
PART III

Chapter 8

**INTEGRATED MANAGEMENT
OF CHILDHOOD ILLNESS**

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I. Introduction

Every year millions of children under the age of 5 years die due to illnesses that can be prevented or treated through the application of effective control measures. Most of these deaths occur in developing countries, and most are due to health problems that have been controlled or overcome in developed countries but continue to be significant causes of disease, death, or disability in a large portion of the developing world.

The international community has devoted increasing attention to the solution of these problems in recent years. As a result, there is now greater social awareness of the need to take action to reduce the enormous disparities that exist in relation to child health conditions in the developing countries. At the same time, progress has been made in the design and application of specific control measures.

The impact of these actions can be seen in the reduction of the numbers of cases and deaths caused by several diseases which only 10 to 20 years ago were among the leading causes of death in children under 5 years of age. These important advances, however, have not been sufficient to ensure a better quality of life for children in the developing countries (1, 2).

Acute respiratory infections (ARI), acute diarrheal diseases (ADD), and malnutrition continue to figure among the first 5 causes of death in most of the developing countries (Figure 1). In some of these countries, or in certain regions within them, malaria is also an important cause of illness and death. Measles will remain one of the prevalent childhood diseases until the eradication plan is successfully completed, although the incidence and death rate from the disease have decreased notably following mass vaccination campaigns carried out in the countries.

There is a clear need to sustain and increase the efforts undertaken up to now in order to achieve the goals for reduction of child mortality established by the countries for the year 2000.

To that end, the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) have recently developed a strategy for integrated management of child health. This strategy combines the assessment, classification, and treatment of prevalent illnesses that affect children under 5 years of age in the developing countries. These illnesses include ARI, diarrheal diseases, malnutrition, and malaria (3-7).

Implementation of this strategy will help to reinforce and complement the actions already being carried out to control these problems in the developing countries and will thus also achieve a greater impact on mortality and morbidity (8).

PAHO and WHO are seeking to promote widespread application of this strategy over the next few years (9, 10). It is hoped that the integrated and specific actions aimed at improving health care for children will mutually reinforce each other to the benefit of children's health.

II. Objectives of Integrated Management of Childhood Illness

The strategy of integrated management of childhood illness (IMCI) is aimed at achieving three general objectives which are considered of utmost importance:

1. To strengthen the concept of integrated health care for children in health services, changing the focus of attention—which up to now has been on illness—to the overall health status of the child, thus making it possible to identify the principal health problems that affect children.
2. To strengthen the planning and response capacity of the primary care level, providing health personnel at that level with the necessary tools to address the problems that most frequently cause child health problems and are the most frequent reasons for health service visits by children.
3. To achieve greater equity in access to good health care for children, making available to the population appropriate technologies for the diagnosis and treatment of the most common health problems.

The IMCI strategy will also contribute to the attainment of the following specific objectives:

- Reduction of under-5 child mortality, in particular from malnutrition, ADD, ARI, malaria, and measles.
- Reduction of the occurrence and severity of cases of ADD, ARI, and measles.
- Improvement of the quality of care for children in health services, reducing the inappropriate and excessive use of diagnostic and treatment technologies.

III. Characteristics of the Strategy of Integrated Management of Childhood Illness

The IMCI strategy developed by PAHO and WHO in coordination with UNICEF includes the following components:

- Assessment of the child and identification of danger signs (4, 5);
- Assessment of the child with difficult breathing and identification of signs of pneumonia;
- Assessment of the child with diarrhea and identification of signs of dehydration;
- Assessment of fever and identification of signs of pneumonia, malaria, or measles (11);
- Assessment of ear problems;
- Identification of signs of malnutrition and anemia (12);
- Assessment of the child's immunization status;
- Treatment of illnesses and health problems detected;
- Education of the mother and/or caregiver on home care of the child during illness and after recovery, and on the signs of severe illness for which the child should be taken immediately to see a health worker (6, 7).

These components are based on the specific strategies currently being applied individually for the control of each of the prevalent childhood illnesses. Hence, the implementation of this strategy will not run counter to current practice in health services, but rather will help to reinforce specific control activities. In addition, it will contribute elements to facilitate the detection and treatment of child health problems other than the specific problem that prompted the health service visit, as well as education of the mother on the overall care of the child in the home.

To implement the IMCI strategy, PAHO and WHO have proposed two general approaches. These are intended, on the one hand, to ensure greater efficiency in terms of the objectives for reduction of child mortality. On the other hand, they will help to strengthen capacity for planning, coordination, monitoring, and evaluation of health activities and will also enhance the capabilities of personnel at the regional, district, and local levels, thus strengthening the processes of decentralization already under way. The two general approaches proposed are:

- The establishment of priority areas of action based on the magnitude of problems and the operational feasibility of implementing control activities; and
- The development and implementation of operational plans of the activities to be carried out in order to ensure universal access to the integrated management of childhood illness and promote its use by the population (10, 13-14).

IV. Rationale

Implementation of the IMCI strategy will help to prevent an enormous number of deaths of children under the age of 5 years. Many such deaths occur each year in developing countries as a result of illnesses such as malnutrition, diarrhea, pneumonia, measles, and malaria.

Moreover, the strategy will help to prevent many cases of these illnesses from getting worse, or even prevent their occurrence in the first place, through the application of the recommended measures for caring for children in the home.

In addition to these significant benefits for children's health, implementation of the strategy will help to improve the quality of care they receive by:

- Extending the health care coverage for the principal childhood illnesses, through training of personnel not only within health services but also in the community;
- Improving the quality of care currently being provided by health services by increasing the capacity to detect and identify problems and the possibilities for providing appropriate treatment; it will also help to reduce the indiscriminate use of diagnostic and treatment technologies.
- Strengthening the technical and managerial capacity of health service personnel at the primary care level through training, not only in the application of the strategy in the treatment of children who visit the health service, but also in aspects relating to the planning and organization of activities. These activities will help to focus efforts on risk groups in order to ensure their access to the strategy.

The implementation of this strategy will also strengthen and complement current ARI/ADD control activities

V. Proposed Stages for Implementation of the Strategy of Integrated Management of Childhood Illness

The IMCI strategy is intended to complement the specific control activities that are already being executed at the country level. PAHO and WHO propose a gradual sequence of implementation taking into account, on the one hand, the epidemiological reality of each country and of particular areas within the countries and, on the other hand, the status of efforts to control the health problems that are currently the main causes of health service visits and child mortality: ARI, ADD, and malnutrition.

Based on the analysis of these two factors, the geographic areas in which the integrated strategy is to be implemented will be established. At the same time, it will be determined how the strategy will complement specific activities aimed at controlling other health problems. All these activities will continue to be carried out in a framework of coordination and complementarity.

PAHO and WHO have therefore proposed to implement the strategy in the following three stages:

- Stage 1: Analysis of the epidemiological situation and the status of efforts to control the principal child health problems.
- Stage 2: Analysis of the IMCI strategy and organization of its implementation in the country.
- Stage 3: Development and implementation of operational plans.

Stage 1: Analysis of the epidemiological situation and the status of efforts to control the principal child health problems.

This stage includes a review of the available information at the national level and at local levels within a country with regard to the magnitude and trends of the main health problems that affect children. In this stage, special emphasis will be placed on identification of those areas in which there are high rates of morbidity and mortality from pneumonia, dehydration, malnutrition, and malaria. The areas in which there is high morbidity from these causes will also be identified based on health service and hospital records.

Special attention will be given to areas in which there is limited access to health services for children due to geographic or cultural obstacles and areas in which health personnel are scarce or referral to more complex services is difficult.

In areas in which it is observed that the health problems targeted by the IMCI strategy coexist, the actions already carried out to address these problems will be reviewed, especially those relating to the implementation of the ARI/ADD control strategies, vaccination, malaria control activities, and growth and nutrition monitoring in under-5 children.

By the conclusion of this stage, it is expected that a list will be available of the places in which the strategy might be most useful and have the greatest potential impact. This stage is also expected to yield a description of how the implementation of the integrated strategy might either complement the control activities already under way or constitute the main control action to be undertaken.

Stage 2: Analysis of the IMCI strategy and organization of its implementation in the country.

This stage includes an examination of the rationale for and characteristics of the IMCI strategy in order to familiarize national authorities with the benefits of its application. At this stage the adaptations needed to make specific control strategies consonant with the integrated strategy will be studied.

Stage 2 also includes analysis of the need to incorporate specific health problems and exclude others (for example, malaria), in accordance with the local epidemiological situation. It should be carried out in collaboration with technical teams at the central, regional, and local levels.

During this stage the various existing structures that participate in the application of specific control strategies will be identified, and the way in which they should participate in the process of implementing the integrated strategy will be determined.

In addition, coordination mechanisms will also be established at the level of the ministry of health and between the various areas of government, as well as with the extragovernmental sector, NGOs, and private services.

Stage 3: Development and implementation of operational plans

The focus of this stage is the formulation of a concrete operational plan detailing the activities to be carried out to control the prevalent childhood illnesses. The plan will also describe the activities to be undertaken to monitor and evaluate the activities carried out and the progress made toward achieving the expected results. These activities might include the following:

1. Training of health personnel in application of the strategy

Training of health personnel in the application of the strategy includes training of the personnel responsible for the care of children at the level of local health services and other outpatient care facilities. It also includes training of personnel responsible for planning of activities at the national, regional, and local levels.

The first health personnel to receive training should be medical and nursing personnel. Later on, training can be extended to community health workers and other volunteer personnel who are involved in providing health care to children, which will help to increase community access to the strategy.

Health care personnel should be trained in the assessment, classification, and treatment of the prevalent childhood illnesses. These personnel will also receive training in how to effectively educate and communicate with mothers of under-5 children in order to enhance their knowledge of how to care for their children in the home. Training will also include a strong practical component aimed at enabling health personnel to acquire the skills needed to apply the strategy correctly.

The personnel responsible for the planning of activities at the national, regional, and local levels should receive training in how to organize the implementation of the strategy on both a national and local scale. This training should include the national and regional personnel responsible for the control of each of the illnesses targeted by the strategy; regional (state, provincial, departmental) health authorities; district and local officials; and all personnel who are involved in any way in the development and execution of strategy implementation activities.

Personnel should receive information about the strategy and should acquire the skills necessary to organize the available structure in order to assure its successful implementation, identifying weaknesses in the structure and designing and applying feasible solutions.

Because training will require a considerable investment of effort and resources over a relatively long period of time, the use of existing training resources will be emphasized, especially the special training units that have been established in the area of ARI and diarrheal disease control. An attempt will also be made to enlist the participation of institutions that train health personnel (schools of medicine and nursing), which might eventually incorporate components of the IMCI strategy as part of their undergraduate training programs.

2. Provision of supplies for the implementation of the strategy

The operational plan should contain a detailed list of the supplies needed to implement the strategy, including not only drugs and supplies for the treatment of children, but also the materials needed to train health personnel and educate mothers on appropriate home care and any other materials required for implementation.

The plan should also provide for coordination with the specific areas responsible for distribution of supplies to health services. This will optimize the use of available resources and operating capacity. Various methodologies for ensuring regular and continuous provision of supplies should be studied, with special attention to those that rely on active participation of the population at the local level.

Issues relating to the distribution, storage, quality control, and appropriate use of drugs merit special emphasis. Reducing excessive use of drugs is one of the primary objectives of the strategy. To this end, it is advisable to strengthen the training of personnel at the local, district, regional, and national levels in the planning and management of supply systems.

3. Supervision of health personnel in application of the strategy

The operational plan should specify how health personnel will be supervised in order to provide them with the necessary support in applying the strategy in their places of work. Supervision will thus serve as a complement to training. It will also play a strategic role, in that it will help to ensure effective application of the IMCI strategy.

The plan should provide for training of the personnel who will be responsible for supervision and should identify the most appropriate supervisory mechanisms, including the use of monitoring indicators to identify possible problems in the execution of specific direct supervision activities.

Special care should be taken in the design of supervisory instruments in order to ensure their quality. In addition, coordination between the various areas at the central, regional, and district levels should be strengthened in order to promote integrated supervision. Coordination with other sectors should also be promoted in order to optimize the use of transport and travel facilities, which often constitute one of the biggest obstacles to regular supervision.

4. Health communication and education of the population about the strategy

In accordance with the recommendations of the IMCI strategy relating to education of mothers and other caregivers, the operational plan should outline general approaches to communication, taking into account the characteristics of the local population.

It should also recommend the most appropriate methodologies to be applied, including not only those to be used with the population in general, but also those to be used at the local level by health service personnel.

Another component of the operational plan should be the collection of information on the current knowledge, attitudes, and practices of the population in general and of groups with specific sociocultural characteristics. This process will serve to identify the areas in which further research is required, and studies can thus be planned to obtain the needed information.

5. Monitoring and evaluation of activities and results

The operational plan should also specify the indicators to be used for monitoring, as well as the partial results that will make it possible to assess the evolution of the problem and determine the impact of the intervention.

Depending on which indicators are chosen, the information needed for their calculation will be determined and the sources of this information will be identified. In all cases, priority will be given to the use of existing sources of information and application and analysis of the data will be promoted.

The plan should also examine the coordination mechanisms that need to be established, both within and outside the ministry of health, to facilitate the collection, processing, analysis, and dissemination of monitoring information, as well as to establish the levels of analysis and the actions to be taken in response to the findings.

VI. Conclusions and Prospects

The loss of any life is always a difficult burden to bear, but the loss of a child's life is all the more difficult to accept because it seems so senseless.

In recent years, a certain awareness has arisen with regard to the need to take concrete action to reduce the social burden that childhood deaths represent. This has helped to accelerate the process of designing and implementing increasingly effective strategies to save millions of under-5 children in the developing countries from illness and death.

Every year, large numbers of children benefit from the application of these strategies. Their risk of becoming ill and dying is reduced through vaccination, use of oral rehydration therapy, treatment of pneumonia with antibiotics, and use of other therapeutic or preventive measures and appropriate health care.

Every year many lives are saved thanks to the combined effort of the numerous people who help to make these strategies accessible to the population. These successes serve as a stimulus to continued effort to extend access to the strategies in order to benefit more of the children who are still at risk of becoming ill and dying of childhood diseases.

The strategy of integrated management of childhood illnesses complements the group of specific strategies currently available, integrating them in order to contribute more efficiently to the prevention, early detection, and treatment of the principal child health problems. These activities are thus expected to help ensure the achievement of the proposed goals for reduction of child morbidity and mortality by the year 2000.

VII. References

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VIII. Annex

