“The pandemic influenza clock is ticking. We just don’t know what time it is.”

“This is the one health threat we’re preparing for that we know will happen”
Pandemic Planning: History and Process

- 1st plan developed in 1978 after Swine flu episode

- Working Group established in 1993
  - Input obtained from federal agencies and stakeholders
  - Multiple plan versions drafted
  - Guidance for State health departments posted in 2001
  - Influenza pandemic preparedness action plan for the United States: 2002 update*

Recent Developments Affecting Pandemic Influenza Planning

- Increased focus on influenza & other threats
  - Experience from 2003-04 influenza season
  - Global spread of SARS
- Improved infrastructures and technologies
  - Expanded influenza surveillance infrastructure
  - Improved vaccine development technologies
  - New antiviral medications
  - New communications systems
  - BT and other emergency preparedness activities
U.S. Impact Estimates for the Next Influenza Pandemic

Deaths: 89-207,000
Hospitalizations: 314-733,000
Outpatient care: 18-42 m
Total infected: 43-100 m

0.3-0.7%
0.1-0.3%
6-15%
15-35%

Absent vaccination, health related economic impacts = $71 to $166 billion

Meltzer, Emerg Infect Dis J 1999
Goals of a Pandemic Influenza Response

- Decrease the burden of disease
- Minimize social disruption
- Reduce economic impacts
Purposes of the Pandemic Influenza Preparedness and Response Plan

- Define and recommend preparedness activities
- Describe roles, responsibilities and actions of federal coordination of response
  - International
  - State and local levels
- Guide health departments and health care system in developing state and local preparedness and response plans
- Provide technical information on which preparedness and response are based
Critical Components of a Pandemic Response

- Detect the pandemic strain through surveillance
- Develop and license vaccine against the pandemic strain
- Produce sufficient vaccine for the US population
- Rapidly and equitably deliver vaccine to target groups
- Provide antiviral medications for therapy and prophylaxis
- Implement measures to decrease disease spread
- Effectively coordinate international, federal & state activities
- Assure quality medical care & provide community services
- Effectively communicate with community leaders, medical providers, the public and the media
HHS’ Draft Pandemic Influenza Preparedness and Response Plan

Core Plan
- Describes National coordination and decision-making
- Provides an overview of key preparedness issues
- Outlines response actions at national, state, & local levels

Guides (2)
- Guidance for State/local Health Departments planning
- Guidance for health care system planning

Annexes (10)
- More detailed and technical information on key preparedness and response issues
Pandemic Influenza Preparedness and Response Plan Annexes

- Influenza and influenza pandemics
- Surveillance
- Vaccine development
- Vaccine strategies
- Antiviral strategies
- Strategies to decrease disease transmission
- Communications
- Research
- Lessons learned from swine influenza
- Similarities between influenza, smallpox, & SARS planning
HHS’ Draft Pandemic Influenza Preparedness and Response Plan

www.dhhs.gov/nvpo/pandemics
What to Expect in the Current Draft Pandemic Influenza Preparedness & Response Plan

- Description of Federal level activities
  - Coordination (command and control)
  - Actions of HHS agencies
- Legal authorities for pandemic response actions
- Description of current infrastructures & technologies
- Guidance on strategies for response actions and supporting rationales
- Table of specific Federal actions by pandemic phase
"The recent outbreak of avian influenza throughout Asia is unprecedented and reminds us just how much more work we have to do before we are prepared nationally and globally. We need to work together more to strengthen our influenza surveillance, reporting and control capabilities."

Secretary Tommy G. Thompson,
World Health Assembly: May 18, 2004
Vaccine and Vaccination Preparedness Goals

- Shorten timelines to availability
- Assure year-round production and surge capacity (egg supply and availability)
- Increase and diversify U.S. manufacturing capacity
- Develop and test investigational lots of pandemic-like vaccine strains
- Clarify potential role of live attenuated influenza virus vaccine
- Ensure effective distribution & administration to achieve pandemic response goals

Enhance interpandemic influenza vaccine use
Priority Groups for Pandemic Vaccine

Definition of priority groups based on pandemic response goals:

- **Reduce health impacts** – Maintain quality healthcare system & protect those at highest risk
- **Reduce social and economic impacts** – Maintain essential community services

Defining priority groups:

- National guidance vs. state-by-state decisions
- Definition of target groups at State/local levels
  - (e.g., Who provides essential community services?)
Antiviral Drug Preparedness

- Prophylaxis and therapy can have major health impacts
- Initial oseltamivir stockpile in SNS
- Drug availability & manufacturing capacity limited
- Shelf life and inventory rotation limitations
- Modeling of antiviral drug use strategies, health impacts, and cost effectiveness

Key preparedness issues
- Assess availability and consider stockpile options
- Work with health departments to develop strategies for effective distribution and use
Guidance on Antiviral Drug Use

- Priority groups for antiviral chemoprophylaxis
  - Health care workers (maintain quality health care)
  - Groups key to response capacity (vaccine manufacturers, public health, decision-makers)
  - Essential public safety services (e.g., police, fire)
  - Animal cullers

- Priority groups for antiviral treatment
  - See above (treatment as more efficient alternative?)
  - Persons at greatest risk of adverse health outcomes (at admission, high-risk outpatients)

- Distribution challenges
Interventions to Decrease Influenza Transmission

- Contain clusters of human disease caused by strains not well transmitted between people
- Slow spread of strains that are more effectively transmitted buying time for specific preventive measures (e.g., vaccine)
- Health care system interventions
  - Infection control and isolation of patients in hospitals
  - Vaccination/antiviral prophylaxis of HCWs and in LCTF
- Community interventions: Options
  - Travel advisories and precautions and protocols
  - Screening travelers from areas with disease
  - Quarantine of exposed persons, based on the epidemiology & transmission of infection
Public Health Preparedness and Pandemic Influenza Preparedness

- State and local health departments
  - Majority of States have or are developing plans
  - Tabletop exercises are being developed
  - CDC support
    - Synergy with BT/other preparedness planning
    - Support for surveillance and public health laboratories

- Health care system
  - Synergies with other response plans
  - Need for influenza-specific planning and education
  - HRSA hospital preparedness program

- FY’04: Encouragement of integrated planning
Pandemic Influenza: Research Priorities

- Improve understanding of influenza molecular biology, emergence of new strains, and viral transmission characteristics
- Improve understanding of ecology and spread of influenza in animals; animal-human interface
- Improve antigen detection tests for patients and develop tests to rapidly detect new subtypes
- Improve timeliness, yield, and immunogenicity of influenza vaccines
- Develop new antiviral drugs and vaccines
Coming Soon...

United States Department of Health and Human Services

Pandemic Influenza Response and Preparedness Plan

Table of Contents
- Executive Summary
- Core Document
- Abbreviations and Internet Resources

Guide A: Planning Guidance for State and Local Health Departments
Guide B: Planning Guidance for Health Care System
Annex 1: Overview of Influenza Illness and Pandemics
Annex 2: Surveillance
Annex 3: Vaccine Development and Production
Annex 4: Vaccination Strategies, Monitoring, and Safety
Annex 5: Antiviral Strategies
Annex 6: Strategies to Limit Transmission
Annex 7: Communication and Education
Annex 8: Pandemic Influenza Research
Annex 9: Lessons from Swine Flu Program
Annex 10: Synergies and Differences in Preparedness and Response for Influenza and other Infectious Disease Threats

Influenza A viruses periodically cause worldwide epidemics, or pandemics, with high rates of illness and death. Unlike other public welfare emergencies, an influenza pandemic will impact on multiple communities across the United States and require swift and coordinated action and cooperation by all levels of government. Advanced planning for a large scale and widespread health emergency is required to optimize health care delivery during a pandemic. In addition, prevention and preparedness activities facilitate the response and recovery during and after an influenza pandemic.

www.dhhs.gov/nvpo/pandemics