



"Now more than ever we must work together as ONE WHO and ONE UN for the benefit of the people of Haiti...we must try to look beyond this crisis and use this as an opportunity to build a sustainable and robust health system to protect the future generations of Haitians."

Mirta Roses Periago

FACT SHEETS OF THE PAHO/WHO TECHNICAL COOPERATION IN HAITI 2010 - 2011





Haitian Minister of Health, Dr. Alex Larsen, and PAHO Director, Dr. Mirta Roses Periago, during her visit to Haiti after the earthquake (Jan. 2010)

INTRODUCTION



Haiti, along with Bolivia, Guyana, Honduras, and Nicaragua, is one of the five priority countries of Pan American Health Organization-Regional Office for the Americas of the World Health Organization (PAHO/WHO). PAHO Director, Dr. Mirta Roses Periago is a member of the Regional United Nations Development Group Team for Latin America and the Caribbean (UNDG LAC), which continues to consider Haiti as a priority on its agenda. PAHO/WHO also participates actively in the "Group of Friends of Haiti" created by the Organization of American States (OAS).

In the aftermath of the earthquake which struck Haiti on January 12, 2010, PAHO/WHO responded immediately and was operational within three days. Critical information was gathered through the PAHO/WHO Emergency Operations Center (EOC). This facilitated the coordination of logistics and humanitarian aid efforts. The PAHO/WHO Country Office was partially damaged and the PAHO/WHO team was relocated to PROMESS premises to continue operations. PROMESS, the National Center for the Supply of Essential Medicines managed by PAHO/WHO, is located near the Port-au-Prince airport and has played a key role in the timely distribution of medical supplies and essential medicines throughout the recovery period. PAHO Director, Dr. Roses, traveled to Haiti and the Dominican Republic within 10 days of the earthquake to hold high level meetings with Haitian authorities and other relevant partners.

Adding to the devastation, in October 2010, the first cases of cholera were reported and confirmed in Haiti, marking the first time epidemic cholera had reached the Hispaniola Island in over 100 years. PAHO/WHO's technical cooperation program was reoriented to respond to the new demands and the immediate threat presented by the cholera epidemic, with thousands of Haitians still living in vulnerable conditions. To respond to the epidemic the Organization's Country Office and PROMESS were strengthened in terms of logistics, staff and financial resources.

PAHO/WHO's sustained support to national authorities in the Ministry of Public Health and Population (MSPP as per its acronym in French) as well as its leadership role in the coordination of efforts with different partners and stakeholders in the health sector of Haiti, including with the Interamerican and United Nations systems, have been key to the Haitian health system recovery process. The Organization, as it is mandated by its governing bodies, always works with the national health counterparts, as well as with other stakeholders and partners to ensure the alignment of efforts with Haitian national priorities in health.

From the beginning of 2010 until April 2011, PAHO/WHO has mobilized over US\$ 22 million to address pressing health issues following the earthquake, and another US\$ 16 million to address the cholera epidemic. PAHO/WHO has also mobilized more than US\$ 35 million for its regular technical cooperation programs in the country.

In the context of the emergency produced by the earthquake and the cholera outbreak, PAHO/WHO's technical cooperation in Haiti has been carried out, in continuous interaction with the MSPP as well as with other government ministries and local government authorities, incorporating governmental actors at all levels, aimed at:

- Improving coordination of the multiplicity of partners and stakeholders in the health sector in Haiti; leading the Health Cluster and participating in other Clusters, particularly the Water, Sanitation and Hygiene Cluster (WASH).
- Supporting the MSPP of Haiti to strengthen its leadership and stewardship of the health sector and promoting national health development.
- Coordination of actions with Dominican Republic, since these two countries share the Hispaniola Island, through a binational approach.
- Strengthening the disaster preparedness and humanitarian aid program, fostering MSPP leadership and participation at national and sub-national levels.
- Development of a health information, and epidemiological alert and response system to support decision-making.

Coordination within the various levels of PAHO/WHO has also been essential. PAHO's Task Force for Haiti was activated, producing and sharing information with all three levels of the Organization (global, regional and country level), which included daily teleconferences between the Country Office in Haiti, the Executive Management Team at the Regional Level and the Global office of the WHO in Geneva. PAHO's Director, Dr. Roses, and PAHO's Deputy Director, Dr. Jon Andrus, conducted press briefings and conferences. A harmonized communication strategy was implemented, as information gathering and dissemination became essential to guide international efforts to support the country.

PAHO/WHO has carefully coordinated health development activities with other agencies of the United Nations, including MINUSTAH (UN Stabilization Mission for Haiti) and the United Nations Central Emergency Response Fund (CERF), as well as the Inter-American system, particularly with the Organization of American States (OAS).

In addition, PAHO/WHO has coordinated its technical cooperation with other major multilateral partners and stakeholders such as the Inter-American Development Bank (IDB), the World Bank (WB), the European Commission (EC) and particularly the European Commission's Humanitarian Aid Department (ECHO).



Haitian Minister of Health, Dr. Alex Larsen, and PAHO Director, Dr. Mirta Roses Periago, during her visit to Haiti after the earthquake (January 2010)

INTRODUCTION



PAHO/WHO, together with the MSPP, is also working with many bilateral partners, including: the UK Department for International Development (DFID), the Spanish Agency of International Development Cooperation (AECID), the Cuban Medical Brigades (CMB), the Canadian International Development Agency (CIDA), the US Agency for International Development (USAID), the US State Department, and US Centers for Disease Control and Prevention (CDC). Following the earthquake, Dr. Jon Andrus held teleconferences three times a week with US and Canadian official government partners.

Andalucía, Andorra, Finland, France, Italy, Japan, Monaco and many other Latin American and Caribbean countries, such as Brazil, Chile, Colombia, Costa Rica, Mexico and Venezuela expressed their solidarity and generosity to Haiti, providing financial resources to address health issues in the context of both the aftermath of the earthquake and the cholera epidemic.

PAHO/WHO is working in the field with many NGO partners, including: International Federation of the Red Cross and its National Societies, Partners in Health, Aide Medical International, Merlin, Médecins Sans Frontières, Médecins du Monde, Save the Children, International Medical Corps, Handicap International, among many others.

The PAHO/WHO Country Office team in Haiti consists of international and national advisors, as well as administrative support personnel. During 2010, the staff grew and as of April 2011, there was a total of 130 staff working in the office, including those who were stationed in Haiti before the earthquake.

To respond to the earthquake emergency, 115 experts were deployed from all over the world to support the Haiti Country Office team. With the onset of the cholera outbreak, an additional 140 experts have been mobilized by PAHO/WHO since October of 2010 to coordinate the health response and to provide support in various areas: alert and epidemiological response, medicines and medical supplies, vaccinations, resource mobilization, water and sanitation, coordination, logistics, among others. According to official records, as of April 15th 2011, 285,239 cholera patients have been treated thanks to efforts carried out by the MSPP, PAHO/WHO and its partners.

PAHO/WHO's technical cooperation in 2010 and 2011 has been reoriented to respond to priorities that emerged after the earthquake and the cholera outbreak. The main programs being carried out are:

- Emergency and Disaster Response: provision of basic health care for the affected population and establishment of epidemiological alert and response systems for the cholera epidemic.
- Leadership and coordination through the Health Cluster.
- Strengthening of PAHO/WHO's Country Office to provide effective support to national health authorities including mobilization of resources and coordination with Dominican Republic.
- Strengthening the National Center for the Supply of Essential Medicines: PROMESS.
- Improving environmental health, especially water and sanitation and social communication/health promotion
- Restarting vaccination activities.
- Supporting the MSPP to establish an effective surveillance network and an integrated health information systems.
- Supporting the MSPP to train additional human resources for health.
- Addressing the priority communicable diseases: tuberculosis, malaria, lymphatic filariasis and intestinal parasites; as well as HIV/AIDS.
- Continuing to improve nutrition, mental health and oral health.
- Relaunching the Free Obstetric Care (SOG) Project to improve maternal and neonatal health and establishing the Free Child Care (SIG) Project.

For details on each of these areas, please see the Fact Sheets that follow.

"To all those in Governments' agencies, public and private donors, individuals and organizations who have contributed funds and time inspired by their generosity and solidarity with Haiti, we say 'thanks' for your trust and confidence."

Mirta Roses Periago
PAHO Director



TABLE OF CONTENTS

	Page
• Response to the Cholera Outbreak	1
• Emergency and Disaster Response	5
• Health Cluster	9
• Binational Cooperation between Haiti and the Dominican Republic	13
• PROMESS (Program for Essential Medicines and Supplies)	17
• Health Information Systems	19
• Vaccination and Immunization	21
• Nutrition	23
• Priority Communicable Diseases: HIV/AIDS, Malaria, Tuberculosis, Lymphatic Filariasis and Intestinal Parasites	25
• Strengthening Health Systems and Services	29
• Free Obstetric Care Project (SOG)/ Free Child Care Project (SIG)	31
• Training Human Resources for Health	33
• Oral Health	35
• Mental Health	37
• Environmental Health	39
• Disability and Rehabilitation	41



Cholera prevention material in Creole

RESPONSE TO THE CHOLERA OUTBREAK



Only nine months into the tremendous effort to recover from the devastating January 12th earthquake, and in the middle of adaptation and reconstruction, Haiti was faced with another emergency caused by a cholera epidemic. The earthquake had generated a large international response that created spaces for coordination, such as the Health Cluster, under the leadership of the Ministry of Public Health and Population (MSPP, per its acronym in French) and PAHO/WHO, which also facilitated an organized and coordinated response to the cholera outbreak.

On October 15th, 2010, the Cuban Medical Brigade (CMB), working in the community of Mirebalais in the Center Department, reported the presence of unusual cases of acute watery diarrhea causing intense dehydration and death. On October 22nd the *Vibrio cholerae* was confirmed as the cause of the outbreak. Laboratory studies allowed for the confirmation of *Vibrio cholerae*, O1 serotype Ogawa, as the causative agent when more cases were reported in several communities in the Artibonite River valley. Haiti and the Dominican Republic have not seen epidemic cholera in over 100 years, since they were not affected by the cholera epidemic of the 1990s that reached most of the other countries in the Western Hemisphere.

The strategy to fight the cholera epidemic was defined by the MSPP, with technical support from PAHO/WHO and other health partners. The agreed upon strategy had two main objectives:

- 1) Saving lives (reducing the mortality rate through the reorganization of health services)
- 2) Preventing the spread of the disease

The first objective was approached through creating oral rehydration posts (ORP) and setting up active surveillance brigades in regions with limited access to health care, and creating a strategic network of Cholera Treatment Units (CTU) and Cholera Treatment Centers (CTC).

The second objective was approached by reducing the rate of infection at the community level, which required the development of community-level interventions (largely in health promotion and safe hygiene and sanitation practices) for all three levels of care (primary care, CTUs and CTCs).

Working with key partners, such as the CMB, to come up with innovative solutions to very difficult health conditions, PAHO/WHO has played a decisive role in the implementation of this strategy. Through these partnerships 217 CTUs were established and 97 CTCs, which were distributed across the country. PAHO/WHO has mobilized both financial and human resources, including over 140 professionals (between October 2010 and March 2011) to address the following priority intervention areas: epidemiological surveillance; organization and response of health services; promotion, prevention and communication with communities; water and sanitation; and to ensure the appropriate organization and distribution of equipment, medicines and supplies needed to treat cholera cases.

As of April 15, 2011, the MSPP has reported a total of 285,239 cases, of which 153,702 have been hospitalized. There have been 4,865 deaths of which 1,864 have occurred in the communities (as opposed to health institutions). The incidence rate of the cholera is 2,429 cases per 100,000 people and the attack rate is 2.4%, with extremes of 3.9% in the department of Artibonite and 0.4% in the South East. The overall mortality rate is 1.7% and the hospital mortality rate is 2.0%. The mortality rate was close to 5% at the onset of the outbreak, when the country was beginning to organize its response. Even though the number of deaths is considerably high, given the historical contextual factors of poverty, lack of clean water and health services, among other health determinants in Haiti, the response to the cholera epidemic is saving thousands of lives.

These figures are not final, as the epidemic is still ongoing and more family and community outbreaks are still expected, though with lesser intensity. The initial calculations of an attack rate of 1 to 2% had to be modified due to the speed of transmission, and it is now estimated that the epidemic will reach, in its first year, an attack rate of 4%, which represents close to 400,000 cases.

On November 12 of 2010, the first case of cholera was reported in the Dominican Republic, which had by then already developed planned interventions to face the epidemic, strengthening the health institutions and networks along the border with Haiti.

Cholera is a preventable disease through proper hygiene and water quality control. Community level health promotion has been and will continue to be one of the most important tools in the fight against cholera. PAHO/WHO will continue to work with the MSPP as per its acronym in French) and its partners to intensify communication and community level health promotion efforts.



Cholera prevention material in Creole

RESPONSE TO THE CHOLERA OUTBREAK



Activities carried out: (continued)

Resource mobilization

- As of March 2011, PAHO/WHO had mobilized around US\$ 16 million to address the cholera epidemic in the country.
- PAHO/WHO participated in the UN Flash Appeal launched last November 2010. The goal was to mobilize funds for an integrated multi-sectorial response to the cholera outbreak, addressing the following: health, water, sanitation and hygiene, camp management and coordination, logistics and communications. The appeal called for US\$ 174 million, for the period from November 2010 to December 2011. Of that total amount, PAHO/WHO will oversee the implementation of US\$ 16 million.
- Through PROMESS, the National Center for the Supply of Essential Medicines managed by PAHO/WHO, technical support is provided in the planning, purchase, storage and national distribution of the equipment, materials, supplies and medicines necessary to treat the epidemic. Donations from countries such as Italy, Spain, Japan, Chile, Colombia and USA enabled the purchase of US\$ 2.3 million in essential materials, which enabled the country to treat 190,000 cases in the first months of the epidemic.

Coordination

- PAHO/WHO supported the MSPP to create an organized response among health institutions, participating in all aspects of coordination, such as: the Health Sector Table, inter-agency coordination, bilateral and multilateral efforts and especially in the Health Cluster.
- Coordination with key partners was essential to implement the response to cholera: the MSPP; the CMB; the U.S. Center for Disease Control (CDC); MINUSTAH, UNICEF, OIM, WFP, OCHA; bilateral partners, NGOs, such as Red Cross; Médecins Sin Frontiers (MSF); Merlin; Save The Children; Médicos del Mundo.

Technical support for strengthening MSPP leadership

- Support the MSPP in defining plans, strategies and protocols to address the epidemic. Together with the MSPP, established protocols and operational guidelines for CTC and CTU.
- Training for health personnel and support staff on the newly adopted protocols of care and logistical aspects of safe water and sanitation in CTCs and CTUs.
- Monitoring and assessment of the quality of care in more than 70 CTC and CTU. Support the MSPP in the creation and operation of 16 CTUs in the metropolitan area of Port-au-Prince.
- PAHO/WHO built 37 CTUs where medical staff offer initial care, distribute and prepare oral rehydration solutions and work with communities in preventative activities.
- Pre-positioning of emergency kits of essential medicines and supplies in each department, in case of another outbreak.
- Financial support for the operation of 23 CTC managed by the CMB and financial and logistical support for 50 active surveillance brigades sent by the CMB working in particularly remote areas of Haiti.
- PAHO/WHO supports the MSPP Department of Epidemiology, Laboratory and Research (DELR - *Direction d'Epidémiologie, de Laboratoire et de Recherche*), for epidemiological surveillance of the acute diarrhea cases at the national level, communal alert and response, with the participation of the National Public Health Laboratory. Through this partnership, the MSPP released daily epidemiological bulletins about the cholera situation on its website: <http://www.mspp.gouv.ht/site/index.php>
- Technical cooperation was also provided to guarantee the availability of safe water and proper disposal of excreta in hospitals and CTCs. This was done in partnership with the Water and Sanitation Cluster (WASH), with the participation of the Ministry of Public Works, Transportation and Communication and the National Water and Sanitation Department. This effort includes capacity building regarding the proper management of biological waste removal, the appropriate handling of cadavers, adequate distribution of chlorine and training of local staff.
- The distribution of materials, supplies and medicines was done through PROMESS/PAHO/WHO, sharing important information about this process through bulletins and on the Health Cluster website, created for that purpose: <http://haiti.humanitarianresponse.info/Default.aspx?tabid=77>
- PAHO/WHO has been assisting the MSPP to develop protocols for acute malnutrition treatment. With the onset of the cholera epidemic the protocol was revised, providing additional instruction for the proper care of malnourished children suffering from cholera (which includes the provision of zinc supplements). In collaboration with UNICEF, 1000 copies were produced and distributed both within the MSPP and to partnering agencies and NGOs.



Cholera prevention material in Creole

RESPONSE TO THE CHOLERA OUTBREAK



Activities carried out: (continued)

Health promotion

- Together with the Ministry of Education, PAHO/WHO is participating in many different social communication activities (dissemination of cholera prevention and cholera treatment messages on the radio, television and cellular phones in Creole). 40,000 posters were distributed around the country, working with local health promoters and community organizations, such as churches.
- The MSPP kept the population informed of health interventions and the progression of the cholera epidemic through press conferences and its website. Appropriate information channels were established for outbreak alerts and immediate response.
- PAHO/WHO participates in the UNICEF led Sanitation and Hygiene Promotion Sub Cluster within the UN WASH Cluster. Activities are coordinated with more than twenty partners (MSPP and the National Directorate for Drinking Water and Sanitation (DINEPA), UN Organizations and NGOs, among others). Resources were mobilized jointly with UNICEF, IOM and NGOs for health promotion activities.
- More than 10,000 community health promoters have been trained on hygiene, hygiene promotion and sanitation.
- With the support of the MSPP, sensitization material were produced and distributed nationwide in both French and Creole: flyers, slogans, radio messages, posters, flipcharts, t-shirts, among others.
- PAHO/WHO, DINEPA, UNICEF, CARITAS and other partners, following the initiative of the country's religious leaders, worked together to disseminate cholera prevention messages in places of worship.
- Special attention was given to Internally Displaced Populations (IDP), which received information on basic sanitation and sanitation kits. Oral Rehydration Salts were also provided to detected cholera cases.

Challenges and next steps:

- Continue supporting the MSPP and supporting coordination among partner organizations to ensure a concerted collective response to the cholera epidemic, like what was accomplished in the first months, especially in the rural communities.
- Finalization of the Hygiene Promotion Strategy. Production of a health promotion communication package for rural areas.
- Continue coordinating with other organizations working in health, through the Health Cluster, with the network of the CMB and following up on projects already in progress.
- Continue the analysis and dissemination of information about the cholera epidemic, considering the different possible future scenarios, especially the rainy season.
- Strengthen the national epidemiological surveillance network and the National Public Health Laboratory for Cholera and other priority diseases.
- Support the new National Health Authorities in the definition of gaps to be filled in the continuity strategy in the fight against cholera, especially with the gradual phasing out of many NGO activities.
- Collaborate with departmental health authorities to define concrete plans for continuing the anti-cholera efforts, including:
 - supporting selected CTUs and pre-positioning of medicines and supplies in case of another outbreak
 - preparation and storage of ready-for-deployment CTU packages, for rapid set-up of CTUs in the case of another outbreak
 - continuity of active surveillance brigades detecting cases of cholera in remote areas
- Mobilize financial resources to ensure sufficient funding for the purchase, storage and distribution of the supplies and materials necessary to address all cholera cases throughout the year 2011.
- Systematize, document and disseminate the experiences and lessons learned from the cholera interventions in Haiti.
- Maintain the collaborative and cooperative environment, with rapid information sharing and exchange as well as a joint response to the epidemic with the Dominican Republic, especially along the border.
- Foster binational cooperation with Dominican Republic to provide care for confirmed cases and to take joint preventative measures, in addition to maintaining careful surveillance among both populations, especially among the migrant population.



Cholera prevention material in Creole

RESPONSE TO THE CHOLERA OUTBREAK





Displaced population camps in Port-au-Prince

EMERGENCY AND DISASTER RESPONSE



The January 12, 2010 earthquake was the most powerful to strike Haiti in 200 years. It killed more than 220,000 people, injured approximately 300,000 and displaced more than one million Haitians. Two hundred staff from the Ministry of Public Health and Population (MSPP per its acronym in French) lost their lives when the buildings collapsed. Adding to the devastation, on October 15, 2010, the first cases of cholera were reported in Haiti, marking the first time a cholera epidemic had reached the island in over 100 years. As of April 15th, 2011, 285,239 cases of cholera had been reported, with 4,865 deaths. However, by April, the total number of daily alerts received from partners in the field was leveling off, with a downward trend in the daily number of reported cholera cases in all 10 departments.

PAHO/WHO experts participated in the preparation of the Post Disaster Needs Assessment (PDNA) after the earthquake. The PDNA served as basis for the development of the MSPP's interim plan that will guide the sector recovery over the course of 2011, including the reorganization of the health system at all three levels (mobile clinics for community health, basic health facilities and hospitals). Cholera has of course impacted the timely implementation of this plan, and recent efforts both within PAHO/WHO and among health partners had to focus on the creation and strategic placement of 217 Cholera Treatment Units (CTU) and 97 Cholera Treatment Centers (CTC) throughout the country.

International organizations working in Haiti, including the PAHO/WHO have had to readjust their priorities to attempt to simultaneously continue efforts of rehabilitation and reconstruction of the country and contain the cholera epidemic. Severe weather and civil unrest created additional obstacles to relief efforts. After an extreme influx of partners into the health sector following the earthquake, now over a year later and with a decreasing trend in the number of cholera cases, many health sector NGOs have left or will be leaving Haiti. At one point following the earthquake, more than 400 organizations were providing humanitarian aid to Haiti, and currently, only 99 organizations continue to carry out health activities.

The approaching rainy season, internal conflicts and demonstrations due to the presidential elections, as well as the phasing out of NGO activities all require heightened attention from national health authorities and health partners, especially those involved in disease surveillance. Timely monitoring of the evolution of the cholera outbreak and ensuring prompt control and intervention has entailed the use of all possible sources of information: formal and informal, quantitative and qualitative, health care facility based and community based. In particular, the contribution of the alert-response component, introduced and systemized during the cholera outbreak, has proven to be extremely valuable in ensuring a functional early warning system for cholera and other public health events. Most NGOs and health facilities participated in this alert and response system and over 300 alerts were received within the first two months of its implementation.

PAHO/WHO will be working together with the national health authorities and other partners towards an efficient integration of all health information sources, leading to a more effective information management process. Now that many people are leaving the camps and returning to their original neighborhoods, access to health care is again a challenge and PAHO/WHO will continue to work directly with the Haitian authorities to determine the best way to rebuild a sustainable health sector.

Activities carried out:

In the aftermath of the earthquake:

PAHO/WHO mobilized over US\$ 22 million to address pressing health issues following the earthquake. Within the Emergency Response Plan PAHO/WHO supported the MSPP through the following actions:

- Leading and managing the Health Cluster and its various sub-clusters (PAHO/WHO also participates in the Water, Sanitation and Hygiene Cluster (WASH), as well as the Nutrition and Logistics Clusters) As of April 2011, PAHO/WHO still leads the Health Cluster, which meets twice a month and publishes a bi-monthly bulletin.
- Coordinating actions at all levels (regional, global and country levels) through the AMRO Region Emergency Operations Center based in Washington DC.
- Participating in high level international meetings and forums related to Haiti to update stakeholders on the health situation.
- Reactivating the Health Information System.
- Distributing medical supplies through PROMESS, the National Center for the Supply of Essential Medicines, managed by PAHO/WHO.
- Distributing diesel fuel, donated by Venezuela, to health facilities to provide them with electricity and ensure continuous functioning.



Displaced population camps in Port-au-Prince

EMERGENCY AND DISASTER RESPONSE



Activities carried out: (continued)

- Supporting rehabilitation in Fond Parisien, Jacmel and Leogane (planning for staff training in rehabilitation services along the border).
- Partnering in training activities including a program for waste management in shelters.
- Supporting national authorities to restart Public Health Programs: outbreak control and environmental health, maternal and neonatal health, nutrition, gender based violence, HIV/AIDS, TB, Malaria, Dengue, mental health, vaccination, health services delivery, rehabilitation services for disabled people.

In response to the cholera epidemic:

To address the cholera epidemic, PAHO/WHO mobilized US\$ 16 million.

- PAHO/WHO mobilized both financial and human resources, including over 140 professionals (between October 2010 and March 2011) to address the following priority intervention areas: epidemiological surveillance; organization and response of health services; promotion, prevention and communication with communities; water and sanitation; and to ensure the appropriate organization and distribution of equipment, medicines and supplies needed to treat cholera cases.
- Coordination with key partners was key to implement the response to cholera: the MSPP; the Cuban Medical Brigade; the U.S. Centers for Disease Control and Prevention (CDC); MINUSTAH, UNICEF, OIM, PAM, OCHA; bilateral partners, NGOs, such as Red Cross; Médecins Sin Frontiers (MSF); Merlin; Save the Children; Médicos del Mundo.
- Through these partnerships 217 CTUs and 97 CTCs were established throughout the country.
- PAHO/WHO has deployed 18 staff members to the field to establish alert and response teams, who, jointly with the MSPP, act to reinforce at the departmental level the response system to any critical health or natural disaster situations representing a public health risk. These teams report to two central level coordinators.

Specific activities of the teams include:

1. Support the Departmental Health Director charged with the coordination of the Health Cluster and coordinate activities with the others clusters and to develop a cholera response plan.
 2. Facilitate the work of the MSPP departmental epidemiologist in the collection, analysis and interpretation of cholera and health data at the departmental level to guide the response.
 3. Ensure that all Health sector partners know and participate in the alarm system and establish an alarm network.
 4. Identify and evaluate alarms/hot-spots and organize the emergency medical response with relevant partners, especially in the remote areas.
 5. Monitor and evaluate the operations of existing CTCs and CTUs, as well as establishing CTUs in existing health facilities.
 6. Identify the gaps and conduct needs assessments in CTCs/CTUs, evaluating the existing institutions on their: human resources, water, cleaning practices, space and location; and to ensure the availability of beds for cholera patients in all health institutions.
 7. Evaluate the need for and promote the installation of Oral Rehydration Posts (ORP) in remote communities with limited access to health care services.
 8. Develop a training program, together with the Departmental health director, for health professionals and health promoters in the communities regarding the alert and response process.
 9. Coordinate with the WASH Cluster in order to ensure that the WASH response complements the Health Cluster response.
- Together with the Ministry of Education, PAHO/WHO is participating in many different social communication activities, such as the dissemination of cholera prevention and cholera treatment messages on the radio, television and cellular phones in Creole. 40,000 posters were distributed around the country, working with local health promoters and community organizations, such as churches.
 - Direct assistance was provided, together with other health partners, in the management of cadavers, as cholera deaths are highly infectious and dead bodies must be disposed of properly.



Displaced population camps in Port-au-Prince

EMERGENCY AND DISASTER RESPONSE



Challenges and next steps:

- Many NGOs responded to the immediate requests for help to address the cholera outbreak and created a significant number of cholera treatment centers, providing them with medical supplies, sanitation facilities, water supplies, as well as salaries and training for local staff. Due to the number of cholera cases decreasing, some NGOs are leaving these centers, creating concerns about local capacities (in terms of infrastructure, funding and staff) to deal with a sudden resurgence of cholera cases especially considering the impending rainy season. NGOs have stated that they will continue monitoring the situation and are ready to return to ensure an appropriate response. However, local staff salary problems and threats of strikes are already affecting some centers and consequently affecting patients looking for medical care.
- According to the evolution of the cholera epidemic, CTCs, CTUs and oral rehydration sites will be maintained, increased or dismantled throughout the course of 2011 to provide essential care to the cholera patients. The MSPP has finalized a definitive protocol for closing CTCs and CTUs in the cholera response, including criteria for closure (going three consecutive days with no more than three cases per day).
- Reconstruction is an area of utmost importance and PAHO/WHO is working with the Reconstruction Committee to ensure that measures to ensure hospital and health facility safety in the case of natural hazards and disasters are being incorporated into all future hospitals to be built.
- Investment in a medium term strategy for access to water is probably the single most important action that can be taken to reduce the number of cholera cases in the future. This requires funding as well as a medium and long term commitment from international partners.



Health Cluster meeting convened by PAHO/WHO with Ministry of Health and partners

HEALTH CLUSTER



Globally, WHO is responsible for the coordination of the Health Cluster, as part of the UN Cluster Approach activated in major emergencies. The humanitarian clusters are created to coordinate the various actors involved in a particular humanitarian theme, to facilitate sharing of information about who does what and where, to identify gaps, to mobilize resources and to guarantee adequate preparedness and response. The Clusters facilitate joint strategic planning and help to establish a clear system of leadership and accountability under the overall guidance of the humanitarian coordinator. After the earthquake of January 2010 in Haiti, PAHO/WHO assumed this role, coordinating over 400 NGOs and partners working in the health sector.

Three days after the earthquake, the Health Cluster began operating. The Haitian Ministry of Public Health and Population (MSPP per its acronym in French) nominated a Health Cluster Coordinator to work together with PAHO/WHO to coordinate the international relief effort in the health sector, ensuring its relevance and coherence to government policies. The Health Cluster became an essential coordination mechanism with the hundreds of partners working in the health sector in Haiti, but it was also a tremendous challenge. Many of the NGOs that responded to the call for help had no experience working in the country, no experience with disaster operations and consequently no knowledge of the cluster system. Due to its privileged working relationship with the MSPP, PAHO/WHO's role in leading the Cluster was essential to ensuring the alignment of international relief efforts with national health policies and priorities.

The Office for the Coordination of Humanitarian Affairs (OCHA) of the United Nations created a joint website (<http://haiti.humanitarianresponse.info/default.aspx?tabid=77>), and Health Cluster partners populated the site with useful data, including information on the health situation; location of field hospitals and health centers; announcements from the Ministry of Health and Population information on epidemiological surveillance, among others.

PAHO/WHO also participated in the Water, Sanitation and Hygiene Cluster (WASH), led by UNICEF, to improve water quality and promote proper health care waste management. Other Clusters with PAHO/WHO participation were the Nutrition, Information Management and Logistics Clusters, as well as the gender-based violence working group under the Protection Cluster. PAHO/WHO also participated in the Inter-Cluster meetings designed to share information on progress achieved by each cluster and to address particular strategic issues.

In October 2010, when the first suspected cholera cases were detected, the Health Cluster once again played a key role in the coordination and leadership of the public health response. The Cluster expanded geographically to cover more territory, especially for surveillance, and its presence was strengthened nationwide. This allowed department level coordination and identification of health alerts and facilitated a rapid response together with other health partners. Many challenges still exist within the Cluster, above all the need for an integrated health information system to enable more effective information management. In addition, the gradual withdrawal of NGOs from the health sector, due to the declining trend of cholera cases is also creating critical gaps in health care and health information networks. At one point following the earthquake, more than 400 organizations were providing humanitarian aid to Haiti, and currently, only 99 organizations continue to carry out health activities.

PAHO/WHO through its Health Cluster leadership will continue to support the MSPP and work with key health partners to conduct a gap analysis of the health sector and work with the MSPP to adjust to the gradual phase out of NGOs. PAHO/WHO will support the MSPP to ensure continuous coverage of care during the cholera epidemic and to work towards improving access to health services in general, moving towards a stronger sustainable health sector in Haiti.

Activities carried out:

Resource Mobilization

On November 11th 2010, as the cholera epidemic was spreading, the United Nations, along with Haitian authorities, launched a strategic appeal for additional funding. The goal was to mobilize funds for an integrated multi-sectorial response, addressing the following: health, water, sanitation and hygiene, camp management and coordination, logistics and communications. The appeal called for US\$ 174 million.

PAHO/WHO mobilized US\$22 million to carry out activities following the earthquake and an additional US\$16 million (as of March 2011) to respond to the cholera outbreak. These funds came from: Italy, Japan, Monaco, Andorra, Andalucía (Spain), Finland, European Union, European Commission's Humanitarian Aid Department (ECHO), the US Agency for International Development (USAID), the US State Department, UK Department for International Development (DFID), the United Nations Central Emergency Response Fund (CERF), the Canadian International Development Agency (CIDA), the Spanish Agency of International Development Cooperation (AECID), American Red Cross, among others.



Health Cluster meeting convened by PAHO/WHO with Ministry of Health and partners



Activities carried out: (continued)

In the aftermath of the earthquake:

Within the Health Cluster, PAHO/WHO supported the MSPP through the following actions:

- Leading and managing the Health Cluster, which included seven sub-clusters established within the Health Cluster umbrella, still coordinated by the overall Health Cluster. Sub-clusters were created for: mobile clinics, field hospitals, disability and rehabilitation activities, health information, disease surveillance, reproductive health, mental health and psychological support.
- PAHO/WHO, with the support of the MSPP, also extended its earthquake relief operations beyond Port-au-Prince creating four field offices: Leogane, Jacmel, Cap-Haitien/Port-de-Paix, Jimani. This facilitated Health Cluster coordination in the areas outside of Port-au-Prince.
- Daily Cluster coordination meetings were held, co-chaired by the MSPP.
- Needs assessment missions were organized.
- Medical supplies and pharmaceuticals were distributed by PROMESS (National Center for the Supply of Essential Medicines) to Health Cluster partners.
- Contingency plans were developed for the approaching rainy season.
- Weekly epidemiology bulletins were prepared and distributed.

In response to the cholera outbreak:

- As of April 2011, PAHO/WHO still leads the Health Cluster, which meets twice a month and publishes a general epidemiological bi-monthly bulletin.
- PAHO/WHO together with the MSPP, the National Directorate of Water Supply and Sanitation (DINEPA), the Civil Protection Directorate (DPC) and local government authorities, and with the support of the Cuban Medical Brigade, Doctors Without Borders (MSF), the United Nations and other humanitarian partners, launched an intensive and multi-sectoral response to the cholera outbreak, focused initially on the Artibonite and Central Departments, which later expanded to all departments. An alert and response system was established in which most international health partners and local NGOs participated. The alert system allowed the MSPP to identify other threats of outbreaks in addition to cholera epidemic and respond to them promptly.
- A specific cholera Health Cluster Bulletin was issued weekly in order to keep all partners informed on the evolution of the cholera epidemic as well as the different activities being carried out in the health sector. By beginning of March 2011, 20 Bulletins had been produced: http://new.paho.org/disasters/index.php?option=com_content&task=view&id=1423&Itemid=1.
- The national strategy for the cholera response, jointly developed by the MSPP and PAHO/WHO, was finalized and validated by the MSPP. PAHO/WHO teamed up with partner NGOs to create a group for coordination of the Cholera Treatment Centers and Units (CTCs and CTUs) nationwide. A joint humanitarian response strategy was developed with key UN partners: PAHO/WHO, UNICEF, IOM and WFP.
- Regular Inter-Cluster meetings between the Health and WASH Clusters were organized to harmonize the response to the epidemic and ensure WASH activities were being conducted in the same geographical areas where the alerts has originated.
- PAHO/WHO and the MSPP developed a website with relevant information on cholera treatment prevention activities and protocols for treatment. A master list of CTCs and CTUs as well as Oral Rehydration Points (ORP) was developed, circulated and updated daily by the Health Cluster. This list together with GPS (Geographic Positioning System) coordinates for each unit has been essential for coordination and referral efforts. An interactive map of CTCs, CTUs and other cholera information can be found here: http://new.paho.org/hq/images/Atlas_IHR/CholeraHispaniola/atlas.html.
- PAHO/WHO continues to work on improving epidemiological surveillance with various partners. PAHO/WHO supported the MSPP and worked with Health and WASH Cluster partners on cholera prevention activities and messages related to carnival in March of 2011. Radio messages, banners and information booths were used to disseminate information on how to prevent the transmission of cholera.



Health Cluster meeting convened by PAHO/WHO with Ministry of Health and partners

HEALTH CLUSTER

Activities carried out: (continued)

- The MSPP, with support from PAHO/WHO, worked to mobilize and bring additional medical staff into the country to address the cholera epidemic. MINUSTAH provided engineering support to set up treatment centers. Training of Haitian personnel is on-going and the Cuban Medical Brigade and other health partners have also deployed additional personnel.
- Direct assistance was provided, together with other health partners, in the management of cadavers, as cholera deaths are highly infectious and dead bodies must be disposed of properly.
- PAHO/WHO, DINEPA, UNICEF, CARITAS and other partners, following the initiative of the country's religious leaders, worked together to disseminate cholera prevention messages in places of worship, which play an important role in the daily lives of many Haitians.
- Together with the Ministry of Education, PAHO/WHO is participating in many different social communication activities (dissemination of cholera prevention and cholera treatment messages on the radio, television and cellular phones in Creole). 40,000 posters were distributed around the country, working with local health promoters and community organizations, such as churches. More than 10,000 community health promoters have been trained on hygiene, hygiene promotion and sanitation.
- With the support of the MSPP, sensitization material were produced and distributed nationwide in both French and Creole: flyers, slogans, radio messages, posters, flipcharts, t-shirts, among others.

Challenges and next steps:

- Continue to support the Haitian authorities in all of the activities mentioned, with a special focus on the following areas: water and sanitation; nutrition; health services provision; contingency planning; health facility mapping and reconstruction.
- Due to the initial and likely progressive suspension of NGO activities related to cholera, several Clusters are conducting a gap analysis aiming to identify main trends and implications for cholera response. The results of this analysis will be available shortly.
- New and pending issues in the WASH sector that present serious concerns for appropriate environmental and public health for the Haitian people:
 - Limited financing (running out of funds or funds have already been exhausted) for drinking water distribution and removal of excreta from latrines and septic tanks.
 - Solution still pending for long-term excreta management.
 - Mobilization of funds for medium and long term water solutions, especially for existing health facilities, is of significant importance and still a challenge.



PAHO Director meet with Health Authorities in the Haiti-Dominican Republic border, Jimaní

BINATIONAL COOPERATION BETWEEN HAITI AND THE DOMINICAN REPUBLIC



Haiti and the Dominican Republic share the island of Hispaniola, with a 360 km borderline between them. Both countries have distinct cultures and languages, but that does not limit commercial exchange or health cooperation between the two. The economies of both countries and their populations are inextricably linked.

Due to the intense exchange of business and people between the two countries and the fact that both share the same vulnerabilities to natural disasters such as hurricanes, similar health challenges are seen on both sides of the border. In fact, this exchange has created opportunities for coordination and joint health plans between the countries in recent years. Any efforts at disease prevention and control, particularly for communicable diseases should be approached through binational coordination. In this regard, joint activities in the health sector have always encouraged and fostered a collaborative political relationship between the two countries.

Dr. Mirta Roses Periago, PAHO Director and Regional Director of the AMRO WHO Region has always promoted binational coordination and has emphasized, in high level meetings, the need to strengthen coordinated actions between the two countries to tackle common health related issues. Some examples of joint collaboration are:

- High level visits led by the PAHO Director, and joint missions (comprised of members of the Organization of American States, United Nations, among other partners and stakeholders)
- Joint vaccination activities in the border areas
- Rabies control through binational canine vaccination campaigns
- Advocacy for joint activities related to the elimination of priority communicable diseases such as: lymphatic filariasis, TB, Malaria and HIV/AIDS, which has led to increasingly coordinated approaches among both countries

After the January 2010 earthquake, Dr. Roses travelled to the Dominican Republic and Haiti to hold high level meetings with the Interamerican and the UN Systems' teams, including National health Authorities from both countries, in an effort to promote a coordinated response and meet the specific needs of the affected Haitian population in the short term.

The Dominican Republic responded immediately out of solidarity with the Haitian people, offering health services in Dominican health institutions for displaced or affected Haitians; with additional support from the Cuban Medical Brigade, immediate medical care was provided. The Dominican Republic also permitted free movement of materials, equipment, medicines, and people across the border and into Haiti to help with disaster response. They also provided fuel for electricity in health facilities.

In May of 2010, Dr. Roses returned to Fond Parisien in Haiti and Jimaní in the Dominican Republic to launch binational vaccination campaigns in support of the Vaccination Week of the Americas.

On November 12 of 2010, the first case of cholera was reported in the Dominican Republic, which had already developed planned interventions to face the epidemic since it was first confirmed in Haiti in October. Efforts were made to strengthen the health institutions and service networks along the border with Haiti. Guidelines, strategies and treatment protocols from Haiti and the Haitian Ministry of Public Health and Population (MSPP per its acronym in French) proved to be essential inputs in the Dominican Republic's preparation. This information was easily accessible and shared through the Health Cluster, led by the PAHO/WHO.

Activities carried out:

In the aftermath of the earthquake:

Coordination and logistics

- Binational meetings were held between PAHO/WHO teams of both countries to define an action plan to implement activities for: health services (hospital care, improved response capacity of health centers at the border), risk communication, rehabilitation, mental health, biosecurity, water and sanitation, disease prevention and control.
- Coordination with the Dominican Republic's Ministry of Health, different partners (United Nations, health authorities, NGOs, volunteers, church leaders) in both the DR and Haiti as well as with the PAHO/WHO Country Offices and Regional Office in Washington DC was key in terms of data gathering, logistics and information management.
- PAHO/WHO Country Office in Dominican Republic activated its Response Team and a Crisis team to support administrative, logistics and technical activities. Emergency kits and fuel were bought in Dominican Republic and sent to Haiti so that PAHO/WHO Country Office and PROMESS (National Center for the Supply of Essential Medicines) in Port-au-Prince could remain operational.



PAHO Director meet with Health Authorities in the Haiti-Dominican Republic border, Jumaní

BINATIONAL COOPERATION BETWEEN HAITI AND THE DOMINICAN REPUBLIC



Activities carried out: (continued)

- Shadow Clusters were established in the Dominican Republic to support the main Health Cluster operations in Haiti and coordinate the relief effort across the border – PAHO/WHO DOR actively participated in the logistics, rehabilitation, mental health, intensive care and research/investigation sub-clusters.
- The rehabilitation sub-cluster recruited and organized volunteer rehabilitation teams from Ecuador, Panamá, Nicaragua, Argentina and Costa Rica, who worked in hospitals in Jimaní and a recovery center in Fond Parisien. Basic rehabilitation training was provided to Haitian nurses and together with the the NGO Progressio the sub-cluster helped to create the first community rehabilitation center in Jimaní.
- As part of the research and investigation sub-cluster, PAHO/WHO jointly with World Vision (“Visión Mundial”) and the General Directorate of Epidemiology of the Dominican Republic Ministry of Health (Dirección General de Epidemiología- DIGEPI) carried out a survey in more than 3,000 houses in the Independencia, Barahona and Bahoruco provinces along the border to identify health demands.
- Medical services were provided for more than 3,000 Haitians (mostly surgeries) in Dominican health facilities. The General Hospital Melenciano in Jimaní and the Hospital Buen Samaritano were provided with additional medical equipment and supplies to handle the increased demand for services.
- The intensive care sub-cluster provided intensive care training for doctors and nurses in hospitals in Jimaní, Barahona and Azua. PAHO/WHO also provided key equipment and materials for intensive care units, ensuring appropriate care for gravely injured patients along the border.
- PAHO/WHO also supported and equipped post-surgical recovery centers in Jimaní (2) and Fond Parisien (1).
- Between January 23 and March 15 2010, Dominican Republic received more than 300,000 Kg. in humanitarian relief supplies, including: medical supplies, water and sanitation products, logistics equipment and cadaver management supplies. PAHO/WHO mobilized experts to support the National Health Authorities in both countries in the management and distribution of these supplies. Supplies were brought into Haiti through Jimaní along the border and PROMESS played a key role in the acquisition, management, administration and distribution of medical supplies in Haiti.

Rehabilitation and psychological support to victims

- PAHO/WHO in coordination with the Dominican Republic's Ministry of Health mobilized equipment from Argentina, Nicaragua, Panama and Costa Rica to provide rehabilitation services.
- A mental health team from the Dominican Republic was deployed to the General Hospital of Jimaní, along the Haiti/DR border, consisting of a psychiatrist, 4 psychologists and 3 specialized nurses. A plan was developed to provide psychosocial and mental health support to patients in 5 other institutions in the border region.
- PAHO/WHO mobilized experts to provide support to victims and internally displaced populations, especially at border areas on both countries. Three initiatives were implemented:
 - seminars for health personnel were organized;
 - seminars for community members were organized in camps and in health institutions;
 - a basic mental health care protocol was produced.

Health surveillance, disease prevention and control

- PAHO/WHO supports the DIGEPI in the Dominican Republic with epidemiological surveillance (identification of outbreaks, decision making processes and response). An alert system was put in place and situation rooms were established at the national level as well as in Independencia, San Juan, Azua, Barahona, Bahoruco y Elías Piña provinces. The DIGEPI also organized Rapid Response Teams (which were deployed in Jimaní and Port-au-Prince immediately following the earthquake).
- Binational meetings were held with the teams for disease prevention and control and a special focus was given to high endemic risk syndromes, such as conjunctivitis, diarrhea, foodborne diseases, acute respiratory infections, immune preventable diseases, malaria, leptospirosis and rabies.
- Through the Expanded Immunizations Program (EPI), 12,544 DT doses (diphtheria and tetanus) and 200 DPT doses (diphtheria, pertussis and tetanus) were applied to populations living in Jimaní and in other border areas. In addition, 960 measles and rubella doses were given to Haitians over one year old and to foreign and national volunteers.

BINATIONAL COOPERATION BETWEEN HAITI AND THE DOMINICAN REPUBLIC



PAHO Director meet with Health Authorities in the Haiti-Dominican Republic border, Jumaní



Activities carried out: (continued)

- The Expanded Program on Vaccination (EPI) was implemented in seven of nine provinces along the border, including home visits, providing coverage to 95% of the border population. EPI consultants were trained on the use of new indicators for monitoring immunization activities.
- Water quality improvements were made in health institutions along the border, including complete replacement of tubing in some institutions, installing sinks and semi-permanent latrines in temporary settlements and health institutions, the establishment of a chlorine distribution route to 29 hospitals along the border from a chlorine generator provided by PAHO/WHO, and the implementation of a water quality surveillance system.
- Canine vaccination campaigns were done in all border provinces in the Dominican Republic.

Information and communication

- PAHO/WHO jointly with the Dominican Republic's Ministry of Health, the General Direction of Health Promotion and Educations (DIGPRESS), and the National Commission for Risk Communication prepared health promotion material (guides, posters, graphic material, audio messages, etc) in both Spanish and Creole for internally displaced populations at the border areas.

In response to the cholera epidemic:

- PAHO/WHO mobilized epidemiology experts for the exchange of information and experiences regarding the cholera epidemic.
- 150 people working in nine hospitals in five border provinces were trained regarding the organization of hospital food and nutrition services, including the completion of a survey of the nutritional status of newborns.
- PAHO/WHO has been working to improve water, sanitation and bio-safety conditions in 20 hospitals along the border. 13 have already received:
 - Improved water supply and 24-hour nonstop provision of water through the installation of water tanks, water pumps, changes in tubing, etc.
 - Improved water quality through water chlorination and the implementation of a regular water quality surveillance system.
 - Survey conducted which provided each hospital with recommendations to improve onsite sewage treatment and disposal.
 - Improved waste management, including segregation of infectious and common waste as well as improved internal waste transportation routes and outside waste storage.
- Cholera prevention activities were carried out in the main border cities of the Dominican Republic covering 5 provinces across the country and more than 15 municipalities. This initiative was supported by PAHO/WHO in coordination with "Promoción de Ecoclubes Asociación Social (OPEAS)". The main purpose was to educate students, teachers, school administrators, and community organizations, on cholera prevention measures.
- On February 15, 2011 the Dominican Republic's Minister of Health, Dr. Bautista Rojas Gomez, visited the Cholera Treatment Center (CTC) in the municipalities of Neyba and Galvan in the Bahoruco province and the municipality of Matas de Farfán the province of San Juan. Dr. Rojas was accompanied by the Director of Environmental Health of the Ministry of Health and PAHO/WHO Country Office staff in the Dominican Republic. These field visits are part of the weekly activities of the Minister of Health since the beginning of the cholera epidemic in Haiti, which are intended to monitor and assess the quality of care being delivered as well as ensuring appropriate cholera prevention measures.
- PAHO / WHO has facilitated the local production of chlorine, which is being distributed in the provinces in dropper bottles to disinfect drinking water.
- For further information on binational activities carried out by PAHO/WHO in Dominican Republic: <http://new.paho.org/dor/>



PAHO Director meet with Health Authorities in the Haiti-Dominican Republic border, Jumaní

BINATIONAL COOPERATION BETWEEN HAITI AND THE DOMINICAN REPUBLIC



Challenges and next steps:

- Continue, promote and encourage opportunities and spaces for binational coordination with the new MSPP authorities.
- Advocate for and foster binational cooperation and the implementation of joint health approaches in different global platforms
- Support and follow up on projects and financial resources, such as the Global Fund, to maintain coordinated disease control activities and efforts in both countries.
- Strengthen health information analysis, as well as research, to better understand the factors and health determinants of the migrant and mobile populations as well as the border regions.
- Revitalize binational malaria and tuberculosis activities between the two countries.
- Foster cooperation between the two countries to provide appropriate care for confirmed cholera cases and to take joint preventative measures, in addition to maintaining careful surveillance among both populations, especially among the migrant population.



PROMESS warehouse in Port-au-Prince

PROMESS PROGRAM FOR ESSENTIAL MEDICINES AND SUPPLIES



PROMESS, the National Center for the Supply of Essential Medicines, was created in 1992 and operates under PAHO/WHO technical and managerial leadership. It is located near the Port-au-Prince airport and is evidence of the concerted effort by many national and international partners to improve access to quality essential medicines and medical supplies in Haiti. Materials and financial contributions are donated by:

- The United Nations Children's Fund (UNICEF),
- The United Nations Population Fund (UNFPA),
- The Canadian International Development Agency (CIDA), and
- The Spanish Agency for International Cooperation and Development (AECID)

PROMESS plays a vital role in the storage and distribution of medicines and health supplies nationwide. PAHO/WHO coordinates its actions with the Ministry of Public Health and Population (MSPP as per its acronym in French), and the Organization has supported the MSPP to establish a national medical supply system and a National Pharmaceutical Commission for regulatory purposes. Despite the many challenges, efforts have been made towards:

- Consolidating PROMESS as the Central Medical Stores to stock and distribute medicines and medical supplies to health institutions, strengthening the national medical supply and distribution system.
- Promoting the rational use of medicines.
- Strengthening the national regulatory capacity of the MSPP.
- Developing a political and regulatory framework for medical supplies and pharmaceutical products.

Careful coordination with a wide variety of partners has been essential during the emergency immediately after the earthquake and during the cholera outbreak of 2010. PROMESS has ensured the distribution of essential medicines, medical supplies, and cholera beds as well as specific supplies requested by the WASH and Logistics Clusters.

Many countries have contributed medical supplies since the earthquake: Brazil, Colombia, Chile, Italy, Japan, Spain, United States.

Activities carried out:

Even with the additional focus on specific supplies and materials for cholera, at no point did PROMESS ever interrupt its non-cholera activities. PROMESS has continued normal operations throughout 2010. Requests for medicines and supplies from NGOs, partner health institutions and PAHO/WHO supported national programs (tuberculosis, vaccination, reproductive health, free obstetrical care project, among others) are met as soon as they are received.

PAHO/WHO Haiti Country Office staff are currently working at the PROMESS premises, since the PAHO/WHO office building was damaged by the earthquake in 2010. As of March 2011, a total of 130 staff are working to implement PAHO/WHO's technical cooperation program, many in Port-au-Prince and some deployed in Haiti's ten Departments.

Distribution of medicines and medical supplies and stock management:

- In 2010, medicines and medical supplies valued at US\$ 13 million were distributed, free of charge.
- PROMESS continues to handle requests from over 430 partners including NGOs and different institutions.
- Using WHO Good Practices for Distribution of Supplies, Operational Standard Procedures were developed.
- Provision of technical support for the evaluation of MSPP Departmental Supply Centers (*Centres Départementaux d'Approvisionnement en Intrants – CDAIAs*).
- Preparation and dissemination of pharmaceutical management tools at the departmental level.
- Training on pharmaceutical inspections and stock management.

Distribution of medicines and medical supplies for cholera response:

- Distribution of over US\$ 3 million in medical supplies to treat 70,000 severe cases and 130,000 moderate cases of cholera. As of March 2011, PROMESS has enough medical supplies to support Cholera Treatment Centers (CTC), Cholera Treatment Units (CTU) and the activities at the community level for the rest of 2011. A large order of Oral Rehydration Salts is arriving in a series of shipments, providing ample support for the community awareness programs.
- Construction and distribution of 2,000 cholera beds.



PROMESS warehouse in Port-au-Prince

PROMESS

PROGRAM FOR ESSENTIAL MEDICINES AND SUPPLIES



Activities carried out: (continued)

- Medical supplies were distributed throughout the different Departments of Haiti directly to health institutions in many cases (60%) and indirectly in others (40%) with the support of different partners. As of March 2011, more than 600 tons and 1500 cubic meters of medical supplies were distributed by the PAHO/WHO logistics team since. There are a total of 12 MSPP warehouses, and an additional eight storage units managed by PAHO/WHO used to maintain emergency inventories. These are located in: Gonaïves, St Marc, Cap Haïtien, Jérémie, Miragoane, Les Cayes, Jacmel, and Léogane.
- Coordination with different partners to share information on stocks of supplies nationwide. To this end, an electronic platform was created, which can be found at www.paho.org/promess. Partners participating in this platform: MSPP (CDAI), UNICEF, US Safe Motherhood and Child Survival (SCMS), International Organization for Migration (IOM), Partners in Health, AMERICARES.
- PROMESS is carefully monitoring stocks in MSPP warehouses outside of Port-au-Prince as well as emergency stocks being managed by PAHO/WHO teams in the field.
- Management of the LSS/SUMA (Logistics Supply Management System) to track and process supplies and incoming donations.
- Rapid response to urgent alerts received through the Health Cluster.
- A contingency plan has been developed to maintain continuous distribution of medical supplies throughout the upcoming rainy season.

Challenges and next steps:

- Continue to support national authorities to establish a national pharmaceutical policy with three priority lines of action:
 1. Access to essential medicines
 2. Rational use of medicines
 3. Strengthening the capacity of the national regulatory authority for medicines
- Continue to strengthen periphery warehouses, with adequately trained human resources and with information technology and communication systems.
- Continue to mobilize financial resources to ensure availability of essential medicines and supplies and their distribution nationwide.

HEALTH INFORMATION SYSTEMS



Due to the multiplicity of stakeholders involved in the health care in Haiti, which was only magnified in the months following the earthquake, collection of reliable health information is a challenge. Historically there have been issues with incomplete data, inaccurate data, lack of timely data collection, and parallel information systems among various partners working in health. In addition, the information that is available is not always analyzed and used for decision-making in health planning and policy. With thousands of Haitians in precarious living situations and the threat of epidemic outbreaks, the need for a consolidated, reliable and usable data collection system becomes an essential public health tool. One of the main challenges is to set up and implement an effective and efficient structure that is capable of reorganizing and consolidating the various health information systems, in order to effectively support evidence-based decision making at all levels: institutional, local, district and central.

Since June of 2008, PAHO/WHO has been supporting the Ministry of Public Health and Population (MSPP, as per its acronym in French) to create a National Health Information System, which will be a consolidated health information system by which all relevant health information will be gathered for use in health planning, decision making, and action. This system will include information on morbidity, mortality, health systems, health services, human resources, and health financing at all levels of the Haitian health care system. In 2008 a 15-member committee, the National Health Information System Committee (CONASIS - *Comite National des Systèmes d'Information de la Sante*), under the leadership of the Planning and Evaluation Unit (UPE) of the MSPP, was created to develop this consolidated system. The CONASIS is supported by PAHO/WHO, other bilateral agencies (Cuban Medical Brigades, U.S. Center for Disease Control and Prevention (CDC), USAID, Canadian Government, etc.) and other established health NGOs working in Haiti (MSH, Measure, etc.).

Unfortunately, the destruction of the MSPP building where the Planning and Evaluation Unit was located in the 2010 earthquake was a tremendous setback to the CONASIS and health information system project. However, even in the post-disaster period, the CONASIS was meeting on a monthly basis and certain subcommittees, i.e. surveillance, were meeting more frequently than that. PAHO/WHO continues to actively participate in the CONASIS and work with the MSPP to develop the necessary consolidated information system.

Activities carried out:

Immediately after the earthquake:

- The MSPP, with support from PAHO/WHO, CDC, the Cuban Medical Brigades, Canadian International Development Agency (CIDA), Japan International Cooperation Agency (JICA), Médecins Sans Frontiers (MSF) and others, created a situation room which became the base for collecting and managing health information, in order to help Haitian Health Authorities to make evidence-based decisions.
- A post-earthquake Sentinel Surveillance System was set up by the MSPP, PAHO/WHO, CDC and the Cuban Medical Brigade. By using and updating the surveillance forms used after the 2008 hurricanes, data collection was able to begin the next day with 52 sentinel surveillance sites (hospitals and health institutions). Data was then sent electronically to the Department of Epidemiology, to the National Public Health Laboratory and to PAHO/WHO.
- A standardized surveillance form was created for use by the National Sentinel Surveillance System and the Internally Displaced Population Surveillance System.
- Within the Health Cluster, a Disease Surveillance sub-cluster was established, which received and disseminated information from the Sentinel Surveillance System.
- PAHO/WHO helped to mobilize and bring epidemiologists from all over the world, and at one point there were a total of 40 epidemiologists working together at the central level.
- By February of 2010, the Internally Displaced Population Camps Surveillance System (IDPSS) was established and data is still being received from 40 Internally Displaced Population camps.
- Monthly epidemiological bulletins are published by the MSPP with PAHO/WHO support.
- The Sentinel Surveillance System established during the earthquake recovery became an essential tool in the fight against the cholera epidemic and is currently being strengthened with support from DFID (UK Department for International Development), CIDA, USAID, EU Delegation to Haiti, Finland, Italy and Andalucía.

HEALTH INFORMATION SYSTEMS



Activities carried out: (continued)

Activities with CONASIS:

- First meeting of CONASIS after the earthquake was held on April 30, 2010.
- Monthly meetings of CONASIS and PAHO/WHO participation in all of the 6 subcommittees: Organizing, Service Statistics, Hospital Information System, Epidemiologic Surveillance, Human Resources, and Financial Resources.

Other Health Information System Activities:

- PAHO/WHO financial support to hire 7 national departmental epidemiologists to strengthen the surveillance system.
- Technical cooperation and capacity building to improve collection, analysis and processing of information at all levels, through a core team of trainers (both epidemiologists and statisticians).

Challenges and next steps:

- Next phase is to consolidate all the databases of each subcommittee of CONASIS into one national ministry database. Progress made thus far by the CONASIS must be shared with the health authorities of the new incoming government to ensure continuity of the process.
- Main challenge is finding funding for the health information system development process.



Haitian Minister of Health launching vaccination campaign

VACCINATION AND IMMUNIZATION



In Haiti, the immunization program has been historically weak and vaccine-preventable diseases (diphtheria, pertussis, tetanus, neonatal tetanus) continue to be a public health concern. Since 2000, reported coverage levels for DTP3 have fluctuated between 39-79%, with 53% coverage reported for 2008 and 68% for 2009. Vaccination campaigns against polio and measles have maintained these diseases at bay; the last outbreak of vaccine-derived poliovirus occurred in 2000-2001 and the last case of measles in 2001. In 2007, Haiti launched the largest national vaccination campaign in its history, targeting five million people nationwide, which represented 53% of the country's population. The campaign included the provision of vaccines against polio, measles, rubella, in addition to an anti-helminthes treatment and vitamin A supplements; the diphtheria and tetanus vaccine was offered in major cities. An independent survey undertaken by the U.S. Centers for Disease Prevention and Control (CDC) estimated the coverage at 80%, which signified a major improvement in vaccination coverage.

When the earthquake hit Haiti, national immunization activities originally planned to address a diphtheria outbreak in various departments, including the metropolitan area, were interrupted. Furthermore the earthquake created the conditions of a major threat for outbreaks of vaccine-preventable diseases, such as measles, diphtheria, tetanus and whooping cough: concentrations of large populations in temporary overcrowded camps; the influx into Haiti of thousands of expatriates from all over the world, including from regions where the level of vaccination coverage is not yet adequate; the destruction of many of the health facilities participating in the Expanded Program on Immunization (EPI), while many others were provisionally out of use; deterioration of the already weak capacity of the EPI at national and departmental levels to support and follow up on activities.

In 2011, PAHO/WHO, along with key partners such as UNICEF, is supporting the MSPP to reestablish the National Immunization Program and resume the large-scale efforts at improving national vaccination coverage which it began in 2007. In this regard a key step is the elaboration of a multi-year plan for the EPI, aiming at strengthening the EPI; maintaining the country free of polio, measles and rubella; eliminating neonatal tetanus as a public health problem; introducing new vaccines; and increasing vaccination coverage for the Haitian population.

Activities carried out:

In the aftermath of the 2010 earthquake:

PAHO/WHO worked closely with the MSPP and UNICEF to develop a National Post-Disaster Vaccination Plan, which included:

- Technical cooperation in the development and implementation of the plan.
- Appeal and Emergency Response Relief Fund for Haiti.
- Purchase and distribution of vaccines, supplies and equipment.
- Funding operational costs of immunization centers.
- Creation of PAHO/WHO satellite field offices in Leogane and Jacmel, aside from the PAHO/WHO main office in Port-au-Prince, in order to provide support to intermediate level.
- Immediate delivery of Td/TT vaccines and tetanus antitoxin to health facilities treating injured persons and performing emergency surgeries after the earthquake (through PROMESS, the National Center for the Supply of Essential Medicines).
- Two phase vaccination campaign with vaccines against measles-rubella as well as diphtheria, tetanus and whooping cough for children under 7 years of age and diphtheria and tetanus for older children and adults, in addition to Vitamin A supplements and albendazole.
 - Phase 1: Targeted displaced populations living in temporary settlements in over 850 sites in the areas most affected by the earthquake including municipalities of metropolitan area (Port-au-Prince, Petionville, Carrefour, Delmas, Tabarre and Cite Soleil), west department (Croix de Bouquet, Léogane, Gressier Grand Goave and Petit Goave) and south east department (Jacmel). The focus was primarily on children, but vaccines were offered to all people living in the displacement camps. By early June of 2010, over 900,000 people had been vaccinated, approximately 62% of the total population in these settlements (over 80 % of under five).
 - Phase 2: Provided a similar vaccination "package" (except that an oral polio vaccine was used and not vitamin A supplements) to all people living in the affected areas, not just those in displacement camps.
- Revitalization of routine EPI activities, both at the institutional and community outreach levels, in all the municipalities of the affected departments, building upon the momentum of the Vaccination Week of the Americas.
- Field visit by PAHO Director, Dr. Mirta Roses, to Fond Parisien, Haiti and Jimaní, Dominican Republic in May of 2010 to launch vaccination activities in support of the Vaccination Week of the Americas.



PAHO Director launching vaccination campaign

VACCINATION AND IMMUNIZATION



Activities carried out: (continued)

Other 2010-2011 technical cooperation activities:

- Reinitiating normal EPI routine activities all over the country, with funding remaining from the Expanded Immunization Program Support Project (Projet d'Appui au Programme Elargi de Vaccination - PAPEV) which began in 2007 with Canadian Government support and an additional US\$ 2 million given by the Canadian International Development Agency (CIDA). This includes EPI support and follow up activities (e.g. supervision, supply, monitoring) with the National Directorate of the EPI, departmental health authorities and with all EPI involved health facilities.
- Using the November 2010 Child Health Week as an opportunity to close the gap for unvaccinated children under the age of five as part of the nationwide delivery of an integrated package of health and nutrition interventions, prioritizing urban and rural localities with difficult access to health services.
- Provided technical cooperation, together with UNICEF to the MSPP for the development of an EPI Multi-Year Strategic Plan, from 2011-2015, which will strengthen routine EPI activities through innovative strategies (like contracting with partner NGOs), introduce new vaccines (Pentavalent, Pneumococcal and Rotavirus) and shift the emphasis towards a family health perspective, with a mix of routine activities and vaccination campaigns.
- Other partners involved in the EPI multi-year plan are: the US Centers for Disease Control and Prevention, the Canadian International Development Agency, UNICEF, USAID, GAVI, Brazil, Cuba, Spain and Japan. Their joint commitment is expected to mobilize the US\$ 100 million funds required for the implementation of the plan over five years.

Challenges and next steps:

- Maintain the present momentum of the EPI with the next government and continue the collaboration with all partners who are keen to strengthening the program and broadening its ambitions.
- Strengthen vaccine and cold chain management while introducing much more expensive and volume consuming vaccines.
- Finding a sustainable solution to the financing of propane gas for the cold chain.
- Finding a sustainable solution to the financial compensation needed for community health workers who are ensuring immunization outreach delivery.
- Maximizing NGO support to health facilities through contractual mechanisms.
- Capitalizing more on Vaccination Week in the Americas and Child Health Week to catch-up unvaccinated children, update vaccination schedules and provide additional vaccine doses as needed.

The priorities of PAHO/WHO support for the next year will be:

- Validation of the EPI Multi-Year Strategic Plan.
- Submission of an application to GAVI for the introduction of new vaccines, which also requires a vaccine management and cold chain evaluation and strengthening plan.
- Supporting the logistics and follow up activities of the EPI program at all levels (central, departmental, and institutional).
- Organizing activities for the 2011 Children's Health Week as an opportunity to provide vaccinations within an integrated health and nutrition package in hard to reach areas.
- Preparing and organizing a Polio and Measles-Rubella nationwide catch-up immunization campaign, targeting children up to 9 years of age.
- Strengthen surveillance of vaccine-preventable diseases.



NUTRITION



Since 2008 there has been a renewed interest in improving nutrition in young children among collaborating international partners in Haiti. The Ministry of Health and Population (MSPP) strengthened the Coordination Unit of the National Program for Food and Nutrition within the Ministry of Health and Population (MSPP - UCPNANu as per its acronym in French). The World Bank (WB) led an initiative to create the Nutrition Consultative Group ("*Groupe Consultatif de Nutrition*") to coordinate nutrition activities in Haiti among the larger partners and agencies in Haiti, such as: UNICEF, World Food Program (WFP), PAHO/WHO, USAID, the Inter-American Development Bank (IDB) and the UCPNANu, at the Ministry of Health.

In addition, a Nutrition Technical Group (NTG) exists in Haiti that is comprised more broadly of all nutrition stakeholders, including smaller NGOs. Right after the earthquake, the NTG became the Nutrition Cluster, led by the MSPP and supported by PAHO/WHO. The Nutrition Cluster benefitted from the previous work and coordination done in 2008 and 2009.

In June of 2010, UNICEF and the MSPP conducted an anthropometric nutrition survey in earthquake affected areas as well as in the metropolitan area of Port-au-Prince, including the displaced populations. The study showed a relatively low rate of acute malnutrition (5.31% with less than 1% severe cases). This is the result of strong cooperation among nutrition partners to prevent the spread of acute malnutrition. However, the proportion of children at risk (10%) remains high and the impact of the cholera epidemic on malnutrition rates is still unknown.

PAHO/WHO will continue to work together with the MSPP to strengthen its leadership, and continue to coordinate with other key partners to maintain the progress made so far and to continue the fight against malnutrition. PAHO/WHO reinforced its technical cooperation in nutrition by hiring a full time expert on nutrition based at the Haiti Country Office.

Activities carried out:

Post-earthquake activities:

- 108 Baby Tents were established throughout the country to promote breastfeeding, counseling was provided as well as ready-to-use infant formula for infants who were not breastfeeding (mainly orphans, etc.)
- The Blanket Supplemental Feeding Program provided an energy-rich biscuit to children between 6 and 59 months, pregnant and breastfeeding mothers to prevent malnutrition.

Regular Technical Cooperation Program activities:

- As part of the Free Obstetrical Care (SOG) project, PAHO/WHO has trained 120 health workers from 65 different institutions on key nutrition improvement actions including: promotion of breast-feeding, dietary supplements of key micronutrients including the prevention of anemia through iron-folic acid supplements; deworming; as well as referral and case management practices for cases of malnutrition among pregnant and breastfeeding women.
- Twenty-three (23) health workers from partner NGOs have been trained in nutrition related counseling for babies and their mothers.
- PAHO/WHO has been assisting the MSPP to develop protocols for acute malnutrition treatment. With the onset of the cholera epidemic the protocol was revised, providing additional instruction for the proper care of malnourished children suffering from cholera (which includes the provision of zinc supplements). In collaboration with UNICEF, 1000 copies were produced and distributed both within the MSPP and to partnering agencies and NGOs.
- Together with UNICEF, PAHO/WHO has trained more than 175 health care providers from seven different departments regarding the appropriate care for children suffering from severe acute malnutrition. Seven Nutrition Stabilization Units were established, one in each department represented, to care for children suffering from complications stemming from severe acute malnutrition. PAHO/WHO also provides essential drugs and materials for the treatment of severe malnutrition in these centers.
- PAHO/WHO has encouraged the adoption of new Child Health Growth Standards by the MSPP. The MSPP, key nutrition partners and professional health associations in Haiti and all have been supportive and active in the implementation of the new growth standards. The MSPP is revising its "Healthy Growth Path" (Chemen Lasante) and drafting a new workbook on nutrition and children's health.



NUTRITION



Activities carried out: (continued)

- PAHO/WHO has provided technical and financial support, in collaboration with other partners, to commemorate Children's Health Week in November of 2010. Activities included: provision of Vitamin A supplements, deworming, provision of oral rehydration salts, and zinc supplements for diarrhea treatment and vaccinations.
- An annual operating plan for 2011 was established with key partners: UNICEF, PAHO / WHO, WFP, USAID, IDB, WB. In addition, a five year strategic plan is being drafted.
- PAHO/WHO together with the MSPP is reviewing the National Policy on Nutrition and is also monitoring the implementation of the Integrated Management of Childhood Illness (IMCI) in Haiti.
- As of April 2011, the Nutrition Technical group together with the MSPP is discussing the possibility of fortifying wheat flour with iron-folic acid and/or other micronutrients still to be determined.

Challenges and next steps:

- Monitor and oversee training of the SOG institutions in their implementation of essential nutrition interventions.
- Together with UNICEF, supervise the departmental Nutrition Stabilization Units.
- Continue to review the implementation of the Integrated Management of Childhood Illness (IMCI) approach.
- Finalize the National Nutrition Policy.
- Finalize the formulation of the 5-year strategic plan for nutrition.
- Mobilize resources to continue nutrition related activities in 2011.



PRIORITY COMMUNICABLE DISEASES HIV/AIDS, MALARIA, TUBERCULOSIS, LYMPHATIC FILARIASIS



HIV/AIDS

The prevalence of HIV in adults was estimated at 2.2% in 2005-2006 (Demographic and Health Surveys). Among pregnant women, the 2006-2007 sentinel study estimated the prevalence at 4.8%. Since 2003 there has been a dramatic change in HIV/AIDS within the country as a result of funds provided by the Global Fund to Fight AIDS, Tuberculosis and Malaria, and by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), leading to an increase in the available resources for tackling HIV/AIDS. The number of people subject to HIV/AIDS tests increased from 58,000 in 2004 to 476,000 in 2008, and the number of patients receiving antiretroviral treatment increased from 2,000 in 2003 to 17,000 in 2008.

In 2008, Haiti launched a National Plan for its HIV/AIDS efforts, with a multi-sectoral strategy comprised of six axes of intervention: risk reduction, vulnerability reduction, impact reduction, promotion and defense of human rights, sustainability of interventions; and epidemic monitoring and research. It was a five year plan, proposed to last from 2008 until 2013.

Despite these initiatives, Haiti continues to be the second country most affected by HIV/AIDS in the Caribbean. The virus affects men and women of childbearing age as well as vulnerable populations. Children are particularly at risk, and the country still does not have universal access to HIV treatment.

On January 12th 2010, the earthquake that struck Haiti forced approximately 1 million Haitians into temporary camps and shelters. An estimated 500,000 additional people have migrated to other departments less affected by the earthquake. The displaced population constitutes a new group at risk for HIV/AIDS.

Displaced populations and the flow of migrants into the Dominican Republic pose many challenges in terms of HIV prevention and control. It is estimated that more than one million Haitians live in Dominican Republic. Binational efforts should be strengthened to promote HIV prevention activities on both sides of the border and to ensure treatment continuity.

Activities carried out:

PAHO/WHO is working closely with the Ministry of Public Health and Population (MSPP as per its acronym in French) in the following areas:

- As one of the main partners supporting the National Aids Program (NAP), participated in the Post Disaster Needs Assessment (PDNA) process and provided assistance to develop the strategic approaches for HIV in the post-disaster interim National Health Plan that will guide the sector throughout 2011.
- Together with HIV partners advocated for the inclusion of HIV issues in the general reconstruction plan of the country.
- Facilitating coordination among HIV/AIDS partners supporting the NAP,
- Provided support for the revision of the guidelines for Preventing Mother to Child Transmission (PMTCT) of HIV and congenital syphilis and for the development of the National Strategic Plan for PMTCT of HIV and congenital syphilis in Haiti.
- Supported the integration of pediatric HIV into the Integrated Management of Childhood Illness (IMCI) strategy.
- Strengthened the leadership of the MSPP in HIV/AIDS activities.
- Supported the continued implementation of the post disaster interim National Health Plan throughout 2011.
- Supported the departments not affected by the earthquake to pursue the implementation of the original 2008-2013 National Strategic Plan for HIV/AIDS.
- Strengthened and improved the information system for HIV.
- Integrated PMTCT into the PAHO/WHO Free Obstetric Care Project (SOG as per its acronym in French).

Challenges and next steps:

- Participation in the review of the national standards of treatment for people living with HIV/AIDS.
- Carry out a situational analysis of congenital syphilis and prevention of PMTCT.
- Conduct a study of the warning signs of resistance of HIV to antiretroviral therapy.
- Support for the National Public Health Laboratory as a reference laboratory for HIV.
- Support data collection and the development of annual reports on the HIV situation in the country, in collaboration with UNICEF and UNAIDS.
- Planning the evaluation of the national response to HIV.



PRIORITY COMMUNICABLE DISEASES HIV/AIDS, MALARIA, TUBERCULOSIS, LYMPHATIC FILARIASIS



MALARIA

In 2008, Haiti reported 30,775 confirmed cases of malaria, all of them due to *plasmodium falciparum* and sensitive to chloroquine. That same year, the National Plan for Malaria Control was adopted to eliminate Malaria in Haiti by the year 2020. The plan, which is the first that has been formalized in the last 20 years, has led to significant changes in the policy for malaria control.

Improvements were made in the following areas: diagnosis and treatment; detection and reaction to epidemics; and vector control. The plan also aims to strengthen Haiti's MSPP, and to ensure free access to malaria diagnosis, treatment, and prevention measures (mosquito nets).

The earthquake that hit Haiti on January 12th, 2010 has raised concerns over malaria and other vector borne diseases (ex: dengue, filariasis and others). Risk of malaria epidemics has increased with seasonal rains and the presence of 1 million internally displaced people. Displaced populations and constant flows of migrants across the border with the Dominican Republic, pose significant challenges to malaria control strategies. The coordination of activities with the Dominican Republic is critical to combating malaria in Haiti.

In 2010, Haiti successfully presented a proposal for Round 8 of the Global Fund to Fight AIDS, Tuberculosis and Malaria, presenting a five year project to eliminate Malaria for a total of US\$ 50 million. Those funds should be available by mid 2011.

PAHO/WHO has worked closely with the MSPP, especially the National Malaria Program (PNCM, per its acronym in French) and the National Public Health Laboratory (LNSP, per its acronym in French) to develop partnerships and a more strategic approach to carry out future activities to fight malaria. This joint collaboration resulted in the creation of the Malaria and Other Vector-Borne Diseases Technical Working Group (MVBD).

This group is comprised of: the MSPP (PNCM and LNSP), PAHO/WHO, U.S. Centers for Disease Control and Prevention (CDC), and the Cuban Medical Brigade (CMB). To ensure sustainability of this working group, the participation of national counterparts within the MSPP is essential.

As of April 2011, key governmental technical experts participate in the MVBD, and are working closely with the PNCM to select the best surveillance tool or system for the current epidemiological, entomological, and parasitological situation.

The MVBD has made a remarkable progress and has become an important advisory and technical working group to the PNCM. The MVBD will partner with the Principle Recipient for Global Fund. Technical activities are expected to be scaled up for effective malaria-control interventions in the coming years to fully support the PNCM in Haiti.

Activities carried out:

- Support the National Malaria Program in coordinating the National post earthquake response with all partners involved.
- PAHO/WHO purchased malaria drugs to support the country when no funds from the Global Fund were available.
- PAHO/WHO supported the assessment visits carried out to selected sites (Thomazeau, Mirebalais, Petit Goave, Cayes and Cayes-Jacmel) in order to develop a sentinel site network for malaria.
- PAHO/WHO supported the National Malaria Program by ordering vector control equipment and reagents to address the outbreaks.
- PAHO/WHO provided 20,000 impregnated mosquito nets to a large number of hospitals within the affected areas.

Challenges and next steps:

- Development of an updated National Plan for Malaria Control.
- Data collection and development of annual reports on the Malaria situation in the country.
- Revitalization of the binational Malaria activities between Haiti and the Dominican Republic.
- Launch the Malaria sentinel site project in 5 departments (West, South, South East, Nippes, Center).



PRIORITY COMMUNICABLE DISEASES HIV/AIDS, MALARIA, TUBERCULOSIS, LYMPHATIC FILARIASIS



TUBERCULOSIS

Haiti has the highest estimated rates of incidence (306 cases per 100,000 population) and prevalence (366 cases per 100,000 population) of all forms of Tuberculosis (TB) in the Western Hemisphere, according to WHO estimates for 2008. Haiti, together with Brazil and Peru, contribute to more than 50% of TB cases in the Americas.

In 2008, due to the implementation of the STOP TB strategy, the detection rate of new smear positive cases was 60%, and the success rate of treatment was 82% for the 2007 cohort. The goal of the National Strategic Plan for TB 2006-2013 is to reduce the incidence, prevalence, and mortality rates. This objective is reflected by the proposed WHO target indicators for TB: a detection rate of 90% of estimated new cases of smear positive pulmonary TB, and a successful treatment rate of 85% of these cases.

The Haiti TB program faces multiple challenges:

- Limited provision of TB services: the devastating earthquake of January 12th 2010 critically affected TB services. The MSPP was severely damaged as well as many TB diagnosis and treatment centers. The Haiti's largest TB treatment center, the Sigueneau Sanatorium in Leogane, was completely destroyed.
- Insufficient financial resources to fully support the National Tuberculosis Program (NTP): most of the country's TB activities have been financed by the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM).
- Lack of coordination of TB interventions between institutions and agencies (especially national institutions and international health agencies operating in the country). PAHO/WHO has played a key role in strengthening coordination and initiatives between the NTP and its major TB partners (PAHO/WHO, CDC, Massachusetts State Laboratory (MSL), USAID, Family Health International (FHI), Grace Children's Hospital (ICC), GHESKIO, Partners in Health and others).

In 2011 TB activities will be augmented. A proposal for funding for National TB Program activities was submitted to 9th Round of the GFATM. The proposal was approved and the grant was signed in March 2011, providing US\$ 27 million over a period of five years between the GFATM and the United Nations Development Program (UNDP - designated as the new Principal Recipient for TB). This represents an opportunity to bolster the National TB Program, to be restarted by the end of March beginning of April 2011.

Due to the large number of Haitians living in the Dominican Republic, and the intense migration flow between the two countries, TB control strategies should include interaction and cooperation between both TB national programs. This binational effort allows for important information exchange, including the creation of binational cards for patients to carry with them to ensure continuity in the treatment process in both countries.

Activities carried out:

- Support the National TB Program to strengthen its leadership.
- PAHO/WHO advocated for and supported the MSPP in the elaboration of a one year TB emergency proposal to the Global Drug Facility (GDF) to obtain TB drugs, until the disbursement of the GFATM funds takes place. GDF agreed to provide TB medicines for one year.
- PAHO/WHO purchased TB medicines for the whole country, valued at approximately US\$ 400,000, to cover the first 8 months after the earthquake and until the arrival of the GDF medicines.
- Participate in TB interagency meetings with national and international partners.
- Facilitate high level coordination of the post-disaster response among major partners and stakeholders involved in TB activities.
- Participation in the planning and coordination of the reconstruction of the TB Sanatorium in Leogane, which was inaugurated on World TB Day, March 24th, 2011.
- PAHO/WHO together with the NTP developed a one year TB REACH proposal to support innovative TB activities and strategies.
- PAHO/WHO supported the training of all TB staff in the West Department on the new WHO TB treatment norms and guidelines.
- Active participation in the elaboration of National guidelines and training materials for TB diagnosis and treatment.



PRIORITY COMMUNICABLE DISEASES HIV/AIDS, MALARIA, TUBERCULOSIS, LYMPHATIC FILARIASIS



Challenges and next steps:

- PAHO/WHO will continue to provide technical support to the NTP, with financial support of the Global Fund.
- Active participation in the review of the National Strategic Plan on Tuberculosis.
- Updating national regulations regarding:
 - Standards for management of multi-drug resistance to TB (MDR-TB).
 - The laboratory network: introduction of cultures, coverage expansion for quality control of sputum-smear microscopy.
 - National study of anti-TB drug resistance that will be conducted by the National Health Laboratory.
 - Detection and management of pediatric TB cases.
- Foster collaboration between the National Program for TB and the National Program for HIV/AIDS, as well as with clinical epidemiological surveillance.
- Continue with binational meetings to strengthen TB control strategies.

LYMPHATIC FILARIASIS AND INTESTINAL PARASITES

Lymphatic Filariasis (LF) affects the Haitian population throughout the entire national territory. A study conducted in 2001-2002 in 119 of the 135 communes in Haiti revealed the presence of LF in all ten departments, with a 10% prevalence rate of the parasite in school age children.

A study of intestinal parasite prevalence carried out in 2002 showed that prevalence reached as high as 70% in some departments. LF and other parasitic intestinal infections have been included in the Neglected Tropical Diseases project, which takes an integrated approach, nationwide, undertaking large-scale drug administration at the community level. The principal goal of the project is to expand the treatment for LF with albendazole and for parasitic intestinal infections among the Haitian population, eventually branching out to have complete coverage at the national level.

The National LF program does not currently have enough resources to be fully implemented in 2011. In the past it has been funded by partners such as the Gates Foundation, Interchurch Medical Assistance (IMA World Health) and the University of Notre Dame. In addition, the devastating earthquake of January 12th, 2010, critically affected the National LF Program. Even though the original timing of the activities was changed due to the cholera outbreak, most activities related to LF control were implemented in 2010.

Activities carried out:

- Implementation of mass treatment activities in collaboration with the National Lymphatic Filariasis Program, the CDC and IMA World Health:
 - In 2008, over 3 million people received treatment in four departments.
 - In 2009, the treatment covered over 4.5 million people in seven Departments.
 - In 2010, the treatment covered approximately 3 million people nation wide.
- Support for epidemiological data collection and the development of annual reports on LF.
- PAHO/WHO procured, stored and managed all the albendazole needed for the LF control activities and the albendazole was provided free of charge through the National Center for the Supply of Essential Medicines (PROMESS).

Challenges and next steps:

- Support the MSPP in the development of an integrated plan for Neglected Tropical Diseases.
- PAHO/WHO is planning a coordination meeting with all the actors (national and international) providing anti-helminthic treatments nationwide, in order to harmonize treatment, agree on the protocol and prevent drug resistance.
- Support the MSPP in carrying out studies to better understand the prevalence of LF infection and its geographical distribution.



STRENGTHENING HEALTH SYSTEMS AND SERVICES



The earthquake which hit Haiti last January 12th 2010 had terrible consequences for the Haitian society. In fact, according to official data, there were 222,000 deaths; 300,000 injuries; 600,000 people who left Port-au-Prince; and 1.37 million people displaced and forced into camps and spontaneous groupings. The consequences have been significant at all levels. Furthermore, 60% of the Haitian state infrastructure was destroyed (including the building of the Ministry of Public Health and Population – MSPP) as well as over 50 health institutions. Economic losses totaled US\$ 7.8 billion or 120% of GDP. Losses and damage in the health sector have exceeded 200% of annual expenditure in health from all sources.

Even prior to the devastating earthquake, the challenges facing primary health care system in Haiti were many: limited access to primary care health services, limited availability of essential medicines and supplies in health centers, high cost for services, lack of trained health professionals. More than 40% of the population report not having used the public health system, even in cases of serious injury or illness, principally due to the cost. In addition, the Haitian health system is fragmented with little interaction or coordination between primary health care institutions and higher level institutions or even among institutions of the same level. Lack of adequate primary health care causes Haitians to turn directly to the second and third levels of health care (hospitals and more specialized centers), which are overwhelmed by the large demand. This situation was only amplified by the disaster.

The influx of NGOs and the introduction of free care in all public institutions during the first two to three months after the earthquake enabled hundreds of thousands of Haitians to receive basic health care services, making access to basic health care readily available to large portions of the Haitian population for the first time. However, the introduction of so many players and partners into the health sector also presented significant challenges to the Haitian health system regarding equity, governance and coordination of health services.

In October of 2010, the first cases of cholera were confirmed in Haiti, marking the first time epidemic cholera had reached the island in over 100 years. The agreed upon strategy to fight the cholera epidemic adopted by the MSPP and health sector partners entailed a massive reorganization of health services, and the strategic creation and placement of Cholera Treatment Centers (CTCs), Cholera Treatment Units (CTUs), and Oral Rehydration Posts (ORPs) all over the country.

PAHO/WHO provides support to the MSPP, not only regarding the earthquake recovery and cholera epidemic, but also in the following key areas: development of national health plans, policies and strategies with the MSPP; strengthening the leadership, governance and regulatory capabilities of the Haitian health system; building a social protection in health (*protection sociale en santé* - PSS) program through the provision of free health care to pregnant women and children under five; developing health human resources; incorporation of oral health in the Haitian health system.

PAHO/WHO has mobilized a total of US\$ 5.5 million to strengthen health systems and services in Haiti. Key partners in this endeavor are: the Cuban Medical Brigades, the Canadian International Development Agency (CIDA), U.S. Agency for International Development (USAID), and France.

Activities carried out:

In the aftermath of the earthquake:

- Coordination of the post-earthquake evaluation, the Post Disaster Needs Assessment (PDNA), which served as the basis for the development of the MSPP's interim plan that will guide the health sector over the course of 2011.
- Establishment of strategic partnerships to achieve specific goals set by the MSPP; by ensuring the participation of the Cuban Medical Brigades in immediate health care response programs after the earthquake (i.e. mobile health clinics and health brigades) and in the SOG project (to provide free health care to pregnant women and children under five).
- Working with the MSPP in the development of new standards to rebuild second level hospitals, using the Departmental Hospital of Gonaïves as model for the new hospitals to be built in Haiti.
- PAHO/WHO participated in developing a short and medium term response on rehabilitation and mental health issues.



STRENGTHENING HEALTH SYSTEMS AND SERVICES



Activities carried out: (continued)

In response to the cholera outbreak:

- Together with the MSPP, established protocols and operational guidelines for CTC and CTU.
- Training for health personnel and support staff on the newly adopted protocols of care and logistical aspects of safe water and sanitation in CTCs and CTUs.
- Monitoring and assessment of the quality of care in more than 70 CTC and UTC.
- Provision of medical supplies and essential medicines, through the Program for Essential Medicines and Supplies (PROMESS), for all partners involved the fight against cholera, and particularly those working in the CTUs, CTCs, and ORPs
- Financial and logistical support for 50 active surveillance brigades sent by the BMC working in particularly remote areas of Haiti.
- Definition of a training curriculum for Multi-skilled Community Health Workers (*Agent de Santé Communautaire Polyvalents* – ASCP) based on Haitian and Brazilian experiences. ACSP training is currently in progress (as of April 2011) and the 60 ASCP students are being integrated into community mobilization efforts in the fight against cholera in the city of Carrefour.

Regular Technical Cooperation Program to strengthen the health system and services:

- Implementation and evaluation of Free Obstetric Care Project (SOG per its acronym in French), expanded from 43 participating institutions to 63 in 2010. Since the beginning of the project, more than 70,000 women and their newborns have had access to skilled care during the pregnancy, the delivery and the postnatal period.
- Active participation in the development of single medical and pharmaceutical supply system and the definition of an essential drugs list.
- Participation in the organizational audit of the MSPP.
- Participation in the development of alternative models of funding for health services in Haiti.
- Working with Brazil and Cuba to train more first level, or primary care, health workers, including: multi-skilled community health workers and nursing assistants.
- Support for establishing oral health services throughout the country.

Challenges and next steps:

- Contribute to the definition and implementation of a continuity strategy for the fight against cholera.
- Actively participate in defining the new strategic plan for the MSPP and the definition of a new national health policy for Haiti.
- Integration of Free Child Care project (SIG) with the Free Obstetric Care project (SOG) and to position this new integrated SIG/SOG project at the center of the health care network, reinforcing the concept of a health system based on primary health care. Also to use the results of SIG/SOG to continue advancing towards the construction of a social protection scheme in Haiti.
- Continue to strengthen the stock of medical supplies and essential drugs and to implement a drug policy that includes a national list of essential medicines.
- Contribute to the definition of a health sector policy regarding the development of human resources for health.
- Continue to provide support for the development and integration of oral health services in the country.



FREE OBSTETRIC CARE PROJECT / FREE CHILD CARE PROJECT PROJET DES SOINS OBSTETRIKAUX GRATUITS (SOG) / PROJET DES SOINS INFANTILES GRATUITS (SIG)



Throughout the last decade, PAHO/WHO had been advocating for free obstetric and neonatal care as a means to address the high infant and maternal mortality rates in the country. The evidence suggested that the financial barrier to health care was the main obstacle for pregnant women, preventing access to quality obstetric care, which in turn was causing excess mortality in these two highly vulnerable population groups: pregnant women and children under 5 years of age, particularly children under 1 and among them the neonates.

This advocacy effort proved to be successful when the Ministry of Health and Population of Haiti (MSPP as per its acronym in French) endorsed PAHO/WHO's proposal for a Free Obstetric Care project (SOG per its acronym in French), which was presented to the Canadian International Development Agency (CIDA) and approved in 2008.

With significant financial support from CIDA and under the leadership of the MSPP, the Free Obstetric Care Project (SOG) began with the objective of providing all pregnant women (low-income women are the main beneficiaries) with free access to health services. SOG results are being used to generate evidence that will ultimately influence national health policy to move towards a social protection scheme in health that will first ensure health care for pregnant women and neonates and, as resources permit, gradually add successive health interventions of proven effectiveness to improve Haiti's health system.

The earthquake which hit Haiti on January 12, 2010 had terrible consequences for the Haitian society and for the Haitian health sector. 60% of the Haitian state infrastructure was destroyed (including the MSPP building) as well as over 50 health institutions. Losses and damage in the health sector have exceeded 200% of annual expenditure in health from all sources. However, the governmental decision to provide the population with free health care over several months following the earthquake, presented an opportunity to pursue a more ambitious SOG project.

In 2010, the SOG project integrated new health facilities and has expanded from 43 to 63 participating institutions. Since the beginning of the project in 2008, more than 70,000 women and their newborns have had access to skilled care during the pregnancy, the delivery and the postnatal period. Institutional deliveries have increased by 66% in 69% of the health facilities offering free obstetrical care and a better response has been given to the obstetrical emergencies as shown by the increase of the C-section rate to 10%, compared to the 3 % national average rate mentioned in the IV Mortality, Morbidity and Services Survey (EMMUS IV - Enquête Mortalité, Morbidité et Utilisation des Services) carried out in 2005 and 2006.

PAHO/WHO continues to use the Perinatal Information System (SIP per its acronym in Spanish), which is implemented in collaboration with the Latin American Center for Perinatology, a PAHO/WHO Specialized Center to gather and process data related to the SOG project. SIP also functions as a surveillance and monitoring tool for the SOG project.

Given the positive results of the SOG, PAHO/WHO has since supported the MSPP to launch an expansion of the SOG project, providing free health care services to children under the age of 5: the Free Child Care project (SIG). The combined SOG/SIG project will include the following objectives:

- ensure a structured continuity to the free health care strategy adopted by the MSPP after the earthquake
- help some participating public and private health institutions with cost recovery, reaching a more balanced financial state after providing free services for several months
- strengthen the leadership capacity of the national health authority regarding health care coverage and health financing for highly vulnerable populations

PAHO/WHO has mobilized US\$ 9 million for the implementation of the SOG project, and another US\$ 4.2 million for the implementation of the SIG project, with an additional US\$ 20 million dedicated to the integration of the two over the next three years. Funds have been provided by CIDA, the World Bank and the European Union for the SOG, and the U.S. Agency for International Development and the Japanese Government for the SIG.

Activities carried out:

Free Obstetrical Care Project (SOG):

- The 2nd phase of the SOG was initiated, providing a more comprehensive service package to participants including immunization, nutrition, Preventing Mother to Child Transmission (PMTCT) of HIV and congenital syphilis, neonatal care and family planning.



FREE OBSTETRIC CARE PROJECT / FREE CHILD CARE PROJECT PROJET DES SOINS OBSTETRIQUES GRATUITS (SOG) / PROJET DES SOINS INFANTILES GRATUITS (SIG)



Activities carried out: (continued)

- The personnel of the participating health facilities were provided with training to ensure the provision of high quality services. Funds were allocated for training workshops on Contraceptive Technology, Obstetrical Emergencies and Basic Neonatal Resuscitation. A Training of Trainers (TOT) on the Integrated Management of Childhood Illness (IMCI) and pediatric HIV was also organized.
- Technical and financial support has been provided to the MSPP for the revision of the Family Planning and Maternal Health protocol and for the printing of the protocol manual. Financial support was also provided for the revision of the PMTCT HIV and congenital syphilis guidelines and for the development of the National Strategic Plan for the prevention of mother to child transmission of HIV and syphilis.
- The neonatal areas of 12 health facilities, which perform the greatest number of deliveries in the country, were rehabilitated and given new equipment and supplies.
- Drugs and medical supplies needed for proper care of pregnant women and newborns were provided to the SOG facilities.
- PAHO/WHO has trained 120 health workers from 65 different institutions on key nutrition improvement actions including: promotion of breast-feeding, dietary supplements of key micronutrients including the prevention of anemia through iron-folic acid supplements; deworming; as well as referral and case management practices for cases of malnutrition among pregnant and breast-feeding women.
- In response to the cholera epidemic, training and sensitization sessions were organized for nearly 700 health personnel.
- An evaluation of the quality of the services in the Cholera Treatment Centers (CTC) and the Cholera Treatment Units (CTU) was also carried out.

Free Child Care Project (SIG):

- Thirty three health institutions (private and public ones) were invited to participate in the project. Twenty seven were finally selected across the country. Two two-month pilot projects were conducted in 2010 and a third one in January 2011.
- Operational budget support was offered to each participating health institution in the amount of US\$ 30,000 per month (on average), thus enabling them to provide free health care for children under five and people living in the Internally Displaced Populations (IDP) camps.
- Training and capacity building in health institution management was provided to a team of 23 MSPP employees to strengthen management and administration of participating health institutions.
- Over 50,000 children under the age of five had access to free health care, representing an increase of more than 50% above previous levels of attendance among pediatric patients at the participating institutions.
- Many innovations in the management and organization of pediatric services were implemented in the participating institutions to increase efficacy and efficiency.
- An instrument within the Mental Health Global Action Program used to evaluate children's neurological and mental development is being incorporated into the integrated package of services offered through the Free Obstetric and Free Child Care Projects (SIG/SOG) for children under 5 year of age.

Challenges and next steps:

- Mobilization of an additional US\$ 8 million per year to continue activities within SOG/SIG.
- Integration of SOG and SIG in order to continue advancing towards the construction of a social protection scheme in Haiti.
- Position this new integrated SIG/SOG project at the center of the health care network, reinforcing the concept of a health system based on primary health care.
- Trigger a deep transformation of Haiti's health system by implementing alternative financing methods in health with the goal of increasing access to health services for vulnerable populations and developing a sustainable social protection scheme for health (PSS – Protection Sociale en Sante) in Haiti.
- Maintain and improve the quality of care for women, neonates, and children to continue the fight of decreasing maternal and neonatal mortality.



TRAINING HUMAN RESOURCES FOR HEALTH



The challenges facing primary health care in Haiti are many: limited access to primary health care services, limited availability of essential medicines and supplies in health centers, high cost for services, lack of trained health professionals, among others.

With only 2.5 doctors per 10,000 inhabitants for Haiti's population of approximately 9.7 million people, and only 26% of births being attended by a skilled health professional, the lack of trained health professionals in Haiti has ramifications throughout the health care system, particularly in primary care health services.

Because of poor primary care services, Haitians turn directly to the second and third levels of health care (hospitals and more specialized centers), which are then overwhelmed by the large demand. This situation, which existed well before the January 2010 earthquake, was only amplified by the disaster and This led to the arrival of vast numbers of NGOs into the health sector and a governmental decision to provide free health care in all public health institutions for the first two to three months following the earthquake, making basic health care services widely accessible to Haitians for the first time.

When the cholera outbreak that hit the country in October 2010, other weaknesses in the primary health care system emerged: a functional health network at the community level to identify the cholera cases as they occurred and appropriately guide their treatment did not exist; mechanisms for rapid dissemination of public health information, such as cholera prevention messages, health promotion activities and examples of good practices, did not exist either; and Surveillance capabilities at the community level were very weak.

To strengthen primary health care, community health promotion and community level surveillance, more trained health professionals are needed in Haiti. PAHO/WHO technical cooperation will focus on supporting the Ministry of Public Health and Population (MSPP as per its acronym in French) to adjust to the gradual withdrawal of NGOs from the health sector and the continuing cholera epidemic, by training more professionals to fill in the gaps. PAHO/WHO has mobilized US\$ 600,000 for human resources related activities.

Activities carried out:

- On March 27, 2010, a tripartite cooperation agreement was signed between the governments of Brazil, Cuba and Haiti, which included a key component on Human Resources Training (Formation des Ressources Humaines). PAHO/WHO will be supporting the cooperation agreement in the area of human resources for health, epidemiological surveillance and vaccination.
- At the request of the MSPP, a workshop to identify and prioritize the human resource needs of the health sector was completed in June 2010. Training of more first level, or primary care, health workers was concluded to be the greatest need, and called for the training of more multi-skilled community health workers, nursing assistants as well as public health officers.
- Definition of a training curriculum for Multi-skilled Community Health Workers (Agent de Santé Communautaire Polyvalents – ASCP) based on Haitian and Brazilian experiences.
- Workshop held to present the Brazilian experience of training Brazilian, Cuban and Haitian teachers in Fortaleza, Brazil.
- Definition and validation of selection criteria for individuals chosen to participate in the ASCP training and the selection of the first class of 60 participants was completed, from the city of Carrefour.
- ASCP training is currently in progress (as of April 2011) and the ASCP students are being integrated into community mobilization efforts in the fight against cholera in the city of Carrefour.

Challenges and next steps:

- Complete the training of the first ASCP cohort of 60 and organize the professional integration of the ASCP into the health care system of the commune of Carrefour.
- Evaluate, revise and revalidate the training curriculum for the ASCP program and recruit and train trainers for the future cohorts of ASCPs in order to replicate the ASCP selection and training procedure in other areas, with the goal of training 2,000 ASCPs.
- Define the curriculum for community nursing assistants, identify trainers for the nursing assistants and begin training, and later develop a mechanism for integration of the trained community nursing assistants into the Haitian public health system.
- Integrate and combine the training process for health technicians and public health officers and begin public health officer training, and later develop a similar system for insertion of the trainees into the public health system.
- Train the first class of biomedical technicians for the maintenance of equipment.
- Support the training of medical transport teams.



ORAL HEALTH



Even before the January 12th, 2010 earthquake, oral health has been a persistent public health problem in Haiti. Haiti had the lowest ratio of dentists to population in the Western Hemisphere according to the 1999 national oral health survey, at only 0.12 dentists per 10,000 inhabitants. Dental extractions were the most common procedures performed in public health centers and even those were difficult to obtain. It has also been difficult for health institutions to acquire the necessary dental supplies; and it has always been difficult if not impossible for most Haitians to pay for necessary oral health care procedures.

Since December 2010, PAHO/WHO has reinforced its Country Office with an oral health consultant for the development of a strategy to integrate oral health into the primary health care system.

In addition, PAHO/WHO has worked to develop institutional partnerships to meet the oral health needs in Haiti. Professional associations, dental school associations, dental research agencies, public health associations and organizations, and trade alliances throughout the Americas were mobilized to participate in the process.

As a result, the Oral Health of Haiti (OHOH) coalition was created, spearheaded by PAHO/WHO, with the objective of working closely with the MSPP and the University of Haiti to determine a viable path for rebuilding and strengthening the oral health infrastructure in the country. The coalition is comprised of representatives from: Haitian Dental Association, University of Haiti Dental School, Latin American Dental Federation (FOLA), FDI World Dental Federation, Pan American Health and Education Foundation, American Dental Education Association, American Dental Association, International and American Associations for Dental Research, US Public Health Service, National Institute of Dental and Craniofacial Research, Centers for Disease Control and Prevention, National Dental Association, Hispanic Dental Association, Alpha Omega Foundation, Tufts University and many university dental schools.

Activities carried out:

Post-Disaster Oral Health Activities:

- Participation in Health Cluster activities to incorporate oral health into the rehabilitation of the Haitian public health system and development of Post-Disaster Guidelines for Oral Health.
- PAHO/WHO, together with the MSPP, conducted in-person assessments of 11 public dental clinics in the earthquake-affected areas in the West Department. Data was gathered regarding infrastructure, human resources, capacity for dental services, financial resources, and oral health policy and planning. This information served as the basis for planning and for mobilizing necessary resources and donations.
- The OHOH mobilized resources and in-kind donations of dental supplies valued at US\$ 100,000, 27 dental chairs, and \$27,000 in cash. The donations were shipped to 18 institutions (11 public) in Port-au-Prince and the surrounding areas after the earthquake. Supplies were provided for: infection control, dental restorations, dental cleanings and consultations (for prevention) and dental surgeries.
- GPS data was collected for each institution and will be used to generate a map of dental facilities in the West Department. This activity will eventually be scaled up to the national level for a more complete evaluation of the national oral health system.

In response to the cholera outbreak:

- Guidelines were developed to orient dentists on controlling cholera transmission in dental clinics and to encourage their participation in the fight against cholera.

Challenges and next steps:

- Working with the MSPP to develop a National Strategic Plan for Oral Health.
- Incorporating the provision of oral health care into the integrated package of services being offered through the Free Obstetric Care (SOG, per its acronym in French) and Free Pediatric Care (SIG, per its acronym in French) Projects.
- Organizing training-of-trainers workshops for basic community oral health care delivery.
- Translation and adaptation of an Integrated Management of Childhood Illness (IMCI) Oral Health Module into French.



Psychosocial rehabilitation activities at community level

MENTAL HEALTH



Even prior to the devastating earthquake, the need for strengthened mental health and psychological support across Haiti was prevalent. With the earthquake that need was multiplied and magnified. It is estimated that the prevalence of people suffering from mental and psychological disorders has increased. Public mental health services are restricted to the tertiary care level; they are also centralized and concentrated in two main facilities: the Centre de Psychiatrie Mars & Kline, which is located in Port au Prince, and the psychiatric hospital, Défilée de Beudet, which is located outside of the capital. Together, both hospitals have a capacity of 180 psychiatric beds and both offer external consultation services as well. Mental health services have not been integrated into the public health system. Instead, all mental health ambulatory services as well as the community approach rely on national and international NGOs.

Immediately after the earthquake, a Cross-Cluster Working Group on Mental Health and Psychological Support (MHPS) was created, coordinated by UNICEF and IOM but with active participation and leadership from PAHO/WHO in support of the MSPP. Following the earthquake, UNICEF, IOM, International Medical Corps, Partners in Health, Médecins du Monde (MDM) and Médecins sans Frontières (MSF) were all providing mental health services – it was estimated that at one point over 110 different organizations were providing mental health care.

More than a year after the earthquake, many NGOs have left, while the need for a sustainable mental health care program in Haiti persists. PAHO/WHO continues to work with the MSPP to develop a National Mental Health Policy and a National Mental Health Strategic Plan and will provide support for the mobilization of resources to implement it.

Activities carried out:

Post-earthquake activities:

- PAHO/WHO strengthened its technical cooperation by recruiting a mental health consultant to the Country Office in Haiti, with back-stopping from a PAHO/WHO Subregional Advisor on Mental Health.
- PAHO/WHO participated in and was one of the leading agencies in the MHPSS Cross-Cluster Working Group, which, working together with the MSPP, established a 3-month work plan in April.
- PAHO/WHO supported the MSPP in the development of its first National Integrated and Inter-organizational Plan on Psychological Emergencies, Mental Health and Psychological Support, which focused on the decentralization of mental health care and the integration of mental health services at the primary health care level and in main public hospitals.
- A mental health team from the Dominican Republic was deployed to the General Hospital of Jimaní, along the Haiti/DR border, consisting of a psychiatrist, 4 psychologists and 3 specialized nurses. A plan was developed to provide psychosocial and mental health support to patients in 5 other institutions in the border region.

Regular Technical Cooperation Program:

- PAHO/WHO together with the MSPP completed an evaluation of the mental health system in Haiti, using the WHO Assessment Instrument for Mental Health Systems (WHO-AIMS).
- PAHO/WHO is working with the MSPP in its development of a National Plan for mental health, following the guidelines established by the "Strategy and Plan of Action on Mental Health" for the Region of the Americas.
- PAHO/WHO staff attended a presentation on the Mental Health Global Action Program (MHGAP). Together with the MSPP the decision has been made to focus on the priorities of depression and developmental disorders in Haiti.
- An instrument within the MHGAP used to evaluate children's mental development is being incorporated into the integrated package of services offered through the Free Obstetric and Free Child Care Projects (SIG/SOG) for children under 5 year of age.
- A proposal of a national essential psychotropic drug list is in its final phase.
- In fact, the mental health component has proven to be of added value during the cholera emergency response; able to be coordinated with health, health promotion, social mobilization and risk communication sectors.



Psychosocial rehabilitation activities
at community level

MENTAL HEALTH



Challenges and next steps:

- Review and analysis of the results of the WHO-AIMS in Haiti.
- Work with the MSPP to develop a national mental health plan that will work to decentralize mental health services and to incorporate mental health into primary health care services.
- Work with the MSPP and mobilizing funds to establish 18 community mental health teams (54 health professionals and their training) each team consisting of: 1 doctor or psychiatrist, 1 psychologist and 1 nurse.
- Training of trainers on the priorities and modules found in the MHGAP and subsequently training of primary health care workers on the MHGAP, especially those regarding depression and developmental disorders.
- Development and implementation of a course on human rights and mental health, for professionals working in the psychiatric hospitals.
- A study will be conducted of psychiatric hospital patients to investigate opportunities for rehabilitation and societal reintegration.
- Creation of a database for basic information regarding psychiatric hospital activities.
- Mobilization of more funds for mental health related activities will be needed in 2011.

ENVIRONMENTAL HEALTH



Haiti is one of the countries with the highest levels of environmental degradation in the world. The lack of a healthy environment has had severe social, economic and health consequences for the Haitian population over the years. In addition, the degradation of watersheds and the high rates of deforestation leave the population particularly vulnerable to flooding.

Insufficient water and sanitation and poor water quality present major public health risks in Haiti. PAHO/WHO estimates that diarrhea accounted for 16% of under-5 deaths in Haiti before the earthquake. 50% of the rural population and 33% of the urban population do not have access to an improved water source. 84% of the rural population and 62% of the urban population do not have improved sanitation facilities. 75% of the demand for energy is satisfied by wood or charcoal. Less than 10% of the solid waste in Port-au-Prince is collected.

The earthquake of January 12, 2010 damaged Haiti's already weak water and sanitation systems and created enormous challenges with thousands of people forced into temporary settlements. After the earthquake, water quality, sanitation and hospital waste management quickly became priorities due to the heavy load of medical activities and surgeries. In addition to leading the Health Cluster, PAHO/WHO also participated in the Water, Sanitation and Hygiene Cluster (WASH) to improve water quality and promote proper health care waste management.

On October 15, 2010, the first cases of suspected cholera were reported in Haiti by the Cuban Medical Brigade working in the community of Mirebalais in the Center Department. On October 22nd it was confirmed that it was cholera, when more cases were reported in several communities in the Artibonite River valley. This was the first time epidemic cholera had reached the island in over 100 years.

As of April 15, 2011, 285,239 cases of cholera had been reported, with 4,865 deaths. 1,864 of the reported deaths have occurred in the communities (as opposed to health institutions). The overall mortality rate is 1.7% and the hospital mortality rate is 2.0%. The mortality rate was close to 5% at the onset of the outbreak, when the country was beginning to organize its response. Fortunately, those numbers have gone down as a result of a large-scale and coordinated effort among health partners collaborating in the field.

Despite the considerably high number of deaths, given the historical contextual factors of poverty, lack of clean water and limited health services, among others in Haiti, the coordinated response to the cholera epidemic is saving thousands of lives. PAHO/WHO and partners have worked together to form an integrated and comprehensive approach, from creating alert and response teams in each department for improved surveillance to mobilizing thousands of community health promoters with cholera prevention messages to monitoring water quality and waste disposal in health facilities.

PAHO/WHO and partners are intensifying efforts at improving environmental health in Haiti, not only for the prevention of further cholera outbreaks, but for a healthier and more sustainable future for Haiti.

Activities carried out:

In the aftermath of the earthquake:

- PAHO/WHO and WASH Cluster partners have worked with the National Directorate of Water Supply and Sanitation (DINEPA) to reach over 1.72 million Haitians affected by the earthquake. Cluster partners installed 15,309 latrines and a total of 327,300 hygiene kits were delivered and 3,500 hygiene promoters and community mobilizers were trained.
- PAHO/WHO put in place a Health Care Waste collection system for the main 24 hospitals in Port-au-Prince and paid for the construction of a discharge pit within the main dump. The cholera epidemic has brought new challenges to the implementation of the plan, and the issue of transport of infectious waste has led to a reanalysis of the best solutions for Haiti.
- PAHO/WHO supported the Ministry of Public Work and Telecommunication (MTPTC) and DINEPA with chlorination chemicals for the water distributed to temporary camps (each day 4.3 million liters of clean water were being delivered to affected communities and health care institutions by 50 water tankers). In addition PAHO/WHO carried out water quality analysis at the filling stations, jointly with Technischen Hilfswerks (THW), a German NGO and the Health Cluster.
- PAHO/WHO provided laboratory assistance for the Water Society in Port-au-Prince to re-start water quality control activities.
- As part of WASH Cluster activities, United Nations Environmental Program (UNEP), International Organization for Migration (IOM) and PAHO/WHO have been working with the Haitian Government on a joint strategy to develop the liquefied oil gas sector with private companies and to establish new biogas production technologies to improve energy use in households.



ENVIRONMENTAL HEALTH



Activities carried out: (continued)

- Water quality improvements were made in health institutions along the border, including complete replacement of tubing in some institutions, installing sinks and semi-permanent latrines in temporary settlements and temporary health institutions, the establishment of a chlorine distribution route to 29 hospitals along the border from a chlorine generator provided by PAHO/WHO, and the implementation of a water quality surveillance system.

Regular Technical Cooperation Program:

- Water quality: PAHO/WHO is working with DINEPA, the Ministry of Health (MSPP as per its acronym in French) and the Direction for Health Promotion and Environmental Protection (DPSPE) on water quality guidelines including a water safety plan. PAHO/WHO is also conducting water quality analysis at Hospitals in Port-au-Prince.
- Sanitation: PAHO/WHO is collaborating with DINEPA and UNICEF on sanitation issues including the safe disposal of excreta, the construction of excreta disposal lagoons, and the development and implementation of excreta management protocols, including the disinfection of removal trucks.
- Health Care Waste (HCW):
 - PAHO/WHO is collaborating with the MSPP/DPSPE, MSPP/Direction of Pharmacy and Medicines (DPM,) MSPP/Direction of Health Services Organization (DOSS), UNICEF, and UNFPA in the triage, collection and safe disposal of HCW. PAHO/WHO sits on the National Committee for the Security of Injections and Management of Waste (CNSI), and is supporting the MSPP in the implementation of the National Policy on the Security of Injections and Waste Management (SIGD).
 - PAHO/WHO has provided public health institutions and NGOs with over 20,000 plastic bags for safe disposal of medical waste and over 1,000 sharps containers for disposal of needles and sharp items.
- Workers' health:
 - Training of healthcare workers on occupational health and infection control principles.
 - Provision of personal protective equipment (gowns, gloves, surgical masks) to healthcare workers.
- Social mobilization, communication and health promotion: PAHO/WHO is supporting the MSPP in the updating of the Health Promotion Strategic Plan. In addition, core documents and information material for the prevention of cholera were developed.
- Vector borne diseases: PAHO/WHO distributed 20,000 mosquito nets in 2010 to health clinics in the earthquake affected areas to be used in clinics and also for patients upon discharge, with emphasis on pregnant women and women with children under 5.
- Resources: PAHO/WHO has mobilized over US\$1.7 million for environmental health activities in Haiti, with another estimated US\$ 200,000 pending. Resources are being contributed from the following partners: Spanish Agency of International Development Cooperation, Canadian International Development Agency, European Commission's Humanitarian Aid Department, UK Department for International Development, United Nations Central Emergency Response Fund, U.S. Agency for International Development and its Office of Foreign Disaster Assistance, as well as the governments of Monaco, Japan and Finland.

Challenges and next steps:

- Water quality: PAHO/WHO will continue to assist in water quality standard setting and in the identification of long term solutions for laboratory analysis. Additional funding is necessary to carry out activities in this field.
- PAHO/WHO will also support the improvement in water quality of water networks in different regions in order to have more long term solutions to the delivery of potable water.
- Health Care Waste: development and approval of a National Plan for HCW and implementation of a national plan for injection security and management of HCW with adjustments for non-incinerable products. PAHO/WHO will assist DINEPA and MSPP in finding medium and long term solutions to the HCW management problems. In addition PAHO/WHO will support the UNFPA project on Reproductive Health in setting up appropriate health care waste management systems in the departments identified.
- Sanitation: definition of a final discharge site (Truitier, Titanyen or other and 9 departmental sites). Implement excreta management in health institutions.
- Vector Control: PAHO/WHO is assisting the National Malaria Control Program in Hygiene Promotion activities related to vector control.
- Mobilize resources to continue environmental health related activities in 2011.



DISCAPACIDAD Y REHABILITACIÓN



El número de personas con discapacidad en Haití antes del terremoto se estimaba aproximadamente en unas 800.000 personas, lo que representa un 10% de la población. Después del terremoto, se estima que el número total de personas con discapacidades relacionadas con el desastre pudo haber aumentado a 1,1 millones (1).

Inmediatamente después del terremoto se estableció un grupo de trabajo sobre Lesión, Discapacidad y Rehabilitación (IRDWG por sus siglas en inglés) en el marco del Cluster de Salud de las Naciones Unidas e independiente del Grupo de Trabajo Inter Clusters sobre Salud Mental y Apoyo Psicológico (véase hoja informativa correspondiente). El Ministerio de Salud Pública y de la Población de Haití (MSPP- por sus siglas en francés) y la Secretaría de Estado para la Integración de Personas con Discapacidad (SEIPH) tienen la responsabilidad primaria en este tema dentro de IRDWG y cuentan con el apoyo de las Brigadas Médicas Cubanas y de *Handicap International*.

Actividades desarrolladas:

Tras el terremoto en Haití la Organización Panamericana de la Salud/Organización Mundial de la Salud (OPS/OMS) desarrolló actividades en las siguientes áreas:

Política y estrategia

- Se proporcionó apoyo a SEIPH y MSPP para desarrollar un plan estratégico nacional de rehabilitación.
- Participación activa en el IRDWG a través del punto focal de discapacidad de la oficina de la OPS/OMS en Haití.
- Cooperación con la Secretaría Técnica de Discapacidad de la Organización de Estados Americanos (OEA) para coordinar las actividades de rehabilitación.

Recopilación y difusión de información

- Evaluación rápida para determinar las necesidades de atención traumatológica, de rehabilitación y de recursos disponibles.
- En colaboración con el MSPP y IRDWG se identificaron las necesidades de dispositivos de asistencia, incluyendo ortesis y prótesis, así como el desarrollo de estrategias para su distribución.
- Levantamiento de información sobre los servicios de rehabilitación existentes (incluyendo talleres de ortesis y prótesis) y de recursos humanos disponibles.
- Se proporcionó a los prestadores de servicios manuales de rehabilitación y otras publicaciones pertinentes de la OMS para apoyar la realización de intervenciones apropiadas.
- Promoción de normas de accesibilidad universal en los esfuerzos de reconstrucción.

Prestación de servicios

- Participación activa, en colaboración con otros organismos como la OEA y la Unión Europea, en la respuesta humanitaria dirigida a personas que tenían discapacidades previas o que resultaron lesionados como consecuencia del terremoto.
- Promoción y organización de grupos de profesionales voluntarios (por ejemplo, fisiatras, fisioterapeutas y terapeutas ocupacionales) de Nicaragua, Argentina, Costa Rica, Panamá, Ecuador, Brasil, EE.UU., República Dominicana en la prestación de atención en rehabilitación a las personas durante la fase aguda de la lesión.
- Se brindó apoyo para la atención de personas con lesiones graves, como resultado del terremoto, en los hospitales dominicanos, garantizando la recepción del tratamiento médico ortopédico y de rehabilitación.
- Colaboración con el Ministerio de Salud Dominicano para la sensibilización en la atención de las víctimas del terremoto en la zona fronteriza y facilitar la provisión de atención en rehabilitación en Fond Parisen (Haití) y Jimaní (República Dominicana).
- El suministro directo de materias primas y dispositivos para la confección de ortesis y prótesis al taller gestionado por *Handicap International*.

Capacitación

- Se brindó capacitación al personal de salud local (en Haití y la República Dominicana) sobre Rehabilitación de Base Comunitaria (RBC) en el marco del proyecto de USAID de fortalecimiento de los servicios de rehabilitación.
- Organización de cursos de capacitación sobre actividades básicas de rehabilitación para el personal local de salud en Haití y la República Dominicana.
- Capacitación a grupos de la sociedad civil sobre derechos humanos y discapacidad, actividad realizada juntamente con equipo de salud mental.



DISCAPACIDAD Y REHABILITACIÓN



Retos y pasos siguientes:

- En abril del 2010 habían más de 50 organizaciones que prestaban servicios de rehabilitación incluidos los hospitales públicos y privados, la brigada cubana y un gran número de organizaciones no gubernamentales. Este número se ha reducido considerablemente. Han habido continuos desafíos en relación a la coordinación entre estos organismos, planificación estratégica limitada y apoyo financiero insuficiente para la rehabilitación. Se necesitan reuniones continuas de coordinación para apoyar la colaboración y la coordinación de las actividades entre las partes interesadas.
- El IRDWG requiere un apoyo continuo para: monitorear las necesidades de rehabilitación no atendidas; mantener un directorio de servicios de rehabilitación; funcionar como una fuente central de información sobre discapacidad y rehabilitación, y proporcionar un foro para individuos y organizaciones involucradas en temas relacionados con la discapacidad.
- El MSPP requiere apoyo continuo para fortalecer su Unidad Técnica de Rehabilitación, también el SEIPH para fortalecer la coordinación de los programas intersectoriales.
- Se debe reforzar el componente de rehabilitación en todos los niveles del sistema de atención de salud (atención primaria, secundaria, terciaria y de la comunidad) por medio de la formalización de redes de referencia, apoyo a la implementación de la RBC para garantizar la prestación de servicios de rehabilitación básica a nivel de la comunidad y desarrollar e implementar programas acreditados de capacitación para el personal de rehabilitación y de salud y otras personas relevantes.
- Las personas con discapacidades rara vez están incluidas en las iniciativas de desarrollo establecidas lo que limita su participación en una variedad de oportunidades que tienen probabilidad de aumentar su capacidad por ejemplo, las oportunidades de subsistencia. Deben darse medidas para incluir a personas con discapacidades en todas las iniciativas de desarrollo establecidas. La finalización del plan nacional de discapacidad es una prioridad para dar la orientación estratégica general a estos esfuerzos.
- Pocas construcciones y planes de reconstrucción están considerando las necesidades de accesibilidad de las personas con discapacidades. Se requieren promoción, apoyo técnico y supervisión para ejecutar las normas en la accesibilidad.

Referencia:

1. Atlas Alliance, Fact sheet: Disability in conflicts and emergencies (<http://www.atlas-alliansen.no/Faktaark-html-versjon/Disability-in-Conflicts-and-Emergencies>, accessed 30 April, 2011)