



DSHS Plans for Pandemic Influenza

Background

Much attention has been focused recently on the possibility of an influenza pandemic and on what states are doing to prepare if one occurs. The differences between an influenza pandemic and a bad influenza season are outlined as follows:

- Influenza pandemics are explosive global events in which most, if not all, people worldwide are at risk for infection and illness.
- With pandemic influenza, there is a new strain of influenza against which there is little or no natural immunity.
- Until a vaccine can be produced against this new strain, effective vaccine protection will not be available.
- Seasonal influenza outbreaks, even bad ones, are caused by variations of influenza viruses that have circulated previously and to which many people have some immunity.

Problems Preparing for Pandemic Influenza

It is difficult to prepare for pandemic influenza for three major reasons. The first obstacle is vaccine development and production.

- Vaccine is the first line of defense to protect people from getting influenza.
- With each new influenza virus, vaccine development is contingent upon the new influenza virus shifting to human-to-human transmission so the strain can be identified and characterized.
- Vaccine manufacturing plants currently are large enough to produce about 90 million doses a year to meet seasonal needs. That amount covers about one third of the U.S. population.
- Influenza vaccine production depends largely on chick embryos. A virulent avian influenza strain may be lethal for chick embryos and make current vaccine production methods ineffective.

The second issue centers around antivirals, which are prescription medications used to treat influenza virus. Current manufacturing capacity for antivirals cannot produce enough to treat everyone. Antivirals, such as Tamiflu®, are helpful in treating influenza symptoms and in lessening the potential for severe complications. Today's antivirals may have limited effect against a new influenza strain. Their use may result in drug resistance in the influenza virus.

Third is the relative speed with which infectious diseases can move due to international travel. In planning for a typical influenza season, we have about six months to prepare, and we have some knowledge of the viruses. With an influenza pandemic, a new virus may reach the United States in hours or days. That is why constant communication among states, between state and federal governments, and between national governments along with the World Health Organization is critical.

Texas Preparations

On average, three influenza pandemics occur in a century with the last one in 1968. Influenza is always on the watch list, and Texas preparations have been ongoing to get ready for pandemic influenza. In Texas, influenza surveillance activities continue to expand – from identifying Texas illnesses to monitoring global events. Texas began developing its current *Pandemic Influenza Plan* in 2002. Major revisions to the Texas plan, which complements the revised World Health Organization plan and the U.S. plan, will incorporate stakeholder input and will be completed in November 2005. The plan includes:

- Guidance to local health departments for working with their community leaders;
- Considerations surrounding allocation and distribution of vaccines and antivirals;
- Updated designs for mass vaccination clinics based on real-time, full-scale exercises;
- Development of information toolkits for health care providers and the public.

Remaining Challenges in Preparing for a Pandemic

One of the biggest challenges in preparing for pandemic influenza in Texas is reaching all our residents quickly. Texas has four of the nation's largest cities by population and also some of the most rural and sparsely populated areas in the country. Another challenge is preparing for many different response scenarios based on availability of vaccines and antivirals. People may need to change their behaviors to reduce illness and death. Schools may need to close and activities such as shopping or large-group activities may have to be limited. The priority groups to get any available influenza vaccine or limited antivirals during an influenza pandemic may be different from the groups identified for influenza shots during a typical influenza season.

Applying Katrina/Rita Lessons Learned to Pandemic Influenza Planning

Responses to both hurricanes Katrina and Rita have proven how critically important it is to have coordinated plans in place and have all levels of government – local, state, federal, and in the case of a pandemic, international – know what is expected and what will happen at each level. People will need to trust, respect, and follow public health recommendations for any pandemic influenza response effort to be successful. In times of crisis, people need a steady stream of information about what to do, where to go or not go, what public health officials know, and what they don't know.

It also is crucial to identify special populations in communities that need assistance. While evacuation will not be an issue in an influenza pandemic, people will need to stay where they are – in their own homes or other sites such as long-term care facilities – and help will need to come to them. It will be necessary to have ways to help those who have no place to stay. Uninterrupted food and water supplies are essential. Those individuals without transportation will need help getting to clinics or hospitals or receiving medication where they are.

For more information, contact: Susan Penfield, M.D., Manager, Infectious Disease Control Unit, Community Preparedness Section, DSHS, at 512/485-7455 or susan.penfield@dshs.state.tx.us