

# Pandemic Influenza

## Prepare for the Worst, But Hope for the Best

By Shari Jones and Joe McDonald

**T**he Oklahoma Department of Corrections has approximately 25,000 inmates located in 51 facilities around the state, which range from community work centers to maximum-security institutions. In addition, the DOC has more than 4,500 employees, making it the second largest state agency.

Due to the increasing threat of pandemic flu, the DOC has taken steps to prepare for the possibility of such an outbreak. Pandemic influenza is defined as a global outbreak of an influenza virus for which people have little or no immunity and for which there is no vaccine. This will happen when a new flu virus emerges in human beings, spreads easily from person to person and causes serious illness. The next pandemic flu is most likely to be the H5N1 strain (avian influenza), which has its origins in bird populations and has recently been transmitted to humans. So far, the spread of this particular virus has been limited to bird-to-human transmission. This strain has not been spread from person to person efficiently, but if it mutates and develops the ability to do so, it is likely to produce the next pandemic. This H5N1 strain is projected to have widespread public health ramifications, with approximately 25 percent to 40 percent of the U.S. population becoming ill and 1 percent to 5 percent of the ill dying. Beyond the human toll, a pandemic influenza outbreak would create significant social disruption and have a crippling economic impact on communities. Absenteeism and illness, plus fear of contagion, could threaten the functioning of critical services related to the economy, security and basic functioning of society.

The impact of a pandemic flu outbreak on corrections will be no less severe. Due to the security measures necessary for inmate populations, the anticipated staff absenteeism, diagnosis, triage, treatment and security of inmates all present a daunting challenge for a reduced staff. Therefore, it is imperative to develop a pandemic flu plan that would be responsive and effective for corrections.

### Process Strategies

Pandemic flu would affect many geographic areas simultaneously. Most continuity-of-operations disaster plans for corrections rely heavily on the shifting of resources (i.e., equipment and personnel) to affected facilities from unaffected facilities. It is clear that pandemic flu response would require a different type of planning, one necessitating responses beyond the internal shifting of resources and one depending on interaction with external partners such as health departments. Correctional administrators must plan in order to find ways of obtaining needed supplies (e.g., food and medication) and distributing them in a timely manner. In Oklahoma, administrators began planning by making local health authorities/agencies aware of the special needs of the agency. The plan began with the efforts of the DOC's chief medical officer, who put the DOC on the local health and disaster response agencies' radar screen.

In 2005, the chief medical officer introduced the DOC to several city and state disaster preparedness agencies in an effort to create an awareness of the needs of this special population of patients. He attended health department meetings, participated in communitywide disaster planning conferences and formalized communications with external partners.

As a result of these contacts, in April 2006, the DOC participated in a communitywide disaster-simulation exercise coordinated by the Oklahoma City-County Health Department. This exercise tested a unique strategy for deployment of the Strategic National Stockpile — life-saving pharmaceuticals, antidotes, and other medical supplies and equipment maintained by the Centers for Disease Control and Prevention (CDC).

In most situations, the distribution in Oklahoma of medications and supplies from the Strategic National Stockpile is handled through the Mass Immunization Prophylaxis Strategy (MIPS), which is implemented and managed by the Oklahoma Department of Health. Through this strategy, the state's general public is made aware of locations in the designated 37 cities where medications and supplies will be

Figure 1

**MEMORANDUM OF UNDERSTANDING**

**MEDICATION/VACCINE DISTRIBUTION AGREEMENT**

**DATE:**

**Facility:**

**Address:**

This is a Memorandum of Understanding between the Oklahoma State Department of Health \_\_\_\_\_ County Health Department and Oklahoma State Department of Corrections \_\_\_\_\_ Correctional Center (“the facility”). The facility agrees to transport the medications/vaccine in a closed container and agrees to return any and all unused portions in a closed container to the \_\_\_\_\_ County Health Department. The facility further agrees to provide security for the medications during transport and distribution.

The facility agrees to administer the medication in accordance with the provided regimen and educational material. The facility also agrees to refer all symptomatic persons to the appropriate definitive care facility. The facility agrees to utilize the provided NAPH forms for each person that receives the medication. The facility agrees to return all forms to the \_\_\_\_\_ County Health Department. The facility agrees to notify the \_\_\_\_\_ County Health Department of all persons declining medication, those who are symptomatic or who have been exposed to the biological agent.

Below are the names of the authorized persons representing the facility who will pick up medications or vaccine in the event of a biological emergency. These individuals will present to the distribution site upon notification from the \_\_\_\_\_ County Health Department of a biologic event. These individual will present with two forms of photo identification.

Authorized persons: \_\_\_\_\_ CHSA  
\_\_\_\_\_

Number of Staff: \_\_\_\_\_ Number of doses to dispense: \_\_\_\_\_

\_\_\_\_\_ CHSA

\_\_\_\_\_ **Alternate authorized staff member**

distributed. Typically, a large number of people would be directed to these sites to obtain whatever treatments are made available. In Oklahoma, a parallel distribution system for sheltered-in populations, known as SIPS, will also be deployed. The SIPS strategy focuses on populations that are unable to go to a MIPS site to obtain needed supplies in the event of a disaster. These populations include nursing home residents and hospitalized patients. The inclusion of the DOC in the SIPS strategy was a logical fit because the inmates must remain incarcerated and needed supplies must be obtained by facility representatives and taken back to correctional facilities for distribution and administration. In addition, the distribution of medications and supplies for DOC staff and their immediate family members would be handled through SIPS. With the convenience of obtaining needed medications and supplies at their workplace, rather than at a MIPS distribution site, it is anticipated that this strategy would reduce staff absenteeism during an actual pandemic flu outbreak. The disaster-simulation exercise was monitored and filmed by the CDC to be used as a training video for this innovative practice.

Expanding on this model, the DOC established a working relationship with the Oklahoma State Health Department’s Terrorism Preparedness and Response Service to replicate this process throughout the state. Memoranda of understanding (see Figure 1) were developed to formalize this relationship and to provide for identification and training of correctional health care staff in each facility who would be credentialed to obtain supplies at the SIPS sites. Emergency planners in each of Oklahoma’s eight homeland security regions would then work with those correctional facility staff in advance of a disaster to provide training and exercises to test their readiness.

Another result of external networking was that the DOC secured an agency-specific stock of 10,395 treatment regimens of Tamiflu for DOC staff and their families in the event of a pandemic flu outbreak. This procurement was made possible by a federal subsidy program through the CDC, which made it possible for state health departments to purchase this antiviral agent from the manufacturer at a greatly reduced price. Health departments were permitted to extend this pricing to other partners if the health department was unable to purchase the state’s entire allotment itself through this subsidy. Through a strong partnership with the state department of health, the DOC was extended this offer to provide for staff and their families, and the agency’s director made the funds available. Although Tamiflu is broad in spectrum and not specific

to a pandemic flu strain, it provides protective immunity equivalent to that of the influenza vaccine in the event of exposure to influenza. It was a significant step forward in heightening the public health community’s awareness of the special needs of DOC staff and in providing for their safety, thereby allowing them to continue their mission during a pandemic.

## Written Pandemic Flu Plan

An interdisciplinary DOC pandemic flu task force was created to plan for the recognition and management of a pandemic flu outbreak in Oklahoma’s system. Members of the task force included the deputy director of institutions, the chief of operational services and representatives from:

- Medical Services;
- Office of General Counsel (legal);
- Human Resources;
- Mental Health Services;
- Training and Staff Development Services;

**Figure 2**

OKLAHOMA DEPARTMENT OF CORRECTIONS  
NURSING PRACTICE GUIDELINES  
**PANDEMIC INFLUENZA**

**ONLY FOR USE DURING A KNOWN INFLUENZA PANDEMIC  
NOT FOR USE DURING SEASONAL INFLUENZA**

Subjective Data: \_\_\_\_\_ Allergies: \_\_\_\_\_  
Chief complaint: \_\_\_\_\_  
Onset: \_\_\_\_\_

Objective Data: (vs)  
TEMP \_\_\_\_\_ Pulse \_\_\_\_\_ Resp. \_\_\_\_\_ BP. \_\_\_\_\_ Wt. \_\_\_\_\_ O<sub>2</sub> sats. \_\_\_\_\_

<input type="checkbox"/> Fever	<input type="checkbox"/> Resp illness	<input type="checkbox"/> Cough	<input type="checkbox"/> Sore throat	<input type="checkbox"/> Joint aches	<input type="checkbox"/> Muscle aches
<input type="checkbox"/> General weakness	<input type="checkbox"/> Dyspnea				

<b>Lungs (right)</b>	<input type="checkbox"/> Clear	<input type="checkbox"/> Crackles	<input type="checkbox"/> Wheezing	<input type="checkbox"/> Rhonchi	<input type="checkbox"/> Diminished
<b>Lungs (left)</b>	<input type="checkbox"/> Clear	<input type="checkbox"/> Crackles	<input type="checkbox"/> Wheezing	<input type="checkbox"/> Rhonchi	<input type="checkbox"/> Diminished

**Appearance**

<input type="checkbox"/> No distress	<input type="checkbox"/> Mild distress	<input type="checkbox"/> Moderate distress	<input type="checkbox"/> Severe distress	<input type="checkbox"/> Anxious	<input type="checkbox"/> Restless
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**NOTIFY MEDICAL PROVIDER/RN IMMEDIATELY IF:**

- Temperature above 101° degrees F. plus
- Any one of the above symptoms

**INITIAL NURSING MANAGEMENT: IF FEBRILE WITH SYMPTOMS**

- Collect nasal/pharyngeal swabs to send to OSHD (keep refrigerated @ 4°C/39.2°F, place in viral transport media)
- Implement Infection Precautions (masks)
- Implement Droplet Precautions (use gloves/gowns)
- Implement Respiratory hygiene/cough etiquette ( good hand washing, cough or sneeze in upper sleeve, not hands)

**First Aid: IF AFEBRILE**

- Acetaminophen 500-650mg for pain tid for 7 days
- Guaifenesin DM cough syrup 2 teaspoons three to four times a day for 5 days  
CTM 4mg po TID for 7-10 days
- Increase oral fluids, especially water

**Assessment:**

- Alteration in comfort related to mild upper respiratory congestion

**Progress Note:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Patient Education:**

- Instruct patient to return to clinic if fever develops, increase fluids, medication use.  
Inmate verbalizes understanding of instructions.

**Signature/credentials:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_  
**Signature/credentials:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

Name \_\_\_\_\_ DOC # \_\_\_\_\_  
(Last, First)

to DOC staff from the Strategic National Stockpile and other sources. An important component of the plan is the scalability of the services to be provided, which is based on staff availability. The written plan has been developed to accommodate altered standards of care and continuity-of-operations strategies, based on staffing shortages of various severities.

A nursing protocol (see Figure 2) was designed to assist nursing staff in triaging inmates complaining of influenza-like illnesses in the setting of a pandemic and determining their need to be seen by a medical provider. In addition, a Pandemic Surveillance Tracking Sheet was developed to be used at all DOC facilities to document new and confirmed cases of influenza-like illnesses, hospitalizations, deaths and staff absences. An influenza-like illnesses assessment tool (see Figure 3) was created for screening employees to determine if they should be excluded from work due to illness.

One of the most challenging aspects of the planning process was the development of a priority listing of staff for the distribution

of antivirals or vaccine. Federal and state authorities recommended that the prioritization list classify all correctional and law enforcement staff in a single priority grouping (category 2B in the federal listing). It was recognized that all staff would be needed in the event of a pandemic; however, in accepting the reality of limited initial supplies, it was decided to further prioritize staff positions for internal use.

To accomplish this nearly impossible task, the DOC used a process similar to that used by the CDC in the Public Engagement Pilot Project on Pandemic Influenza. In this project, the federal policy-makers sought broad public input into the federal prioritization lists. In a series of training meetings held across the country, members of the general public were taught about pandemic influenza and its anticipated impact and then were given an opportunity to participate in creating new priority lists. This was done through the use of “nominal group process” exercises that focused first on guiding principles in prioritization and then on prioritizing groups of citizens.

The DOC’s version of the exercise first discussed guiding principles in prioritization:

- Give everyone an equal chance to be protected via a lottery or first-come, first-served system;
- Protect individuals with the most life ahead of them;

- Executive Communications;
- Security and Facility Operations;
- Legislative Liaison; and
- Community Corrections.

The authors of this article were assigned specific responsibilities for disaster preparedness within Health Services. Monthly meetings were held to drive the planning process forward and to update the disaster response strategies.

The development of a pandemic flu plan was critical to the success of the DOC’s disaster response by defining specifics — the who, what, when, where and how of the agency’s response in the event of a pandemic flu outbreak.

A number of sources of information regarding pandemic flu planning were used in the preparation of the plan. Key sources of information included the State of Oklahoma Pandemic Influenza Management Plan and the CDC Web site [www.PandemicFlu.gov](http://www.PandemicFlu.gov). There were also numerous meetings and informal consultations with disaster-response leaders in local and state agencies.

Key elements of the DOC’s pandemic flu plan include assigning daily surveillance measures and triggers for plan implementation, defining command and control communication pathways, creating checklists for screening and treatment, establishing temporary sick bays and morgues, and prioritizing vaccine and antiviral administration

**Figure 3**

### **Influenza-Like Illness (ILI) Assessment Tool**

An ILI assessment tool may be used as a screening tool to determine if employees should be excluded from work due to illness.

Please check the following:

ILI (Influenza-Like Illness) in the general population is determined by the presence of 1, 2, and 3, and any of 4: a-c, which could be due to the influenza virus.

- \_\_\_\_\_ 1. Sudden onset of respiratory illness **AND**
- \_\_\_\_\_ 2. Fever greater than 101° F **AND**
- \_\_\_\_\_ 3. Cough **AND**
- \_\_\_\_\_ 4. One or more of the following:
  - \_\_\_\_\_ a. sore throat
  - \_\_\_\_\_ b. joint aches
  - \_\_\_\_\_ c. muscle aches or weakness

Persons with influenza-like illness should remain at home until they have fully recovered (usually 5 to 7 days after symptoms stop).

Persons who have been exposed within the last 3 days to someone with influenza-like illness should stay at home for 3 days until they are sure they are not ill.

#### **Fit to Work**

- No symptoms

#### **Fit to Work with Restrictions**

- Afebrile (meet above criteria 1-3-4)

#### **Unfit for Work**

Meet above criteria (1-4)

- Protect those of any age or health condition most likely to die from a new influenza strain;
- Assure public safety;
- Maintain emergency and/or life-saving services;
- Protect society's key government leaders and decision-makers;
- Protect those providing the most critical services that keep society running;
- Provide some vaccine to other countries, even if it is at the expense of vaccinating some individuals in the United States; and
- Protect those who provide homeland security and those who defend the nation against military threats abroad.

The group then was given a list of these principles and asked to rank them in order from most important to least important, using a scale from one to 10. The rankings of each group member were added together, resulting in a group ranking of the principles. Group consensus was used to make decisions about moving each principle higher or lower on the group ranking until everyone was satisfied with the priority list of the principles.

With a sense of the relative importance of each principle, the group was then provided with a listing of staff categories (e.g., uniformed staff, health services staff, food services staff, administrative staff, executive staff) and again individually ranked these categories as to which should receive limited supplies first. A group ranking was then derived and refined as described above. The result was a priority listing that was carefully considered, fair and based on a good understanding of the principles that were used to develop it. The ultimate goal of this kind of prioritization is that everyone in need will eventually receive supplies, but that during initial limited supply a clear and well-considered decision has been made about where supplies are distributed first.

### **Future Focus**

Facility health care staff working with their unit administrators are developing facility-specific plans (field memoranda) based on the DOC's pandemic flu plan. Essential elements of field memoranda include:

- A procedure for monitoring local hospital bed capacity;
- A location for a temporary sick bay;
- A location for a temporary morgue;
- A location for a mass immunization/prophylaxis site;
- Provision of food services;
- Provision of laundry services;
- Environmental cleaning/disinfection schedule and monitoring;
- A location for isolation/quarantine housing;
- A single point of entry/exit for screening purposes;
- A mechanism for tracking daily influenza-like illnesses and confirmed cases;
- A location for stockpiles; and
- Automatic policy exceptions.

Training has been scheduled this fall for key facility staff, wardens, and DOC administrative and medical personnel. In addition, DOC Medical Services will promote staff awareness of the health benefits of seasonal flu and pneumonia immunizations, including the monitoring and surveillance of staff immunizations.

Oklahoma's DOC is protecting its thousands of inmates, employees and the general public by strengthening its plan for responding to pandemic flu. Its health care staff continue to develop strong ties with the disaster-response community by participating in numerous meetings that focus on the DOC's structure of processes planned for the possibility of an actual pandemic flu outbreak and through collaboration in readiness exercises.

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