

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.