

Public Health Service

Food and Drug Administration Rockville MD 20857

## STATEMENT OF

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## PRINCIPAL DEPUTY COMMISSIONER AND

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## FOOD AND DRUG ADMINISTRATION

## **DEPARTMENT OF HEALTH AND HUMAN SERVICES**

## **BEFORE THE**

# SUBCOMMITTEE ON AGRICULTURE, RURAL DEVELOPMENT,

## FOOD AND DRUG ADMINISTRATION, AND RELATED AGENCIES

## UNITED STATES SENATE

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## FOR RELEASE ONLY UPON DELIVERY

### **INTRODUCTION**

Chairman Kohl and Members of the Subcommittee, I am Dr. Joshua M. Sharfstein, Principal Deputy Commissioner and Acting Commissioner at the U.S. Food and Drug Administration. Among its other responsibilities, FDA protects the public health by facilitating access to safe and effective human and animal drugs, human biological products, and devices. Recognizing the global nature of public health issues, we collaborate with foreign counterpart regulatory agencies and international organizations to carry out our mission.

FDA plays a vital role in the Nation's preparedness for, and response to, challenges such as the one presented today by the 2009 H1N1 Flu Virus. FDA is part of a team led by the Department of Health and Human Services. Since the beginning of the 2009 H1N1 Flu Virus outbreak on Thursday, April 23, FDA has worked closely with HHS, our sister HHS agencies, other U.S. government agencies, the World Health Organization (WHO), and foreign governments.

I appreciate the opportunity to discuss FDA's response, including our approval of several emergency use authorizations and the efforts of internal FDA response teams.

### FDA 2009 H1N1 FLU VIRUS RESPONSE

### **Emergency Use Authorizations**

Section 564 of the Federal Food, Drug, and Cosmetic Act, which was added by the Project BioShield Act of 2004 (Public Law 108-276), permits the FDA Commissioner to issue an Emergency Use Authorization following a determination and declaration of a public health emergency, provided certain statutory criteria are met. An Emergency Use Authorization allows the use of an unapproved product or of an approved product for an unapproved use in a declared emergency. To authorize the emergency use of a product, FDA must generally find that the agent (in this case, the 2009 H1N1 Flu Virus):

- can cause a serious or life-threatening disease or condition
- that based on the totality of the scientific evidence available it is reasonable to believe that the product may be effective against the disease or condition
- that the known and potential benefits of the product's use outweigh the known and potential risks, and
- that there is no adequate, approved, and available alternative.

Section 564(b)(1) of the Federal Food, Drug, and Cosmetic Act provides that, before an Emergency Use Authorization may be issued, the Secretary of HHS must declare a public health emergency justifying the authorization based on one of three grounds. One of these is, "a determination by the Secretary of a public health emergency under section 319 of the Public Health Service Act that affects, or has a significant potential to affect, national security, and that involves a specified biological, chemical, radiological, or nuclear agent or agents, or a specified disease or condition that may be attributable to such agent or agents."

On Sunday, April 26, 2009, the Acting HHS Secretary issued a nationwide public health emergency declaration in response to recent human infections from a newly discovered influenza A virus, the 2009 H1N1 Flu Virus. In the days that followed, the Acting Secretary issued declarations justifying emergency use of certain antivirals, in vitro diagnostics, and personal respiratory protection devices.

On April 27, 2009, FDA issued four Emergency Use Authorizations in response to requests from the Centers for Disease Control and Prevention (CDC). Two of these Emergency Use Authorizations extend the circumstances in which two FDA-approved drugs, Relenza and Tamiflu, can be used to treat and prevent the 2009 H1N1 Flu Virus. A third Emergency Use Authorization makes available an rRT-PCR test for diagnosing infection with the virus. The fourth authorizes the emergency use of certain personal respiratory protection devices, specifically certain disposable respirators certified by CDC's National Institute for Occupational Safety and Health, known as N95 respirators. FDA later approved a fifth EUA for a diagnostic panel for laboratory screening.

By statute, these authorizations expire in one year unless previously revoked by FDA. However, the authorizations can be renewed if the conditions giving rise to the determination and declaration continue to exist.

Tamiflu has previously been FDA approved to treat uncomplicated illness due to influenza and prevent influenza in patients 1 year and older. Relenza had been approved to treat acute uncomplicated illnesses due to influenza in adults and children 7 years and older who have been symptomatic for less than two days, and to prevent influenza in adults and children 5 years and older.

One of the emergency use authorizations now allows for Tamiflu also to be used to treat and prevent influenza in children under one year. In addition, under the emergency authorizations, both medications may be distributed with information pertaining to emergency use to large segments of the population without complying with the label requirements otherwise applicable to dispensed drugs. Both medications may also be distributed by a broader range of health care workers, including some public health officials and volunteers, in accordance with applicable state and local laws or public health emergency responses.

The primary Emergency Use Authorization for the rRT-PCR 2009 H1N1 Flu Panel diagnostic test allows the CDC to distribute the 2009 H1N1 Flu Panel test to public health and other qualified laboratories that have the needed equipment and the personnel who are trained to perform and interpret the results. FDA amended this authorization to allow the use of different sample types, such as throat swabs and different reagents for this test to help ensure that supplies of this test remain adequate.

The H1N1 test amplifies the viral genetic material from a human sample. A positive result indicates that the patient is presumptively infected with the 2009 H1N1 Flu Virus, but it does

not identify the stage of infection. A negative result does not, by itself, exclude the possibility of 2009 H1N1 Flu Virus infection.

The Emergency Use Authorization for certain disposable respirators permits HHS to deploy these products from the Strategic National Stockpile for use by the general public, including individuals performing work-related duties, to help reduce exposure to airborne germs during this emergency. These products, when used properly and in accordance with information that is provided, may help reduce the chances of getting sick. They do not eliminate the risk of illness or death. They should always be used in conjunction with other infection control measures, such as frequent hand washing, and other measures recommended by CDC and state and local public health authorities. Finally, this emergency use authorization only relates to requirements under the Food, Drug and Cosmetic Act, not other requirements such as the standards for safety in the workplace administered by the Department of Labor.

Taken together, these authorizations helped enable CDC and state and local responders to take actions needed to help meet the medical and public health threat, getting these products to patients and communities in need.

#### The FDA's Efforts on 2009 H1N1 Flu Virus

As soon as we became aware of the 2009 H1N1 Flu Virus outbreak, I asked Dr. Jesse Goodman, FDA's Acting Chief Scientist and Deputy Commissioner for Scientific and Medical Programs, to coordinate and lead FDA's efforts on the 2009 H1N1 Flu Virus. Dr. Goodman previously directed FDA's Center for Biologics Evaluation and Research and is a

world-recognized infectious disease expert with extensive experience in issues related to influenza vaccine development and evaluation.

Dr. Goodman leads an <u>incident management approach</u> that now includes seven substantive teams, which are cross-cutting and include staff from across the FDA as needed. All of FDA's Centers are engaged in this important work.

These teams work with the Office of the Assistant Secretary for Preparedness and Response (ASPR), CDC, other HHS agencies, and national and international partners. The teams include: Vaccine Team, Antiviral Team, In Vitro Diagnostics Team, Personal Protection Team, Blood Team, Shortage Team, and the Consumer Protection Team.

The incident management structure also includes an operations section, a logistics section, and a communications section that coordinates external relations, including media, legislative, stakeholders, international, and Web site development. The incident management structure also includes FDA senior-level health, international, and legal advisers.

I would like to provide a brief summary of the focus of each team. This management approach is flexible and likely to change over time. It has already changes in response to evolving events.

#### Vaccine Team

Surveillance for novel strains of influenza is ongoing. If epidemiological data suggest the emergence of a novel human influenza virus, we have the infrastructure to begin work in the event that a vaccine needs to be manufactured for the novel strain. The Vaccine Team is working to facilitate the availability of a safe and effective vaccine to protect the public from the 2009 H1N1 Flu Virus as soon as possible, in the event that it is needed.

Members of the team are working collaboratively with CDC and other partners in efforts to grow and genetically engineer the 2009 H1N1 Flu Virus in the laboratory for possible use in a vaccine. FDA is also beginning to prepare reagents that will be essential to help manufacturers produce and test the vaccine. The Vaccine Team also is working with CDC, NIH and other WHO centers on laboratory studies that may help us better understand this new virus, including whether seasonal flu vaccines may provide some protection against the 2009 H1N1 Flu Virus.

At the policy level, the Vaccine Team is fully engaged in discussions with the Biomedical Advanced Research and Development Authority (BARDA), a component of ASPR in HHS. These discussions also include the National Institutes of Health (NIH) and manufacturers on the issue of designing and initiating clinical trials to evaluate the immune response to vaccines derived from the 2009 H1N1 Flu Virus and on options for vaccine production and dosage regimens. FDA is a WHO/Pan American Health Organization collaborating center and is working closely with WHO on vaccine issues, including testing and development of seed strains in preparation for vaccine development. FDA is also fully engaged with its sister

regulatory agencies throughout the world. In collaboration with CDC, FDA is also preparing to monitor the safety of the vaccine, were it to be utilized.

#### Antiviral Team

The goal of the Antiviral Team is to identify and evaluate antiviral drugs that can be used to prevent and treat illness caused by the 2009 H1N1 Flu Virus and to facilitate access to these medications. This team led FDA's efforts to issue the April 27, 2009, Emergency Use Authorizations for Relenza and Tamiflu. In addition, the team is in communication with manufacturers to explore potential investigational options for treatment of the 2009 H1N1 Flu Virus. Like the Vaccine team, the Antiviral Team is working closely with our colleagues in other HHS agencies and with our sister regulatory agencies throughout the world, including, Mexico, Canada, the European Union, Australia, and Singapore.

### **In Vitro Diagnostics Team**

The goal of the In Vitro Diagnostics Team is to identify and evaluate in vitro diagnostics that can help test for the 2009 H1N1 Flu Virus. This team led FDA's efforts to issue the April 27, 2009, Emergency Use Authorization for the rRT-PCR test developed by CDC. This team regularly communicates with ASPR, BARDA and manufacturers regarding potential shortages with the FDA-approved rapid influenza A test.

### Personal Protective Equipment Team

This team works to facilitate the availability of personal protective equipment that may help reduce the risks from exposure to the 2009 H1N1 Flu Virus. This team led the efforts to issue the April 27, 2009, Emergency Use Authorization for disposable N95 respirators. The team regularly communicates with manufacturers regarding current demand and ability to increase production if needed to meet expected demands. The team is working with CDC on public communications about appropriate use of various forms of respiratory protection.

### **Blood Team**

The Blood Team is dedicated to the safety and availability of blood and blood products needed for transfusion by the American public during this influenza outbreak. Though we have no evidence to date that the 2009 H1N1 Flu Virus has affected our blood supply, we are monitoring both supply and safety, and working closely with HHS, our sister agencies in HHS, blood banks, and other blood and infectious disease experts.

### Shortage Team

The Shortage Team works to facilitate the availability of antiviral drugs to the American public. The team participates in daily calls with the ASPR's Biomedical Advanced Research and Development Authority and manufacturers to assess current needs and availability of these products. FDA has alerted consumers to the possibility of spot shortages in the consumer market and to encourage appropriate purchasing practices, and will be referring private individuals, including health care providers, to their state and local health departments to obtain information about product availability in their locale.

#### **Consumer Protection Team**

This team has the goal of protecting consumers from fraudulent and potentially dangerous FDA-regulated products or other promotions for products that claim to diagnose, prevent, mitigate, treat, or cure the 2009 H1N1 Flu Virus.

FDA considers the promotion and sale of products that have not been approved, cleared or otherwise authorized by FDA to diagnose, mitigate, prevent, treat or cure H1N1 Flu virus to be a potentially significant threat to the public health. Many of these deceptive products are being sold over the Internet through illegitimate web sites. The operators of these web sites take advantage of the public's concerns about H1N1 influenza and their desire to protect themselves and their families. The fraudulent products come in all varieties and could include dietary supplements or other food products, or products purporting to be drugs, devices or vaccines.

FDA has an aggressive strategy to identify, investigate, and take action against individuals or businesses that wrongfully promote products in an attempt to take advantage of this current public health emergency. In addition, on April 30, FDA asked the public to voluntarily report suspected criminal activity, Websites and other promotions for products that claim to diagnose, prevent, mitigate, treat or cure the 2009 H1N1 influenza virus. As a further effort, on May 1, FDA issued a joint announcement with the Federal Trade Commission alerting the public to be wary of deceptive products that may be offered for sale over the Internet via

illegitimate web sites. On May 4, FDA began posting a list of any firm issued a warning letter for such practices.

### FY 2006 Influenza Pandemic Funding

During FY 2006, this subcommittee had the foresight to appropriate \$20 million to FDA for pandemic influenza preparedness in an emergency supplemental appropriation. The FY 2006 appropriation allowed FDA to invest in priorities that are critical to America's preparedness for an influenza pandemic. This \$20 million supplemental became part of FDA's base resources in the Vaccine Program and allowed FDA to achieve a higher state of preparedness for events like 2009 H1N1 flu virus outbreak. I would like to report to you on what FDA achieved with the FY 2006 funding and how the work begun in 2006 makes us better prepared for today's response to the 2009 H1N1 flu virus.

FDA invested pandemic influenza supplemental funding in three key areas: strengthening our capacity to expedite the development of flu vaccines, conducting essential monitoring and inspection of flu vaccine manufacturers, and conducting FDA-wide pandemic planning and preparedness activities.

#### **<u>Strengthening FDA Capacity to Expedite Flu Vaccine Development:</u>**

Within FDA's Center for Biologics Evaluation and Research (CBER), FDA expanded its capacity to expedite development, evaluation and licensing of additional flu vaccines and manufacturing facilities to meet pandemic preparedness needs. The expanded science capacity funded through the supplemental allowed CBER to work, in collaboration with

ASPR/BARDA, on science, product review, and product guidance to facilitate the development and evaluation of new technologies, including recombinant and cell-based technologies. Increased funding also allowed CBER to develop better tools and systems for monitoring the safety and effectiveness of vaccines. With these resources, CBER provided highly interactive advice to manufacturers on product development and worked closely with ORA on inspection issues for vaccine manufacturing facilities.

CBER constructed high containment facilities to safely grow and genetically engineer pandemic influenza viruses and support vaccine development. CBER also expanded its testing program to speed the release and distribution of influenza vaccines and expanded its capacity to produce and distribute reagents to manufacturers. Reagents are used to determine the potency of influenza vaccines.

CBER scientists developed new methods and techniques to characterize influenza vaccines and to measure protective immune responses, which help assess the effectiveness of pandemic influenza vaccines. CBER also defined an accelerated approval pathway for both annual and pandemic influenza vaccines based on the immune response, and we worked expeditiously to evaluate new vaccines and enhance manufacturing quality.

In April 2007, FDA licensed the first vaccine to immunize individuals against H5N1 avian influenza, and this accomplishment was in part due to the investments in the 2006 pandemic supplemental. For the 2008-2009 influenza season, a record 146 million doses of seasonal influenza vaccine produced by six licensed manufacturers were available for distribution in

the United States. CBER staff is working with public health partners and manufacturers to develop globally coordinated and expedited approaches to vaccine production, to develop new molecular tools to evaluate these vaccines, and to conduct collaborative research projects.

### Monitoring and Inspection of Flu Vaccine Manufacturers:

The FY 2006 Pandemic Flu Supplemental allowed Team Biologics, a joint effort of Office of Regulatory Affairs field operations and CBER, to conduct annual inspections of influenza virus vaccine manufacturing facilities. These annual inspections have helped to carefully monitor production practices and quality, with the goal of detecting potential problems early and, wherever possible, intervening to address them to better prevent future disruptions in supply or effects on final product quality.

### FDA-Wide Pandemic Planning and Preparedness:

To strengthen our preparedness for an influenza pandemic, FDA's Office of Crisis Management led the effort to create FDA preparedness plans and conduct a functional exercise to text our preparedness. The exercise occurred in October 2008 and involved more than 600 FDA staff from FDA offices across the nation. In this exercise, we confirmed FDA's ability to conduct essential functions with reduced staff. We also tested FDA's IT system with a large number of employees accessing the FDA network simultaneously from home or another remote location. The October 2008 exercise provided invaluable lessons, and we are benefiting from those lessons during the 2009 H1N1 Flu Virus outbreak. Finally, the 2006 Pandemic Influenza funding also allowed FDA to put plans in place intended to ensure continuity of operations during a pandemic. FDA, including CBER, installed dedicated servers, applications, laptops and other software and hardware to support critical personnel that must respond to an outbreak. The goal was to make certain that crucial data and applications for pandemic response are available on a 24/7 basis. FDA also strengthened the system on which we rely on for pandemic flu tracking, status, and reporting. We also enhanced systems and infrastructure that help integrate and expedite work flow for vaccine development, laboratory screening and testing, and adverse reporting.

### CONCLUSION

FDA is fully committed and engaged in protecting the public's health during this difficult time. Among us are laboratory scientists, medical reviewers, epidemiologists, product experts and field inspectors. We will bring every skill and resource we have to this critical mission.

Thank you very much for the opportunity to testify today. I welcome your ideas and your questions.