Avian Influenza

Presentation to UC Departments
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Epidemic means more than the usual number of cases in a local area

Pandemic means more than the usual number of cases over the entire globe

Older persons are more likely to die from the usual influenza than younger persons

Influenza viruses are always changing (mutating)
The 1918 human influenza is thought to have originated from an avian (bird) source.
The 1918 influenza pandemic caused more deaths in young persons and wage earners.
There has been no pandemic from a bird-source influenza since 1918.
Avian Influenza Virus

- Present in migrating birds.
- Has spread west from Asian birds to European birds (most recently Scotland).
- Flyways for North American birds intersect with flyways for Asian birds over Alaska.
- Outbreaks have occurred in chicken flocks in multiple southeast Asian and Middle East countries.
The presence of avian influenza virus in chickens and ducks seems to make the virus more likely to mutate so it can infect humans.

- China is vaccinating its chicken population.
- Limited spread from person-to-person.
- Thought to have about half (all but 2?) of the mutations it needs to easily infect humans.
As of July 26, 2006, 232 cases of human Avian Influenza have been reported with 134 deaths.

Involved countries include Azerbaijan, Cambodia, China, Djibouti, Egypt, Indonesia, Iraq, Thailand, Turkey, and Viet Nam.
WHO Classification of the Current Situation – Stage 3

- Stage 3: No or very limited human-to-human transmission
- Stage 4: Evidence of increased human-to-human transmission
- Stage 5: Evidence of significant human-to-human transmission
- Stage 6: Efficient and sustained human-to-human transmission (pandemic)
Avian Influenza Virus

- Currently no vaccine available
- Not enough antiviral medicines Tamiflu and Relenza for the world’s population
- Antiviral medications would have to be taken for months to prevent avian influenza infection
Avian Influenza Pandemic

- Thought to be a certainly – only issue is when
- Would likely spread over most of the entire globe in a matter of weeks
- Could take 18 months to 3 years to infect about 50 percent of the world’s population.
- 2-10% deaths (1918 Spanish flu with 5% deaths)
- Multiple possible scenarios
Avian Influenza Pandemic (Drs. Koop and Osterholm)

- Could cause massive disruption in travel and commerce as individuals refuse to travel to certain areas or are too ill to work.
- No food on grocery shelves, no water available and citizens will be sequestered inside their houses.
- Not enough ventilators, hospital beds, or medical personnel for everyone who might need care.
Avian Influenza Pandemic (Dr. Donald A Henderson)

- A moderate disruption for 16 weeks
- Maximum of 15% of people ill at any one time
- No advantage to quarantine or “socially isolate” people
- No need to close universities
- Not enough ventilators, hospital beds, or medical personnel for everyone who might need care
US Avian Flu Prevention Strategies

- US government has accepted the Drs. Koop and Osterholm scenario
- Provide Vaccine
- Provide Antiviral medications
- Encourage social distancing
Pre-Pandemic Activities

• Plan for healthcare workers who are ill and unable to work
• Prepare for breakdown in government services such as sanitation, water, and power.
• Build up inventories in case foreign or domestic suppliers and transport services are paralyzed.
UC Pre-Pandemic Activities

- Prepare an Avian Flu Pandemic Response Plan involving the entire UC campus
- Identify essential and non-essential services
- Prepare to deliver essential services with 25% of your employees – and maybe not the 25% you wish you had.
UC Pre-Pandemic Activities

- When to change the UC call-off policy so that ill persons are encouraged to stay home
- When to require only essential personnel to show up for work
- Whether or not to put resources into servers so that most students could take classes from home
- Identify, purchase, and use any needed personal protective equipment
University Health Services Activities

- UHS staff is current with publicly available information regarding the world Avian flu situation.
- Links on UHS websites
- UHS staff has contacts at the City, county, state and CDC.
- UHS has Tamiflu, Relenza, N95 masks, positive air purifying respirators and hand sanitizer.
UC Activities in a Pandemic

- Disseminate information (website, emails, telephones, posters)
- Discourage faculty and student travel
- Require faculty and students to be healthy for two weeks after travel to infected areas
- Discourage campus-wide congregation of students (sports, seminars)
UC Activities in a Pandemic

- Plan for ill employees to stay home. Workers will come to work only if they feel well enough to work and they feel their families are safe.
- Plan to deliver services with only 25% of staff
- Plan for delivering instruction mostly (entirely) electronically
UC Activities in a Pandemic

- Will probably send most students home. May have to provide services to some faculty, staff, and students who don’t want to go home or who cannot get home.
- If students are on campus, UC must be able to provide, heat, cooling, water, food, bathrooms, trash service, internet, and telephone connections.
All of us wish the manufacturers success in developing an H5N1 avian influenza vaccine.

Report in the media this week that one of the pharmaceutical manufacturers has had good antibody responses to its avian influenza vaccine.
Avian Influenza Websites

- http://www.who.int
- http://www.pandemicflu.gov
- http://www.ohiopandemicflu.gov
- http://www.uc.edu/uhs