

# Pandemic Influenza Planning

Frank J. Welch, MD, MSPH  
Medical Director  
Louisiana Department of Health and Hospitals  
Office of Public Health

"We don't know the timing of the next pandemic, how severe it will be. We don't know what drugs will work. We don't have a vaccine. Yet we are telling everyone to prepare for a pandemic. It's tricky...This is scary and we don't know... That's the message." **Dick Thompson, World Health Organization**

**December 2005**

## Flu terms

- **Seasonal (or common) flu**
  - Respiratory illness that can be transmitted person to person. Most people have some immunity; vaccine available. What is left over from previous pandemics.
- **Avian (or bird) flu**
  - Caused by influenza viruses that occur naturally among wild birds. The H5N1 variant is deadly to domestic fowl and can be transmitted from birds to humans. No human immunity and no vaccine.
- **Pandemic flu**
  - A virulent human flu (often from mutation of an avian flu) that causes a global outbreak (pandemic) of serious illness. Since little natural immunity, the disease can spread easily from person to person. **Currently no pandemic flu.**

**It is scientifically impossible to predict next pandemic flu event**  
If not the Avian flu strain then another will mutate into the next pandemic flu.

## Lessons from Past Pandemics

- Occur unpredictably, not always in winter
- Variations in mortality, severity of illness and pattern of illness
- Rapid surge in number of cases over brief period of time, **often measured in weeks**
- Tend to occur in waves
  - Each wave lasts about 2-3 months
  - Subsequent waves may be more or less severe
  - Generally occur 3-12 months after previous wave

## Estimated Pandemic Flu Impact – Louisiana

- 3 million infected
- 600,000 – 1.4 million clinically ill
- 300,000 – 700,000 requiring outpatient care
- 10,000 – 22,500 hospitalized
- 3,000 – 6,000 deaths

## Estimated Pandemic Influenza Impact in the US

- 200 million persons infected
- 38-89 million clinically ill
- 18-42 million requiring outpatient care
- 314,000 – 733,000 hospitalized
- 89,000 – 207,000 deaths

## Requirements for Pandemic Flu

- For pandemic flu to occur, three conditions must be met:
    - ✓ A new influenza A virus appears or “emerges” in the human population ✓-met
    - ✓ The new virus causes serious illness in people ✓-met
    - **The new virus spreads easily from person to person worldwide**
- (Note that two of three are checked off.)

## Vaccines

- Vaccine will likely not be available when the novel virus first affects communities.
- Current manufacturing procedures require **six to eight months** before large amounts of vaccine are available for distribution.
- Once a vaccine becomes available, it will be distributed through the Strategic National Stockpile system:
  - The target population will be the entire Louisiana population.
  - Demand for vaccine will be greater than the supply early in the course of the pandemic.
  - Once vaccine is available, it will need to be distributed as quickly as possible through Point of Dispensing (POD) sites.
  - Immunologic responses is poor to unknown. It is likely that a second (booster) dose of vaccine two to four weeks after the first dose is given will be required.
  - Like antivirals, early in distribution, vaccines will need to be prioritized.

Interventions* by Setting	Pandemic Severity Index		
	1	2 and 3	4 and 5
<b>Home</b>			
<b>Voluntary isolation</b> of ill at home (adults and children), combine with use of antiviral treatment as available and indicated	Recommend †§	Recommend †§	Recommend †§
<b>Voluntary quarantine</b> of household members in homes with ill persons¶ (adults and children); consider combining with antiviral prophylaxis if effective, feasible, and quantities sufficient	Generally not recommended	Consider **	Recommend **
<b>School</b>			
<b>Child social distancing</b>			
-dismissal of students from schools and school based activities, and closure of child care programs	Generally not recommended	Consider: ≤4 weeks ††	Recommend: ≤12 weeks §§
-reduce out-of school social contacts and community mixing	Generally not recommended	Consider: ≤4 weeks ††	Recommend: ≤12 weeks §§
<b>Workplace / Community</b>			
<b>Adult social distancing</b>			
-decrease number of social contacts (e.g., encourage teleconferences, alternatives to face-to-face meetings)	Generally not recommended	Consider	Recommend
-increase distance between persons (e.g., reduce density in public transit, workplace)	Generally not recommended	Consider	Recommend
-modify, postpone, or cancel selected public gatherings to promote social distance (e.g., stadium events, theater performances)	Generally not recommended	Consider	Recommend
-modify work place schedules and practices (e.g., telework, staggered shifts)	Generally not recommended	Consider	Recommend

## How do we plan?

- Understand roles
  - Federal, State, Local
  - Hospitals and Clinics
  - Business and Industry
  - Schools and Universities
  - ***Faith-Based and Community organizations***
  - Individuals/families
- Education
- Collaboration

## Summary

- Influenza pandemics are naturally recurring events – come in waves
- Experts think the world may be on the brink of another pandemic
- All countries will be affected; illness will be widespread; mortality rate will be high
- Healthcare systems will be overwhelmed
- Economic and social disruption will be great
- Risk minimized through preventive steps
- No vaccine initially
- Plan beyond “traditional notions of continuity of operations”

Everyone needs to be prepared.

Here are some links to further help you in your endeavor to be prepared:

Guide for Parents (CDC):

[http://www.cdc.gov/flu/professionals/flugallery/2008-09/parents\\_guide.htm](http://www.cdc.gov/flu/professionals/flugallery/2008-09/parents_guide.htm)

Preventing the Spread of the Flu in Child Care Settings: Guide for Administrators & Staff

<http://www.cdc.gov/flu/professionals/infectioncontrol/childcaresettings.htm>

Questions & Answers for Schools

<http://www.cdc.gov/flu/school/qa.htm>

Flu Advice for Caregivers of Children Less Than 6 Months Old

<http://www.cdc.gov/flu/protect/infantcare.htm>

Flu Information for Workplace and Employees

<http://www.cdc.gov/flu/workplace/index.htm>

