.)	1	2

TREATMENT MODULE

T0. Does the provider advise immediate referral for the child?

Yes:... **1** No:... **2** ➔ *Skip to question # T1*

If YES (health worker advises immediate referral):

☞ **T0a. Does the provider explain to the caretaker the reasons for referral?**

Yes:... **1** No:... **2**

☞ **T0b. Does the caretaker accept referral for the child?**

Yes:… **1** No:... **2**

☞ **T0c. Does the provider complete a referral note?**

Yes:… **1** No:... **2**

T1. Does the provider administer or prescribe injection(s)?

Yes:... **1** No:... **2**

Supervisor *Correct as pre-referral Tx?*	
YES	NO
1 T1a1	**2**

T2. Does the provider administer a rapid-acting bronchodilator?

Yes:... **1** No:... **2**

T3. Does the provider prescribe or give ORS sachets to take home?

Yes:... **1** No:... **2** ➔ *Skip to question # T4*

If YES (health worker prescribes/gives ORS to take home):

o ***Does the provider explain:***

☞ **T3a. How much water to mix with 1 ORS sachet?**

Yes:... **1** *If Yes*, ***Amount*****:** _____ No:... **2**

☞ **T3b. When ORS should be given to the child during the day?**

Yes:... **1** *If Yes*, ***When:*** _____ No:... **2**

☞ **T3c. How much ORS should be given to the child each time?**

Yes:... **1** *If Yes*, ***How much:*** _____ No:... **2**

Supervisor *Correct?*	
YES	NO
1 T3a1	**2**
1 T3b1	**2**
1 T3c1	**2**

☞ **T4. Does the provider actually administer ORS solution to the child at the facility?**

Yes:... **1** No:... **2**

T6. Does the provider administer or prescribe oral treatment?

Yes:... **1** No:... **2** ➔ *Skip to question # T12 if child not referred or caretaker refuses referral. If child referred and caretaker accepts referral, skip to question # CM12 at the end of the questionnaire.*

☞ **T7.** *IF YES:* **Record all oral treatment given***:*

a. Antidiarrheal/antimotility	a.	Yes:... **1**	No:... **2**	a.
a1. Cough/cold medicine	a1.	Yes:... **1**	No:... **2**	a1.
b. Metronidazole tablet/syrup	b.	Yes:... **1**	No:... **2**	b.
e. Paracetamol/acetylsalicylic acid	e.	Yes:... **1**	No:... **2**	e.
f. Recommended* **antibiotic** tablets/syrup (*: amoxycillin, cotrimoxazole, erythromycin, pen. V)	f.	Yes:... **1**	No:... **2**	**f.**
g. Other **antibiotic** tablet/syrup	g.	Yes:... **1**	No:... **2**	g.
g1. Salbutamol tablet/syrup	g1.	Yes:... **1**	No:... **2**	g1.
g2. Terbutaline tablet/syrup	g2.	Yes:... **1**	No:... **2**	g2.
h. Vitamin A	h.	Yes:... **1**	No:... **2**	h.
i. Multi-vitamins	i.	Yes:... **1**	No:... **2**	i.
k. Mebendazole	k.	Yes:... **1**	No:... **2**	k.
l. Iron tablet/syrup	l.	Yes:... **1**	No:... **2**	l.
n. Others Yes:... **1** – n1. *specify:* _____			No:... **2**	n.

ⓘ ***If the health worker has referred the child urgently and the mother has accepted referral (T0b=Yes), go to question CM12 at the end of the form. If an oral antibiotic recommended by IMCI has been given (T7f=Yes), go to next question. In the other cases, go to question T12.***

☞ ***T8.*** *If an oral antibiotic recommended by IMCI is given,* ***record what the provider says:***

	Supervisor *Correct for this IMCI condition?* YES		NO
a. Name: _____	**1**	T8a1	**2**
b. Formulation: _____			
c. Amount each time: _____	**1**	T8c1	**2**
d. Number of times per day: _____	**1**	T8d1	**2**
e. Total days: _____	**1**	T8e1	**2**

T12. Is any of the following medicines given or prescribed by the provider?

a. Salbutamol inhaler	a.	Yes:... **1**	No:... **2**
c. Tetracycline eye ointment	c.	Yes:... **1**	No:... **2**

FORM 1: SUPERVISOR CODING

	Information needed	Where to find data	Codes		
B	If oral "IMCI" antibiotics were prescribed for an IMCI condition, were they prescribed correctly?	YES in T7f *and* YES in T8c1, d1 and e1	Yes **1**	No **2**	NA **3** *(no antibiotic)*
D	If the child was referred urgently (whatever the reason), did the child receive an appropriate pre-referral treatment?	YES in T0 *and* - if needing antibiotics: YES in T1a1 *or* YES in T7f - if severely dehydrated: YES in T4	Yes **1**	No **2**	NA **3** *(child not referred)*

NA = NOT APPLICABLE

COMMUNICATION MODULE

In some settings, tasks are shared and the drug dispenser counsels the caretaker on the treatment given and also administers the first dose. The child should then be followed to the drug dispenser to complete the observation.

- *If NO ORS (T3=No) and no oral Ab (T7f=No) is prescribed or given, skip to question # CM5.*

CM1. Does the provider explain how to administer oral treatment?

a. Antibiotic ..... a. Yes:... **1** No:... **2** NA (No antibiotic):…**3**

c. ORS ..... c. Yes:... **1** No:... **2** NA (No ORS):…**3**

CM2. Does the provider demonstrate how to administer the oral treatment?

a. Antibiotic ..... a. Yes:... **1** No:... **2** NA (No antibiotic):…**3**

c. ORS ..... c. Yes:... **1** No:... **2** NA (No ORS):…**3**

CM3. Does the provider ask an open-ended question to check if the caretaker understands how to administer the oral treatment?

a. Antibiotic ..... a. Yes:... **1** No:... **2** NA (No antibiotic):…**3**

c. ORS ..... c. Yes:... **1** No:... **2** NA (No ORS):…**3**

CM4. Does the provider give or ask the mother to give the first dose of the oral drug at the facility?

a. Antibiotic ..... a. Yes:... **1** No:... **2** NA (No antibiotic):…**3**

CM5. Does the provider advise when to return for a ('definite') follow-up visit?

Yes:... **1** No:... **2** ➔ *Skip to question # CM7*

☞ *If YES:* **CM5a. Does the provider explain the reasons f**or returning for a ('definite') follow-up visit**?**

Yes:... **1** No:... **2**

☞ **CM6. In how many days does the provider advise the caretaker to come back?**

|___|___| days

CM7. Does the provider advise to give more to drink (liquid or breastmilk) at home?

Yes:... **1** No:... **2**

CM8. Does the provider advise to continue feeding or breastfeeding at home?

Yes:... **1** No:... **2**

CM9. Does the provider advise how often (no. of times) **to feed and/or breastfeed the child?**

Yes:... **1** No:... **2** ➔ *Skip to question # CM10* NA:... **3** ➔ *Skip to question #CM10*

If YES (health worker advises how many times to feed and/or breastfeed the child):

☞ **CM9a. How many times/24 hours did the provider advise to feed the child?**

|___|___| times per 24 hours *(Write* 00 *if nothing is mentioned about food and 77 if advice is "as much as the child wants")*

☞ **CM9b. How many times/24 hours did the provider advise to breastfeed the child?**

|___|___| times per 24 hours *(Write* 00 *if nothing is mentioned about breastfeeding, 77 if advice is "as much as the child wants" and 88 if not applicable)*

☞ **CM9c. Who has provided this advice on feeding and/or breastfeeding?**

Doctor:…**1** Nurse:… **2** → **CM9ct. Trained in IMCI?** Yes:… **1** No:… **2**

CM10. Does the provider tell the caretaker to bring the child back immediately for the following signs?
Circle all that apply (NA=not applicable)

a. Child is not able to drink or breastfeed ... a. Yes:... **1** No:... **2**
b. Child becomes sicker ..... b. Yes:... **1** No:... **2**
c. Child develops a fever ..... c. Yes:... **1** No:... **2** NA:… **3** (child has fever)
d. Child develops fast breathing ..... d. Yes:... **1** No:... **2** NA:… **3** (child has no cough/fast b)
e. Child develops difficult breathing ..... e. Yes:... **1** No:... **2** NA:… **3** (child has no cough/diff. b)
e1. Child develops wheezing ..... e1 Yes:... **1** No:... **2** NA:… **3** (child has no cough/whee)
f. Child develops blood in the stool ..... f. Yes:... **1** No:... **2** NA:… **3** (child has no diarrhoea)
g. Child drinks poorly ..... g. Yes:... **1** No:... **2** NA:… **3** (child has no diarrhoea)
h. Other ..... Yes:... **1** (CM10hs.*Specify* _____) No:... **2**

CM11a. Does the provider use the "mother card" to advise the caretaker on child care?

Yes:... **1** No:... **2** → *Skip to question # CM11d*

IF YES, mother card used:

☞ **CM11b. Does the provider hold the card so that the caretaker sees the pictures easily?**

Yes:... **1** No:... **2**

☞ **CM11c. Does the provider point at the pictures on the card while counselling the** caretaker**?**

Yes:... **1** No:... **2**

CM11d. Does the provider ask open-ended questions to check if the caretaker understands how to care for the child at home (fluids, feeding, signs to watch out…)?

Yes:... **1** No:... **2**

CM11. Does the provider ask at least one question about the mother's health (ask about her own health, access to family planning or vaccination status)?

Yes:... **1** No:... **2** NA:… **3** (Not Applicable if caretaker is not the child's mother)

CM12. Did the provider use the IMCI chart booklet at any time during the management of the child?

Yes:... **1** No:... **2** Don't know:… **8**

Ω → Ending time of exam: |___|___| hours |___|___| min → Time taken for exam: |___|___| minutes

ⓘ **NOW: CHECK THE FORM AND MAKE SURE IT IS COMPLETE!**
END OF OBSERVATION**:** review the form before observing the case management of next child
SUPERVISOR: Complete coding for Form 1 (drug treatment)

Form 2: EXIT INTERVIEW—CARETAKER OF CHILD (2 months-5 years)

[If the caretaker has more than a sick child enrolled in the survey, complete separate exit interview forms for each child. Copy questions 1, 2, 21, 22, 24 and 25 for all children and conduct a new interview with the caretaker for all remaining questions for each child.]

Date: ____/____/ 2007 Province: _____ Residence: Urban:…**1** Rural:… **2**

Facility: Code: |___|___| Name: _____ Type: HC:… **1** D:… **2**

Child: Name_____ ID: |___|___|

Birth date: _____/_____/_____ Age (months): |___|___| Sex: M:… **1** F:… **2**

Surveyor ID: |___|___|

Caretaker: Sex: M:… **1** F:… **2** Education: None… **1** Primary… **2** Secondary… **3** Higher… **4**

Relationship to child: Mother… **1** Father… **2** Other relative… **3** Other… **4** _____
(e.g.: neighbour)

---

1. Overall, how satisfied are you with the care and services provided to children in this facility: Are you "Very satisfied", "Satisfied", "A little Unsatisfied" or "Very Unsatisfied"?

Very satisfied… 1 Satisfied… 2 Little Unsatisfied… 3 Very unsatisfied… 4 Don't know… 8 ➔ *Skip to question # 3*

2. Why? *Tick all reasons that apply. Do not prompt (do not read options).*

	Yes	No	Don't know	
a. Time health worker spent with child.....a.	**1**	**2**	**8**	a.
b. I was (or was not) given a chance to ask questions .....b.	**1**	**2**	**8**	b.
c. Way the health worker examined the child .....c.	**1**	**2**	**8**	c.
d. Treatment / care provided (or not provided) .....d.	**1**	**2**	**8**	d.
e. What I learnt (or did not learn) from the health worker ...e.	**1**	**2**	**8**	e.
f. Health worker attitude towards me and child.....f.	**1**	**2**	**8**	f.
g. Health provider usually available (or absent).....g.	**1**	**2**	**8**	g.
h. Availability of drugs.....h.	**1**	**2**	**8**	h.
i. Waiting time.....i.	**1**	**2**	**8**	i.
j. Way services are arranged.....j.	**1**	**2**	**8**	j.
k. Cost (affordable or not affordable).....k.	**1**	**2**	**8**	k.
n. Other: Yes... **1** *If Yes*, specify: _____		**2**		n.

3. Did the health worker give you or prescribe any <u>oral</u> medicines for <CHILD's NAME> at the health facility today?

Yes... **1** No... **2** ➔ *Skip to question # 16* Don't know... **8** ➔ *Skip to question # 16*

If YES, ask the caretaker to show you the prescription or the medicines. Look at the prescription or the actual medicines and record:

☛ **4. ► <u>Oral antibiotics included?</u>**

Yes... **1** No... **2** ➔ *Skip to question # 16*

☛ **4x.** If YES (oral antibiotic included): **Is it an antibiotic recommended by IMCI?**

Yes... **1** No... **2** ➔ *Skip to question # 16*

If YES, record name and formulation of the antibiotic:

☞ **4a. Name:** _____

☞ **4b. Formulation**: _____

Then ask the caretaker the following questions about the antibiotic (record only what the caretaker says, not what is written on the prescription. Write DK if she/he does not know):

		Supervisor *Correct?* YES	NO
☞ **5. How much of this medicine will you give to <NAME> each time?** _____	5S	**1**	**2**
☞ **6. How many times will you give it to <NAME> each day?** |___|___| times	6S	**1**	**2**
☞ **7. For how many days will you give it to <NAME> ?** |___|___| days	7S	**1**	**2**

☞ **7o. If <NAME> gets better before then, what will you do with the medicine?** *(Tick only 1 answer)*

a. Will stop the medicine.....a… **1**
b. Will continue the medicine, but will reduce the dose ..b... **2**
c. Will continue the medicine as prescribed .....c... **3**
d. Other.....d… **4**
(*Specify*:_____)
e. Don' t know.....e… **8**

☞ **7y. Did you get the antibiotic for your child from this health facility today?**

Yes... **1** No... **2** Don't know... **8**

16. ► **Find out from caretaker and/or prescription whether ORS prescribed or given:**

Yes... **1** (ORS prescribed or given) No... **2** ➔ *Skip to question # 19a* (no ORS prescribed or given)

If YES (ORS prescribed or given), ask:

		Supervisor *Correct?* YES	NO
☞ **17. How much water will you mix with one ORS packet?** _____	17S	**1**	**2**
☞ **18. When will you give ORS to <NAME> each day?** _____	18S	**1**	**2**
☞ **19. How much ORS will you give to <NAME> each time?** _____	19S	**1**	**2**

Now that <NAME> is unwell:

19a. Will you give him/her *more, about the same* or *less* fluids - including breastmilk - to drink?

More... **1** About the same... **2** Less… **3** Don't know... **8**

19b. And will you give him/her *more, about the same* or *less* food - including breastmilk -?

More... **1** About the same... **2** Less… **3** Don't know... **8**

IS THIS CHILD LESS THAN 24 MONTHS OLD?

Yes... **1** No... **2** ➔ *Skip to question # 19d*

☞ **19c. How many <u>times</u>/24 hours did the health worker advise you to breastfeed <NAME>?**

(Tick only 1 answer)

8 times or more..... **1**
As much as the child wants..... **2**
Less than 8 times **3**
Other..... **4** (*Specify*: _____)
Did not tell me *or* don't know *or* child not breastfed..... **8**

19d. How many times/24 hours did health worker advise you to feed <NAME>? |___|___| times
(*Enter*: 77 *if caretaker says "as much as the child wants"*, 88 *if caretaker says she does not know, she was not told or the child is exclusively breastfed*)

20. Did the health worker tell you to bring <NAME> back to this facility on a specific day?

Yes... **1** No... **2** ➔ *Skip to question # 21* Don't know... **8** ➔ *Skip to question # 21*

☞ **20a.** *<u>If YES:</u>* **In how many days should you bring <NAME> back?** |__|__| days

21. Sometimes children who are sick should be taken right away to a health facility: What symptoms would worry you most that would make you take your child to a health facility right away? *Do <u>not</u> prompt – Circle all that is mentioned. Ask up to 2 times for more signs/symptoms*

		Mentioned	Not mentioned	Don't know	
a. Child not able to drink or breastfeed.....	a	**1**	**2**	**8**	a
b. Child becomes sicker	b	**1**	**2**	**8**	b
c. Child develops a fever	c	**1**	**2**	**8**	c
d. Child has fast breathing.....	d	**1**	**2**	**8**	d
e. Child has difficult breathing/pneumonia....	e	**1**	**2**	**8**	e
e1. Child develops wheezing.....	e1.	**1**	**2**	**8**	e1
f. Child has blood in the stools.....	f	**1**	**2**	**8**	f
g. Child is drinking poorly	g	**1**	**2**	**8**	g
h. Child has convulsions.....	h	**1**	**2**	**8**	h
i. Other: Yes... **1** (specify:_____)			**2**		i
j. Other: Yes... **1** (specify:_____)			**2**		j

IS THIS CARETAKER THE MOTHER OF THE CHILD?

Yes... **1** No... **2** ➔ *Skip to question # 23*

☞ **22.** *<u>If YES:</u>* **Were you ever given an injection in the arm to prevent the baby from getting tetanus?**

Yes... **1** No... **2** ➔ *Skip to question # 23* Don't know... **8** ➔ *Skip to question # 23*

<u>If YES</u> (injection received)*:*

☞ **22a. How many injections did you receive?** |___|___| injections

☞ **22b. When did you receive the last injection?** Year: |___|___|___|___|

23. Did you receive or were you shown this card today? *Show mother's IMCI counselling card*

Yes... **1** No... **2** Don't know... **8**

24. How long did it take you to reach this facility from your place today? |___|___|___| minutes

25. How much did you spend for transport for you and your child to come to this facility from your place today? *(enter 0 if nothing paid)*.....|___|___|___|___|___|MAD→ *If 0, go to q. # 29*

28. Has anyone shared in these costs?

Yes... **1** No... **2** ➔ *Skip to question # 28c* Don't know... **8** ➔ *Skip to question # 28c*

☞ **28a.** *If YES:* **Who is it?** *(choose only one category)*

a. Relative…**1** b. Friend/neighbour… **2** c. Other… **3**

☞ **28b. How much did he/she share?** |___|___|___|___|___|MAD

28c. Did you pay from your regular income?

Yes... **1** No... **2** Don't know... **8**

29. Is <NAME> covered by health insurance?

Yes... **1** No... **2** Don't know... **8**

30. What would you suggest to improve child health services in this facility? *Tick all reasons that apply. Do not prompt (do not read options).*

a. More time to examine the child.....a. Yes... **1** No... **2**
b. More opportunities to ask questions.....b. Yes... **1** No... **2**
c. Better, complete examination of the child.....c. Yes... **1** No... **2**
d. Better treatment, services provided.....d. Yes... **1** No... **2**
e. More advice and explanations.....e. Yes... **1** No... **2**
f. Better reception .....f. Yes... **1** No... **2**
g. Health provider availability after office hours/week-end .g. Yes... **1** No... **2**
h. Availability of drugs / free drugs at facility.....h. Yes... **1** No... **2**
i. Less waiting time .....i. Yes... **1** No... **2**
j. Better organization of services .....j. Yes... **1** No... **2**
l. Less cost (for drugs, transport…) .....l. Yes... **1** No... **2**
m. Don't know.....m. Yes... **1** No... **2**
n. Other: Yes... **1** *If Yes*, specify: _____ No... **2**

ⓘ NOW: CHECK THE FORM AND MAKE SURE IT IS COMPLETE!

END OF EXIT INTERVIEW

Thank the caretaker for answering your questions and ask if he/she has any questions. Be sure that the caretaker knows how to prepare ORS for a child with diarrhoea, when to return for vaccination, how to give the prescribed medications, and when to return if the child becomes worse at home.

SUPERVISOR: Complete coding for Form 2 (oral drugs and ORS)

FORM 3: RE-EXAMINATION

Date: ____/____/ 2007 Surveyor ID: |___|___| **Questionnaire:** |___|___‖___|___|

Province: _____ FACILITY: Name: _____ Code: |___|___| Type: HC… **1** D:… **2** HF code‖ Child ID

CHILD: Name: _____ ID: |___|___| Age: |___|___| Sex: M… **1** F… **2** Weight: |___|___|.|___|Kg Rectal temperature: |___|___|.|___|^{0}C

Visit: Initial… **1** Follow-up… **2** ASK: What are the child's problems? _____

ASSESS (circle all signs present)	YES	NO	**CLASSIFY** (Circle all relevant answers)	YES	NO
1. GENERAL DANGER SIGNS • NOT ABLE TO DRINK OR BREASTFEED • VOMITS EVERYTHING • HISTORY OF CONVULSIONS DURING CURRENT ILLNESS • LETHARGIC OR UNCONSCIOUS • CONVULSIONS NOW	**1**	**2**	105. VERY SEVERE DISEASE	**1**	**2**
2. DOES THE CHILD HAVE COUGH OR DIFFICULT BREATHING? For how long? |___|___| days **3. Count the breaths in one minute: |___|___|___| breaths per minute. Fast breathing?** ▪ Recent TB contact? ▪ Look for chest indrawing . Look and listen for stridor	**1**	**2**	110. SEVERE PNEUMONIA 111 PNEUMONIA 112 NO PNEUMONIA (Cough or cold)	**1** **1** **1**	**2** **2** **2**
4. ▪ Look and listen for wheezing → → →			113. WHEEZING	**1**	**2**
5. DOES THE CHILD HAVE DIARRHOEA? o For how long? |___|___| days o Is there blood in the stool? ▪ Look at the child's general condition. Is the child: Lethargic or unconscious? Restless and irritable? ▪ Look for sunken eyes ▪ Offer the child fluid. Is the child: Not able to drink or drinking poorly? Drinking eagerly, thirsty? ▪ Pinch the skin of the abdomen. Does it go back: **5a.** Fast… **1** Slowly:… **2** Very slowly (longer than 2 seconds):… **3**	**1**	**2**	120 a. SEVERE DEHYDRATION 120 b. SOME DEHYDRATION 120 c. NO DEHYDRATION 121. SEVERE PERSISTENT DIARRHOEA 122. PERSISTENT DIARRHOEA 123. DYSENTERY	**1** **1** **1** **1** **1** **1**	**2** **2** **2** **2** **2** **2**
CHECK FOR THROAT PROBLEM • Does the child have fever? (by history or feels hot or rectal temperature 38.0°C or above) • Does the child have sore throat? • Look for red (congested) throat • Look for white or yellow exudate on the throat and tonsils • Feel enlarged tender lymph node on the front of the neck			124. STREPTOCOCCAL SORE THROAT 125. NO STREPTOCOCCAL SORE THROAT	**1** **1**	**2** **2**
6. DOES THE CHILD HAVE AN EAR PROBLEM? o Is there ear pain? o Is there ear discharge? If Yes, for how long? ____ days ▪ Look for pus draining from the ear ▪ Feel for tender swelling behind the ear	**1**	**2**	140. MASTOIDITIS 141. ACUTE EAR INFECTION 142. CHRONIC EAR INFECTION 143. NO EAR INFECTION	**1** **1** **1** **1**	2 2 2 2
7. DOES THE CHILD HAVE FEVER? (by history/feels hot/rectal temperature 38.0^{0}C or above) o For how long? ___ days o If more than 5 days, has fever been present every day? o Recent TB contact? o Has child had measles within the last 3 months? ▪ Feel for bulging fontanelle ▪ Look or feel for stiff neck ▪ Look for runny nose Look for signs of MEASLES: ▪ Generalised rash and ▪ One of these: cough, runny nose, or red eyes	**1**	**2**	130. VERY SEVERE FEBRILE DISEASE 131. FEVER- POSSIBLE BACTERIAL INFECTION 132. FEVER- BACTERIAL INFECTION UNLIKELY	**1** **1** **1**	**2** **2** **2**
If the child has measles now or within the last 3 months ▪ Look for mouth ulcers ▪ Look for pus draining from the eye **7a. MEASLES?**	**1**	**2**	135. MEASLES WITH COMPLICATIONS 136. MEASLES	**1** **1**	**2** **2**

FORM 3: RE-EXAMINATION

Questionnaire: |___|___‖___|___|
HF code ‖ Child ID

ASSESS (circle all signs present) | **CLASSIFY** (Circle all relevant answers) **YES NO**

CHECK FOR MALNUTRITION AND ANAEMIA

- Look for visible severe wasting
- Look for oedema of both feet
- Determine weight for age Low ___ Normal ___
- Look for palmar pallor: child has

8. No pallor:... **1** Some palmar pallor:... **2** Severe palmar pallor:.. **3**

150 a. SEVERE MALNUTRITION **1** **2**
151 a. LOW WEIGHT **1** **2**
152 a. NOT LOW WEIGHT **1** **2**
150 b. SEVERE ANAEMIA **1** **2**
151 b. ANAEMIA **1** **2**
152 b. NO ANAEMIA **1** **2**

CHECK THE CHILD'S IMMUNISATION STATUS Circle immunisations and vitamin A and D needed today

Birth	*6 weeks*	*10 weeks*	*14 weeks*	*9 months*				
BCG	**DPT1**	**DPT2**	**DPT3**	**Measles**	**Vitamin A:**	**1st dose**	**2nd dose**	**3rd dose**
OPV0	**OPV1**	**OPV2**	**OPV3**		**Vitamin D:**	**1st dose**	**2nd dose**	
HB1	**HB2**			**HB3**				
	Hib 1	**Hib 2**	**Hib 3**					

ASSESS CHILD'S FEEDING if child has ANAEMIA or LOW WEIGHT or PERSISTENT DIARRHOEA or is less than 2 years old

9. IS <NAME> BREASTFED? ..... Yes... **1** No... **2**

If YES: **HOW MANY TIMES IN 24 HOURS?** |___|___| Do you breastfeed during the night? ..... Yes No

IS NUMBER OF TIMES OF BREASTFEEDING AS RECOMMENDED? ..... Yes No

DOES THE CHILD TAKE ANY OTHER FOOD OR FLUIDS? ..... Yes No

If Yes, what food or fluids? _____

IS THIS TYPE OF FOOD APPROPRIATE? ..... Yes No

HOW MANY TIMES PER DAY? |___|___| times.

IS NUMBER OF TIMES OF FEEDING AS RECOMMENDED? ..... Yes No

What do you use to feed the child? _____

If low weight for age: How large are servings? _____

Does the child receive his own serving? ... Yes ___ No ___ Who feeds the child and how? _____

During this illness, has the child's feeding changed? ... Yes No If Yes, how?

163. ANY FEEDING PROBLEMS? **1** **2**
a. No. of times child breastfed insufficient/not on demand ... **1** **2**
b. Food or fluids given before age 6 months **1** **2**
c. Insufficient no. of meals / day **1** **2**
d. Inadequate amount of food given **1** **2**
e. Food not varied / thick / not enriched w/ oil etc. **1** **2**
f. No individual portion **1** **2**
g. No active feeding **1** **2**
h. Use of teat or bottle-feeding **1** **2**
i. Reduced feeding during illness **1** **2**
j. Other (specify_____) **1** **2**

15. ASSESS OTHER PROBLEMS: ANY OTHER PROBLEMS? ..... Yes... **1** No... **2**

160. **EYE INFECTION** (OTHER PROBLEM 1) **1** **2**
161. **SKIN PROBLEM** (OTHER PROBLEM 2) **1** **2**
162. OTHER PROBLEM (Sp.:_____) ... **1** **2**

164. **DOES CHILD NEED URGENT REFERRAL?** ..... Yes... **1** No... **2**

164a. **DOES CHILD NEED TO BE UNDER OBSERVATION AT THE FACILITY?** ..... Yes... **1** No... **2**

165. **RETURN FOR DEFINITE FOLLOW-UP IN:** ..... |___|___| days → *Enter* 00 *if no follow-up is needed*

166. **ANY NON-IMCI REASON FOR ANTIBIOTICS?** ..... Yes... **1** No... **2**

16. ► Record if the child needs Vitamin A today:

Yes… **1** (Vitamin A needed) | No… **2** (not needed) ➔ *If NO or DON'T KNOW, skip to question # 19* | Don't know… **8**

☞ **17.** *IF YES, ASK THE CARETAKER*:

Has <NAME> been given vitamin A drops from a capsule like this today? (Show the mother a capsule of vitamin A as per child age)

Yes… **1** ➔ *Skip to question # 19* | No… **2** | Don't know… **8**

☞ **18.** *IF NO or Don't know*: **Has the health worker told you to bring back <NAME> to receive vitamin A on another day?**

Yes… **1** | No… **2** | Don't know… **8**

19. ► Record if child's "carnet de la sante" or vaccination record is available:

Yes… **1** (available) | No… **2** (not available)

20. ► Record if child needs to receive any immunisation today:

Yes… **1** (immunisation needed) | No… **2** ➔ *STOP HERE* (not needed) *If NO or DON'T KNOW, STOP HERE* | Don't know… **8** ➔ *STOP HERE*

IF YES (immunization needed today), ASK THE CARETAKER:

☞ **21. Did <NAME> receive a vaccination today or has the health worker referred <NAME> to the immunisation room?**

Yes… **1** ➔ *STOP HERE* (vaccination received or child referred to immunisation room) | No… **2** (vaccination not given and child not referred) | Don't know… **8**

☞ **22.** *IF NO or Don't know*: **Has the health worker told you to bring back <NAME> on another day or to take him/her to another place to receive a vaccination?**

Yes… **1** | No… **2**

ⓘ SUPERVISOR: COPY CLASSIFICATIONS IN APPROPRIATE BOX ON FORM 1, PAGE 8

Form 4. EQUIPMENT AND SUPPLY CHECKLIST

Date: ____/____/ 2007 Province: _____ Residence: Urban:…**1** Rural:… **2**

Facility: Code |___|___| Name _____ Type: HC:... **1** D:... **2**

Team: |_____|

Discuss with the head of facility to determine the number of health providers who usually manage children:

Table 1: Profile of health providers with case management responsibilities

Category	**No. managing children**	**No. managing children trained in IMCI**	**No. trained in IMCI present today**
Doctor			
Nurse			
Total			

Ask a health provider to show you around the facility. Look and <u>physically check</u> items to complete the following questions. These questions are for you to answer, based on what you see and find.

EQUIPMENT AND SUPPLIES MODULE

E1. Does the facility have the following equipment and materials?

a. Accessible and working adult scale ..... a. Yes:... **1** No:... **2**
b. Accessible and working baby scale ..... b. Yes:... **1** No:... **2**
c. Working watch or timing device ..... c. Yes:... **1** No:... **2**
d. Supplies to mix ORS, cups and spoons ..... d. Yes:... **1** No:... **2**
e. Space deviser for bronchodilator ..... e. Yes:... **1** No:... **2**
f. Thermometer ..... f. Yes:... **1** No:... **2**
g. Stock cards/drug logbook ..... g. Yes:... **1** No:... **2**
h. Vaccination register/logbook ..... h. Yes:... **1** No:... **2**
i. Integrated child health register ..... i. Yes:... **1** No:... **2**
j. Mothers' IMCI counselling cards for use by health worker .... j. Yes:... **1** No:... **2**
k. IMCI chart booklet ..... k. Yes:... **1** No:... **2**
l. IMCI recording forms ..... l. Yes:... **1** No:... **2**
m. IMCI daily register / logbook ..... m. Yes:... **1** No:... **2**
n. IMCI monthly report ..... n. Yes:... **1** No:... **2**
o. IMCI referral form ..... o. Yes:... **1** No:... **2**
p. Source of heating ..... p. Yes:... **1** No:... **2**
q. Improved source of water (hand-pump, tap water, deep well) ..... q. Yes:... **1** No:... **2**
r. Accessible* means of transportation for patients requiring referral . r. Yes:... **1** No:... **2**

**Accessible here refers to transportation that is <u>both</u> physically accessible (e.g., distance) and economically accessible (= affordable) daily to most people living in the catchment area of this facility during the clinic hours.*

E1z. Does the facility provide immunisation services?

Yes:... **1** No:... **2** ➔ *Skip to Availability of Drugs Module, question # D1*

E2. Does the facility have disposable needles and syringes appropriate for vaccinations?

Yes:... **1** No:... **2** ➔ *Skip to question # E3*

☞ **E2a.** 🔔 *IF YES* (appropriate needles/syringes): **How do health workers use these needles?**

Single use:… **1** Multiple uses:… **2** ➔ *Skip to question # E3*

☞ **E2b.** If single (disposable) use: **Does the facility have the safety box to dispose of them?**

Yes:... **1** No:... **2**

E3. Does the facility have a functional sterilizer, cooker or stove?

Yes:... **1** No:... **2** ➔ *Skip to question # E4a*

☞ **E3a.** 🔔 *IF YES*: **Do facility staff use it to sterilize needles/syringes?**

Yes:... **1** No:... **2**

E4a. Does the facility have a functioning refrigerator?

Yes:... **1** No:... **2** ➔ *Skip to question # E5*

☞ **E4b.** 🔔 *IF YES:* **Is there a working thermometer inside the refrigerator?**

Yes:... **1** No:... **2** ➔ *Skip to question # E5*

☞ **E4c.** *IF YES:* **Is the refrigerator's temperature between 2^0C and 8^0C at the time of visit?**

Yes:... **1** No:... **2**

E5. Does the facility have ice packs?

Yes:... **1** No:... **2** ➔ *Skip to question # E5b*

☞ **E5a.** 🔔 *IF YES:* **Are ice packs frozen?**

Yes:... **1** No:... **2**

E5b. Does the health facility have vaccine carrier?

Yes:... **1** No:... **2** Not applicable (urban area):… **3**

E6. Does the facility have the following vaccines in stock?

a. BCG	a.	Yes:... **1**	No:... **2**
b. OPV	b.	Yes:... **1**	No:... **2**
c. DPT	c.	Yes:... **1**	No:... **2**
d. Measles	d.	Yes:... **1**	No:... **2**
e. Hib	e.	Yes:... **1**	No:... **2**
f. Hepatitis B	f.	Yes:... **1**	No:... **2**
g. Tetanus toxoid	g.	Yes:... **1**	No:... **2**

E7. Has any of the following vaccines expired?

a. BCG	a.	Yes:... **1**	No:... **2**
b. OPV	b.	Yes:... **1**	No:... **2**
c. DPT	c.	Yes:... **1**	No:... **2**
d. Measles	d.	Yes:... **1**	No:... **2**
e. Hib	e.	Yes:... **1**	No:... **2**
f. Hepatitis B	f.	Yes:... **1**	No:... **2**
g. Tetanus toxoid	g.	Yes:... **1**	No:... **2**

E8. Is any open measles vial stored in the refrigerator?

Yes:... **1** No:... **2**

E9. Is there any measles vial frozen?

Yes:... **1** No:... **2**

AVAILABILITY OF DRUGS MODULE

Check the drug stocks. Answer the following questions based on what you see.

D1. Does the facility have the following drugs available at the time of the visit?

a. **ORS** ..... a. Yes:... **1** No:... **2** Expired:... **3**

b. **Cotrimoxazole** tablets or susp. – First line antibiotic for pneumonia and first line antibiotic for dysentery: ..... b. Yes:... **1** No:... **2** Exp:…**3**

c. **Amoxycillin** susp / disp. tablets – Streptococcal sore throat, second-line for pneumonia and dysentery ..... c. Yes:... **1** No:... **2** Exp:…**3**

g. **Penicillin V** tablets (1 M IU) or susp (250000 or 400000 IU/5ml) .... g. Yes:... **1** No:... **2** Exp:…**3**

g1. **Erythromycin** sachets / tablets (125, 250, 500 mg)..... g1 Yes:... **1** No:... **2** Exp:…**3**

h. **Vitamin A** *blue* (100,000 IU) or *red* (200,000IU) caps with nipple ... h. Yes:... **1** No:... **2** Exp:…**3**

h1. **Vitamin D** ampule (600,000 IU) ..... h1 Yes:... **1** No:... **2** Exp:…**3**

i. **Iron** tablets (60mg elemental iron) ..... i. Yes:... **1** No:... **2** Exp:…**3**

j. **Paracetamol** syrup (120mg/5 ml), sachets (100 → 300mg), tablets (500mg), supp. or **Aspirin** tablets (500mg) or sachets (100, 250, 500mg) ..... j. Yes:... **1** No:... **2** Exp:…**3**

l. **Tetracycline eye ointment** ..... l. Yes:... **1** No:... **2** Exp:…**3**

n. **Salbutamol** or **Terbutaline** solution or metered dose inhaler (MDI)..... n. Yes:... **1** No:... **2** Exp:…**3**

o. **Salbutamol** syrup (2mg/5 ml), tablets (2mg) or **Terbutaline** syrup (1.5 mg/5 ml), tablets (2,5 mg)..... o. Yes:... **1** No:... **2** Exp:…**3**

p. **Diazepam** (10mg/2ml) or **Medazolam** ampule (5mg/5ml) ..... p. Yes:... **1** No:... **2** Exp:…**3**

D2. Does the facility have the following injectable drugs/fluids available at the time of the visit?

a. **Thiamphenicol IM** ..... a. Yes:... **1** No:... **2** Exp:…**3**

b. **Ampicillin IM** ..... b. Yes:... **1** No:... **2** Exp:…**3**

c. **Benzylpenicillin IM** ..... c. Yes:... **1** No:... **2** Exp:…**3**

c1. **Benzathine penicillin IM** ..... c1. Yes:... **1** No:... **2** Exp:…**3**

d. **Gentamycin IM** ..... d. Yes:... **1** No:... **2** Exp:…**3**

e. Sterile water for injection ..... e. Yes:... **1** No:... **2** Exp:…**3**

f2. Saline (for severe dehydration) ..... f2. Yes:... **1** No:... **2** Exp:…**3**

D3. How long ago did this facility receive its stock of medicines?

Less than 30 days ago:… **1** 30 to 59 days ago:… **2** More than 60 days ago:… **3**

FACILITY SERVICES MODULE

Ask the following questions of the health provider who has been observed during case management. If there are several health providers who have been observed managing cases in the same facility, discuss the following questions with all of them and try to reach a consensus for each question. Add comments on the back of the form if you have any problems.

S1. How many days per week is the facility open (including emergency services)? |___| days/week

S2. How many days per week are curative child health services provided? .....|___| days/week

S3. Does the facility hold immunisation sessions?

Yes:... **1** No:... **2** ➔ *Skip to question # S4*

☞ **S3a. How many sessions are held at the facility during the week?**.....|___| no./week

☞ **S3b. Does the facility follow the open vial policy?**

Yes:... **1** No:... **2**

S4. Does the facility provide outreach services ("equipe mobile")?

Yes:... **1** No:... **2** ➔ *Skip to question # S5*

🔔 If *YES* (outreach services provided):

☞ **S4a. How many outreach sessions were planned for 2006?** .....|___| sessions

☞ **S4b. How many planned outreach sessions in 2006 were not conducted?** .....|___| sessions

☞ **S4c. Which services are provided during outreach sessions?**

a. Preventive (EPI, vitamin A and D, weight, family planning, prenatal care) .....a. Yes:... **1** No:... **2**

b. Curative .....b. Yes:... **1** No:... **2**

c. Promotive (health education, etc.) .....c. Yes:... **1** No:... **2**

☞ **S4d. Does the health facility physician accompany the outreach team each time?**

Yes:... **1** ➔ *Skip to question # S5* No:... **2**

☞ **S4e.** 🔔 *If No*: **Why?** Specify: _____

S5. How many times during the last 6 months did the facility receive a supervisory visit? .....|___|___| times/6 months

➔ *If* No *visit in the last 6 months, enter* 0 *and skip to question S7*

☞ **S6. How many of these supervisory visits were follow-up visits after training to health workers who had recently been trained in IMCI?** |___|___| visits

ASK THE HEALTH PROVIDER/S QUESTIONS S6a and S6b, BASED ON THE MOST RECENT SUPERVISORY VISIT THAT WAS NOT AN IMCI FOLLOW-UP VISIT AFTER TRAINING:

☞ **S6a. During the last supervisory visit in the past 6 months, were child health activities supervised?**

Yes:... **1** No:... **2** ➔ *Skip to question # S7* Doesn't know:… **8** ➔ *Skip to question # S7*

☞ **S6b.** *If YES:* **Did the supervisor observe case management of a sick child the last time he/she visited the facility?**

Yes:... **1** No:... **2** Doesn't know:… **8**

S7. Does the facility have a supervisory book?

Yes:... **1** No:... **2** ➔ *Skip to question # S9* Doesn't know:… **8** ➔ *Skip to question # S9*

☞ **S7a.** *If YES:* **Does the record of the latest supervisory visit in the book include also any recommendations to facility staff?**

Yes:... **1** No:... **2** No record of visit found:... **3** ➔ *Skip to question # S9*

☞ **S7b. How many months ago was the latest record of a supervisory visit?** |___|___| months ago

S9. How long does it take for the patient to get to the referral hospital using the most common* local transport? |___|___| hours |___|___| minutes

*****Common here refers to the means of transport commonly taken by and affordable to most people in this area*

S10. Have you ever wanted to refer a very severely-ill child but been unable to do so?

Yes:... **1** No:... **2** ➔ *Skip to question # S11*

☞ **S10a.** *IF YES,* **Why?** _____

_____

S11. If you had to refer 10 children to the hospital, how many of them do you think will end up going to the hospital?

|___|___| children

FACILITY RECORDS MODULE

Ask the health provider responsible for records to help you identify records for all visits to the health facility. Do not include inpatient records. Use these records to answer the questions below. If not enough information is available to answer a question, mark NI (not enough information).

Note: The availability of records may vary by level of health facility. Procedures to estimate attendance should be determined in each site. These procedures must be practical!

F1. Does the facility have a logbook where outpatients are recorded?

Yes:... 1 No:... 2 ➔ *If NO, Stop here* ⊗

F2. Does the logbook differentiate between "sick child" and "immunization" visits?

Yes:... 1 No:... 2

- **CHECK THE RECORDS OF THE MONTH OF <u>SEPTEMBER 2007</u> AND FILL IN THE TABLE BELOW**

Count total for each type of service. Children may visit more than one service during one visit to the facility.

		SICK CHILDREN		IMMUNIZATION
R1.	**What is the total number of visits to the health facility for OUTPATIENT services (ALL AGES) during the month of September 2007?**	|__|__|__|__|__|		
R2.	**How many of these visits were made by children UNDER-FIVE** (from 0 up to 5 years old)**?**	|__|__|__|__|__|	**R5.**	|__|__|__|__|__|
R3.	**How many of these under-five child visits were made by FEMALE children?**	|__|__|__|__|__|	**R6.**	|__|__|__|__|__|
R4.	**How many of these under-five visits were made by children UNDER TWO MONTHS** (from 0 up to 2 months)**?**	|__|__|__|__|__|		

OBSERVATION SHEET

Date: _____ Supervisor:_____ **Team: ____**

Province: _____ **Health facility code: |___|___|**

1. ORGANISATION OF WORK AT THE FACILITY (Flow of patients, waiting time, distribution of tasks - triage to select severe cases, system to screen severe cases, counselling, etc.-)

2. DRUGS (Availability in the past 3 months and out-of-stock situations lasting more than 1 week – esp. antibiotics -, drug procurement system, perception about affordability of drugs by families)

3. REFERRAL (Pathway, accessibility to referral sites and perceived quality of services at the referral facility, referral note and feedback received from referral facility)

4. UTILISATION OF SERVICES (Has there been an increase in the utilisation of health services for sick children since IMCI has been introduced in this facility? If so, are there any data supporting this point?)

5. HIS: RECORDING AND REPORTING TO HIGHER LEVELS (how many different records are used to record information on the sick child from the time s/he enters the facility to the time s/he leaves it? What is the quality of recording - completeness, consistency etc.? Check if the facility has a copy of the last routine report submitted to higher level)

6. PERCEIVED MAIN CONSTRAINTS TO THE IMPLEMENTATION OF THE IMCI STRATEGY AT THIS FACILITY AND SUGGESTED SOLUTIONS

Continue on the back of this page if necessary.

Fiche de recrutement

Date: _____/_____/ 2007 Province: _____ Milieu : U:…**1** R :…**2**

Formation sanitaire: Code: |___|___| Nom : _____ Type : CS :…**1** D :... **2**

Nom de l'enfant: _____ Code de l'enfant: |___|___|___| **Questionnaire #**|__|__|__|__|

FS code | Enfant ID

Date de naissance de l'enfant: |___|___| /|___|___| /|___|___|___|___| Age (mois):|___|___| Sexe: M:…**1** F:…**2**

Inclure *seulement* les enfants âgés de 2 mois à 5 ans.

EC1. Demandez à la mère s'il s'agit de la première visite pour l'épisode actuelle. NE PAS INCLURE les enfants qui viennent pour les visites de suivi.

1ère visite ? Oui:…**1** Non:…**2** → ⊖ STOP

EC2. Demandez la ou les raisons pour la ou lesquelles l'enfant est amené à la formation sanitaire et entourez toutes les raisons mentionnées (puis demandez: *" si il y a d'autre problème? "*).

A. Diarrhée ..... Oui:...**1** Non:...**2**

B. Fièvre ..... Oui:...**1** Non:...**2**

C. Toux ..... Oui:...**1** Non:...**2**

D. Respiration rapide / difficulté respiratoire / Pneumonie. Oui:…**1** Non:…**2** → *allez à E*.

D1. Si oui : *notez les termes utilisés* :_____

D2. ***Demandez*** au bout de combien de temps après la constatation des symptômes a-t-elle amené l'enfant à la formation sanitaire : |___| jours

E. Problème de gorge ..... Oui:...**1** Non:...**2**

F. Problème d'oreille ..... Oui:...**1** Non:...**2**

G. Incapable de boire et/ou de téter, vomit tout ce qu'il consomme, convulsions, léthargique ou inconscient..... Oui:...**1** Non:...**2**

H. Autre ..... Oui:…**1** (Si Oui : *précisez* _____) Non:…**2**

EC3. Demandez : "Quel symptôme vous a-t-il le plus inquiété et vous a poussé à décider d'amener l'enfant à la FS ?"

_____ (_____)

(Notez le terme local utilisé par la mère) (Notez le terme équivalent en français)

_____ (_____)

(Notez le terme local utilisé par la mère) (Notez le terme équivalent en français)

Lire la fiche de recrutement à la mère et lui demandez son consentement: Consentement accordé: Oui:...**1** Non:...**2**

(Initiales du superviseur : _____) Si consentement non accordé, notez "9" en face de l'ID de l'enfant

---

Si le poids et la température sont déjà prises et si correctement pris (Formulaire : A1b et A4b) par l'équipe de la FS, notez les ci-dessous. Ne pas les noter si la prise n'est pas correcte.

Poids : |___|___|.|___||___||___| **Température**: |___|___|.|___| ^{0}C

Formulaire 1: Observation [ ] **Formulaire 2** : Entretien avec la mère [ ] **Formulaire 3**: Re-examen [ ]

ENFANT TRANSFÉRÉ D'URGENCE PAR LE PS [ ]

Formulaire 1. Grille d'OBSERVATION —Enfant (2 mois - 5 ans)

Entourez le code pour la réponse appropriée (ex. si la réponse est OUI, encerclez 1: OUI..(1) NON… **2**)

Date: ____/____/ 2007 Formation sanitaire: Code: |___|___| Type: CS:…**1** D:… **2**

Enfant: Nom_____ ID:|___|___| Date de naissance: ____/_____/_____ Age :(mois)|___|___|

ID de l'enquêteur: |___|___| Nom du PS: _____ ID: |___| Sexe: M…. **1** F…. **2**

Profil du PS: Médecin :… **1** Infirmier:… **2** Ancienneté en matière de PEC des enfants: |___|___| années

❖ **I1. Le PS est-il formé à la PCIME ?**

Oui:... **1** Non:… **2** ➔ *Allez à la question # A1*

*Si OUI (*formé à la PCIME*)*:

☞ **I2. Notez la date de formation à la PCIME?** |_0_|_0_||___|___||___|___|___|___|
Jour || Mois || Année

☞ **I2a. Durée de formation (jour):** 12 jours:… **1** 11 jours:… **2** 10 jours:… **3** 7 jours … **4**

☞ **I3. Le PS a-t-il bénéficié d'un suivi après la formation PCIME?**

Oui:... **1** Non:… **2** ➔ *Allez à la question # A1*

Si OUI (PS a bénéficié d'au moins une visite de suivi):

☞ **I4. De combien de visites de suivi a-t-il bénéficié après la formation PCIME** (ne pas tenir compte des visites de supervision de routine) **?**

|___|___| visites

☞ **I5. Au bout de combien de temps après la formation PCIME, la première visite de suivi a-t-elle eu lieu ?**

< 2 mois:… **1** 2 mois ou plus:… **2** Ne se rappelle pas:… **3**

PARTIE EVALUATION
(*Reportez ce que vous entendez ou voyez, incluant ce qui est marqué sur la feuille de PEC par le PS*)

➢ **PESEE**

A1. Est-ce que le PS, ou un autre membre de l'équipe a-t-il pesé l'enfant ce jour?

Oui:... **1** Non:… **2** ➔ *Allez à la question # A4* Ne sait pas:... **8** ➔ *Allez à la question # A4*

Si OUI (poids pris):

☞ **A1a. Quel est le profil du PS qui a pesé l'enfant ?**

Médecin:… **1** Infirmier:… **2** ➔ **A1at. Est-il formé à la PCIME?** Oui:… **1** Non:… **2**

☞ **A1b. La pesée a-t-elle été correctement faite ?**

Oui:... **1** Non:… **2** Ne sait pas:… **8**

☞ **A1c. Le poids a-t-il été correctement noté ?**

Oui:... **1** Non:… **2** *Reportez le poids sur la fiche de recrutement si c'est correctement pris.*

➢ **PRISE DE TEMPERATURE**

A4. Est-ce que le PS, ou un autre membre de l'équipe, a pris la température de l'enfant ce jour (avec le thermomètre)?

Oui:... **1** Non:… **2** ➔ *Allez à* **Ω** Ne sait pas:… **8** ➔ *Allez à* **Ω**

Si OUI (température prise):

☞ **A4a. Quel est le profil du PS qui a pris la température?**

Médecin :…**1** Infirmier:…**2** ➔ **A4at. Est-il formé à la PCIME?** Oui:… **1** Non:… **2**

☞ **A4b. La température a-t-elle été correctement prise?**

Oui:... **1** Non:… **2** Ne sait pas:… **8**

Reportez la température sur la fiche de recrutement si elle est correctement prise.

Ω ➔ Notez le moment du début de l'examen de l'enfant par le PS : |___|___| heurs |___|___| min

➢ **SIGNES GENEREAUX DE DANGER**

A6. Le PS a-t-il demandé si l'enfant est incapable de boire ou de téter?

Oui (ou l'enfant prend le sein maintenant):… **1** Non:… **2** ➔ *Allez à la question # A7*

☞ **A6a.** *Si OUI:* **Est-ce que la mère a dit que l'enfant est incapable de boire ou de téter?**

Oui:… **1** Non:… **2** ➔ *Allez à la question # A7* Ne sait pas:… **8** ➔ *Allez à la question # A7*

☞ **A6b.** *Si OUI* (*la mère a répondu que l'enfant est incapable de boire):* **Le PS a-t-il offert à boire à l'enfant pour vérifier si l'enfant est effectivement incapable de boire?**

Oui:... **1** Non:… **2**

A7. Le PS a-t-il demandé si l'enfant vomit tout ce qu'il consomme?

Oui:... **1** Non:… **2** ➔ *Allez à la question # A8*

☞ **A7a.** *Si OUI:* **Est-ce que la mère a répondu que l'enfant vomit tout ce qu'il consomme?**

Oui:... **1** Non:… **2** ➔ *Allez à la question # A8* Ne sait pas:… **8** ➔ *Allez à la question # A8*

☞ **A7b.** *Si OUI (la mère a répondu que l'enfant vomit tout ce qu'il consomme):* **Le PS a-t-il offert à boire à l'enfant pour vérifier si l'enfant vomit effectivement tout ce qu'il consomme?**

Oui:... **1** Non:… **2**

A8. Le PS a-t-il demandé si l'enfant a convulsé durant la maladie actuelle ?

Oui (ou l'enfant convulse au moment de l'examen):… **1** Non:… **2**

A9. L'enfant paraît-il endormi, léthargique ou inconscient?

Oui:… **1** Non:… **2** ➔ *Allez à la question # A11*

☞ **A10.** 🔔 *Si OUI (l'enfant paraît endormi)* **: Le PS a-t-il essayé de le réveiller pour vérifier que l'enfant est effectivement léthargique ou inconscient ?**

Oui:… **1** Non:… **2**

A11. Le PS a-t-il demandé si l'enfant a une TOUX OU UNE DIFFICULTE RESPIRATOIRE ?

Oui:… **1** Non:… **2** ➔ *Allez à la question # A12*

☞ **A11a.** 🔔 *Si OUI:* **L'enfant a-t-il une toux ou difficulté respiratoire ?**

Oui:… **1** Non:… **2** ➔ *Allez à la question # A12* Ne sait pas:… **8** ➔ *Allez à la question # A12*

Si OUI (La mère a répondu que l'enfant a une toux ou difficulté respiratoire)

☞ **A11b. Le PS a-t-il demandé depuis combien de temps l'enfant tousse-t-il ?**

Oui:… **1** Non:… **2**

☞ **A11c. Le PS a-t-il demandé si l'enfant a un contage tuberculeux récent ?**

Oui:… **1** Non:… **2**

☞ **A11d. Le PS a-t-il rapproché son oreille de l'enfant ?**

Oui:… **1** Non:… **2**

☞ **A11e. Le PS a-t-il compté la fréquence respiratoire ?**

Oui:… **1** Non:… **2** ➔ *Allez à la question # A12*

Si OUI, la fréquence est comptée:

☞ **A11f. L'enfant a-t-il été calme avant et pendant le comptage?**

Oui:… **1** Non:… **2**

☞ **A11g. Le comptage a-t-il été fait durant une minute entière ?**

Oui:… **1** Non:… **2**

☞ **A11i. Ecrire la fréquence respiratoire/min mesurée par le PS:**

|___|___|

A12. Le PS a-t-il demandé si l'enfant a la DIARRHEE ?

Oui:… **1** Non:… **2** ➔ *Allez à la question # A120*

☞ **A12a.** 🔔 *Si OUI :* **L'enfant a-t-il la diarrhée?**

Oui:… **1** Non:… **2** ➔ *Allez à la question # A120* Ne sait pas:…**8** ➔ *Allez à la question # A120*

🔔 *Si OUI (La mère a répondu que l'enfant a la diarrhée) :*

☞ **A12b. Le PS a-t-il demandé depuis combien de temps l'enfant a-t-il la diarrhée ?**

Oui:… **1** Non:… **2**

☞ **A12c. Le PS a-t-il demandé s'il y a du sang dans les selles ?**

Oui:… **1** Non:… **2**

☞ **A12d. Le PS a-t-il donné à boire à l'enfant**?

Oui:… **1** Non:… **2**

☞ **A12e. Le PS a-t-il pincé la peau de l'abdomen ?**

Oui:… **1** Non:… **2** ➔ *Allez à la question # A120*

☞ **A12f.** 🔔 *Si OUI*, **le PS a-t-il pincé correctement la peau de l'abdomen ?**

Oui:… **1** Non:… **2**

☞ **A12g. Entourez la conclusion du PS sur le pli cutané, s'efface-t-il :**

Rapidement:… **1** Lentement:… **2** Très lentement:… **3**

A120. Le PS a-t-il examine la GORGE de l'enfant ?

Oui:... **1** Non:... **2**

A120a. Le PS a-t-il cherché les ADP sous maxillaires ?

Oui:… **1** Non:… **2**

A121. Le PS a-t-il demande si l'enfant a un PROBLEME D'OREILLE ?

Oui:… **1** Non:… **2** ➔ *Allez à la question #* A13

☞ **A121a.** 🔔 *Si OUI:* **La mère a-t-elle répondu que l'enfant a un problème d'oreille?**

Oui:… **1** Non:… **2** ➔ *Allez à la question # A13* Ne sait pas:… **8** ➔ *Allez à la question # A13*

Si OUI (La mère a répondu que l'enfant a un problème d'oreille) :

☞ **A121b. Le PS a-t-il demandé si l'enfant a mal aux oreilles ?**

Oui:… **1** Non:… **2**

☞ **A121c. Le PS a-t-il demandé si l'enfant a un écoulement auriculaire ?**

Oui:… **1** Non:… **2** ➔ A*llez à la question # A121f*

☞ **A121d** 🔔 *SI OUI* : La mère a-t-elle répondu que l'enfant a un écoulement auriculaire?

Oui:… **1** Non:… **2** ➔ A*llez à la question # A121f*

☞ **A121e.** 🔔 *SI OUI*: **Le PS a-t-il demandé depuis combien de temps l'enfant a un écoulement auriculaire ?**

Oui:… **1** Non:… **2**

☞ **A121f. Le PS a-t-il examiné les 2 oreilles pour voir si il y a du pus qui s'en écoule?**

Oui:… **1** Non:… **2**

☞ **A121g. Le PS a-t-il palpé derrière les deux oreilles ?**

Oui:… **1** Non:… **2**

A13. Le PS a-t-il demandé ou a-t-il touché l'enfant pour vérifier si il a de la FIÈVRE? (ou s'est-il référé à la température si elle a été prise au début)?

Oui:… **1** Non:… **2** ➔ *Allez à la question # A14*

☞ **A13a.** 🔔 *Si OUI*: **L'enfant a-t-il de la fièvre (≥ 38.0^{0}C) ou des antécédents de fièvre ?**

Oui:… **1** Non:… **2** ➔ *Allez à la question # A14* Ne sait pas:… **8** ➔ *Allez à la question # A14*

🔔 *Si OUI* (*l'enfant a de la fièvre) :*

☞ **A13b. Le PS a-t-il demandé depuis combien de temps l'enfant a de la fièvre ?**

Oui:… **1** Non:… **2**

A13c. Le PS a-t-il demandé si l'enfant a eu la rougeole au cours des 3 derniers mois ?

Oui:… **1** Non:… **2**

A14. Le PS a-t-il recherché les signes d'AMAIGRISSEMENT visible et sévère (malnutrition sévère)**?**

Oui:… **1** Non:… **2** Ne sait pas:… **8**

A15. Le PS a-t-il recherché la PÂLEUR PALMAIRE?

Oui:… **1** Non:… **2** ➔ *Allez à la question # A16*

☞ **A15a.** 🔔 *Si OUI* : **Le PS a-t-il correctement recherché la pâleur palmaire ?**

Oui:… **1** Non:… **2** Ne sait pas:… **8**

☞ **A15b. Entourez la conclusion du PS pour ce qui est de la pâleur palmaire :**

Pas de pâleur:… **1** Pâleur légère :… **2** Pâleur sévère:… **3**

A16. Le PS a-t-il recherché un OEDÈME au niveau des 2 pieds ?

Oui:… **1** Non:… **2** ➔ *Allez à la question # A17* Ne sait pas:… **8** ➔ *Allez à la question # A17*

☞ **A16a.** 🔔 *Si OUI*: **Le PS a-t-il recherché correctement un oedème au niveau des 2 pieds ?**

Oui:… **1** Non:… **2** Ne sait pas:… **8**

A17. Le PS a-t-il analysé le RAPPORT POIDS/ÂGE ?

Oui:… **1** Non:… **2** ➔ *Allez à la question # A18a* Ne sait pas:… **8** ➔*Allez à la question #A18a*

☞ **A17a.** 🔔 *Si OUI (le poids analysé /courbe de croissance)*: **Qui a analysé le poids/âge à l'aide de la courbe de croissance?**

Médecin:…**1** Infirmier:…**2**

A18a. Le PS a-t-il demandé le "CARNET DE SANTE DE L'ENFANT"?

Oui:… **1** Non:… **2** ➔ *Allez à la question # A20*

☞ **A19. La mère a-t-elle le carnet de santé de l'enfant au moment de la visite ?**

Oui:… **1** Non:… **2** ➔ *Allez à la question # A20*

☞ **A19a. Le PS a-t-il consulté le carnet de santé?**

Oui:... **1** ➔ *Allez à la question # A21* Non:... **2**

A20. *Si la mère n'a PAS de carnet de santé ou le PS ne l'a pas consulté :*
Est-ce que le PS a essayé de se renseigner auprès de la mère pour s'assurer que l'enfant a reçu:

a. Une injection sur le bras contre la tuberculose (BCG)? ..... a. Oui:... **1** Non:... **2**
b. Gouttes contre la polio? .....b. Oui:... **1** Non:... **2**
c. Une ou plusieurs injections contre la DTC (FA Cuisse)? .....c. Oui:... **1** Non:... **2**
c1. Une ou plusieurs injections contre l'HB (FA cuisse)?.....c1. Oui:... **1** Non:... **2**
d. Une ou plusieurs injections contre la méningite à Hib (FA cuisse)? ..d. Oui:... **1** Non:... **2** NA:… **3**
e. A 9 mois, une injection contre la rougeole (bras)? .....e. Oui:... **1** Non:... **2** NA:… **3**
f. A 18 mois, une injection contre la DTC (bras)?.....f. Oui:... **1** Non:... **2** NA:… **3**
g Vitamine A capsule bleu/rouge?.....g. Oui:... **1** Non:... **2** NA:… **3**
h. Vitamine D.....h. Oui:... **1** Non:... **2**

A21. Le PS a-t-il demandé si l'enfant est allaité au sein?

Oui:… **1** Non:… 2 ➔ *Allez à la question # A22* NA:... **3** ➔ *Allez à la question # A22* (enfant ≥ 24 mois)

☞ *Si OUI:* **A21a. L'enfant est-il allaité au sein d'après la mère ?**

Oui:… **1** Non:… **2** ➔ *Allez à la question # A22*

Si OUI (enfant allaité):

☞ **A21b. Le PS a-t-il demandé combien de fois par 24 heures ?**

Oui:… **1** Non:… **2**

A22. Le PS a-t-il demandé quels ALIMENTS OU LIQUIDES sont donnés à l'enfant ?

Oui:… **1** Non:... **2**

A22a. Le PS a-t-il demandé combien de fois par 24 heures la mère donne à manger à l'enfant ?

Oui:… **1** Non:... **2**

A22b. Le PS a-t-il demandé quelle quantité prend-il à chaque repas ?

Oui:… **1** Non:... **2**

A22c. Le PS a-t-il demandé si l'enfant reçoit sa propre ration ?

Oui:… **1** Non:... **2**

A22d. Le PS a-t-il demandé si l'enfant finit sa ration ?

Oui:… **1** Non:... **2**

A22e. Le PS a-t-il demandé qui nourrit l'enfant?

Oui:… **1** Non:... **2**

A23. Le PS a-t-il demandé si la mère A CHANGÉ L'ALIMENTATION DE L'ENFANT DURANT LA MALADIE ACTUELLE?

Oui:… **1** Non:... **2**

A23a. Quel est le profil du PS qui a évalué l'alimentation? *(Entourez la bonne réponse)*

Médecin :… **1** Infirmier : **2**

A23at. Est-il formé à la PCIME?

Oui:… **1** Non:... **2**

A24. Le PS a-t-il demandé si l'enfant a d'"AUTRE PROBLEMÈ"?

Oui:… **1** Non:... **2**

PARTIE CLASSIFICATION

Entourez toutes les classifications faites par le PS et par vous pour l'enfant : si le PS n'a rien dit spontanément, lui demandez ses conclusions par rapport à l'évaluation de l'enfant.

*Classifications du **PS***

	OUI	NON
C05. Maladie très grave	**1**	**2**
C10. Pneumopathie grave	**1**	**2**
C11. Pneumopathie	**1**	**2**
C12. Pas de Pneumopathie (toux ou rhume)	**1**	**2**
C13. Sifflement	**1**	**2**
C14. Classification reportée (voir T2)	**1**	**2**
C20a. Déshydratation sévère	**1**	**2**
C20b. Déshydratation modérée	**1**	**2**
C20c. Pas de déshydratation	**1**	**2**
C21. Diarrhée persistante sévère	**1**	**2**
C22. Diarrhée persistante	**1**	**2**
C23. Dysenterie	**1**	**2**
C24. Angine	**1**	**2**
C25. Pas d'angine	**1**	**2**
C40. Mastoïdite	**1**	**2**
C41. Infection aiguë de l'oreille	**1**	**2**
C42. Infection chronique de l'oreille	**1**	**2**
C43. Pas d'infection de l'oreille	**1**	**2**
C30. Maladie fébrile très grave	**1**	**2**
C31. Infection bactérienne probable	**1**	**2**
C32. Infection bactérienne peu probable	**1**	**2**
C35. Rougeole avec complications	**1**	**2**
C36. Rougeole	**1**	**2**
C50a. Malnutrition sévère	**1**	**2**
C51a. Insuffisance pondérale	**1**	**2**
C52a. Poids normal	**1**	**2**
C50b. Anémie grave	**1**	**2**
C51b. Anémie	**1**	**2**
C52.b Pas d'anémie	**1**	**2**
C63. Problèmes d'alimentation	**1**	**2**
C60. Autres: **Infection de l'oeil**	**1**	**2**
C61. Autres: **Problème cutané** _____	**1**	**2**
C62. Autres (spécifiez)_____	**1**	**2**

NOTE:
SI L'ENFANT A UN PROBLEME DE L'OEIL, ENCERCLER 1 DANS C60
SI L'ENFANT A UN PROBLEME CUTANE, ENCERCLER 1 DANS C61 ET SPECIFIER.
SI L'ENFANT A UN AUTRE PROBLEME, ENCERCLER 1 DANS C62 ET SPECIFIER.

Classifications de **l'enquêteur**

En se référant au le re-examen de l'enfant (Formulaire 3), entourez les classifications de l'enquêteur:

	OUI	NON
105. Maladie très grave	**1**	**2**
110. Pneumopathie grave	**1**	**2**
111. Pneumopathie	**1**	**2**
112. Pas de Pneumopathie (toux ou rhume)	**1**	**2**
113. Sifflement	**1**	**2**
120a. Déshydratation sévère	**1**	**2**
120b. Déshydratation modérée	**1**	**2**
120c. Pas de déshydratation	**1**	**2**
121. Diarrhée persistante sévère	**1**	**2**
122. Diarrhée persistante	**1**	**2**
123. Dysenterie	**1**	**2**
124. Angine	**1**	**2**
125. Pas d'angine	**1**	**2**
140. Mastoïdite	**1**	**2**
141. Infection aiguë de l'oreille	**1**	**2**
142. Infection chronique de l'oreille	**1**	**2**
143. Pas d'infection de l'oreille	**1**	**2**
130. Maladie fébrile très grave	**1**	**2**
131. Infection bactérienne probable	**1**	**2**
132. Infection bactérienne peu probable	**1**	**2**
135. Rougeole avec complications	**1**	**2**
136. Rougeole	**1**	**2**
150. a Malnutrition sévère	**1**	**2**
151. a Insuffisance pondérale	**1**	**2**
152. a Poids normal	**1**	**2**
150. b Anémie grave	**1**	**2**
151. b Anémie	**1**	**2**
152. b Pas d'anémie	**1**	**2**
163. Problèmes d'alimentation	**1**	**2**
*160. Autres: **Infection de l'oeil***	**1**	**2**
*161. Autres: **Problème cutané**: _____*	**1**	**2**
162. Autres (spécifiez) _____	**1**	**2**
164. Besoin de transfert d'urgence?	**1**	**2**
164a. Besoin d'observation à la FS?	**1**	**2**
165. Enfant à revoir pour une visite de suivi nécessaire dans ____ jours [si pas de besoin de visite de suivi nécessaire, noter 0]		
166. Besoin d'antibiotiques pour des problèmes non retenus dans le cadre de la PCIME ? (ex : infection cutanée, etc.)	**1**	**2**

PARTIE TRAITEMENT

T0. Le PS a-t-il informé la mère sur la nécessité de transférer d'urgence l'enfant à l'hôpital ?

Oui:... **1** Non:... **2** ➔ *Allez à la question # T1*

Si OUI (mère informée par le PS sur la nécessité de transférer d'urgence l'enfant à l'hôpital):

☞ **T0a. Le PS a-t-il expliqué à la mère les raisons du transfert ?**

Oui:... **1** Non:... **2**

☞ **T0b. La mère a-t-elle accepté le transfert de l'enfant ?**

Oui:... **1** Non:... **2**

☞ **T0c. Le PS a-t-il rempli la fiche de transfert ?**

Oui:... **1** Non:... **2**

T1. Le PS a-t-il administré ou prescrit une ou des injection(s) ?

Oui:... **1** Non:... **2**

Superviseur *Traitement prétransfert correct?*	
OUI	NON
1 T1a1	**2**

T2. Le PS a-t-il administré un broncho-dilatateur inhalé ?

Oui:... **1** Non:... **2**

T3. Le PS a-t-il prescrit ou a-t-il donné des sachets de SRO à prendre à la maison ?

Oui:... **1** Non:... **2** ➔ *Allez à la question # T4*

Si OUI (le PS a prescrit ou a donné des sachets de SRO à prendre à la maison):

- ***Le PS a-t-il expliqué :***

☞ **T3a. La quantité d'eau à utiliser pour préparer la solution de SRO ?**

Oui:... **1** *Si Oui*, **Combien:** _____ Non:... **2**

☞ **T3b. Quand les SRO doivent être donnés à l'enfant durant la journée?**

Oui:... **1** *Si Oui,* **Quand:** _____ Non:... **2**

☞ **T3c. Quelle quantité de SRO donner à l'enfant chaque fois ?**

Oui:... **1** *Si Oui*, **Combien:** _____ Non:... **2**

Superviseur *Correct?*		
	OUI	NON
T3a1	**1**	**2**
T3b1	**1**	**2**
T3c1	**1**	**2**

☞ **T4. Le PS a-t-il administré la solution de SRO à l'enfant au niveau de la FS** ?

Oui.. **1** Non:... **2**

T6. Le PS a-t-il administré ou prescrit un traitement oral ?

Oui.. **1** Non:... **2** ➔ *allez à la question # T12 si l'enfant n'est pas référé ou la mère refuse le transfert. Si l'enfant doit être transféré et que la mère accepte le transfert, allez à la question # CM13 à la fin du questionnaire.*

☞ **T7.** *SI OUI:* **Reportez tous les traitements administrés et/ou prescrits:**

a. Antidiarrhéiques/antispasmodiques	a.	Oui:... **1**	Non:... **2**	a.
a1. Antitussifs/fluidifiants/médicaments pour rhume ...	a1.	Oui:... **1**	Non:... **2**	a1.
b. Metronidazole cp/sirop	b.	Oui:... **1**	Non:... **2**	b.
e. Paracétamol/ acide acétyl salicylique	e.	Oui:... **1**	Non:... **2**	e.
f. Antibiotiques cp/sirop/sachet recommandés* ..... (*****: amoxycilline, cotrimoxazole, erythromycine, Péni V)	f.	Oui:... **1**	Non:... **2**	**f.**
g. Autres **antibiotiques** cp/sirop	g.	Oui:... **1**	Non:... **2**	g.
g1. Salbutamol cp/sirop	g1.	Oui:... **1**	Non:... **2**	g1.
g2. Terbutaline cp/sirop	g2.	Oui:... **1**	Non:... **2**	g2.
h. Vitamine A	h.	Oui:... **1**	Non:... **2**	h.
i. Multi-vitamines	i.	Oui:... **1**	Non:... **2**	i.
k. Mebendazole	k.	Oui:... **1**	Non:... **2**	k.
l. Fer cp/sirop	l.	Oui:... **1**	Non:... **2**	l.
n. Autres Oui:... **1** – n1. *spécifiez:* _____			Non:... **2**	n.

ⓘ ***Si le PS a indiqué le transfert d'urgence de l'enfant et que la mère a accepté le transfert (T0b=Oui), allez à la question CM12 à la fin du formulaire. Si un antibiotique oral et recommandé par la PCIME est donné (T7f=Oui), allez à la question suivante. Pour les autres situations, allez à la question T12.***

☞ ***T8.*** *Si un ATB oral recommandé par la PCIME est donné,* ***notez ce que le PS a dit:***

	Superviseur *Conformité avec les directives de la PCIME?* OUI		NON
a. Nom: _____	**1**	T8a1	**2**
b. Présentation: _____			
c. Quantité par prise : _____	**1**	T8c1	**2**
d. Nombre de prise par jour : _____	**1**	T8d1	**2**
e. Durée du traitement (jours): _____	**1**	T8e1	**2**

T12. Les médicaments suivants ont-ils été donnés ou prescrits par le PS?

a. Salbutamol/Terbutaline aérosol	a.	Oui:... **1**	Non:... **2**
c. Tétracycline pommade ophtalmique	c.	Oui:... **1**	Non:... **2**

FORME 1: CODAGE DU SUPERVISEUR

	Informations nécessaires	Où trouver les données	Codes		
B	Si un ATB oral a été prescrit pour un problème couvert par les directives cliniques de la PCIME, a-t-il été prescrit correctement?	OUI dans T7f *et* OUI dans T8c1, d1 et e1	Oui **1**	Non **2**	NA **3** *(pas d'ATB)*
D	Si l'enfant est transféré d'urgence (quelque soit la raison), a-t-il reçu un traitement pré transfert approprié ?	OUI dans T0 *et* - Si ATB nécessaire: OUI dans T1a1 OU OUI in T7f - Si sévèrement déshydraté: OUI dans T4	Oui **1**	Non **2**	NA **3** *(enfant non transféré)*

NA = NON APPLICABLE

PARTIE CONSEILS

Dans certaines circonstances, les taches sont accomplies par plusieurs professionnels de santé. Ainsi, si c'est le responsable de la pharmacie qui remet les médicaments à la mère et la conseille sur les modalités d'administration du traitement donné et administre aussi la première dose, il faut dans ce cas suivre l'enfant et observer cette partie là où sont remis les médicaments pour compléter l'observation.

- *Si pas de SRO (T3=Non) et ou d'ATB oral (T7f=Non) prescrit ou donné, allez à la question # CM5.*

CM1. Le PS a-t-il expliqué comment donner un traitement oral ?

a. Antibiotique ..... a. Oui:... **1** Non:... **2** NA (pas d'ATB):… **3**
c. SRO ..... c. Oui:... **1** Non:... **2** NA (pas de SRO):… **3**

CM2. Le PS a-t-il fait une démonstration pour montrer comment administrer un traitement oral?

a. Antibiotique ..... a. Oui:... **1** Non:... **2** NA (pas d'ATB):… **3**
c. SRO ..... c. Oui:... **1** Non:... **2** NA (pas de SRO):… **3**

CM3. Le PS a-t-il posé des questions ouvertes pour vérifier si la mère a compris comment administrer un traitement oral?

a. Antibiotique ..... a. Oui:... **1** Non:... **2** NA (pas d'ATB):… **3**
c. SRO ..... c. Oui:... **1** Non:... **2** NA (pas de SRO):… **3**

CM4. Le PS a-t-il donné ou a demandé à la mère de donner la première dose du médicament au niveau de la FS?

a. Antibiotique a. Oui:... **1** Non:... **2** NA (pas d'ATB):… **3**

CM5. Le PS a-t-il conseillé la mère sur quand revenir pour la visite de suivi nécessaire?

Oui:... **1** Non:... **2** ➔ *Allez à la question # CM7*

☞ *Si OUI:* **CM5a.** Le PS a-t-il expliqué les raisons pour lesquelles il faut revenir pour la visite de suivi nécessaire?

Oui:... **1** Non:... **2**

☞ **CM6.** ***Au bout de combien de jours la mère doit-elle revenir à la FS ?***

|___|___| jours

CM7. Le PS a-t-il conseillé la mère d'augmenter les apports liquidiens à domicile (liquide et/ou allaitement maternel)?

Oui:... **1** Non:... **2**

CM8. Le PS a-t-il conseillé la mère de maintenir l'allaitement maternel et/ou l'alimentation durant la maladie?

Oui:... **1** Non:... **2**

CM9. Le PS a-t-il conseillé la mère sur le nombre de fois qu'elle doit nourrir et/ou allaiter son enfant?

Oui:... **1** Non:... **2** ➔ *Allez à la question # CM10* NA:... **3** ➔ *Allez à la question # CM10*

Si OUI (le PS a conseillé la mère sur le nombre de fois qu'elle doit nourrir et/ou allaiter son enfant):

☞ **CM9a. Combien de fois par 24 heures le PS a-t-il conseillé la mère de nourrir son enfant?**

|___|___| fois/24 heures *(écrire* 00 *si rien n'a été mentionné sur l'alimentation et 77 si le conseil est "autant que l'enfant veut")*

☞ **CM9b.** Combien de fois par 24 heures le PS a-t-il conseillé la mère de donner le sein à son enfant?

|___|___| fois/24 heurs *(écrire* 00 *si rien n'a été mentionné sur l'allaitement maternel et 77 si le conseil est "autant que l'enfant veut" et 88 si non applicable)*

☞ **CM9c.** Quel est le profil du PS qui a donné ce conseil sur l'alimentation et/ou l'allaitement maternel?

Médecin:…**1** Infirmier:… **2** → **CM9ct. Est-il formé à la PCIME?** Oui:… **1** Non:… **2**

CM10. Le PS a-t-il dit à la mère de revenir immédiatement pour les signes suivants?
(entourez les réponses applicables)(NA=non applicable)

a. L'enfant est incapable de boire ou de téter ..... a. Oui:... **1** Non:... **2**
b. L'enfant devient plus malade ..... b. Oui:... **1** Non:... **2**
c. L'enfant développe une fièvre ..... c. Oui:... **1** Non:... **2** NA:… **3** (enfant a une fièvre)
d. L'enfant développe une respiration rapide... d. Oui:... **1** Non:... **2** NA:… **3** (enfant sans toux/ a diff.re)
e. L'enfant développe une difficulté respiratoire e. Oui:... **1** Non:... **2** NA:… **3** (enfant sans toux/ a diff.re)
e1. L'enfant développe un sifflement ..... e1 Oui:... **1** Non:... **2** NA:… **3** (enfant a siffl. /pas de toux)
f. L'enfant développe une dysenterie ..... f. Oui:... **1** Non:... **2** NA:… **3** (enfant sans diarrhée)
g. L'enfant boit difficilement ou très peu ..... g. Oui:... **1** Non:... **2** NA:… **3** (enfant sans diarrhée)
h. Autres..... Oui:... **1** (CM10hs.*Spécifiez* _____) Non:... **2**

CM11a. Le PS utilise-t-il «la carte de la mère» ou les pages correspondantes du carnet de santé pour conseiller la mère sur les règles de prise en charge à domicile ?

Oui:... **1** Non:... **2** → *Allez à la question # CM11d*

Si OUI , carte de la mère utilisée ou carnet de santé:

☞ **CM11b. Le PS montre-t-il bien les pages correspondantes pour que la mère puisse voir facilement les illustrations?**

Oui:... **1** Non:... **2**

☞ **CM11c. Le PS indique-t-il à la mère les illustrations tout en la conseillant?**

Oui:... **1** Non:... **2**

CM11d. Le PS pose-t-il des questions ouvertes pour vérifier si la mère a compris comment prendre en charge l'enfant à domicile (liquides, alimentation, quand revenir immédiatement …)?

Oui:... **1** Non:... **2**

CM11. Le PS a-t-il posé au moins une question sur la santé de la mère (besoin d'avis médical pour problème de santé, besoin de PF ou de vaccination, consultation prénatale ou postnatale …)?

Oui:... **1** Non:... **2** NA:… **3** (Non Applicable si l'accompagnant n'est pas la mère)

CM12. Le ou les PS qui ont pris en charge cet enfant ont-ils utilisé l'algorithme de la PCIME, à un moment donné de sa prise en charge?

Oui:... **1** Non:... **2** Ne sait pas:… **8**

Ω → Fin du temps de l'examen: |___|___| hrs |___|___| min→ Temps de l'examen: |___|___| min

ⓘ **MAINTENANT: CONTROLER LE FORMULAIRE ET SOYEZ SURE QU'IL EST COMPLETEMENT REMPLI**
FIN DE L'OBSERVATION - l'enquêteur doit revoir ce formulaire avant l'observation de la prise en charge du prochain enfant.
SUPERVISEUR: Compléter le codage du formulaire 1 (Partie « traitement par les médicaments »)

Forme 2: ENTRETIEN DE SORTIE— LA MÈRE DE L'ENFANT (2 mois–5 ans)

[Si la mère a ramené plusieurs enfants malades dont la prise en charge a été observée, faire un entretien de sortie avec la mère pour chacun des enfants. Recopier les réponses pour les questions 1, 2, 21, 22, 24 et 25 pour tous les enfants et reprendre l'entretien avec la mère pour les autres questions et ce pour chacun des enfants]

Date: ____/____/ 2007 Province: _____ Milieu : U :… **1** R :… **2**

FS: Code: |___|___| Nom: _____ Type: CS:… **1** D:… **2**

Enfant: Nom_____ ID: |___|___|

Date de naissance: _____/_____/_____ Age (mois): |___|___| Sexe: M:… **1** F:… **2**

ID de l'enquêteur: |___|___|

La mère (personne accompagnant l'enfant): Sexe: M:… **1** F:… **2**

Niveau d'instruction: Aucun … **1** Primaire… **2** Secondaire… **3** Supérieur… **4**

Lien avec l'enfant: Mère… **1** Père… **2** Autres parents… **3** Autres… **4** _____
(ex : voisins)

---

1. En général, pouvez-vous me dire quel est le degré de votre satisfaction par rapport aux prestations qui viennent d'être offertes aujourd'hui à votre enfant au niveau de cette FS : Etes-vous : "très satisfait", "satisfait", "peu satisfait" ou "pas du tout satisfait"?

Très satisfait… 1 Satisfait…2 Peu satisfait… 3 Pas du tout satisfait… 4 Ne sait pas… 8 ➔ *Allez à la question # 3*

2. Pourquoi? *Entourez toutes les raisons qui s'appliquent. Ne suggérez rien (ne pas lire les options).*

	Oui	Non	Ne sait pas	
a. Suffisamment de temps pour l'examen de l'enfant (ou temps trop court)	**1**	**2**	**8**	a.
b. On m'a (ou on ne m'a pas) donné l'opportunité de poser des question	**1**	**2**	**8**	b.
c. La bonne façon avec laquelle le PS a examiné l'enfant (ou mauvaise)	**1**	**2**	**8**	c.
d. Traitement /soins administrés (ou non administrés)	**1**	**2**	**8**	d.
e. Ce que j'ai appris (ou que j'e n'ai pas appris) du PS	**1**	**2**	**8**	e.
f. La bonne attitude du PS envers moi et l'enfant (ou mauvaise)	**1**	**2**	**8**	f.
g. La disponibilité du PS (ou son absence)	**1**	**2**	**8**	g.
h. La disponibilité des médicaments (ou non disponibilité)	**1**	**2**	**8**	h.
i. Le délai d'attente correct (ou trop long)	**1**	**2**	**8**	i.
j. La bonne organisation des services (ou mauvaise)	**1**	**2**	**8**	j.
k. Les frais abordables (ou trop chers)	**1**	**2**	**8**	k.
n. Autres: Oui... **1** *Si Oui*, spécifier: _____		**2**		n.

3. Le PS vous a-t-il donné ou prescrit un médicament oral pour <NOM> au niveau de la FS ce jour?

Oui... **1** Non... **2** ➔ *Allez à la question # 16* Ne sait pas... **8** ➔ *Allez à la question # 16*

Si OUI, demandez à la mère de vous montrer la prescription ou les médicaments. Voir l'ordonnance ou les médicaments et prenez note:

☞ **4. ► ATB oral inclus?**

Oui… **1** Non... **2** ➔ *Allez à la question # 16*

☞ **4x.** Si OUI (ATB oral inclus): **S'agit-il d'un ATB recommandé par la PCIME?**

Oui... **1** Non... **2** ➔ *Allez à la question # 16*

Si OUI, reportez le nom et la présentation et le dosage de l'ATB:

☞ **4a. Nom:** _____

☞ **4b. Présentation et dosage**: _____

Puis demander à la mère les questions suivantes sur l'ATB (reportez seulement ce que la mère a dit, pas ce qui est écrit sur la prescription. Ecrivez NSP si elle ne sait pas):

		Superviseur *Correct?* OUI	NON
☞ **5. Quelle quantité de médicament allez-vous donner à «NOM> par prise?** _____	5S	**1**	**2**
☞ **6. Combien de fois par jour allez-vous lui en donner?** |___|___| fois	6S	**1**	**2**
☞ **7. Pendant combien de jours, allez-vous lui en donner?** |___|___| jours	7S	**1**	**2**

☞ **7o. Si <NOM> s'améliore avant, qu'est ce que vous allez faire avec les médicaments?** *(Cochez une seule réponse)*

a. Arrêter le médicament .....a… **1**
b. Continuer le médicament mais en réduire la dose .....b... **2**
c. Continuer le médicament comme prescrit .....c... **3**
d. Autres .....d… **4** (Préciser:_____)
e. Ne sait pas.....e… **8**

☞ **7y. Est-ce que on vous a remis l'ATB pour l'enfant à la FS ce jour?**

Oui... **1** Non... **2** Ne sait pas... **8**

16. ► Déterminez en vérifiant auprès de la mère et/ou en consultant la prescription si les SRO ont été prescrits ou donnés:

Oui... **1** (SRO prescrits ou donnés) Non... **2** ➔ *Allez à la question # 19a* (pas de SRO prescrits ou donnés)

Si OUI (SRO sont prescrits ou donnés), demandez:

		Superviseur *Correct?* OUI	NON
☞ **17.** Quelle est la quantité d'eau pour un sachet de SRO que vous allez utiliser? _____	17S	**1**	**2**
☞ **18. A quel moment dans la journée allez-vous donner les SRO?** _____	18S	**1**	**2**
☞ **19.** Quelle quantité de solution de SRO allez vous donner à <NOM>chaque fois? _____	19S	**1**	**2**

Durant la maladie actuelle de votre enfant <NOM>:

19a. Allez-vous lui donner *plus, la même quantité* ou *moins de liquide* à boire – y compris l'allaitement maternel–?

Plus... **1** La même quantité... **2** Moins de liquide… **3** Ne sait pas... **8**

19b. Allez-vous lui donner *plus*, *la même quantité* ou *moins de nourriture* que d'habitude - y compris l'allaitement maternel–?

Plus... **1** La même quantité... **2** Moins… **3** Ne sait pas... **8**

🔔 **EST CE QUE L'ENFANT EST AGE DE MOINS DE 24 MOIS ?**

Oui... **1** Non... **2** ➔ *Allez à la question # 19d*

☞ **19c. Combien de fois par 24 heures le PS vous a-t-il conseillé de donner le sein à <NOM>?**

(Cochez uniquement une seule réponse)

8 fois ou plus **1**

Chaque fois que l'enfant le réclame **2**

Moins de 8 fois **3**

Autres ..... **4** (*Préciser:* _____)

N'a rien dit *ou* ne sait pas
ou l'enfant n'est pas allaité au sein **8**

19d. Combien de fois par 24 heures le PS vous a-t-il conseillé d'alimenter <NOM>? |___|___| fois
(*Noter 77 si la mère a dit "autant de fois que l'enfant veut"*, 88 *si la mère a dit ne sait pas, ou on lui a rien dit ou l'enfant est allaité exclusivement au sein*)

20. Le PS vous a-t-il dit de ramener <NOM> à la FS un jour déterminé?

Oui... **1** Non... **2** ➔ *Allez à la question # 21* Ne sait pas... **8** ➔ *Allez à la question # 21*

☞ **20a.** 🔔 *Si OUI:* **Au bout de combien de jours allez-vous ramener <NOM>?** |__|__| jours

21. Certains enfants malades doivent être ramenés immédiatement à la FS: Quels symptômes vont vous pousser à ramener l'enfant immédiatement à la FS? *Ne suggérez rien – Entourez tous ce qui est mentionné. Répétez la question jusqu'à deux fois pour plus de signes/symptômes.*

		Mentioné	Non mentioné	Ne sait pas	
a. Enfant incapable de boire ou de téter	a	**1**	**2**	**8**	a
b. Enfant devenant plus malade	b	**1**	**2**	**8**	b
c. Enfant développant une fièvre	c	**1**	**2**	**8**	c
d. Enfant développant une respiration rapide	d	**1**	**2**	**8**	d
e. Enfant développant une difficulté respiratoire/pneumopathie	e	**1**	**2**	**8**	e
e1. Enfant développant un sifflement	e1	**1**	**2**	**8**	e1
f. Enfant présentant du sang dans les selles	f	**1**	**2**	**8**	f
g. Enfant boit difficilement	g	**1**	**2**	**8**	g
h. Enfant a eu des convulsions	h	**1**	**2**	**8**	h
i. Autre: Oui... **1** (Préciser:_____)			**2**		i
j. Autre: Oui... **1** (Préciser:_____)			**2**		j

🔔 ***EST-CE LA PERSONNE ACCAMPAGNANT L'ENFANT EST LA MERE ?***

Oui... **1** Non... **2** ➔ *Allez à la question # 23*

☞ **22.** 🔔 *Si OUI:* **Avez-vous bénéficié de la vaccination contre le tétanos (une injection au niveau du bras pour protéger votre NNé contre le tétanos)?**

Oui... **1** Non... **2** ➔ *Allez à la question # 23* Ne sait pas... **8** ➔ *Allez à la question # 23*

🔔 *Si OUI* (injection reçue)*:*

☞ **22a. Nombre d'injections reçues?** |___|___| injections

☞ **22b. Date de la dernière injection?** Année: |___|___|___|___|

23. Avez-vous reçu ou vous a-t-on montré cette carte ce jour ? *Montrer la carte «conseiller la mère PCIME» ou les pages correspondantes sur le carnet de santé de l'enfant.*

Oui... **1** Non... **2** Ne sait pas... **8**

24. Combien de temps vous a-t-il fallu aujourd'hui pour arriver à la FS en partant de votre domicile ? |___|___|___| minutes

25. Combien avez-vous dépensé pour payer le transport pour vous et votre enfant pour venir à la FS à partir de votre domicile ce jour ? *(Notez 0 si rien n'a été payé*) |___|___|___|___|___| DH

Si 0, allez à la question # 29

28. Est-ce qu'une autre personne a partagé avec vous ces frais ?

Oui... **1** Non... **2** ➔ *Allez à la question # 28c* Ne sait pas... **8** ➔ *Allez à la question # 28c*

☞ **28a.** *Si OUI:* **Qui est ce?** *(Choisissez une seule catégorie)*

a. Un proche… **1** b. Ami/voisin… **2** c. Autre… **3**

☞ **28b. De combien a-t-il ou a-t-elle contribué?** |___|___|___|___|___| DH

28c. Est-ce que vous avez payé ces frais à partir de votre revenu régulier?

Oui... **1** Non... **2** Ne sait pas... **8**

29. Est-ce que <NOM >est couvert par une assurance maladie ?

Oui... **1** Non... **2** Ne sait pas... **8**

30. Que suggérerez-vous pour améliorer les services en matière de santé de l'enfant au niveau de cette formation sanitaire? *Entourer toutes les raisons qui s'appliquent. Ne suggérez rien (ne pas lire les options)*

a. Plus de temps à l'examen.....a. Oui... **1** Non... **2**
b. Plus d'opportunité pour poser des questions .....b. Oui... **1** Non....**2**
c. Meilleure façon d'examiner l'enfant /examen complet.....c. Oui... **1** Non... **2**
d. Meilleurs traitements /soins offerts .....d. Oui... **1** Non... **2**
e. Plus de conseils et d'explications .....e. Oui... **1** Non... **2**
f. Meilleur accueil.....f. Oui... **1** Non... **2**
g. Disponibilité du PS durant les heures ouvrables/week-end.....g. Oui... **1** Non... **2**
h. Recevoir gratuitement des médicaments /disponibilité des médic. à la FS .....h. Oui... **1** Non... **2**
i. Moins de temps en salle d'attente .....i. Oui... **1** Non... **2**
j. Meilleure organisation des services .....j. Oui... **1** Non... **2**
l. Moins de frais (achat des médicaments, transport….) .....l. Oui... **1** Non... **2**
m. Ne sait pas.....m. Oui... **1** Non... **2**
n. Autres: Oui... **1** *Si Oui*, spécifier: _____ Non... **2**

ⓘ MAINTENANT: VÉRIFIER SI LE FORMULAIRE EST BIEN REMPLI ET QU'AUCUNE PARTIE N'A ÉTÉ OMISE !

FIN DE L'ENTERTIEN DE SORTIE

Remerciez la mère d'avoir bien voulu répondre aux questions et lui demandez si elle a envie de poser d'éventuelles questions. Assurez-vous que la mère connaît comment préparer la solution de SRO et comment l'administrer à l'enfant qui a une diarrhée, comment donner les médicaments prescrits, quand revenir pour la visite de suivi, quand revenir pour la vaccination, et quand revenir immédiatement en absence d'amélioration.

SUPERVISEUR: Compléter le codage du formulaire 2 (Médicaments par voie orale et SRO)

FORME 3: VALIDATION DE L'EXAMEN

Date: ____/____/ 2007 Enquêteur ID: |___|___| **Questionnaire: |___|___‖___|___|**

Province: _____ FORMATION SANITAIRE: Nom: _____ Code: |___|___| Type: CS… **1** D:… **2** FS code ‖ Enfant ID

ENFANT: Nom: _____ ID: |___|___| Age: |___|___| Sexe: M… **1** F… **2** Poids : |___|___|.|___|Kg Température rectale : |___|___|.|___|^{0}C

Visite : Première visite … **1** Visite de suivi … **2** DEMANDER: Quel est le motif de consultation? _____

EVALUER (entourer les signes présents)	OUI	NON	**CLASSER** (entourer les mentions correctes)	OUI	NON
1. SIGNES GENERAUX DE DANGER ▪ INCAPABLE DE BOIRE OU DE PRENDRE LE SEIN ▪ L' ENFANT VOMIT TOUT CE QU'IL CONSOMME ▪ A EU DES CONVULSIONS DURANT LA MALADIE ACTUELLE ▪ LETHARGIQUE OU INCONSCIENT ▪ CONVULSE ACTUELLEMENT	**1**	**2**	105. MALADIE TRES GRAVE	**1**	**2**
2. L'ENFANT TOUSSE T-IL OU A T-IL DES DIFFICULTÉS RESPIRATOIRES ? ▪ Depuis combien de temps? **|___|___|** jours **3. Compter les respirations par minute**: |___|___|___| **Respiration rapide?** ▪ Y a-t-il un contage tuberculeux récent? ▪ Rechercher un tirage sous-costal ▪ Regarder et écouter le stridor	**1**	**2**	110. PNEUMOPATHIE GRAVE 111. PNEUMOPATHIE 112. PAS DE PNEUMOPATHIE (toux ou rhume)	**1** **1** **1**	**2** **2** **2**
4. ▪ Regarder et écouter le SIFFLEMENT → → →			113. SIFFLEMENT	**1**	**2**
5. L'ENFANT A-T-IL LA DIARRHEE ? o Depuis combien de temps ? |___|___| jours o Les selles contiennent-elles du sang? ▪ Evaluer l'état général de l'enfant. L'enfant est-il: Léthargique ou inconscient? Agité ou irritable? ▪ Regarder si les yeux sont enfoncés ▪ Offrir à boire à l'enfant. L'enfant: Est-il incapable de boire ou boit-il difficilement? Est-il assoiffé, boit-il avidement? ▪ Pincer la peau de l'abdomen. Le pli, est-il: **5a.** Immédiatement **... 1** Pâteux (disparaît en moins de 2 secondes) **... 2** Persistant (2 secondes ou plus) **... 3**	**1**	**2**	120 a. DESHYDRATATION SEVERE 120 b. DESHYDRATATION MODEREE 120 c. PAS DE DESHYDRATATION 121 DIARRHEE PERSISANTE SEVERE 122. DIARRHEE PERSISANTE 123. DYSENTERIE	**1** **1** **1** **1** **1** **1**	**2** **2** **2** **2** **2** **2**
EVALUATION DE LA GORGE ▪ L'enfant a-t-il de la fièvre? (antécédents, chaud au toucher ou température rectale de 38 ou plus) ▪ L'enfant a-t-il mal à la gorge? ▪ Vérifier si la gorge est rouge ▪ Regarder s'il y a des taches blanchâtres ▪ Rechercher des adénopathies sous-maxillaires douloureuses			124. ANGINE 125. PAS D'ANGINE	**1** **1**	**2** **2**
6. L'ENFANT A-T-IL UN PROBLEME D'OREILLE ? o L'enfant a-t-il mal à l'oreille? o Y a-t-il un écoulement d'oreille? Si "Oui": Depuis combien de temps? ____ jours. ▪ Regarder si du pus coule d'une oreille ▪ Palper l'arrière de l'oreille pour détecter un gonflement douloureux	**1**	**2**	140. MASTOIDITE 141. INFECTION AIGUE DE L'OREILLE 142. INFECTION CHRONIQUE DE L'OREILLE 143. PAS D'INFECTION DE L'OREILLE	**1** **1** **1** **1**	**2** **2** **2** **2**
7. L'ENFANT A-T-IL DE LA FIEVRE ? (antécédents/chaud au toucher/température rectale ≥ 38) o Depuis combien de temps? ____ jours o Si depuis plus de 5 jours, la fièvre a-t-elle été présente tous les jours? o Y a-t-il un contage tuberculeux récent? o L'enfant a-t-il eu la rougeole au cours des 3 derniers mois ? ▪ Existe-t-il un signe général de danger? ▪ Observer et rechercher une e ou fontanelle bombée ▪ Observer et rechercher une raideur de la nuque ▪ Rechercher les signes de ROUGEOLE: - Eruption généralisée rougeoleuse et - L'un de ces signes: toux, écoulement nasal, ou yeux rouges	**1**	**2**	130. MALADIE FEBRILE TRES GRAVE 131. INFECTION BACTERIENNE PROBABLE 132. INFECTION BACTERIENNE PEU PROBABLE	**1** **1** **1**	**2** **2** **2**
Si l'enfant a actuellement la rougeole ou l'a eue au cours des 3 derniers mois: ▪ Regarder la bouche pour détecter les ulcérations ▪ Regarder les yeux : y'a-t-il du pus au niveau des yeux **7a. ROUGEOLE ?**	**1**	**2**	135. ROUGEOLE AVEC COMPLICATIONS 136. ROUGEOLE	**1** **1**	**2** **2**

FORME 3: VALIDATION DE L'EXAMEN

Questionnaire: |___|___||___|___|
FS code || Enfant ID

EVALUER (entourer les signes présents) | **CLASSER** (entourer les mentions correctes) | **OUI** | **NON**

VERIFIER L'ETAT NUTRITIONNEL ET RECHERCHER L'ANEMIE

- Rechercher les signes d'amaigrissement visible et sévère
- Rechercher les oedèmes au niveau des 2 pieds
- Déterminer le poids pour l'âge: Faible ___ Normal ___
- Rechercher la pâleur palmaire. Est-elle :

8. Pas de pâleur:… **1** Pâleur palmaire légère:… **2** Pâleur palmaire sèvère:.. **3**

150 a. MALNUTRITION SÉVÈRE **1** **2**
151 a. INSUFFISANCE PONDÉRALE **1** **2**
152 a. POIDS NORMAL **1** **2**
150 b. ANÉMIE GRAVE..... **1** **2**
151 b. ANÉMIE **1** **2**
152 b. PAS D'ANÉMIE..... **1** **2**

VERIFIER L'ETAT VACCINAL et LA SUPPLEMENTATION EN VITAMINES A ET D

Entourer les vaccins et les vitamines à administrer le jour de la visite

Naissance	*6 semaines*	*10 semaines*	*14 semaines*	*9 mois*	
BCG	**DTC 1**	**DTC 2**	**DTC 3**	**Antirougeole**	**Vitamine A: 1ère dose 2ème dose 3ème dose**
VPO 0	**VPO 1**	**VPO 2**	**VPO 3**		**Vitamine D: 1ère dose 2ème dose**
HB1	**HB2**			**HB3**	
	Hib1	**Hib2**	**Hib3**		**18 mois : Premier rappel DTCP**

EVALUER L'ALIMENTATION si l'enfant a moins de 2 ans ou est classé DIARRHE PERSISTANTE, INSUFFISANCE PONDÉRALE ou ANÉMIE ou si cassure de la courbe de poids.

9. Est-ce que <NOM> est allaité au sein ?..... Oui… **1** Non... **2**

Si OUI: **COMBIEN DE FOIS EN 24 HEURES?** |___|___| Donnez-vous le sein durant la nuit? ..... Oui Non

LE NOMBRE DE TETEES EST CONFORME AUX RECOMMANDATIONS? ..... Oui Non

L'ENFANT CONSOMME-T-IL D'AUTRES ALIMENTS ET/OU LIQUIDES? ..... Oui Non

Si oui, quels aliments ou liquides? _____

LE TYPE D'ALIMENTS EST-IL APPROPRIE? ..... Oui Non

COMBIEN DE FOIS PAR 24 HEURES? |___|___| fois.

LE NOMBRE DE REPAS PAR JOUR EST-IL CONFORME AUX RECOMMANDATIONS?..... Oui Non

Comment donnez-vous à manger à l'enfant? _____

Quelle quantité lui donnez-vous à chaque repas? (Précisez)_____

L'enfant reçoit-il sa propre ration? Oui ____ Non ____

Finit-il sa ration? Oui ____ Non ____

Est-ce que quelqu'un aide l'enfant à manger? _____ Et comment? _____

Pendant sa maladie, la mère a-t-elle changé l'alimentation de l'enfant? Oui ____ Non ____ Si Oui, comment? _____

163. PROBLEME D'ALIMENTATION?.....**1** **2**
a. Nombre de tétée insuffisant ou pas à la demande **1** **2**
b. Administration de liquides ou d'aliments avant l'âge de 6 mois **1** **2**
c. Quantité d'aliments insuffisante / jour **1** **2**
d. Nombre de repas insuffisant / jour **1** **2**
e. Alimentation non variée/de consistance légère/ non enrichie avec de l'huile et/ou protéines.....**1** **2**
f. Pas de ration individuelle **1** **2**
g. Absence d'alimentation active **1** **2**
h. Utilisation du biberon **1** **2**
i. Diminution des apports alimentaires durant la maladie ..**1** **2**
j. Autres (préciser) : _____) **1** **2**

15. EVALUATION DES AUTRES PROBLEMES : Y'A-T-IL D'AUTRES PROBLEMES? ..... Oui... **1** Non... **2**

160. **CONJONCTIVITE** (AUTRE PROBLEME 1) **1** **2**
161. **DERMATOSE** (AUTRE PROBLEME 2) **1** **2**
162. AUTRE PROBLEME (Sp.:_____).....**1** **2**

164. **L'ENFANT A-T-Il BESOIN D'UN TRANSFERT D'URGENCE ?**..... Oui ... **1** Non... **2**

164a. **L'ENFANT A-T-Il BESOIN D'ETRE GARDE EN OBSERVATION A LA FORMATION SANITAIRE?**..... Oui... **1** Non... **2**

165. **L'ENFANT A-T-IL BESOIN D'UNE VISITE DE SUIVI :**.....|___|___| jours → *Entrer* 00 *si pas besoin d'une visite de suivi* .

166. **Y'A-T-IL BESOIN DE PRESCRIRE DES ANTIBIOTIQUES POUR DES PROBELMES NON COUVERTS PAR LA PCIME?** ..... Oui... **1** Non... **2**

FORME 3: VALIDATION DE L'EXAMEN

Questionnaire: |___|___‖___|___|
FS code ‖ Enfant ID

16. **► Vérifier si l'enfant a besoin de recevoir une prise de vitamine A aujourd'hui:**

Oui … **1** (Vitamine A nécessaire) | Non… **2** (n'a pas besoin de vitamine A) ➔ Si NON ou NE SAIT PAS, *passer à la q. # 19* | Ne sait pas … **8**

☞ **17.** *Si OUI*, *DEMANDER AU PARENT QUI ACCOMPAGNE L'ENFANT* :

Est-ce que <NOM> a reçu de la vitamine A aujourd'hui? (Montrer au parent la gélule de vitamine A adaptée à l'âge de l'enfant)

Oui …**1** ➔ *Passer à la question # 19* | Non… **2** | Ne sait pas … **8**

☞ **18.** *SI NON ou NE SAIT PAS* : **Est-ce que le professionnel de santé vous a demandé de ramener <NOM> pour recevoir la vitamine A un autre jour?**

Oui … **1** | Non… **2** | Ne sait pas … **8**

19. **► Vérifier si le carnet de santé ou la carte de vaccination de l'enfant est disponible:**

Oui … **1** (Disponible) | Non… **2** (Non disponible)

20. **► Vérifier si l'enfant a besoin de recevoir une vaccination aujourd'hui:**

Oui … **1** (Besoin de vaccination) | Non… **2** ➔ *ARRÊTEZ* (Pas de besoin de vaccination) | Ne sait pas … **8** ➔ *ARRÊTEZ*

Si NON ou NE SAIT PAS, S'ARRÊTER À CE NIVEAU

SI OUI (vaccination nécessaire), DEMANDER AU PARENT :

☞ **21. Est-ce que <NOM> a reçu un vaccin aujourd'hui ou le professionnel de santé l'a référé pour vaccination au niveau de la SMI?**

Oui … **1** ➔*S' ARRÊTER À CE NIVEAU* (Vaccin administré ou enfant référé pour vaccination à la SMI) | Non… **2** (Vaccin non administré et l'enfant non référé) | Ne sait pas … **8**

☞ **22.** *SI NON ou Ne sait pas*: **Est-ce que le professionnel de santé vous a demandé de ramener <NOM> pour vaccination un autre jour ou d'aller au niveau d'une autre structure pour le vacciner?**

Oui … **1** | Non… **2**

ⓘ SUPERVISEUR : NOTER LES CLASSIFICATIONS AU NIVEAU DES TABLEAUX DU FORME 1, PAGE 8

Formulaire 4. EQUIPMENTS ET SUPPORTS

Date: ____/____/ 2007 Province: _____ Milieu : Urbain :… **1** Rural :… **2**

Formation sanitaire: Code |___|___| Nom _____ Type: CS:… **1** D:… **2**

Equipe: |_____|

Discutez avec le responsable de la formation sanitaire pour déterminer le nombre de professionnels de santé impliqués dans la santé de l'enfant:

Tableau 1: Profils des professionnels de santé impliqués dans la prise en charge des enfants malades

Profil	**Effectif des PS impliqués dans la prise en charge des enfants**	**Effectif des PS impliqués dans la prise en charge des enfants et qui sont formés à la PCIME**	**Effectif des PS formés à la PCIME présents aujourd'hui**
Médecin			
Infirmier			
Total			

Demandez au responsable de la formation de vous guider durant la visite de la structure. Observez et vérifiez la disponibilité des différents équipements et supports et remplissez la forme en se basant sur votre propre constat.

EQUIPEMENTS ET SUPPORTS

E1. La formation sanitaire dispose-t-elle des équipements et supports suivants?

a. Pèse - personne disponible et fonctionnel .....a. Oui:... **1** Non:... **2**
b. Pèse - bébé disponible et fonctionnel.....b. Oui:... **1** Non:... **2**
c. Montre disponible et fonctionnelle ou autre .....c. Oui:... **1** Non:... **2**
d. Matériel de préparation des SRO et de réhydratation orale (bocal d'un litre, gobelet et cuillères) .....d. Oui:... **1** Non:... **2**
e. Chambre d'inhalation avec masque (baby haler) ..... e. Oui:... **1** Non:... **2**
f. Thermomètre ..... f. Oui:... **1** Non:... **2**
g. Fiches de stock et registre des médicaments .....g. Oui:... **1** Non:... **2**
h. Registre de vaccination ..... h. Oui:... **1** Non:... **2**
i. Registre intégré de santé de l'enfant..... i. Oui:... **1** Non:... **2**
j. Carte de conseils pour la mère (PCIME) ou carnet de santé de l'enfant..... j. Oui:... **1** Non:... **2**
k. Algorithme PCIME : Prise en charge de l'enfant malade ..... k. Oui:... **1** Non:... **2**
l. Fiches PCIME ..... l. Oui:... **1** Non:... **2**
m. Fiche journalière PCIME..... m. Oui:... **1** Non:... **2**
n. Rapport mensuel PCIME..... n. Oui:... **1** Non:... **2**
o. Fiche de référence et contre référence PCIME..... o. Oui:... **1** Non:... **2**
p. Chauffage / Climatiseur ..... p. Oui:... **1** Non:... **2**
q. Alimentation en eau (eau courante, eau de pompe ou eau provenant d'une citerne) q. Oui:... **1** Non:... **2**
r. Moyens d'évacuation des cas graves nécessitant le transfert ..... r. Oui:... **1** Non:... **2**

**L'accessibilité des moyens d'évacuation est définie à la fois par l'accessibilité physique (distance) et économique* (abordable) *et ce pour la majorité de la population desservie par la formation sanitaire durant les heures ouvrables.*

E1z. La FS offre-t-elle des prestations de vaccination?

Oui:... **1** Non:... **2** ➔ *Allez à la partie traitant de la disponibilité des médicaments, question #D1*

E2. La FS dispose-t-elle de seringues et aiguilles appropriées pour la vaccination?

Oui:... **1** Non:... **2** ➔ *Allez à la question # E3*

☞ **E2a.** 🔔 *SI OUI* (seringues et aiguilles appropriées): **Comment son-elles utilisées par le PS?**

Usage unique :… **1** Usage multiple:… **2** ➔ *Allez à la question # E3*

☞ **E2b.** Si seringues jetables: **La FS dispose-t-elle de boîte pour collecter les aiguilles utilisées?**

Oui:... **1** Non:... **2**

E3. La FS dispose-t-elle d'un stérilisateur ou d'une cuisinière ou étuve fonctionnels?

Oui:... **1** Non:... **2** ➔ *Allez à la question # E4a*

☞ **E3a.** 🔔 *SI OUI*: **Est-ce que la FS utilise l'un de ces moyens pour stériliser les seringues et les aiguilles?**

Oui:... **1** Non:... **2**

E4a. La FS dispose-t-elle d'un réfrigérateur fonctionnel ?

Oui:... **1** Non:... **2** ➔ *Allez à la question # E5*

☞ **E4b.** 🔔 *SI OUI*: **Y'a-t-il un thermomètre de contrôle de la température fonctionnel dans le réfrigérateur?**

Oui:... **1** Non:... **2** ➔ *Allez à la question # E5*

☞ **E4c.** *IF YES:* **La température du réfrigérateur est-elle entre 2^0C et 8^0C au moment de la visite ?**

Oui:... **1** Non:... **2**

E5. Y'a-t-il des accumulateurs de froids à la FS?

Oui:... **1** Non:... **2** ➔ *Allez à la question # E5b*

☞ **E5a.** 🔔 *SI OUI*: **Les accumulateurs son-ils congelés ?**

Oui:... **1** Non:... **2**

E5b. La FS dispose-t-elle d'un porte vaccin ?

Oui:... **1** Non:... **2** No applicable (milieu urbain):… **3**

E6. La FS dispose-t-elle des vaccins suivants le jour de la visite ?

a. BCG	a.	Oui:... **1**	Non:... **2**
b. VPO	b.	Oui:... **1**	Non:... **2**
c. DTC	c.	Oui:... **1**	Non:... **2**
d. Rougeole	d.	Oui:... **1**	Non:... **2**
e. Hib	e.	Oui:... **1**	Non:... **2**
f. Hépatite B	f.	Oui:... **1**	Non:... **2**
g. Vaccin anti tétanique (VAT)	g.	Oui:... **1**	Non:... **2**

E7. Y'a-t-il péremption de l'un des vaccins suivants ?

a. BCG	a.	Oui:... **1**	Non:... **2**
b. VPO	b.	Oui:... **1**	Non:... **2**
c. DTC	c.	Oui:... **1**	Non:... **2**
d. Rougeole	d.	Oui:... **1**	Non:... **2**
e. Hib	e.	Oui:... **1**	Non:... **2**
f. Hépatite B	f.	Oui:... **1**	Non:... **2**
g. Vaccin anti tétanique (VAT)	g.	Oui:... **1**	Non:... **2**

E8. Y'a-t-il un ou des flacons ouverts du vaccin contre la rougeole à l'intérieur du réfrigérateur ?

Oui:... **1** Non:... **2**

E9. Y'a-t-il un ou des flacons congelés du vaccin contre la rougeole ?

Oui:... **1** Non:... **2**

DISPONIBILITE DES MEDICAMENTS

<u>Vérifiez</u> le stock des médicaments. Répondez aux questions en se basant sur votre propre constat.

D1. La FS dispose-t-elle des médicaments suivants au moment de la visite ?

a. **SRO** .....a. Oui:... **1** Non... **2** Périmé:…**3**

b. **Cotrimoxazole** (comprimé, sirop – antibiotique de première intention pour les cas de pneumopathie et de dysenterie) .....b. Oui:... **1** Non... **2** Périmé:…**3**

c. **Amoxicilline** (comprimé, sirop – antibiotique pour les cas d'angine, de deuxième intention pour les cas de pneumopathie et de dysenterie).....c. Oui:... **1** Non... **2** Périmé:…**3**

g. **Pénicilline V** comprimé (1 M IU) ou sirop (250000 or 400000 IU/5ml).....g. Oui:... **1** Non... **2** Périmé:…**3**

g1. **Erythromycine** sachets / comprimé (125, 250, 500 mg) .....g1. Oui:... **1** Non... **2** Périmé:…**3**

h. **Vitamine A** *bleu* (100,000 IU) ou *rouge* (200,000IU) gélule .....h. Oui:... **1** Non... **2** Périmé:…**3**

h1. **Vitamine D** ampoule (600,000 IU) .....h1 Oui:... **1** Non... **2** Périmé:…**3**

i. **Fer** comprimé ou sirop (60mg fer élément) .....i. Oui:... **1** Non... **2** Périmé:…**3**

j. **Paracétamol** sirop (120mg/5 ml), sachets (100 → 300mg), comprimé (500mg), suppositoires ou **Aspirine** comprimé (500mg) ou sachet (100, 250, 500mg) .....j. Oui:...**1** Non... **2** Périmé:…**3**

l. **Tétracycline pommade ophtalmique** .....l. Oui:...**1** Non... **2** Périmé:…**3**

n. **Salbutamol** ou **terbutaline** aérosol doseur .....n. Oui:...**1** Non... **2** Périmé:…**3**

o. **Salbutamol** sirop (2mg/5 ml), comprimé (2mg) ou **Terbutaline** sirop (1.5 mg/5 ml), comprimé (2,5 mg) .....o. Oui:...**1** Non… **2** Périmé:…**3**

p. **Diazépam** ampoule (10mg/2ml) ou **Médazolam** ampoule (5mg/5ml) .....p. Oui:... **1** Non... **2** Périmé:…**3**

D2. La FS dispose-t-elle des médicaments injectables et eau stérile pour la préparation des injections au moment de la visite ?

a. **Thiamphénicol IM** .....a. Oui:... **1** Non... **2** Périmé:…**3**

b. **Ampicilline IM**.....b. Oui:... **1** Non... **2** Périmé:…**3**

c. **Benzylpénicilline IM** .....c. Oui:... **1** Non... **2** Périmé:…**3**

c1. **Benzathine pénicilline IM**.....c1. Oui:... **1** Non... **2** Périmé:…**3**

d. **Gentamycine IM** .....d. Oui:... **1** Non... **2** Périmé:…**3**

e. Eau stérile pour préparer les injections .....e. Oui:... **1** Non... **2** Périmé:…**3**

f2. Sérum salé 9 pour mille (pour la réhydratation intraveineuse)..f2. Oui:... **1** Non... **2** Périmé:…**3**

D3. A combien de temps remonte la dernière livraison de médicaments ?

Moins de 30 jours :… **1** Entre 30 et 59 jours:… **2** Plus de 60 jours :… **3**

ORGANISATION DES SERVICES

Posez les questions suivantes au professionnel de santé ayant été observés durant la prise en charge d'enfants malades. Dans le cas où plusieurs professionnels de santé ont été observés, discutez ces questions avec l'ensemble des PS observés et en concertation avec le groupe, notez les réponses. Notez vos commentaires sur le recto de la page en cas de difficultés de récolte de données.

S1. Quel est le nombre de jours ouvrables par semaine (y compris pour les urgences ou les jours de garde) ? .....|___| jours/semaine

S2. Quel est le nombre de jours par semaine durant lesquels des prestations curatives sont offertes pour les enfants ?..... |___| jours/semaine

S3. La FS offre-t-elle des prestations de vaccination?

Oui:... **1** Non:... **2** ➔ *Allez à la question # S4*

☞ **S3a. Combien de séances de vaccination sont offertes par semaine?**....|___| no./semaine

☞ **S3b. La FS applique-t-elle la politique du flacon ouvert ?**

Oui:... **1** Non:... **2**

S4. La FS assure-t-elle des services mobiles ("équipe mobile")?

Oui:... **1** Non:... **2** ➔ *Allez à la question # S5*

🔔 *Si <u>OUI</u>* (service mobile assuré):

☞ **S4a. Quel est le nombre de sorties planifiées durant l'année 2006?** .....|___| sorties

☞ **S4b.** Quel est le nombre de sorties planifiées mais non réalisées pour l'année 2006?....|___| sorties

☞ **S4c. Quelles sont les prestations offertes par l'équipe mobile ?**

a. Prestations préventives (PNI, vitamines A et D, pesée, PF, CPN, etc.) .....a. Oui:... **1** Non:... **2**

b. Prestations curatives.....b. Oui:... **1** Non:... **2**

c. Promotion de la santé (éducation sanitaire, hygiène du milieu, etc.) ...c. Oui:... **1** Non:... **2**

☞ **S4d. Est-ce que l'équipe mobile est <u>systématiquement</u> médicalisée (présence d'un ou plusieurs médecins) et ce à toutes les sorties)?**

Oui:... **1** ➔ *Allez à la question # S5* Non:... **2**

☞ **S4e.** 🔔 Si *<u>NON</u>* : **Pourquoi ?** Précisez: _____

S5. Quel est le nombre de visites de supervision dont a bénéficié la FS durant les 6 derniers mois ? .....|___|___| fois/6 mois

➔ *Si <u>aucune</u> visite durant les 6 derniers mois, noter* 0 *et allez à la question S7*

☞ **S6. Parmi ces visites de supervision, combien ont été des visites de suivi après la formation PCIME (en dehors des visites de supervision de routine)?**.....|___|___| visites de suivi après la formation PCIME

POSEZ LA QUESTION S6a et S6b AUX PS EN SE RÉFÉRRANT À LA VISITE DE SUPERVISION DE ROUTINE LA PLUS RÉCENTE, LES VISITES DE SUIVI APRÈS LA FORMATION PCIME ÉTANT EXCLUSES:

☞ **S6a. Durant la dernière visite de supervision de routine qui a eu lieu au cours des 6 derniers mois, y'a-t-il eu supervision des activités de santé de l'enfant ?**

Oui:... **1** Non:... **2** ➔ *Allez à la question # S7* Ne sait pas :… **8** ➔ *Allez à la question # S7*

☞ **S6b.** *Si Oui* : **Le ou les superviseurs ont-ils observé la prise en charge clinique des cas d'enfants malades ?**

Oui:... **1** Non:... **2** Ne sait pas:… **8**

S7. La FS dispose-t-elle d'un registre de supervision ?

Oui:... **1** Non:... **2** ➔ *Allez à la question # S9* Ne sait pas:… **8** ➔ *Allez à la question # S9*

☞ **S7a.** *Si Oui :* **Des recommandations pour l'équipe de la FS ont-elle été notifiées sur le registre de supervision ?**

Oui:... **1** Non:... **2** Aucune trace de la visite:... **3** ➔ *Allez à la question # S9*

☞ **S7b. A combien de mois remonte la dernière notification faite sur le registre de supervision?**

|___|___| mois passés

S9. Combien de temps faut-il pour arriver à l'hôpital le plus proche en utilisant le mode de transport le plus commun* ?.....|___|___| heures |___|___| minutes

**Le mode de transport commun signifie le moyen de transport le plus disponible et le plus abordable pour la majorité de la population.*

S10. Avez-vous déjà eu le cas d'un enfant nécessitant le transfert d'urgence à l'hôpital et qui n'a pas été transféré ?

Oui:... **1** Non:... **2** ➔ *Allez à la question # S11*

☞ **S10a.** *Si Oui,* **Pourquoi ?** _____

_____

S11. D'après vous sur 10 enfants pour qui le transfert d'urgence à l'hôpital est indiqué, combien arrivent-ils effectivement à l'hôpital ?

|___|___| enfants

SYSTEME D'INFORMATION

Demandez au responsable de la FS de vous aider à identifier les supports d'information de la F S. Consultez les supports pour répondre aux questions suivantes. Notez "NI" si pas assez d'informations.

Note: La disponibilité des supports d'information varie en fonction du type de FS.

F1. La FS dispose-t-elle d'un registre pour la prise en charge d'enfants de moins de 5 ans ?

Oui:... **1** Non:... **2** ➔ *If NO, Stop here* ⊗

F2. La FS utilise-t-elle deux registres différents pour noter séparément les cas d'enfants malades pris en charge et les prestations de vaccination ?

Oui:... **1** Non:... **2**

- **VÉRIFIEZ LES DONNÉES DU MOIS DE <u>SEPTEMBRE 2007</u> ET NOTEZ LES RÉSULTATS SUR LE TABLEAU SUIVANT**

Compter en exploitant les données des registres l'effectif total des contacts pour maladie et pour vaccination pour le mois de Septembre de l'année 2007. Un enfant peut bénéficier de plusieurs prestations durant la même visite à la FS.

		CONSULTATION POUR MALADIE		CONSULTATION POUR VACCINATION
R1.	**Quel est le nombre total de contacts avec la FS durant le mois de septembre 2007 pour l'ENSEMBLE des patients?**	|__|__|__|__|__|		
R2.	**Quel est le nombre total de contacts avec la FS durant le mois de septembre 2007 pour les enfants ÂGÉS DE MOINS DE 5 ANS indépendamment du sexe?**	|__|__|__|__|__|	**R5.**	|__|__|__|__|__|
R3.	**Quel est le nombre total de contacts avec la FS durant le mois de septembre 2007 pour les enfants âgés de moins de 5 ans de sexe FÉMININ?**	|__|__|__|__|__|	**R6.**	|__|__|__|__|__|
R4.	**Quel est le nombre total de contacts avec la FS durant le mois de septembre 2007 pour les nourrissons de MOINS DE 2 MOIS indépendamment de l'âge?**	|__|__|__|__|__|		

FEUILLE D'OBSERVATION

Date: _____ Enquêteur :_____ **Equipe: ____**

Province: _____ Code de la formation sanitaire |___|___|

1. ORGANISATION du travail au niveau de la FS : *a) Circuit des enfants (passage systématique de moins de 5 ans par la cellule SMI ? b) Charge globale de travail sur la base d'un document et chiffrée (enfants et adultes) ? c) Délai d'attente ? d) Existence d'un système pour prioriser les cas gravement malades ? e) Répartition des taches entre médecin et infirmier ? f) Qui assure la partie " conseiller " la mère pour l'enfant malade (médecin ou infirmier) ?*

2. MÉDICAMENTS : *a) Le rythme de livraison des médicaments par le niveau provincial est-il régulier ? b) Si oui, à quel rythme (tous les 2 mois, 3 mois…? c) Nombre de rupture de stock des médicaments essentiel de la PCIME et leurs durées durant l'année 2006 ? d) Si rupture d'antibiotiques PCIME durant les 3 derniers mois, la rupture a-t-elle été plus d'une semaine ? e) Modalités d'établissement des besoins en médicaments et d'approvisionnement (quantité mensuelle consommée, reconduite ou majoration de la commande de l'année précédente, etc..) et si priorisation de certains médicaments ? f) Disponibilité et qualité de remplissage des supports de gestion des médicaments (fiches de stock et registre de la main courante au niveau de la pharmacie et du poste de distribution) ? g) Accessibilité financière des familles aux médicaments (achat en privé) ?*

3. TRANSFERT DES CAS URGENTS : *a) Eloignement de l'hôpital ? B) Disponibilité d'ambulance ? Si non, autres moyens d'évacuation accessibles ? c) Perception de la qualité de services au niveau de l'hôpital ? d) Système de référence et de contre référence est-il opérationnel ?*

4. UTILISATION DES SERVICES : *a) Y'a-t-il un problème d'accessibilité de la FS pour la population ? b) Y a-t-il eu une augmentation de l'utilisation des services depuis l'introduction de la PCIME dans cette FS ? Si oui, y a t'il des données qui confirme ce constat (chiffres) ?*

5. SIS: Qualité, analyse et utilisation des données pour la planification au niveau local et feed back du niveau supérieur : *a) Que pense l'équipe de la FS du SI de la santé de l'enfant (nombre, fiabilité et utilité) ? b) Quel est le nombre de supports utilisés pour noter les données relatives à la PEC de l'enfant malade depuis son entrée et jusqu'au moment où il quitte la FS (registres et dossier personnel) ? c) Toutes les données sont-elles notées sur les supports de l'enfant (toutes les cases et toutes les colonnes sont-elles remplies : âge, sexe, etc..) ? d) Les données sont-elles analysées par l'équipe et utilisées au niveau local (donner des exemples) ? e) Y'a-t-il un tableau de bord ? f) Les données PCIME sont-elles affichées ?*

6. PERCEPTION DES CONTRAINTES MAJEURES POUR LA MISE EN OEUVRE DE LA STRATEGIE PCIME AU NIVEAU DE LA FS ET LES SOLUTIONS PROPOSEES

Noter la suite sur le verso de la page