

# Disasters

## Preparedness and Mitigation in the Americas



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### Pandemic Influenza: Not just a health issue



Photo courtesy of FAO

Over the centuries, epidemics have caused a large-scale loss of human life, with diseases such as the plague, smallpox, tuberculosis, leprosy, and cholera reaching truly catastrophic levels. In the 20th century alone, three Type A influenza pandemics occurred in 1918, 1957 and 1968, causing millions of deaths worldwide. Past epidemics have had, and continue to have, an unusually detrimental impact on society. In addition to epidemiological problems, countries faced other crisis management challenges. The actual number of cases of a disease can be less relevant than the presence of the disease itself. The six deaths from the anthrax scare in the United States or the 44 deaths from SARS in Canada caused enormous socioeconomic repercussions, demonstrating that we are not fully prepared to handle these crises.

By late January 2006, the World Organization for Animal Health had already reported H5N1-type avian influenza in 19 countries. In that same period, the World Health Organization reported 152 confirmed human cases of H5N1-type avian influenza in five countries, resulting in 83 deaths. Preventive measures and disease control in birds are key to controlling the spread among the avian population and to stemming the mutation of the virus into one that can be easily transmitted from human to human. Once the transmission of this strain has taken root in the general population, the worldwide spread of the disease would be swift and practically inevitable.

#### Preparedness for a pandemic: a collective responsibility

Past influenza pandemics have taken the world by surprise, leaving insufficient time to respond adequately to the large number of patients and deaths or to the crises they have caused. Therefore, it is the responsibility of governments and communities to prevent such a scenario from occurring again. In Phase 3 (see chart on page 7,) the

*(continued on page 7)*

### PAHO Readies a Regional Disaster Response Team



Photo courtesy of Prensa Latina

Many countries in the Americas can, and have already dealt with the health impact of small or medium-size emergency situations using local resources and staff. However, major sudden-impact disasters completely overwhelm the affected country's capacity to respond. Worse yet, when a disaster occurs simultaneously in several countries, it limits the capacity of any one country to respond to its own needs, let alone to assist its neighbors. The 2004 and 2005 hurricane seasons brought to light once again this dilemma. And the problem is not exclusive to this Region. Even large countries can require external assistance from specialized public health experts, as was the case following the earthquake and tsunami in South Asia. More on page 2 about PAHO's steps to solidify this worldwide response.

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**Pan American  
Health  
Organization**



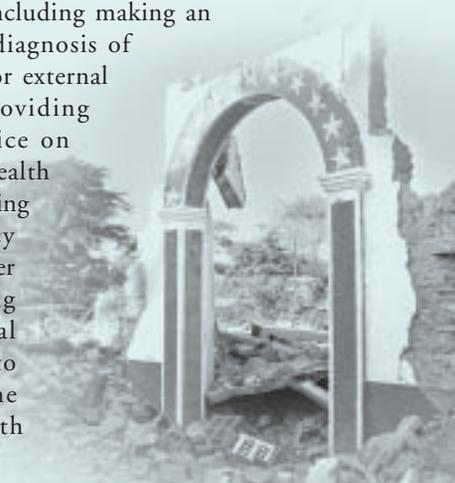
Regional Office of the  
World Health Organization

## Regional Disaster Response Team

For more than two decades, PAHO has worked with a small team of health professionals based in Caribbean countries to respond to disasters that exceed a country's capacity to deal with the health consequences. However, in 2004 the impact and frequency of the hurricanes that struck that region exceeded the team's limited response capacity. A lack of appropriate logistical and communication equipment also significantly reduced effectiveness. Unfortunately, this is not exclusively a Caribbean problem. Hurricane Mitch was a disaster of such overwhelming proportions in Central America, that PAHO mobilized 50 international experts from unaffected countries to deal with the health aspects.

Given these limitations, PAHO/WHO is expanding the capacity and flexibility of its Disaster Response Team. The selection of team members from among PAHO staff and experts regionwide is underway. Many of these experts have provided ad hoc assistance in areas such as damage and needs assessment, water quality monitoring, epidemiological surveillance and vector control.

Team members will meet in February to update technical and administrative procedures, clarify their functions and discuss cross-cutting issues such as the collection, analysis and management of post-disaster information. In future large-scale disasters, the support they provide will take many forms, including making an authoritative diagnosis of health needs for external assistance; providing technical advice on post-disaster health issues; establishing an emergency operations center and working with national authorities to coordinate the overall health response.



## PAHO/WHO Task Force for Epidemic Alert and Response

Planning for an influenza pandemic is a complex process that requires coordinated efforts and an approach that best utilizes an organization's expertise. PAHO/WHO has begun this process by creating a Task Force on Epidemic Alert and Response. This Task Force will advise on preparedness, readiness and response activities to address the risk of an influenza pandemic, including when to implement the WHO International Health Regulations (IHR). The purpose of the regulations is to ensure maximum security against the international spread

of diseases. WHO adopted new regulations in May to manage public health emergencies of international concern.

The PAHO/WHO Task Force has prepared a framework for responding to an influenza pandemic, assigned responsibilities to its public health programs and set up coordination mechanisms. PAHO will support countries to strengthen core capacities for pandemic influenza and other diseases subject to the IHR-2005 and will establish coordination mechanisms with international organizations and regional integration systems.

### Disaster Office for Central America Moves to Panama

PAHO has moved its Disaster Program for Central America from Costa Rica to Panama, where several UN agencies and major NGOs have regional disaster offices.

For information on PAHO's disaster preparedness and mitigation activities in Central America, contact Dr. Alejandro Santander at [santanda@paho.org](mailto:santanda@paho.org); phone (507) 317-0971; fax: (507) 317-0600.

### New Leader for WHO Health Action in Crises

The World Health Organization's Department of Health Action in Crises (HAC) is now led by Dr. Ala Alwan, the Director-General's Representative for Health Action in Crises. Dr. Alwan replaces Dr. David Nabarro who has been appointed UN Coordinator for Avian and Human Influenza.

# Other Organizations

Other Organizations

## Johns Hopkins University and WHO Call for Guidelines for Children during Emergencies

Researchers from the Johns Hopkins Bloomberg School of Public Health and the World Health Organization have concluded that guidelines for the care of children in emergency situations need to be developed and distributed to international relief organizations.

The study highlights the fact that children under five have the highest mortality rates following armed conflicts, natural disasters, population displacements or famine situations. International agencies are less likely to have formal guidelines on managing neonatal problems; the diagnosis and management of children with HIV; active case-finding and treatment of tuberculosis; pediatric trauma; or the diagnosis and treatment of mental health problems in chil-

dren. Often guidelines are not adapted to the different types of health-care workers who provide care in complex emergencies. Evidence-based, locally adapted guidelines for the care of children in complex emergencies should be adopted by ministries of health, supported by WHO and UNICEF, and disseminated to international relief organizations to ensure appropriate, effective, and uniform care.

Read or download this study in the January issue of the Bulletin of the World Health Organization at [www.who.int/bulletin/en/](http://www.who.int/bulletin/en/).



## MSF Manual on Mental Health

Médecins Sans Frontières (MSF) has worked worldwide in acute emergency situations, providing mental health services and psychosocial interventions to those affected by chronic or complex emergencies. Based on these experiences, MSF has published a new manual titled *Psychosocial and Mental Health Interventions in Areas of Mass Violence*.

Although the guidelines focus on manmade disasters, the principles have proved to be just as effective in the context of natural disasters. The manual is useful for those in coordination positions (medical and management) to strategize, plan and supervise a psychosocial or mental health program component. Nevertheless, others interested in psychological interventions related to conflicts can also use the manual. However, it is not intended to serve as a handbook for counseling or psychotherapy. The manual is divided into three parts. The first examines general concepts about trauma and its consequences and the need for mental health programs. The second part looks at programming psychosocial interventions, and the final section covers assessment, planning, monitoring and training.

Download the guidelines from the MSF Holland website at [www.artsenzonderegrenzen.nl](http://www.artsenzonderegrenzen.nl). Send comments to [Kaz.de.Jong@amsterdam.msf.org](mailto:Kaz.de.Jong@amsterdam.msf.org).

## 2005 World Disasters Report

People need information as much as water, food, medicine or shelter. Information can save lives, livelihoods and resources. It may be the only form of disaster preparedness that the most vulnerable can afford. The right kind of information leads to a deeper understanding of needs and ways to respond. The wrong information can lead to inappropriate, even dangerous interventions. This is the premise of the IFRC's 2005 World Disasters Report, which focuses on information in disaster situations.

This year's considers the quality of the communication that takes place between those involved in disasters and what impact this information has on the people caught up in a crisis. The report calls on agencies to focus less on gathering information for their own needs and more on exchanging information with the people they seek to support. Download the report from the IFRC web site at [www.ifrc.org](http://www.ifrc.org).



Recognizing that the avian flu threatens the entire global community, Ministers of Health from the Andean Region pledged to strengthen mutual support mechanisms, including epidemiological surveillance and laboratory networks as well as create an ad hoc forum in which to exchange information and prepare a joint plan to face this public health threat.



Cuba is slated to host the VII International Disaster Conference in Havana in June 2006. Complete information and agenda at [www.loseventos.cu/desastres2006](http://www.loseventos.cu/desastres2006).

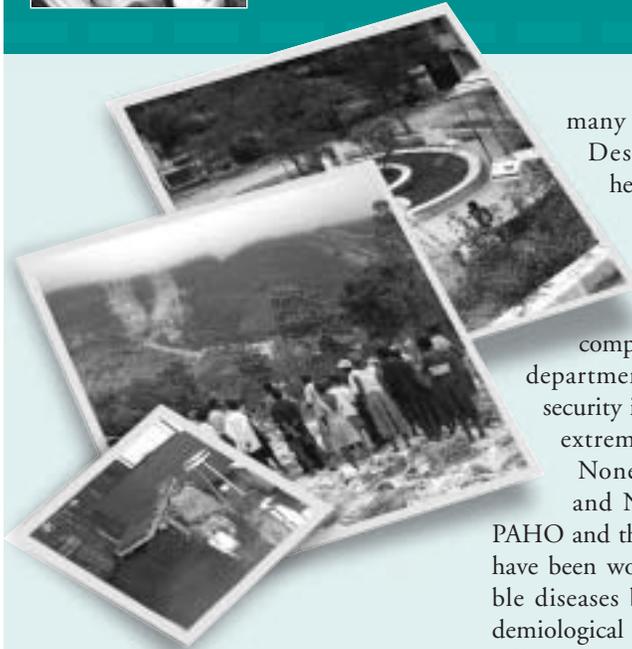


The Spanish Red Cross has an excellent Virtual Library that includes many Spanish-language publications related to emergencies and disasters. All can be downloaded in full text from [www.cruzroja.es/](http://www.cruzroja.es/).

# Member Countries



## Update on Health Emergency Activities in Haiti



A large majority of the Haitian population remains extremely vulnerable to a variety of health emergencies such as infectious diseases, a lack of access to emergency health care and a shortage of treatment and essential medicines for chronic conditions. Haiti ranked last on UNDP's Human Development Index and is also one of the Region's most disaster-prone countries.

The last two years have been especially difficult for Haiti. A political crisis brewed for months, culminating in the departure of the president in February 2004 and causing hundreds of deaths or serious injuries due to the ensuing civil unrest. In May 2004, heavy rains caused landslides and floods in Belle Anse and Fonds-Verrettes, affecting 30,000 and leaving a death toll close to 2,000. Several months later, tropical storm Jeanne destroyed the most fertile areas of the country and flooded the city of Gonaives, once again causing thousands of deaths and leaving

many more homeless and injured.

Despite these grim situations, health disaster programs continue.

Even before the May 2004 floods, work was underway to set up an epidemiological surveillance system, composed of 37 sentinel sites in five departments. Unfortunately, a lack of security in many areas of Haiti made it extremely difficult to collect data.

Nonetheless, national authorities and NGOs, in collaboration with PAHO and thanks to international support, have been working to control communicable diseases by creating a simplified epidemiological surveillance system to specifically monitor risks linked to floods. Other activities included providing medicines, medical supplies and equipment; vector control activities; providing drinking water; training in mass casualty management and emergency procedures and logistical support.

According to the UN, the security situation in Haiti continued to deteriorate over the course of 2005, with widespread kidnappings and an increased level of violence in many residential areas of the capital during the first six months of the year. In the last three months of 2005, more than 200 kidnappings were reported to authorities, although the actual number might be much higher. Despite this, UN agencies continued to work in Haiti under a UN Phase 3 level of security, which severely restricted the movement of staff, particularly from the capital to the provinces, but also within the capital itself. Some areas of Port-au-Prince remained off limits to UN staff.

In this climate of uncertainty, PROMESS, the PAHO/WHO-managed project that acts as Haiti's pharmacy for

essential medicines, attempted to continue meeting one of the country's greatest health needs. However, as it is located in one of the most dangerous parts of Port-au-Prince, Cité Militaire, PROMESS staff was directly affected by the violence in early 2005. Consequently, very few beneficiaries (including hospitals, health departments, international organizations and international NGOs) were able to obtain a regular and reliable supply of pharmaceuticals. A security escort and an armed vehicle from MINUSTAH, the United Nations Stabilization Mission in Haiti, were required just to get to the PROMESS warehouse.

PROMESS supports its operations from the cost-recovery sale of medical supplies and equipment; however, decreased activity translated into reduced operating income. Efforts to save what is, in effect, Haiti's main pharmacy from theft and financial collapse proved insufficient under these difficult circumstances. In the end, the solution was to relocate the warehouse to a more secure site with the financial support of the European Union (ECHO).

Despite the additional difficulties of the last several years, the national health disaster program and the Civil Protection are continuing their efforts to reduce the impact of all types of disasters. An emergency preparedness advisor is now on board in the PAHO Country Office, under a special disaster preparedness and risk management project funded by the Canadian International Development Agency (CIDA). For more information on PAHO's emergency health activities in Haiti, contact Ellen Verluyten at [verluyten@paho.org](mailto:verluyten@paho.org).



## Caribbean Countries Review Mass Casualty Plans

The West Indies is gearing up to host the Cricket World Cup beginning next March 2007. Events will take place in eight venues in the Caribbean and are sure to draw huge crowds (the television audience is expected to reach 2 billion people!) In preparation for these mass gatherings, Member States are reviewing their hospital preparedness plans. PAHO is helping to organize simulation exercises and other training for emergency care and treatment, incident command systems and mass casualty management. Look for more in upcoming issues of this newsletter.



## Peru Revisits Multisector Emergency Plans

Peru's Ministry of Health organized a meeting of the nation's epidemiology, disaster and environmental health networks to assess the country's capacity to respond to epidemics, natural disasters and other health emergencies. Participants from the Ministry in Lima and 35 regional offices were joined by other national agencies and PAHO/WHO. They analyzed the current situation in the health sector and identified priority areas to improve coordination, and internal and external capacity. These will be included in a joint action plan. For more information, contact Dr. Luis Suárez at [lsuarez@oge.sld.pe](mailto:lsuarez@oge.sld.pe).



Photo courtesy of FAO

## Paraguay Steps Up Disaster Training

In Paraguay, several national health institutions participated in two popular disaster courses—Evaluation of Damage and Needs (EDAN) and Hospital Disaster Planning (PHD). The EDAN course used a case study of a damage and needs assessment following floods in 2003 in Santa Fe, Argentina. Participants emphasized the importance of creating an operational situation room for quick decision making. Using the Previsión Social Hospital in Paraguay, site of the PHD course, as a model, participants helped to identify factors that put this facility at risk. They also prepared a hospital survey and a hospital disaster plan.

## ECLAC Study to Include Damage to Health Sector

The Economic Commission for Latin America and the Caribbean is preparing an evaluation of the socioeconomic impact of Hurricane Stan, which lashed Guatemala with heavy rains in October 2005, causing devastating landslides. Guatemala's Ministry of Health contributed a significant amount of data to the study, which looked at damage to health infrastructure and equipment and how the health sector responded, including the deployment of medical teams, epidemiological surveillance and vector control as well as the distribution of medicines. For more information, contact Patricia Gomez at [pgomez@paho.org](mailto:pgomez@paho.org).

## Disaster Communications Workshop Issues Recommendations

Health workers and social communicators met with journalists in Bolivia during a workshop on how to establish a two-way dialogue, improve collaboration and become more effective in how we generate information in emergency and disaster situations. Among the recommendations: when setting up an emergency operations center, include a communications and information desk; strive to provide the most up-to-date, reliable and official information possible; avoid sensationalism; develop and/or improve good working relationships between the press and international organizations in "normal" times; and create national commissions with representatives of the press and communicators from key disaster agencies. For more information contact [marodrig@paho.org](mailto:marodrig@paho.org).

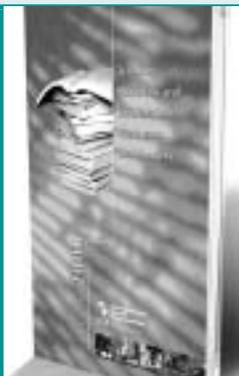
## Chemical Accidents Preparedness Continues



ETESB, Brazil's Environmental Sanitation Technology Company and a regional leader in assessing, preventing and preparing for environmental emergencies, joined forces with national authorities in Ecuador to carry out a course on chemical accidents. The course used a simulation exercise based on response to a chemical accident in a company that deals with hazardous materials. Participants assessed the situation, used protective gear to enter the facility, dealt with the chemical substances and provided treatment for the simulated patients. Ecuador has inventoried the capacity that currently exists at local and national level to deal with this type of emergency. For more information contact Carlos Roberto Garzon at [cgarzon@paho.org](mailto:cgarzon@paho.org).



## New Disaster Publications Catalog from PAHO/WHO



With the publication of a new print edition of its Disaster Publications Catalog, PAHO/WHO renews its commitment to disseminating, as widely as possible, information on the Organization's publications, training materials and other information resources on emergencies and disasters. PAHO is nearing its 30th year of working with Member States to prepare for and mitigate the effects of disasters on health. Access to this type of information continues to have tremendous technical and strategic value, both in terms of building capacity among the Region's health professionals and by advancing political and institutional commitments to disaster reduction. The new English edition of the catalog will be ready by April 2006 and the Spanish version will be ready in February. Both versions have

been updated to include all material produced or revised in the last three years.

As soon as any print catalog is issued, it's safe to assume it will quickly become outdated. That is why the print catalog is published much less frequently and much more emphasis is placed on the online Disaster Publications Catalog, which contains up-to-the-minute reviews of all new materials. The Internet-based catalog has served users well for several years by offering full-text access to a wide variety of materials. However, as the number of publications grows and the scope of the collection broadens, it is becoming more necessary to revamp the catalog and improve its search engine. This process has already begun and readers are invited to watch for the new user-friendly e-catalog on our website, [www.paho.org/disasters](http://www.paho.org/disasters), in late March or early April. The power of the Internet allows us to multiply and improve access to information. We ask all disaster-related organizations to support this effort by creating links to the online catalog or to specific documents on their own web sites. For more information, please write to [rperez@paho.org](mailto:rperez@paho.org).

## Guidelines Help to Keep Hospitals Safe from Floods

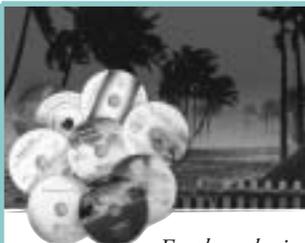


Hospitals are vulnerable to all types of natural hazards, and although we are more apt to recall the dramatic images of a health facility that has collapsed following an earthquake, floods can pose just as serious a threat. This new PAHO/WHO publication (Spanish only) looks at the most common health effects of floods. Additionally, it provides technical recommendations to prevent, mitigate, retrofit and reconstruct vulnerable health infrastructure which are at risk or have been affected by floods. Not only will these interventions reduce the impact of a disaster, they will also improve the response, particularly in times of crises when hospitals are needed most.

This publication points to ways to incorporate disaster mitigation measures into both existing hospitals and new health facilities in the design and construction stage. The emphasis lies on protecting a building as it relates to its environment by analyzing potential risks and vulnerabilities. Although it was written for technical and managerial health personnel, it is also useful for administrators, directors, engineers and architects responsible for the operation and maintenance of health facilities.

The book can be downloaded from the Publications Catalog at [www.paho.org/disasters](http://www.paho.org/disasters). A limited number of print copies will be available through the CRID (see page 8).

## PAHO/WHO Disaster Videos Now Available in DVD Format



The PAHO/WHO video library includes historic footage and edited documentaries on many major disasters of the 1980s and 1990s as well as shows on topics such as disaster mitigation, the SUMA system and international health relief assistance. Now, most PAHO/WHO video programs of the last 20 years have been converted to digital format and are available on DVD. Programs such as *Myths and Realities of Natural Disasters*, *Volcanoes: Protecting the Public's Health*, *The Earthquake in Mexico* and *The Earthquake in El Salvador*, in addition to many other titles, are still sought after for use in training and awareness programs. Consult the PAHO/WHO online publications catalog for a list of available titles.

## Pandemic Influenza

(from page 1)

most effective way to prevent a pandemic is to limit, as much as possible, the circulation of the virus among animals.

If prevention measures fail and a human pandemic virus emerges, with sustained person-to-person transmission, the beginnings of an influenza pandemic will be officially declared. This will oblige governments to take immediate steps beyond their routine response by activating multisectoral response mechanisms to deal with the potential crisis—with their own resources and with the technical leadership of the health sector.

Prevention of, and preparedness for, a potential influenza pandemic requires collaboration among the health, agriculture and other government sectors, as well as international organizations, universities, research centers and the private sector, much along the lines of national disaster reduction and relief strategies that are currently in place in the Americas. This model could be used to bring together national and international capacities to solve a common problem that transcends institutional and sectoral boundaries.

### Responding to a potential crisis

The public reaction alone to an influenza pandemic would be enough to produce a domino effect. For the health sector, this could mean an explosive increase in the number of persons (infected or not) seeking medical care. Consequently, countries will need to significantly expand the capacity of their health services, including emergency and routine services, intensive care and triage units, as well as morgues.

Turmoil and absenteeism in all sectors of the work force are likely to occur due to fear of contracting the disease or the actual illness itself. This would temporarily reduce capacity in many essential services such as health care, law enforcement, transportation, drinking water, power, telecommunications, and the economic and commercial sectors. Governments will be pressured into deciding whether or not to close places with

Inter-pandemic phase New virus in animal, no human cases	Low risk of human cases	1
	Higher risk of human cases	2
Pandemic alert New virus causes human cases	No or very limited human-to-human transmission	3
	Evidence of increased human-to-human transmission	4
	Evidence of significant human-to-human transmission	5
Pandemic	Efficient and sustained human-to-human transmission	6

Source: World Health Organization

high concentrations of people such as schools, markets, stadiums, commercial centers and public buildings.

Faced with a pandemic, national disaster offices should lead the set up an Emergency Operations Center and Committee, activate multisectoral readiness and response mechanisms, deploying emergency response teams, assigning financial resources, and speeding up routine logistics procedures. The emergency and disaster program of the Ministry of Health should also convene the Health Emergency Committee and promote multi-sectoral participation.

The health sector should also undertake other critical prevention and mitigation measures such as risk communications, epidemiological surveillance, that includes reports of unusual events, the activation of an early warning system, prescription and distribution of antiviral medications, vaccination of high-risk populations (if and when a vaccine is available), and exchange of information among institutions and countries. Additional public health measures would include quarantine and isolation procedures, business and travel restrictions, and risk reduction recommendations for international transport.

However, we should not lose sight of the fact that the risk of an influenza pandemic is just one of many public health risks countries face each day. Each month some 1.2 million people worldwide die from preventable diseases. With more than 45 million infected and 22 million dead, HIV/AIDS is poised to become one of the world's worst human catastrophes. A balance must be struck between national health priorities and commitments to global health security.

The media and the public will require clear direction and action from the highest levels of government, not only from Ministries of Health. The problem is potentially so great that all sectors must implement recommended measures in a coordinated fashion to control or mitigate the effects of the pandemic. The National Civil Protection Systems and Disaster Units in the Ministries of Health in Latin America and the Caribbean are key players in crisis management.

Authorities in other sectors, particularly agriculture and livestock, are critical to preventing the spread of the avian flu and reducing the risk of a pandemic virus from emerging. If and when sustained human-to-human transmission is confirmed, the health sector must take the lead in implementing epidemiological surveillance and public health measures to try to contain or delay the course of the pandemic. Each week that countries can slow the onset and spread of the pandemic represents an opportunity to reduce its economic and social impact.

Communicable diseases are bound to continue causing grave public health emergencies for decades to come. Although major efforts currently are underway in many sectors to deal with these risks, the health sector must actively involve and collaborate with other actors, a strategy which is not commonplace today. Stepping up preparedness now for an influenza pandemic—whether or not it materializes—is simply good for public health in general.

*We would like to thank the PAHO Unit of Communicable Diseases for their contribution to this article.*

# Selected Bibliography



S e l e c t e d B i b l i o g r a p h y

In light of the current interest in pandemic influenza, we have dedicated this space to a selection of articles on the topic. We also recommend visiting the WHO website ([www.who.int/csr/disease/avian\\_influenza/en/index.html](http://www.who.int/csr/disease/avian_influenza/en/index.html)) and the PAHO website ([www.paho.org/english/AD/DPC/CD/influenza.htm](http://www.paho.org/english/AD/DPC/CD/influenza.htm)) for more guidelines and recommendations on the subject.

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