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Strengthening State and Local Public Health Preparedness

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Good afternoon Chairman Towns, Ranking Member Issa, and distinguished members of the committee. I am Dr. Dan Sosin, Acting Director of the Coordinating Office for Terrorism Preparedness and Emergency Response (COTPER) at the Centers for Disease Control and Prevention (CDC). COTPER coordinates national public health preparedness and response efforts and supports these efforts at the state and local levels.

Thank you for the opportunity to discuss the importance of state and local public health preparedness and response efforts, and how we can further improve our response to public health emergencies in the United States. The nation continues to respond proactively to understand the complexities of the ongoing outbreak of 2009-H1N1 influenza and to implement control measures. Our current response is a direct result of the investments and support from the Congress for state and local public health preparedness, and the hard work of federal, state, and local public health officials across the country.

Importance of State and Local Public Health Preparedness

The coordinated response to the 2009-H1N1 outbreak marks a great improvement of the nation's public health response capabilities from just a few short years ago. Investments in public health preparedness have made a tremendous difference. One of the foundations of public health preparedness is a skilled workforce to respond quickly to new and unexpected threats. This outbreak has placed huge demands on state and local public health departments to rapidly expand on-the-ground investigations and response, and highlighted how necessary it is to have a trained workforce at the ready.

State and local public health departments are first responders to a wide variety of health threats, many of which never make the evening news. The many duties of public health departments include tracking the source, spread, and severity of health threats; assessing the impact of these threats and how the public can be protected; testing laboratory samples to identify the cause of infectious and non-infectious health threats; educating the public on how to safeguard their health; and working with elected officials and others to implement measures to protect the public. Public health departments must have flexible and scalable capacity to respond to both major events such as an influenza pandemic or a terrorist attack, and also to more routine events including community outbreaks of meningitis, measles, pertussis, seasonal influenza, and foodborne disease; chemical spills; and natural disasters such as floods, wildfires, and ice storms.

CDC's Support of State and Local Public Health Preparedness

The primary tool for supporting preparedness and response in public health departments is CDC's Public Health Emergency Preparedness (PHEP) cooperative agreement. This cooperative agreement provides funding to all 50 states, 4 localities (Chicago, Los Angeles County, New York City, and Washington, D.C.), and 8 U.S. territories and freely associated states. As part of this program, CDC provides public health departments with scientific expertise in areas including surveillance and epidemiology, laboratory testing, countermeasure delivery, incident management, and communication to meet the information needs of the public and health practitioners and support their decision-making. CDC's longstanding working relationships with state and local public health departments are critical to the success of this program.

During a public health emergency, CDC's priority is to support response at the state and local levels. CDC works with partners and experts to develop and disseminate science-based recommendations and community guidance so that clinicians, laboratory professionals, and other public health officials will know what to do when an emergency affects their community. Interim recommendations are posted on the CDC website – www.cdc.gov. As more is learned about a health threat, CDC refines these recommendations to reflect evolving knowledge. In addition, CDC communication experts work with their state and local counterparts to develop timely information for the public that fills information gaps, builds trust in the governmental response, and supports good individual and family decisions for safeguarding health.

CDC works closely with state and local public health officials and when needed provides experts in fields such as epidemiology and laboratory science to assist in investigations of health threats. CDC also performs complex laboratory tests, develops new laboratory methods to transfer to state and local public health labs, and provides resources, such as federally stockpiled medical supplies. CDC maintains the nation's Strategic National Stockpile of medications and supplies that may be needed to meet extreme demands during events like the present 2009-H1N1 influenza outbreak or other public health emergencies. As part of our pandemic preparedness efforts, the U.S. Government has purchased supplies of antiviral drugs for the Strategic National Stockpile, as well as respirators and other personal protective equipment. CDC has also exercised with state and local officials to test distribution and dispensing of these supplies.

Return on Investment in Public Health Preparedness

In 2002, the Institute of Medicine evaluated our national public health system and found outdated technology, an insufficient workforce, antiquated laboratory capacity, and ineffective communication networks. Since then, the nation has made great progress in preparing for public health emergencies. Investments in public health preparedness through the PHEP cooperative agreement have led to achievements such as improved surveillance systems, a greater number of epidemiologists at the state and local levels, more state and local public health laboratories participating in the national Laboratory Response Network, and increased planning and exercising for delivering medicines and medical supplies. In addition, public health departments are now integrated into the national system for managing emergency response efforts (led by the Department of Homeland Security), significantly improving coordination and communication among federal, state, and local response agencies in emergency situations.

Public health departments received supplemental funding for pandemic influenza preparedness from 2006 to 2008 to support practical, community-based approaches to prevent or delay the spread of an influenza pandemic. The supplemental funds built upon the base response capabilities supported by the PHEP cooperative agreement. These targeted efforts started with states reviewing their existing pandemic influenza preparedness status, identifying gaps, and working to fill those gaps. For example, in 2006, influenza surveillance in many states was limited only to the annual influenza season; now all states conduct surveillance year-round. Ongoing influenza surveillance tells us when and where influenza activity is occurring, tracks illness, determines which influenza viruses are circulating, and detects changes in influenza viruses.

The supplemental funding also allowed public health departments to hold community summits to facilitate planning efforts across government agencies, businesses, and non-profit organizations. Public health departments conducted exercises testing response capabilities such as providing antiviral drugs and vaccinating broad segments of their population.

Preparedness in Action – Responding to 2009-H1N1 Influenza Outbreak

As a result of the nation's investment in public health preparedness, within two short weeks, CDC, working with state and local public health departments, quickly identified a novel virus, determined its genetic characteristics, and compared the genetic composition of specimens from U.S. patients to others around the globe to watch for mutations. Working with our FDA colleagues, CDC also quickly developed and deployed kits for state and local public health laboratories to test for the novel 2009-H1N1 influenza virus. These steps, along with capacity already in place as a result of planning and exercising, allowed for rapid diagnostic and epidemiologic capabilities, leading to a clearer understanding of the transmission and severity of illness caused by this virus. In addition, CDC staff in quarantine stations across the country responded to reports of ill travelers at air, land, and sea ports of entry by assisting with disease control measures, notification and surveillance activities, and health recommendations for passengers.

CDC quickly ramped up its Emergency Operations Center (EOC) and staffed response efforts with experts working 24 hours per day, 7 days per week, facilitating strong coordination with state and local health departments, the HHS Secretary's Operations Center, and the Department

of Homeland Security. The EOC has coordinated the deployment of more than 1,100 CDC employees to assist in the response either at our headquarters in Atlanta or in the field across the U.S. and internationally. Moving cautiously in the face of a new virus to which U.S. residents lack immunity, rapid human-to-human transmission, and indications of severe disease abroad, our nationwide pandemic influenza plans were executed and federal countermeasures were deployed.

All states and territories received one-quarter of their share of antiviral drugs and personal protective equipment from the Strategic National Stockpile to bolster their response to the 2009-H1N1 influenza outbreak. During this outbreak, CDC demonstrated that we can deliver–and states can accept–critical medicines and medical supplies in preparation for extreme demand.

CDC's communication specialists and health educators also played a major role in the response. They served as a central location to gather, analyze, validate, and share information from multiple sources. CDC held frequent 2009-H1N1 investigation update calls with clinicians and over 150 public health and medical organizations; we sent secure reports to state public health officials, with over 55,000 officials viewing the reports; and we communicated about the virus with more than 150,000 followers via the CDC Emergency Twitter feed at: http://twitter.com/CDCemergency. In addition, CDC answered more than 30,000 phone and e-mail inquiries on 2009-H1N1 influenza, and kept our 2009-H1N1 website – http://www.cdc.gov/h1n1flu/ – updated with the latest health recommendations. In less than three weeks, the 2009-H1N1 influenza website grew to include more than 200 pages of information. This website proved to be a great resource to the public, as it experienced a high of almost 8 million page views in a single day.

At the state and local levels, public health departments have been working around-the-clock. State emergency operations centers have been activated and emergency plans put into place. Public health officials implemented surveillance for possible cases of 2009-H1N1 influenza and helped inform community decisions about ways to slow the spread of the virus in communities. The nation's public health laboratories quickly identified and sequenced a new strain of influenza, implemented rapid assays, and validated them for emergency use in a widening network of laboratories across the country. Public health professionals answered questions and educated the public about precautionary measures to prevent the spread of the virus. This education worked. A survey conducted for CDC by the Harvard School of Public Health earlier this month found that two-thirds of respondents report that they or someone in their household has washed their hands or used hand sanitizer more frequently in response to reports about 2009-H1N1 flu, and over half say they have made preparations to stay at home if they or a family member is sick.

Where Do We Go from Here?

Despite the great strides in preparedness and response for pandemic influenza, work remains to be done. The nation's surveillance and monitoring systems can be improved. For example, we do not have nationwide electronic systems to automatically manage and share data that are vital to response efforts, such as laboratory results. Electronic laboratory systems are operational in pockets of excellence, such as in North Carolina, New York City, and Indianapolis, but these successes need to be built upon across the country.

We can also do more to build on the electronic health information infrastructure to have real-time visibility of the types and prevalence of disease in hospitals across the country. CDC and states have the capabilities needed to do this, but the systems cannot always "communicate" with each other, and coverage is not yet nationwide. We do not have enough information from private physician offices to monitor the frequency of relevant illness. This information is crucial to help communities make decisions, such as whether to close schools, and to help public health officials know where to focus their investigations and efforts to prevent further spread of illness.

At the foundation of effective preparedness and response is a strong public health workforce. Having all the data does not help unless one has the skilled workforce to interpret and act on the data. Dr. Paul Jarris of the Association of State and Territorial Health Officials (ASTHO) recently noted that the public health workforce lost close to 12,000 jobs in the past year. Moreover, in an ASTHO survey conducted in 2007, most states reported workforce shortages in public health professions including epidemiologists, laboratorians, and public health nurses.

During an outbreak of a new virus, epidemiologists need to be on the ground to study how and why the disease is spreading, and how serious the effects are. Many state and local public health departments are limited in the number of epidemiologists able to gather and analyze data quickly and inform response efforts. The challenge of covering new threats versus sustaining other vital health department functions can also compromise the collection of crucial information. Scientists also evaluate potential interventions at the state and local level, such as the value of different treatment options or whether to cancel public events.

Moreover, public health laboratories vary in the sophistication of their testing equipment and information technology. The combination of workforce shortages in laboratory professionals and variability in laboratory capacity can produce bottlenecks in confirming cases and understanding vital characteristics of an outbreak. With stronger laboratory capacity in states, we could accelerate the detection and study of new viruses such as the 2009-H1N1 virus, helping us better understand and respond to emerging health threats. State and local capabilities are also needed for delivering medicines and other supplies to the people who need them. As with other public health department response activities, it is a challenge to have enough public health workers at the ready to deliver medicines and medical supplies during an emergency.

Preparing for the Unexpected

Preparedness and response for pandemic influenza and other health threats requires investment. Ongoing work at the local, state, and federal levels is needed to keep the nation ready. Complicating matters, other public health incidents that need our attention continue to arise: foodborne disease outbreaks, floods, wildfires, and soon hurricane season will begin. We must be ready for all these threats, especially since unexpected threats could occur simultaneously.

The path of the 2009-H1N1 outbreak may change; and we need to be prepared for a possible resurgence of this virus in the fall, potentially in a more virulent form. We must consider what might be needed if this outbreak deepens in communities across the United States. The Government cannot solve this alone; personal preparedness is key and all of us must take constructive steps. If you are sick, stay home. If children are sick, keep them home from school

and childcare. Wash your hands. Cough into your sleeve. Taking all of these reasonable measures will help us reduce the number of influenza cases.

There has been tremendous progress in the United States and abroad to prepare for this kind of an outbreak or even a pandemic, and we must sustain progress to be ready for future threats. Congress has provided strong leadership and support for these efforts. Our improved detection and response in the United States is a direct result of this investment. While we must remain vigilant throughout this and subsequent outbreaks, at no time in our nation's history have we been more prepared to face this kind of challenge. Nevertheless, more work remains to be done. We look forward to working closely with you to continue to prepare the nation for evolving health threats. Thank you for the opportunity to share this information with you today. I am happy to answer any questions.