

## VIEW AND REVIEW

# Integrated Management of Childhood Illness (IMCI): An overview

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### Background

Over 12 million children under the age of five die annually in the developing world and this accounts for a third of all deaths. Acute respiratory infection (particularly pneumonia), diarrhea, malnutrition, measles and malaria are responsible for about 70% of under-five deaths (1). Moreover most children visit health facilities for one or more of these conditions. According to a study done in Gondar 87% of the presenting complaints to health institutions were due to fever, cough, diarrhea, and ear problems (2). Overlap of symptoms and signs is quite common in sick children. For instance, a child with cough could have fever and diarrhea at the same time, and also having 2 or more diagnosis is not at all uncommon. There is, therefore, a need for a management guideline which addresses all the problems a child may have.

Based on the lessons learnt from disease specific control programs, WHO and UNICEF developed a guideline referred to as Integrated Management of Childhood Illness (IMCI) which primarily addresses the 5 conditions (acute respiratory infection, diarrhea, malnutrition, measles, and malaria) responsible for most of the mortality and morbidity in under-five children (1). The

guideline is meant for use in the first level health facility or in an outpatient setting, and hence, it does not address inpatient management of these conditions.

The IMCI guidelines rely on detection of cases based on simple clinical signs which have acceptable degree of sensitivity and specificity. The health worker is trained to assess, classify, and treat a sick child 1 week up to 5 years of age. Each sick child is assessed for non-specific general danger signs, 4 main symptoms (cough or difficult breathing, diarrhea, fever, and ear problem), nutritional status, and immunization status. Feeding will be assessed and feeding problems identified in all children less than two years, and in those children who are malnourished or have anemia. Following assessment the health worker classifies the child's illness, and nutritional status. Classifications are not diagnosis, however, but they guide action to be taken. Treatment will be given based on the classification. The treatment options are urgent referral after pre-referral treatment, specific medical treatment, or simple advice on home care. Vaccines and vitamin A the child needs on the day of visit will also be given (3).

### Implementation status

The case management guidelines were initially tested in Gambia, Kenya, and Ethiopia (Gondar). Revision was made based on observations in these countries as well as other studies done in different places (1). A separate management chart and training module was added for the sick young infant (1 week upto 2 months).

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The full IMCI course was then, field tested in Arusha, Tanzania in February 1995 (4).

The first and second international consultant training courses on IMCI were conducted in Addis Ababa, Ethiopia, in November 1995, and in May 1996 respectively using the semi-adapted version of the IMCI training materials for Ethiopia. Since then several countries are in different stages of the implementation process.

In Ethiopia, the first national orientation workshop was conducted in February 1996 in Addis Ababa where a national task force for IMCI was established under the auspices of the Family Health and Adolescents Department of the Federal Ministry of Health with terms of reference. The national task force members were drawn from the Federal Ministry of Health, Gondar College of Medical Sciences, Addis Ababa Faculty of Medicine, Jimma Institute of Health Sciences, Ethiopian Health and Nutrition Institute, and partner organizations including WHO, UNICEF, USAID/ BASICS, and CRDA. IMCI was, then, officially endorsed by the Federal Ministry of Health.

Adaptation of training materials is completed; the materials are printed, and are now in use. The national task force has selected three pilot regions for initial implementation of IMCI in Ethiopia. These regions are Regions 1, 14, and Southern Nations, Nationalities, and Peoples' Region. As part of the preparation for early IMCI implementation in these regions, the first national course was held in February/ March 1998 in Addis Ababa where physicians and nurses were trained. In due course regional task forces were formed with the purpose of coordinating

and guiding the implementation process.

### Impact of IMCI

IMCI focuses on the child rather than on a specific disease and it makes identification of illnesses more accurate and avoids duplication of treatment (5). The IMCI strategy strives to reduce significantly global mortality and morbidity associated with the major causes of diseases in children, and to contribute to improved practices in both health facilities and in the home. To adequately reach both health facilities and the home, implementation of the IMCI approach in countries involves three components:

- ❖ Improvements in the case management skills of health staff through the provision of locally adapted guidelines on IMCI, and activities to promote their use.
- ❖ Improvements in the health system required for effective management of childhood illness.
- ❖ Improvements in family and community practices.

Experiences from countries that have introduced the course has shown the effectiveness of the training for improving the case management skills of a broad range of health professionals.

The IMCI package is said to be useful for the majority of developing countries with infant mortality over 40/ 1000 live births, and with *P. falciparum* malaria transmission (1). According to the world bank, IMCI has the potential as the most cost-effective health intervention in both low and middle income countries (5). It is expected that IMCI will make a major contribution towards reduction in under-5 mortality.