

## THE IMPLEMENTATION STATUS OF THE INTEGRATED MANAGEMENT OF NEWBORN AND CHILDHOOD ILLNESS (IMNCI) STRATEGY IN ETHIOPIA

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### ABSTRACT

*IMNCI is a cost effective strategy that deals with diseases and conditions of the greatest health burden to children. The IMNCI strategy aims to improve the skills of health workers, the health system and the family and community practices, and strengthen the link between the health system and the community.*

*Currently, Ethiopia is in the expansion phase with all regions implementing IMNCI and there has been progress in all the three components of IMNCI. Out of 662 public Hospitals and Health Centers, 261 (40%) have IMNCI trained health workers managing under-five children. Out of the 622 Districts in the country, 220 (35%) are actively implementing IMNCI. Fifty-two percent (52%) of the 14,500 target health workers (Paediatricians, General Practitioners; Health Officers and Nurses working in under five clinics) have been trained either in pre-service or in-service trainings. Seventy percent (23/31) of government health professional training institutions are conducting pre-service IMNCI training for nursing, health officer and recently medical students. Community IMNCI interventions are well underway in forty-one (41) districts in seven (7) regional states and a total of 849 health personnel (541 health workers and 298 HEWs) were trained in the training of trainers (TOT) course on C-IMNCI. These in turn trained 4652 Community Resource Persons (CRP) who were deployed serving 237,370 households in 216 Kebeles and are working under the immediate supervision of the Health Extension Workers.*

*A mini health facility survey was conducted in all regions in 2006 involving 3-4 facilities per region and covering a total of 42 reportedly IMNCI implementing health facilities which were selected by convenience. On the day of the visit, 38% (16/42) were not implementing IMNCI case management; mainly due to attrition of the trained health workers in 8 of them, and due to improper assignment and inadequate attention given to the service by the facilities. This finding underlines the critical importance of regular supportive supervision and the need for continuous capacity building for sustained implementation of IMNCI. On the other hand, observation of the case management process in 27 sick children revealed that the IMNCI trained health workers were able to practice the integrated approach satisfactorily by the fact that they were able to correctly check for the presence of general danger signs in 78%, the four main symptoms in 93%, nutritional and immunization status in 81% and 78% of the children respectively. Besides, 96% of the sick children had been prescribed the correct treatments. However, only 56% of the care takers got complete counselling for their children's conditions and this calls for more emphasis on counselling skills during IMNCI trainings and more importantly the need for skills re-enforcement through close follow up and supportive supervision.*

*resources and lack of clear guidelines for remuneration of resource persons were some of the major constraining factors affecting the scaling up of IMNCI implementation. The lack of adequate supportive supervision is a major factor affecting the implementation of IMNCI at facility level and needs to be addressed properly.*

*Scaling up IMNCI implementation requires strong partnership and continuous advocacy for effective mobilization and utilization of available resources. Scaling-up of IMNCI implementation through training of at least two health workers per health facility is fundamental to ensure continuity of care. Strengthening of Pre-service and Community IMNCI, improvement of the quality of referral care in first referral hospitals, creating more synergy with the HEP and actively engaging the private sector are the future directions for universal coverage and effective implementation of IMNCI in Ethiopia.*

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## INTRODUCTION

Every year about 11 million children in developing countries die before they reach their fifth birthday, many of them during the first year of life. Ethiopia is one of the developing countries with a high infant and under five mortality rates of 77 and 123 per thousand live births respectively (Demographic and Health Survey, 2005). More than 70% of these child deaths are due to five diseases namely pneumonia, diarrhea, malaria, measles and malnutrition, and often to a combination of these conditions. These diseases are also the reasons for seeking care for at least three out of four children who come to health facilities. As children usually present with more than one of these conditions, there is a need for an integrated approach in order to manage the child in a holistic manner.

The IMNCI strategy aims to improve the skills of health workers, the health system and the family and community practices, and strengthen the link between the health system and the community. The IMCI/IMNCI package is useful for the majority of developing countries with an infant mortality rate of over 40/1000 live births and it is ranked by the World Bank among the ten most cost effective health interventions in low and mid-level income countries. To date, over 44 countries out of the 46 member states in the African region and over 100 countries globally are actively implementing IMCI/IMNCI.

Thus, the Ministry of Health of the Federal Democratic Republic of Ethiopia endorsed IMCI in 1997 as a key strategy to reduce child mortality and morbidity and to promote child growth and development and currently the country is in the expansion phase of implementation.

IMNCI is identified as a major delivery mechanism for the key child survival interventions both in the National Child Survival Strategy (2004) and the Essential Health Services Package for Ethiopia (2005) documents.

Currently, the child survival partnership has facilitated to bring together key child survival players and there are better opportunities to scale up child survival interventions including IMNCI. However, accelerating the implementation of child survival interventions to meet the Child Health MDG is a big challenge in the face of the existing weak health system. Shortage and high turnover of staff at all levels was a major constraining factor in scaling up IMNCI implementation. Doing timely follow up has been a challenge due to difficulty of geographic access and problems of logistics. Overall, shortage of human and financial resources has been the major challenge impeding the scaling up of IMNCI implementation.

## OVERVIEW OF ACHIEVEMENTS TO DATE

### General progress to date

There is an IMNCI focal person assigned by the Ministry of Health and two technical officers seconded to the Federal Ministry of Health by WHO and UNICEF to assist in IMNCI/child health activities. Even though IMCI task forces were initially established at the federal level and in all regions and contributed a lot in the early phase of its implementation, currently none of them are functional. However, the Child Survival Technical Working Group is coordinating the implementation of IMNCI and other child survival interventions at central level. Currently, 8 of the 11 regions have IMNCI focal persons fully assigned to coordinate the implementation of IMNCI activities at

regional level. Five regions have adequate pool of trainers to conduct IMNCI case management skills trainings.

All regions are implementing IMNCI and there has been progress in all the three components of IMNCI. Out of 662 public Hospitals and Health Centers, 261 (40%) have IMNCI trained health workers managing under-five children. Out of the 622 Districts in the country, 220

(35%) are actively implementing IMNCI. Seven thousand and five hundred (52%) of the 14,500 target health workers (Paediatricians, General Practitioners, Health Officers and Nurses working in under five clinics) have been trained either in pre-service or in-service trainings. Over 70% of the IMNCI trained health workers were trained through the pre-service program (Table 1).

**Table 1: - Total number of IMNCI trained health workers by mode of training, April 2007.**

| Mode of IM-NCI training | Total No. of IM-NCI trained health workers till end of 2005 | No. of health workers trained in IMNCI in 2006 and 1 <sup>st</sup> Quarter of 2007 | Total       |     |
|-------------------------|-------------------------------------------------------------|------------------------------------------------------------------------------------|-------------|-----|
|                         |                                                             |                                                                                    | No.         | %   |
| In-service              | 1590                                                        | 522                                                                                | <b>2112</b> | 28  |
| Pre-service             | 4254                                                        | 1134                                                                               | <b>5388</b> | 72  |
| <b>TOTAL</b>            | <b>5844</b>                                                 | <b>1656</b>                                                                        | <b>7500</b> | 100 |

### Facility support

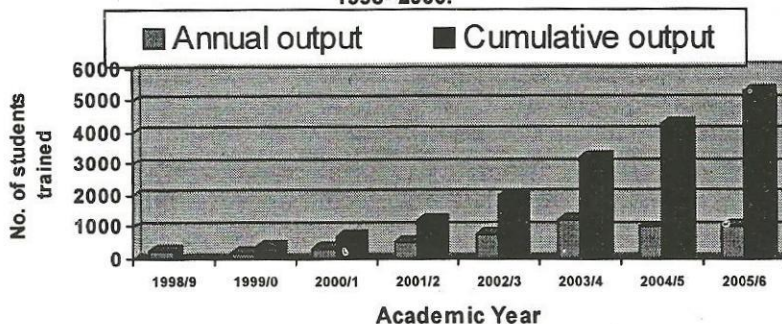
Survey of 358 health facilities (54% of all health facilities; 45 Hospitals and 313 Health Centers) was conducted nationwide in March 2006 using Polio Surveillance Officers to assess the facility support for IMNCI implementation. They were oriented on the process of data collection using a structured questionnaire and checklist. The results showed availability of functional Weighing Scale in 81% (290/358), Integrated U5 Registration Book and Chart Booklet in 30% (105/358) and functional ORT Corner in 49% (174/358) of the visited health facilities.

### Pre-service IMNCI training

Seventy percent (23/31) of government health professional training institutions are conducting pre-service IMNCI training for nursing and health officer students. IMNCI is incorporated in the diploma nursing and Health Extension Workers Curricula centrally. The Medical Faculty of Addis Ababa University has started training medical students in pre-service IMNCI as of the academic year 2005-2006. The IMNCI Model Handbook has been adapted and printed to serve as instruction material in the training institutions. **Figure 1** shows the annual and cumulative output of pre-service IMNCI trained health workers, 1998-2006.



Figure 1: Annual and cumulative output of Pre-service IMCI training, 1998- 2006.



### Quality of care in IMNCI implementing health facilities

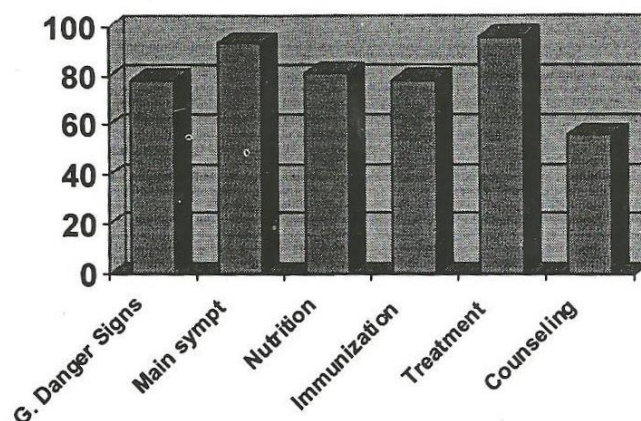
Assessment of quality of care and facility support was conducted in IMNCI implementing health facilities in all regions in January 2006. The objective of this mini-survey was to assess the quality of care provided by IMNCI trained health workers and the facility support for IMNCI implementation. Two experienced IMNCI supervisors made field visits to selected IMNCI implementing health facilities in all of the 11 regions with an average of 4 facilities per region (range 2-6). A total of 42 IMNCI implementing health facilities selected by convenience, often in the vicinity of regional and zonal towns, were visited. The IMNCI follow-up after training tools and procedures were used which includes; observation of the case management process with skill reinforcement, exit interview of care takers and review of facility supports.

Out of the 42 Health Facilities visited, 16 (38%) were not implementing IMNCI case management on the day of the visit. In 8 facilities, the IMNCI trained Health Workers have left the facility while in the other 8, there were 1-3 IM

NCI trained health workers but they were not managing sick children mainly due to improper assignment and inadequate attention given to the service by the facilities mainly as a result of poor follow-up and supportive supervision at district level. Observation of case management was made in the 26 (62%) health facilities implementing IMNCI on the day of the visit and a total of 27 case observations were made as performed by 26 Nurses and one Medical Doctor.

During the case management observation, 78% and 93% of the sick children were checked for the presence of general danger signs and the four main symptoms respectively. Nutrition and immunization status were checked properly in 81% and 78% of the children respectively. This is a good indication that functioning IMNCI trained health workers are using the integrated approach when managing sick children. Even though 96% of the sick children had been prescribed the correct treatments, only 56% got complete counselling for their condition. This finding calls for more emphasis on counselling skills during IMNCI trainings and more importantly the need for close follow up and supportive supervision. (See Figure 4)

Fig. 4:- Proportion of correct case management practices observed in the 27 cases during the health facility survey, March 2006.



Of the visited health facilities, adequate space, drugs and supplies were observed in 83% (35/42); functioning ORT Corner in 62% (26/42) and properly functioning immunization facilities in 95% (40/42). Quality of records was not adequate and the Integrated U5 Registration Book was found in 43% (18/42) of the visited health facilities. On exit interview, all care takers expressed satisfaction with the service they were given.

#### Community IMNCI implementation

Consensus to initiate C-IMNCI implementation was reached during the first national IMNCI review and planning workshop in March 2001 where Amhara and Tigray Regions were selected to pilot its implementation. C-IMNCI baseline assessment was carried out in Dabat and Wukro districts of Amhara and Tigray regions respectively, and the 20 key family and household practices were adapted during a national dissemination workshop in 2002 based on the findings of the baseline survey. Then the National Communication Strategy and Im-

plementation Guideline for the Household and Community IMNCI were developed. Subsequently, the Trainers Guide and Manuals for the training of Community Resource Persons (CRPs) and the Messages for promoting the 20 key family and community practices were developed, translated into four (4) local languages and have been used in the field successfully.

Currently, community IMNCI implementation activities are initiated in 10 of the 11 regions in the country and interventions are well underway in seven (7) regions. Forty-one (41) districts in Amhara, Tigray, Oromiya, SNNPR, Addis Ababa, Harari and Afar regions have started interventions within the community and households by training voluntary Community Resource Persons (Figure 2).

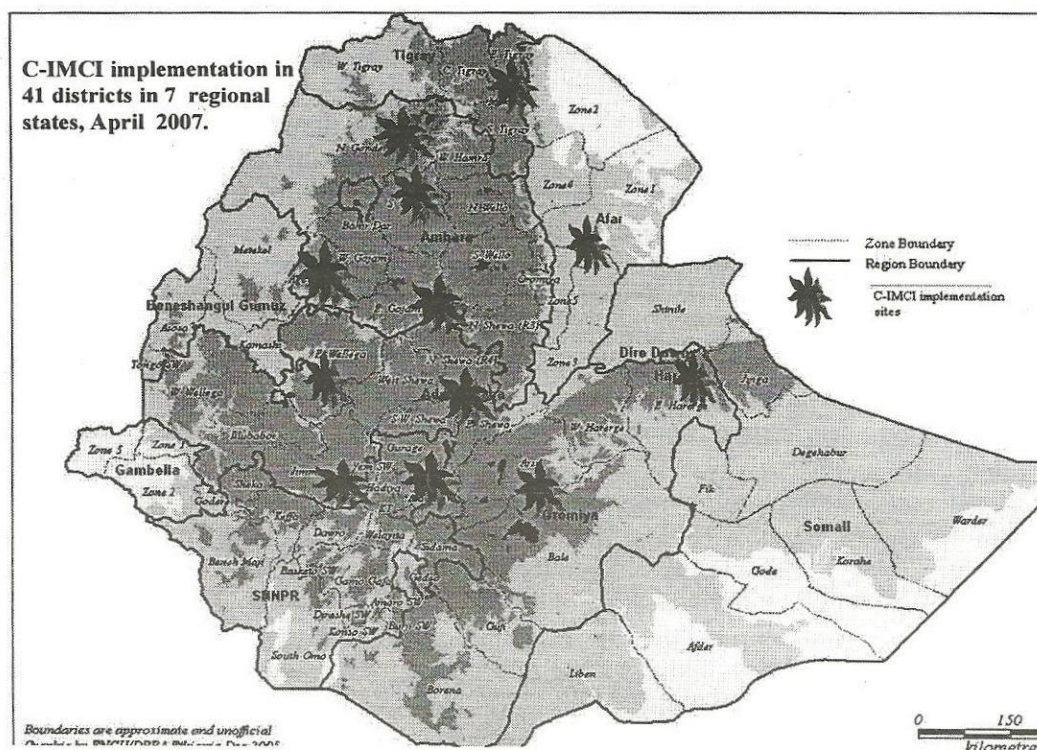
Eight hundred and forty-nine (849) health personnel (541 health workers and 298 HEWs) were trained in the training of trainers (TOT) course on C-IMNCI.



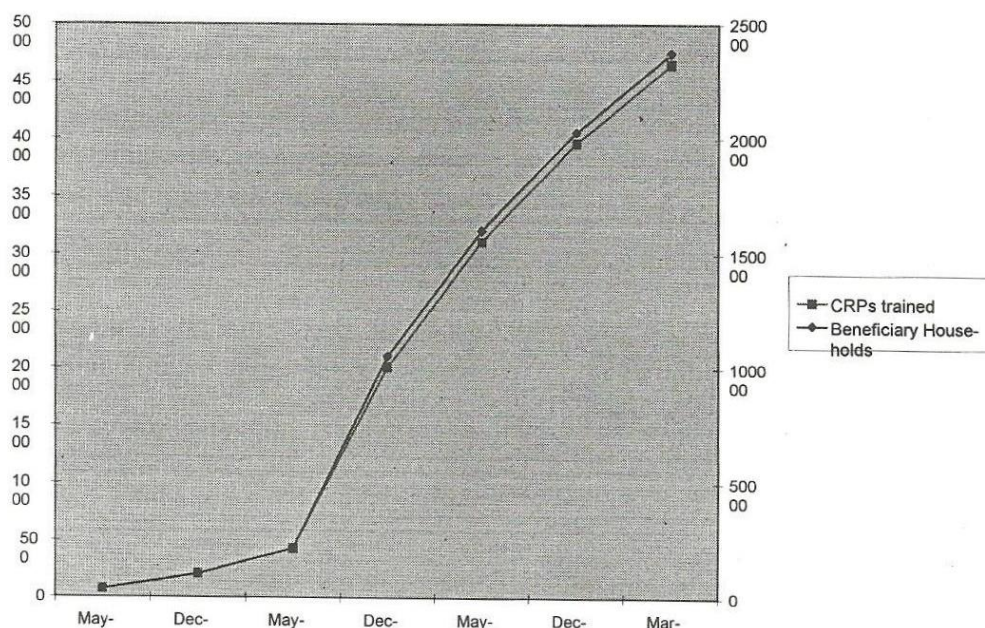
These in turn trained 4652 Community Resource Persons (CRP) who were deployed serving 237,370 households in 216 Kebeles and are working under the immediate supervision of the Health Extension Workers (Figure 3). The CRPs educate and mobilize the community on the selected key family practices and

monitor their activities using registration books. Significant improvements have been documented in infant feeding, water and sanitation activities, use of ITNs and immunization and family planning coverages.

**Figure 2: C-IMNCI intervention sites - 41 Districts in 7 Regions, April 2007.**



**Figure 3: Cumulative frequency of trained Community Resource Persons and Beneficiary Households, C-IMNCI, May 2004 – April 2007.**



#### Other Key Achievements

1. A 6 days' IMNCI (Integrated Management of Newborn and Childhood Illness) Case Management skills training course material incorporating care and management of newborns below the age of 7 days, childhood HIV/AIDS and the new WHO technical updates was developed and has replaced the previous 11 days' course as of mid 2006. This is envisaged to facilitate the expansion of IMNCI coverage by reducing the duration and cost of training by nearly a half.
2. A similar but simplified IMNCI training material was also developed for lower level health workers particularly for the training of Health Extension Workers. Currently, the material is being translated to Amharic to make it easier for the training and it will also be translated into other local languages in the near future.

1. IMNCI Complementary Course on HIV/AIDS was adopted to improve the identification and management of HIV exposed and infected children. So far, two hundred and sixty-four (264) health workers were trained in IMNCI-HIV Complementary course, mainly linked with IMAI (Integrated Management of Adolescent and adult-hood Illness) training.

2. IMNCI has been incorporated in the Integrated Refresher Training package, a refresher training course which consists of nine (9) different packages including IMNCI and designed to strengthen the knowledge and skills of HEWs. So far, 688 District Health Managers and supervisors/tutors of HEWs were trained in IMNCI as part of the Integrated Refresher Training course with the objective of ultimately improving the knowledge and skills of Health Extension Workers to deliver



integrated assessment and treatment of common neonatal and childhood illnesses at health post/community level.

## CONSTRAINTS and CHALLENGES

*The major constraining factors affecting the scaling up of IMNCI implementation in the country include: -*

Absence of IMNCI Focal persons, limited staffing and high turnover of the family health teams at all levels

Lack of adequate and timely follow-up after training and regular supportive supervision, mainly as a result of the weak health system and difficult geographic access, is a major factor affecting the implementation of IMNCI at facility level. Lack of integration of subsequent IMNCI follow-ups with the routine supervision contributes a lot to this sector wide problem.

Shortage of financial resources to scale up IMNCI implementation and lack of clear guidelines for remuneration of resource persons

Assuring the quality of IMNCI trainings in the face of the shortened course duration and decentralization and scaling up of trainings needs strong consideration by all stakeholders.

The weak recording, reporting and documentation system has resulted in poor institutional memory that hinders effective programmatic implementation.

## LESSONS LEARNT

Scaling up IMNCI implementation requires strong partnership and continuous advocacy for effective mobilization and utilization of available resources.

Supportive supervision and follow up is crucial to initiate IMNCI implementation and sustain IMNCI knowledge and skills. Subsequent follow up should be integrated into the routine supervision system to ensure its sustainability.

Availing IMNCI job aids and improvement of facility support are crucial for effective implementation of IMNCI at facility level.

Pre-service IMNCI training is the most feasible, sustainable and fastest means of achieving coverage of training of health workers. Therefore, pre-service training should be strengthened and expanded to all health professional training institutions.

Field experience has shown that, the CRPs are working in synergy with the HEWs whereby the former are helping in the house to house counselling and community mobilization while the HEWs are involved in the training, supervision and monitoring of the CRPs.

IMNCI training of tutors and supervisors of HEWs has been found to be a very useful input to empower the HEWs and their district supervisors on the provision of integrated preventive and basic curative services for children at community level.

## THE WAY FORWARD

Based on previous experiences and the lessons learnt so far, the way forward to scale up IMNCI implementation in Ethiopia needs to focus on the following: -

Continuous advocacy at all levels and strengthening partnership and coordination with all relevant programs and stakeholders is crucial.



Accelerate capacity building at Regional and District levels for planning, implementation, follow up and supportive supervision. In this regards, improvement of the overall recording, reporting and documentation system is vital.

Scaling-up of IMNCI implementation through targeting to train at least two health workers per health facility is fundamental to ensure continuity of care.

The capacity building of training institutions through training of instructors and provision of technical and material support is the most feasible and cost effective approach for scaling-up IMNCI training coverage. Simultaneously, we need to devise a mechanism for optimally utilizing pre-service IMNCI trained health workers in the provision of child health services.

The quality of care provided to sick children in first referral hospitals should be improved through the introduction of the Referral Care package which is complementary to the outpatient IMNCI guideline.

The linkage of IMNCI with the HEP needs to be strengthened to achieve universal coverage of IMNCI services at community/health post level.

Since the private sector has a significant contribution in the training of health professionals and provision of services, there is a need to devise a mechanism to engage this sector actively.

To ensure provision of continuum of care through the life cycle approach (pregnancy, birth, postnatal and childhood period), there is a need to foster

strong partnership for Maternal, New-born and Child health (PMNCH) at all levels.

## ACKNOWLEDGEMENTS

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