

Disasters

Preparedness and Mitigation in the Americas



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What can we really learn from the earthquake in Haiti?

Editorial



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Although there are lessons to be learned from all sectors, this editorial focuses on health sector issues in Haiti.

Lessons on prevention

Safe hospitals is a goal that has been adopted by all countries, Haiti included. Retrofitting all existing facilities is a challenge everywhere but is often presented as an unrealistic goal in a poor country. The total capital losses to health services are proof enough of the cost-benefit of risk reduction, even in Haiti. Now, there should be no excuses for very strict enforcement of building codes during reconstruction.

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Interview

Gerard Gómez, Head of the U.N. Office for the Coordination of Humanitarian Affairs for the Latin American and Caribbean region (OCHA), responds to questions about the earthquake in Haiti, the international community's response to the tragedy, and lessons for international humanitarian actors.

1. From your vantage point as an OCHA official, what do you think were the major successes of the international community, including the United Nations, Red Cross, and NGOs? Would you address some aspects of response that should be improved?

In responding to this question it is important to consider the context of the disaster. The Haitian government and international actors in the country lost key personnel during the earthquake as well as the material resources to deal the crisis. The capital of the country, which is the poorest in the region, was the most severely affected. Emergency planners had not envisioned such a situation. They did not anticipate that the people providing immediate humanitarian response would have to face the anguish of having lost friends and family members. Much was said about the problems in coordinating the response, but little was said about the emotional dimension of this crisis for humanitarian workers.

In the case of the response in Haiti, these "professional" humanitarian organizations demonstrated good collaboration and genuine solidarity with the Haitian people. They established coordination measures among sectors during the crisis that included Haitian partners and over 900 registered NGOs present in the country.

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In a matter of months, two major seismic disasters affected the Region: in Haiti, at least 200,000 victims died in a magnitude 7 earthquake (January 12), while in Chile a magnitude 8.8 earthquake on February 27 killed "only" 521 persons. The striking difference in impact illus-

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Pan American Health Organization



Regional Office of the World Health Organization

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LSS/SUMA assists in managing supplies in Haiti



Photo: Victor Arizcan/PAHO/WHO

Following the earthquake on January 12 in Haiti, PAHO/WHO mobilized a Logistics Support System team (LSS/SUMA) to support the work of receiving, sorting, and distributing humanitarian supplies. The magnitude and complexity of the emergency placed significant demands on logistic capacity.

The first experts in LSS/SUMA were deployed from the Dominican Republic to Jimaní, on the border with Haiti. They established storage areas to receive and classify humanitarian supplies and donations destined for Haiti and to assist operations at the PAHO/WHO medicine warehouse in Port-au-Prince.

Subsequently, other experts were deployed from Nicaragua, Colombia, and Argentina. During the first days of operations, working conditions were very difficult due to the chaos that reigned at the airport, which was overwhelmed by the massive influx of aid from all over the world.

Collaboration from the disaster response team of DHL, a freight transport company, was instrumental in collecting information on supplies entering the country. At the same time, Haiti's Civil Protection Agency cooperated in setting up a team trained in the use of LSS/SUMA to work at the airport. Once operations at the port terminal resumed in Port-au-Prince, a LSS/SUMA team was established there to manage supplies coming by sea. The information collected was shared with various organizations in Haiti.

LSS/SUMA operations are ongoing in Haiti. The PAHO/WHO office in Haiti has hired local staff to continue using LSS/SUMA at the headquarters of Haiti's Civil Protection Agency. This agency develops the country's emergency response plans, which include the use of LSS/SUMA as an important tool in the logistics of disaster response.

For more information please contact Jeronimo Venegas at: jeronimosuma@yahoo.com.

Costa Rica hosts disaster training

Emergency and disaster experts from Central America and Ecuador took part in a simulation as part of a regional workshop between 19 and 23 April in San José, Costa Rica. The drill simulated an earthquake and response operations at several venues, including water plants, situation rooms, and emergency operations center, emergency shelters, etc., giving some 40 participants the chance to use information and tools they had covered in training. The drill was part of the "Strengthening the disaster response capacity of the health sector" project which is being administered by PAHO with funding from the Spanish International Cooperation Agency.

Costa Rica's National Emergency Commission, Institute of Aqueducts and Sewers, Ministry of Health, Social Security Fund, and Red Cross provided logistical support and equipment, assisted in developing the simulation script, and took part in evaluation of the exercise.

Participants in the drill were organized into multidisciplinary teams. They responded to scenarios requiring damage and needs assessment in the health sector, disaster management, information management, logistics, and management of emer-



Photo: PAHO/WHO

gency shelters and water and sanitation systems.

Among lessons learned from the drill, participants noted the importance of teamwork, effective coordination, good management, and timely flow of information for decision making in emergencies, among others.

For more information contact Dr. Alejandro Santander: santanda@pan.ops-oms.org.

Hospital disaster planning course updated



In 2009, PAHO/WHO worked to revise its course materials for Hospital Planning for Disaster Response with the participation and collaboration of professionals from Central and South America. The process allowed updates and inclusion of material about important aspects of hospital preparedness, including the influenza pandemic, climate change, new concepts about safe hospitals, and the Hospital Safety Index. Participants reviewed the course sequence and content to make sure that the course presents a practical model of the hospital emergency plan, which is the main objective of the course.

As part of the revision process, an analysis of experiences throughout the region was made. The Risk Management Team for Costa Rica's Social Security Fund agreed to prepare the first draft. A workshop in Nicaragua was convened, where experts from Central and South America analyzed the content and methodology proposed for the new version. Finally, materials were tested at the Hospital de Cobán in Alta Verapaz, Guatemala. New recommendations emerging from that trial were incorporated in the training materials.

For more information about these course materials, contact Ricardo Perez at: perezric@pan.ops-oms.org.

The Earthquake in Haiti: Lessons for International Humanitarian Actors

(from page 1)

Professional humanitarian organizations have also provided basic services to hundred of thousands of people in need, including health care, shelter, water, and food. By combining efforts to mobilize resources, they have raised more than US\$ 800 million. Of course, they could have done better; there is always room for improvement. But after having spent the first seven weeks in Port-au-Prince, it is my opinion that the members of this international humanitarian community have done what was expected of them.

There are things that should be improved, or at least that should be considered. The issue of communication is an example. While most of the international humanitarian agencies did a good job, we were not very good at communicating this to the outside world. Nor were we very good at explaining to the media what was being done. The result was that while lives were being saved and tons of food and shelter materials were distributed to families, much of the international press reported that nothing was being done.

2. What is the current capacity of humanitarian agencies to deal with disasters where the impacted population is so large and when national response capacity is so limited, as in the case of Haiti?

Experts say we must invest in disaster prevention rather than response. I think the approach must be inclusive—prevention and response—rather than exclusive—prevention or response. There must be funding for recovery and prevention but also for preparedness and response.

The effectiveness of humanitarian agencies in Haiti depends on balance between these different phases of disaster. If not enough is invested in appropriate projects during the recovery phase, there will be negative consequences for prevention, and finally for vulnerability to future events. In the case of Haiti, even if enough is invested, how many years will it take to return to the conditions of a few seconds before the earthquake of January 12? The ability of donors in the coming years to continue assisting national and international humanitarian actors in the phases of preparedness and response as well as recovery and prevention is essential for the Haitian people.

3. Some international donors think that humanitarian reform needs to be corrected. What aspects of the reform should be addressed to bring about change?

Rather than correct, I would say adjust. Assessment and analysis of the contributions of humanitarian reform is a healthy exercise. However, as I said earlier, the actors involved in humanitarian



Mr. Gerard Gómez

action go beyond those represented at the Inter-Agency Standing Committee level. Had this system of coordination among sectors not been established, what type of response would we have seen in Haiti? It probably would have been impossible to achieve what has been accomplished. I think we should all learn from this experience and discuss what needs to be improved.

Donors provide necessary funds for “professional” humanitarian actors to do their work. But the donors also represent governments, and they become humanitarian actors when they decide to help the country concerned within the framework of bilateral aid. The experience in Haiti shows very clearly that a large part of bilateral assistance was

made without any effort at coordination. The reduced capacity of the Haitian government was so obvious that it justifiably asked for assistance with the coordination of international aid. However, bilateral aid used the pretext of direct cooperation with the Haitian government to justify their lack of participation in established coordination mechanisms for international aid.

We must recognize the position of the major international NGOs during the crisis in Haiti. I do not want to name them for fear of forgetting some, but we know who we are dealing with. They participated in coordination mechanisms, were proactive in calling our attention to important issues, and were very transparent in informing us about their operations. However, these organizations represent less than 10% of the 900 NGOs working in Haiti.

4. Finally, your involvement in an emergency such as Haiti must pose an enormous personal challenge. What has been of greatest value to you, or what has affected you the most?

The offices were destroyed and we were instructed not to enter concrete structures. This led to organizational problems such as where to meet, how to get an internet connection, how to take a shower, where to sleep, or how to carry out an evaluation. In addition to the emotional and organizational crises, we had to handle a humanitarian crisis of enormous magnitude. And then on top of that were the criticisms and accusations through the media that nothing was being done, that there was no coordination.

The main challenge for me was trying to maintain objectivity and clarity in my tasks in spite of the psychological pressure of knowing how desperate the families and children living on the streets were for our help.

Disasters of this magnitude put us in extreme conditions and push us to our limits. I have to admit that it was a very strange feeling to be at the center of criticism, precisely when we were the group that was trying to remedy the consequences of past mistakes. After more than 20 years of being dedicated to emergency response, the crisis in Haiti has reinforced my belief in the need for a code of conduct. Those who want to be part of humanitarian action should also subscribe to humanitarian ethics whereby solidarity with affected populations outweighs political self interest and respects concerted and coordinated action.

Read the full interview in the online version of the newsletter: www.paho.org/disasters/boletin.

Profile

Gerard Gómez began his career with the United Nations in 2002 as a regional disaster advisor and was named Head of the U.N. Office for the Coordination of Humanitarian Affairs for the Latin American and Caribbean region. He has promoted the development of emergency preparedness plans in the region and is an active member of the U.N. Disaster Assessment and Coordination Team.

Mr. Gómez led in the development and coordination of the Risk, Emergency and Disaster Group for Latin America and the Caribbean. He worked with Médecins Sans Frontières for 13 years prior to joining the United Nations.

ISDR launches the 2010–2011 world campaign for disaster reduction



The United Nations International Strategy for Disaster Reduction (ISDR) has launched a Web site for the 2010–2011 global campaign for disaster reduction. The campaign theme is: “Making Cities Resilient: My city is getting ready.” The site can be accessed at: www.unisdr.org/english/campaigns/campaign2010-2011.

The campaign is based on the previous two campaigns, which focused on disaster reduction in schools (2006–2007) and hospital safety (2008–2009). The aim is to persuade leaders of cities and local governments to commit to a checklist of 10 essentials for developing resilient cities.

PAHO/WHO is committed to promoting the new campaign. It will work with governments, health professionals, and other partners in the Region of the Americas to ensure preparedness, structural safety, and the operation of health facilities so that they continue to provide health care to populations when affected by emergencies and disasters.

As one of the most important parts of this campaign, the ISDR introduced the One Million Schools and Hospitals Initiative. The intention is to encourage schools, hospitals, individuals, families, communities, organizations, businesses, and others to pledge to make a school or hospital safer from disaster. The web site for the online pledging initiative is: www.safe-schools-hospitals.net.

U.S. National Library of Medicine’s focus on disaster information

The National Library of Medicine of the U.S. National Institutes of Health recognizes the importance of improving information management and access to information resources about health and disasters as a way to assist national efforts in managing emergencies and disasters. The creation of the Disaster Information Management Research Center (DIMRC) in 2008 reflects strong commitment to that goal.

The Center has made significant progress in collecting and disseminating material about the health effects of disasters, making it more accessible to health professionals, first responders, and the public.

For the period 2010-2012, the DIMRC plans to expand their work on disaster medicine and emergency management and develop new resources to meet information needs. The plan focuses on identifying and using best practices to ensure access to public health information during disasters; developing new products and services for first response and preparedness activities; conducting research on managing health information relating to disasters; and collaborating with other agencies, communities, and public health officials in efforts to prevent, respond, and reduce the adverse effects of disasters on health.

Future activities planned by the Center include: the development of online resources to disseminate literature on disasters and health; training and certification; new tools to respond to chemical, biological, radiological, or nuclear hazards; research on improving hospital communication systems during major events; and collaboration with hospitals and libraries.

The web site of the Disaster Information Management Research Center provides information on health and disasters, including:

- 1. Tools for emergency response**
 - Radiation emergency medical management (REMM): Guidance on the clinical diagnosis and treatment of mass casualty radiological/nuclear events for health care providers.
 - Wireless Information System for Emergency Responders (WISER): A system to help emergency responders identify hazardous materials and respond to chemical emergencies. Contains information on over 400 chemical, biological, and radiologic agents.
- 2. Literature on medicine and public health**
 - PubMed: a database that contains references on disaster/emergency preparedness and response, including natural disasters, bioterrorism, chemical terrorism, and pandemic influenza.
 - PubMed Central: free digital archive of thousands of articles on disaster preparedness and emergency response.
 - Resource guide for public health preparedness: access to resources, online and at no cost, about public health preparedness. This includes expert guidelines, fact sheets, websites, technical reports, articles, and other tools intended for the public health community.
 - Toxicology Information Network (TOXNET): more than 14 databases available on toxicology, toxic chemical releases, and environmental health.

For more information, visit <http://disasterinfo.nlm.nih.gov>

UNASUR sets strategies for health emergencies and disasters

The South American Council of Health, comprising the Ministers of Health of member countries of the Union of South American Nations, held its second regular meeting between 29 and April 30, 2010, in Cuenca, Ecuador. The meeting provided an opportunity for ministers to exchange experiences and proposals regarding the integration of the countries of the region. Several resolutions were adopted on pressing issues such as Chagas disease, vaccination against H1N1 influenza (2009), dengue, and emergencies and disasters.

A resolution was adopted pledging assistance to Haiti following the January 12 earthquake. The ministers committed to assist Haiti in several areas and in partnership with the countries of the Caribbean. The plan was developed following the

International Donors’ Conference in March in New York, where action plans were outlined for rebuilding Haiti.

The Ministers of Health also approved an action plan for 2010–2015 which, among other things, addresses emergencies and disasters in light of the earthquakes in Haiti and Chile and the influenza pandemic in 2009. These events demonstrate the need to strengthen health sector preparedness and response and mechanisms to coordinate international assistance.

The Ministers agreed to develop a network of offices for emergencies and disasters, which should be integrated with networks existing in the Andean region and MERCOSUR.

For more details on these initiatives, contact Carlos Roberto Garzon: cgarzon@ecu.ops-oms.org.

Hospital safety index adapted for small health facilities

Based on the experience gained with the hospital safety index (HSI) in hospitals, a new assessment tool has been developed by PAHO for less complex health facilities, including primary care hospitals providing basic specialties (obstetrics and gynecology, pediatrics, internal medicine, and general surgery), hospitals with less than 20 beds or without inpatient services, health centers, polyclinics, clinics, etc.

The guide outlines the most common risks for health facilities of medium and low complexity. It is designed to ensure that a facility will be able to continue providing services after an adverse event. It identifies the most important structural, nonstructural, and functional vulnerabilities and addresses interventions needed to increase a facility's safety. It has been prepared for the reality of Latin America, and users are encouraged to adapt the contents according to the situation in their country.

The guide is structured on the same pattern as its older brother, the hospital safety index.

1. Issues related to geographic location. It allows rapid characterization of hazards a facility is exposed to, including its location and type of terrain.



2. Structural aspects. It aids in assessing facility safety in terms of the type of structure, materials used, and its history of exposure to natural and other types of hazards.

3. Non-structural aspects. It facilitates the analysis of the safety of non-structural elements of

a health facility, including lifelines, equipment, architectural elements, access roads, and circulation inside and outside of the facility.

4. Functional aspects. It guides assessment of an institution's organization, how plans and preparedness programs for disaster and emergency response are implemented, what resources are available, the level of training of its personnel, as well as priority services that provide for the facility's operation.

Authorities of the facility can use the information provided by the assessment to develop strategies for intervention. These strategies prioritize necessary actions according to their importance, time needed to carry them out, and resources needed.

The first response after a disaster almost always occurs at the local level. For that reason, we hope that this new tool will help to improve safety and operational capabilities of the smaller facilities that play a key role in emergencies and disasters.

For more information please contact Alejandro Santander at: santanda@pan.ops-oms.org.

A self-assessment tool to reduce disaster risk in the health sector

During discussions at the 2008 Caribbean Health Disaster Coordinators meeting, and in the framework of PAHO's Disaster Strategic Plan, participants rallied around the idea of developing a health sector Self-Assessment Tool for Disaster Risk Reduction to evaluate key aspects of disaster risk management (notably mitigation and preparedness). The self-assessment tool was completed in 2009, with significant support from the Canadian International Development Agency. During 2009, it was tested in Trinidad and Tobago, Suriname, and St. Kitts and Nevis. It will be rolled out in at least three other Caribbean countries in the first half of 2010.

This self-assessment tool differs from an external assessment in that it is generally limited to information and data—quantitative and qualitative—available to or generated by the health sector. As a tool for internal use by the health sector, it will aid in determining priorities for a national health sector risk reduction or disaster management program (or set of initiatives) and, if used regularly, as a monitoring tool for measuring changes (or lack thereof) over time.

The construct of the tool is based first on determining the components of mitigation and pre-

paredness from the health sector perspective and their key elements and sub-elements. The sub-elements lead to a selection of both quantitative and qualitative indicators, which provide a comprehensive description of the state or level of the various aspects of mitigation and preparedness in the health sector. In turn, the data needed for the indicators generate a set of questions that comprise the health sector Self-Assessment Tool for Disaster Risk Reduction (DRR).

The components of mitigation and elements that are relevant to the health sector are:

- **Risk identification:** the key elements are hazard, vulnerability, and risk assessments. These assessments are specific to the health sector as a whole and to individual health sector facilities as opposed to overall national assessments conducted by national disaster agencies. Of course, health sector assessments rely in great part on information and knowledge generated by the latter.
- **Soft mitigation activities:** land-use planning and building codes are key elements. The sub-elements of each are the national standards and their application within the health sector.
- **Hard mitigation activities:** New and old facili-

ties are the key elements. The sub-elements are the planning processes leading to the construction of new health facilities, retrofitting activities, and application of the Safe Hospital Program.

The components of preparedness that are relevant to the health sector are:

- **Governance:** The key elements are the legislative, policy, and structural/systemic frameworks that govern DRR in the health sector.
- **Health sector planning:** The DRR planning framework, national level health sector plans, and health sector plans at the institution/facility level are the key elements.
- **Health sector resources:** This component focuses on health sector resources available to deliver the health sector DRR program as opposed to the principal health sector program. Its key elements are material and human resources.
- **Health sector public awareness:** Pre-event DRR public health awareness and post-event DRR public health information are the two key elements of this component.

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Member Countries

The health cluster: successes and obstacles in Haiti



disaster was overwhelming, and there is no doubt that this aid was well-intentioned and spontaneous. This influx of assistance posed a major challenge for the cluster. Humanitarian aid agencies arrived in stages, varying widely in size, funds, logistical capacity, and levels of self-sufficiency. More than 390 health sector actors, including NGOs, international, and bilateral teams

arrived in Haiti. By the end of March, there were some 553 agencies on the ground, most of them international.

It should be noted that organizations working in Haiti before the crisis suffered major losses from the earthquake, both in terms of people and property. Qualified local personnel were in short supply and largely absent because they had been personally impacted by the earthquake. Many of the agencies that arrived after the event were initially disoriented, and because most of their staff did not speak the language, their relationship with local authorities, patients, and communities was made more difficult.

To have a more effective response, working groups were created in the following areas:

- Primary care and mobile clinics (in March, 55 NGOs were managing some 160 mobile clinics)
- Hospitals and trauma care (in March, 2,000 beds were available and 43 hospitals were functional)
- Mental health and psychosocial support
- Disabilities: more than 20 NGOs are partici-

pating in this subgroup, which is led by Handicap International

- Medical supplies: Because of the delay in the arrival of flights, many agencies initially needed the support of PROMESS, Haiti's Central Procurement Agency for drugs and medical supplies, which is managed by PAHO
- Early warning and communicable diseases.

One of the first actions of the cluster, in coordination with the Haitian government, was to determine the status of health institutions. This included establishing whether or not these facilities were fully or partially functional, indentifying available health personnel, determining whether these facilities were receiving external support, and identifying that support. This process has helped to identify the biggest gaps between needs and capacities, and establishes priorities for assistance.

The health cluster played a key role in coordination. Incoming groups may have had skills but lacked logistical support; foreign health experts arrived who were not associated with an agency. Some were not self-sufficient in matters of their own food, drink, shelter, or supplies, or they simply could not find partners. The ability to provide guidance to such organizations was one of the successes of the health cluster.

Another area of success was in matching up needs and capacity. For example, the cluster was able to connect a group of doctors from Bangladesh that had arrived without equipment and a Belgian group that was departing from Haiti and leaving equipment behind in a particular hospital.

Recognizing the shortage of skilled human resources, the health cluster called on agencies to

United Nations humanitarian reform introduced the “cluster” or sectoral approach, which is a group of humanitarian agencies and organizations that work together to achieve more coordinated, more efficient, and more appropriate response for a country affected by disaster. Assistance is organized by areas or sectors that are led by one agency, always in support of and in collaboration with the authorities of the country concerned. The cluster is meant to strengthen, never replace, existing coordination mechanisms in the sector. Health cluster coordination is the responsibility of the World Health Organization (WHO).

In the case of the earthquake in Haiti, PAHO, the Regional Office for WHO, led and coordinated the cluster. The cluster provided national authorities mechanisms for communicating with the international community. Due to enormous difficulties in communication and coordination, information on the magnitude of the event and about specific needs was initially slow and inadequate.

The international community's response to the

PROMESS crucial in providing medications in Haiti

The Program of Essential Medicines and Supplies (PROMESS), administered by PAHO/WHO, has been the central distributor of medicines and medical supplies throughout Haiti since 1992. The earthquake in January did not have a significant impact on the PROMESS warehouse, which continued to function and was able to perform among the less visible but most vital tasks for humanitarian assistance. PROMESS became practically the only source of medicines in the country, and experienced a sharp increase in demand for these items after the earthquake. The Haitian Minister of Health stated that “without PROMESS, there

would have been a second catastrophe.”

Humanitarian aid organizations and donor countries sent tons of pharmaceuticals and non-medical supplies to Haiti to meet health needs following the earthquake. Organizing the enormous volume of supplies was a major challenge, and PROMESS was assisted by several governments, including the United States and Spain.

Four months after the earthquake, PROMESS continues to strengthen its role as the central provider of medicines and medical supplies to Haiti. It serves as the central repository of vaccines in Haiti and cooperates with UNICEF and UNFPA in storing and distributing supplies for



their priority health programs. All international donations received by PROMESS are distributed at no cost to public health facilities, health clinics, and temporary health services that do not depend on international NGOs and are accredited by the Ministry of Health of Haiti.

The new PROMESS web site describes procedures for purchasing medicines and other useful information: www.paho.org/promess.

build local capacity—working not only for Haitians, but with Haitians.

One weak point of the cluster was in managing the information needed to guide and facilitate decisions. For example, information was needed about the most common diseases: whether these illnesses were increasing or decreasing, whether there was risk for epidemics and public health risk, whether local surveillance structures were operating, and if so, to what extent.

Now that the acute phase of the crisis has passed and steps are being taken toward restoring services, it is important that Haiti progress can be sustained. This will happen only if national institutions continue to be strengthened with the support of NGOs and other organizations that are working or plan to work in Haiti for the long term. At present, the country does not need short-term visits from health personnel, except in very particular specialties, and then only when requested.

There are important lessons that the international community should learn from this disaster:

- Individuals willing to assist a country affected by a disaster must travel with institutional backing.
- The only way to be part of the solution and not a burden is to be self-sufficient. A place devastated by a disaster, everything becomes a problem: accommodation, logistics, water, food, transportation, communication, etc. This same message is intended for small organizations, countries, and university health teams.
- It is important to be involved with the community and local professionals. The local people are the first responders and will be there after everyone else has gone. The importance of involving and working with local doctors, nurses, and health authorities to achieve results cannot be overemphasized.
- It is important to have local language skills. It is also important to go where the displaced population has genuine needs, which means being prepared to leave the capital cities and travel to remote areas.

In short, the Haitian disaster has reinforced the importance of effective coordination in the health sector in support of a government that is completely overwhelmed by a disaster. Managing the health cluster in similar situations requires a team specialized in various disciplines (logistics, information technology, communications) to manage coordination and information. At the same time, the cluster team must operate independently of the routine activities of the PAHO/WHO national office.

For more information contact Dr. Dana Van Alphen: vanalphd@pan.ops-oms.org.

Earthquake in Chile shows benefits of disaster preparedness

An earthquake measuring 8.8 on the Richter scale struck Chile on 28 February, leaving 521 dead and 56 missing. The quake impacted 6 of the country's 13 regions, where 80% of the population lives. The majority of the country's hospital facilities are located in these regions, with 77% (20,950) of hospital beds.

Two months after the event, authorities estimate that the earthquake affected 2 million people; 370,000 homes, 73 hospitals, and 4,012 schools (nearly half the schools in the affected area) were damaged or completely destroyed. The costs of losses and damage are estimated to reach US\$ 30 billion, equivalent to 17% of the country's gross domestic product.

The Reconstruction Plan announced by the Chilean Government proposes numerous measures, across all sectors, including the repair or replacement of 79 hospitals and more than 150 clinics.

Health sector response was fast and efficient

The health service network was severely affected, especially in the regions of Maule and Bío Bío. More than 4,000 of the country's hospital beds were lost, but the Ministry of Health was able to restore health services in a matter of days. Field hospitals (national and international) were set up to meet increased demand and, where necessary, services were relocated to functional facilities.

PAHO began to provide health authorities with technical support and expertise within hours of the earthquake. PAHO/WHO's office in Chile redirected its services to assist and collaborate with the Ministry of Health.

Using information from the rapid damage and needs assessment, PAHO/WHO mobilized international resources to address the impact on public health and to restore health services. In the three months since the earthquake, PAHO's collaboration with Chilean authorities has focused on the following actions:

- Support operations in health facilities by providing equipment such as power generators, medical and clinical laboratory equipment, arranging for the donation of medicines, and assisting in improving operations in 10 hospitals. Advice was given on options for installing temporary modular facilities in order to



PHOTO: PAHO/WHO

reestablish hospital capacity. Training was provided on conducting hospital assessments with a focus on safe hospitals.

- Support the Ministry of Health in assessing structural and nonstructural damage sustained by hospitals. Make recommendations on repairs and reconstruction consistent with the safe hospitals strategy.
- Coordinate donation of vaccines (especially for hepatitis A and H1N1 influenza) thereby supporting immunization campaigns in the affected areas.
- Assist in developing a communication strategy for health promotion in the affected areas.
- Strengthen epidemiological surveillance, disease control, and public health measures relating to safe water, food, and sanitation.
- Initiate a mental health plan in the areas affected by the disaster.

The earthquake in Chile reminds us of the importance of developing or updating emergency and disaster plans for the health sector, both regionally and at the national level. It also highlights how critical it is to have strong coordination between institutions that are part of the national civil protection system. The crisis provides opportunities to realize strategies, plans, and measures for safe hospitals, so that new and rebuilt facilities will be able to continue to provide services after the next disaster.

A wide range of documents relating to this earthquake can be accessed at: www.paho.org/chi.

PAHO's 2010-2015 plan for safe hospitals

The PAHO Directing Council, made up by the Health Ministers of PAHO Member States, has adopted several resolutions on safe hospitals in recent years, urging countries to adopt national policies and develop work plans to achieve the goal of safe hospitals by 2015. To achieve this, a Regional Action Plan is being developed for discussion and approval at the 50th Meeting of the Directing Council, in September 2010.

The Regional Action Plan has been prepared and discussed with input from national and international experts in the region, and has been the subject of consultation in disaster programs of the ministries of health.

It is important to note that 67% of health facilities in Latin America and the Caribbean are located in areas that are exposed to disaster risk. A hospital that is unable to function leaves an average of 200,000 people in this region without health care, and the loss of emergency services during disasters significantly reduces the chances of saving lives.

There is growing public demand for safe hospitals and growing political will to meet the demand, as can be seen from the resolutions, agreements, and commitments that have been adopted at the global, regional, and subregional levels. In the case of Colombia, Ecuador, Mexico, and Peru, among others, political will has resulted in the creation and implementation of national hospital safety plans and programs. However, because of increasing public health concerns and shrinking public budgets, initiatives for safe hospitals must compete with other priorities, including the fight against poverty and inequality.

In some countries the responsibility for achieving the goal of safe hospitals by 2015 is led or shared by national, multisectoral disaster reduction agencies. In most countries, however, participation by other sectors in disaster reduction is still very limited, which has hampered the incorporation of the safe hospitals initiative into concrete,

medium- and long-term actions.

While there have been advances in developing specific legislation on safe hospitals, most countries still lack updated standards and mechanisms for regulatory and administrative oversight that will ensure the safety and continued functioning of health facilities in the event of disaster.

Results from assessments using the Hospital Safety Index show that only 39% of hospitals are highly likely to remain functional in the event of a disaster and that 15% of hospitals are in urgent need of intervention measures. Application of the safety index has proven beneficial for strengthening health service networks, giving priority to measures that will improve safety, and developing disaster response plans in the health sector.

Objectives and outline of the plan of action

The Regional Action Plan is intended to enable Member States to adopt "Hospitals Safe from Disasters" as a national risk reduction policy. The goal is for all new hospitals to be built to a standard that will ensure their ability to remain functional in disaster situations, and to carry out appropriate mitigation measures to reinforce existing health facilities, especially those providing primary care.

The targets being proposed for Member Coun-



Photo: PAHO/WHO

tries by 2015 include the following:

- Establish a National Hospital Safety Program;
- Systematize information on the construction of new hospitals and upgrading existing ones;
- Establish mechanisms for monitoring the construction of hospitals and other investments in health facilities;
- Include measures to ensure that health facilities will be able to function in case of disaster wherever new health investment projects are undertaken;
- Ensure that current standards for the design, construction, and safe operation are used in new health facilities;
- Carry out measures to improve the ability of existing health facilities to function in case of disaster.

There will be more information on this topic in the next newsletter. For information, please write to Dr. Ciro Ugarte, ugarteci@paho.org.

Venezuela on the way to safe hospitals

Venezuelan authorities are developing a strategy to strengthen safety of the country's hospitals. Action is being taken with broad participation from professionals who are committed to optimal response from health facilities faced with adverse events.

As part of the strategy, in 2009, training on the Hospital Safety Index was given to professionals from various health institutions and units in the

city of Caracas. This group then formed an assessment team that could apply the index in hospitals in the capital city and throughout the country. New programs are now underway to train more teams to use the index. At the same time, the Ministry of Health is working to establish a legal framework to ensure the safety of hospitals in emergencies and disasters.

The Hospital Safety Index is a tool to assess

how well health facilities can function using their own resources after a disaster. It also assists in identifying interventions and plans to improve hospital response.

For more information about the safe hospitals initiative, contact Xiomara Vidal at: vidalxio@ven.ops-oms.org.

Handicap International assists injured and disabled in Haiti

Contributed by Aleema Shivji*

The January 12 earthquake in Haiti left in its wake more than 300,000 persons with injuries, many of whom are now temporarily or permanently disabled. Combined with the estimated 800,000 persons living with disabilities before the earthquake, this results in a significant proportion of the population in a situation of extreme vulnerability.

People with disability and other vulnerable groups are always among the most seriously affected during and after crisis. They are often “invisible” to mainstream relief organizations and lack proper access to the relief activities deployed, therefore facing major challenges and protection issues. With the urgency to provide large-scale humanitarian relief to the Haitian population, many vulnerable people find themselves excluded from the relief efforts. Handicap International’s strategy is thus two-fold: to provide specific support to persons with injuries and disabilities, and to ensure this population has equal access to all mainstream relief services.

Fractures account for the most frequent major injury following the earthquake in Haiti, followed by amputations, spinal cord injuries (SCI), burns, and head injuries. Some of the injured—such as those with amputations or spinal cord injuries—are immediately faced with disabling consequences and need specialized services and care to mitigate their disability. The earlier these services are started, the more impact they will have. Early rehabilitation can prevent potentially life-threatening pressure sores in a person with SCI and can ensure that a person with amputation can be fitted with a prosthesis at a later date.

A larger proportion of injured persons face a significant risk of becoming permanently disabled due to secondary complications from infected wounds and poorly managed fractures, including contractures, paralysis due to nerve lesions, or secondary amputations. Immediate implementation of rehabilitation services following the earthquake is vital—providing mobility devices to persons with fractures to restore movement and stimulate recovery, teaching exercises to prevent contractures, providing simple advice to families and caregivers, etc. Emphasis on regular wound care and appropriate hygiene is essential to prevent infection.

Starting on January 14, Handicap International (HI) and its partners immediately carried out rapid assessment of the situation and simul-

taneous provision of relief in hospitals and in the community. Essential services included: provision of post-surgical care and early rehabilitation at hospital level; setting up a link from hospitals to communities to guarantee continuity of care and assistance; and ensuring that vulnerable people had access to information on services available to assist them with basic and specific needs. In an emergency situation, HI’s strategy comprises specialized services such as rehabilitation alongside general humanitarian assistance to ensure that specific and basic needs are covered both for persons with injuries and disabilities as well as the larger vulnerable population.

Actions in hospitals:

- Teams of Haitian and expatriate physiotherapists, occupational therapists, nurses, and community workers have provided more than 11,000 rehabilitation sessions in 19 hospitals in the Port-au-Prince area since the earthquake.
- Assistive devices such as wheelchairs, mattresses, crutches, and walkers have been distributed, and education sessions provided to caregivers and family members.
- These activities are being implemented in collaboration with the Christian Blind Mission (CBM), an international NGO specializing in disability.

Actions in the community:

- Nine temporary assistance points (*antennes handicap*) have been set up at community level to provide information and services for persons with injuries and disabilities and to the elderly. To date, approximately 4,000 people have benefited from these services and more than 1,000 assistive devices have been provided.
- These *antennes* ensure the link from hospital to community and provide services such as wound care, rehabilitation, distribution of assistive devices, psychosocial support, provision of temporary shelter, information on humanitarian services, re-

ferral to other actors for specific or mainstream assistance (e.g., surgery, food distribution), etc. Mobile teams provide home-based services for people unable to reach the *antenne* sites.

- These *antennes* are implemented in partnership with the Haitian Secretary of State for the Inclusion of Persons with Disabilities and CBM.

Prosthetic and orthotic services:

- HI, with partner Healing Hands for Haiti, has opened a rehabilitation center in Port-au-Prince for fabrication and provision of prosthetics and orthotics, along with related rehabilitation and psychosocial services.
- The center provides prosthetic devices to persons with amputations, as well as orthotic devices for persons with spinal cord injuries and complications from fractures and for others requiring postural supports or splints.
- The center is currently following 150 patients and has a target of reaching 450 patients by the end of July.

In addition to the above specific services, HI has been distributing emergency humanitarian aid (food, temporary shelter, and non-food items) with a strategy to ensure appropriate inclusion of vulnerable persons.

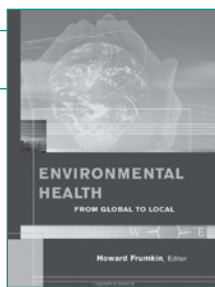
To promote a coordinated response for persons with injuries and disabilities, an Injury, Rehabilitation and Disability Working Group has been set up under the UN Health Cluster. This working group is led by HI, CBM, the Haitian Secretary of State for the Inclusion of Persons with Disabilities, and the Ministry of Health.

It is evident that during the emergency response phase, actions targeting persons with injuries and disabilities are absolutely necessary to prevent or mitigate disability and to ensure access to all humanitarian assistance programs. Immediate activation of rehabilitation teams at hospitals and in communities can have a very strong impact on prevention of disability in injured persons and is an essential component of the emergency medical response. A coordinated response is crucial to maximize impact of rehabilitation and other services for persons with disabilities and injuries.

* *Emergency Response Specialist, Handicap International*



Photo: i/c by Anisam/PAHO/WHO



The first edition of *Environmental Health, from Global to Local*, published by PAHO/WHO, is now available in both English and Spanish. This book aims to build, systematize, and disseminate knowledge, methods, and techniques for environmental management. It covers relationships between the environment and economic development, including issues such as environmental justice and ethics in environmental health which are espe-

Environmental health: from global to local

cially relevant today.

The authors address the practice of environmental public health practice and include chapters on assessment and communication of risk, health services, regulations and legal resources, economic development, urbanization, and sanitation.

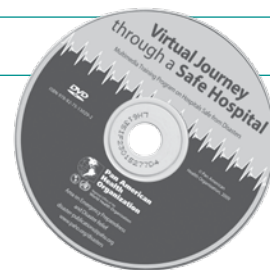
PAHO/WHO is distributing the book to interested parties in Latin America through its Expanded Textbook and Instructional Materials Program (PALTEX). For more information, please visit: www.pahef.org/paltex

Virtual Journey through a safe hospital

The multimedia training program, *Virtual journey through a safe hospital* is now available on DVD in its English version. The program combines video, animation, three-dimensional images, and sound, and includes technical presentations and publications to create a virtual learning environment about safe hospitals.

The virtual tour is presented in separate modules that can be used independently to explore specific aspects of the subject, or the modules can be used in sequence.

The DVD of the virtual hospital includes a library that can be consulted and/or downloaded. This virtual library includes supporting material, text, videos, PowerPoint presentations, etc. For more information, please contact Ricardo Perez: perezric@pan.ops-oms.org.



World Health Organization (WHO) to develop programs for health facilities that

Healthy hospitals, healthy planet: facing climate change

Climate change is no longer a future threat but a reality, one that is changing the natural and human environment, eroding the balance of the ecosystems of our planet and the species that depend on it. The draft document, *Healthy hospitals, healthy planet, healthy people, confronting climate change in health care settings*, is based on the mandate from member states of the

will contribute to reducing their own greenhouse gas emissions.

The document identifies seven aspects of a climate-friendly hospital. It gives a series of examples of hospitals from around the world that demonstrate that the health sector has already taken the lead on these issues.

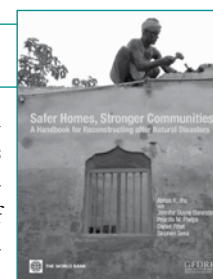
This work is the first phase of a WHO project in collaboration with Health Care without Harm which addresses the health sector's impact on climate change. The document is available only in English and can be accessed at: www.who.int/globalchange/publications/healthcare_settings/en.

Guidelines for reconstruction after a disaster

The World Bank and the Global Facility for Disaster Reduction and Recovery have launched the manual *Safer Homes, Stronger Communities: A Handbook for Reconstructing after Natural Disasters*. It was prepared to assist policy makers and project managers responsible for rebuilding homes and communities after major disasters.

The book argues that reconstruction after a disaster begins with a series of decisions that must be made immediately and emphasizes the importance of establishing policy that will guide an effective process. Effective rebuilding is

possible only after alternatives have been assessed in collaboration with stakeholders, and once standards for reconstruction have been established. The handbook gives guidelines on developing the content of reconstruction policies, mechanisms for communicating effectively with partners, and adapting and monitoring the implementation of policies. The manual can be downloaded at: www.housingreconstruction.org/housing/toc.



Early warning systems save lives and reduce economic losses at all levels, but they still are not integrated into disaster management and risk reduction globally. This topic is the focus of the new World Disasters Report, 2009, of the International Federation of Red Cross and Red Crescent Societies.

This report argues that early warning is not enough without early

World Disaster Report from the IFRC

action; early action can do more to reduce deaths and protect livelihoods than can be achieved through emergency response alone. The report emphasizes that this challenge must be taken by national governments, donors, and other stakeholders.

The document is available in English and Spanish and can be downloaded at: www.ifrc.org/publicat/wdr2009.

What can we really learn from the earthquake in Haiti?

(from page 1)

Hospitals are not the only critical facilities. It seems that little attention was given by Haiti's Civil Protection Agency and the United Nations to the vulnerability of their own headquarters. The loss of key UN staff and installations seriously affected immediate response to the disaster. PAHO requires that an assessment of structural vulnerability be carried out before renting or acquiring new facilities in a country. The resilience of the new additions to the PAHO office in Haiti shows the wisdom of this requirement, while severe damage to PAHO's old building points to the need to extend this practice to its existing facilities.

Lessons on preparedness

No country is ever fully prepared for major disasters. Reality is always different from projected scenarios and catastrophes will continue to take us by surprise. Nevertheless, training and planning should shorten the duration of confusion and chaos. How useful and relevant international and, in particular, PAHO investment has been in preparing the health sector requires careful, objective evaluation. The issue will not be to identify what went wrong, but what would have been worse without this investment. Again, preparedness is a relative issue.

Health sector preparedness in the Caribbean cannot be limited to the national level. It should assume a Caribbean-wide dimension since the health resources of any single country are quickly overwhelmed.

Lessons on the response

In Haiti, the initial medical response was provided by local agencies, mostly NGOs, forces from the UN Stabilization Mission in Haiti (MINUSTAH), and a strong contingent of Cuban doctors. The additional external health response was extraordinary but suffered from the same shortcomings observed in other large disasters: inevitably late (the country was on its own for at least 3 to 4 days) but with a rapid buildup. Quantity and visibility are not always matched by appropriateness and effectiveness.

Coordination and information were significant issues that did not get the required attention. In particular, PAHO/WHO personnel responsible for coordinating the UN Health Cluster were not up to the task of guiding over 300 health actors. Information on unmet needs and on who was doing what in the health sector was lacking. Decision makers tend to forget that disaster management is primarily a matter of information management. Shipping supplies and teams without data and prior consultation is a recipe for chaos, a natural

element of major catastrophes.

Although much, and even too much was done on the short-term relief side, the mass media kept focusing on unavoidable local gaps, providing a somewhat dark picture of the international community's performance. This contributed to an overflow of less than appropriate assistance.

Obstacles to response seen in the 2004 tsunami and other major earthquakes were also present in Haiti, including:

- Bilateral official assistance was generous, operationally effective, and highly skilled in search and rescue and medical care. However, the first priority, understandably, was for their many nationals missing or trapped in hotels, residences, or offices or wishing to evacuate. Actual availability of external resources to assist Haitians was delayed and limited.
- Caribbean assistance was coordinated by the Caribbean Disaster Emergency Management Agency (CDEMA), which Haiti joined recently. Effective support, including medical personnel, was provided through the hub in Jamaica. However, CDEMA's lack of logistic and financial resources rapidly hampered what should have been a massive neighborhood response. Part of the funding assigned to logistic support of bilateral teams from developed countries would have been more effective technically and socially had it been applied to support this Caribbean response.
- A survey by Handicap International shows that the distribution of injuries was similar to that observed in other earthquakes, with one major exception: an abnormally high number of amputations. It is premature to determine the cause of this anomaly but one can only wonder whether foreign teams unfamiliar with the social conditions of an amputee in a developing country might not have adopted a more conservative approach to their treatment. Emergency teams interviewed in past disasters have cited the number of field amputations as a measure of their effectiveness under extreme conditions.
- Medical evacuations may be a necessity when local facilities are utterly inadequate. The response in Haiti suggests that clear medical criteria were lacking. Returning stabilized patients to Haiti now poses a difficult issue for the host countries. For example, the long-term care needs were not taken into account at the time that victims of spinal cord injuries were arbitrarily selected for referral. A triage strategy to determine who can benefit most from evacuation is needed.

PAHO/WHO, in consultation with its Member States, has developed a series of guidelines on field hospitals, dead bodies, donations, logistics management, etc. How realistic and effective

are those guidelines, and how well were they complied with in Haiti? In severe disasters with intense media attention, such as the tsunami or the Pakistan earthquake, compliance is generally poor. Haiti is no exception: the guidelines do not seem to have "guided" most of the response.

In part, public demand and pressure from the mass media for rapid and visible action are not conducive to reflection and evidence-based decisions. But there are also extreme situations when strict compliance to guidelines is impractical or counterproductive. Guidelines should call for flexibility but definitely not for a free-for-all response in disregard of the basic disaster management principles.

A few preliminary conclusions

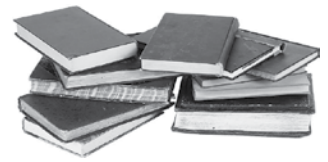
The experience and lessons from Haiti are highly perishable. The humanitarian community has a short memory and a remarkable capacity to repeat the same errors. If no formal evaluation and dissemination of this experience are carried out, the losses in Haiti will not help other Caribbean countries to be in a better position to face the next massive urban earthquake. That such an event will occur is not speculation, but certainty. Place and date are unknown.

It is time also for PAHO and WHO to review their guidelines on the use of foreign field hospitals and the management of dead bodies to make their application more practical in extreme situations.

The more exposed a country is to daily emergencies and crises, the less inclined it is to prepare for the rare catastrophic events. In addition to their short memories, countries ignore warnings and recommendations. In 1990, Haiti organized a conference on natural disasters and the recommendations for action were submitted to the Prime Minister at the time. Only in recent years, with the support of international donors, have prevention and preparedness returned to their place in the priority list of the national authorities. Far too late, however, to have made a significant impact on this catastrophe.

This earthquake has demonstrated that risk reduction is not a luxury for the poorest countries but a critical condition for their emergence from poverty.

Sophisticated health response will always come late! Neighborhood (i.e., Caribbean) response must be respected, strengthened, and supported by donors. The forthcoming Caribbean Regional Public Health Agency (CARPHA) includes preparedness for public health emergencies as a core function. If a massive earthquake is not a public health emergency, what is it? CARPHA should play a lead role in preparedness not only to traditional outbreaks but to all type of health crises.



The **Regional Disaster Information Center's (CRID)** mission is to promote the development of a culture of prevention in Latin American and Caribbean countries through the compilation and dissemination of disaster-related information and the promotion of cooperative efforts to improve risk management in the Region.

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CRID publishes new catalogs

New catalogs available from CRID include a selection of disaster preparedness tools and information resources on Early Warning Systems, health, education, and strengthening local response capacity. The catalogs have been distributed among the different actors and partners working in disaster risk reduction in Latin America. They are available on the CRID website: <http://www.crid.or.cr/dipeccho/herramientas.shtml>.

Web site launched on education and risk management

UNICEF and a group of agencies and organizations working in disaster risk reduction collaborated with CRID to launch a web site that is dedicated to education and risk management. The site expands on efforts to provide information and lessons learned about education and risk management. A wide range of materials can be accessed, including documents, entertainment materials, multimedia resources, informational materials and tools, a directory of institutions, and photographs, among other resources. The web site can be accessed at: <http://educacionygestiondelriesgo.crid.or.cr>.

Other new material available from CRID

Other information resources recently made available from CRID include:

- Public health risk assessment and interventions. Earthquake: Haiti, January 2010. World Health Organization (WHO), Communicable Diseases Working Group on Emergencies, Haiti, 2010.
- Health cluster guide: a practical guide for country-level implementation of the health cluster. 2009. Inter-Agency Standing Committee (IASC), Global Health Cluster, World Health Organization.

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