

REGIONAL STRATEGY AND PLAN OF ACTION
FOR NEONATAL HEALTH WITHIN THE CONTINUUM
OF MATERNAL, NEWBORN, AND CHILD CARE

48th Directing Council of the Pan American Health Organization
60th Session of the Regional Committee

Washington, D.C., USA, 29 September–3 October 2008



**Pan American
Health
Organization**



Regional Office of the
World Health Organization

8 figures which were prepared by the Newborn, Children & Youth Health Project and Family and Community Health (FCH/CH) Area have been included into the document; this document was approved by the 48th Directing Council. A Director's prologue has been included as well.

This publication has been made possible by the support of the Regional Office of Sustainable Development, Office for Latin America and the Caribbean of the U.S. Agency for International Development (USAID), under the terms of the Grant No. 002122. The concepts and opinions expressed correspond to the document approved by PAHO's 48^o Directing Council and do not necessarily reflect the standpoint of USAID.

**REGIONAL STRATEGY AND PLAN OF ACTION
FOR NEONATAL HEALTH WITHIN
THE CONTINUUM OF MATERNAL, NEWBORN,
AND CHILD CARE**

**48th Directing Council of the Pan American Health Organization
60th Session of the Regional Committee**

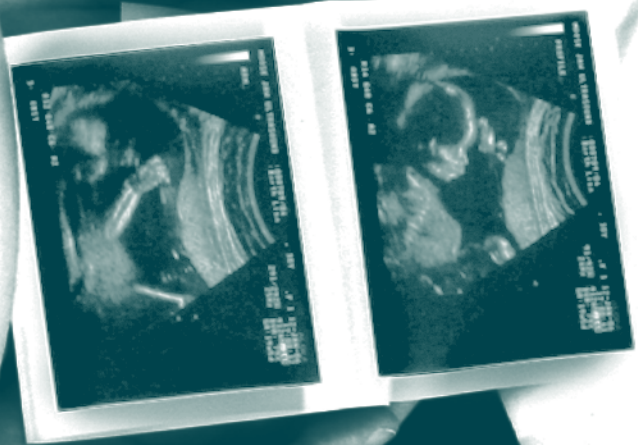


Washington, D.C., USA, 29 September–3 October 2008



**Newborn, Child and Youth Health
Family and Community Health**





CONTENT



Preface [7]

Introduction [8]

Global Mandates and Initiatives [10]

Analysis of the Situation in Latin America and the Caribbean [12]

Interventions in the Latin American Region [15]

The Maternal–Newborn–Child Continuum Approach [18]

Plan of Action [19]

Role of the Pan American Health Organization [29]

References [30]

Annexes

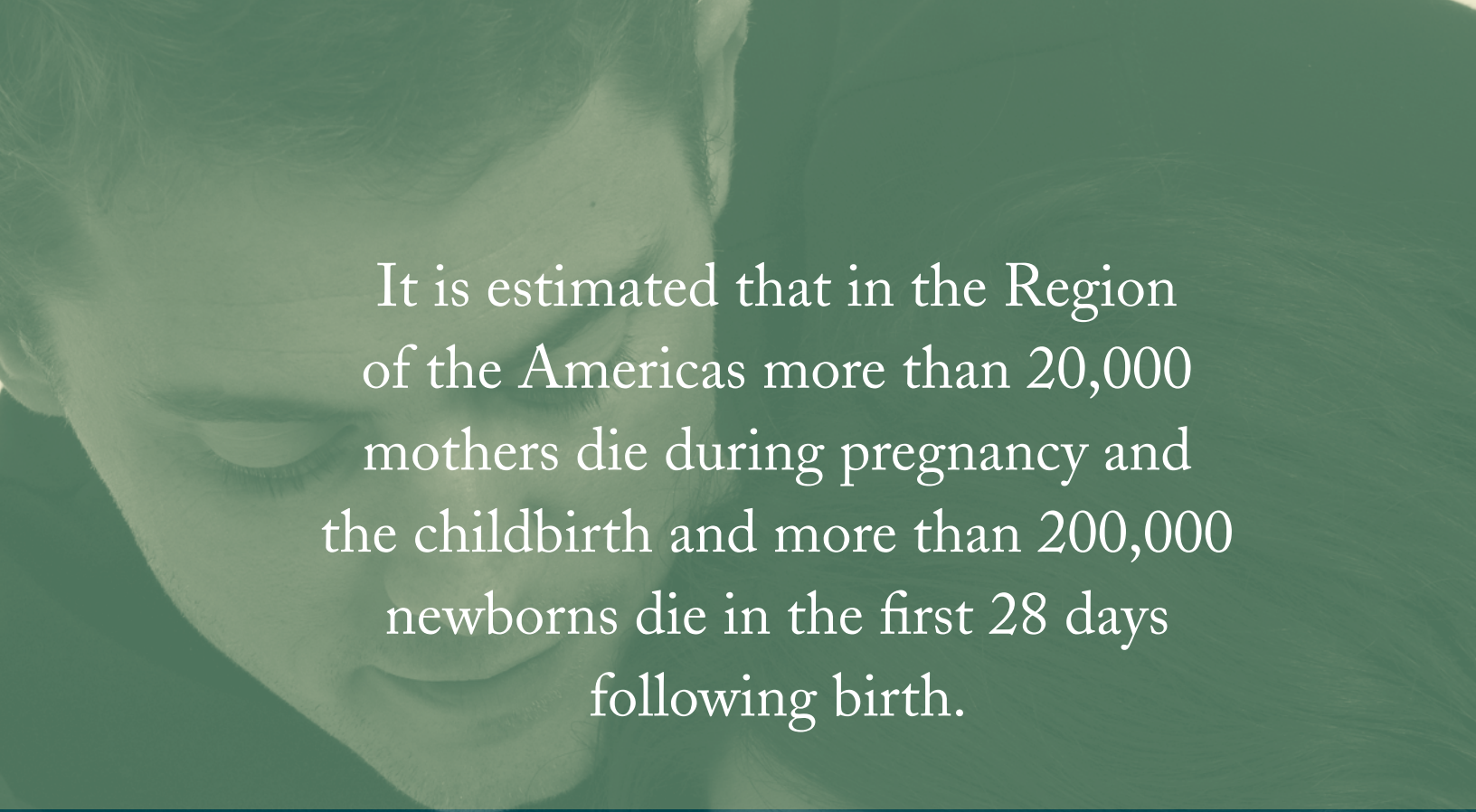
Annex A Neonatal and maternal mortality rates, births attended by skilled personnel and percentage of low birthweight newborns in countries of the Region of the Americas [32]

Annex B Competencies of community health workers and activities for the family and community [33]

Annex C Key elements for a continuous functioning process in the health care system [34]

Annex D Different types of care necessary before, during and after pregnancy, and the different levels of participation, from family to the health facility [36]

Resolution CD48.R4, Rev. 1 [38]



It is estimated that in the Region of the Americas more than 20,000 mothers die during pregnancy and the childbirth and more than 200,000 newborns die in the first 28 days following birth.



PREFACE



It is estimated that in the Region of the Americas more than 20,000 mothers die during pregnancy and the childbirth and more than 200,000 newborns die in the first 28 days following birth. The majority of these deaths occur during the first week of life, in rural populations and in indigenous populations, with limited access to health services. 85% of all neonatal deaths are associated with low birthweight, prematurity, or preventable causes such as perinatal asphyxiation and infections.



Efforts carried out by the countries of the Region have had an impact on improved maternal and child health indices, however, little has been achieved in reducing neonatal deaths which currently represent more than 75% of deaths in children under one year. This presents a great difficulty for the majority of countries to reach the Millennium Development Goals 4 and 5 by 2015.

The 48th Directing Council of the Pan American Health Organization has adopted the resolution “*Regional Strategy and Plan of Action for Neonatal Health Within the Continuum of Maternal, Newborn, and Child Care*” and proposes to support the Member States in the preparation of strategies and national action plans directed to reduce maternal and neonatal mortality in the context of the continuum of maternal, newborn and child health care.

This action plan presented on this occasion addresses persistent inequities, focusing on marginalized groups while it proposes strategies of technical cooperation and methods differentiated for responding to various situations in countries. It constitutes the basis for future strategies and action plans of the Pan American Health Organization on the subject of newborn health. 🍷

Mirta Roses Periago

Director

Pan American Health Organization

World Health Organization

INTRODUCTION

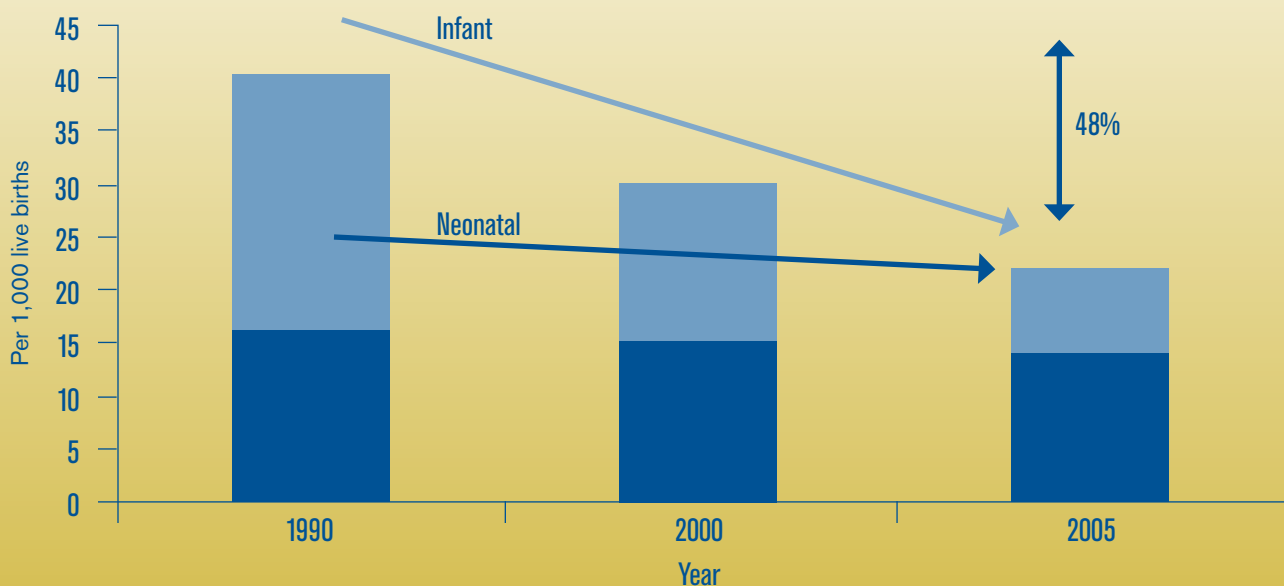


Over the past 10 years, the Latin America and Caribbean region (LAC) has made great strides in reducing post-neonatal mortality (in infants and children under 5); however, neonatal mortality has not fallen at the same pace.

LAC is a region characterized by wide disparities in health indicators among the countries and enormous inequities within them.

Most of the countries of this Region need to accelerate the reduction of neonatal mortality to achieve the Millennium Development Goals aimed at reducing child mortality. Figure 1 shows that infant mortality has been reduced 48% between 1990 and 2005 at the cost of post-neonatal mortality; however, reductions in neonatal mortality have been slower to come.

Figure 1 ▲ Evolution of infant and newborn mortality in the Region of the Americas according to period of time



Source: Estimates of FCH/CA with database from HA-PAHO, 2008



Simple, inexpensive, high-impact interventions based on sound scientific evidence are now available that could improve neonatal health, even in the poorest areas. Unfortunately, these interventions have not yet reached those who need them the most.

In response to this problem, the Pan American Health Organization has launched and served as coordinator for a consultative process that, together with partner organizations and representatives from almost every country in the Region, has studied the neonatal health situation in the Region and proposed intervention alternatives. One product of this highly participatory process is the publication *Reducing Neonatal Mortality and Morbidity in Latin America and The Caribbean: An Interagency Strategic Consensus* (PAHO/UNICEF/USAID/ACCESS/BASICS/CORE/Save the Children), which has served as the basis for this Strategy and Plan of Action on Neonatal Health within the Continuum of Maternal, Newborn, and Child Care 2008-2015.

The purpose of this document is to provide technical, operational, and strategic inputs that will support the development and execution of operating plans at the country level, in response to Resolution CD47.R19, Neonatal Health in the Context of Maternal, Newborn, and Child Health for the Attainment of the Development Goals of the United Nations Millennium Declaration in 2006.



GLOBAL MANDATES AND INITIATIVES



The launch of the *Millennium Development Goals* (United Nations, 2000), which are the health and human development goals to be achieved by the year 2015, is probably the most important social initiative in the history of humanity. All the member nations of the United Nations, among them the governments of Latin American and the Caribbean, have made a formal commitment to achieving the eight interconnected, synergistic Goals, half of which are directly or indirectly related to different aspects of public health. Goal 4 commits the international community to reducing mortality in children under 5 by two-thirds between 1990 and 2015 (United Nations, 2000).

The April 2005 *Delhi Declaration on Maternal, Newborn, and Child Health*, issues a call to action, urging the countries to take steps to save the lives of mothers, newborns, and children. To this end, it recommends that the countries focus their development plans and national budgets on achieving the Millennium Development Goals linked to maternal and child health, and that multilateral organizations, bilateral partners, international foundations, and nongovernmental organizations collaborate with the countries.

On 12 September 2005 the global *Partnership for Maternal, Newborn, & Child Health* was launched. This partnership reflects the growing world interest and attention to this issue. Its objective is to harmonize and intensify national, regional, and global activities geared to the achievement of the Millennium Development Goals linked to maternal, newborn, and child health.

At the regional level, in April 2005 the Latin America and Caribbean Newborn Health Alliance was formed during a workshop held in Washington, D.C., as part of World Health Day. On that occasion, representatives from the ministries of health of 16 countries explored the different actions to improve perinatal and neonatal health.

REGIONAL STRATEGIES

PAHO/WHO has developed several key strategies, launched a diverse of initiatives, and adopted a number of resolutions through its respective Governing Bodies, among them:

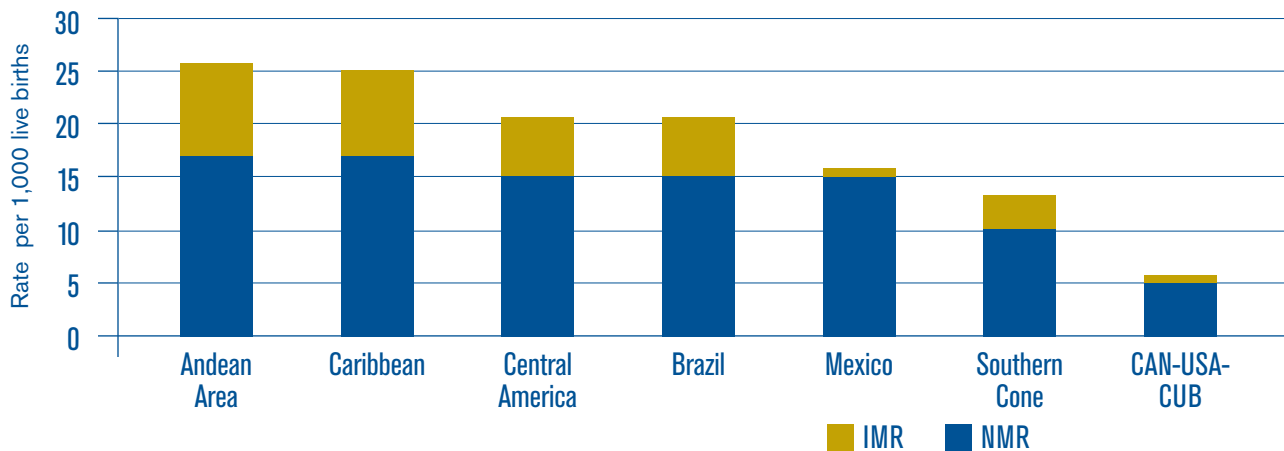
- ✧ Resolution CSP26.R13, Regional Strategy for Maternal Mortality and Morbidity Reduction (2002);
- ✧ Resolution CD45.R3, Millennium Development Goals and Health Targets (2004);
- ✧ Resolution WHA58.31, Working towards Universal Coverage of Maternal, Newborn, and Child Health Interventions (2005);
- ✧ Resolution CD46.R16, PAHO Gender Equality Policy (2005);
- ✧ Resolution CD47.R19, Neonatal Health in the Context of Maternal, Newborn, and Child Health for the Attainment of the Development Goals of the United Nations Millennium Declaration (2006);
- ✧ Resolution CE138.R2 Regional Strategy and Plan of Action on Nutrition in Health and Development (2006);
- ✧ In 1970, the Latin American Center for Perinatology, currently linked to the Women and Reproductive Health Unit (CLAP/SWR) was created to direct technical cooperation to the Latin American countries and develop appropriate technologies for improving perinatal care.

ANALYSIS OF THE SITUATION IN LATIN AMERICA AND THE CARIBBEAN

Magnitude of the neonatal problem

Each year in LAC, more than 200,000 babies die in the first 28 days of life. The average regional neonatal mortality rate is 14 per 1,000 live births (OPS, 2008). This average conceals the enormous disparities between countries, with rates ranging from 9.7 per 1,000 live births in the Southern Cone to 18.3 in the Latin Caribbean. Furthermore, average perinatal mortality is 21.3 per 1,000 live births. Neonatal mortality accounts for over 70% of infant mortality and nearly 40% of mortality in children under 5. Figure 2 shows that in some regions neonatal deaths represent more than 85% of infant mortality.

Figure 2 ▲ Infant and neonatal mortality rates in the Americas separated by Regions

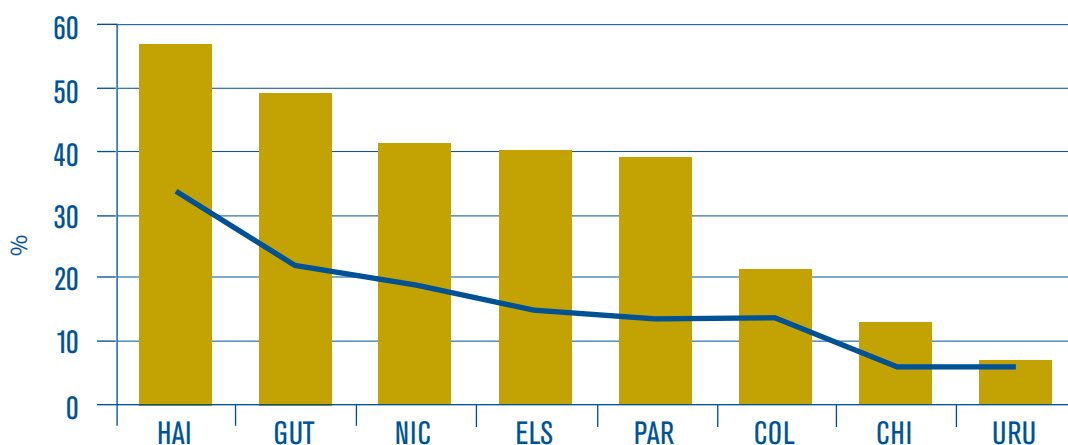


Source: Estimates of FCH/CA with database from HA-PAHO, 2008

Causes of neonatal mortality

Like many public health problems, neonatal mortality is the most obvious consequence of other underlying causes, many of them structural, that reflect the poverty and inequity in society. Figure 3 shows the relationship between the female population that lives in rural areas with neonatal mortality.

Figure 3 ▲ Percentage of female population in rural area and its relation to neonatal mortality in selected countries of Latin America and the Caribbean

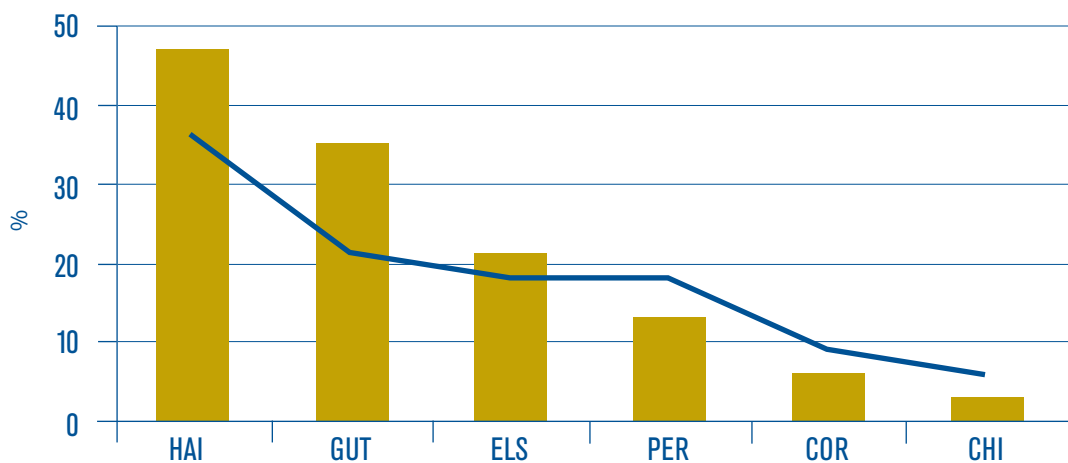


Source: Estimates based on CELADE, 2006 and D.POB.NU, 2007

The primary direct causes of neonatal mortality in LAC are infections and perinatal asphyxia. Low birthweight, while not considered a direct cause of neonatal mortality, is a significant predisposing factor. Infections, asphyxia, and low birthweight are preventable. An estimated 9% of newborns in LAC suffer from low birthweight, but they account for some 60% to 80% of neonatal mortality.

The underlying causes of neonatal mortality are varied, and as mentioned earlier, reflect social inequities, such as women's position in society, access to formal education and health education, access to health services, and care practices. Figure 4 shows the relationship between the education of the mother and neonatal mortality in selected countries of Latin America and the Caribbean.

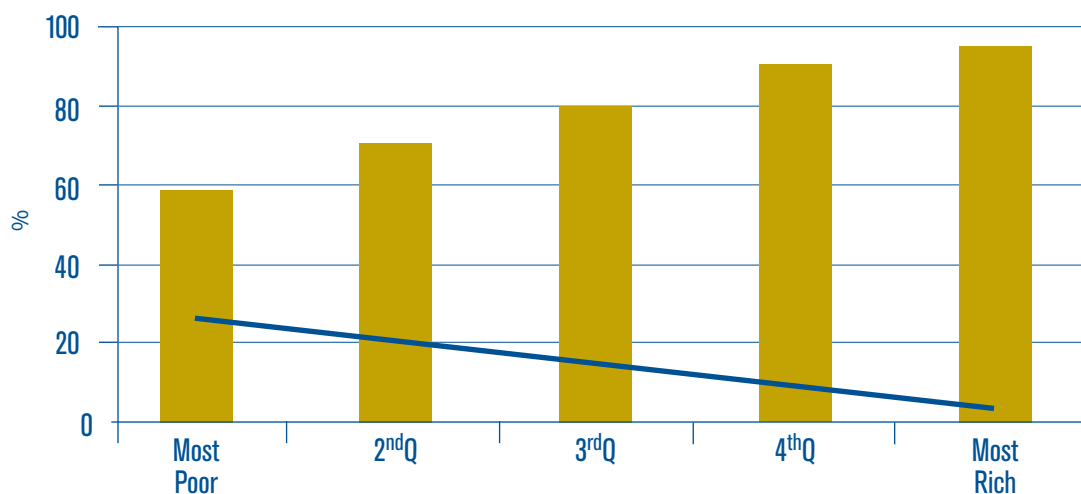
Figure 4 ▲ Percentage of illiteracy in women 15 years or older and its relationship to neonatal mortality, in selected countries of Latin America and the Caribbean



Source: Estimates based on data from UNESCO-IEU, 2005

Poverty and education probably have the most influence on neonatal mortality and social determinants. For example, in Latin America and the Caribbean, 50% fewer births are attended by skilled personnel in the poorest quintile of the population than in the wealthiest quintile (Banco Mundial, 2007). Moreover, in the Region of the Americas, neonatal mortality in countries with high percentages of mothers without an education is four times higher than in countries where mothers have more schooling (OPS, 2007). Figure 5 shows inequities among the poorest and richest countries with regard to coverage of the prenatal check-up and its impact on neonatal mortality.

Figure 5 Percentage of prenatal check-up between rich and poor in selected countries of Latin America and the Caribbean and its relation to neonatal mortality



Source: Estimates of FCH/CA with database from HA-PAHO, 2007 and World Bank, 2007

Rural and poor urban populations, marginalized communities, and indigenous and Afro-descendent populations also have very high neonatal mortality rates compared with those of other population groups.

In general, newborn survival and health have not received sufficient attention in communities or the health system. Fetal and neonatal deaths are still practically invisible, occur in the home, and often are not included in the official statistics.

INTERVENTIONS IN THE LATIN AMERICA REGION

To a greater or lesser degree, the countries of the region have been adopting a series of health sector interventions directly or indirectly aimed at improving the health of newborns and reducing neonatal mortality.

Wider coverage

With a view to reducing and even eliminating the financial, cultural, and structural barriers that impede access to the health services, chiefly by the neediest population groups, some countries have adopted health sector reform processes to provide public insurance that promotes universal access to equitable, good quality maternal and child services.

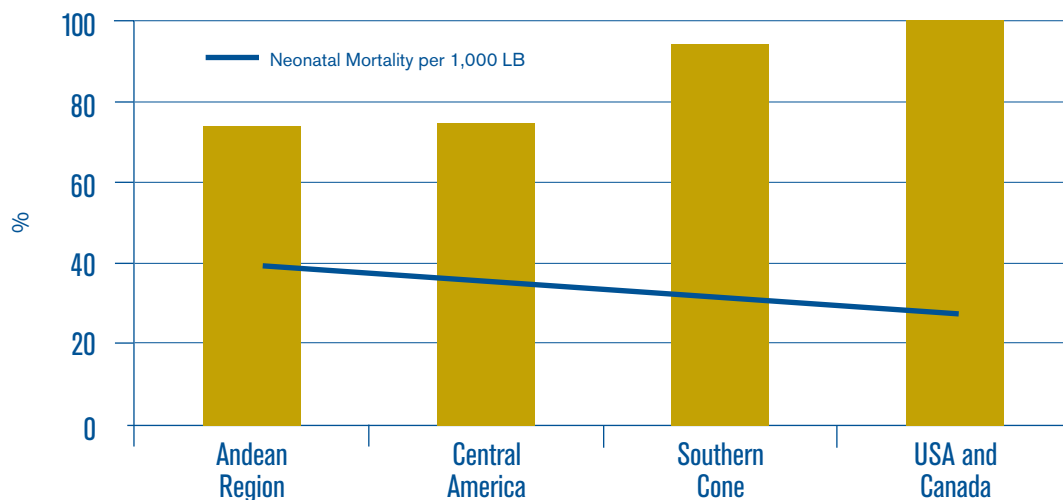
Some of these processes focus on family health, as in the case of Brazil; others are unfolding within the framework of universal public insurance or programs that offer free maternity services, as in Bolivia, Ecuador, and Haiti.

In Bolivia, the Dominican Republic, Ecuador, Guatemala, Honduras, Nicaragua, Paraguay, and Peru maternal care programs are being strengthened with the neonatal component.

Care and access to skilled care in childbirth

Although 80% of births in LAC occur in health facilities, the quality of the care provided is often less than optimal. Figure 6 shows that skilled delivery care has a direct impact on neonatal mortality.

Figure 6 ■ Percentage of deliveries attended by skilled personnel according to regions and its relationship to neonatal mortality



Source: Estimates of FCH/CA with database from HA-PAHO, 2007

In rural areas, geographical and cultural barriers pose obstacles to care during labor and delivery in health facilities and there are serious deficiencies in terms of access to skilled birth attendants, basic supplies, and functioning equipment compared to urban areas. Moreover, the referral network is generally inoperative. A high proportion of births in rural areas are attended by midwives who lack the proper training to attend normal births and the basic equipment and supplies necessary.

The highest proportion of home births is found in Bolivia, Guatemala, and Haiti; these births are usually attended by a traditional midwife, a family member, or an unskilled person, resulting in high maternal and neonatal mortality.

Integrated Management of Childhood Illness Strategy (IMCI)

The IMCI strategy includes a strong prevention and promotion approach in addition to the management of prevalent childhood illness. IMCI is designed to bolster the competencies of health workers through its clinical component, improve the care of children in the family and community through its community component, and strengthen the health systems.

The majority of the countries have implemented it to one degree or another, with some variations, since 1996. The countries that work with IMCI integrated the neonatal component in 2003,¹ and some have made efforts to integrate interventions with maternal health, thus contributing to an integrated maternal-neonatal-child approach. In many cases, IMCI has contributed to the training of hospital personnel in advanced neonatal resuscitation, employing the standards of the American Academy of Pediatrics. IMCI's neonatal component is critical for reducing the most hard-core fraction of infant and under-5 mortality.

The community component of IMCI, adopted since 2000 in countries such as Bolivia, Colombia, the Dominican Republic, Paraguay, and Peru, has shown its potential as a powerful tool for mobilizing society to improve child health, promoting the involvement and empowerment of the social actors that live and work in the community.

Vaccination

Vaccination has made a major contribution to the reduction of neonatal and infant mortality throughout Latin America and the Caribbean. Vaccinating mothers has been key to reducing neonatal tetanus, and universal rubella vaccination has helped to lower the prevalence of congenital rubella syndrome.

Micronutrients

Micronutrient deficiencies are common in women of childbearing age. At the start of pregnancy, many women have inadequate micronutrient reserves and display other signs of deficiencies that can seriously affect their health and that of their babies. According to WHO, 43% of women aged 15 to 49 in the developing countries suffer from anemia in pregnancy, a condition recognized as a risk factor for maternal mortality, low birthweight, and prematurity. It has been shown that clamping the umbilical cord at three minutes or more increases iron reserves and reduces anemia during the first six months of breast-feeding (Hutton EK, Hassan ES, JAMA 2007). Lack of folic acid during the preconception period heightens the risk of neural tube defects.

1 Bolivia, Colombia, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Panama, Paraguay, and Peru.

Breast-feeding

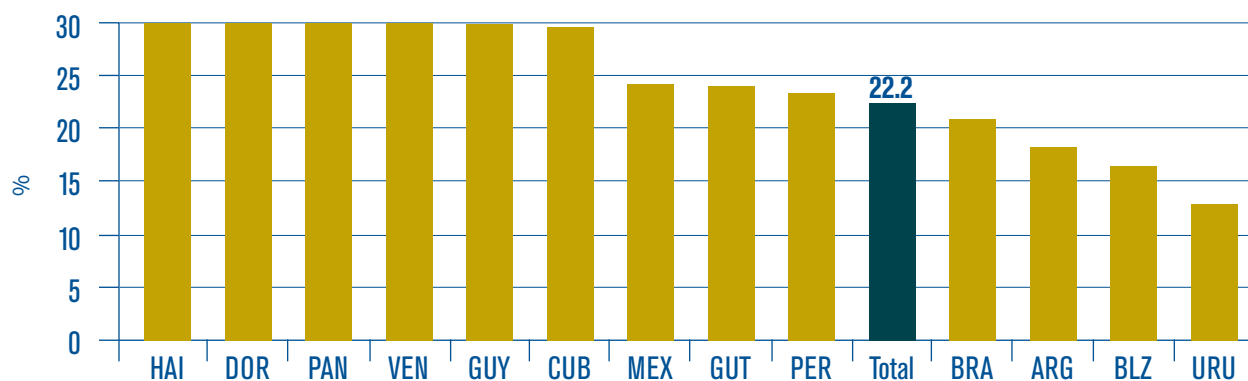
Beginning exclusive breast-feeding in the first hour of life is fundamental to survival in the neonatal period and the first years of life. In Latin America and the Caribbean, it is estimated that 66% of the deaths from diarrhea and acute respiratory infections in the first three months of life could be prevented by exclusive breast-feeding (Betran AP et al. BMJ 2001).

Although it is currently estimated that 90% of mothers in Latin America and the Caribbean breast-feed their newborns, fewer than one-third of them do so exclusively for the first six months. Moreover, giving babies other fluids is a common practice in the region that can prove highly detrimental. It has been shown that essential interventions, such as keeping the mother and baby together after delivery, skin-to-skin contact, and beginning breast-feeding in the first hour of life foster exclusive breast-feeding and its maintenance.

Prevention of Mother-to-Child Transmission of HIV

Since the early 1990s, the HIV epidemic has been a threat to infant survival, due chiefly to vertical transmission of the infection from mother to newborn. In Latin America and the Caribbean, some 49,000 children have been infected through vertical transmission (OPS, 2007). Without effective medical interventions, at least one-third of the children born of HIV+ mothers will contract the virus, and most will die before their fifth birthday. Figure 7 shows that on average, 22.2% of newborns are infected by their HIV-positive mothers.

Figure 7 ▲ Estimated percentage of HIV-infected newborns of HIV-positive mothers in LAC



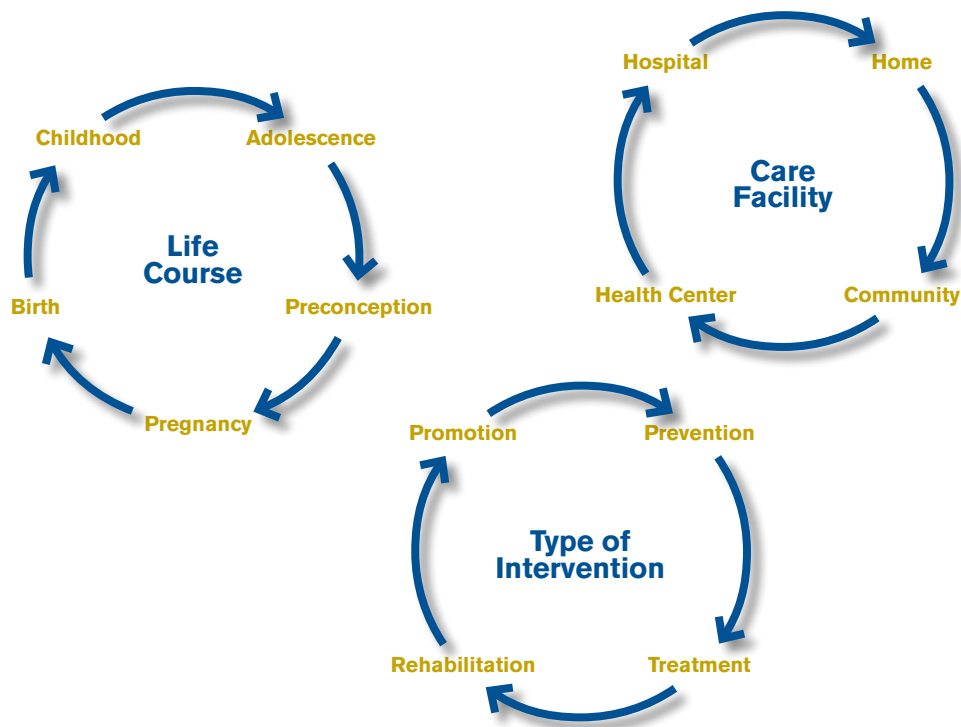
Source: Estimates of FCH/CA with database of HA-PAHO, 2007

THE MATERNAL-NEWBORN-CHILD CARE CONTINUUM APPROACH

The justification for adopting a strategy that covers the continuum of care is based on the close link between health and the well-being of families, women, newborns, children, and adolescents. The goal of addressing this continuum is to guarantee the availability of and access to evidence-based interventions that will make it possible to improve the health of mothers, newborns, and children.

This approach has at least three different dimensions with profound implications for the way in which policies, programs, and interventions are organized and executed. First, it means that care must be provided throughout the life cycle, which includes adolescence, the preconception period, pregnancy, delivery, and childhood, thereby taking advantage of natural interactions. Second, it indicates that care must be provided through a process that preserves absolute continuity and encompasses the home, community, health center, and hospital. Finally, the continuum of care also implies interventions in health promotion, disease prevention and control, treatment, rehabilitation, and reintegration into society. Figure 8 shows that the framework of the continuum of care takes place not only within the life course, but also in the care facility and the type of intervention carried out.

Figure 8 Framework of the Continuum of Maternal, Newborn, and Child Care



PLAN OF ACTION



The Regional Strategic Plan of Action is based on the Interagency Strategic Consensus on Reducing Neonatal Mortality and Morbidity in Latin America and the Caribbean. Reflecting the commitment by the governments of the region for the eight-year period 2008-2015, its activities are geared to responding to that commitment, based on the following vision:

All mothers, newborns, and children in Latin America and the Caribbean shall receive the appropriate, effective, quality care that they need to live healthy and productive lives, thus making MDG-4 a reality.

General Objective

Support the countries of the Region in achieving Millennium Development Goal-4, emphasizing interventions to promote peri-neonatal health

Strategic Areas

This Plan of Action covers four interdependent strategic areas: 1) create an enabling environment for the promotion of peri-neonatal health; 2) strengthen health systems to improve access to maternal, newborn, and child health services; 3) promote community-based interventions; and 4) develop and strengthen monitoring and evaluation systems. Each area has one or more lines of action, and each line of action has an objective that represents an expected result, with specific activities at the regional and national level.

Strategic Area 1: Create an enabling environment for the promotion of peri-neonatal health

Ensuring better conditions for adapting, implementing, disseminating, and developing the neonatal health strategy will require Member States to take responsibility for creating conditions that will promote national plans to foster the creation of an enabling environment for the promotion of peri-neonatal health.

Line of action 1.1 *Promote the development of national plan to improve peri-neonatal health*

Objective

By 2010, all priority impact countries (1) in Latin America and the Caribbean will have a national strategic plan in place.

Activities at the regional level

- Disseminate and promote the regional plan approved by the Governing Bodies
- Update the analysis of the maternal, newborn, child health situation in the countries of the region.
- Develop a regional advocacy strategy to promote neonatal health within the framework of the continuum of care

Activities at the national level

- Develop national plans to promote peri-neonatal health
- Adapt the advocacy strategy for promoting peri-neonatal health to the national level.
- Update the national analysis of the maternal, newborn, child health situation
- Review the legal framework governing the protection and rights of mothers and children (Priority impact countries: Bolivia, Brazil, the Dominican Republic, Ecuador, El Salvador, Guatemala, Guyana, Haiti, Honduras, Nicaragua, Paraguay, and Peru.)

Line of Action 1.2 *Create and strengthen alliances and partnerships*

Objective

By 2010, the priority impact countries in Latin America and the Caribbean will have entered into partnerships with organizations that support implementation of the national plans.

Activities at the regional level

- Strengthen the Latin American and Caribbean Newborn Health Alliance to develop a joint work plan to support the initiative
- Share instruments and experiences through newsletters or other media
- Promote South-South cooperation

Activities at the national level

- Identify potential partners and social actors who can join the alliance to support implementation of the joint plan
- Develop and execute the joint work plan with institutions that support the regional plan

Strategic Area 2: Strengthen health systems to improve access to maternal, newborn, and child health services

Pregnancy and birth are part of a normal physiological process in which complications may occur. The health system must be prepared to address these needs, improving the quality of care at the different levels of the system, along with access, and promoting evidence-based practices.

Line of action 2.1		Promote universal equitable access to maternal and neonatal care, giving priority to vulnerable groups
Objective	By 2012, the priority countries will have achieved at least 80% coverage in terms of skilled care in childbirth	
Activities at the regional level	<ul style="list-style-type: none"> ▪ Provide technical assistance in the use of program instruments for delivering essential neonatal care in health facilities and communities; these instruments should include cost estimates. ▪ Develop, draft, and promote proposals that support interculturalism and good treatment ▪ Facilitate the sharing of experiences among countries that have developed insurance models for maternal and neonatal care 	
Activities at the national level	<ul style="list-style-type: none"> ▪ Explore the various alternatives for financing universal access to maternal and neonatal health care, considering cost analysis ▪ Improve and promote good treatment and the intercultural approach in maternal and neonatal services ▪ Strengthen the referral and counter-referral system. ▪ Increase social network participation in financing the referral and counter-referral system 	
Line of action 2.2		Update, disseminate, and implement maternal and neonatal health care interventions
Objective	By 2009, all priority impact countries will be implementing evidence-based neonatal care standards and procedures as part of the continuum of care.	
Activities at the regional level	<ul style="list-style-type: none"> ▪ Develop and disseminate generic standards that can be adapted nationally and at the different levels of care. ▪ Facilitate adaptation at the country level ▪ Promote the sharing of experiences among countries 	
Activities at the national level	<ul style="list-style-type: none"> ▪ Adapt and apply generic standards to the national situation ▪ Upgrade the competencies of human resources in health institutions and the community ▪ Strengthen the contents of undergraduate and graduate programs in institutions that train human resources for health ▪ Surveillance and monitoring of the standards application by level of care ▪ Guarantee the supply and distribution of drugs, equipment, and basic inputs for maternal and neonatal care ▪ Promote local application of the continuum of care 	

Strategic Area 3: Promote community-based interventions

Based on the international resolutions, evidence, and the lessons learned in the Region, the Latin American and Caribbean Newborn Health Alliance recommended the promotion of community interventions as an integral part of the regional strategy and plan of action in neonatal health. The main goal of this strategic area is to expand health care coverage for mothers and newborns through community-based interventions that have had a positive impact on maternal and neonatal mortality, especially in areas with limited access.

Health practices that can be promoted in the community

- Proper nutrition for mothers
- Immunization against tetanus
- Essential neonatal care, including a clean and safe birth
- Early recognition of danger signs and immediate transport
- Exclusive breast-feeding
- Safe sex
- A safe and clean environment
- Protection against violence
- Prevention of early pregnancy
- Education of girls

The interventions to improve family and community practices have had a real impact on neonatal health and development; they should therefore be given high priority. Families need knowledge and support to provide effective care to newborns in their home—for example, temperature control, early and exclusive breast-feeding, good hygiene, and use of the health services for immunization. They must also be able to recognize the signs of disease and be able to quickly take the newborn to an appropriate health facility.

Line of action 3.1

Promote community interventions in national health plans to improve neonatal health

Objective

- By 2010, the priority impact countries will have added instruments to their national program to improve the skills of community health workers and other social actors so that they can support health programs for mothers and newborns in the framework of the continuum of care.

Activities at the regional level

- Develop and distribute instruments to improve the skills of community workers and other social actors
- Technical support for the design and implementation of community-based interventions in health plans

Activities at the national level

- Adapt and use the instruments for improving the skills of community workers and other social actors to promote maternal and neonatal health
- Identify mechanisms that will strengthen ties between the community and health facilities
- Guarantee the quality, supervision, and monitoring of support, emphasizing good communication and negotiating skills
- Put basic measures in place in the home and community when referral is not an option



Line of action 3.2

Community mobilization and communication strategies to promote healthy behaviors

Objective

- By 2010, the priority impact countries will have implemented communication and social mobilization strategies.

Activities at the regional level

- Prepare guidelines for developing communication and social mobilization strategies that will promote healthy behaviors

Activities at the national level

- Adapt and implement the strategies for communication, social mobilization, and behavioral change
- Explore the most efficient dissemination modalities
- Promote the creation of networks of local/municipal maternal-neonatal health committees
- Identify mechanisms to strengthen the ties between communities and health facilities
- Promote intersectoral activities (e.g., education)
- Promote community analysis of the maternal-neonatal health information available at the local level to improve interventions



Strategic Area 4: Develop and strengthen monitoring and evaluation systems

In the Region, the lack of quality peri-neonatal information and standardization is a problem, as is the lack of analysis and its use in decision-making. CLAP/SMR has collaborated with the ministries of health, high officials, and health professionals in several Latin American and Caribbean countries to create and promote perinatal clinical record-keeping and the perinatal information system as one of the key tools for maternal and perinatal health.

It is essential to oversee and monitor the performance of health workers and other human resources to guarantee compliance with basic standards of quality and improve competencies. Bolivia has conducted these neonatal IMCI monitoring activities in health services, a practice that is expected to be replicated in other countries of the region.

In order to improve perinatal and neonatal health information, WHO has devised a methodology for creating the country profile that can be used in developing a baseline.

Line of action 4.1		Strengthen health information systems, with emphasis on maternal and peri-neonatal health
Objective	By 2010, all the countries will have information systems that generate quality information on maternal and peri-neonatal health	
Activities at the regional level	<ul style="list-style-type: none"> ▪ Reach agreement on a standardized list of basic indicators for monitoring and comparison purposes; the list should include the identification of gaps and inequities, with evaluations 2010-2015 ▪ Provide technical support to the countries to strengthen their regular health information systems, prioritizing the indicators linked with MDG-4 ▪ Technical assistance to strengthen the Perinatal Health Information System 	
Activities at the national level	<ul style="list-style-type: none"> ▪ Systematically integrate basic maternal and peri-neonatal health information into regular systems ▪ Improve the capture and quality of death records in civil registries and other information sources ▪ Promote peri-neonatal morbidity and mortality surveillance initiatives 	
Line of action 4.2		Create and strengthen health worker surveillance, monitoring, and performance evaluation systems within the framework of the continuum of care
Objective	By 2010 the priority impact countries will have implemented health worker performance monitoring systems	
Activities at the regional level	<ul style="list-style-type: none"> ▪ Develop health worker quality performance indicators ▪ Develop and disseminate guidelines for developing baselines and conducting impact assessments within the framework of the continuum of care ▪ Provide technical cooperation for regional adaptation and dissemination of the neonatal IMCI surveillance and monitoring proposal within the framework of the continuum of care ▪ Promote the integration of neonatal and perinatal variables in national demographic and health surveys 	
Activities at the national level	<ul style="list-style-type: none"> ▪ Implement quality of care indicators for health work performance ▪ Adapt the generic guidelines for neonatal monitoring and evaluation ▪ Systematic application of the neonatal IMCI monitoring and follow-up methodology ▪ Administer baseline and evaluation surveys in the sites with the greatest information deficits ▪ Encourage operations research 	

In response to the resolution of the 47th Directing Council of PAHO, Table 1 proposes a series of activities differentiated to face the different situations among countries and within the same, as well as a series of process, result and impact indicators.

Table 1 ▀ Activities differentiated according to different epidemiological scenarios for addressing specific situations

Strategic Areas	Neonatal Mortality 20 or more per 1,000 live births	Neonatal Mortality between 15 and 19 per 1,000 live births	Neonatal Mortality < 15 per 1,000 live births
1) Create an enabling environment for the promotion of peri-neonatal health	<ul style="list-style-type: none"> ▪ Prepare specific policies that address neonatal care. ▪ Design financing mechanisms for protecting the most vulnerable. ▪ Disseminate manuals and standards at all levels of care. ▪ Guarantee equity. ▪ Promote quality. 	<ul style="list-style-type: none"> ▪ Prepare specific policies that address neonatal care. ▪ Disseminate manuals and standards at all levels of care. ▪ Intensive promotion of essential newborn care and identification of warning signs. 	<ul style="list-style-type: none"> ▪ Prepare specific policies that address neonatal care. ▪ Disseminate manuals and standards at all levels of care.
2) Strengthen health systems to improve access to maternal, newborn, and child health services	<ul style="list-style-type: none"> ▪ Increase coverage of care provided by skilled personnel. ▪ Guarantee emergency obstetrical and neonatal care in referral establishments. ▪ Establish quality integrated obstetric care services and comprehensive neonatal health care in referral hospitals. ▪ Strengthen the referral system and the connections among communities and establishments. 	<ul style="list-style-type: none"> ▪ Achieve universal coverage with skilled personnel, directed at populations that do not regularly come to these services. ▪ Guarantee emergency obstetrical and neonatal care in referral establishments. ▪ Improve the quality and cultural acceptability of obstetric and perinatal care. ▪ Establish quality integrated obstetric care services and comprehensive neonatal health care in referral hospitals. 	<ul style="list-style-type: none"> ▪ Achieve universal clinical care coverage, including intensive neonatal care. ▪ Improve clinical care quality and promote care favorable for the entire family. ▪ Guarantee the drug supply for the management of severe pathologies. ▪ Assure continuity among personnel.
3) Promote community-based interventions	<ul style="list-style-type: none"> ▪ Continue to promote the demand for care. ▪ Strengthen family and community care. ▪ Promote specific behavioral goals (e.g. increase exclusive breastfeeding up to 6 months old). ▪ Consider community treatment for some specific newborn problems. 	<ul style="list-style-type: none"> ▪ Continue to promote healthy behavior in the home and the search for care. 	<ul style="list-style-type: none"> ▪ Create community criteria for addressing harmful habits such as smoking and consumption of drugs.
4) Develop and strengthen monitoring and evaluation systems.	<ul style="list-style-type: none"> ▪ Guarantee surveillance. ▪ Monitoring and neonatal evaluation. ▪ Adapt generic instruments for the different levels of care. ▪ Favor the incorporation of neonatal variables into statistics and national surveys. 	<ul style="list-style-type: none"> ▪ Guarantee quality, supervision, and monitoring of support emphasizing good communication and negotiation skills. 	<ul style="list-style-type: none"> • Monitor and improve long-term results in cases of neonatal complications.

Based on the activities differentiated according to different epidemiological scenarios in Table 2, a series of tracer indicators are proposed that all the countries should compile and other process, outcome and impact indicators that can be optional according to local needs.

Table 2 ■ Suggested common tracer, process, outcome and impact indicators.

Strategic areas	Common tracer indicators	Process indicators	Outcome indicators	Impact indicators
1)) Create an enabling environment for the promotion of peri-neonatal health	<ul style="list-style-type: none"> ▪ Have a national plan that includes maternal and neonatal health within the framework of the continuum, approved, by consensus, under way and with an assigned budget. 	<ul style="list-style-type: none"> ▪ Health expenditure assigned to maternal and neonatal programs. ▪ Access to health services. ▪ Access to drugs. 	<ul style="list-style-type: none"> ▪ Number of countries that have national programs integrated for maternal, newborn and child health. ▪ Proportion of establishments with neonatal health programs set up. 	<ul style="list-style-type: none"> ▪ Perinatal mortality rate x 1000 live births. ▪ Fetal mortality rate per 1000 live births. ▪ Hospital case-fatality by neonatal cause. ▪ Early neonatal mortality rate (0-6 days) per 1000 live births. ▪ Late neonatal death rate (7-28 days) per 1000 live births. ▪ Neonatal death (0-28 days) per 1000 live births. ▪ Neonatal mortality by specific cause. ▪ Neonatal mortality specific to birth weight. ▪ Neonatal mortality by age at birth. ▪ Prevalence of low birthweight.
2) Strengthen health systems to improve access to maternal, newborn, and child health services	<ul style="list-style-type: none"> ▪ Proportion of institutional deliveries in areas of greater risk. ▪ Proportion of deliveries attended by skilled personnel. ▪ Proportion of services that apply standards and neonatal management protocols. 	<ul style="list-style-type: none"> ▪ Number of personnel trained in essential newborn care. ▪ Number of staff trained in basic neonatal resuscitation. ▪ Proportion of maternal and child services with standards or protocols for newborn care. ▪ Proportion of maternal and child services with an established referral and counter-referral system. 	<ul style="list-style-type: none"> ▪ Proportion of maternal and child services in which neonatal IMCI is applied. ▪ Proportion of personnel of maternal and child services that properly apply essential newborn care. ▪ Proportion of personnel of maternal and child services that have knowledge of at least 5 neonatal warning signs. ▪ Proportion of institutional births. 	

Table 2 continues

Strategic areas	Common tracer indicators	Process indicators	Outcome indicators	Impact indicators
2) (continues)		<ul style="list-style-type: none"> ▪ Caesarean deliveries as proportion of all births among the population. ▪ Proportion of newborns admitted to an establishment with complications who die. 	<ul style="list-style-type: none"> ▪ Proportion of births attended by qualified personnel. ▪ Proportion of pregnant women with 4 or more prenatal check-ups. ▪ Proportion of newborns breast-fed within the first hour of life. ▪ Proportion of babies who receive postnatal care up to the 3rd day. ▪ Proportion of pregnant women with VDRL test. ▪ Proportion of pregnant women vaccinated with tetanus toxoid. 	
3) Promote community-based interventions	<ul style="list-style-type: none"> ▪ Proportion of services that work in the community with IEC strategies implemented. ▪ Proportion of communities that carry out home visits. 	<ul style="list-style-type: none"> ▪ Closer distance in time between the home and first level and referral institutions. 	<ul style="list-style-type: none"> ▪ Number of communities that have established maternal-neonatal transportation plans. ▪ Proportion of mothers who know at least 3 neonatal warning signs. 	
4) Develop and strengthen monitoring and evaluation systems.	<ul style="list-style-type: none"> ▪ Proportion of reduction in mortality in children < 5 years old based on MDGs. ▪ Proportion of reduction in early and late neonatal mortality. ▪ Proportion of mothers who recognize at least two maternal and neonatal warning signs. ▪ Proportion of services with a community neonatal surveillance system implemented. 	<ul style="list-style-type: none"> ▪ Proportion of maternal and child services with an established surveillance, monitoring and evaluation system. ▪ Proportion of maternal and child services with a peri-neonatal information system established. ▪ Proportion of services that routinely analyze neonatal mortality and morbidity. 	<ul style="list-style-type: none"> ▪ Proportion of maternal and child services that have increased their newborn care coverage. 	

ROLE OF THE PAN AMERICAN HEALTH ORGANIZATION



The Pan American Health Organization (PAHO) has served as a catalyst for securing technical and financial resources to strengthen the 11 Essential Public Health Functions (EPHF) in the Latin American and Caribbean countries (OMS/OPS, 2000; Muñoz F et al., 2000). Strengthening these functions can prevent mortality in newborns but requires the participation of external and internal actors through interprogrammatic efforts that employ a multisectoral approach.

Each strategic area of this Plan has one or more lines of action, thereby promoting an integrated, comprehensive methodology for managing the health of mothers, newborns, and children. In order to respond to new challenges and address the unfinished agenda in child health, the strategy also considers the PAHO technical cooperation framework.

In this context, the technical capacity of the Representative Offices must reflect the needs and priorities set for maternal, newborn, and child health. PAHO technical support to the countries will center on the health sector's response to maternal and neonatal care and will pay special attention to the training and upgrading of human resources and the development and adaptation of standards, guidelines, methodologies, and tools, along with the dissemination of information, including that on evidence-based interventions and best practices in care. It is equally important to strengthen the country's existing cooperation mechanisms and technical cooperation among countries. These technical cooperation mechanisms must guarantee real visibility for neonatal problems within the continuum of care and result in the mobilization of political, social, and economic support.

Partners

For years, interventions for improving maternal and child health have focused only on this issue and, thus, have ignored important links. Today it is recognized that neonatal health is the basic link between maternal, newborn, and child health programs. Linking interventions can lead to a substantial reduction in costs and improve the efficiency and effectiveness of program planning, monitoring, and supervision, as well as training and resource use.

No country, agency, or organization can tackle the entire problem of neonatal, perinatal, and maternal mortality on its own. Thus, joining forces will facilitate the creation of a continuum of care and an environment that facilitates achievement of the Millennium Development Goals in maternal and child health. The main partners will be multi-lateral and bilateral organizations, donors, the private sector, scientific and academic institutions, nongovernmental organizations, faith-based organizations, and civil society.

Consequently, this document is a call for a multisectoral interagency agreement on the technical program and policies that we should promote in Latin America in the area of neonatal health within the framework of the continuum of care. An effective partnership is critical for harmonizing and intensifying the measures adopted at the global, regional, national, and local levels to achieve Millennium Development Goals 4 and 5.

REFERENCES



- Adam, T., Lim, S. S., Mehta, S., Bhutta, Z. A., Fogstad, H., Mathai, M., et al. (2005). Cost effectiveness analysis of strategies for maternal and neonatal health in developing countries. *Bmj*, 331(7525), 1107.
- Aubel, J., Ibrahima, T., Mamadou, D. (2001). Strengthening grandmother networks to improve community nutrition: experience from Senegal. *Gender and Development*, 9(2), 62-73.
- Betran AP, de Onis M, Laurer JA, Villar J. Ecological study of effect of breast feeding on infant mortality in Latin America. *BMJ* 2001;323(7308):303-306.
- Bhutta, Z. A., Darmstadt, G. L., Hasan, B. S. and Haws, R. A. (2005). Community-based interventions for improving perinatal and neonatal health outcomes in developing countries: a review of the evidence. *Pediatrics*, 115(2 Suppl), 519-617.
- Bryce, J., Victora, C. G., Habicht, J. P., Black, R. E. and Scherpbier, R. W. (2005). Programmatic pathways to child survival: results of a multi-country evaluation of Integrated Management of Childhood Illness. *Health Policy Plan*, 20 Suppl 1, i5-i17.
- Buffington, S., Sibley, L., Beck, D., Armsbruster, D. (2003). *Home based life saving skills: where home birth is common*. Maryland, U.S.A.: American College of Nurse Midwives.
- Burkhalter B, Edson W, Harvey S, Boucar M, Djibrina S, Hermida J, Ayabaca P, Bucagu M, Gbangbade S, McCaw-Binns A. Quality of obstetric care observed in 14 hospitals in Benin, Ecuador, Jamaica, and Rwanda. *Operations Research Results*. Published for USAID by the Quality Assurance Project. March 2006.
- Caparro CM, Neufeld LM, Tena Alvarez G, Eguia-Liz Cedillo R, Dewey KG. Effect of timing of umbilical cord clamping on iron status in Mexican infants: a randomised controlled trial. *Lancet* 2006;367:1997-2004
- Darmstadt GL, Bhutta ZA, Cousens S, Adam T, Walker N, De Bernis L. *Evidence-based, cost-effective interventions: how many newborn babies can we save?* *Lancet* 2005; 365:977-88.
- Declaration of Alma Ata: International Conference on Primary Health Care*. (1978). Alma-Ata, USSR: WHO.
- FCH/CA. (2003). *Prácticas claves para el crecimiento and desarrollo saludables*: OPS-OMS/UNICEF.
- Figuroa, M., Kincaid, L., Rani, M. and Lewis, G. (2002). *The communication for social change: An integrated model for measuring the process and its outcomes*: John Hopkins University's Center for Communication Program/ The Rockefeller Foundation.
- Green, L. W., Kreuter, M. W. and Green, L. W. (2005). *Health program planning : an educational and ecological approach*. New York: McGraw-Hill.
- Haws R, W. P., Castillo J. (2004). *Innovative Community-Based Interventions to Improve Newborn Health in Latin America and the Caribbean*: The CORE Group.
- Haws, R. A., Thomas, A. L., Bhutta, Z. A. and Darmstadt, G. L. (2007). Impact of packaged interventions on neonatal health: a review of the evidence. *Health Policy Plan*, 22(4), 193-215.
- Huicho, L., Davila, M., Gonzales, F., Drasbek, C., Bryce, J. and Victora, C. G. (2005). Implementation of the Integrated Management of Childhood Illness strategy in Peru and its association with health indicators: an ecological analysis. *Health Policy Plan*, 20 Suppl 1, i32-i41.
- Hutton EK, Hassan ES, Late vs. Early clamping of the umbilical cord in full-term neonates: systematic review and meta-analysis of controlled trials. *JAMA* 2007;297(11):1241-52
- Interagency Working Group. Reducing Neonatal Mortality and Morbidity in Latin America and the Caribbean: An Interagency Strategic Consensus. PAHO/WHO, UNICEF, USAID, ACCESS, BASICS, CORE and SNL/Save the Children/USA. 2007
- Kenya-Mogisha, N. and Pangu, K. (1999). *The Household and Community Component of IMCI: As resource manual on strategies and implementation steps*: UNICEF-ESARO.
- Knippenberg R, Lawn J, Darmstadt G, Begkoyian G, Fogstad H, Waleign N, Paul K. Systematic scaling up of neonatal care in countries. *The Lancet* –Neonatal Survival. March 2005.
- Labonte, R. (1987). Community health promotion strategies. *Health Promotion*, 32(Summer), 5-10.

- Lawn J, Kerber, K, BASICS eds. *Opportunities for Africa's newborns: Practical data, policy and programmatic support for newborn care in Africa*. Partnership for Maternal, Newborn and Child Health (PMNCH), 2006.
- Lawn J, Zupan J, Begkoyian G, Knippenberg R. Newborn survival. In: Jamison D, Breman J, Measham A, Alleyne G, Claeson M, Evans D, Jha P, Mills A, Musgrove P, eds. *Disease Control Priorities in Developing Countries 2nd edition*. Washington, D.C., The World Bank Group, 2006
- Lawn JE, Cousens S, Zupan J. 4 million neonatal deaths: When? Where? Why? *The Lancet* 2005; 365:891-900.
- Lawn, J. E., Manandhar, A., Haws, R. A., & Darmstadt, G. L. (2007). Reducing one million child deaths from birth asphyxia - a survey of health systems gaps and priorities. *Health Res Policy Syst*, 5, 4.
- Martines J, Paul V, Bhutta Z, Koblinsky M, Soucat A, Walker N, Bahl R, Fogstad H, Costello A. Neonatal survival: a call for action. *Lancet* - Neonatal Survival. March 2005.
- Muñoz F, López-Acuña D, Halverson P, et al. Las funciones esenciales de la salud pública: un tema emergente en las reformas del sector salud. *Rev Panam Salud Pública* 8(1/2), 2000.
- Obaid, T. A. (2007). Statement on the Occasion of World Population Day 2007: Men at work - men as partners for maternal health. Found 07/12/07 in <http://www.unfpa.org/wpd/>
- OPS. (2003). Atención primaria de salud en las Américas: Las enseñanzas extraídas a lo largo de 25 años and los retos futuros, 44 Consejo Directivo CD44.R6. Washington, D.C., USA: Pan American Health Organization.
- OPS. (2005). *Componente del hogar and la comunidad: Guía práctica and mensajes clave para actores sociales*. Washington, D.C.: Pan American Health Organization.
- OPS. (2006). Serie de Guías para los actores sociales de la Alianza regional de AIEPI Comunitario.
- Organización Mundial de la Salud. Informe sobre la Salud en el Mundo 2005: Cada madre and cada niño contarán. 2005.
- Organización Panamericana de la Salud. 26.^a Conferencia Sanitaria Panamericana. *Estrategia regional para la reducción de la mortalidad and la morbilidad maternas*. Washington, D.C., USA. 2003.
- Organización Panamericana de la Salud. 44.^o Consejo Directivo, 55.^a Sesión del Comité Regional. *La contribución de la atención integrada a las enfermedades prevalentes de la infancia (AIEPI) para el logro de los Objetivos de Desarrollo del Milenio*. Washington, D.C., USA. 2003.
- Organización Panamericana de la Salud. 47.^o Consejo Directivo. *La salud neonatal en el contexto de la salud de la madre, del recién nacido and del niño para cumplir los Objetivos de Desarrollo del Milenio de las Naciones Unidas*. Washington, D.C., USA. September 2006.
- Pan American Health Organization (2007). *Declaration of the Americas on the Renewal of Primary Health Care (PHC)*. Washington, D.C.: Pan American Health Organization.
- Pan American Health Organization. (2001-2005). *Regional Community IMCI Project: Empowering Local Communities to Improve Children's Health in Ten Latin American Countries* Washington, D.C.: PAHO- American Red Cross.
- República de Nicaragua Ministerio de Salud. Evaluación de competencias en la atención del embarazo, parto, posparto, recién nacido and sus complicaciones. June 2006.
- Save the Children. *State of the World's Mothers 2006. Saving the Lives of Mothers and Newborns*. May 2006.
- The United Nations Children's Fund (UNICEF). *Tracking Progress in Child Survival: The 2005 Report*. New York, USA. 2005
- Tinker A, Hoop-Bender P, Azfar S, Bustreo F, Bell R. *A continuum of care to save newborn lives*. *The Lancet* 2005; 365:822-5.
- Banco Mundial. Partos atendidos por personal médico calificado and su relación entre ricos and pobres en 9 países seleccionados de América Latina and el Caribe. World Bank online, 2007.
- World Health Organization. (1986). *Ottawa Charter for Health Promotion; First International Conference on Health Promotion*. Ottawa, Canada: World Helath Organization.
- World Health Organization. *Neonatal and perinatal mortality - Country, regional and global estimates*. 2006
- World Health Organization. Strategic Directions for Improving the Health and development of Children and Adolescents. 2003.
- World Health Organization. *The Partnership for Maternal, Newborn, and Child Health: Conceptual and Institutional Framework*. Geneva, Switzerland. 2006.
- World Health Organization. *The Partnership for Maternal, Newborn, and Child Health: Ten-Year Strategy*. Geneva, Switzerland. 2006.
- World Health Organization. *Working towards universal coverage of maternal, newborn and child health interventions*: 58th World Health Assembly. Geneva, Switzerland, 2005.

ANNEXES

Annex A ▶ Neonatal and maternal mortality rates, births attended by skilled personnel, and percentage of low birthweight newborns in countries of the Region of the Americas

Country	Neonatal mortality rate (x 1,000 lb) ^{a,e}	Perinatal mortality rate (x 1,000 lb) ^b	Maternal mortality ratio (x 100,000 lb) ^{a,c,d}	Percentage of births attended by skilled personnel ^e	Percentage of newborns with low birthweight (<2,500 g) ^a
Scenario 1: Neonatal mortality rate of 20 or more					
Haiti	34	54	630.0	23.8	21.0
Bolivia	27	31	230.0	60.8	7.0
Guyana	25	40	161.2	85.6	12.6
Scenario 2: Neonatal mortality rate of between 15 and 19					
Dominican Rep.	19	28	80.0	98.7	10.8
Guatemala	19	23	148.8	41.4	6.8
Belize	18	20	68.4	83.8	14.1
Suriname	18	30	110.0	84.5	11.4
Honduras	18	28	108.0	55.7	10.0
Nicaragua	18	23	86.5	66.9	8.4
El Salvador	17	26	71.2	69.4	8.0
Ecuador	16	20	85.0	68.7	11.8
Peru	16	20	185.0	71.1	11.0
Paraguay	16	23	153.5	77.2	5.7
Brazil	15	20	76.1	87.6	8.2
Mexico	15	22	63.4	85.5	8.8
Scenario 3: Neonatal mortality rate of less than 15					
Colombia	14	23	72.7	90.7	6.2
Trinidad & Tobago	13	---	45.0	---	11.1
Granada	13	---	---	---	9.4
Venezuela	12	18	59.9	94.0	9.5
SV & Grenadines	11	---	---	---	7.9
Panama	11	15	66.0	92.5	9.4
Argentina	10	14	39.2	98.7	7.3
Jamaica	10	17	95.0	94.6	11.6
Bahamas	10	---	16.0	---	10.6
Ant. & Barb.	8	---	---	---	5.3
Uruguay	7	14	11.1	99.4	8.6
Costa Rica	7	13	39.3	97.5	6.8
Chile	6	8	19.8	99.8	5.5
U.S.A	5	8	13.1	99.0	8.1
Cuba	4	14	49.4	99.9	5.4
Canada	3	6	5.9	98.3	5.9
Average	14	21.3	99.6	74.1	9.2

Sources:

^a PAHO/WHO, Health Situation in the Americas. Basic Indicators, 2007.

^b WHO. Neonatal and Perinatal Mortality 2006

^c UNICEF. State of the World's Children 2006.

^d WHO. Maternal Mortality in 2007: Estimates calculated by WHO, UNICEF, UNFPA.

^e WHO. Factsheet. Skilled attendant at birth, 2006

Annex B ■ Competencies of community health workers and activities for the family and community

Phase	Activities for community health workers	Activities for the family and community
Prenatal care	<ul style="list-style-type: none"> • Early detection of all danger signs • Adequate treatment skills for the stabilization of complications • Presence of a community transportation system for emergencies • Promotion of birth preparedness • Promotion and administration of tetanus vaccinations 	<ul style="list-style-type: none"> • Early detection of all danger signs • Raising community awareness and provision of information about maternal and neonatal care • Promotion of tetanus vaccinations • Promotion of maternal nutrition and a reduced maternal workload • Community transportation system for cases with complications
Care in delivery	<ul style="list-style-type: none"> • Early detection of all danger signs • Adequate treatment skills for the stabilization of complications • Promotion of skilled care in childbirth • Referral to emergency obstetric care when needed • Delivery of supplies for hygienic birth in home births • Work to prevent mother-to-child transmission of HIV 	<ul style="list-style-type: none"> • Early detection of all danger signs • Raising awareness and providing information about early institutional care when complications arise • Community transportation system for cases with complications
Newborn care	<ul style="list-style-type: none"> • Delivery of essential newborn care • Early detection of all danger signs • Adequate treatment skills for the stabilization of complications • Referral of newborns for emergency care when necessary • Promotion of exclusive breast-feeding • Promotion of hygiene (cord, eyes, and skin) and handwashing • Home care for the low birthweight baby • Promotion and administration of vaccinations • Work to prevent mother-to-child transmission of HIV 	<ul style="list-style-type: none"> • Early detection of all danger signs • Raising awareness and provision of information about early institutional care in the event of complications • Community transportation system for cases with complications • Essential newborn care • Community-based case management • Promotion of exclusive breast-feeding • Promotion of immunization
Post-partum care	<ul style="list-style-type: none"> • Early detection of all danger signs • Adequate treatment skills for the stabilization of complications • Promotion of the use of family planning services • Promotion of exclusive breast-feeding • Work to prevent mother-to-child transmission of HIV 	<ul style="list-style-type: none"> • Early detection of all danger signs • Raising awareness and provision of information about early institutional care in the event of complications • Community transportation system for cases with complications

Annex C Key elements for a continuous, functioning process in the health care system

Phase	Activities
Preconception care for all women of childbearing age^{1,2}	<ul style="list-style-type: none"> • Access to good quality health care for all adolescents • Vaccination (for example, rubella and hepatitis B vaccine) • Essential nutrition for girls and women and work to combat eating disorders (obesity prevention), including the administration of folic acid supplements • Preventive medical consultations, risk assessment, and psychological counseling (for example, prevention of psychotropic substance abuse, risk behaviors) • Family planning, including the promotion of planned, adequately spaced pregnancies • Detection and treatment of sexually transmitted infections, especially HIV/AIDS • Treatment of chronic diseases (for example, diabetes, hypothyroidism, malaria, tuberculosis, and Chagas' disease) • Education of students in reproductive health and responsible parenthood and promotion of breast feeding among young men and women
Prenatal care	<p>Prenatal care that includes at least four medical check-ups consisting of:</p> <ul style="list-style-type: none"> • A history and physical examination in which the following are evaluated: blood pressure, weight gain, uterine fundus height, urine (for the presence of protein - multi-test strip) • Anemia detection (hemoglobin level) • Blood group and Rh factor • Two doses of tetanus vaccine • Administration of iron and folate supplements • Counseling and HIV, drug abuse, and syphilis tests (including treatment for the latter) • Identification, treatment, and follow-up of women with a history of drug use • Detection and referral of multiple pregnancies, abnormal fetal position, preeclampsia, and eclampsia • Planning of pregnancies and preparedness for emergencies • Prenatal counseling and counseling on risk-free pregnancy, and preparation for breast-feeding • Counseling and information to assist women exposed to domestic violence • Community mobilization and participation • Detection and treatment of common maternal infections (for example, urinary infections) • Detection and treatment of streptococcus to prevent infection in newborns • Education in health and nutrition (feeding, hygiene, sleep, clothing) • Sex education for the couple at this stage of pregnancy and family
Care in childbirth	<p>Skilled care during the different stages of labor, including:</p> <ul style="list-style-type: none"> • Active care during the birth • Use of the partogram • Monitor maternal and fetal well-being, encourage the presence of a companion to provide support • Guarantee hygienic, beneficial birth practices • Optimal moment for clamping the umbilical cord: 2 minutes after expulsion of the baby • Treatment and clinical referral when the mother or newborn experiences complications (emergency obstetric care at the first level) and resuscitation of the newborn, if necessary • The package of emergency obstetric care measures (second and third levels) • Monitoring of vaginal discharge in new mothers during the first 24 hours • Facilitation of early breast feeding (during the newborn's active period within the first 2 hours of birth, whenever the conditions of the mother and baby permit) • Monitoring of blood pressure

1 IMAN Servicios: Normas de atención de salud sexual y reproductiva de adolescentes (FCH/CA, PAHO/OMS, 2006). Found at <http://www.paho.org/english/ad/fch/ca/sa-servicios.htm>

2 CDC/ATSDR Report. Preconception Care Work Group and the Select Panel on Preconception Care. MMWR Recomm Rep 2006; 55 (RR-6):1-23. Accessible at: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5506a1.htm>.

Phase	Activities
Post-partum and post-natal care	<p>Essential care for all newborns should guarantee:</p> <ul style="list-style-type: none"> • birth in a risk-free environment with access to full obstetric and neonatal care • bonding with the mother and avoidance of unjustified separation from her • early and exclusive breast-feeding, physical contact of the baby with the mother, rooming in of mother and baby, and feeding on demand, the 10 steps to successful breast-feeding, and proper storage of breast-milk • Teaching the mother how to manually express milk for proper storage of breast milk • control of body temperature and no bath for the first 24 hours • infection control, including umbilical cord hygiene • after delivery, administration of vitamin A supplements to the mother • eye prophylaxis to prevent gonococcal conjunctivitis • information and counseling on care in the home and preparedness for emergencies • Orientation to encourage the mother to go for the first post-discharge check-up before five days have passed • Education for the mother so that she can monitor her vaginal discharge, identify risks, and seek prompt care • Monitoring of newborns who, at discharge or before the health worker has left the mother at home, have received Vitamin K and eye prophylaxis and begun the hepatitis B vaccination series • Monitoring of maternal-child bonding
Additional care for small babies	<ul style="list-style-type: none"> • Additional home visits, breast-feeding support, temperature control in the newborn, and umbilical cord hygiene • Additional care in the areas of temperature, feeding, and early detection and treatment of complications • Temperature control in the newborn through skin-to-skin contact with the mother (mother kangaroo method) • Administration of vitamin K supplement at birth • Clinical care in a health facility for sick newborns, especially those with infections, who are premature, or have suffered perinatal asphyxia. Short and long-term follow-up • Early stimulation of neural development • Set up a schedule of visits to the health center by the mother/ family (especially with teenage mothers)
Package of measures prior to discharge (in the facility or before the midwife leaves the mother in the case of a home birth):	<ul style="list-style-type: none"> • Careful assessment of factors associated with high risk or danger signs (for both the mother and newborn), • Counseling for the mother and the rest of the family about preventive care, recognition of warning signs, and the delivery of care (what to do and where to go) • Promotion of and referral to early post-natal care, • Follow-up care to encourage the spacing of pregnancies, vaccination, nutrition (breast-feeding), growth monitoring, and the baby's development. • Collection of a sample for the FEI • Advise mothers NOT to give infusions to newborns
Guarantee of proper care for mother and newborn in the home	<ul style="list-style-type: none"> • Autonomy, participation, and effective communication strategies, including community participation in the planning of maternal, newborn and child health programs • Community mobilization and participation to encourage changes in prenatal and post-partum behaviors in the home to foster evidence-based health practices (breast-feeding, temperature control in the newborn, and umbilical cord hygiene), care-seeking, and the demand for quality clinical care
Integrated management of childhood illness	<ul style="list-style-type: none"> • Strengthen implementation of the IMCI strategy, particularly in rural and poor communities, especially in the first week of life, which is fundamental

Annex D ▶ Different types of care necessary before, during, and after pregnancy and the different levels of participation, from family to health facility

Phase	Interventions	Situational coverage (in cases where certain specific conditions prevail)	Additional interventions
Package of family care measures (family and community care)	<ul style="list-style-type: none"> - Community mobilization and participation and communication for changes in prenatal and post-partum behaviors in the home, in order to promote evidence-based neonatal care practices (breast-feeding, temperature control in the newborn, umbilical cord hygiene), care-seeking, and the demand for quality clinical care. - Promotion and practice of a clean birth and referral of complications (for home births). 	Chagas' disease, malaria, syphilis and sexually transmitted infections, HIV/AIDS. TORCH test	Promotion of healthy behaviors in the home and a favorable environment for women and newborns, including good nutrition, hygiene, and the danger signs, as well as domestic violence prevention.
Preconception period	Folic acid supplements.		
Prenatal	<ul style="list-style-type: none"> - Outreach consultations that involve taking a patient history and a physical examination that includes an evaluation of blood pressure, weight gain, uterine fundus height, urinalysis for protein detection, two doses of tetanus vaccine, the detection and treatment of syphilis, counseling about the birth plan, emergencies, and breast-feeding; referral when complications arise. Detection and treatment of asymptomatic urinary tract infections <p>Prevention of preeclampsia and eclampsia (administration of calcium supplements)</p>	Intermittent treatment of presumptive malaria	<p>Rubella vaccine</p> <p>Universal access to quality health services, including counseling and STI and HIV/AIDS testing and access to family planning, with special programs for adolescents.</p> <p>Encouragement to quit smoking and stop drug and alcohol use during pregnancy</p> <p>Detection, treatment, and counseling about infections during pregnancy, including toxoplasmosis, tuberculosis, sexually transmitted infections (STI), and HIV/AIDS (including the prevention of mother-to-child transmission).</p>
During labor	<p>Package of measures for skilled care for the mother and immediate neonatal care</p> <ul style="list-style-type: none"> - Active care and monitoring of the first stage of labor (including use of the partogram) for early diagnosis of complications; skilled personnel during the birth; treatment and clinical referral in the event of complications in the mother or newborn (emergency obstetric care in a first-level health facility); early detection; detection and treatment for breach birth; clean birth; comforting encouragement from a birth companion; assistance with the birth (including vacuum extraction); antibiotics for premature breakage of waters; administration of corticosteroids for premature birth; resuscitation of newborn. 		<p>Promote male participation during pregnancy and delivery</p> <p>Antiretroviral treatment for seropositive mothers and babies</p> <p>Guarantee of transportation (for example, by ambulance) in emergencies stemming from obstetric or neonatal complications</p> <p>Allow women in labor to ingest fluids, move around, and shift position during the birth</p> <p>Active care during the birth.</p> <p>Basic neonatal care:</p> <ul style="list-style-type: none"> • Immediate assess the newborn. • Avoid separating mother and newborn • Begin breast-feeding in the first hour • Take prophylactic measures immediately after skin-to-skin contact • Vitamin K supplement • Start vaccination, according to the schedule • Register newborn

Phase	Interventions	Situational coverage (in cases where certain specific conditions prevail)	Additional interventions
During labor (cont)	Emergency obstetric care package: <ul style="list-style-type: none"> - Detection and clinical treatment of obstetric complications (obstructed labor, hemorrhage, hypertension, infections), including provision of the instruments necessary for birth, C-section, and blood transfusions. 		
Post-partum	<ul style="list-style-type: none"> -Additional community care for low birthweight babies (family and community care) - Additional home visits, support for breast-feeding , temperature control in the newborn, umbilical cord hygiene; early recognition of and care-seeking in the event of illness -Community treatment of pneumonia cases (family and community care) - Diagnosis and treatment based on the pneumonia algorithm, including oral antibiotic treatment -Package of neonatal emergency care measures - Clinical care in a health facility for sick newborns, especially those who have infections, are premature (for example, very low birthweight babies), cases of perinatal asphyxia or jaundice. 	Mother kangaroo method (low birthweight babies in health facilities)	Basic care for newborns and mothers following the birth <ul style="list-style-type: none"> • Physical exploration of the mother and newborn; referral if danger signs are present • Counseling on basic aspects of neonatal care and hygiene, and recognition of danger signs in the mother and baby

Based on: Darmstadt, G. et al. 2005, "Evidence-based, cost effective interventions: how many newborn babies can we save?" *The Lancet*, Vol. 365: 12 March 2005: 977-988.

**REGIONAL STRATEGY AND PLAN OF ACTION FOR
NEONATAL HEALTH WITHIN THE CONTINUUM OF
MATERNAL, NEWBORN, AND CHILD CARE**

THE 48th DIRECTING COUNCIL,

Having reviewed the report of the Director, *Regional Strategy and Plan of Action for Neonatal Health within the Continuum of Maternal, Newborn, and Child Care* (Document CD48/7);

Recognizing that maternal and neonatal mortality continues to have a high impact on infant mortality in the Region, and that it will be necessary to redouble efforts to achieve the goals of the Millennium Declaration related to the reduction of infant mortality for 2015;

Considering Resolution CD47.R19 (2006) on neonatal health, in the context of the health of the mother, newborn, and child, which recommends the development of a strategy and an action plan to support the achievement of the goals of the Millennium Declaration; and

Noting that the Regional Plan of Action addresses persistent inequities, focusing on marginalized groups while proposing differentiated technical cooperation strategies and approaches to respond to multiple situations in countries,

RESOLVES:

1. To urge Member States to:
 - a) support the reduction of maternal and neonatal mortality as a priority within health programs by expanding, strengthening or sustaining the implementation of the Strategy and Regional Plan of Action for neonatal health in the continuum of the mother, newborn, and child care;
 - b) consider the Regional Plan of Action for neonatal health within the continuum of care when formulating national plans, and include differentiated strategies that effectively respond to multiple situations among and within countries, to protect recent achievements and reach the objectives related to mortality reduction of children under five by 2015 included in the Millennium Declaration;

- c) consider strengthening health systems based on primary health care to support the implementation of evidence-based strategies aimed at reducing maternal and neonatal mortality, and improving collaboration between programs and the different levels of care;
 - d) support strong community and civil society participation so that they include, within their activities, actions directed to mothers, newborns, and children, with an equity, gender and ethnicity approach;
 - e) consider undertaking, facilitating, and supporting national activities that promote universal access of health care for mothers, newborns, and children;
 - f) consider strengthening national frameworks that protect mothers, newborns, and children;
 - g) establish and maintain quality neonatal health monitoring and information systems, disaggregated by gender, socioeconomic status, ethnicity, and education of the mother;
 - h) forge partnerships and associations with nongovernmental, community and religious organizations, with the academic and research community, as well as with relevant government agencies, to strengthen and expand policies and programs on maternal, neonatal and child health.
2. To request the Director to:
- a) support Member States in developing national plans aimed at reducing maternal and neonatal mortality, within the continuum of mother, newborn, and child, taking into account the Strategy and Regional Action Plan, and addressing inequities and directed to vulnerable and marginalized groups;
 - b) collaborate in country evaluations to ensure adequate and evidence-based corrective actions;
 - c) facilitate the exchange of successful experiences and promote horizontal technical cooperation by Member States in the implementation of the Regional Plan of Action.

(Fifth meeting, 1 October 2008)



Pan American Health Organization



*Regional Office of the
World Health Organization*

525 Twenty-third Street, N.W.
Washington, D.C. 20037, U.S.A.

www.paho.org



USAID
FROM THE AMERICAN PEOPLE