

FLORIDA INFLUENZA SURVEILLANCE

Week 35: August 30th 2009 – September 5th 2009



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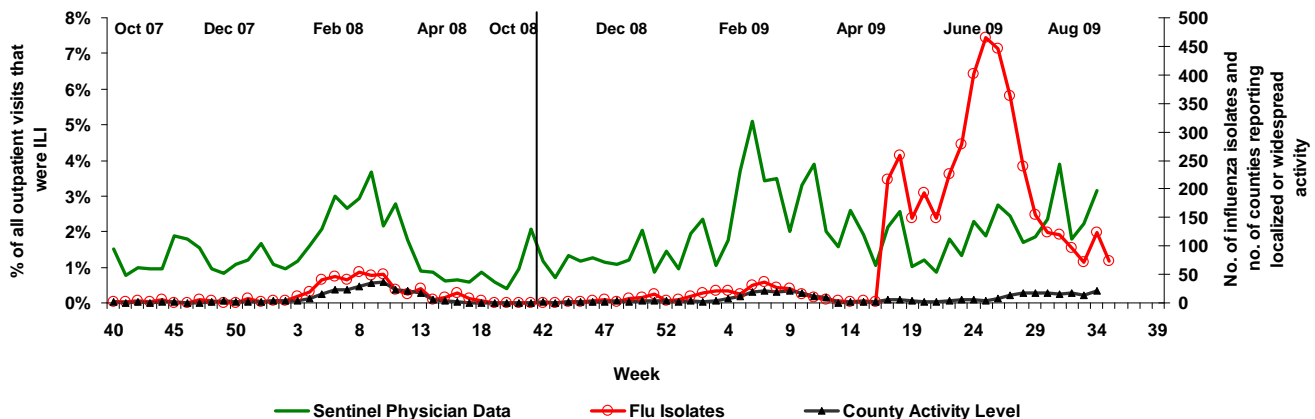
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I. SUMMARY

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) Bureau of Laboratories viral surveillance; 4) County influenza activity levels; 5) Notifiable Disease Reports: Influenza-associated deaths in children, post-influenza infection encephalitis and novel influenza cases; 6) Influenza or ILI outbreaks; 7) Syndromic surveillance.

During week 35 (08/30/09-09/05/09), the proportion of patient visits for influenza-like illness (ILI) as reported by the Florida Sentinel Physician Influenza Surveillance Network was 6.16%. This is above the state threshold for moderate activity of 2.98 percent. Seventy-three (66%) of 110 ILI specimens tested by Bureau of Laboratories were positive for influenza. Ten counties reported widespread activity and 18 counties reported localized activity. Fifteen counties reported sporadic activity and two counties reported no activity. Twenty-two 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 35). Florida meets the CDC widespread activity definition which is: outbreaks of influenza or increases in ILI cases in more 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>.



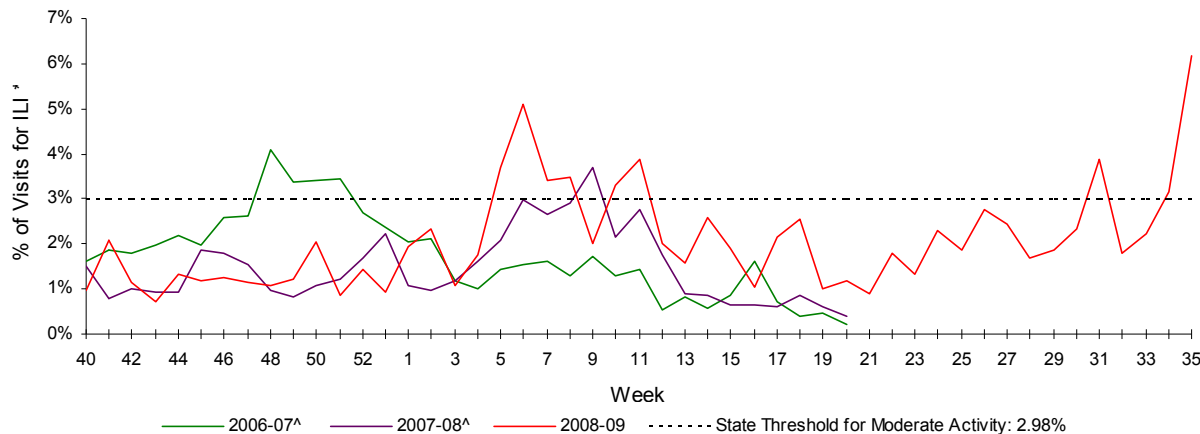
*The purposes of these surveillance systems are to determine when and where influenza activity is occurring, to identify circulating viruses, to detect changes in the circulating influenza viruses, to track patterns of influenza-associated morbidity and mortality and estimate the overall impact of influenza 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 35, 6.16%* 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 1.58% in the Northwest to 13.34% in the Southwest region. FSPISN reporting is incomplete for week 35 (34% of providers reported). Numbers may change as more reports are received. Data displayed is weighted to the state population.

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



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

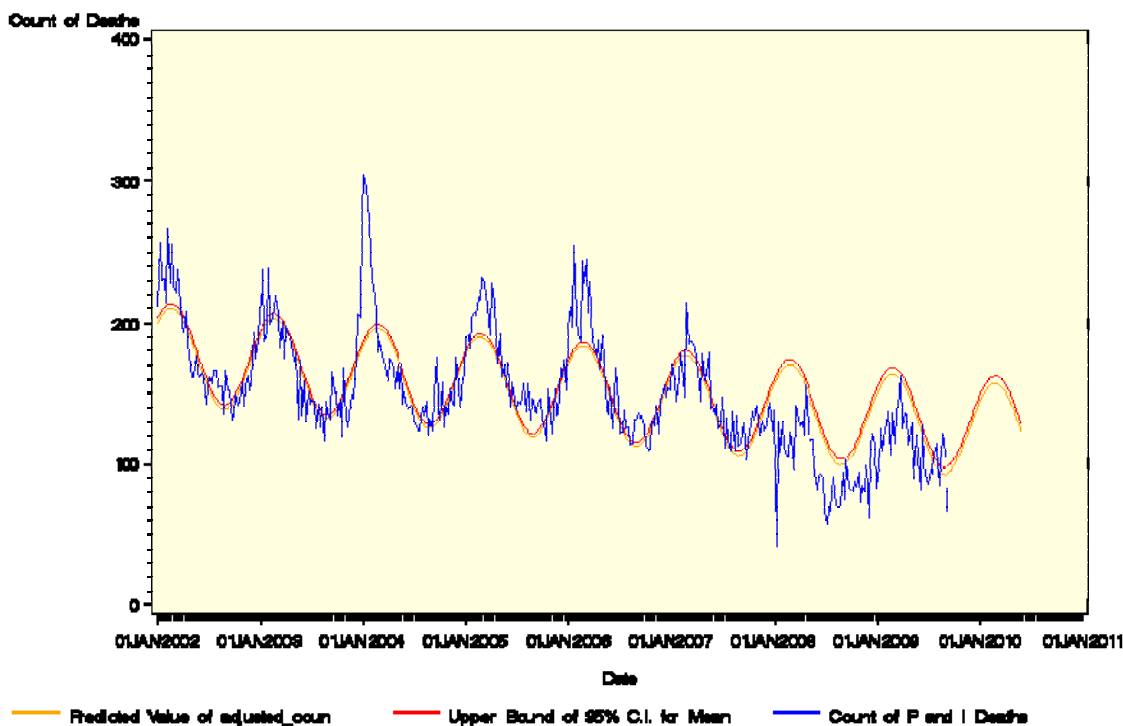
**The 2008—09 threshold for moderate activity is calculated from FSPISN data. The threshold for moderate activity is the mean percentage of patient visits for ILI during influenza weeks for the previous three seasons plus two standard deviations. Only weeks with 10% or greater of laboratory specimens 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 35, the total count of pneumonia and influenza (P&I) deaths reported was below the epidemic threshold. The expected number of deaths for week 35 was 98, and there were 67 observed deaths. This indicates that there were 0 excess deaths**.

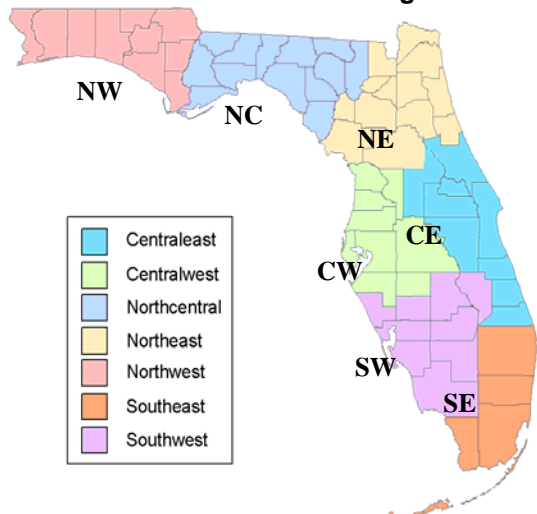
Pneumonia and Influenza Mortality for 24 Florida Counties, Counts Model



**Twenty-two of 24 counties reported P&I deaths to create this trend graph. Data was not available from Hillsborough and Orange. 100% participation is required for this graph to provide an accurate representation. Graph created September 9, 2009.

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

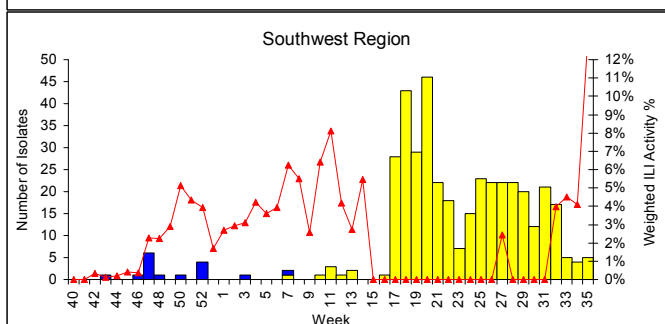
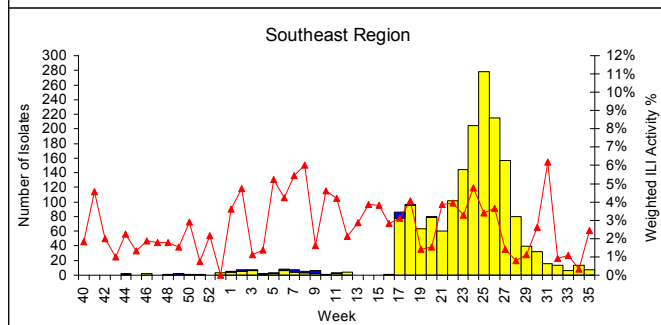
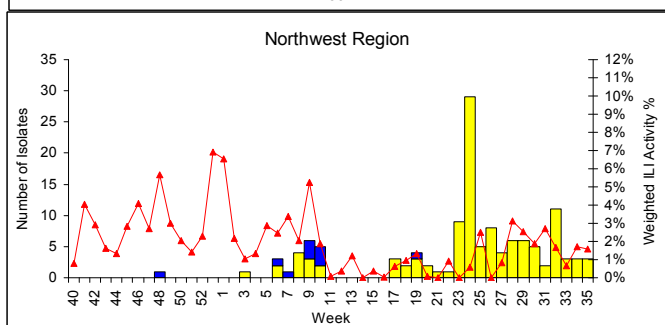
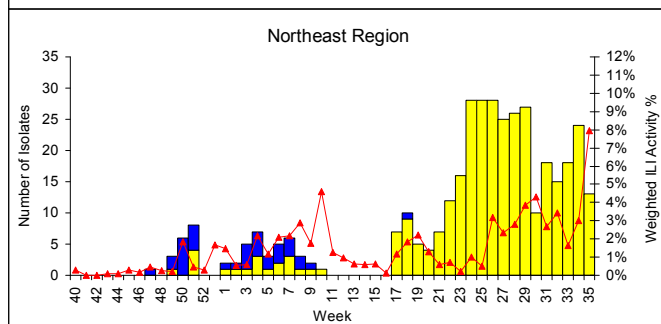
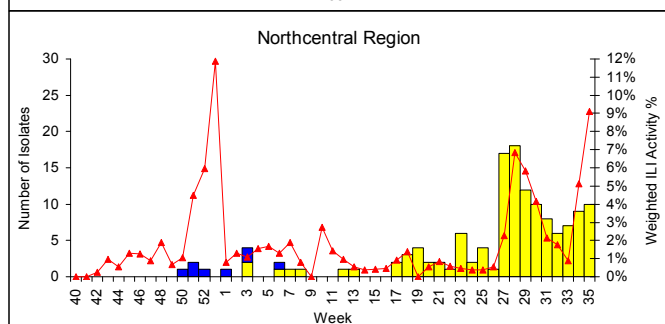
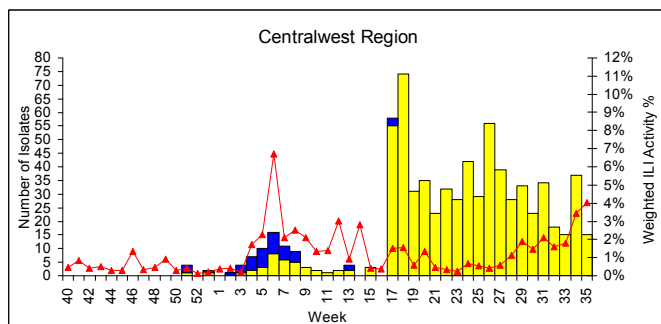
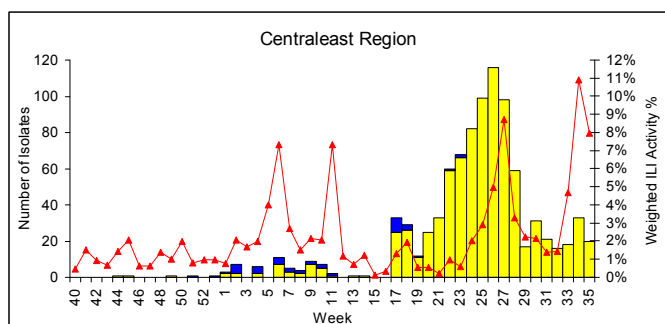
Influenza Surveillance Regions



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

Week 35: FSPISN Weighted ILI Activity, by Region 2008-09 Season

REGION	Percent and number of sentinel sites reporting	2008-09 ILI %
Centraleast	32% (10/31)	7.95%
Centralwest	46% (16/35)	4.04%
Northcentral	67% (2/3)	9.09%
Northeast	41% (10/22)	7.96%
Northwest	45% (4/14)	1.58%
Southeast	13% (2/16)	2.45%
Southwest	15% (2/13)	13.34%



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

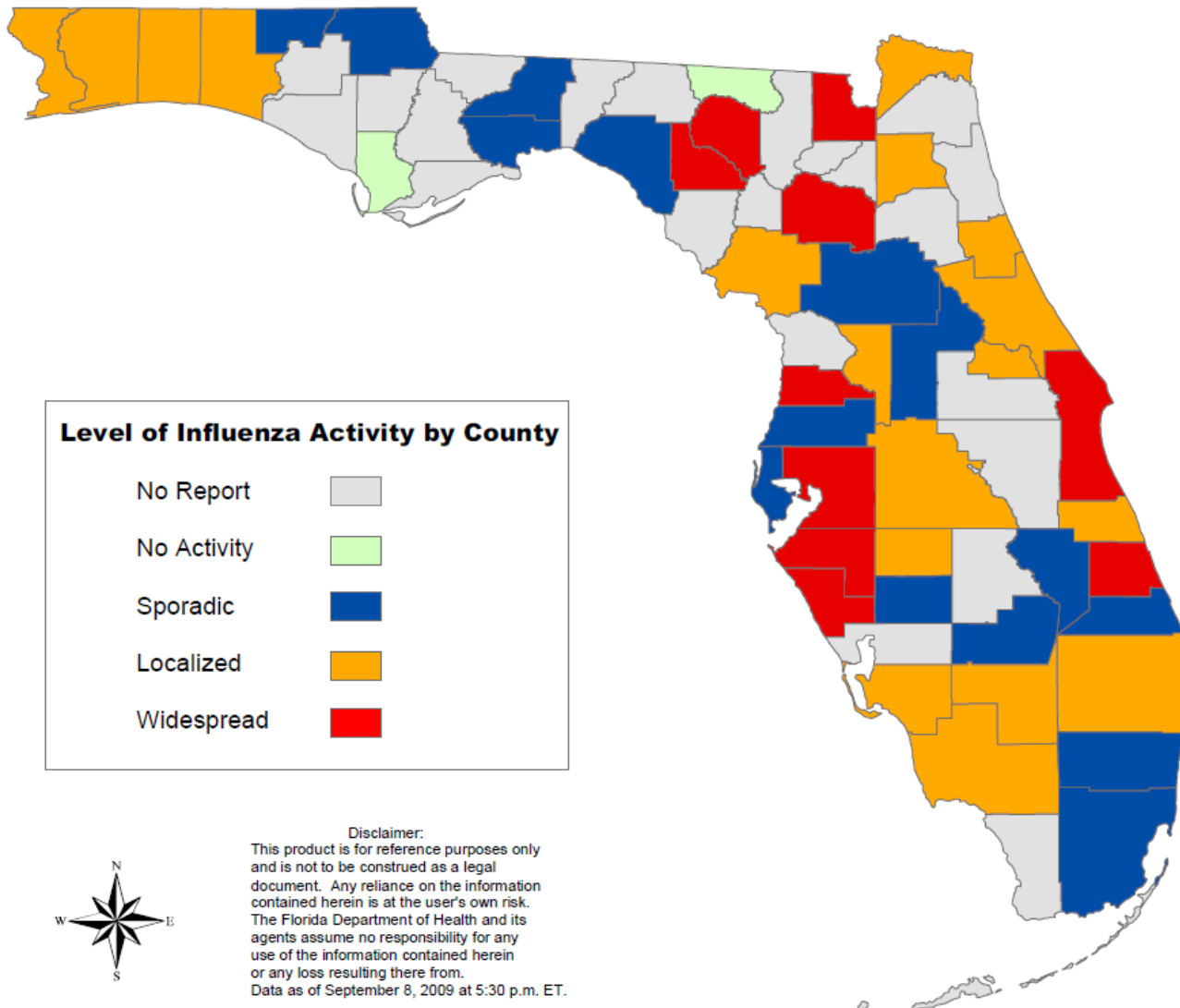
VI. COUNTY INFLUENZA ACTIVITY MAP

During week 35, ten counties reported widespread activity. Eighteen counties reported localized activity. Fifteen counties reported sporadic activity and two counties reported no activity. Twenty-two 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 September 5, 2009 - Week 35)

County influenza activity levels are reported by county health department epidemiologists



Activity Level	Counties
No Report	Bay, Bradford, Calhoun, Charlotte, Citrus, Columbia, Dixie, Duval, Franklin, Gadsden, Gilchrist, Highlands, Jefferson, Liberty, Madison, Monroe, Orange, Osceola, Putnam, St. Johns, Union, Washington
No Activity	Gulf, Hamilton
Sporadic	Broward, Dade, Desoto, Glades, Holmes, Jackson, Lake, Leon, Marion, Martin, Okeechobee, Pasco, Pinellas, Taylor, Wakulla
Localized	Clay, Collier, Escambia, Flagler, Hardee, Hendry, Indian River, Lee, Levy, Nassau, Okaloosa, Palm Beach, Polk, Santa Rosa, Seminole, Sumter, Volusia, Walton
Widespread	Alachua, Baker, Brevard, Hernando, Hillsborough, Lafayette, Manatee, Sarasota, St. Lucie, Suwannee

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

26 confirmed or suspect outbreaks of novel influenza A (H1N1) reported in week 35 (ending 09/05/09)

During week 35, 26 new confirmed or suspect outbreaks of novel influenza A (H1N1) were reported via EpiCom (please note that outbreaks may not have occurred during the week in which they were posted). These outbreaks occurred in twenty schools, two special needs facilities, a military facility, a day care, an athletic team, and a college/university.

147 confirmed or suspect outbreaks of novel influenza A (H1N1) reported as of 09/08/09

Summer camps have been the most heavily impacted setting with 43 (29.3%) of the 147 outbreaks. Schools have accounted for 28 (19.0%) of the outbreaks, daycares have accounted for 12 (8.2%), and correctional facilities have also accounted for 12 (8.2%) .

County Health Department epidemiologists should report Influenza and ILI outbreaks via the Influenza Forum in EpiCom at:

<https://fdens.com/vabtrs/GateStart.aspx>

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

In week 35, there were no new influenza-associated death among those <18 years of age and/or post-influenza infection encephalitis reported in the state of Florida.

Deaths that occurred during weeks 23, 25, and 29 were due to novel influenza A (H1N1).

Reportable Disease	# of Cases 08-09 Influenza Season
Influenza-associated deaths among those <18 years of age	5*
Post-influenza infection encephalitis	0

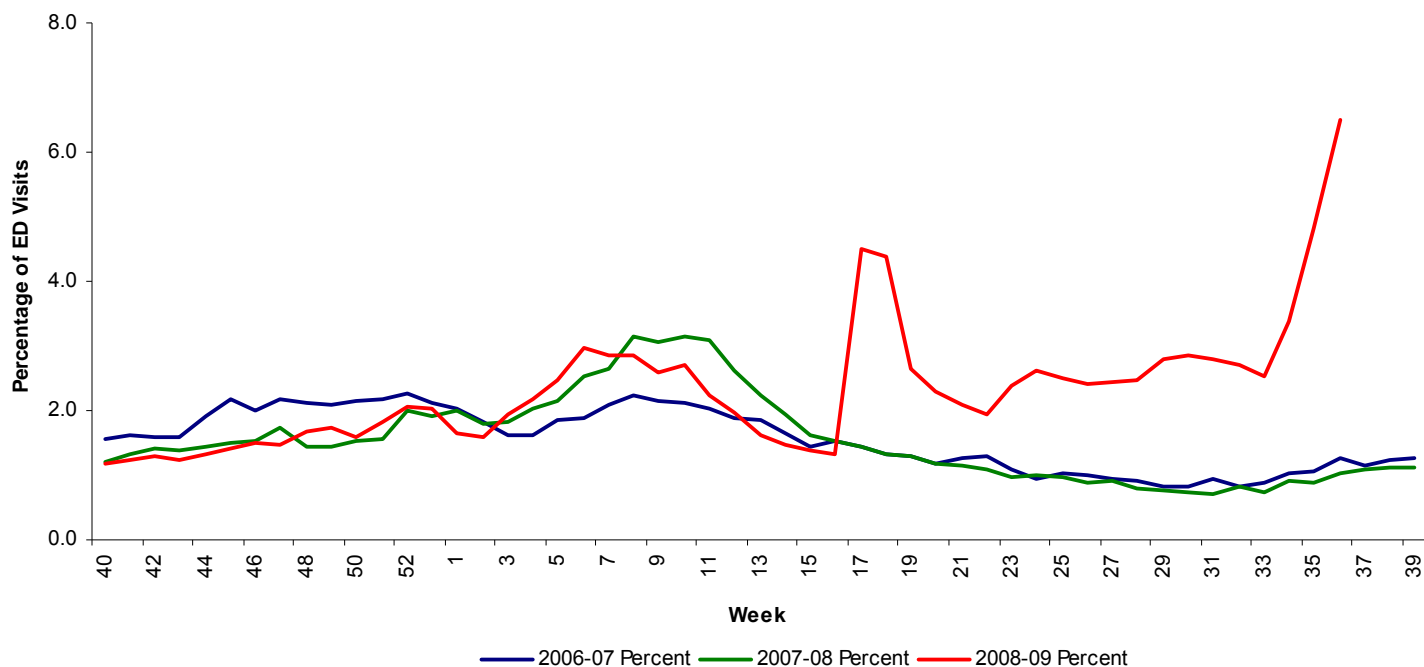
*Case reported during week 6 was reclassified as a suspect case. Please note that status of reported cases are subject to change upon receipt of additional information.

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.

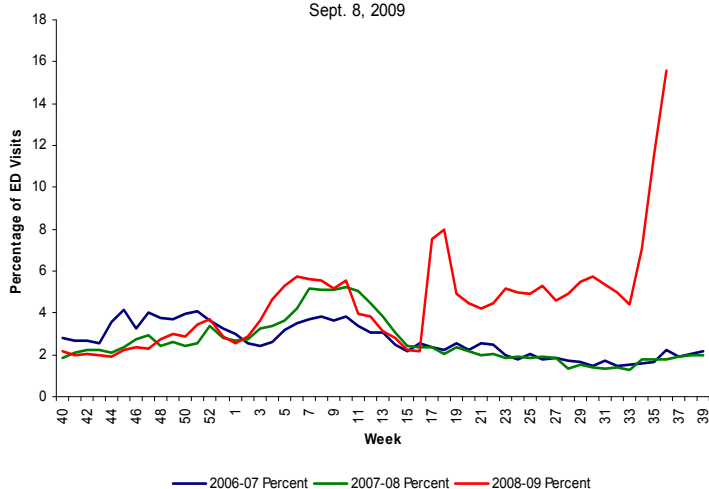
IX. SYNDROMIC SURVEILLANCE SUMMARY

Florida uses the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) for syndromic surveillance, which currently collects data from 117* 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.

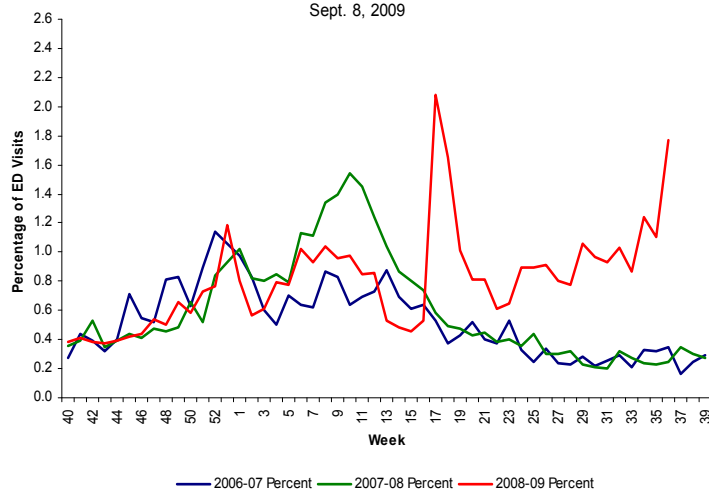
Percentage of Influenza-Like Illness from Emergency Department Chief Complaints, Florida
ESSENCE Participating Hospitals (N=117), Week 40, 2006 through Sept. 8, 2009



Weekly Percentage of Influenza-Like Illness Emergency Department Visits from ESSENCE Participating Facilities (N=117), Ages 5-19, Week 40, 2006 through Sept. 8, 2009



Weekly Percentage of Influenza-Like Illness Emergency Department Visits from ESSENCE Participating Facilities (N=117), Ages 55-74, Week 40, 2006 through Sept. 8, 2009



*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, UNITED STATES, AND FLORIDA NOVEL INFLUENZA ACTIVITY

Avian Influenza A (H5N1)

Since the outbreak activity of avian influenza A (H5N1) began at the end of December 2003, there have been a total of 438 confirmed human cases and 262 deaths. Cases and deaths have occurred in the following nations: Azerbaijan 8 cases and 5 deaths; Bangladesh 1 case and 0 deaths; Cambodia 8 cases and 7 deaths; China 38 cases and 25 deaths; Djibouti 1 case and 0 deaths; Egypt 81 cases and 27 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 111 cases and 56 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 weeks 33-35, no new cases of Influenza A (H5N1) were reported.

During week 32, 2 new cases of Influenza A (H5N1) were reported by the Ministry of Health of Egypt. The first case is an 8 year-old female from Kfr Elsheikh district, Kfr Elsheikh Governorate. Her symptoms started on July 24, 2009. She was admitted to Kfr Elsheikh fever hospital on July 25th, where she received oseltamivir treatment. The patient is in a stable condition. The second case is an 18 month-old male from Shebin Elkom district, Menofya Governorate. His symptoms started on July 28, 2009. He was admitted to Shebin Elkom fever hospital on July 29, 2009, where he received oseltamivir treatment, and is in a stable condition.

Investigations into the source of infection indicated that both cases had close contact with dead and/or sick poultry.

Information about previously reported cases can be found at: http://www.who.int/csr/disease/avian_influenza/updates/en/index.html

Novel Influenza A (H1N1)—Updated 09/04/09

Worldwide, a total of 245,206 confirmed human cases and 2,837 confirmed deaths due to novel influenza A (H1N1) have been reported, since the virus was first recognized in April 2009. The WHO is no longer collecting data on individual cases reported from around the world. As a result of this, the number of cases reported here is most likely an underestimate of the true burden of disease.

For a summary of the most up to date novel influenza A (H1N1) information please visit: <http://www.who.int/csr/disease/swineflu/en/index.html>.

In the United States, a total of 50 states, the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands have reported confirmed cases of novel Influenza A (H1N1). There have been a total of 43,771 cases and 302 deaths reported as of July 24, 2009. July 24, 2009 was the last day that CDC provided individual confirmed and probable cases of novel influenza A (H1N1).

CDC will report the total number of hospitalizations and deaths each week, and continue to use its traditional surveillance systems to track the progress of the novel influenza A (H1N1) outbreak. For more information about CDC's novel influenza surveillance system, see [Questions & Answers About CDC's Novel H1N1 Influenza Surveillance](#). For the latest information about this rapidly evolving situation please visit: <http://www.cdc.gov/h1n1flu/>.

Because the WHO, the CDC, and the Florida Department of Health (FDOH) are no longer collecting representative data on all novel influenza A (H1N1) cases that are occurring, reporting the number of new cases likely under represents the true burden of disease. For that reason, case counts will no longer be reported in this publication.

FDOH novel influenza A (H1N1) surveillance reports are updated weekly and available at http://www.doh.state.fl.us/disease_ctrl/epi/swineflu/Reports/reports.htm.

For more information FDOH's novel influenza A H1N1 surveillance strategies please see [Novel Influenza A H1N1 Surveillance Strategies Questions and Answers](#) at http://www.doh.state.fl.us/disease_ctrl/epi/swineflu/H1N1_Surv_QA.pdf.

X. SUMMARY OF WORLDWIDE, UNITED STATES, AND FLORIDA NOVEL INFLUENZA ACTIVITY

Although the number of cases, hospitalizations, and deaths continues to rise, there is no evidence that the virus has changed to a more virulent form, either in Florida, the rest of the US, or elsewhere in the world. Approximately 25% of deaths are in people with no clear underlying medical condition.

The following tables present cases reported in Merlin for the dates and times listed.
Please note that numbers are provisional and subject to change.

670 hospitalizations* in those with laboratory-confirmed novel H1N1 influenza have been reported as of 5:00 p.m. September 8, 2009
18 hospitalizations* were in newly reported cases (5:00 p.m. September 1, 2009 to 5:00 p.m. September 8, 2009)

TABLE 2. Hospitalizations* in all reported novel H1N1 influenza cases by county, Florida (n=670)

County	Frequency	Percent	County	Frequency	Percent
Alachua	4	0.60	Levy	1	0.15
Baker	1	0.15	Manatee	4	0.60
Bay	1	0.15	Martin	3	0.45
Brevard	5	0.75	Monroe	4	0.60
Broward	65	9.70	Nassau	1	0.15
Charlotte	2	0.30	Okaloosa	1	0.15
Citrus	5	0.75	Okeechobee	1	0.15
Clay	1	0.15	Orange	66	9.85
Collier	3	0.45	Osceola	5	0.75
Columbia	1	0.15	Palm Beach	59	8.81
Dade	300	44.78	Pinellas	13	1.94
Duval	29	4.33	Polk	10	1.49
Escambia	2	0.30	Putnam	1	0.15
Flagler	1	0.15	Santa Rosa	1	0.15
Gadsden	1	0.15	Sarasota	4	0.60
Hendry	1	0.15	Seminole	14	2.09
Hernando	3	0.45	St. Johns	3	0.45
Highlands	4	0.60	St. Lucie	3	0.45
Hillsborough	12	1.79	Taylor	1	0.15
Lake	3	0.45	Volusia	9	1.34
Lee	21	3.13	Walton	1	0.15

TABLE 3. Hospitalizations* in newly reported novel H1N1 influenza cases by county, Florida (n=18)

County	Frequency	Percent
Alachua	1	5.56
Brevard	1	5.56
Broward	2	11.11
Dade	3	16.67
Duval	3	16.67
Hernando	1	5.56
Orange	1	5.56
Palm Beach	3	16.67
Pinellas	2	11.11
Polk	1	5.56

*Under the current surveillance strategy, case reporting is only required for confirmed or probable cases of novel H1N1 influenza in a) patients with life-threatening illness, b) pregnant women who are hospitalized, and c) deaths.

TABLE 4. Hospitalizations* in all reported pregnant novel H1N1 influenza cases by county, Florida (n=59)

	Underlying medical condition reported		No underlying medical condition reported	
	Frequency	Percent of Total	Frequency	Percent of Total
Mechanical ventilation	4	36.36	11	22.92
ICU	4	36.36	16	33.33
Died	3	27.27	2	4.17
Total	11		48	

All deaths in reported laboratory-confirmed novel H1N1 influenza cases are presented in the following tables. Note that novel H1N1 influenza may not necessarily be the attributable cause of death in all cases.

78 deaths in those with laboratory-confirmed novel H1N1 influenza have been reported as of 5:00 p.m. September 8, 2009
8 deaths were newly reported (5:00 p.m. September 1, 2009 to 5:00 p.m. September 8, 2009)

TABLE 5. Deaths in all reported novel H1N1 influenza cases by county, Florida (n=78)

County	Frequency	Percent
Alachua	2	2.56
Brevard	1	1.28
Broward	8	10.26
Clay	1	1.28
Dade	21	26.92
Duval	6	7.69
Hernando	1	1.28
Hillsborough	6	7.69
Lee	3	3.85
Monroe	1	1.28
Orange	6	7.69
Osceola	1	1.28
Palm Beach	6	7.69
Pinellas	3	3.85
Polk	2	2.56
Sarasota	2	2.56
Seminole	2	2.56
St. Lucie	2	2.56
Taylor	1	1.28
Volusia	2	2.56
Walton	1	1.28

TABLE 6. Newly reported novel H1N1 influenza deaths by county, Florida (n=8)

County	Frequency	Percent
Alachua	1	12.50
Broward	1	12.50
Duval	1	12.50
Orange	1	12.50
Palm Beach	1	12.50
Pinellas	1	12.50
St. Lucie	2	25.00

TABLE 7. Deaths in all reported novel H1N1 influenza cases by age*, Florida (n=78)

Age	Frequency	Percent	Rate (per million population)	NO underlying condition
0-4	3*	3.85	2.65	0 (0.00%)
5-24	11*	14.10	2.29	7 (63.64%)
25-49	29	37.18	4.68	8 (27.59%)
50-64	29	37.18	7.91	5 (17.24%)
65+	6	7.69	1.81	0 (0.00%)
Total	78	100.00	4.08	20 (25.64%)

*Please note that a mistake was discovered in the age calculation. Two <1 year old cases were misclassified in the 5-24 age group. This table was updated with correct ages on September 11, 2009.