

# *Infection Control Issues and Pandemic Flu Preparedness*

“Prediction is very difficult, especially  
about the future.”

**Niels Bohr**, *Danish physicist (1885 - 1962)*

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# *Pandemic Influenza Transmission: Key Assumptions*

- Pandemic influenza will be spread in the same way as seasonal influenza
  - ◆ Primary – mucous membrane exposure to respiratory secretions via direct or indirect contact
  - ◆ Possible – small particle aerosols and direct and indirect contact

# *Principles of Infection Control for Pandemic Influenza*

- Contain respiratory secretions
- Limit contact between infected and non-infected persons
- Isolation/cohorting of persons with pandemic influenza
- Limit non-essential personnel and visitor contact with patients
- Promote spatial separation in common areas

# *Respiratory Hygiene / Cough Etiquette*

- Primary source control measure for healthcare and community settings
- Persons with respiratory symptoms should:
  - ◆ Cover mouth/nose when sneezing or coughing
  - ◆ Use tissues and dispose of appropriately
  - ◆ Perform hand hygiene after contact with respiratory secretions
  - ◆ Distance yourself from others (more than 3 feet)
  - ◆ Wear a surgical/procedural mask in healthcare settings

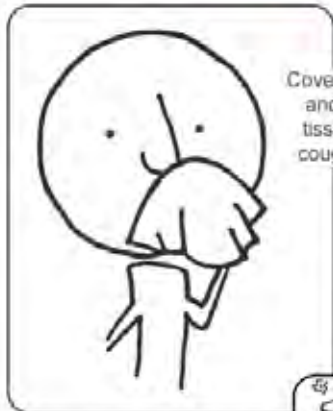
*Primary Control Measure...*

*Control Respiratory Secretions !*



Stop the spread of germs that make you and others sick!

# Cover your Cough



Cover your mouth  
and nose with a  
tissue when you  
cough or sneeze  
or  
cough or sneeze  
into  
your upper sleeve,  
not your hands.



Put your used tissue in  
the waste basket.



You may be asked to  
put on a surgical mask  
to protect others.

Clean  
your  
Hands  
after coughing or sneezing.



Wash with  
soap and water  
or  
clean with  
alcohol-based  
hand cleaner.



## Role of the Patient: Respiratory Hygiene

Cover cough

Appropriate disposal of tissues

Wear a mask

Hand hygiene

# *Infection Control Precautions*

- Prompt evaluation and removal from other individuals
- Place patient in private room on droplet precautions
- Add contact precautions if patient also has diarrhea
- Airborne Precautions for aerosol-generating procedures

# *Protection of Healthcare Workers*

- Masks for close contact
  - ◆ Consider donning upon room entry
- Gloves, gowns, eye protection as per standard precautions
- Hand hygiene as per standard precautions
- Use airborne infection precautions (AIIR and N-95) for aerosol-generating procedure (e.g., intubation, open suctioning, bronchoscopy)

# *Occupational Health Preparedness*

- Surveillance system for HCWs
  - ◆ Monitor absenteeism by syndrome if possible
  - ◆ **not just for influenza**
- Educate HCWs on influenza
  - ◆ Signs/symptoms
  - ◆ Steps to take if ill
  - ◆ **not just for influenza**
- System to track previous patient care assignments for epidemiological purposes
  - ◆ **not just for influenza**

## *Worker Issues during a Local Pandemic – must work with local/state health department*

- Depending upon availability, efficacy, tolerance, epidemiological factors
  - ◆ Use of antivirals for prophylaxis
  - ◆ Use of antivirals for treatment
  - ◆ Vaccination
- Will need to consider if, when, and how to initiate:
  - ◆ Active screening of HCWs
  - ◆ Recovered HCWs assigned to ill cohort
  - ◆ If ill HCWs must work:
    - Assign to ill cohort
    - Surgical mask

# *Local pandemic*

- Emergency Medical Services
  - ◆ Consider masks for all patient encounters
  - ◆ Appropriate use of gowns, gloves, eye protection as per standard and droplet precautions
  - ◆ Remove gloves and use alcohol hand rub between all patient encounters
- Outpatient Medical Offices:
  - ◆ Appropriate phone triage critical: home, office, hospital
  - ◆ Respiratory hygiene/cough etiquette
  - ◆ Timing of ILI visits: end of day, prompt placement in room
- Ambulatory Settings
  - ◆ Consider canceling all non-emergent services when pandemic is local

# *Survival of Influenza virus on Environmental Surfaces & Efficacy of Antimicrobial Agents*

- Survival studies, influenza A & B-
  - ◆ Hard, nonporous surface: 24 – 48h
  - ◆ Cloth, paper, tissue: 8 – 12h
  - ◆ Transfer from surface to hands documented
  - ◆ Concentration of virus on hands drops significantly within 5 min. High initial viral titer needed.

Bean B, et al. J Infect Dis 1982;146:47–51

- Low level disinfectants are effective:
  - ◆ Ethyl or isopropyl alcohol
  - ◆ Chlorine (100 ppm; 1:500 dilution 5.25% sodium hypochlorite)
  - ◆ Iodophor
  - ◆ Phenolic
  - ◆ Quaternary ammonium compound
  - ◆ Peroxygen
- Hand Hygiene:
  - ◆ Handwash
  - ◆ Alcohol based hand rub

Suarez DL 2003;CDC 2003;52(RR10); Kampf G 2004

A black and white photograph of a large, industrial-style hall with a high ceiling and many windows. The room is filled with long tables covered in white cloths, arranged in rows. The lighting is dramatic, with strong highlights from the windows and deep shadows in the aisles. The overall atmosphere is one of a busy, temporary setup.

**SURGE CAPACITY!!!!**

# *Triage, Clinical Evaluation, and Admission Procedures*

- How will the facility deal with an overwhelming influx of patients who need to be clinically evaluated?
- How will patients with non-influenza-related illnesses be handled?
- How will decisions about patient priorities for admission be made?
- How will the facility limit the introduction and spread of pandemic influenza?

# *Surge Capacity Issues*

- Staffing
  - ◆ What will happen if 25%, 50% or more of employees are unable to work?
- Bed capacity
  - ◆ How can the facility accommodate/expand to accommodate the influx of patients?
- Consumable and durable supplies
  - ◆ What happens if the facility runs out of ventilators, medical supplies, personal protective equipment?
- Continuation of essential medical services
  - ◆ How can the facility continue to provide care when surge capacity has been reached?

# Staffing

- Things to think about...
  - ◆ Estimate in advance the minimum number and category of required personnel
  - ◆ Explore alternate staffing options
    - Use of clinical administrators
    - Retirees and trainees
    - Patient family members in ancillary capacity (healthy ones!)
  - ◆ Increase cross-training
  - ◆ Identify “essential” personnel categories
    - Reassign non-essential personnel

# *Bed Capacity*

- Things to think about....
  - ◆ Revising admissions criteria
  - ◆ Expediting d/c to home or other facilities
    - Work closely w/home care agencies
  - ◆ Explore alternate placement for emergency patients
  - ◆ Develop policies/procedures for shifting patients to other areas
  - ◆ Identify space that could be vacated for use in cohorting patients

IT'S TIME AGAIN FOR  
EVERYONE'S LEAST FAVORITE  
GAME... FEAR OF THE WEEK!

TODAY, WE WELCOME JOHN  
SMIDDLEDORF, A DAIRY FARMER  
FROM WISCONSIN... JOHN,  
GIVE 'ER A SPIN!!



KOBERMAN  
OMAHA WORLD-HERALD

# *Communication*

- Emotional needs must be assessed and addressed
- Fear and anxiety is a normal reaction
- Fear of unknown can be conquered with information