



Earthquake in Haiti

The Response of the

Pan American Health Organization / World Health Organization

Update March 3, 2010



Overview

The 12 January earthquake caused massive loss of life and countless injuries that required surgery and trauma management. The latest official figures report over 217,000 deaths and more than 300,000 injured. The area between Port-au-Prince and Leogane and a 25-km radius around the epicenter were directly affected, including Jacmel to a certain degree.

Almost two million people lost their homes. More than 500,000 have sought shelter other areas of Haiti including Miragoane, Petit Goave, Grande Goave, Cap Haitian, Les Cayes and Gonaives.

Many victims have become disabled and will require specialized care. Those left homeless have gathered in improvised shelters or public spaces, creating overcrowding and poor sanitary conditions, which can lead to water-, air- and vector-borne diseases and increasing the potential for epidemic diseases. People were affected emotionally and will require mental health and psychosocial support.



The health system suffered severe damage to its infrastructure and organization. In addition to many hospitals and health centers that were damaged, the Ministry of Health building collapsed and many staff lost their lives. Also, a number of health personnel died in the event. Although around 75% of health staff are now reporting to work, many are not present because they have lost their homes or must take care of their families. This situation has compromised the ability of Haiti's health system to respond to current needs.

Before the earthquake, there were 594 primary health care centers (with or without beds); 30 reference communal hospitals (30-60 beds each); six centers for integrated diagnostics, 10 department hospitals (with 150 beds each); and three university hospitals (1,500 beds in total). The total extent of the damage to Haiti's health sector is still unknown. Many hospitals have sustained damage but continue to function, often with the help of NGOs. Initial assessments indicate that there are some 49 health facilities with structural damage that has rendered them unusable. Many NGOs and international medical teams are providing a great number of health services.

PAHO/WHO in Haiti

PAHO/WHO's long-term mission in Haiti is to provide technical cooperation that promotes equity in health, combats disease and improves the quality of life for the country's people. The team of over 50 PAHO/WHO staff who were already in Haiti was immediately strengthened with 30 international experts in fields including disaster management,



epidemiology, mental health, primary health care mobile units, hospital care and referrals, pharmacy, logistics, communication, among others.

In addition to the team present in Port-au-Prince, on the third day after the earthquake, PAHO/WHO sent a team to Jimaní, in the Dominican Republic at the border with Haiti. This field office acted as a logistics hub and also supported local health facilities, which received over 3,000 patients in the first few days.

A medical officer from PAHO/WHO supported triage efforts in hospitals, and Dominican medical brigades were sent to Jimaní to help refer patients to hospitals in Santo Domingo. PAHO set up a coordination mechanism with the health staff of the 'Love a Child' Hospital, run by Harvard University and World Vision, to join forces in the treatment of patients. A small pharmacy was set up to serve the hospitals.

The field office in Jimaní has also served as a logistical base to identify and track the enormous amount of medical supplies being sent to Haiti. A two-person team used LSS/SUMA, the humanitarian supply management system developed by PAHO/WHO, to sort through tons of medical supplies that entered Haiti via the Dominican Republic, to ensure that urgently needed items reach disaster victims who needed them.

On the other side of the border, more than 10,000 people sought medical attention in the locality of Fond Parisien. The existing hospital was quickly overwhelmed with patients. PAHO/WHO provided equipment and beds to enlarge its capacity.



Update on Activities

1. Health cluster/sector coordination

1.1 Interagency collaboration and partnerships

WHO (PAHO in the Americas) is charged with coordinating the health cluster in major emergencies. In Haiti, more than 314 health partners work together under the Health Cluster. They include local organizations, international NGOs and bilateral teams who support government efforts to treat the injured and provide health services in the affected areas.

This tremendous influx of human resources and supplies creates an enormous need for coordination. The Cluster



began operating four days after the event, when a Health Cluster Coordinator was designated to help Haitian health authorities coordinate the international health relief effort, carry out an initial evaluation of needs, and map out the capacities and activities of NGOs, governments and UN agencies to ensure that the health response would be as effective as possible.

Within the first days, OCHA had established a joint website (www.oneresponse.info), and health partners populated the site with useful data, including background information on the health situation in the country before the earthquake; location of hospitals and health centers; announcements from the Ministry of Health; bulletins on activities carried out by health partners; information on epidemiological surveillance and health guidelines for best practices.

To ensure effectiveness, sub-groups were created to develop strategies and protocols to guide the response on the following areas: 1) primary health care and mobile clinics; 2) hospitals and trauma care; 3) health information management; 4) mental health and psychosocial support; 5) disabilities; 6) medical supplies and 7) early warning of communicable diseases.

The Health Cluster has also been coordinating preparedness for the upcoming rainy and hurricane seasons, which are expected to increase health risks, especially in temporary shelters where nearly two million people are living.

PAHO/WHO also participates in the Water, Sanitation and Hygiene Cluster and the Nutrition and Logistics Clusters.

1.2 Re-activation of the Health Information System

Haiti's Health Information System, which was already weak before the earthquake, was disrupted by the catastrophe. The Ministry of Public Health and Population (MSPP for its French abbreviation) lost 200 staff when its building collapsed; many health staff at hospitals and health centers were affected, and a number of them left their posts.

The MSPP asked for support from PAHO/WHO and other partners including UNFPA, UNICEF, U.S. Centers for Disease Control and Prevention (CDC), and the Clinton Foundation to establish a Health Information Situation Room as the basis for a system for collecting and managing health information. This information should provide an overview of the needs, epidemic trends and services available to enable the MSPP to take evidence-based decisions.



A simple and practical system is being developed around the following information areas: human resources for health, financial resources, provision of health services and epidemiological information. A single form for data collection is being developed for use in all health facilities and in settlements for the displaced.

Post-Disaster Needs Assessment for Reconstruction

A Post-Disaster Needs Assessment (PNDA) was initiated on 18 February by the United Nations, the World Bank, the European Commission and the Inter-American Development Bank, at the request of the Prime Minister of Haiti. This group is liaising with other national and international stakeholders and government-led teams that are assessing reconstruction needs.

The health component is being led by the MSPP and a team of Haitian officials and experts. A four-member WHO/PAHO team is supporting the MSPP in this exercise, together with UNICEF, UNFPA, ILO, World Bank, USAID, Management Sciences for Health (MSH), the Clinton Foundation, NGOs and the private sector. The various teams are expected to complete their work March. The report will be presented to a donor conference that will take place in New York on 31 March.

For the health partners, the PNDA is viewed not only as the opportunity to reconstruct damaged health infrastructure but also to 'build back better' the health system with a view toward improving access to health services.

1.3 Civil-military collaboration

In the aftermath of the earthquake, one of the challenges faced by the health sector was the distribution of drugs and medical supplies to health facilities in need. The Haiti Program for Essential Medicines (PROMESS), managed by PAHO/WHO, has been in charge of procuring and distributing medical supplies for the health system in Haiti for the past 18 years.



The warehouse and offices of PROMESS were spared by the earthquake, and in the following days, an even greater number of health supplies were given to NGOs and health facilities for distribution. However, many hospitals and health centers could not contact PROMESS to get medicines.

Several days after the earthquake, the U.S. Army offered to support PROMESS in the distribution of drugs and supplies. The collaboration revolved around four areas:

- The U.S. Army provided 25 medical logisticians and pharmacists who, for several weeks, worked throughout the night to update the inventory of PROMESS.
- Through USAID, PROMESS received help to organize more effectively the supply chain management of medical items to be able to address the growing requests for drugs and supplies with the speed that the emergency required.
- A group from the JFSOCC visited hospitals and health centers in Cape Haitien, Saint Louis du Nord, and Gros Morneto to collect a list of medicines and supplies needed, then prepared the requests for PROMESS and delivered them to the hospitals within six hours.
- U.S. forces also provided engineering support to clear the rubble around the PROMESS facilities to create space for storage of containers. In addition, they provided 24/7 security for the premises for over a month, until new walls could be erected.

2. Health service delivery

2.1 Access to health care services

Access to health care has become a challenge for many Haitians. Initial assessments show that the earthquake has hit 49 hospitals and health centers, mainly in the departments of Ouest and Nippes. Structural damage has rendered these facilities unusable, and limited services are being provided in adjacent tents and temporary structures. People who fled the capital to other departments put additional pressure on health facilities, particularly in areas such as Miragoane, Petit Goave, Grande Goave, Cape Haitian, Les Cayes, Gonaives and along the border with the Dominican Republic.

PAHO/WHO is supporting the MSPP as it takes the lead in addressing the health needs of the population, especially those affected by the earthquake. A dataset of existing facilities in Haiti, including geographical location and unique identifiers based on codes generated by the MSPP has been developed by PAHO/WHO. Structural engineers



are being fielded to Haiti to evaluate the structural status of health facilities.

In addition, a 'who-does-what-where' database has also been compiled to provide an overview of health services available to the affected population. These tools have been shared with partners in order to improve coordination of health services, including existing facilities as well as field hospitals that have been brought in since the earthquake.

PAHO/WHO and other health partners are supporting the MSPP in the development of a center to coordinate the referral of patients from health centers to hospitals and other specialized institutions, taking into account the existing capacities.

Before the earthquake more than 40% of the population had no access to health care, either because no health facilities were available nearby or, as in most cases, because of the high fees charged for those health services. Following the earthquake two developments have temporarily increased access to health services for the population: 1) the arrival of many foreign medical teams and 2) the MSPP-established, free-of-charge health services as part of the humanitarian response. However, the situation may not be sustainable in the medium and longer term. Access to health services will become an even bigger problem in the coming months when international NGOs that are currently providing health services leave the country.

PAHO/WHO is working with the MSPP and health partners to define a new National Health Plan to 'build back better' the health system, with the goal of ensuring universal access to primary health care services.

Mobile health units

A system of mobile health units has been put in place to facilitate access to health care for displaced Haitians.

PAHO/WHO is helping the MSPP coordinate the work of international and national agencies and NGOs that have brought in health personnel and equipment to provide primary health care services in the affected areas.

A number of international agencies are providing mobile health services, including the Cuban Medical Brigade, Partners in Health, Aide Médical International, Merlin, Médecins Sans Frontières, International Federation of the Red Cross and its National Societies, and Médecins du Monde, among others.

PAHO/WHO is advising the MSPP and health partners on ways to implement the Minimum Health Care Service Package (MSP) to be delivered in those health units. The package requires the delivery of health services according to international standards for maternal and child health, vaccination, treatment and control of communicable diseases, management of chronic diseases, HIV/AIDS and tuberculosis, detection and treatment of malnutrition, psychosocial support and mental health, promotion of hygiene and healthy practices, etc.



Blood banks

The MSPP National Blood Safety Program was created to establish standards for safe blood transfusions, increase voluntary blood donations and facilitate access to safe blood for patients. In the past five years blood collection rose by 250%, the number of blood units increased from 9,000 to 22,000 and voluntary blood donations went from 4.7% to 70%. The NBSPP hoped to reach the goal of 100% voluntary donations by 2010, but their efforts have been seriously hampered by the earthquake's destruction of the building housing the National Center for Transfusions and the NBSPP building itself.

For the first eight days after the earthquake, no blood was available for transfusions. PAHO/WHO played a critical role in coordinating and distributing blood donations from other countries, and in six weeks, 2,500 units were received and distributed to hospitals in Port-au-Prince and the metropolitan area. International donations of blood will still be needed for several months until the system is fully re-established. PAHO/WHO is now working with the MSPP and other partners to seek funds and international support to build new premises for the National Center for Transfusions.



2.2 Access to drugs and medical supplies

The availability of drugs and medical supplies in health facilities was already poor before the earthquake. The disaster aggravated the situation, as many hospitals and other health facilities lost equipment and medical supplies while the high number of people injured and sick increased the need for additional medicines and supplies. Moreover, a large number of relief agencies rapidly used up their own stocks.

The PROMESS medical warehouse, established in 1992 to ensure access to quality medicines and supplies, has played a vital role in the earthquake response. Overseen by a management committee led by the Haitian minister of health and managed by PAHO/WHO, PROMESS has served as the main storage and distribution center for medicines and supplies that were already in-country as well as those donated as part of the relief effort.

In the aftermath of the earthquake, PROMESS made drugs and medical supplies available to all public health facilities and national and international NGOs that were providing free health services to the affected population. In the first 45 days, PROMESS distributed more than 345,000 boxes of essential medicines and supplies, including antibiotics; vaccines; drugs for mental health conditions; drugs for treatment of TB, diabetes and malaria; anaesthetics; analgesics, etc.

Thanks to a global agreement with the World Food Program (WFP) for collaboration in logistics, PAHO/WHO was able to send more than 25 metric tons of essential medicines, supplies and equipment by helicopter to hospitals and health centers in areas where health services are being overwhelmed by the needs of displaced people.

Donations of drugs

PAHO/WHO is constantly advocating for good practices in the donation of drugs in relief operations. Medicines that would not be acceptable in the donor country should not be offered to any other country. Donated drugs should come from reliable sources and should meet the quality standards of both the donor and recipient countries.

Drugs should be valid for at least one year following their arrival in Haiti. Donations should fully respect the wishes and authority of Haiti's health officials and should comply with the health policies and administrative procedures that exist in the country.

PAHO has published a guide called "Be a Better Donor: Practical Recommendations for Humanitarian Aid," which is available at www.paho.org/disasters. These and other guidelines on how to be a good donor are available in Spanish on the www.saberdonar.info website, which was developed by PAHO/WHO and partner agencies to establish standards for donation practices. PAHO/WHO monitors drug donations to make sure they comply with these guidelines.



2.3 Rehabilitation services for amputees and other trauma patients

Among the 300,000 people injured in the earthquake, more than 4,000 amputations have been performed. In addition, there are many people with other traumas, including head and spinal cord injuries. Rehabilitation services are critically important to help them recover mobility, even if partially.

Prior to the earthquake Haiti did not have a specialized rehabilitation center. Several hospitals offered rehabilitation services, however, the existing infrastructure and equipment were damaged, and some of the health personnel specialized in rehabilitative care (already scarce before the disaster) became unavailable.

Handicap International and Christoffel Blind Mission (CBM) are the chairs of the sub-group that has been created within the Health Cluster to coordinate rehabilitation activities in the relief phase. A PAHO/WHO expert in rehabilitation is part of this group and another working group set up by the MSPP to develop a national rehabilitation plan. The draft plan will be presented to national authorities in March.



PAHO/WHO is also providing technical advice to the MSPP on the integration of rehabilitation services into the health system structure. This includes training of specialized personnel (psychiatrists, occupational therapists, prosthetic and orthotic technicians, speech therapists and physiotherapists), and the provision of equipment for rehabilitation and the production of prostheses.

3. Update on Public Health Programs

3.1 Communicable disease control

The current living conditions of almost two million displaced people pose a serious risk of outbreaks of communicable and water-borne diseases, such as diarrhea, acute respiratory infections, malaria, dengue, and measles. The situation will become critical in the next weeks when the rainy season starts.

PAHO/WHO plays a critical role in the detection and control of communicable diseases in the aftermath of the earthquake. Together with partners such as the U.S. Centers for Disease Control and Prevention (CDC), the Cuban Brigades, the Canadian International Development Agency (CIDA) and MSF, PAHO/WHO supported MSPP in developing an early warning system for the detection of communicable diseases, comprising 52 sentinel sites. Health facilities, NGOs and medical brigades from Cuba and other countries (including China, Philippines and Taiwan) are providing daily information on a large number of communicable diseases with epidemic potential. Field investigations of suspected cases are conducted for the immediate notification of six diseases (measles, diphtheria, meningitis, acute hemorrhagic fever syndrome, flaccid paralysis, and rabies) reported through the sites.

In addition, the MSPP and partners recently initiated active surveillance in temporary camps, where the risk of epidemics is higher due to overcrowding and poor sanitary conditions.

Malaria and dengue

Activities that fall under the MSPP National Malaria Program (malaria and dengue) have been hard hit by a lack of funding since mid 2009. This is a concern because the upcoming rainy season will further increase the risk not only for displaced Haitians but for the entire population. PAHO/WHO is supporting the MSPP to address this situation and has helped to develop short-and medium-term emergency response plans.

Vaccine-preventable diseases

To control vaccine-preventable diseases such as measles, rubella, tetanus, whooping cough and diphtheria, PAHO/WHO, in conjunction with UNICEF, provided support to the MSPP to develop a post-disaster vaccination plan for children and adults against tetanus and diphtheria. Children under 8 are also being vaccinated against measles,



rubella, and whooping cough and are receiving vitamin A supplements. Antiparasitic drugs are also being distributed.

In the first phase, vaccination activities target an estimated 250,000 children under 8 years of age and 1.2 million persons living in temporary settlements in metropolitan Port-au-Prince and surrounding communities in the Department of l'Ouest and Jacmel in the Department of Sudest.

As of 28 February 2010, approximately 149,000 adults and children had been vaccinated. Vaccination posts are being set up in strategic points to complement the current vaccination rounds in the more than 300 settlements. Once the situation stabilizes, a second phase will include mass vaccination of all people in the affected areas, as well as a second dose of the appropriate vaccines to those who have already been vaccinated in the current round.

3.2 Maternal and neonatal health

PAHO/WHO has been carrying out a "Free Obstetric Care" project in Haiti since early 2008 to increase institutional deliveries by reducing or eliminating the financial barriers that limit the access of pregnant women to health facilities. Currently only 25% of Haitian women give birth in a health facility. Countrywide, 48 health care facilities participate in this project to provide prenatal, delivery, post-partum and neonatal care free of charge.

Since the project began, deliveries in health facilities have increased 57%, and the number of cesarean sections has increased from 3% to 10%, indicating improvement in the response to problems during delivery. Of the women participating in the project, 80% report they are satisfied, including 30% who had previously delivered at home, indicating an important behavioral change. Although



the participating health facilities are now operational, the earthquake has disrupted implementation of the project, as beneficiaries have been displaced, data has been lost and some health personnel are no longer available.

PAHO/WHO is now reactivating the project, providing additional drugs and equipment, expanding the number of participating health facilities and extending the number of services provided (vaccines, drugs, nutrition, HIV/AIDS, syphilis prevention, information on reproductive rights, family planning, etc.). Mobile clinics will be used to detect pregnancy and refer women living in temporary camps to a participating health institution.

3.3 Environmental health

The earthquake damaged Haiti's already weak power, water and sanitation systems. Insufficient and poor-quality water and sanitation present a major health risk. Diarrhea is already a major cause of the high rates of mortality among children under 5 in Haiti. PAHO/WHO estimates that diarrhea accounted for 16% of under-5 deaths in Haiti before the earthquake.

PAHO/WHO is supporting the Ministry of Public Works (MPW) with chlorination chemicals for the water distributed to temporary camps (over one million liters of water are chlorinated every day) and with laboratory assistance for the Water Society in Port-au-Prince to re-start water quality control activities.

The disposal of medical waste from hospitals and health facilities also poses an environmental risk. After the earthquake, these facilities were overwhelmed with patients, and medical waste was not disposed of properly. Proper collection of solid and medical waste is essential to controlling the spread of vectors (rodents, mosquitoes, etc.) that transmit diseases. PAHO/WHO has provided public health institutions and NGOs with 20,000 plastic bags for safe disposal of medical waste and 1,000 sharp containers for disposal of needles and other sharp items.

The situation in the camps and the upcoming rainy season will



increase the risk of malaria and dengue, as mosquito breeding is expected to increase. PAHO/WHO personnel, together with other partners, is advising the MSPP on how to improve the vector control.

3.4 Nutrition

Prior to the earthquake global malnutrition among children under 5 years of age reached 8.5% and low birth rate 2%. In the border area with the Dominican Republic, the situation is more severe: 16.8% of children under 5 are chronically malnourished, and 9.5% are born with low birth weight. Through the nutrition programs that are part of the Free Obstetric Care project, malnourished pregnant women receive food supplements and micronutrients such as vitamin A, iron and folic acid to prevent low birth weight. PAHO/WHO is also stepping up efforts to detect malnutrition and provide treatment for children under 5 years of age.



3.5 HIV/AIDS and tuberculosis

HIV/AIDS

Currently there are approximately 120,000 people living with HIV/AIDS in Haiti; 53% are women, and it is estimated that 60% of the total resided in earthquake-affected areas. Haiti is among the countries in Latin America and the Caribbean with the highest prevalence of HIV/AIDS. One decade ago, 10% of the population lived with HIV/AIDS, but the percentage was reduced to 2.2% in the last years.

The earthquake has put at risk the achievements of the last decade, and PAHO/WHO is working with the MSPP to address these issues with a focus on ongoing plan development and needs assessments (emergency operational response plan, intermediate plan, PDNA). Priorities include restoring all interruptions of services/care to HIV/AIDS patients and preventing the spread of the disease in temporary settlements (which are prone to a rise in HIV/AIDS incidence following disasters). Attempts are also ongoing to locate patients whose treatment has been interrupted due to the earthquake.

Tuberculosis

Haiti has a very high incidence of tuberculosis; around 14,000 new cases are diagnosed each year. Twenty-six percent of the TB cases are in persons living with HIV. Prior to the earthquake, there were 294 health facilities providing services to TB patients. PAHO/WHO is supporting the National TB Program in the response to the emergency situation; an assessment of the current capacity of those institutions is under way.

The Sigueneau TB Center, which was providing service to 186 patients, was damaged, and patients are now be-

ing sheltered in tents outside the hospital and receiving support from NGOs. In addition, many laboratories that performed TB diagnostic tests were damaged and today suffer from a shortage of material and reagents.

PAHO/WHO, through PROMESS, remains the leading actor in procuring, storing and distributing TB drugs in Haiti, including those coming through the Global Drug Facility (GDF).

3.6 Mental Health

The earthquake has brought enormous suffering to the Haitian people, stemming from the loss of life, personal belongings and housing, and livelihoods. This has increased the need psychological support and mental health services. Haiti does not have mental health services at the primary health care level, only at hospital level, and there are very few health professionals working in this field. According to information gathered, there are approximately



23 psychiatrists and only 10 nurses with expertise in mental health, and most resources are concentrated in and around Port-au-Prince.

Only two public hospitals provide mental health services: the Mars and Kline Psychiatric Center and the Hôpital Defilée de Bedeut, in addition to five private clinics. UNICEF, IOM, International Medical Corps, Partners in Health, Médecins du Monde and Médecins sans Frontières are filling the gaps, providing mental health services. It is important to establish a strategy that decentralizes mental health and that integrates mental health services at the primary health care level and in the main public hospitals across the country. PAHO/WHO will work with MSPP and partners to develop such a strategy.

Priorities for the coming months

The upcoming rainy and hurricane seasons will further complicate an already distressed situation. The immediate health risks are diarrhea and water-borne diseases, and until May, priority will be on strengthening primary health care and mobile clinics to reduce morbidity and mortality, especially in the camps.

Some international NGOs and medical teams have already indicated that they will leave the country in the coming months. This will pose a serious challenge, since many health facilities are functioning with their support.

The provision of safe blood may also be compromised if international blood donations are discontinued, as the country must rebuild its capacity for blood donations and safe transfusions.

It is critical to establish a health information management system/situation room that enables MSPP and partners to take decisions based on real-time data regarding needs, disease trends, health service provision, state of the national health system (facilities, staff) and international cooperation.



Photos: Victor Ariscain PAHO/WHO
Photo pg. 9, bottom-right: David Spitz PAHO/WHO