



DISASTERS

News and Information for the International Community



Preparedness and Mitigation in the Americas

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Verification mission visit to the Costa Rican Social Security Fund's EMT.

Photo: Luis de la Fuente, PAHO/WHO

Hurricane Matthew, an overview of comprehensive action during and after the emergency

Hurricane Matthew tested readiness levels of Caribbean countries' health services and their staff, as well as the technical capacity of PAHO/WHO for mobilization and response.

The Category 5 hurricane put thousands of people at risk in Cuba, the Turks and Caicos Islands, the Dominican Republic, Haiti, and the United States, and Colombia.

PAHO/WHO continuously monitored the situation, keeping in touch with the health authorities and with their counterparts in the Region, to be aware of the support, readiness,

and response actions. The resources mobilized by PAHO allowed for the deployment of 80 experts in logistics; in the coordination of emergency medical teams (EMTs); in damage assessment and needs analysis; in water, sanitation, and hygiene; and in health response coordination.

PAHO lead health coordination efforts ensuring the supply of drinking water and uninterrupted medical services—including the distribution of equipment and essential supplies—in the affected areas.

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Editorial

The EMT initiative moves forward in the Americas

The Americas rank second globally in terms of natural disasters, after Asia. Between 2007 and 2016, 20.6% of the world's disasters occurred in the Region of the Americas, causing 255,033 deaths, 898,816 injuries, and damages worth 470 billion dollars; 88% of those deaths occurred in earthquakes in Peru (2007), Haiti (2010), Chile (2010), and Ecuador (2016), while also leaving 541,787 people

(continued on page 2) >>

Hurricane Matthew, an overview of comprehensive action during and after the emergency

From Tropical Storm to Hurricane

On 28 September 2016 a strong tropical wave was reported, located near Barbados, producing winds of 40–45 miles per hour (mph), as the storm system moved through the Lesser Antilles.

Preparedness and response measures included, in Barbados, activation of the National Emergency Operations Centre and the opening of 20 shelters. In Saint Vincent and the Grenadines, the Milton Cato Memorial Hospital went into emergency operations mode. In Saint Lucia, communication with the population was intensified. On 29 September, there were reports of evacuees, some power outages, and floods.

On 4 October, Matthew—now a Category 4 hurricane—made landfall near Les Anglais, Haiti, with winds of up to 145 mph. Consequently, an alert went into effect for Haiti, the Bahamas, the Turks and Caicos Islands, and Cuba. It was reported that 601,241 people were in shelters in the affected areas.



Emergency Operations Center in Port-au-Prince, Haiti.





In the Bahamas, PAHO supported the Ministry of Health in the evaluation of needs for the Sandilands Rehabilitation Centre, the Princess Margaret Hospital, the South Beach Health Centre, and the Anne's Town Clinic.

In Cuba 320,00 people were evacuated and 44 health facilities were damaged. In response, 30 EMTs were deployed to risk areas, continued epidemiological surveillance and the provision of supplies for health services and water quality were ensured, as well as the rehabilitation of health centers, including the restocking of equipment and essential supplies. Jamaica reported 900 people in shelters. Hospitals were open for emergencies only. The Ministry of Health implemented health monitoring systems with regard to water quality, sanitation, food security, and disease surveillance. The Dominican Republic put its 31 provinces bordering Haiti on red alert. There were 366 official shelters activated, and 35,000 families were affected. Colombia reported 15,000 affected families, especially in the departments of La Guajira, Magdalena, César, Bolívar, and Atlántico.

Haiti

In Haiti, more than 750,000 people were left in need of international assistance after the passage of Matthew. More than two million were directly or indirectly affected. Approximately 50% of the health infrastructure was affected. Out of 15 hospitals, one was completely evacuated and five were inaccessible. Furthermore, 75% of Acute Diarrhea Treatment Centers (CDTA) were damaged.

Haiti after Hurricane Matthew, in figures

	1,410,744	people in urgent need of humanitarian assistance
	175,509	people in shelters
	2,271	suspected cases of cholera
	128	missing persons
	546	deaths
	65	affected health care facilities

PAHO Haiti activated its Emergency and Disaster Preparedness and Response Plan, set up a situation room, and deployed two logistics experts and a health coordination expert.

PAHO/WHO working priorities in the field focused on supporting the Ministry of Health, on access to medical care and drinking water, and on health and hygiene conditions, in addition to the recovery and strengthening of health services.

During the response phase in Haiti, two field offices were set up in Jérémie and in Les Cayes to support the delivery of basic medical supplies and equipment, and the transfer of experts to the field. More than 1.5 million doses of cholera vaccine were distributed, targeting approximately 800,000 people. In December 2016, PAHO/WHO estimated that the needs of the health sector for rehabilitation and resiliency measures would total US\$ 230 million. 🌐

The EMT initiative moves forward in the Americas

injured (60% of the global total).¹

In the Haiti earthquake, 30 of 49 hospitals were damaged or destroyed. The immediate impact on health services was devastating in terms of professional staff and infrastructure, especially since the number of hospital beds (1.3 per 1000 population) and health workers (3 per 10,000) was already insufficient.² In the Chile earthquake, 21.9% of hospital beds (4,249) were lost in the affected area.³ In Ecuador 29% of available beds (517) were lost, 86% of them in the public health network.⁴

Analysis of the health response to the 2010 earthquake in Haiti demonstrated the need to develop principles, criteria, and standards for medical team response in emergencies and disasters. Based on this analysis, the Pan American Health Organization brought together a group of experts, in December 2010 in Cuba, to lay the groundwork of the World Health Organization's global Emergency Medical Teams (EMT) initiative.

Twelve countries in the Americas are already adopting the EMT initiative as part of their national systems to ensure that emergency medical teams can be requested and deployed in the shortest possible time, while building national medical emergency teams that are ready to be deployed to neighboring countries or internationally.

Costa Rica is one of the countries that has developed national medical teams in line with



Verification of water and sanitation capacities of the Costa Rican Social Security Fund's EMT.

EMT standards. It is on its way to becoming the first country in the Americas to receive WHO International EMT classification.


In February of this year, after a rigorous verification process, an international expert mission confirmed that the EMT of the Costa Rican Social Security Fund meets the standards and principles established by WHO and is ready for international deployment to emergencies and disasters.

The purpose of classification is to have a global roster of medical teams that meet WHO's minimum standards for EMTs and that can be deployed to emergencies in the shortest possible time.

Costa Rica's Type 1 EMT can serve at least 100 people per day on an outpatient basis, in addition to stabilizing patients

who need to be transferred to higher-level services. This EMT needs to be self-sufficient for at least two weeks, the minimum expected mobilization period.

To date, EMTs from Russia, China, Japan, Australia, Israel, and the United Kingdom have been classified. Costa Rica will be the seventh country at the international level and the first in the Region to be added to the WHO roster. About a third of the countries registered for the verification process are in the Americas.

Since the initiative was launched, EMT implementation in the Americas has had financial support from Spanish Cooperation, which has also shared its own experiences in the development and deployment of EMTs. 

1 The OFDA/CRED International Disaster Database. EM-DAT. Reviewed: 16 March 2017.

2 PAHO. Health response to the earthquake in Haiti. January 2010.

3 Information from the Ministry of Social Development of Chile, 27 August 2010.

4 Preliminary report on the Ecuador earthquake. DALA SALUD. 2016.



Participants at the parallel session: Health Intersections and Disaster Risk Reduction.

Regional Platform for Disaster Risk Reduction in the Americas

The Fifth Regional Platform for Disaster Risk Reduction in the Americas was held in Montreal, Canada, from 7-9 March 2017. Delegates from across the Americas met to discuss efforts for disaster risk reduction. Key outcomes included the adoption of the Montreal Declaration and the Regional Plan of Action, both designed to meet the commitments of the Sendai Framework for Disaster Risk Reduction 2015-2030.

Parallel Session: Health Intersections and Disaster Risk Reduction

In recognition of the important role of the health sector in the Sendai Framework, the Public Health Agency of Canada (PHAC) and the Pan American Health Organization (PAHO) co-hosted a parallel interactive session to explore key intersections of health and disaster risk reduction. Issues related to the implementation of the Plan of Action for Disaster Risk Reduction

2016-2021, approved by the Ministers of Health of the Americas in September 2016, were addressed.

The session had six speakers and was co-chaired by Elaine Chatigny, Deputy Vice-Minister of PHAC's Security Infrastructure Branch, and Dr. Ciro Ugarte, Director of PAHO's Department of Health Emergencies.

The first part focused on disaster risk reduction, tools and approaches to understanding and reducing risk. Celso Bambaren, from Peru, gave a presentation

The Montreal Declaration highlighted the approval in the health sector of the Plan of Action for Disaster Risk Reduction 2016-2021 by the Ministers of Health of the Americas, in September 2016, and the contribution it could make to the implementation of the Sendai Framework. Read more at <http://eird.org/rp17/docs/montreal-declaration.pdf>.

and led a discussion on the mutual understanding of the roles and responsibilities of the health sector in multi-hazard risk management, and shared a methodology for risk assessment, vulnerability and systemic capacity to deal with disasters.

José Luis Cruz, from the Dominican Republic, presented how biological hazards can multiply the risk of disasters. He used cholera in Haiti as an example, and how the Dominican Republic worked with other sectors of society to mitigate the consequences of poor water management and, ultimately, to avoid an outbreak of cholera like the one in their neighboring country.

PAHO's Roberta Andraghetti, closed the first hour explaining the main health frameworks for capacity building in the sector, such as the International Health Regulations (IHR), and how, together with risk assessments, efforts strengthening the capacity of the IHR can provide a basis for investment that helps reduce the risk of disasters.

The second part focused on physical investments for critical health infrastructure, the challenges and opportunities faced


by health professionals in managing the inherent programs, in the context of climate change adaptation and conflict zones.

Josefina Arellano, from Mexico, led a presentation on Mexico's safe hospitals advanced program and its legal framework, as well as the governance, training, evaluation and certification/accreditation program, which allows Mexico to prioritize improvements to infrastructure and reduce the risk of disasters, so that it is operational during emergencies and disasters.

Sharleen DaBreo, from the British Virgin Islands, lectured on Smart Hospitals, within the framework of Caribbean projects, which brings together concepts and funding for safe hospitals with environmentally sustainable and disaster-resilient measures. Through the application of a toolkit for Smart Hospitals and nonstruc-

tural adaptation measures, facilities become centers of care for many communities and demonstrate the success of integrated approaches to reduce the risk of disasters.

A hospital is "smart" when it is safe and includes measures to mitigate climate change. Other sectors, such as education (schools), have adopted the concept.

Jenny Hernández, from Honduras, closed the presentations with a discussion on the dangers of health interventions (such as vaccination) in areas prone to violence. She explained the challenges and strategies needed to ensure that people in areas prone to violence have access to the medical care they require. She also highlighted best practices focused on health professionals to ensure that they have the communication tools and skills needed to deliver health services in hostile environments. 



The Caribbean improves contingency plans in Smart Hospitals

Ensuring that each facility participating in the Smart Hospitals initiative develops and maintains a comprehensive contingency plan: this was the goal of a series of workshops held in Saint Vincent and the Grenadines, Saint Lucia, and Dominica as part of the PAHO/WHO Smart Hospitals Project.

The sessions were divided into two parts: the first covered the concepts and theoretical aspects of contingency planning; the second focused on the practical application of knowledge and experience sharing.

Health workers—including health disaster coordinators and representatives


from fire services and from the Department of Maintenance who provide services to health facilities all over the country—were retrained, using “smart hospital” parameters, in contingency planning and methods to respond effectively to future events. Expected results include:

1. Increasing understanding of the need for contingency planning in health facilities;
2. Identifying key components of the contingency planning process;
3. Sharing and discussing examples of best practices regarding field experience in response;

4. Providing in-depth guidance for developing a contingency planning document to improve coordination and collaboration among health services at the national level; and

5. Providing practical training on the use of safety equipment in health centers.

The workshops emphasized the importance of achieving an “A 70+” score on the Hospital Safety Index (HSI), considering such aspects as:

- Understanding the context of hazards and threats
- Profile and community context and resources mapping
- Introduction to contingency planning
- Creating associations
- Components of fire safety in health centers. 



Fire-fighting practice.

“Taking Care of Our Water”: An initiative in Bolivia to cope with the national drought emergency

On 21 November 2016, the government of the Plurinational State of Bolivia declared a National Drought and Water Shortage Emergency. PAHO/WHO, together with the Ministry of Health, activated support mechanisms for monitoring water quality, epidemiological surveillance and outbreak control, and risk communication.

The chronic drought that began at the end of 2015 and worsened during 2016 caused a severe water supply crisis in at least five departmental capitals and one rural area. The city of La Paz, administra-

tive capital of the country, was undoubtedly the hardest hit, with the particular characteristics of a critical urban emergency warranting urgent response measures.

The Ministry of Health, which considered that there was an emergency health risk due to possible outbreaks of water-borne and food-borne diseases, agreed on a collaboration plan with PAHO/WHO, carried out through the Ministry's environmental health units and epidemiology units, centering on three lines of work:

Monitoring water quality

- Support for creating the Monitoring and Quality Control Committee for drinking water.
- Analysis of residual chlorine and turbidity in 25 health facilities of the city of La Paz, five hydrants, and seven hemodialysis units of the National Program.
- Training in water and sanitation in emergencies for 25 environmental health technicians (from eight departmental health services, known as SEDES).
- Installation of two centrifugal water treatment pumps for the renal hemodialysis unit at Obrero Hospital.
- Provision of 25 chlorine comparators for 25 health facilities in the affected area.
- Training in drinking water treatment for staff from 25 health facilities.
- Renewal of health services: delivery of water storage tanks, with a capacity of 3,000 liters, and water kits (dispenser and containers) to 25 health facilities.
- Delivery of 1,500 bottles of water purification tablets to the Ministry of Health.
- International technical assistance with the support of the regional water and sanitation team.

Epidemiological surveillance and control of outbreaks caused by contaminated water consumption

- Permanent monitoring of the endemic channel.
- Theoretical and practical workshops on outbreak control for rapid response teams and *Mi Salud* (My Health) teams in five departments of the country: Potosí, Chuquisaca, Tarija, Cochabamba, and Oruro.

Risk communication

- Development of educational and informative materials targeting different groups (health workers, health facilities, and general public): advertising spots, posters, flyers, etc.

Key figures when the National Emergency was declared

- More than 177,00 families affected.
- Five major cities with serious water shortages.
- 64,000 families affected by water rationing in the city of La Paz.
- More than 624,000 hectares of crops affected (VIDECI).
- Nearly 566,000 head of cattle affected (VIDECI).



Water distribution in a neighborhood of Health Network 4.



Intersectoral Committee for Monitoring Drinking Water Quality. On-site analysis of residual chlorine and turbidity (hydrant at Obrero Hospital).



Public health education at intermediate water distribution points Alto Obrajes, city of La Paz.

SIMEX 2016 confirms the relevance of EMT standards and tools

After five months of preparation, the SIMEX 2016 earthquake simulation exercises were held in Bogotá from 26 to 30 September, with the participation of 779 delegates and representatives from 25 countries. These included national and international Urban Search and Rescue (USAR) teams, national and international EMTs, a United Nations Disaster Assessment and Coordination (UNDAC) team, Humanitarian Country Team (HCT), representatives from the public and private sectors, observers and monitors.

This SIMEX, which included two days of classroom sessions and a three-day simulation exercise, provided a satisfactory confirmation of the standards and coordination tools used by the EMTs, both at the national and international levels. It also identified the priorities and elements to be

incorporated by the Ministry of Health into the ongoing EMT creation program and into the structuring and strengthening of the National Health Emergencies Operation Center (Centro de Operaciones de Emergencia, or COE), as well as their organizational ties to the National Disaster Risk Management System and the United Nations system, in the event of a disaster situation.

The EMT aspect of this SIMEX was a joint project of PAHO/WHO, the Ministry of Health and Social Protection, and the Bogotá Health Department's Emergency Response Center (CRUE), together with Colombia's National Risk Management Unit (UNGRD) and OCHA. Participants in the exercise also included the National Health COE, the District Health COE, CICOM (Medical Information and Coordination Team), 20 EMTs (14 international and 6

national), and the Health Cluster.

The participants highlighted the importance and relevance of USAR-EMT coordination, both in this kind of exercise and in actual emergency situations, seeing opportunities for networking and mutual learning, which are necessary to improve coordination and joint actions during emergencies.


The SIMEX was organized by the International Search and Rescue Advisory Group (INSARAG) for the Americas, chaired by Colombia, through the UNGRD Director, the INSARAG-OCHA Secretariat, the District Institute of Risk Management and Climate Change (IDIGER) and PAHO/WHO. 



Photo: Luis de la Fuente, PAHO/WHO

SIMEX participants and simulation exercise.

Hurricane Otto: Early mobilization strengthened health services' response capacity in Nicaragua and Costa Rica

From 16 to 22 November 2016, a severe weather system developed into Hurricane Otto, and affected communities in Nicaragua and Costa Rica.

In Costa Rica, 461 communities nationwide reported damages due to the storm's impact, which affected 10,831 people (with 10 deaths and 5,363 people sent to 42 temporary shelters).

In Nicaragua, there were no deaths; however, there were nonstructural and operational damages in at least two health care facilities.

Emergency response

The coordinated response of risk management and emergency and disaster response institutions from both countries (National Commission for Risk Prevention and Emergency Care of Costa Rica/CNE and National System for Disaster Prevention, Mitigation and Assistance of Nicaragua/SINAPRED)—facilitated the timely evacuation of approximately 15,700 people: 4,000 in Costa Rica and 11,678 who were along the hurricane's path in Nicaragua.

Health sector response in Nicaragua

The early pre-positioning of eight medical teams made it possible, during the green alert phase, for the commission in charge of shelters and temporary housing to organize and ensure sanitary conditions and set up the necessary medical services, based on the Family and Community Health Care Model. Local health services focused on reorganizing, through their Local Emergency Health Plans and Hospital Plans for external and internal emergencies.

Costa Rica

The Ministry of Health's Operations Coordination Center (led by the MoH management and technical team), in coordination with the affected regions, determined the health response actions to be taken. Likewise, a coordination center was set up at the hospital in Upala to manage information and facilitate coordination within the health sector as a whole: Ministry of Health, the Costa Rican Social Security Fund, the Red Cross, and the Water and Sewerage Systems Institute (AyA).

Impact on the population

Country	Total persons	Communities	Dwellings	Deaths	Shelters	Housed in shelters
Costa Rica	10,831	461	1,610	10	42	5,363
Nicaragua	4,135	73	827	0	152	11,678

Resumen del impacto en la infraestructura sanitaria

Country	Hospitals*	EBAIS* / Health Centers	Regional Health Authority	**CEN-CINAI
Costa Rica	2	2	1	8
Nicaragua	0	2	S/D	S/D

* Basic Comprehensive Health Care Teams (Costa Rica).

** Education and Nutrition Centers—Comprehensive Child Care Centers (Costa Rica).



Nicaragua: Mobile medical teams



Costa Rica: Mobile medical unit deployed to Upala.



Dr. Gina Tambini, PAHO Representative in Ecuador, and participants in the workshop.

Ecuador

The Ecuadorean health sector: lessons learned post-earthquake

The regional meeting “Learning from the Ecuadorean Earthquake: Towards Risk Reduction in the Health Sector” was held from 24 to 25 October in Quito, Ecuador. Its goal was to strengthen disaster risk management in the health sector based on experiences from the April 2016 earthquake. The participants also analyzed lessons learned from the response, and identified the priority areas to be strengthened in order to improve comprehensive response to emergencies and disasters, at both the national and regional levels.

Participants included a wide range of health actors at the local, regional, and national levels from the Ministry of Public Health and the public and complementary networks, as well as health professionals representing Ministries of Health from


countries around the region.

Major issues addressed during the workshop included the earthquake’s impact on the health sector, response coordination, comprehensive response, logistical management of humanitarian assistance, EMTs, early recovery of health services, rehabilitation and reconstruction without replicating vulnerabilities, and providing health care to displaced populations in shelters.

The event made it possible for the participants to analyze the information shared during the different presentations and forums, with the following overall conclusions:

- Disaster risk reduction programs should make health services safer and more resilient, both in terms of existing hospitals and new projects, through compliance

with the norms and standards for accreditation and by designing emergency plans with a multi-hazard approach.

- A comprehensive response from the health sector is crucial. Capacity-building is needed in coordination, incident management, data management, the design of minimum standards and requirements for EMTs and the CICOM (Emergency Medical Team Coordination), human resources training, managing donated medicines and supplies, and managing strategic warehouses.
- Efforts in early recovery should concentrate on human resources, communications, and basic services, in order to then move on to rehabilitation and reconstruction. 



The US National Library of Medicine

trains librarians in health information during disasters

The United States National Library of Medicine (NLM) is providing training and support for librarians to prepare them for providing health information in response to disasters.

Through the NLM Disaster Information Specialist program, librarians and other information professionals learn to support emergency planners, first responders, and health workers with critical information in times of disaster.

Depending on the specific risks in their communities, these “information first responders” can acquire training in natural disasters, such as hurricanes and earthquakes, or public health emergencies, such as the Ebola or Zika virus epidemics.

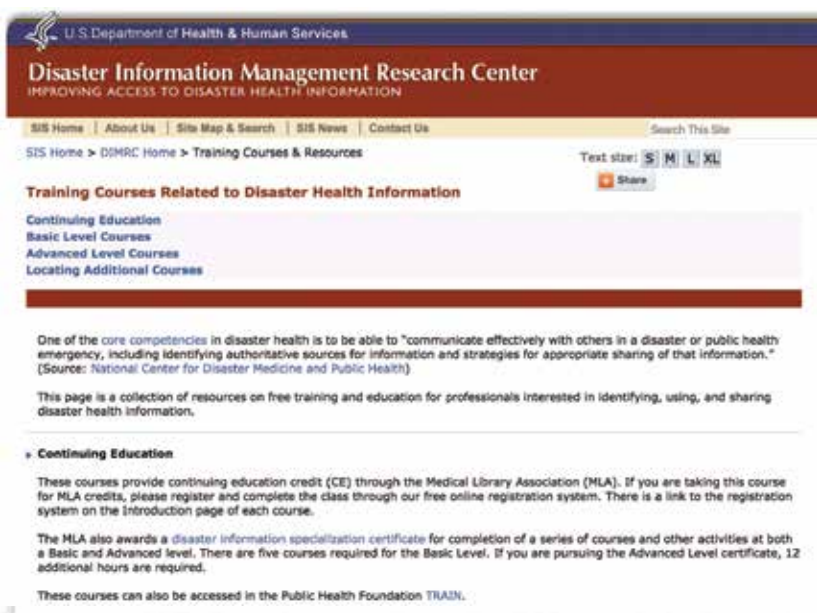
The NLM Disaster Information Specialist program includes:

- Online training courses
- Monthly webinars
- Connection with like-minded professionals through email and social media

The online courses, recently updated and expanded, are free and open to all, and can be studied at one's own pace. The courses include:

- Disaster Health Information Sources: The Basics
- US Response to Disasters and Public Health Emergencies
- Information Roles in Disaster Management
- A Seat at the Table: Working with Local Responders
- Health and Disasters: Understanding the International Context
- CBRNE (Chemical, Biological, Radiological, Nuclear and Explosives) Standards: Health Information Resources


Students will enjoy the user-friendly, interactive online format, with the flexibility of being able to study whenever and wherever they want (internet connection required). These courses may also be used to comply with core competencies in their professional field, or to obtain continuing education (CE) credits.



These are the top ten reasons why information professionals take this NLM training:

1. It's free!
2. Earn continuing education credits.
3. Enjoy a user-friendly, online format.
4. Study wherever you want whenever you can.
5. Learn to work with a disaster team.
6. Choose basic or advanced courses.
7. Add “Disaster Information Specialist” to your résumé or c.v.
8. Know the core competencies required in the library and information field.
9. Connect with other professionals.
10. Be recognized as an information expert by your colleagues and the disaster task force.

To access these courses or learn more about them, see the NLM page “Training Courses Related to Disaster Health Information”:

<https://disaster.nlm.nih.gov/dimrc/trainingresources.html> 

Upcoming Events

WADEM Congress on Disaster and Emergency Medicine

25-28 April 2017/Toronto, Canada

<https://wadem.org/congress/toronto-2017/>

The Congress will bring together global experts to exchange knowledge and best practices on pre-hospital and in-hospital emergency medical care, disaster health and response, and emergency public health and safety.

2017 Global Platform for Disaster Risk Reduction

22-26 May/Cancun, Mexico

<http://www.unisdr.org/conferences/2017/globalplatform/en>


At the event, global progress in the implementation of the Sendai Framework for Disaster Risk Reduction will be reviewed.


Fourth International Congress and Fifth

22-26 May/Cancun, Mexico


<http://www.sochped.cl/noticias/informaciones/santiago-10-11-y-12-de-mayo-de-2017>


The main topic to be discussed at this meeting is the importance of psychology in the prevention, response, and recovery from emergencies, disasters, and catastrophes.


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