INTEGRATED MANAGEMENT OF CHILDHOOD ILLNESS

Integrated management of childhood illness (IMCI) is a strategy developed by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF). Introduced in 1996 as the principal strategy for improving child health, it targets children under five years of age, focusing care on their health status rather than the diseases that occasionally affect them. IMCI thus reduces missed opportunities for early detection and treatment of illnesses that, while not the main reason for consulting the health services, can escape the notice of health workers, with the consequent risk of worsening and leading to complications. The care provided through IMCI, moreover, includes a strong disease prevention and health promotion component, whose benefits include broader vaccination coverage and better knowledge and practices in terms of the care and treatment of children under five years of age in the home, thus contributing to healthy growth and development.

Implementing IMCI requires the participation of the health services and community alike, through three components. The first component is designed to improve the performance of health workers in the prevention and treatment of childhood illness; the second, to upgrade health services so that they offer appropriate quality care; and the third, to improve family and community practices in caring for children.

This document summarizes the progress made in implementing the IMCI strategy in the Americas and the evidence obtained about its benefits. It also describes the main obstacles to expanding the implementation of IMCI and ensuring that its benefits reach every child in the Hemisphere. In view of the progress made and the obstacles to be overcome, it is proposed that the most appropriate mechanisms for strengthening the implementation of IMCI and expanding its coverage among the population be analyzed and discussed.

This document is presented with the following objectives: (a) to request ideas and recommendations for the Secretariat and the countries on how to overcome the obstacles that arise and strengthen the implementation and expansion of IMCI; (b) to identify mechanisms that the Secretariat and the countries can use to expand the mobilization of resources and secure universal access by children to the benefits of IMCI.
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1. Introduction

Improving child health requires not only promoting living conditions favorable to children's growth and development, but guaranteeing that all boys and girls benefit from the available prevention and treatment measures—measures that will keep them free of many illnesses and prevent such illnesses from becoming serious when they do strike, thus averting a potentially fatal outcome. Integrated Management of Childhood Illness (IMCI) is a strategy that integrates all of these measures. It can be used by health workers and others responsible for the care of children under five years of age, including parents. It offers the necessary knowledge and skills for the sequential and integrated assessment of children's health status and, thus, the detection of the most common illnesses or health problems, as determined by the epidemiological profile in each locality. IMCI provides clear instructions on how to classify the illnesses and health problems discovered in the assessment and outlines the treatment that should be administered for each of them. It also contains indications for monitoring the progress of the treatment, identifying the need for preventive measures, and informing and educating parents about how to prevent disease and promote the health of their children.

In light of this, IMCI is currently considered the most efficient strategy for reducing the burden of disease and disability in the population and contributing to healthy growth and development during the first five years of life.

2. Current Situation

The IMCI strategy was developed jointly by the World Health Organization and the United Nations Children's Fund (UNICEF) and targets a group of infectious diseases that are still responsible for 20% to 30% of mortality in children under five years of age, and in some countries of the Hemisphere, for as much as 50%. IMCI also includes contents in health promotion that are specially designed to improve the care and feeding of children during their first five years of life.

In 1996, PAHO officially presented the IMCI strategy to the countries of the Hemisphere and promoted its implementation, given its potential for reducing mortality and morbidity in children under five years of age and the contribution it could make to ensuring adequate health care for children, not only in the health services but in the home and community as well.

In 1999, the 41st Directing Council of PAHO adopted Resolution CD41.R5, urging the Member States to adopt and expand implementation of the strategy and requesting the active participation of the Director in this process. Late that year, PAHO launched the Healthy Children: Goal 2002 Initiative, aimed at preventing 100,000 deaths
in children under five years of age during the period 1999-2002 and offering access to the IMCI strategy to all the population, especially the most vulnerable groups.

By late 2001, the strategy had been adapted and implemented in 17 countries in the Hemisphere (Figure 1). The evaluations conducted revealed significant improvements in the quality of care given to children under five years of age by staff trained in the IMCI strategy (Figure 2). These evaluations also showed that the strategy was effective in improving the knowledge and practices of parents and family members with respect to disease prevention and health promotion, in encouraging early consultation when illness strikes, and in promoting adherence to the treatments prescribed (Figure 3).

Figure 1: Countries that incorporated and adapted the IMCI strategy for the care of children under five years of age in the Americas, 1996-2001

Figure 2: Use of drugs for the treatment of children under five years of age from the standpoint of the IMCI strategy

Dominican Republic, 1999

Source: Project HOPE, Dominican Republic, 1999.

Figure 3: Knowledge of parents of children under five years of age on how to provide care in the home using the IMCI strategy

Before implementation of the IMCI strategy

After implementation of the IMCI strategy

Source: Project HOPE, Dominican Republic, 1999.
Evaluation of the mortality figures for children under five years of age also showed a significant impact in the form of a rapid decline in the total deaths in children under five years of age and among these, deaths from the causes targeted by the IMCI strategy. In the first year of the Healthy Children: Goal 2002 Initiative, the number of deaths in children under five years of age fell by more than 30,000, a decline of more than 6% annually. Most of this decline was attributable to the sharp drop in mortality from the causes targeted by the IMCI strategy, which fell by more than 15% annually.

The monitoring of mortality from diarrheal diseases and pneumonia, which are responsible for most of the deaths from the illnesses targeted by the IMCI strategy, has also revealed a decline in the number, rate, and proportion of deaths from these causes in children under five years of age. In the 12 countries that implemented IMCI between 1996 and 1998, mortality from diarrhea dropped by 47% between 1995 and 1999, and mortality from ARI by 44% (Figure 4). Both declines were steeper than the total figure for the Region, which was 39% in each case.

![Figure 4: Trend in mortality from diarrheal diseases and acute respiratory infections in children under five years of age during the period 1995-1999. Estimates for the 12 countries that implemented the IMCI strategy between 1996 and 1998. Number of deaths, rates per 100,000 population, and percentage of the total deaths in children under five years of age.](image-url)
This progress was the fruit of a major effort and broad coordination at the regional, subregional, and country level. Efficient coordination was achieved in the countries between the ministries of health and other governmental and nongovernmental entities working to improve child health; this made it possible to promote implementation of the IMCI strategy through the health services and other public and private institutions, NGOs, and community organizations.

Despite this progress, however, the demonstrable benefits of the IMCI strategy in preventing disease and promoting healthy lifestyles have yet to reach a significant proportion of children under five years of age in the Americas. Many families still lack access to personnel and health services trained in the application of the strategy and do not receive the information offered by IMCI to improve growth and development during the initial years of life.

Overcoming the lack of equity posed by this situation in terms of access to knowledge and practices critical for healthy child growth and development requires the consolidation of efforts to ensure effective implementation and expansion of the strategy in all the countries of the Region. PAHO can play a decisive role here by assisting the countries in the successful implementation of IMCI and establishing mechanisms that will facilitate the mobilization of all available resources at the regional and national level to guarantee universal access to the strategy.

### 2.1 Adoption of the IMCI Strategy and Progress of the Healthy Children: Goal 2002 Initiative

By late 2001, 17 Latin American and Caribbean countries had adopted the IMCI strategy. These countries have 52% of the under five population of the Hemisphere but account for 75% of the annual deaths in this age group.

The countries that have adopted IMCI have done so not only because of the high mortality from infectious diseases in children under five years of age, which is currently the basic focus of the strategy. Some have adopted IMCI because of its capacity to improve the quality of care (i.e., the reduction of missed opportunities for the detection and treatment of health problems and the application of preventive measures), to ensure better utilization of resources and diagnostic and treatment technologies, and to offer parents more and better information on the care and treatment of their children.

All of the countries adopted the Healthy Children: Goal 2002 Initiative, and 10 of them launched the initiative with national and local events designed to encourage institutional and community participation and thereby accelerate the decline in mortality through the implementation of the IMCI strategy.
Expanding IMCI to the remaining countries can constitute an important step toward improving the quality of health care for children, especially if the strategy is applied through the personnel and the health services that serve population groups with no health care coverage or whose access to health care is limited.

Implementing IMCI in all the countries can also help to strengthen and improve the knowledge and practices of parents and other people responsible for the health care of children under five years of age (people in charge of day-care centers and community kitchens, teachers, foster mothers), contributing to healthier growth and development during the first years of life.

Furthermore, the gradual addition of new contents in prevention, treatment, and health promotion is making the strategy increasingly compatible with the epidemiological situation of countries with lower mortality figures. As a result, the adoption of the strategy by these countries can represent one more contribution toward reducing morbidity and mortality in children under five years of age and guaranteeing access to adequate and efficient quality of care.

2.2 Incorporating the IMCI Strategy into the Basic Health Measures that Should Be Accessible to the Entire Population

The way and the extent to which the IMCI strategy is incorporated varies from country to country. In some countries, the strategy was adopted by a resolution making it the official health care policy for children. In others, it was added to the existing maternal and child programs, thus superseding strategies for the control of specific illnesses, such as acute diarrheal diseases or acute respiratory infections in children.

While some countries are moving forward with the implementation of IMCI through the social security system and its integration into health sector reform, these generally represent special initiatives, not an organic plan to guarantee that the IMCI strategy actually becomes a basic health service for all children under five years of age.

2.3 Planning and Setting Goals to Achieve Universal Access to IMCI through Health Services and in the Community

All the countries that adopted the IMCI strategy drew up plans to target its implementation to the most vulnerable areas and population groups, using infant mortality levels as the criteria. As part of these plans, they set goals compatible with the Healthy Children: Goal 2002 Initiative, making a commitment to accelerate the decrease in mortality among children under five years of age from the causes targeted by IMCI and to achieve a reduction in the number of deaths as established in the goals laid out in the initiative.
In implementing the plans, significant progress was made in the training of health services personnel to enable them to apply the procedures established for the care of children under five years of age. The number of trained staff was increased, thanks to a regional, national, and local training mechanism, which has already trained more than 30,000 people in the application of IMCI.

Although mechanisms have been established to monitor the progress and results of implementing IMCI, some countries are still experiencing difficulties in providing information that is timely and extensive enough to measure the impact of the strategy. This is particularly important with respect to mortality in children under five years of age, since a reduction in this area is the first objective of the strategy.

The monitoring of the Healthy Children: Goal 2002 Initiative revealed significant potential for improving this situation, together with a willingness to establish efficient mechanisms for coordination among the different sectors involved in the generation, collection, and analysis of the pertinent mortality data.

In the past two years, PAHO/WHO and UNICEF have proposed a set of 16 key practices for healthy growth and development, which constitute the core of the IMCI community component. The promotion of these practices and their adoption by families and communities can result in a significant reduction in the current incidence and mortality rates, while helping more and more children to grow healthily and receive the necessary stimulation for better development.

### 2.4 Economic Support and Mobilization of Resources for IMCI

The launch of the Healthy Children: Goal 2002 Initiative made it possible to mobilize resources in support of IMCI activities at the regional level, particularly those related to its community component, aimed at imparting knowledge and practices to improve the care of children in the home. At the country level, there was better coordination with nongovernmental organizations and agencies to support the implementation of the IMCI strategy.

Notwithstanding, the mobilization achieved is not yet sufficient to expand its implementation at the rate necessary to guarantee universal access by the most disadvantaged population groups or to support and sustain monitoring and evaluation mechanisms that will ensure effective implementation of the strategy and measurement of its results.

Greater regional and national resources will be required to achieve this, as well as external financing to ensure the continuity of existing projects and continue to strengthen and expand the implementation of IMCI.
2.5  **Introduction of IMCI in the Education of Health Personnel**

The IMCI strategy is being utilized in the pediatrics programs of medical and nursing schools in many countries. This is partly because of the coordination established with these institutions at the regional level to involve them in the adaptation of the strategy and the education of facilitators.

However, most medical schools, nursing schools, and other academic institutions that train health workers do not guarantee that their graduates will be able to apply the IMCI strategy in care for children under five years of age. This issue is particularly important as it relates to students who are beginning their compulsory social service, since they work in health services that cover at-risk populations that could benefit from the strategy's potential impact on mortality, morbidity, and quality of care.

The experience in many countries indicates that the effective incorporation of IMCI into academic programs could help to ensure that all students in medicine, nursing, and other health professions graduate with the capacity to apply the IMCI strategy in health care delivery. It would also ensure that the thousands of students doing compulsory social service in the last year of their program bring the benefits of the strategy to the populations they serve, in terms of preventing and treating illness and improving knowledge and information about the most appropriate practices for promoting child health.

2.6  **Adaptation of the IMCI Strategy to the Different Epidemiological and Operational Situations**

Adaptation of the IMCI strategy was part of the implementation process. Its purpose was not only to adjust its basic contents but to introduce additional contents for the prevention and treatment of other prevalent illnesses in the epidemiological profile of the country and the Region. The preparation and inclusion of these contents took place within the countries, between the countries, and at the regional level.

As a result of this process, components were added for the control of dengue, respiratory problems (illnesses affecting the throat; chronic obstructive pulmonary diseases), and abuse. The design of contents to control oral health problems and neonatal disorders and promote development and early stimulation is being finalized.

These new contents expand the potential of IMCI for improving the health status of children. On the one hand, in terms of its impact on mortality and morbidity by addressing other common causes of death before the age of five, such as perinatal disorders and accidents. On the other, by improving the conditions for growth and
development, thanks to its content in areas such as early stimulation, the promotion of oral health, and the prevention of accidents and abuse.

3. Proposed Actions

The progress made and results obtained demonstrate the potential of IMCI for improving the health status of children. However, many population groups in the countries do not yet have access to IMCI. This is particularly serious in the case of highly vulnerable populations that could benefit from the strategy's potential to reduce mortality and morbidity and improve growth and development in infants and children.

The actions listed below can help to overcome this problem and ensure that all children under five years of age in the Region of the Americas can enjoy the benefits of the IMCI strategy in terms of better health care.

- **Effective incorporation of the IMCI strategy in the regulatory frameworks of the countries and the systems for monitoring its implementation** is fundamental for it to become the universal, basic service for children's health care. Through this decision, the countries can make progress in guaranteeing all children under five years of age access to the benefits of the IMCI strategy, making its mandatory use the minimum quality of care offered by institutional and community health workers in the public health, social security, and private health services.

- **Making training in the IMCI strategy part of university and graduate programs in the health professions** will guarantee that the investment made in the education of this personnel covers the health needs of the population. This will also foster more efficient utilization of resources, since it will prevent the ministries of health from having to invest in subsequent graduate training to ensure that these professionals meet the performance standards set for them in the health services. Making IMCI part of university education will also enable students fulfilling their compulsory social service requirement in the health services during their final year of training to extend the benefits of IMCI in improving child health to the population they serve.

- **Preparation and implementation of special plans to promote the 16 key practices for healthy growth and development**, proposed under the community component of the IMCI strategy, through all channels of communication. Using these key practices as a reference for intersectoral coordination to benefit children will also make it possible to take advantage of all areas involved in social development, promoting their active participation to improve the ability of families and communities to offer better care to children.
• Establishment of active, coordinated mechanisms to ensure timely and sufficiently extensive information on deaths in children under five years of age; with the existing resources, these mechanisms can improve the countries’ capacity to utilize information as an instrument for measuring progress, identifying problems, and setting priorities. These mechanisms can reinforce the progress already made in gathering information on the monitoring of the Healthy Children: Goal 2002 Initiative and can be complemented with national and local analyses that will help avoid deaths preventable with the application of the IMCI strategy.

• The most expeditious incorporation of new contents for the prevention and control of other illnesses and health problems in children under five years of age, consistent with the epidemiological profile of the Region of the Americas. These contents specifically include the control of problems associated with the perinatal period, the cause of more than one-third of all deaths in children under 1 year; the prevention and control of accidents, the leading cause of mortality in children over 1 year; and the prevention and control of obstructive pulmonary disorders, accidents, abuse, violence, and developmental problems in children through early stimulation, the detection of developmental delays, and the promotion of oral health.

• The mobilization of extrabudgetary resources to continue supporting the expansion of the IMCI strategy in terms of population coverage, simultaneous strengthening of its three components (health workers, health services, and the community), and its contents on disease prevention and treatment and health promotion for children. In particular, it is necessary to ensure the continuity of the external resources for special projects financed by bilateral cooperation agencies, which have facilitated the rapid expansion of the strategy and progress toward the achievement of the goal established, in addition to accelerating the decline in mortality among children under five years of age.

4. Financial Consequences

The Regional IMCI Unit has regular and over-the-ceiling funds totaling US$350,000 annually. Furthermore, it has received extrabudgetary resources from WHO and bilateral agencies of the governments of the United States (USAID, United States Agency for International Development), Spain (AECI, Spanish Agency for International Cooperation), and the Netherlands, which finance special plans and activities at the regional and country level. In 2001, funds were received for a joint project with the American Red Cross (ARC) to strengthen the community component in regional activities and 10 countries. In 2002, funds are expected from CIDA-Canada and the United Nations Foundation for specific projects to expand and strengthen the implementation of IMCI.
However, there will be significant cutbacks in extrabudgetary resources in 2002 as a result of reductions in the funding provided by WHO, the conclusion of the five-year project with USAID, and the end of the support from AECI.

In order to continue to expand and strengthen implementation of the IMCI strategy, contribute to a reduction in mortality, and improve the health status of children, it will be necessary to redouble efforts to maintain the existing resources from WHO and the USAID and AECI projects, to support approval of the projects submitted to CIDA-Canada and the United Nations Foundation, and to search for potential new sources of financing.

5. Key Areas for Deliberation

Since its launch in 1996, IMCI has enjoyed vast acceptance, chiefly due to the change in approach that it promotes in the care of children under five years of age, which focuses on the health status of children instead of the illnesses that occasionally strike them. IMCI has proven an effective tool for the early detection and treatment of illness, and this has had an impact on serious morbidity and mortality. IMCI has also made it possible to take advantage of all the opportunities for disease prevention and health promotion, contributing better quality care in both the health services and the home.

Nevertheless, these benefits have still not reached all sectors of the population, which means that other steps must be taken to expand and improve the access of all children to IMCI, especially those in the most vulnerable groups.

The following areas are therefore proposed for the discussion and deliberation.

5.1 Incorporation of IMCI as a Universal Basic Health Service for Children and as Basic Content in University and Graduate Programs

IMCI synthesizes the most up-to-date pediatric knowledge to guarantee proper assessment and treatment of the most common childhood illnesses and health problems. It includes, moreover, the basic measures for disease prevention that should protect all boys and girls during their first five years of life and offers the most important knowledge and practices that parents should apply to safeguard the healthy growth and development of their children. Thus, IMCI constitutes a basic standard of care to which all children under five years of age should have access, and to which other measures can be added, in keeping with the epidemiological situation or the operating capacity of the health services, families, and the community.

In this regard, what obstacles still prevent IMCI from effectively being applied in many health services or included as basic content in university and graduate programs for
health workers, and what measures and steps can PAHO take with the countries to overcome them?

5.2 **Promotion of the Key Family Practices for Healthy Growth and Development Promoted in the IMCI Strategy**

A basic set of knowledge and practices that should be applied by those responsible for the care of children will ensure that they grow and develop healthily, do not become ill, and receive timely and effective care when they do. These practices do not require sophisticated technologies or resources beyond the reach of most families. However, many families do not have the necessary information about them and do not receive assistance to acquire the skills for their effective application in the home. In a single strategy, IMCI has brought together the knowledge and key practices for healthy growth and development, but they must reach all families—first and foremost those belonging to the most vulnerable population groups.

How can we ensure the broadest and fastest dissemination and promotion of the 16 key family practices for healthy child growth and development, and what specific action can PAHO and the countries take to contribute to this?

5.3 **Expansion and Monitoring of the IMCI Strategy**

The diverse epidemiological situations in the countries of the Hemisphere and IMCI's potential as the point of entry for improving the health status of children has created the need to expand the basic content of the strategy to include additional actions for the prevention and treatment of other health problems. However, moving forward with this process requires clear identification of the magnitude of the new problems that must be addressed and adequate monitoring of the impact IMCI in terms of reducing child mortality and morbidity. However, the information needed for monitoring and evaluation, especially for mortality, is not always available in a timely manner and with the appropriate coverage.

Within this context, how can PAHO, working with the countries, optimize use of the available resources to improve the breadth and timeliness of the key information for monitoring IMCI, especially with respect to mortality? Furthermore, in what order should new contents for the prevention and treatment of other illnesses be added to IMCI to heighten its impact on child mortality and morbidity?

5.4 **Economic Support and Mobilization of Resources for IMCI**

Strengthening the implementation of IMCI, expanding its coverage, improving the mechanisms for impact assessment, and broadening its contents are lines of action that have been identified as priorities for maintaining and accelerating the decline in mortality
and morbidity and contributing to healthy children. However, the resources available for this at both the regional and country level are limited. How can PAHO increase the existing resources to support IMCI at the regional and country level?

6. **Action by the Subcommittee on Planning and Programming**

   Based on the information presented, the Subcommittee on Planning and Programming is requested to:

   1. Analyze the actions that PAHO, together with the countries, can take to ensure that IMCI is successfully adopted as a basic standard of health care for children and is included in university and graduate programs leading to a career in health.

   2. Recommend actions that can be taken at the regional and national level to ensure the broadest and fastest dissemination and promotion of the 16 key family practices for healthy growth and development.

   3. Suggest to the Secretariat the best way of strengthening the monitoring and evaluation component of IMCI, gradually expand its contents for the prevention and control of other illnesses, and mobilize resources for its implementation.