

FLORIDA INFLUENZA SURVEILLANCE

Week 8: February 22nd 2009—February 28th 2009



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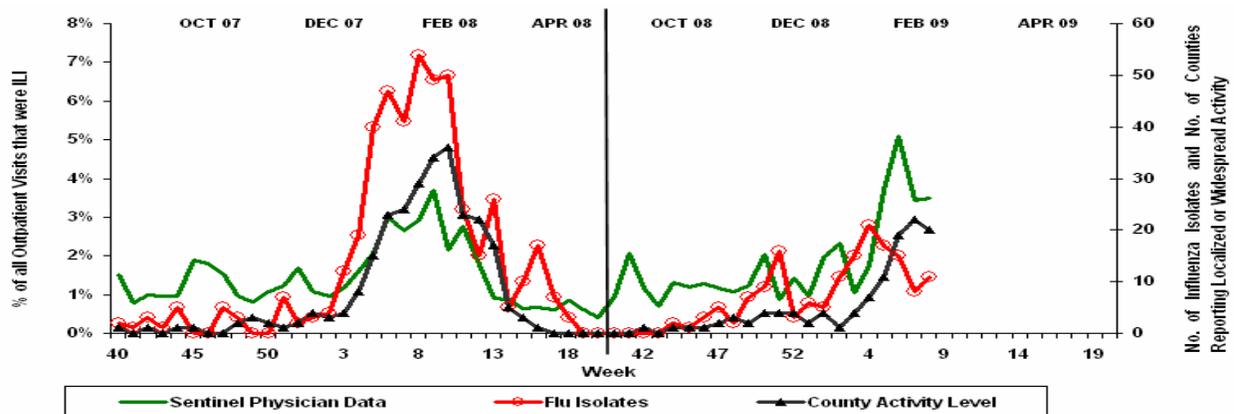
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I. SUMMARY

This is the twenty-second weekly Florida influenza surveillance report for the 2008-09 season. Influenza surveillance in Florida consists of seven surveillance components*: 1) Florida Sentinel Physician Influenza Surveillance Network (FSPISN); 2) Florida Pneumonia & Influenza Mortality Surveillance System; 3) State laboratory viral surveillance; 4) County influenza activity levels; 5) Notifiable Disease Reports: Influenza-associated deaths in children & post-influenza infection encephalitis; 6) Influenza or ILI outbreaks; 7) Syndromic surveillance.

During week 8 (02/22/09-02/28/09), the proportion of patient visits for influenza-like illness (ILI) as reported by the Florida Sentinel Physician Influenza Surveillance Network was 3.50 percent. This is above the state threshold for moderate activity of 2.98 percent. Eleven of the fourteen ILI specimens tested by Bureau of Laboratories were positive for influenza. Four counties reported widespread activity and sixteen counties reported localized activity. Twenty-one counties reported sporadic activity and 2 counties reported no activity. Twenty-four counties did not report. The graph below shows the progression of the 2007-08 & 2008-09 Florida influenza seasons as monitored by three** of seven surveillance systems.

Each week an activity code for the state as a whole is reported to the Centers for Disease Control and Prevention (CDC). There are five possible categories: No Activity, Sporadic, Local, Regional, or Widespread. Widespread activity has been reported in Florida for this reporting week (week 8). Florida meets the CDC widespread activity definition. The CDC definition for widespread activity is: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a at least half the regions of the state. The CDC report can be viewed at <http://www.cdc.gov/flu/weekly/usmap.htm>.



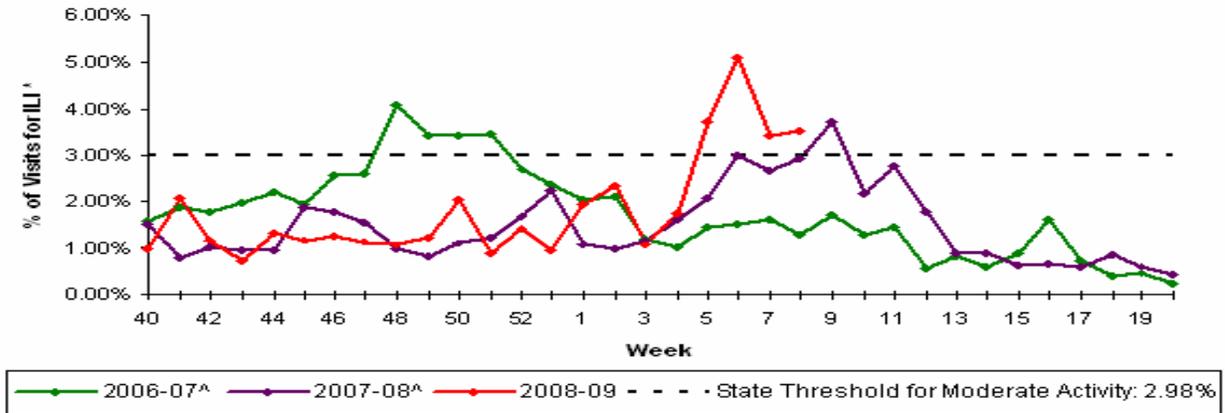
*The purposes of these surveillance systems are to determine when and where influenza activity is occurring, to identify circulating viruses, to detect changes in the circulating influenza viruses, to track patterns of influenza-associated morbidity and mortality and estimate the overall impact of influenza in the state of Florida.

**1) FSPISN, 2) State Laboratory Viral Surveillance, and 3) County Activity Levels.

II. FSPISN INFLUENZA-LIKE ILLNESS STATEWIDE GRAPH

During week 8, 3.50%* of patient visits to Florida sentinel providers were due to ILI. This percentage is above the statewide threshold for moderate activity of 2.98%**. The percentage of visits ranged from 0.81% in the Northcentral to 6.01% in the Southeast region.

Percentage of Visits for Influenza-like Illness Reported by Sentinel Providers Statewide Summary 2008-09, 2007-08, and 2006-07



*FSPISN reporting is incomplete for this week (39% of providers reported). Numbers may change as more reports are received. Data displayed is weighted to the state population.

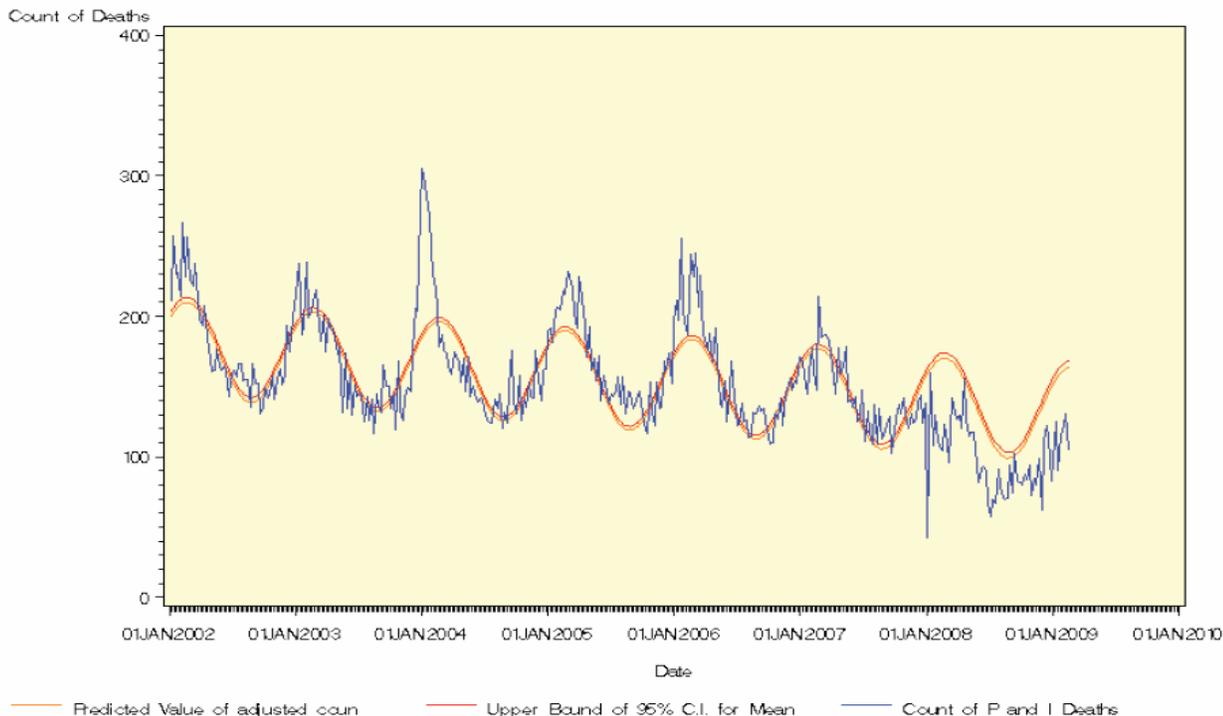
**The 2008—09 threshold for moderate activity is calculated from FSPISN data. The threshold for moderate activity is the mean percentage of patient visits for ILI during influenza weeks for the previous three seasons plus two standard deviations. Only weeks with 10% or greater of laboratory specimens testing positive are included in the calculation. Due to wide variability in regional level data, it is not appropriate to apply the state baseline to regional data.

^ There was no week 53 during the 2006-07 and 2007-08 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

III. FLORIDA PNEUMONIA AND INFLUENZA MORTALITY SURVEILLANCE

During week 8, the total count of pneumonia and influenza (P&I) deaths reported was below the epidemic threshold. This indicates there were no deaths in excess of the expected count for week 8 and observed mortality does not indicate that Florida has surpassed the epidemic threshold for this week**.

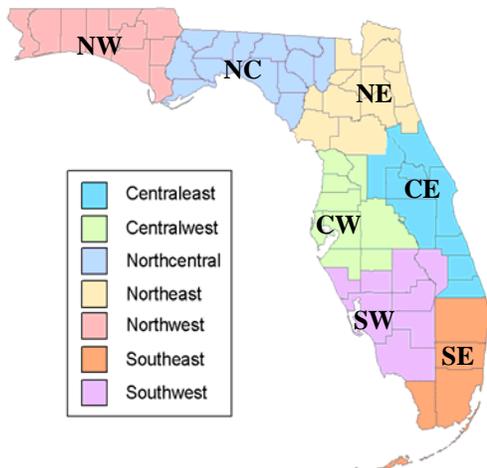
Pneumonia and Influenza Mortality for 24 Florida Counties, Counts Model



**Twenty-three of 24 counties reported P&I deaths to create this trend graph. Please note: Data from Volusia was not available. 100% participation is required for this graph to provide an accurate representation. We look forward to 100% participation for the duration of the influenza season.

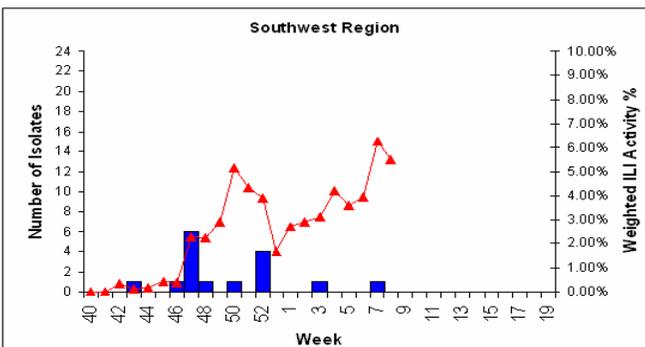
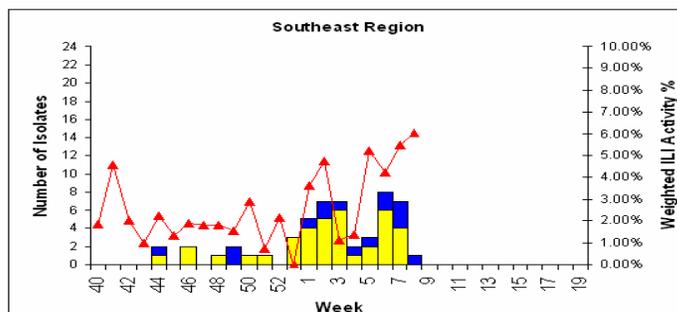
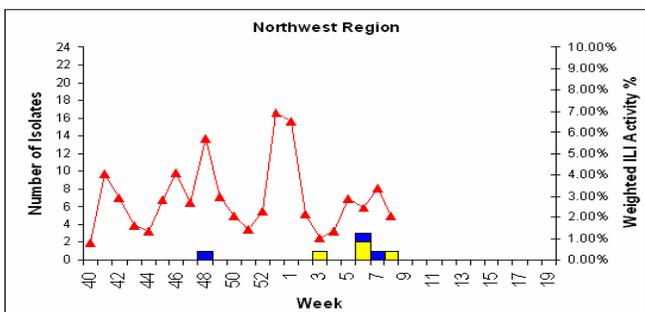
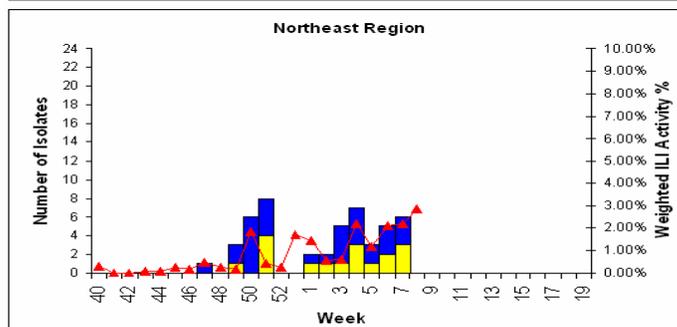
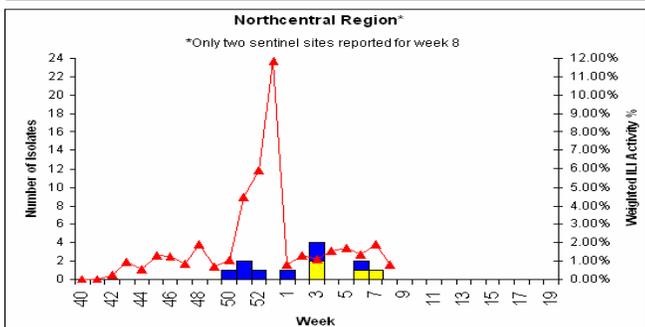
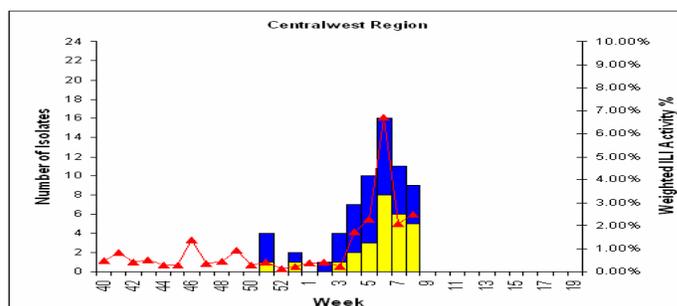
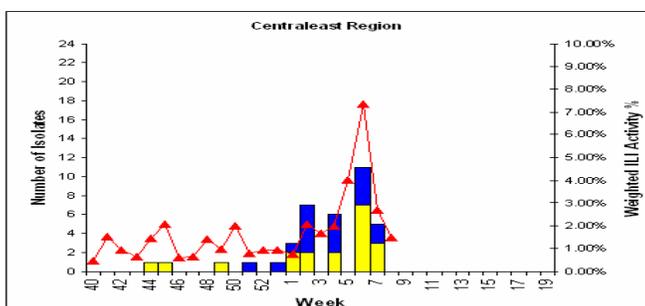
V. LABORATORY AND INFLUENZA-LIKE ILLNESS (ILI) SURVEILLANCE BY REGION

Influenza Surveillance Regions



The table below shows the weighted ILI activity by region as reported by Florida sentinel physicians for the 2007-08 & 2008-09 seasons. The graphs below include ILI activity as reported by sentinel physicians and FDOH laboratory data.

Week 8: FSPISN Weighted ILI Activity, by Region 2007-08 & 2008-09 Seasons		
REGION	2008-09 ILI %	2007-08 ILI %
Centraleast	1.50%	3.86%
Centralwest	2.50%	0.21%
Northcentral	0.81%	2.78%
Northeast	2.87%	3.34%
Northwest	2.06%	8.95%
Southeast	6.01%	2.83%
Southwest	5.51%	2.75%



- Influenza A specimens FDOH Laboratories
- Influenza B specimens FDOH Laboratories
- % of visits for ILI, reported by sentinel providers

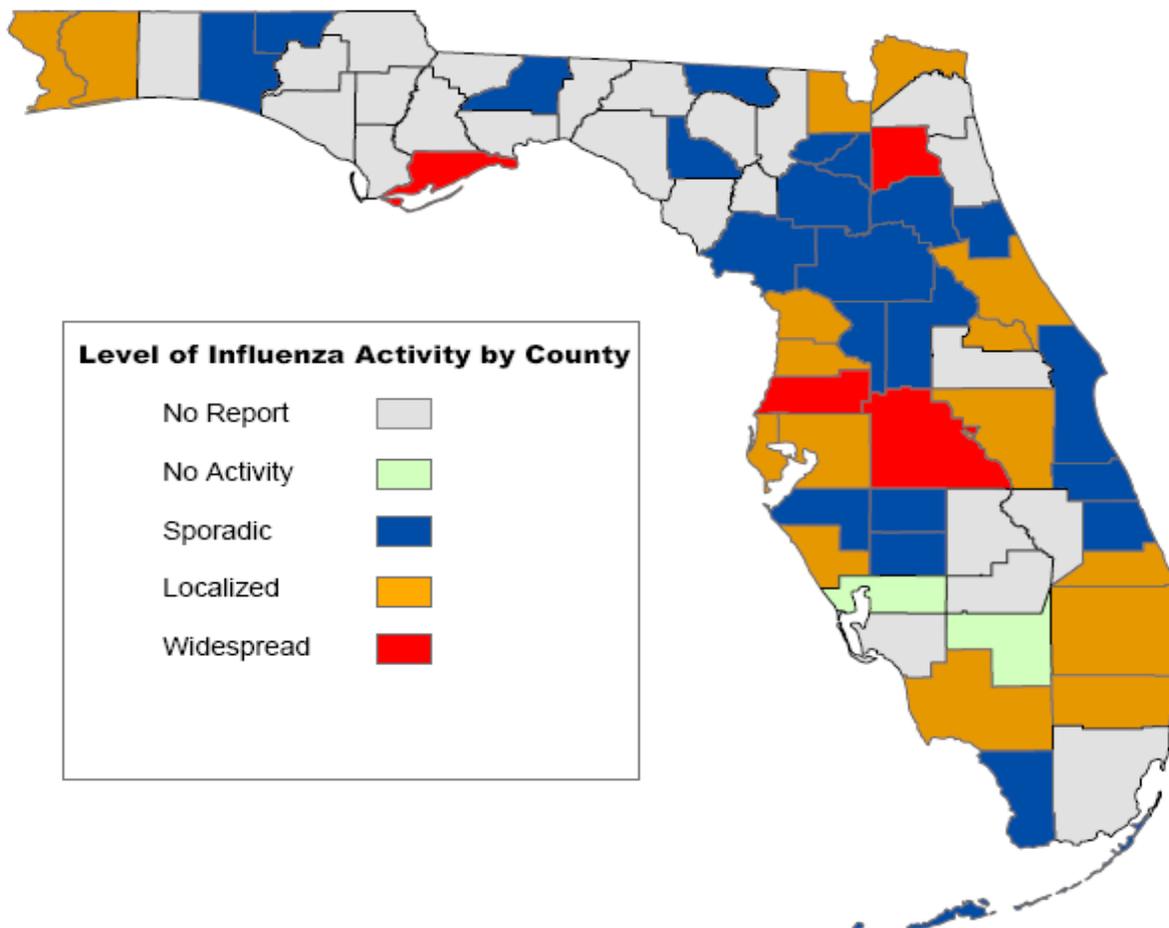
VI. COUNTY INFLUENZA ACTIVITY MAP

During week 8, four counties reported widespread activity (Clay, Franklin, Pasco, Polk). Sixteen counties reported localized activity (Baker, Broward, Citrus, Collier, Escambia, Hernando, Hillsborough, Martin, Nassau, Osceola, Palm Beach, Pinellas, Santa Rosa, Sarasota, Seminole, Volusia,). Twenty-one counties (Alachua, Bradford, Brevard, DeSoto, Flagler, Hamilton, Hardee, Holmes, Indian River, Lafayette, Lake, Leon, Manatee, Marion, Monroe, Putnam, St. Johns, St. Lucie, Sumter, Union, Walton) reported sporadic activity. Two counties reported no activity. Twenty-four counties did not report. *Please note: data reported from counties reporting after the deadline are recorded but may not be included in the activity map below.*

Weekly County Influenza Activity

(Week ending February 28, 2009 - Week 8)

County influenza activity levels are reported by county health department epidemiologists



Florida Department of Health
Bureau of Epidemiology

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Map printed March 5, 2009 at 9:25 am ET.

COUNTY INFLUENZA ACTIVITY LEVEL DEFINITIONS

0 = No Activity:

Overall clinical activity remains low with no laboratory confirmed cases[†] in the county.

1 = Sporadic:

- And/or {
- Isolated cases of laboratory confirmed influenza[†] in the county.
 - An ILI[§] outbreak in a single setting[‡] in the county. (No detection of decreased ILI[§] activity by surveillance systems*)

2 = Localized:

- And/or {
- ILI[§] activity detected by a *single* surveillance system* within the county. (ILI[§] activity has not been detected by *multiple* ILI surveillance systems.)
 - Two or more outbreaks (ILI[§] or lab confirmed[†]) detected in a *single* setting[‡] in the county.

AND

- Recent (within past three weeks) laboratory evidence[†] of influenza activity in the county.

3 = Widespread:

- And/or {
- An increase in ILI[§] activity detected in ≥ 2 surveillance systems in the county.
 - Two or more outbreaks ((ILI[§] or laboratory confirmed[†]) detected in *multiple* settings[‡] in the county.

No Report: (No report was received from the county at the time of publication)

[†] Laboratory confirmed case = case confirmed by rapid diagnostic test, antigen detection, culture, or PCR.

[§]ILI = Influenza-like illness, fever $\geq 100^{\circ}\text{F}$ AND sore throat and/or cough *in the absence* of another known cause.

*ILI surveillance system activity can be assessed using a variety of surveillance systems including sentinel providers, school/workplace absenteeism, long-term care facility (LTCF) surveillance, correctional institution surveillance, hospital emergency department surveillance and laboratory surveillance.

[‡]Settings include institutional settings (LTCFs, hospitals, prisons, schools, companies) & the community.

VII. REPORTS OF INFLUENZA OR INFLUENZA-LIKE ILLNESS (ILI) OUTBREAKS

During week 8 there were three influenza or influenza-like illness (ILI) outbreaks reported to the Bureau of Epidemiology.

An influenza outbreak at a local correctional facility in Hillsborough county was reported on 02/23/09. Eight inmates exhibited ILI symptoms and some also had gastrointestinal symptoms. Specimen collection kits were taken to the facility by epidemiology staff. One of the two specimens sent to the state lab for influenza testing resulted in a PCR positive result for influenza A.

On 02/24/09, an ILI cluster at a local nursing facility was reported to the Miami-Dade CHD. Six of the residents reported symptoms of fever, cough, and rhinorrhea. Two of the six were positive for influenza A by rapid test. Specimens were collected and shipped to the state lab for confirmation on 02/25/09. Unfortunately due to the inappropriate use of transport media by the nursing facility staff, analysis of the specimens could not be conducted by the lab.

On 02/25/09, a correctional facility in Bay County reported an influenza outbreak among their inmates. The Bay CHD epidemiology staff visited the facility and dropped off specimen collection kits so swabs could be collected from ill inmates and sent to the state lab for analysis. Three inmates with ILI symptoms were tested and two were culture positive for influenza A H1. The remaining inmate was PCR positive for influenza A.

County Health Department epidemiologists should report Influenza and ILI outbreaks via EpiCom at: <https://fdens.com/vabtrs/GateStart.aspx> within the Influenza Forum.

Total influenza or ILI outbreaks reported as of week 8 (02/28/09): 6

VIII. NOTIFIABLE DISEASE REPORTS: INFLUENZA-ASSOCIATED DEATHS AMONG CHILDREN (<18 YEARS) & POST-INFLUENZA INFECTION ENCEPHALITIS

As of the week ending February 28, 2009, there were no influenza-associated death among those <18 years of age and/ or post influenza infection encephalitis reported in the state of Florida.

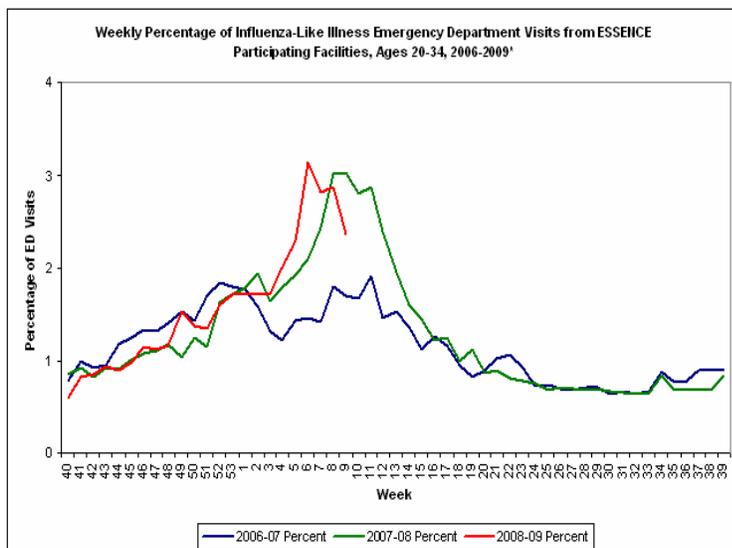
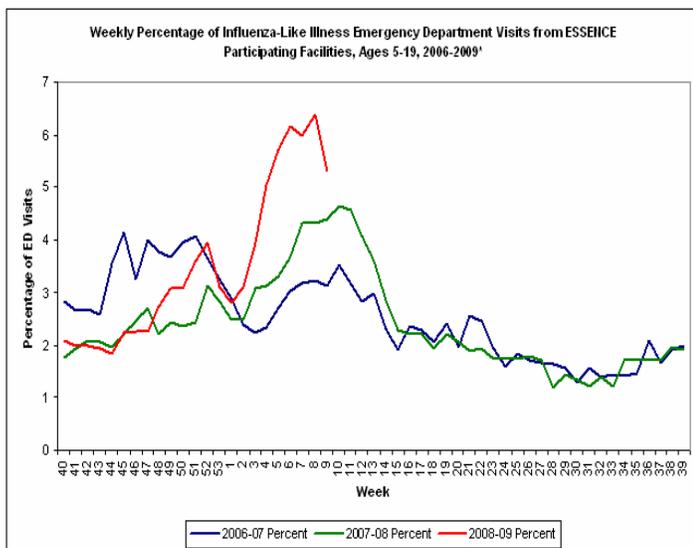
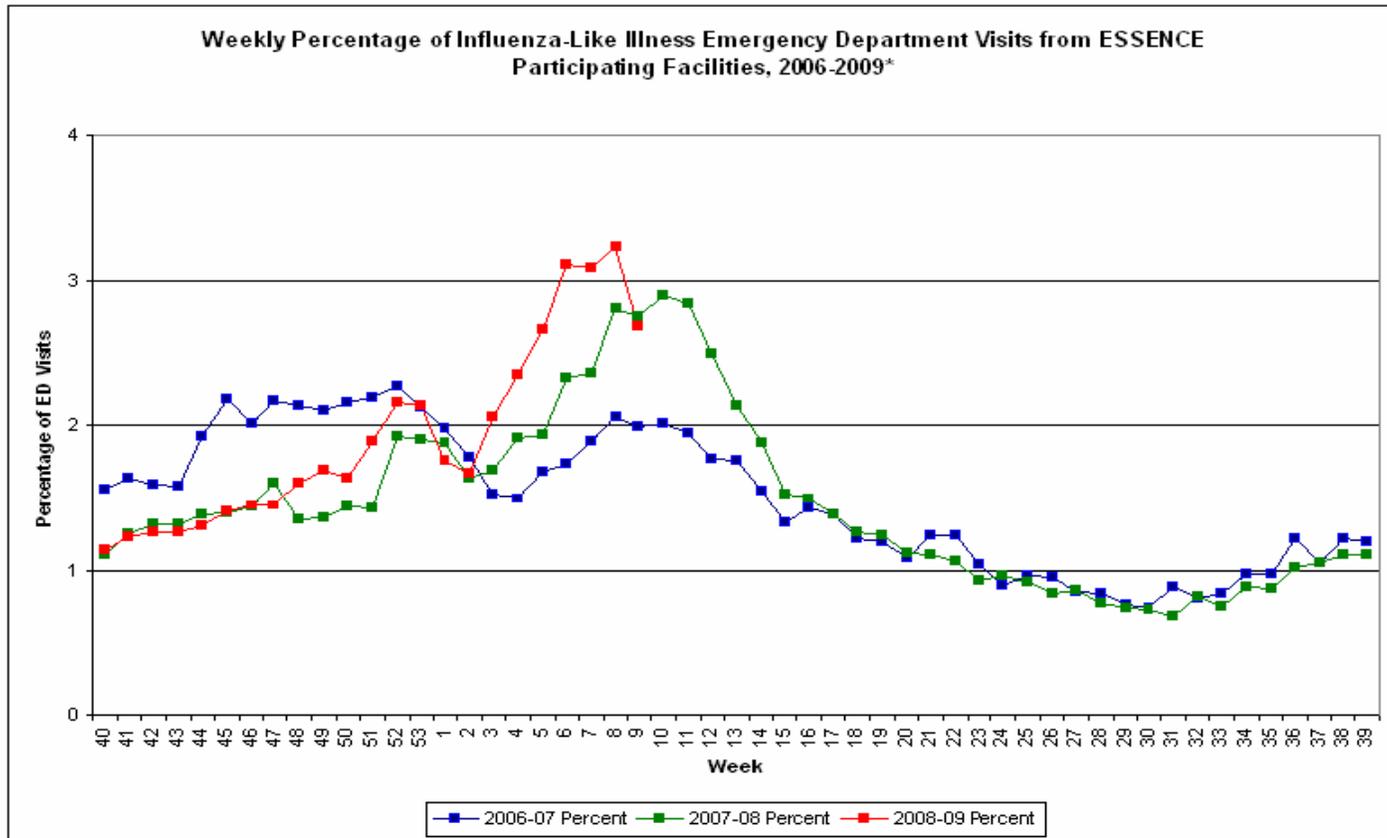
Reportable Disease	# of Cases 08-09 Influenza Season
Influenza-associated deaths among those <18 years of age	1*
Post-influenza infection encephalitis	0

*Case reported during week 6 was reclassified as a suspect case. Please note that status of reported cases are subject to change upon receipt of additional information.

Influenza-associated deaths among those <18 years of age and/or post-influenza infection encephalitis are reportable; case report forms can be accessed at: http://www.doh.state.fl.us/disease_ctrl/epi/topicscrforms.htm.

IX. SYNDROMIC SURVEILLANCE SUMMARY

Florida uses the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) for syndromic surveillance, which currently collects data from 92* hospitals. These data are processed into 11 different syndrome categories based on the patient's chief complaint. One of the categories is influenza-like illness (ILI), which is composed of chief complaints that include the words "influenza" or "flu", or either fever and cough or sore throat. The data are collected on a daily basis from participating hospital emergency departments (ED) across the state. Displayed below are the percentage of ILI visits to local EDs from 2006 to 2009 by week.



*The total number of facilities participating in ESSENCE has increased steadily from 2006 to 2009. In 2007 ESSENCE was implemented as the state syndromic surveillance system. Please note that numbers may change as facility data is updated.

X. SUMMARY OF WORLDWIDE A/H5N1 INFLUENZA ACTIVITY

Accessed on: 02/28/09

Since the outbreak activity began at the end of December 2003, there have been a total of 408 confirmed human cases and 256 deaths. Cases and deaths have occurred in the following nations: Azerbaijan 8 cases and 5 deaths; Bangladesh 1 case 0 deaths; Cambodia 8 cases and 7 deaths; China 38 cases and 25 deaths; Djibouti 1 case 0 deaths; Egypt 55 cases and 23 deaths; Indonesia 141 cases and 115 deaths; Iraq 3 cases and 2 deaths; Lao People's Democratic Republic 2 cases and 2 deaths; Myanmar 1 case and 0 deaths; Nigeria 1 case and 1 death; Pakistan 3 cases and 1 death. Thailand 25 cases and 17 deaths; Turkey 12 cases and 4 deaths; and, Vietnam 109 cases and 54 deaths. For a complete analysis and summary of WHO confirmed human cases of H5N1 from 12/1/2003 to current, please visit: http://www.who.int/csr/disease/avian_influenza/ai_timeline/en/index.html

Changes in the WHO case definition for human infection with avian influenza H5N1 can be found here: http://www.who.int/csr/disease/avian_influenza/guidelines/case_definition2006_08_29/en/index.html

During week 8, the Ministry of Health and Population of Egypt reported a new confirmed human case of avian influenza on March 1st, 2009. The case is a two-year old male from the Fayoum Governorate whose symptoms began on February 25th, 2009. He was hospitalized and treated at the hospital on February 28th and is currently in critical condition. Investigations into source of infection indicated a history of close contact with sick and dead poultry.

During week 7, the Ministry of Health in Viet Nam announced the death of a previously reported confirmed case of H5N1 infection in a 23-year old female from the Quang Ninh Province. The case died on February 21, 2009.

During week 6, the Ministry of Health in Viet Nam has reported two new confirmed cases of human infection with the H5N1 avian influenza virus. The cases have been confirmed at the National Institute of Hygiene and Epidemiology (NIHE). The first case is a 23-year old female from the Ha district, Quang Ninh province. She developed symptoms on January 31, 2009. She is currently in serious condition and is known to have had recent contact with sick and dead poultry prior to onset of her illness. The second case is a 32-year old man from Kim Son district, Ninh Binh province. He developed symptoms on February 5, 2009 and was hospitalized on February 13, 2009. He is currently in serious condition. The case is known to have recent contact with sick poultry prior to the onset of his illness. Further investigations are currently under way. Control measures have been implemented and close contacts are being identified and monitored.

During week 5, the Ministry of Health and Population of Egypt announced a new human case of avian influenza A (H5N1) virus infection. The case is a 2-year-old male from the Suez Governorate. His symptoms began on February 2nd, 2009 and he was hospitalized at the Suez Fever Hospital the following day. The patient is currently in stable condition. A recent history of contact with dead poultry was noted as a possible source of infection. The Ministry of Health in China announced a new confirmed human case of avian influenza A (H5N1) virus infection. The case was a 21-year-old female from the Hunan province. She developed symptoms on January 23rd, 2009, and is currently hospitalized in stable condition. Investigation into the source of infection indicate possible exposure to sick and dead poultry.

The current phase of alert as defined by the WHO global influenza preparedness plan is phase 3, which states that human infections with a new subtype are occurring, but no human-to-human spread, or at most rare instances of spread to a close contact. At the present time the WHO is not recommending restrictions on travel to areas affected by H5N1 avian influenza, but is suggesting that travelers to these areas avoid contact with live animal markets and poultry farms, and any free-ranging or caged poultry. Evidence suggests that the primary route of infection at this time is associated with direct contact with infected poultry, or surfaces and objects contaminated by their droppings.

More information about these cases can be found at http://www.who.int/csr/disease/avian_influenza/updates/en/index.html

Human cases of influenza due to infection from novel or pandemic strains are reportable in Florida. Reports should be made to the Department 24/7 upon initial suspicion.