

Board of County Commissioners

Leon County, Florida

Workshop on Pandemic Influenza Leon County Preparedness

**July 11, 2006
1:30 – 3:00 P.M.**

**Leon County Board of County Commissioner Chambers
Leon county Courthouse, 5th Floor**

This document distributed: Friday, July 7, 2006 at 10:00 a.m.

Board of County Commissioners Workshop

Date of Meeting: July 11, 2006

Date Submitted: July 7, 2006

To: Honorable Chairman and Members of the Board

From: Parwez Alam, County Administrator *PA*
Homer Rice, Administrator, Leon County Health Department *HR*

Subject: Workshop on Pandemic Influenza and Leon County Preparedness

Statement of Issue:

This workshop presents information on the possibility of a pandemic influenza, potential consequences on Leon County, and plans underway to mitigate its impact.

Background:

At the April 11, 2006, regular meeting, the Board requested an update of information related to pandemic influenza.

Current outbreaks of avian (bird) influenza began occurring in Southeast Asia in 2003. Although readily transmitted among wild birds, it is not necessarily fatal to them. Avian influenza is also readily transmitted from wild birds to domestic fowl where it is often fatal. Migratory birds have carried the disease into Southwest Asia, Central and Northern Africa, and some parts of Europe. Avian influenza has not yet reached North America. It will likely do so over the next year.

In rare cases, avian influenza has been transmitted to human beings. As of June 20, 2006, the World Health Organization (WHO) has confirmed 228 human cases with 130 deaths in 10 countries, over 3 ½ years. In still rarer cases, about 8, it has been transmitted between human beings living in very close family units.

The concern is not that the current form of the avian virus will attack human beings in large numbers, but that the virus will mutate into a form that is easily transmittable among human beings -- an influenza virus to which none of us is immune -- an influenza virus that will rapidly spread worldwide -- a pandemic.

Analysis:

The workshop will cover five areas:

- Current avian flu situation
- Concerns about pandemic flu ("pan flu")
- Lessons from the 1918 pan flu
- A new pan flu – impact on Leon County
- Leon County pan flu strategy

Some information presented in this analysis discussion is in addition to what will formally presented. It is technical and background information that may help in understanding the context of the presentation.

Current avian flu situation:

As of July 4, 2006, WHO lists ten countries where human cases of avian influenza have been reported. Please see the table below.

Country	2003		2004		2005		2006		Total	
	cases	deaths								
Azerbaijan	0	0	0	0	0	0	8	5	8	5
Cambodia	0	0	0	0	4	4	2	2	6	6
China	0	0	0	0	8	5	11	7	19	12
Djibouti	0	0	0	0	0	0	1	0	1	0
Egypt	0	0	0	0	0	0	14	6	14	6
Indonesia	0	0	0	0	17	11	34	28	52	40
Iraq	0	0	0	0	0	0	2	2	2	2
Thailand	0	0	17	12	5	2	0	0	22	14
Turkey	0	0	0	0	0	0	12	4	12	4
Viet Nam	3	3	29	20	61	19	0	0	93	42
Total	3	3	46	32	95	41	84	54	229	131

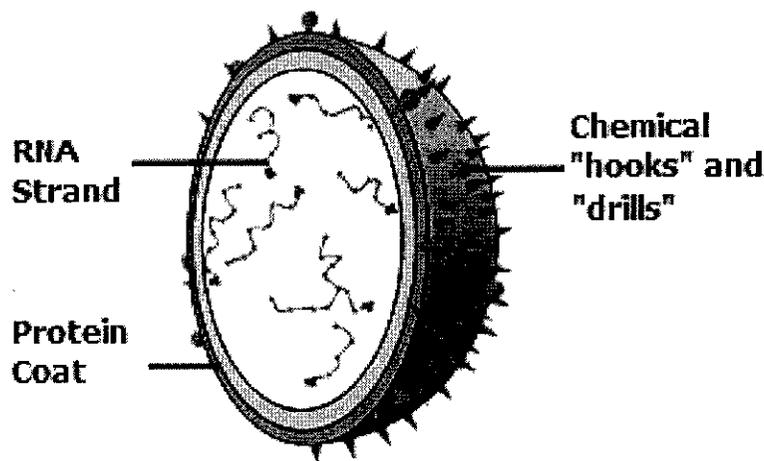
The table is updated each time a new case is confirmed. It is important to note that these are only confirmed cases and that the actual number of mild cases go unreported. This fact also makes the death rate, 131/229 (57%), appear alarmingly high. If mild, unreported cases were factored in the actual death rate would be much lower. Information on WHO surveillance efforts and response strategies can be found on their web site <http://www.who.int/en/>.

Migratory birds seem to be carrying the disease from Southeast Asia, where it originated to other parts of Asia, Africa and Europe. The Centers for Disease control and Prevention (CDC) has dispatched teams to Alaska to catch and test wild birds for evidence of the disease. Results this far have been negative and the rate of new cases

worldwide among bird populations does seem to have somewhat diminished. But it is likely just a matter of time (perhaps within this year) before avian influenza cases are detected in North America. When avian influenza begins to be seen in wild birds in Alaska and Northern Canada, it may take another six to nine months to reach Florida. This may seem alarming to the public and an active risk communications program will be needed to set out all of the facts. In its present form, the greatest threat from the virus is to poultry farmers. The Florida Department of Agriculture and Consumer Services has plans to respond to this contingency. [http://www.doacs.state.fl.us/ai/main/avian_flu_main.shtml]

Concerns about pandemic flu:

Many scientists are concerned that the current avian influenza will mutate into a form that makes it easily transmissible human to human.



Influenza viruses consist basically of an outer shell and an inner core containing RNA, a more primitive, single strand version of DNA. The RNA contains the instructions needed for the virus to take over and replicate inside of a living cell. Because the RNA coding is simpler than DNA it enables the replication to take place

very rapidly. But it sacrifices accuracy for speed and many replicated viruses contain mutations. These mutations are almost always damaging preventing the replicants from infecting new cells. But occasionally there is a mutation that allows the virus to infect in new ways in different species.

On the outer shell of the influenza virus there are proteins (**Hemagglutinin**) and enzymes (**Neuraminidase**). The hemagglutinin proteins act like hooks enabling the virus to attach itself to receptors in other cells in the body. Once attached, the influenza virus pulls apart the outer wall of the cell and drops inside. The RNA then spills out of the virus and into the host cell where it orders replication. The replicated viruses then use the neuraminidase enzymes to "drill" there way out of the host cell destroying it in the process. Influenza viruses are named for the configuration of the hemagglutinin and neuraminidase. The 1918 Pandemic Flu virus was the original standard H1N1. The current avian flu virus is designated H5N1.

Seasonal influenza symptoms include:

- Fever (usually high)
- Extreme tiredness
- Sore throat
- Headache
- Dry cough
- Runny or stuffy nose
- Muscle aches
- Stomach symptoms, such as nausea, vomiting, and diarrhea, also can occur but are more common in children than adults

Complications of flu can include bacterial pneumonia, dehydration, and worsening of chronic medical conditions, such as congestive heart failure, asthma, or diabetes. Each year 36,000 people, on average, die from seasonal flu and its complications.

Death's from influenza can occur from complications, particularly in the very young and seniors. Healthy adults can also die from a phenomenon called a cytokine storm where the immune systems over-reacts and kills healthy cells as well as virus invaders causing major organ damage and failure.

A pandemic influenza may include other symptoms in addition to those presented in seasonal influenza. The symptoms may be more or less severe.

Most influenza transmission is caused by breathing in virus particles expelled in an unguarded sneeze or cough. Viruses can also survive for a short time on hands and hard surfaces such as doorknobs, telephones, and computer key boards. Touching these surfaces and then touching eyes, nose, or mouth can lead to an influenza infection. Good hygiene practices such as using tissues to cover a sneeze or cough and frequent, thorough hand washing can reduce the transmission and occurrence of influenza.

Lessons from the 1918 pan flu:

There were three influenza pandemics in the 20th Century: the 1968 Hong Kong Flu, the 1957 Asian Flu, and the 1918 "Spanish" Flu. The 1918 Flu affected 25 million of 103 million of the US population at that time – a 25% attack rate. The 1918 Flu killed an estimated 650,000. Worldwide, the 1918 Flu may have killed as many as 100 million people. Some scientists conjecture is that the 1918 Flu was so deadly because it promoted a cytokine storm response in greater numbers than other influenza viruses.

A new pan flu – impact on Leon County.

A mutated version of the avian flu that is readily transmissible human to human, or perhaps another strain of influenza that we have not seen yet, could develop into a pandemic at any time. Most likely it will begin in Asia. It could spread to Florida and

Leon County in a matter of weeks. Depending on its attack rate and virulence, a new pandemic influenza could affect the health, economy, and social well being of Leon County citizens. Federal and state agencies have gone on record stating that if pan flu containment fails, there is little that can be done until a vaccine has been developed and is ready for mass distribution. Limited Stockpiles of Tamiflu would likely be used as part of the initial containment effort. Development and distribution of a vaccine could take up to nine months.

During this nine months period, response will be focused at the county and local level. There are 950 licensed beds in Leon County – 770 at Tallahassee Memorial Hospital (TMH) and 180 at Capital Regional Medical Center (CMRC). But on any given day, there are only about 800 total staffed beds due to shortages of nurses and other medical staff. Assuming a mild influenza pandemic attack rate, 15% of hospital staff absent would mean the availability of 680 staffed beds. A serious influenza pandemic attack rate of 30% would mean only 560 available hospital beds. Hospitals must also retain beds for other non-flu medical emergencies.

Some Florida regions and counties are considering the establishment of alternative medical treatment sites (AMTS) , but there are immediate problems with staffing and equipping these sites sufficiently to make a real difference in patient survival rate. There are other options that may be more manageable and doable.

Leon County pan flu strategy

Since 1998, the Capital Area Chapter of the American Red Cross has been training Leon (and other county) citizens to respond to hurricanes and other natural disasters in a program called “Disaster Resistant Neighborhoods.” Thus far, 147 neighborhoods in Leon County have organized and trained for a natural disaster event. This program can become the nucleus for a Leon County-wide pan flu response. Three other initiatives are needed to make this plan work -- (1) limiting opportunities for large gatherings of people (social distancing) (2) an intense and continuous public information campaign educating people how to care for themselves and others during a pandemic and (3) organizing and training home-flu response teams.

During a pan flu event, the Leon County Health Department Administrator may recommend to the County Commission that social and sporting events be postponed until the danger of infection has past. Depending on the severity of the event, these recommendations could also include the closure of schools, church services, shopping malls, other businesses, and government facilities. Most government agencies and many businesses have continuity of operations (COOP) plans covering the loss of a facility. These COOP plans must also consider a diminished work force due to flu illness.

Hospitals and other medical facilities will be rapidly overwhelmed with serious flu cases. Many families lack the basic knowledge about how to care for children or other loved ones who are sick with flu. It is important to educate Leon County citizens on how to

care for those without serious flu complications in their own home. The Leon County Health Department has prepared flu home care information for publication, but a continuous multi-media campaign will be needed to build people's knowledge and confidence. This campaign can begin as part of this year's seasonal flu preparations.

In coordination with the American Red Cross and social and faith-based organizations, the Leon County Health Department will begin soliciting volunteers to be trained as home flu care response teams. These teams will work closely with disaster and flu-resistant neighborhood teams to assess the criticality of flu victims in their home and arrange for transport to a hospital if there is an available bed. They will also evaluate the overall well being of the family and provide end-of-life and grief counseling as needed. The Leon County Health Department and the Capital Area Chapter of the American Red Cross are jointly preparing a CDC grant funding request for two "flu-resistant neighborhood" pilot projects in Leon County.

The Leon County Health Department has mass immunization plans when vaccine supplies become available. The most difficult period will be the six to nine months when Leon citizens must work together to reduce the spread of the disease and care for those who become ill. It will be a time when the leadership of the County Commission and all community leaders will be needed to maintain essential services and confidence in the future.

As part of this leadership effort, the Leon County Health Department is requesting a Proclamation designating October 2006 as Influenza Awareness Month in Leon County (Attachment #1).

Options:

1. Accept the report on Pandemic Influenza and Leon County Preparedness.
2. Approve a Proclamation designating October 2006 as Influenza Awareness Month in Leon County.
3. Do not accept the report on Pandemic Influenza and Leon County Preparedness.
4. Do not approve a Proclamation designating October 2006 as Influenza Awareness Month in Leon County.
5. Board Direction.

Recommendation:

Options #1 and #2.

Attachment:

1. Proclamation designating October 2006 as Influenza Awareness Month in Leon County

Proclamation

WHEREAS, we now know that seasonal influenza and secondary pneumonia infections kill an estimated 36,000 people each year in the United States affecting our youngest and oldest citizens. And that many of these deaths could be prevented through timely immunizations, emphasis on personal hygiene, and self-isolation measures, and

WHEREAS, there is currently an avian influenza affecting small numbers of human beings in Asia and Africa, and that there is potential for this or another influenza strain to mutate into a dangerous person-to-person communicable form that could spread worldwide and become a pandemic. And that the importation of this pandemic influenza into Florida would seriously disrupt the health, economic, and social well-being of Leon County citizens, and

WHEREAS, there will be limited assistance from federal and state agencies until a vaccine is available for mass distribution in six to nine months from pandemic influenza importation, and that families and neighborhood communities will be key to mitigating the spread of the disease and to caring for those who are affected, and

WHEREAS, local leaders from Leon County government, Leon County Health Department, the Capital Area Chapter of the American Red Cross, faith and social-based organizations, hospitals and other medical and health agencies are joining together to strategize pandemic influenza planning and to provide educational materials for Leon County citizens.

NOW, THEREFORE BE IT RESOLVED, that the LEON COUNTY BOARD OF COUNTY COMMISSIONERS do hereby proclaim October 2006, the start of the influenza season, as INFLUENZA AWARENESS MONTH in LEON COUNTY, FLORIDA to increase public preparedness for both seasonal and pandemic influenza and to underscore the need for community cooperation in limiting the spread and impact of influenza in our county.

**BOARD OF COUNTY COMMISSIONERS
LEON COUNTY, FLORIDA**

William C. Proctor
CHAIRMAN

ATTEST:

Parwez Alam
COUNTY ADMINISTRATOR