


# H1N1 Swine Influenza A Briefing

May 6, 2009

Florida  
Health Care  
Association



# Overview

- Short History & Lessons Learned
- Symptoms and Transmission
- Definitions
- Current Interventions
- Infection Control Strategies
- Contingency Planning Assumptions

# Important Swine Flu Warning



# When Have Pandemics Occurred?

- **1918 "Spanish Flu" H1N1**
  - Up to 50 million deaths worldwide
  - Over 500,000 deaths in the U.S.
- **1957 "Asian Flu" H2N2**
  - 70,000 deaths in U.S.; 1 million globally
- **1968 "Hong Kong Flu" H3N2**
  - 50,000 deaths in U.S.

# Lessons from Past Pandemics

- The virus behaves unpredictably
- Rapid surge in cases and exponential increase over a short period of time, often weeks
- Affects non-traditional age groups, e.g. young adults
- Unfolds in waves, with later waves more severe
- Most pandemics start in Asia due to dense populations of humans in close proximity to ducks and pigs

# Lessons from Past Pandemics

- Anti-virals used effectively for some treatment
- Vaccines for specific flu viruses take 4-6 months to develop
- Spread through respiratory secretions from person to person (doorknobs, sneezing, coughing, medical care)

# Symptoms of General Influenza Viruses

- Incubation period 1-3 days
- Fever, chills, muscle aches, headache & fatigue
- Cough, sore throat, runny nose
- Nausea, vomiting & diarrhea in children
- Complications
  - Primary viral or secondary pneumonia
  - Worsening of underlying illnesses
  - Heart disease
- Florida DOH is defining Influenza-like Illness (ILI) as fever (100° or greater) and a cough and/or sore throat in the absence of a KNOWN cause other than influenza.

# Modes of Transmission for Influenza Viruses

- Droplet: large droplets  $> 5$   $\mu\text{m}$ , can travel no more than 3 feet
- Direct and indirect contact: direct skin to skin (hand-to hand); influenza virus can live on surfaces
- Airborne: via small droplet nuclei  $< 5$   $\mu\text{m}$  which can persist for hours

# General Flu Definitions

- Seasonal Flu: A contagious respiratory illness caused by influenza viruses
- Epidemic Flu: An outbreak of seasonal flu in a community or region
- Pandemic Flu: A global human outbreak caused by a novel influenza A virus
- Bird Flu: An infection of birds by an avian flu virus, occurring naturally among birds
- Swine Flu: Respiratory infection in pigs usually during winter months

# H1N1 Definitions

- A suspected case of H1N1 is defined as a person with acute respiratory illness (with fever) with onset:
  - within 7 days of close contact with a person who was a confirmed case of swine influenza A virus infection, or
  - within 7 days of travel to a community either within the U.S. or internationally where there are one or more confirmed swine influenza A cases, or
  - resides in a community where there are one or more confirmed swine influenza.
- Close contact is defined as: within about 6 feet of an ill person who is a confirmed or suspected case of swine influenza A virus infection during the infectious period.
- Infectious period for a confirmed case of swine influenza A virus infection is defined as: 1 day prior to the case's illness onset to 7 days after onset.

# Current Swine Flu Interventions

- Current H1N1 is a new strain composed of segments of human, swine, and avian genes
- Person-to-person spread has occurred
- Total of 227 U.S. cases have been confirmed in 30 states (5/4/09)
- Laboratory studies indicate susceptibility to Oseltamivir and Zanamivir (Tamiflu, Relenza)
- Resistance to Amantadine and Rimantidine (Symmetrel, Flumadine)
- Federal Government and manufacturers have begun the process of developing a vaccine against the current novel H1N1 flu virus.
  - no genetic markers similar to the 1918 H1N1 flu according to CDC

# Non-pharmaceutical Interventions

- Isolation and quarantine
- Social distancing
- Use of masks
- Handwashing
- Respiratory hygiene/cough etiquette
- Follow existing procedures for containing a flu outbreak in the facility

# Infection Control in a Healthcare Setting

- Patients with suspected or confirmed case-status should be placed in a single-patient room with the door kept closed. If available, an airborne infection isolation room (AIIR) with negative pressure air handling with 6 to 12 air changes per hour can be used. Air can be exhausted directly.
- For suctioning, bronchoscopy, or intubation, use a procedure room with negative pressure air handling.
- The ill person should wear a surgical mask when outside of the patient room, and should be encouraged to wash hands frequently and follow respiratory hygiene etiquette.

# Infection Control in a Healthcare Setting

- Routine cleaning and disinfection strategies used during influenza seasons **can be applied** to the environmental management of swine influenza.
- *Standard, Droplet and Contact precautions* should be used for all patient care activities, and maintained for 7 days after illness onset or until symptoms have resolved. Maintain adherence to *hand hygiene by washing with soap and water or using hand sanitizer* immediately after removing gloves and other equipment and after any contact with respiratory secretions.

# Infection Control in the Nursing Home Setting

- In a Nursing Home, who is responsible for:
  - Providing care to suspected or confirmed cases of H1N1?
  - Collecting clinical specimens from suspected or confirmed cases?
- What are the preventative measures these persons must take?
- In the Nursing Home setting, are any personnel engaged in:
  - endotracheal intubation?
  - nebulizer treatment?
  - resuscitation involving emergency intubation or cardiac pulmonary resuscitation for suspected or confirmed swine influenza?

# Infection Control in the Nursing Home Setting

- Persons providing care to or collecting clinical specimens from suspected or confirmed cases of H1N1 should wear:
  - *disposable* non-sterile gloves, gowns, and eye protection (e.g., goggles) to prevent conjunctival exposure.
- Personnel collecting clinical specimens for suspected or confirmed H1N1 cases should wear:
  - a fit-tested disposable N95 respirator.
- Personnel providing direct patient care for suspected or confirmed swine influenza A (H1N1) cases should wear:
  - a fit-tested disposable N-95 respirator when entering the patient room.
- Florida Department of Health's *Guidance document for Enhanced Influenza Surveillance and Treatment for Hospitals and Clinicians*

# Immediate Strategies for Nursing Homes

- Keep Employees, Visitors, and Families Safe
- Comply with Health Department and CDC
- Maintain Situational Awareness
- Brief Staff, Residents, Family Regularly
  - How is your receptionist handling phone calls/queries?
  - What preemptive communication measures have occurred?
- Maintain Consistent Message
- Assess and Obtain Resources as Needed
  - N-95 respirators, surgical masks, personal protective equipment, and medications
- Communicate with Corporate Leadership
- Clinicians should report suspected infections to local County Health Department (64D-3, FAC)

# Florida DOH Memo to County Health Departments, May 1, 2009

- Specific antiviral medication is indicated for the treatment of confirmed, probable and suspect cases, as well as, for **prophylaxis** of high risk close contacts.
- If community hospitals and providers cannot obtain antivirals through **normal mechanisms**, they should work with their health department in obtaining antivirals made available to states from the Federal Strategic National Stockpile

# Florida DOH Memo to County Health Departments, May 1, 2009

- The CDC has released only a portion of the stockpile and prioritizing its appropriate use is critical.
  - The state has determined allocations for each county, based on population and hospital beds.
  - County health departments will work with their local hospitals and health care providers to **prioritize** and fill requests for antivirals.
- Note that patients cannot be charged for the cost of the medications

# Long term Contingency Planning Assumptions for Pandemic

- Severe strain on the entire health care system including long term care
- Clinical management challenges for maintaining infection control
- Scarcity of necessary equipment
- Scarcity of vaccines and/or anti-virals

# Long term Contingency Planning Assumptions for Pandemic

- Limited mechanical ventilators and oxygen
  - Nursing homes have any extra?
- Scarce vacant hospital beds
- Disaster planning assumes services will be less and may have to be rationed
- May necessitate ethical decision-making for care interventions

# Resources

**Florida Flu Information Line at 800-342-3557**

**Human Swine Influenza Investigation:**

<http://www.cdc.gov/swineflu/index.htm>

**AHCA/NCAL Swine (2009-H1N1) Flu Updates and Resources:**

[http://www.ahcancal.org/facility\\_operations/clinical\\_practice/Pages/SwineFlu.aspx](http://www.ahcancal.org/facility_operations/clinical_practice/Pages/SwineFlu.aspx)

**Guidance for Professionals:**

<http://www.cdc.gov/swineflu/guidance/>

**Florida Department of Health**

<http://www.doh.state.fl.us/>; select Swine Flu Information; then Health Care Providers and Professionals

**CAHF Model Respiratory Protection Program**