

**Testimony of Dr. Dennis Carroll  
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**2009-H1N1 Influenza Outbreak**

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**Before the Committee on Foreign Affairs  
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Chairman Payne, Representative Smith, and other distinguished members of the subcommittee. I would like to thank you for convening this important hearing on the 2009-H1N1 influenza outbreak and for inviting me here today.

Since early April, cases of human infection with the Influenza A H1N1 virus have been confirmed in at least 21 countries, as of May 5. On April 29, 2009, the World Health Organization (WHO) raised its pandemic alert level to Phase 5, indicating sustained human-to-human spread of a novel virus in two countries in one WHO region. It is important to note that the WHO phases refer to geographic spread rather than severity. We do not know whether this outbreak will become severe or remain mild. Additional work is underway to determine the virulence of this virus.

Based on the growing threat of an influenza pandemic and in close coordination with other U.S. Government (USG) agencies including the Department of Health and Human Services (HHS), the Department of Defense, and the Department of State, the U.S. Agency for International Development (USAID) has mobilized critical resources to help control the spread of the 2009-H1N1 virus. USAID has provided \$5 million in support to WHO and the Pan American Health Organization to bolster disease detection and control efforts in Mexico, where the first 2009-H1N1 cases were detected. Additionally, this past Saturday USAID sent 100,000 sets of personal protective equipment (PPE) to Mexico to help protect disease surveillance workers and first responders from contracting or spreading the virus.

USAID is also providing support to the United Nations Food and Agriculture Organization (FAO) to conduct surveillance in swine in Mexico and other parts of Central America to determine if swine are infected with this virus. In addition, the USAID team in Mexico has been working in close coordination with the Department of Health and Human Services to facilitate the delivery of 400,000 treatment courses of Tamiflu to Mexico.

Even as we have provided immediate assistance for the events in Mexico, we have also been moving aggressively to ensure the rapid mobilization of all necessary Agency resources to address the potential global consequence of a pandemic. On May 1, USAID's Acting Administrator, Mr. Alonzo Fulgham, established an Agency-wide 2009-H1N1 Influenza Task Force to ensure that issues related to the mobilization of all necessary USAID resources are addressed as quickly as possible. We will be focused on assisting countries around the globe as appropriate to:

1. restrict the spread of the 2009-H1N1 virus,
2. reduce the mortality and social and economic impact from the disease, and,
3. respond to emergency needs in countries affected by the virus as needed.

In addition, USAID's Office of Foreign Disaster Assistance (OFDA) and Bureau for Global Health activated a Washington, D.C.-based response management team to coordinate the United States Government's international humanitarian response to pandemic influenza, facilitate information sharing, and provide assistance through international and domestic agencies to limit the spread of the 2009-H1N1 virus. USAID/OFDA has prepared a Pandemic Response Plan targeting the humanitarian

needs of 1 billion people in the developing world. This plan builds directly on the Pandemic Preparedness platforms that USAID has been developing in 30 countries over the past two years.

While the current situation regarding a possible 2009-H1N1 influenza pandemic is of concern, it is important to note that due to the work over the last three years, pandemic preparedness measures are in place at the international level. In a statement on April 29, WHO Director-General Margaret Chan noted that the world is more prepared for an influenza pandemic now than at any time in history. This is in large part, she emphasized, due to the investments made over the past several years in responding to the pandemic threat posed by H5N1 avian influenza.

Since 2005, USAID has invested \$543 million to build capacities in more than 50 countries for monitoring the spread of the avian influenza virus among wild bird populations, domestic poultry, and humans and to mount rapid and effective containment of the virus when it is found. USAID has also made significant efforts to support more than 30 countries to prepare plans to respond to a possible influenza pandemic. Recent analyses indicate that U.S. Government and international efforts to control the threat posed by the avian influenza virus have contributed to a significant reduction in the number of reported poultry outbreaks and human infections, and a dramatic reduction in the number of countries affected. At the peak of its spread in 2006, avian influenza had been reported in 53 countries across three continents. With the end of the 2008/2009 transmission season only nine countries were affected. Four of the affected countries, three of which were in Asia, accounted for more than 90% of all reported outbreaks. Although these apparent successes are significant, avian influenza remains a serious threat: it continues to spread in poultry, the mortality rate among infected humans remains above 60%, and the potential for it to again spread rapidly across the globe and cause a human influenza pandemic remains.

As noted earlier, USAID has been helping prepare for just such an event for the past two years. Through a focused partnership with the UN family of agencies, the International Federation of Red Cross and Red Crescent Societies and a coalition of non-governmental organizations, the level of preparedness to respond to a WHO Phase 6 pandemic (if declared) has been significantly improved in 30 countries across Africa, Asia and Latin America. Whereas coordinated efforts to respond to disasters usually begin only after the disaster has occurred, the concerns of a global pandemic caused by the avian influenza virus created an unprecedented opportunity to develop the planning and coordination for a pandemic in advance of the event. Because of this work, developing countries' ability to respond to a pandemic, while still far from perfect, will be both better and faster than what would otherwise have been possible.

USAID has engaged in several critical activities to help monitor the progress of the 2009-H1N1 virus and assist countries in preparing for a potential Phase 6 pandemic. Those activities include:

**Testing the Appropriateness of National Pandemic Plans:** Just last week, USAID supported a regional pandemic readiness exercise as part of our Avian and Pandemic Preparedness Program in Addis Ababa, Ethiopia. Country representatives from seven East African countries were able to draw from their experience developing national pandemic plans to test them in the real-time context of a possible H1N1 pandemic. We have similar exercises already planned for South African countries in June and Asian countries in August. In addition, USAID is working directly with the Department of Defense and its Pacific and Africa combatant commands, PACOM and AFRICOM, to provide direct military-to-military assistance to 25 countries across Africa and Asia to strengthen their own readiness to respond to a pandemic. In just two weeks, as part of USAID's Pandemic Preparedness Program, AFRICOM and PACOM will co-host with the U.N.'s World Food Programme a joint pandemic preparedness exercise in Rome involving 25 countries from Africa and Asia.

**Monitoring for Continued Evolution and Spread of 2009-H1N1 in Swine and Humans:** USAID will continue to support our international partners' activities that directly contribute to tracking the circulation of the 2009-H1N1 virus in both human and swine populations worldwide. As noted by President Obama, "even if it turns out that the H1N1 virus is relatively mild in the 'front end,' it could come back in a more virulent form during the actual flu season." It is important to note that the 1918-1919 influenza pandemic virus, which also began in the spring, remained relatively mild for six months until the second pandemic wave arrived with a much more lethal version of the virus. With the approach of the influenza season in the Southern Hemisphere it will be critical that we are able to monitor changes in this virus' virulence and mobilize effective response if needed.

**Commodity Support for Response to an Influenza Outbreak:** USAID has established an emergency stockpile of more than 800,000 personal protective equipment (PPE) kits, which include protective gowns, gloves, goggles and masks. These kits protect health care providers as well as case investigators. To date, USAID has pre-positioned an additional 394,146 PPE kits in 82 countries for use in the event of a pandemic.

At the core of USAID's planned response to a pandemic is the mitigation of mortality through a package of interventions including disease monitoring, prevention, treatment and assuring food security. Should WHO declare Phase 6, indicating a 2009-H1N1 pandemic is occurring, USAID is ready to support several lines of activity in conjunction with WHO and other international partners, including:

**Promotion of social distancing and other appropriate behaviors:** As in the U.S., public health authorities around the world will need to get appropriate, technically sound messages to their populations regarding respiratory hygiene, social distancing, and other behaviors that should be adopted during an influenza pandemic. USAID has used its extensive experience in behavior change communications to inform and educate people on the ways in which they can reduce risk and avoid becoming infected with a pandemic virus.

**Reinforcing hospital and health facility infection control:** To date, USAID has oriented most of its activities to the community level, as this is the most effective level from which to conduct most public health control measures. Still, it is estimated that about 40% of ill patients will seek care which will quickly overwhelm health facilities. These facilities should be made safe and secure and not turned into places in which infection can be spread as was the case in the 2003 SARS epidemic. To ensure this, government health facilities will need to institute infection control measures that have already been elaborated by WHO. Through commodity support and technical assistance, USAID can assist countries in the proper methods of infection control in health facilities.

**Provision of treatment/management of severe infections related to pandemic influenza:** It is important to note that people in developing countries, particularly those who have been displaced, generally have higher morbidity and mortality rates from infectious diseases than people in developed countries due to a variety of factors including crowding, weakened immunity due to other infectious diseases, poor nutrition due to food insecurity and poverty, weak preventive and curative health care services, and suboptimal health education. USAID will support several lines of activity that directly contribute to improving the management of severe infections related to pandemic influenza, and thereby limiting excess mortality, in targeted developing countries.

**Food Assistance:** In order to prevent people from leaving their homes and communities in search of food during an influenza pandemic, USAID will work with the World Food Programme and other groups to help families maintain continued access to food in adequate quantity and quality. The USG alone cannot provide the funding required to achieve this goal, but together with other donors a large part of the problem can be tackled.

Even as we mobilize to respond to the threat of the 2009-H1N1 virus, or the earlier emergence of the H5N1 avian influenza virus, it is important that we understand that their emergence is indicative of a broader dynamic that over the past half century has given rise to a stream of new and increasingly deadly diseases that originate in animals. Having already identified the rising threat posed by new emergent diseases, USAID announced earlier last month that the Agency will launch of a new Emerging Pandemic Threats Program. In collaboration with other U.S. Government agencies, this program will develop a global early warning system for the threat posed by diseases of animal origin that infect humans. The objective of USAID's new program is to pre-empt or combat, at their source, the emergence of new diseases from animals, such as 2009-H1N1, that pose a significant threat to public health. This effort builds on the Agency's ongoing work to control the threat of the avian and swine influenza viruses and will include four main lines of work: (1) expand our current monitoring of wild birds to more broadly address the role played by wildlife in facilitating the emergence and spread of new pathogens; (2) enhance support for field epidemiological training of relevant animal and human health teams beyond avian influenza to more broadly address the threat posed by other newly emergent diseases; (3) enhance our support for animal- and public-health diagnostic laboratories to

more fully address a broader array of infectious disease threats; (4) broaden ongoing behavior change and communications efforts to address high risk behaviors associated with emergent animal pathogens.

In closing let me say, that even as we do not yet know how severe a 2009-H1N1 influenza pandemic will be or how long it will last if Phase 6 is declared. As the lead U.S. agency for foreign disaster assistance, we will continue to provide emergency support to countries in response to the 2009-H1N1 influenza threat. However, even in the face of the immediate threat posed by the 2009-H1N1 virus, recent history has been very clear in its core lesson - we must remain vigilant in our response to the larger threat posed by emerging pandemic diseases if we are to ensure a secure future for the world's population.