“The model and implementation of IMCI: Integrated Management of Childhood Illness”

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I. Mortality and morbidity among children under 5 years old at the global level

II. The situation in the Region of the Americas

III. The IMCI Strategy

IV. Future challenges
I. Mortality and morbidity among children under 5 years old at the global level
Progress has been significant, with the number of deaths among children under 5 years old reduced from 12.5 million in 1990 to less than 9 million in 2008.

Correspondingly, the rate of under-five mortality fell from 90 deaths per 1,000 live births to 65 deaths per 1,000 live births over the same period.
MORTALITY IN CHILDREN <5 AT THE GLOBAL LEVEL

- Around 14 per cent of children are born weighing less than 2,500 grams – a condition that often derives from the mother’s poor health and nutritional status.

- Inadequate health care and nutrition for women also contribute to high numbers of neonatal deaths, with 4 million newborns dying within the first month after birth each year.
MORTALITY IN CHILDREN <5 AT THE GLOBAL LEVEL

- Pneumonia and diarrhoeal diseases are the biggest killers of children under five, accounting for almost 40 per cent of deaths for this age cohort. Yet access to antibiotics and oral rehydration therapy – simple, proven interventions to combat these diseases and conditions – remains low in many developing countries.
Children of income-poor families have far higher rates of under-five mortality and are less likely to be in school than children from wealthier families. The primary school net attendance ratio in 2000–2006 was 65 per cent for children from the poorest fifth of households in developing countries, compared with 88 per cent for children from the richest households.
MORTALITY IN CHILDREN <5 AT THE GLOBAL LEVEL

- Violence may affect between 500 million and 1.5 billion children, and an estimated 150 million children aged 5–14 are engaged in child labor. More than 70 million women and girls aged 15–49 in 29 countries have been subjected to female genital mutilation/cutting.
LEVELS AND TRENDS IN UNDER-5 MORTALITY RATE

Source: The Lancet, September 2010
II. The situation in the Region of the Americas
MORTALITY IN CHILDREN <5 IN THE AMERICAS REGION

- More than 300,000 deaths annually of children under 5 years
- Infectious diseases are still the cause of 27% of deaths
- Peri-neonatal affections are the cause of 58% of deaths
- Big gaps between countries & areas within countries regarding mortality rates
CAUSES OF DEATH IN CHILDREN < 5 IN THE AMERICAS REGION

- Sepsis: 32%
- Asphyxia: 29%
- LWB & Prematurity: 24%
- Congenital anomalies: 10%
- Malnutrition: 3%
- Pneumonia & ARI: 12%
- Diarrhea: 12%
- Perinatal: 58%
- Other: 6%
- Accidents: 6%
- Respiratory & infectious diseases: 27%

Source: Estimates of FCH/HL-based PAHO/HSD/HA data, 2009
EVOLUTION OF MORTALITY IN CHILDREN UNDER 5 YEARS IN THE REGION OF THE AMERICAS. RATES PER 1000 LIVE BIRTHS

Source: Estimates of FCH /HL-based PAHO/HSD/HA data, 2009
NEONATAL MORTALITY RATE IN RELATION TO TOTAL NUMBER OF DEAD IN < 5 YEARS AND < 1 YEAR

Source: Estimates of FCH /HL-based PAHO/HSD/HA data, 2009
MORBILITY IN CHILDREN <5 YRS.

- Peri neonatal diseases are the most common cause of morbidity and mortilidad (58%).
- Infectious diseases continue to be a frequent cause of disease (27%):
  - ARI
  - Diarrheal disease
- Nutritional deficiencies affect growth & development: malnutrition, deficient micronutrients (Fe, Vit. A, zinc)
MORTALITY IN CHILDREN UNDER 5 YEARS IN THE REGION OF THE AMERICAS.

8% of births
18% of deaths

RR = 5

32% of births
13% of deaths

Per 1000 live births

Source: Estimates of FCH /HL-based PAHO/HSD/HA data, 2009
III. The IMCI Strategy
**IMCI: INTEGRATED STRATEGY**

*Changes the approach to child healthcare:*

- From treatment of specific diseases,
- To an evaluation of the child’s health status

Looks for signs of disease & most prevalent pediatric problems regardless of the reason to consult

Integrates actions of prevention & health promotion as part of healthcare in a systematic fashion
IMCI AS A KEY STRATEGY FOR IMPROVING CHILD HEALTH

- Management of sick children
- Nutrition
- Immunization
- Other disease prevention
  Promotion of growth and development
IMCI
MAIN OBJECTIVES

- Prevent mortality
- Reduce incidence & severity of morbidity
- Improve growth & development
IMCI MAIN ACTIONS.

- Early diagnosis & appropriate & effective treatment by healthcare team
- Early recognition of child’s health problems by the parents & family.
- Teach parents to seek the appropriate care
- Better home care:
  
  *Feeding practices, Early stimulation, BF*

  *Preventive interventions: immunizations, Vit. A*
CONCEPTUAL FRAMEWORK OF CAUSES OF DEATH DURING CHILDHOOD PERIOD

Direct medical reasons

Underlying causes attributable to the community and the health system

Root Causes

Barriers in seeking care

Low health care quality

Deleted recognition of the problem

Inadequate newborn care at home

Education

Low priority given to women and newborns

Cultural barriers

Source: The Healthy Newborn: A Reference Manual for Program Managers. CDC, CCHI, CARE, 1987
IMCI CASE MANAGEMENT AT FIRST LEVEL, REFERRAL LEVEL AND AT HOME

**FIRST-LEVEL OUTPATIENT HEALTH FACILITY**

- Ask about CHILD’S PROBLEMS
- Check for GENERAL DANGER SIGNS
- ASSESS for MAIN SYMPTOMS:
  - COUGH OR DIFFICULT BREATHING
  - DIARRHOEA
  - FEVER
- ASSESS for MALNUTRITION AND ANAEMIA
- Check for OTHER PROBLEMS

- Give FOLLOW-UP care when the child returns, and if necessary, reassess for new problems

**“PINK” - PRE-REFERRAL TREATMENT AND REFERRAL**

- CLASSIFY CHILD’S CONDITIONS AND IDENTIFY TREATMENT
- ADVISE parents about REFERRAL

**“YELLOW” - SPECIFIC TREATMENT AT FIRST LEVEL FACILITY**

- TEACH parents about treatment
- COUNSEL them about feeding and when to return

**“GREEN” - HOME MANAGEMENT**

- GIVE ORAL DRUGS AND/OR TREAT LOCAL INFECTION
- GIVE FOOD AND FLUIDS (follow feeding recommendations)
- RETURN TO HEALTH FACILITY WHEN NEEDED

**FIRST-LEVEL REFERRAL HEALTH FACILITY**

- EMERGENCY TRIAGE ASSESSMENT AND TREATMENT (ETAT)
- DIAGNOSE AND TREAT COMMON SERIOUS CONDITIONS
- MONITOR PATIENT PROGRESS

**HOME**

- Pan American Health Organization
Over 100 countries have adopted IMCI
WHY IMCI?

*Takes advantage of the child’s contact with the health system to:*

- Answer parents questions regarding the reason for the visit to the health facility.
- Look for early signs & symptoms of other diseases & problems that might affect the child’s health.
- Treat all problems found.
- Check immunization status.
- Assess nutritional condition, development & feeding practices as well as home care.
- Inform & educate parents to improve health & development.
BASICS IMCI COMPONENTS

- Danger signs recognition
- ARI
- Diarrhea: 
  - Dehydration, persistent diarrhea, dysentery
- Fever: 
  - Malaria, measles
- Ear problems
- Parasitosis
- Nutrition & feeding practices
- Immunizations
- Perinatal-neonatal
- The continuum and care approach
Wash your hands before and after examining the newborn. Prevent hypothermia.

### ASSESS RISKS AT BIRTH

#### ASSESS
- Color
- Breathing
- Cry
- Vitality
- Birth defects
- Signs of intrauterine infection (TORCH/HIV)

#### CLASSIFY

1. **HIGH RISK AT BIRTH**
   - Refer URGENTLY to hospital, follow stabilization & transport guidelines (pg. 9)
   - Encourage skin to skin care
   - If possible, initiate breast feeding
   - Keep warm
   - Premature rupture of membranes >12 hrs. give first dose antibiotics
   - Provide routine newborn care (pg.12)
   - Update mother on reasons for transfer

2. **MODERATE RISK AT BIRTH**
   - Refer for follow-up visit
   - Encourage skin to skin care
   - Initiate breast feeding
   - Keep warm
   - Provide routine care (pg12)
   - Teach danger signs

3. **LOW RISK AT BIRTH**
   - Encourage skin to skin
   - Initiate breast feeding
   - Keep warm
   - Provide routine newborn care (pg. 12)
   - Orient mother on home care
   - Teach danger signs
   - Follow-up visit in 3 days
   - Initiate vaccination according to schedule

#### TREAT
- **ASSESS RISKS AT BIRTH**

- **CLASSIFY RISK**

  - **ASK**
    - Premature rupture of membranes? How long?
    - Has mother had fever?
    - Medical problems during this pregnancy (Table 1)?
    - Was resuscitation needed?

  - **OBSERVE**
    - Color
    - Breathing
    - Cry
    - Vitality
    - Birth defects
    - Signs of intrauterine infection (TORCH/HIV)

  - **DETERMINE**
    - Weight & gestational age
    - Body temperature

- **Adequate thermal environment for newborn 24° to 26° C w/o air currents in delivery room & 36° C at examination table**
IMCI
NEW COMPONENTS

- Development
- Asthma & broncho obstructive disease
- Child abuse
- Diabetes & obesity
- HIV / AIDS
- Disasters
- Oral health
- Dengue & Chagas disease
- Accidents & Violence
- Epilepsy
- Dermatologic
- Nursing
IMCI EXPANSION

New Components

Health Facilities

Referral Hospitals

Family & Community

• Community health workers
• Volunteers
• NGOs

Information, Education & Social Communication

Operational & Epidemiological Research

• Medical, Nursing, Nutrition Schools
• Others

• Hospital & ambulatory rotations
• Rural service
IV. Future Challenges
ACTIONS AND INTERVENTIONS WITH POTENTIAL IMPACT

- Increased Coverage of IMCI strategy
- Incorporate new tools
- Incorporating new evidence-based interventions
- New components translate into different languages
- Ensure the sustainability of the strategies built into the university curricula
- Maintain and expand strategic partnerships
- Community interventions – LAC 30%
GAP TO ACHIEVE MDG # 4 FOR MORTALITY IN CHILDREN LESS THAN 5 YEARS OLD BY 2015

Necessary decline for fulfilling MDG: annual 6.3%

Source: Estimates of FCH /HL-based PAHO/HSD/HA data, 2009
THE CHALLENGE

Effective Interventions

Public Health Strategies

Priority Areas Vulnerable People

Impact
Childhood Mortality Reduction
THE 1st GLOBAL CONGRESS FOR CONSENSUS IN PEDIATRICS AND CHILD HEALTH
February 17-20, 2011
Paris, France

thanks