

FLORIDA INFLUENZA SURVEILLANCE

Week 11: March 15th 2009—March 21st 2009



Kateesha McConnell, MPH, Respiratory Disease Surveillance Epidemiologist
 Kate Goodin, MPH, Surveillance Epidemiologist
 Lillian Stark, PhD, MPH, MS, Bureau of Laboratories-Tampa
 Valerie Mock, Bureau of Laboratories-Jacksonville
 Julian Everett, Influenza Coordinator



IN THIS ISSUE:

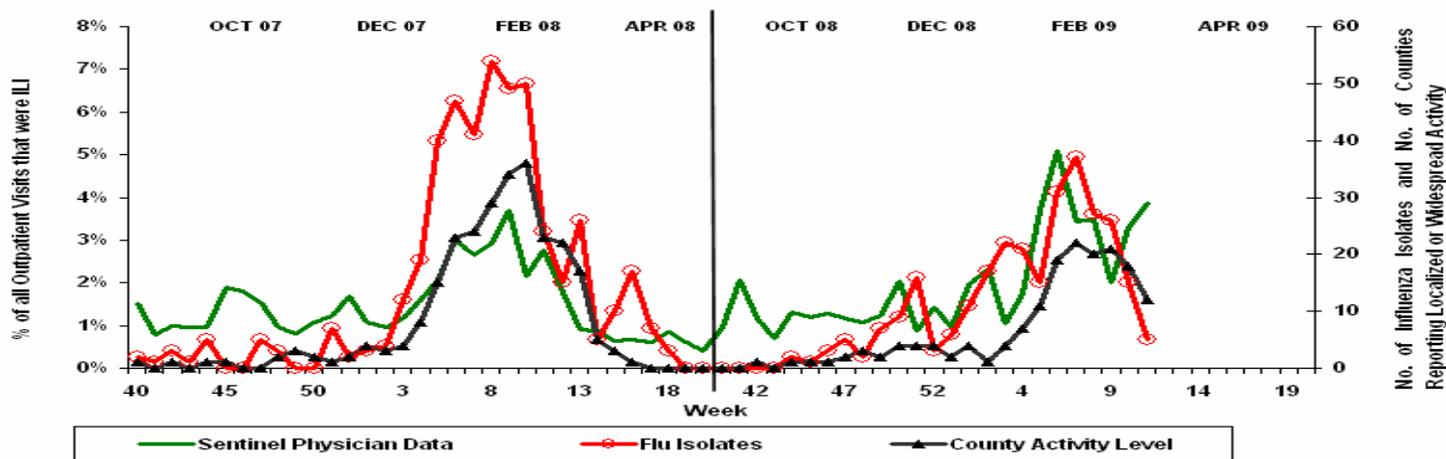
- I. Summary
- II. FSPISN Influenza-like Illness Statewide Graph
- III. Florida Pneumonia and Influenza Mortality Surveillance
- IV. FDOH Laboratory Surveillance
- V. Laboratory and Influenza-like Illness Surveillance by Region
- VI. County Influenza Activity Map
- VII. Reports of Influenza or Influenza-like Illness (ILI) Outbreaks
- VIII. Notifiable Disease Reports: Influenza-associated deaths in children & post-influenza infection encephalitis
- IX. ESSENCE ILI syndromic surveillance summary
- X. Summary of Worldwide A/H5N1 Influenza Activity

I. SUMMARY

This is the twenty-fifth 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 11 (03/15/09-03/22/09), the proportion of patient visits for influenza-like illness (ILI) as reported by the Florida Sentinel Physician Influenza Surveillance Network was 3.88 percent. This is above the state threshold for moderate activity of 2.98 percent. Five of the eight ILI specimens tested by Bureau of Laboratories were positive for influenza. Two counties reported widespread activity and ten counties reported localized activity. Twenty-seven counties reported sporadic activity and 13 counties reported no activity. Fifteen 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. Regional activity has been reported in Florida for this reporting week (week 11). Florida meets the CDC regional activity definition. The CDC definition for regional activity is: Outbreaks of influenza or increases in ILI and recent laboratory-confirmed influenza in at least two but less than half the regions of the state with recent laboratory evidence of influenza in those regions. The CDC report can be viewed at <http://www.cdc.gov/flu/weekly/usmap.htm>.



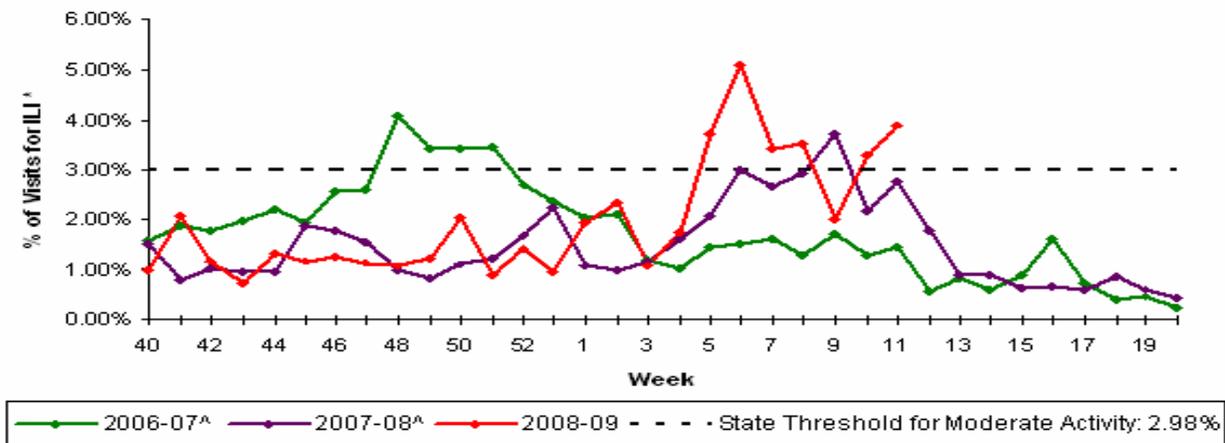
*The purposes of these surveillance systems are to determine when and where influenza activity is occurring, to identify circulating viruses, to detect changes in the circulating influenza viruses, to track patterns of influenza-associated morbidity and mortality and estimate the overall impact of influenza 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 11, 3.88%* 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 0.08% in the Northwest to 8.13% in the Southwest 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 (47% of providers reported). Numbers may change as more reports are received. Data displayed is weighted to the state population.

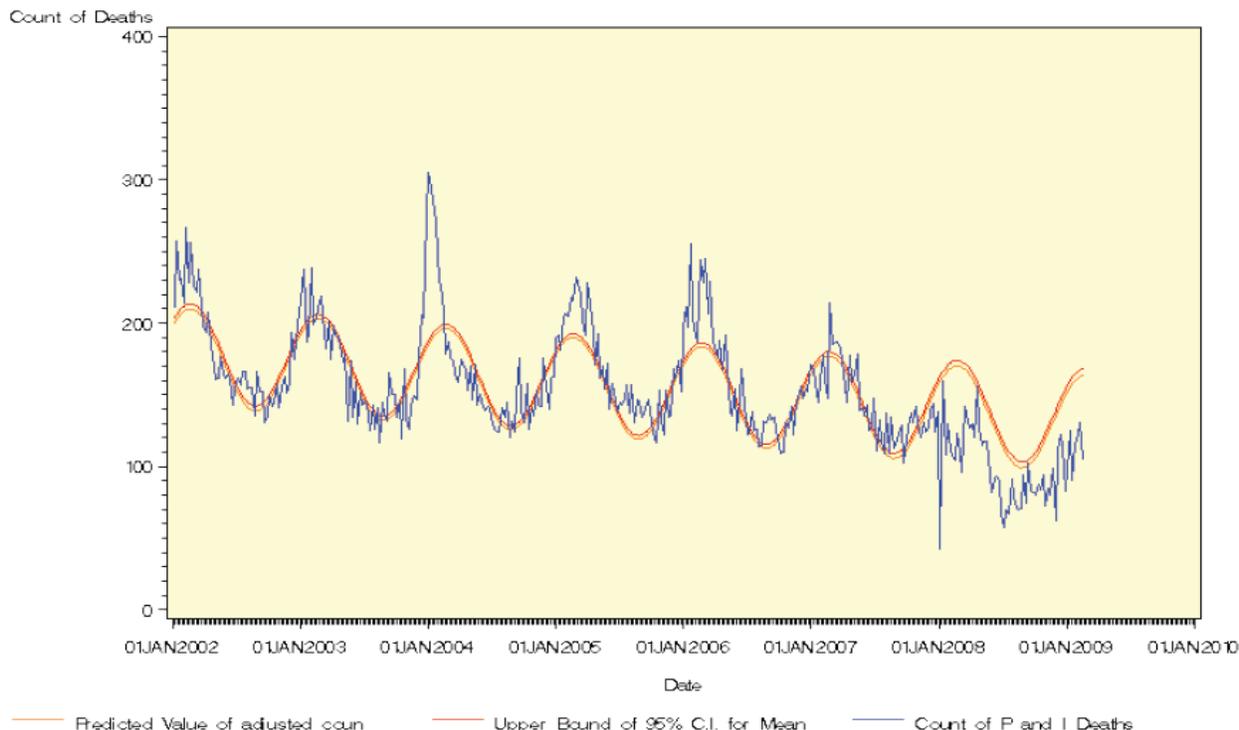
**The 2008—09 threshold for moderate activity is calculated from FSPISN data. The threshold for moderate activity is the mean percentage of patient visits for ILI during influenza weeks for the previous three seasons plus two standard deviations. Only weeks with 10% or greater of laboratory specimens 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 11, 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 11 and observed mortality does not indicate that Florida has surpassed the epidemic threshold for this week**.

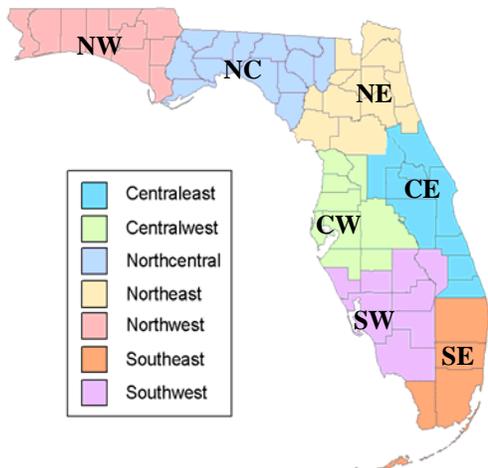
Pneumonia and Influenza Mortality for 24 Florida Counties, Counts Model



**Twenty-two of 24 counties reported P&I deaths to create this trend graph. Please note: Data from Broward and Sumter 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.

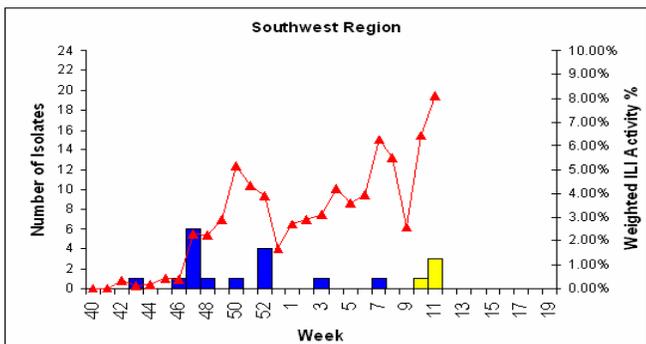
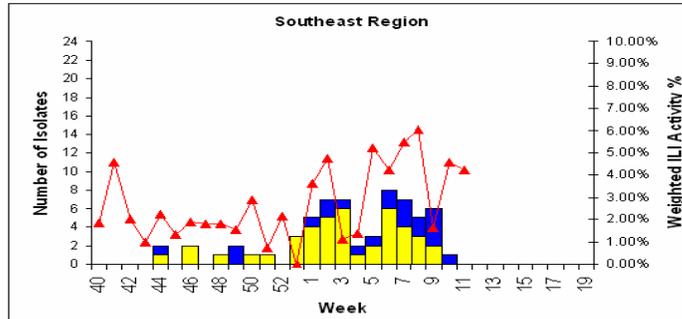
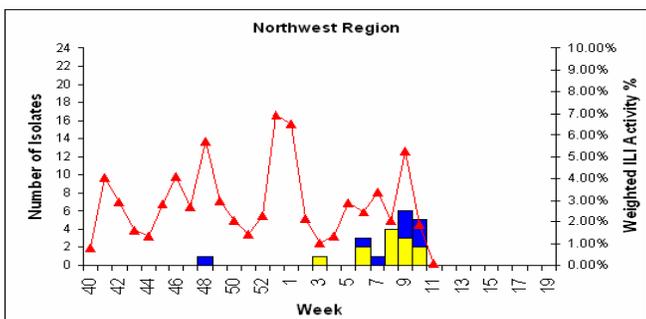
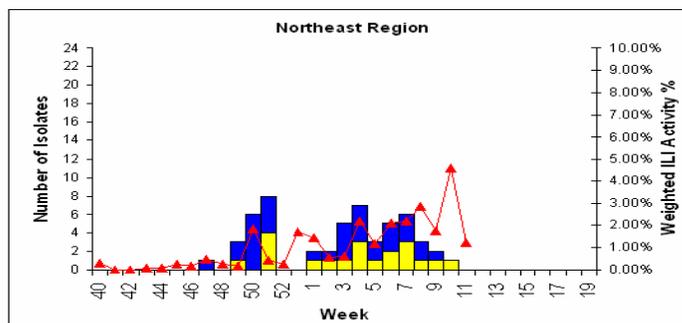
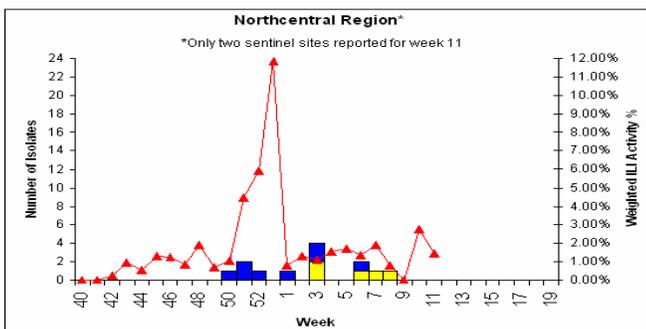
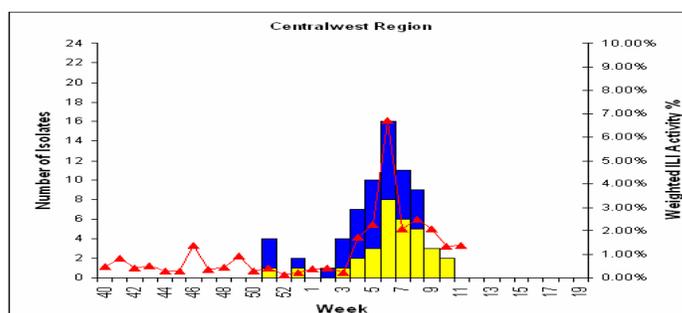
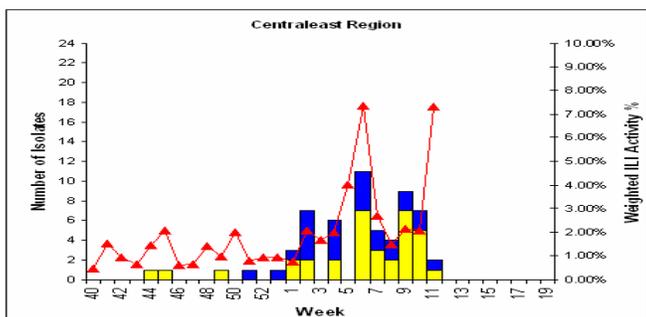
V. LABORATORY AND INFLUENZA-LIKE ILLNESS (ILI) SURVEILLANCE BY REGION

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 11: FSPISN Weighted ILI Activity, by Region 2007-08 & 2008-09 Seasons		
REGION	2008-09 ILI %	2007-08 ILI %
Centraleast	7.32%	5.70%
Centralwest	1.37%	0.84%
Northcentral	1.43%	2.42%
Northeast	1.24%	3.96%
Northwest	0.08%	2.90%
Southeast	4.21%	2.43%
Southwest	8.13%	0.34%



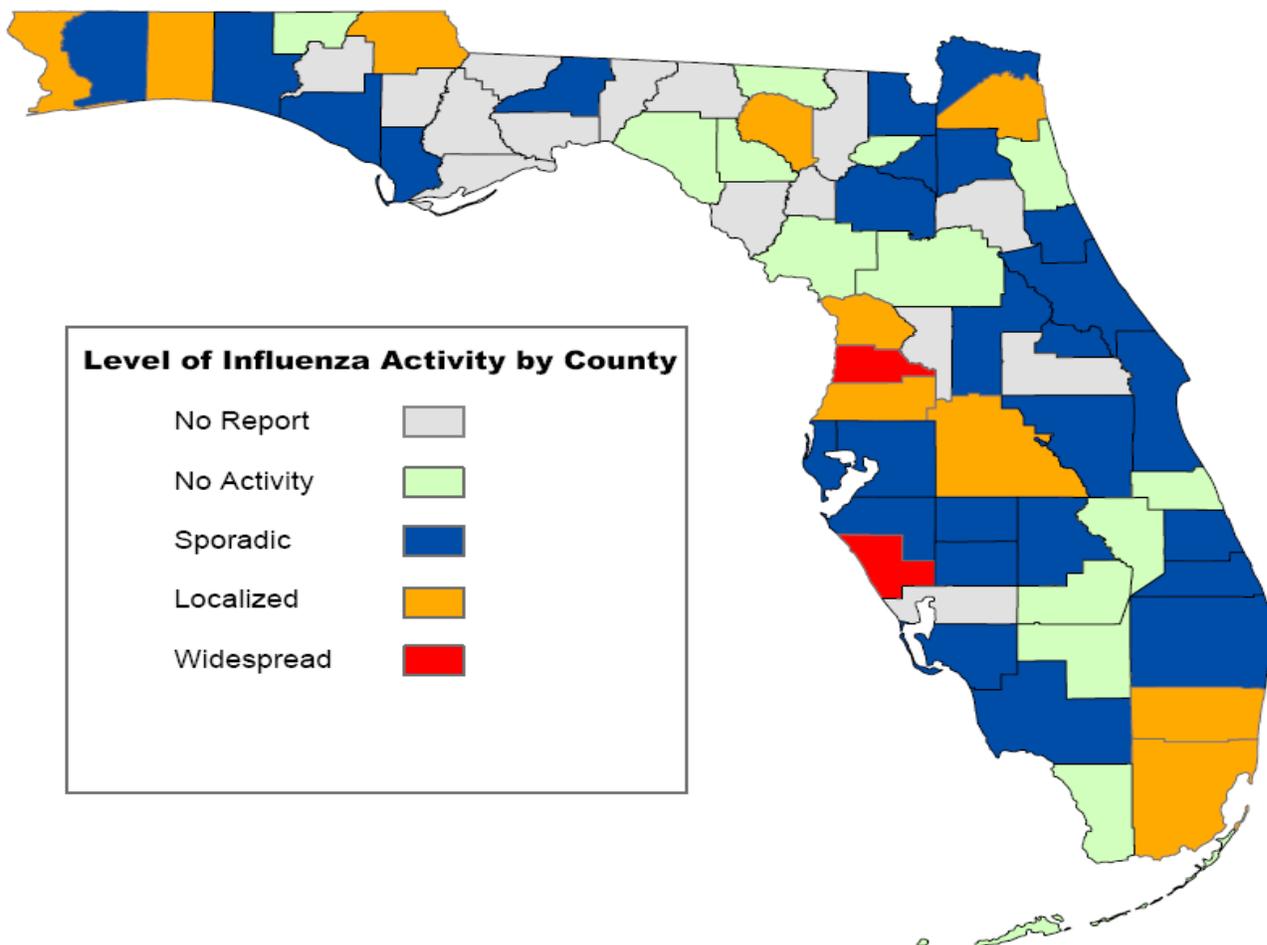
VI. COUNTY INFLUENZA ACTIVITY MAP

During week 11, two counties reported widespread activity (Hernando, Sarasota). Ten counties reported localized activity (Broward, Citrus, Miami-Dade, Duval, Escambia, Jackson, Okaloosa, Pasco, Polk, Suwannee). Twenty-seven counties (Alachua, Baker, Bay, Bradford, Brevard, Clay, Collier, DeSoto, Flagler, Gulf, Hardee, Highlands, Hillsborough, Lake, Lee, Leon, Manatee, Martin, Nassau, Osceola, Palm Beach, Pinellas, St. Lucie, Santa Rosa, Seminole, Volusia, Walton) reported sporadic activity. Thirteen counties reported no activity. Fifteen 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 March 21, 2009 - Week 11)

County influenza activity levels are reported by county health department epidemiologists



Florida Department of Health
Bureau of Epidemiology

Disclaimer:
 This product is for reference purposes only and is not to be construed as a legal document. Any reliance on the information contained herein is at the user's own risk. The Florida Department of Health and its agents assume no responsibility for any use of the information contained herein or any loss resulting there from.
 Map printed March 26, 2009 at 10:50 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 11 there were no influenza or influenza-like illness outbreaks reported.

During week 10 there was one influenza outbreak reported in a long-term care facility in Brevard County. The Brevard CHD was notified on 03/09/09 of 12 residents and 3 employees suffering from an upper respiratory infection in one wing of the facility. Nasopharyngeal swabs were collected from two residents and one employee with URI and submitted to the state lab in Tampa for analysis. All three were specimens were positive for influenza A by PCR. All positive residents and suspect cases were treated with oseltamivir and amantadine.

During week 9 there were no influenza or influenza-like illness outbreaks reported.

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 10 (03/14/09): 7

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

As of the week ending March 21, 2009, there were no influenza-associated deaths among those <18 years of age and/ or post influenza infection encephalitis reported in the state of Florida.

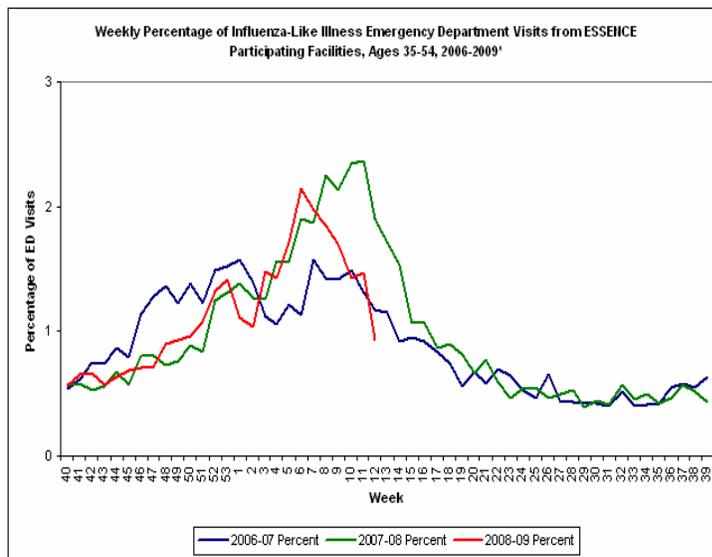
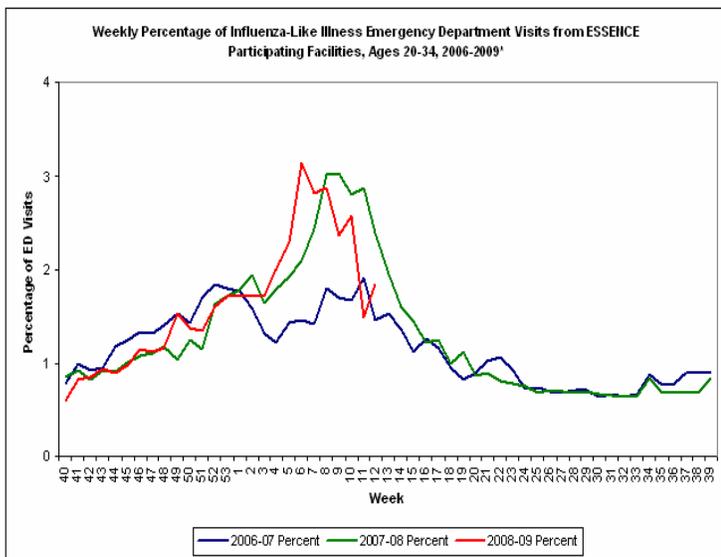
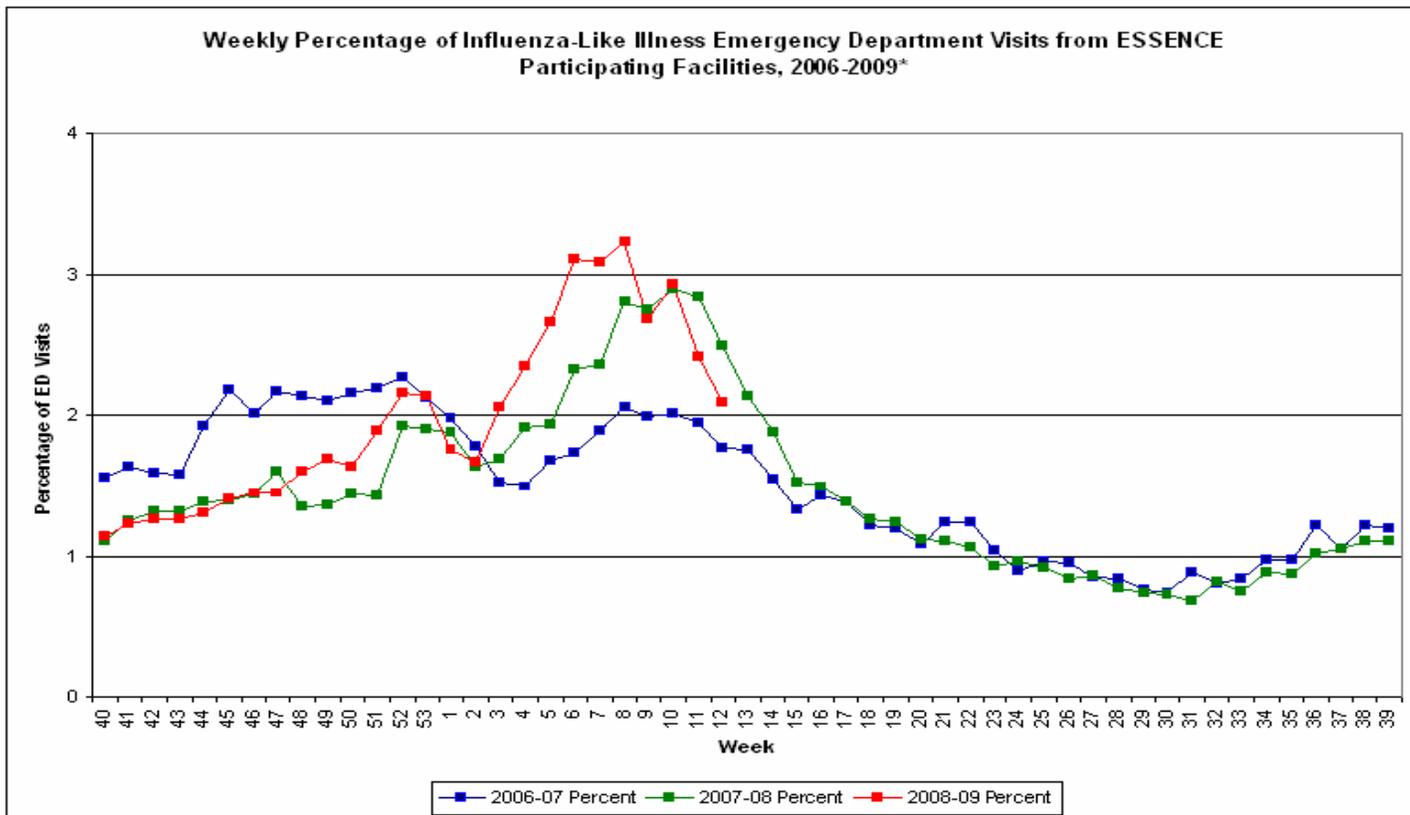
Reportable Disease	# of Cases 08-09 Influenza Season
Influenza-associated deaths among those <18 years of age	3*
Post-influenza infection encephalitis	0

*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 108* 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: 03/26/09

Since the outbreak activity began at the end of December 2003, there have been a total of 411 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 58 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 11, the Ministry of Health and Population of Egypt reported a new confirmed human case of avian influenza. The case was a 38-year old female from the Assiut Governorate. Her symptoms began on March 14th, 2009. The case was hospitalized at the Assiut Fever Hospital on March 14th and started on oseltamivir the same day. The patient is currently in stable condition. Investigations into the source of infection indicate a history of close contact with sick and dead poultry prior to illness.

During week 10, the Ministry of Health and Population of Egypt reported two new confirmed human cases of avian influenza. The first case reported was a two and a half year old male from the Alexandria Governorate. His symptoms began on March 3rd, 2009 and he was hospitalized at the Alexandria Fever Hospital where is in stable condition. The second case was reported in a one and a half year old female from the Menofia Governorate. Her symptoms began on March 6th, 2009 and she was hospitalized on March 9th where she is currently in stable condition. Investigations into the source of infection for both cases indicated a history of close contact with sick and dead poultry prior to illness.

During week 9, there were no new updates posted.

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.

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.