

**A Message from Mike Ardaiz, MD, MPH, CPH,
U.S. Department of Energy's Chief Medical Officer:
*Weathering This Storm Together***



As Chief Medical Officer, I would like to share with you my observations and encouragement as we rise to the challenge of addressing the 2009 H1N1 influenza (swine flu) outbreak now confirmed to be spreading from human to human. It is increasingly clear that as sailors on this ship we may know as the U.S. Department of Energy (DOE), our ability to remain on course will rely upon our ability to work and communicate effectively about what we do and what we do not know.

Above all, I wish to reassure you that this is NOT the “Perfect Storm” and that we WILL weather this storm together.

What We are Facing – While this is not the long-anticipated avian (H5N1) influenza, we are facing an outbreak of a new 2009 H1N1 influenza (swine flu) virus with a particularly high rate of illness (i.e., attack rate) among those who are exposed through close contact. Although the virus responsible for the present influenza outbreak is genetically associated with and was initially derived from swine or pigs, it does have mixed genetic features, has been difficult to subtype beyond its recognition as an influenza A-type virus, and is regarded as a novel or new virus in terms of the susceptibility of the majority of individuals in our population (i.e., there is not already a protective level of “herd immunity” from past exposures). Consistent with other influenza viruses, however, there is a particularly short period of time (i.e., 1-3 days) between exposure to the virus and the onset of illness (i.e., incubation), which actually makes recognition of affected individuals and containment of the outbreak significantly easier than it might be for other viruses and certain bacteria. **This influenza outbreak is NOT the “Perfect Storm.”**

We recognize that inhalation is the most significant way in which individuals can become infected and that this virus is particularly easy to transmit through sneezing and coughing, consistent with the more common, seasonal influenza viruses our population endures. Human behavior remains the single most important risk factor among individuals becoming ill. Through personal and workplace efforts to modify our behaviors and limit our exposures, we can dramatically reduce the impact of this and possibly later “waves” of the outbreak. In addition, there are a variety of countermeasures, such as appropriately selected and fitted masks, Food and Drug Administration (FDA)-approved antiviral medications (as well as antibiotics to address the particularly lethal bacterial pneumonias, which may develop in the wake of otherwise less dangerous viral pneumonias), and eventually a new influenza vaccination, which is currently under development to support our efforts in behavioral modification. **This influenza outbreak is NOT the “Perfect Storm.”**

How We Are Responding – We, at DOE Headquarters, have been implementing the *DOE Internal Preparedness Plan for Infectious Diseases* throughout this week through the activities of the DOE Biological Event Monitoring Team (BEMT), which was established by the Deputy Secretary of Energy on March 29, 2006. DOE BEMT is a multidisciplinary team consisting of experts in biological events (e.g., occupational medicine, infectious diseases, epidemiologic investigations, emergency operations, counterterrorism, security, and administration). BEMT is charged with organizing the following:

1. Biomedical expertise;
2. Continuity programs; and
3. Emergency operations within the DOE complex.

DOE BEMT convened in the early morning of April 27, 2009, to begin the difficult work of addressing the 2009 H1N1 influenza (swine flu) outbreak and its implications for the DOE workforce and its families. Principle members of DOE BEMT are meeting daily, and current activities include: (1) monitoring of the Centers for Disease Control and Prevention (CDC) and other sources of epidemiologic and public health information; (2) exchange of information with DOE sites and site medical providers; and (3) facilitating the MEDCON alert system. MEDCON is a site or multisite-specific alert system that establishes a stratified or stepwise response to biological events on a scale of 7 (normal condition) to 1 (widespread pandemic throughout the United States) as follows:

Medical Condition (MEDCON) Alert Matrix

MEDCON Phase	General Criteria
7	Normal Condition – No unusual infectious disease threats (above background) known to be imminent.
6	Initial Concern – Increase in incidence of infectious disease threat within the world with the potential to impact DOE.
5	Disease Outbreak – Outside the continental United States, but directly impacting humans.
4	Single-Locus or Cluster Outbreak – Anywhere within the continental United States and border regions.
3	Disease Cluster Confirmed or Suspected - Within local State/region.
2	DOE Outbreak – At a Specific Site/Facility or Nearby Community.
1	Widespread Pandemic – Throughout the United States.

At present, BEMT recommends that all DOE sites consider establishing an alert status consistent with MEDCON Phase 4 due to the presence of swine influenza clusters within the United States and its border regions. The Savannah River Site (SRS) has advanced to MEDCON Phase 3 and has begun to take the appropriate actions based upon the identification of a cluster of 2009 H1N1 influenza (swine flu) cases in relatively close proximity to the site. In addition, DOE Headquarters is currently assessing a preliminary report that the State of Maryland may now have documented its first case(s) of 2009

H1N1 influenza (swine flu), which could similarly impact the MEDCON status at Headquarters.

BEMT has been communicating with our partners at CDC and at Federal Occupational Health (FOH) to ensure that both contractor and Federal employees are benefiting from the best possible information and medical recommendations. In addition, several members of BEMT are active participants in interagency discussions. These include the *National Biodefense Science Board* created under the authority of the Pandemic and All-Hazards Preparedness Act of 2006 to provide expert advice and guidance to the U.S. Department of Health and Human Services (HHS) regarding public health emergency preparedness and response and the *Interagency Pandemic Vaccine Prioritization Working Group*, which was established to provide HHS with guidance for prioritization of the distribution and administration of both pre-pandemic and pandemic influenza vaccines based on various pandemic severity and vaccine supply scenarios. These communications are essential to ensuring that DOE employees and their families are receiving occupational health services consistent with the latest recommendation of HHS.

What Employers Can Do – Although much of the existing guidance pertains directly to members of the general public, the Occupational Safety and Health Administration (OSHA) has provided specific guidance for employers to reduce the likelihood that the risk of employees developing swine influenza:

- Review and update your pandemic plans as necessary;
- Keep your employees informed of where they can obtain agency-specific updates; and
- Encourage employees to stay home if they are sick to avoid spreading influenza and other germs.

The following table provides a selection of measures employers should consider to further mitigate the workplace risks at this juncture of the swine flu outbreak:

Department of Homeland Security’s (DHS) Pandemic Influenza: Preparedness, Response, and Recovery: Guide for Critical Infrastructure and Key Resources

Issues	Supporting Actions
1. Reduce risk and protect workers and their families.	Implement actions and policies to reduce overall and specific “risk” and protect the workforce from internal and external contacts.
2. Virtual operations.	To build a more flexible worksite, establish and implement creative policies and actions, including promoting telecommuting; providing “batch-loading” tasks; and installing remote handling and delivery capabilities (i.e., drive-up windows).
3. Information technology (IT) support.	Implement preparedness actions to enhance IT support for telecommuters to provide sufficient computer and telephone equipment, lines, and bandwidth at the business and intermediary telecommunications systems.

4. Manage worker shifts.	Practice “ghost-shift changes” wherever possible, with workers going off duty leaving the workplace before the new shift enters.
5. “Safe” workers.	Set up a process to track and deploy workers recovering from influenza to perform high-risk, essential services.
6. Dedicated transportation.	Identify worker transportation requirements. For those essential workers without options or for those who rely solely on public transportation, establish a means of dedicated transportation to/from work while maintaining necessary infection control processes (e.g., social distancing and surface cleaning).
7. Business and worker insurance.	Review, revise, and implement insurance for workers, including providing adequate health insurance, business interruption insurance, and liability insurance for home care or dedicated transportation.

What Employees Can Do – There are everyday actions that can help prevent the spread of germs that cause respiratory illnesses like influenza. Take these everyday steps to protect your health:

- Cover your nose and mouth with a tissue when you cough or sneeze.
- Wash your hands often with soap and water, especially after you cough or sneeze. Alcohol-based hand cleaners are also effective.
- Avoid touching your eyes, nose or mouth. Germs are spread this way.
- Avoid close contact with sick people.

If you get sick with influenza-like symptoms, stay home from work and contact your personal physician and limit contact with others to keep from infecting them. If, however, you live in areas where 2009 H1N1 influenza (swine flu) cases have been identified or have been exposed to travelers returning from affected areas and become ill with influenza-like symptoms, including fever, body aches, runny nose, sore throat, nausea, or vomiting or diarrhea, contact your health care provider. Your health care provider or public health department will determine whether influenza testing or treatment is needed depending upon the circumstances.

The following aspects of health should be carefully considered and reviewed with personal physicians as needed:

- A nourishing, nonallergenic diet;
- Liberal fluid intake;
- Adequate rest and sleep; and
- Reasonable physical activity and exercise.

In addition, the following potentially harmful exposures should be carefully considered and reviewed with personal physicians as needed:

- Overexertion;
- Volatile chemical exposures;

- Extremes of temperature; and
- Tobacco products.

For Additional Information – Information on pandemic and 2009 H1N1 influenza (swine flu) is available through CDC, which has recently updated its Web site to include a “questions and answers” format (see attached document). Otherwise, please go to the following Web sites or resources:

- **CDC 2009 H1N1 influenza (swine flu) home page:**
<http://www.cdc.gov/swineflu/whatsnew.htm>
- **World Health Organization 2009 H1N1 influenza (swine flu):**
<http://www.who.int/csr/disease/swineflu/en/index.html>
- **OSHA’s *Guidance on Preparing Workplaces for Influenza Pandemic*:**
http://www.osha.gov/Publications/influenza_pandemic.html
- **DHS’ National Strategy for Pandemic Flu and associated documents:**
http://www.dhs.gov/xprevprot/programs/editorial_0760.shtm

We Can Assist You – In light of the events surrounding the swine flu outbreak, the Office of Health, Safety and Security wishes to be sure that everyone is aware of whom the point-of-contact is within DOE. As DOE’s Chief Medical Officer, I should be regarded as DOE’s subject matter expert in occupational medicine and will remain in continuous contact with both CDC and FOH. If you have any questions with regard to the 2009 H1N1 influenza (swine flu) or its implications for DOE workers and their families, please direct them to me at (301) 903-9910 or via my cellular phone at (202) 360-3650.

If you are unable to reach me, the secondary contact within the Office of Health, Safety and Security is Dr. Bonnie Richter, Coordinator for BEMT. Dr. Richter can be reached in her office at (301) 903-4501 or via cell phone at (301) 633-8191.

QUESTIONS & ANSWERS:

[HTTP://WWW.CDC.GOV/SWINEFLU/KEY_FACTS.HTM](http://www.cdc.gov/swineflu/key_facts.htm)

Key Facts about Swine Influenza (Swine Flu)

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Swine Flu

What is Swine Influenza?

Swine Influenza (swine flu) is a respiratory disease of pigs caused by type A influenza virus that regularly causes outbreaks of influenza in pigs. Swine flu viruses cause high levels of illness and low death rates in pigs. Swine influenza viruses may circulate among swine throughout the year, but most outbreaks occur during the late fall and winter months similar to outbreaks in humans. The classical swine flu virus (an influenza type A H1N1 virus) was first isolated from a pig in 1930.

How many swine flu viruses are there?

Like all influenza viruses, swine flu viruses change constantly. Pigs can be infected by avian influenza and human influenza viruses as well as swine influenza viruses. When influenza viruses from different species infect pigs, the viruses can reassort (i.e. swap genes) and new viruses that are a mix of swine, human and/or avian influenza viruses can emerge. Over the years, different variations of swine flu viruses have emerged. At this time, there are four main influenza type A virus subtypes that have been isolated in pigs: H1N1, H1N2, H3N2, and H3N1. However, most of the recently isolated influenza viruses from pigs have been H1N1 viruses.

Swine Flu in Humans

Can humans catch swine flu?

Swine flu viruses do not normally infect humans. However, sporadic human infections with swine flu have occurred. Most commonly, these cases occur in persons with direct exposure to pigs (e.g. children near pigs at a fair or workers in the swine industry). In addition, there have been documented cases of one person spreading swine flu to others. For example, an outbreak of apparent swine flu infection in pigs in Wisconsin in 1988 resulted in multiple human infections, and, although no community outbreak resulted, there was antibody evidence of virus transmission from the patient to health care workers who had close contact with the patient.

How common is swine flu infection in humans?

In the past, CDC received reports of approximately one human swine influenza virus infection every one to two years in the U.S., but from December 2005 through February 2009, 12 cases of human infection with swine influenza have been reported.

What are the symptoms of swine flu in humans?

The symptoms of swine flu in people are expected to be similar to the symptoms of regular human seasonal influenza and include fever, lethargy, lack of appetite and coughing. Some people with swine flu also have reported runny nose, sore throat, nausea, vomiting and diarrhea.

Can people catch swine flu from eating pork?

No. Swine influenza viruses are not transmitted by food. You can not get swine influenza from eating pork or pork products. Eating properly handled and cooked pork and pork products is safe. Cooking pork to an internal temperature of 160°F kills the swine flu virus as it does other bacteria and viruses.

How does swine flu spread?

Influenza viruses can be directly transmitted from pigs to people and from people to pigs. Human infection with flu viruses from pigs are most likely to occur when people are in close proximity to infected pigs, such as in pig barns and livestock exhibits housing pigs at fairs. Human-to-human transmission of swine flu can also occur. This is thought to occur in the same way as seasonal flu occurs in people, which is mainly person-to-person transmission through coughing or sneezing of people infected with the influenza virus. People may become infected by touching something with flu viruses on it and then touching their mouth or nose.

What do we know about human-to-human spread of swine flu?

In September 1988, a previously healthy 32-year-old pregnant woman was hospitalized for pneumonia and died 8 days later. A swine H1N1 flu virus was detected. Four days before getting sick, the patient visited a county fair swine exhibition where there was widespread influenza-like illness among the swine. In follow-up studies, 76% of swine exhibitors tested had antibody evidence of swine flu infection but no serious illnesses were detected among this group. Additional studies suggest that one to three health care personnel who had contact with the patient developed mild influenza-like illnesses with antibody evidence of swine flu infection.

How can human infections with swine influenza be diagnosed?

To diagnose swine influenza A infection, a respiratory specimen would generally need to be collected within the first 4 to 5 days of illness (when an infected person is most likely to be shedding virus). However, some persons, especially children, may shed virus for 10 days or longer. Identification as a swine flu influenza A virus requires sending the specimen to CDC for laboratory testing.

What medications are available to treat swine flu infections in humans?

There are four different antiviral drugs that are licensed for use in the US for the treatment of influenza: amantadine, rimantadine, oseltamivir and zanamivir. While most swine influenza viruses have been susceptible to all four drugs, the most recent swine influenza viruses isolated from humans are resistant to amantadine and rimantadine. At this time, CDC recommends the use of oseltamivir or zanamivir for the treatment and/or prevention of infection with swine influenza viruses.

Is the H1N1 swine flu virus the same as human H1N1 viruses?

No. The H1N1 swine flu viruses are antigenically very different from human H1N1 viruses and, therefore, vaccines for human seasonal flu would not provide protection from H1N1 swine flu viruses.