

FLORIDA INFLUENZA SURVEILLANCE

Week 9: February 24th 2008—March 1st 2008



Kateesha McConnell, MPH, FL EIS Fellow
 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:

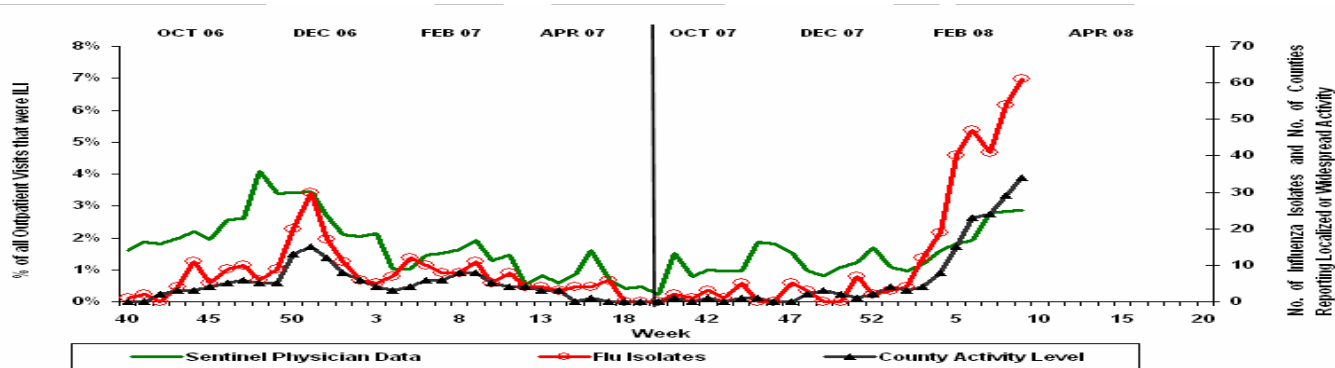
- I. Summary
- II. FSPISN Influenza-like Illness Statewide Graph
- III. Florida Pneumonia and Influenza Mortality Surveillance
- IV. FDOH Laboratory Surveillance
- V. Laboratory and Influenza-like Illness Surveillance by Region
- VI. County Influenza Activity Map
- VII. Reports of Influenza or Influenza-like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

I. SUMMARY

This is twenty-second weekly Florida influenza surveillance report for the 2007-08 season. Influenza surveillance in Florida consists of six 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.

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 for Florida for this reporting week (Week 9). There has been an increase in influenza activity in the Centraleast, Northeast, Northwest, and Southeast regions of Florida as well as recent lab confirmed cases. Because of this increase, Florida meets the CDC widespread activity definition. The CDC definition for widespread activity is: Outbreaks of influenza or increases in influenza-like illness (ILI) cases and recent laboratory confirmed influenza in at least half the regions of the state. The CDC report can be viewed at <http://www.cdc.gov/flu/weekly/usmap.htm>.

During week 9 the proportion of patient visits for influenza-like illness (ILI) as reported by the Florida Sentinel Physician Influenza Surveillance Network was 3.59 percent. This is above the state threshold for moderate activity of 1.75 percent. Forty-nine of the 61 specimens tested by Bureau of Laboratories were positive for influenza. Sixteen counties reported widespread activity and eighteen counties reported localized activity. Seventeen counties reported sporadic activity and 5 counties reported no activity. Twelve counties did not report. The graph below shows the progression of the 2006-07 & 2007-08 Florida influenza seasons as monitored by three** of six surveillance systems.



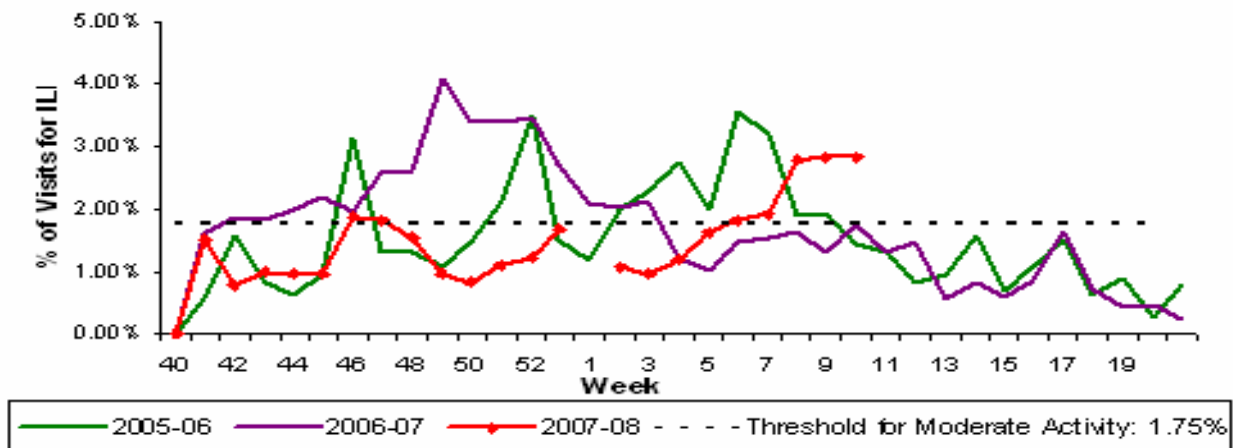
*The purposes of these surveillance systems are to determine when and where influenza activity is occurring, to identify circulating viruses, to detect changes in the circulating influenza viruses, to track patterns of influenza-associated morbidity and mortality and estimate the overall impact of influenza 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 9, 3.59%* of patient visits to Florida sentinel providers were due to ILI. This percentage is above the statewide baseline of 1.75%**. The percentage of visits ranged from 0.31% in the Southwest region to 6.52% in the Northwest region. For the 2006-07 influenza season the statewide ILI activity percent 1.93% for week 9.

Percentage of Visits for Influenza-like Illness Reported by Sentinel Providers Statewide Summary 2007-08, 2006-07, and 2005-06



*FSPISN reporting is incomplete for this week (40%). Numbers may change as more reports are received.

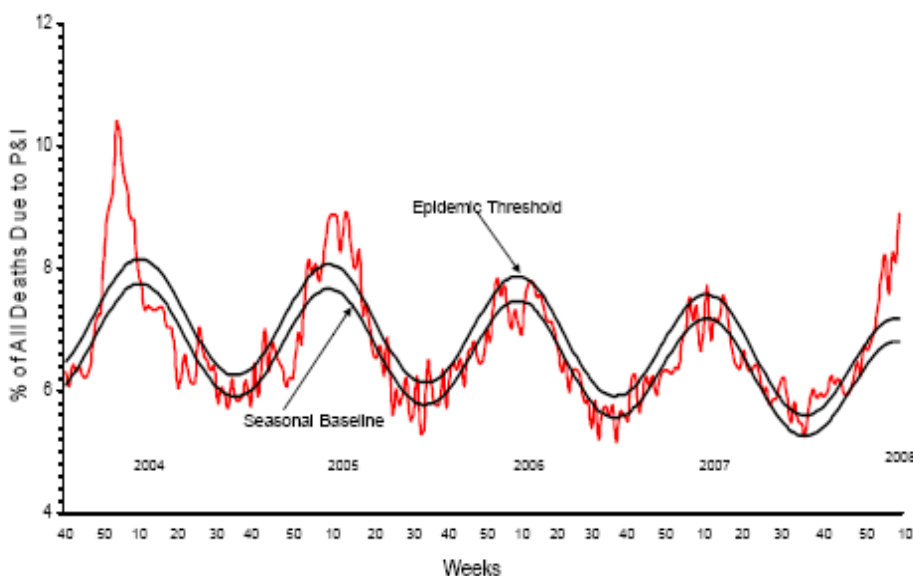
**The 2006—07 threshold for moderate activity is calculated from the previous 3 years of FSPISN data. Only weeks with 10% or greater of laboratory specimens testing positive are included in the calculation. The threshold is only specific to 2007—08 data.

III. Florida Pneumonia and Influenza Mortality Surveillance

Florida is currently in the process of updating P&I mortality surveillance. Please refer to the national data compiled by the CDC below.

Pneumonia and Influenza (P&I) Mortality Surveillance: During week 9, 8.9% of all deaths reported through the 122 Cities Mortality Reporting System were reported as due to P&I. This percentage is above the epidemic threshold of 7.2% for week 9. Including week 9, P&I mortality has been above epidemic threshold for eight consecutive weeks.

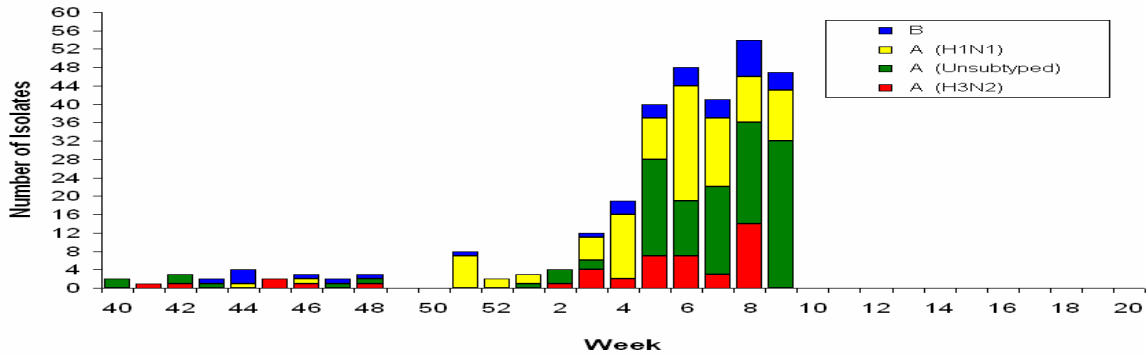
Pneumonia and Influenza Mortality for 122 U.S. Cities
Week Ending 03/01/2008



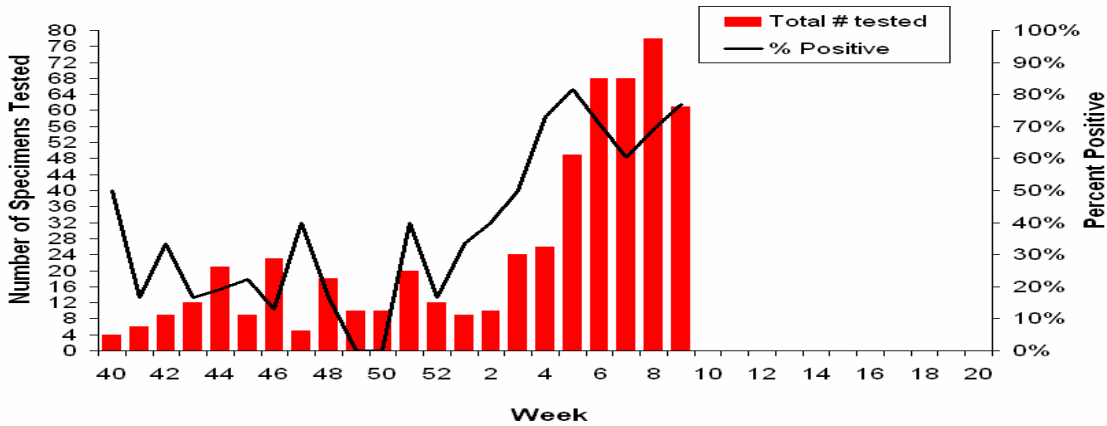
IV. FDOH LABORATORY SURVEILLANCE

Since September 30th, 2007, Florida Department of Health Laboratories have tested a total of 552 specimens for influenza viruses and 300 (54%) were positive. Among the 300 influenza viruses, 265 (88%) were influenza A viruses and 35 (12%) were influenza B viruses. Of the 265 influenza A viruses, 44 were A H3N2, 102 were H1N1, and 119 were A untyped. Of the 35 influenza B viruses 31 were Shanghai. All of the influenza B viruses have not been subtyped. *Laboratory information is preliminary and may change as additional results are received. Totals from previous weeks have been adjusted to reflect correct specimen numbers.*

FDOH State Laboratory Influenza Virus Isolates 2007-08



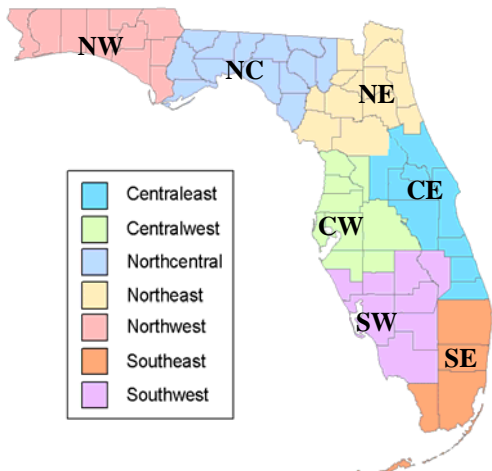
Number of Influenza Specimens Tested by FDOH State Laboratories, 2007-08



		2007-2008 Influenza Laboratory Isolates by Week and County																														
Week		Alachua	Bay	Brevard	Broward	Clay	Charlotte	Miami-Dade	DeSoto	Duval	Escambia	Hardee	Hillsborough	Holmes	Indian River	Jackson	Leon	Levy	Marion	Nassau	Okechobee	Orange	Palm Beach	Pasco	Pinellas	Polk	Santa Rosa	Sarasota	Seminole	St. Johns	Washington	Volusia
1	A							1	2																							
	B																															
2	A									2													2									
	B																															
3	A	2									1				2				1			3						2				
	B									1																						
4	A	1						8														1	3	1				2				
	B							2		1																						
5	A	10						17		1												1						6		1		
	B							1					1										1									
6	A	8						5	3	2			2				2	2	4			5	1			1	5	1	1		1	
	B	1						1																			1					
7	A	2				1		7	1	7		1	2		2		2	1	4			1				2			2	1	1	
	B												1									1										
8	A	3	4			2	2		1	3		1	1	5		6	1					1					6	5	2		1	
	B												1				1					1	1			1	3	1				
9	A	4			2	8			1	1	1	12	3			1	3		1	1		1		1		1	1			2	1	
	B											1			2											1						

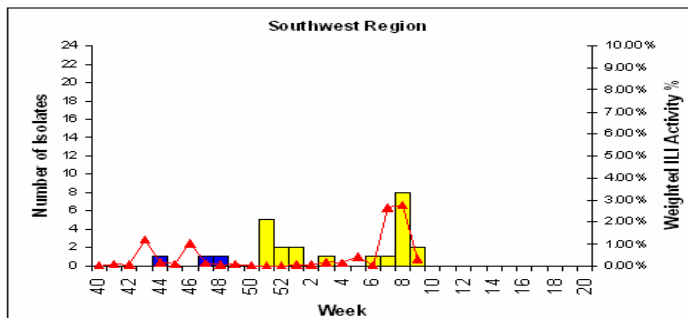
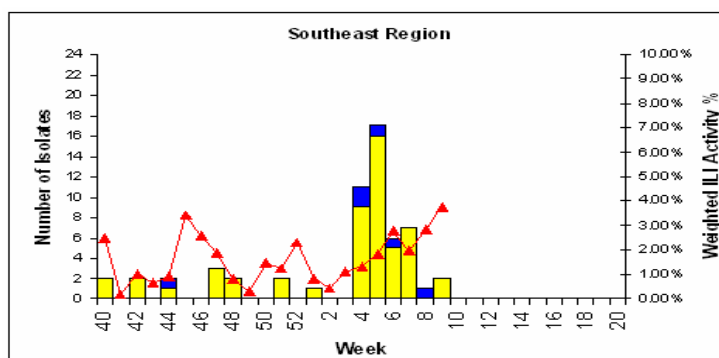
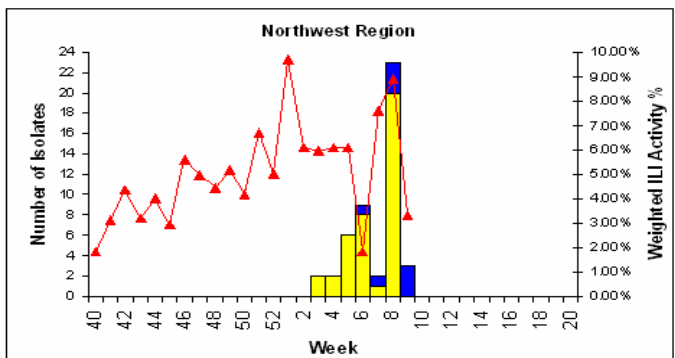
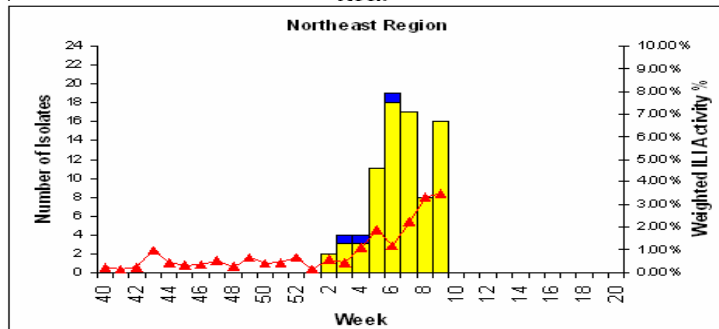
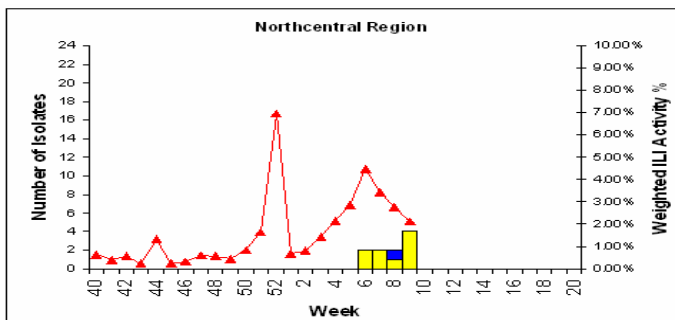
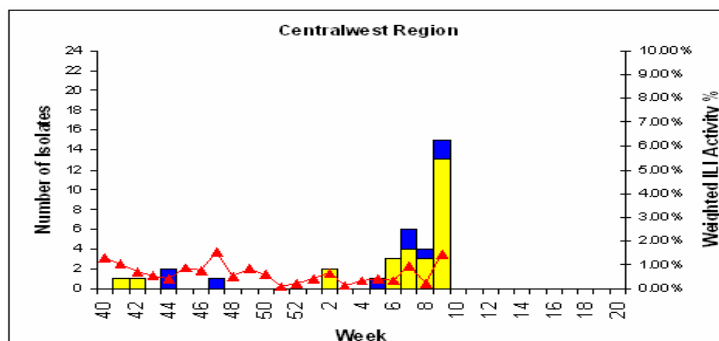
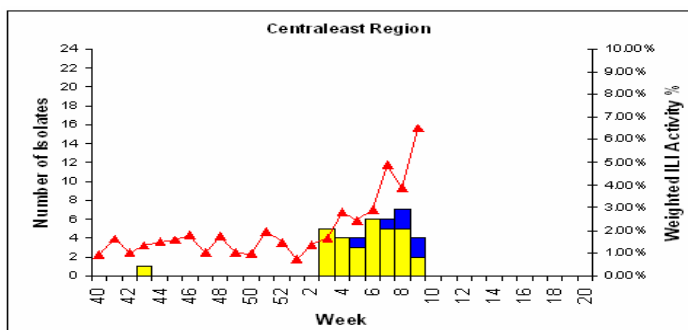
IV. LABORATORY AND INFLUENZA-LIKE ILLNESS (ILI) SURVEILLANCE BY REGION

Influenza Surveillance Regions



The table below shows the weighted ILI activity by region as reported by Florida sentinel physicians for the 2006-07 & 2007-08 seasons. The graphs below include ILI activity as reported by sentinel physicians and FDOH laboratory data.

Week 9: FSPISN Weighted ILI Activity, by Region 2006-07 & 2007-08 Seasons		
REGION	2007-08 ILI %	2006-07 ILI %
Centraleast	6.52%	2.97%
Centralwest	1.44%	0.71%
Northcentral	2.13%	2.14%
Northeast	3.48%	2.15%
Northwest	3.33%	0.10%
Southeast	3.74%	2.13%
Southwest	0.31%	1.81%



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

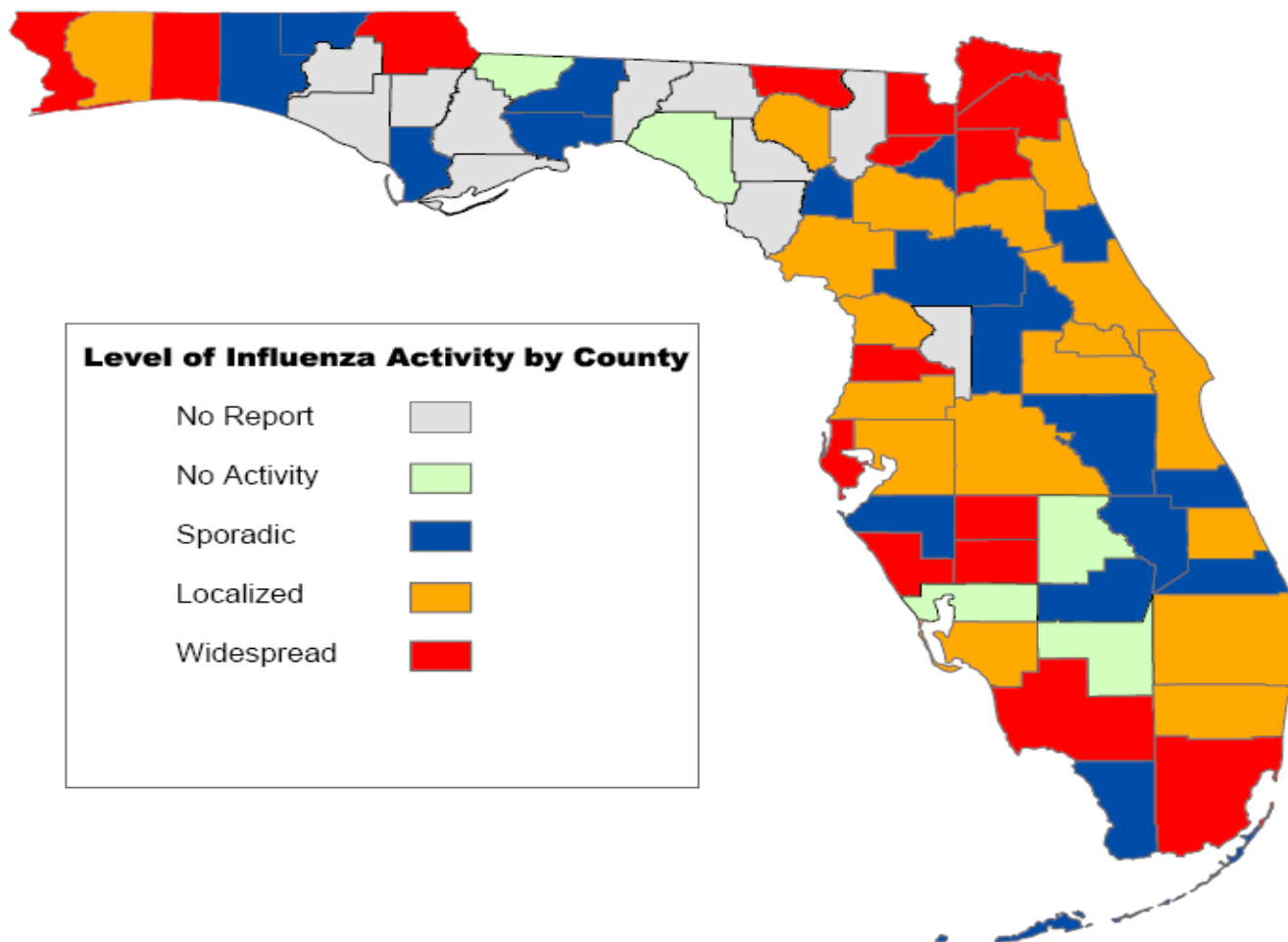
V. COUNTY INFLUENZA ACTIVITY MAP

During week 9, sixteen counties reported widespread activity (Baker, Clay, Collier, Miami-Dade, DeSoto, Duval, Escambia, Hamilton, Hardee, Hernando, Jackson, Nassau, Okaloosa, Pinellas, Sarasota, Union). Eighteen counties reported localized activity (Alachua, Brevard, Broward, Citrus, Hillsborough, Lee, Levy, Orange, Palm Beach, Pasco, Polk, Putnam, St. Johns, St. Lucie, Santa Rosa, Seminole, Suwannee, Volusia). Seventeen counties (Bradford, Flagler, Gilchrist, Glades, Gulf, Holmes, Indian River, Lake, Leon, Manatee, Marion, Martin, Monroe, Okeechobee, Osceola, Wakulla, Walton) reported sporadic activity. Five counties reported no activity. Twelve counties did not report.

Weekly County Influenza Activity

(Week ending March 1, 2008 - Week 9)

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 therefrom. Map printed March 7, 2008

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 {
- An increase of ILI[§] activity detected by a *single* surveillance system* within the county. (An increase in 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.

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

The Nassau CHD observed a substantial increase in flu activity at numerous health care sites beginning 2/4/08 and peaking 02/24-29. Two clinics reported 145 ILIs and 93 confirmed cases of influenza using rapid flu test kits. Of the 93 confirmed cases, 85 were type A, 3 were type B, and 5 were unknown.

The Brevard CHD received a phone call on 02/22/08 from a local assisted living facility regarding an outbreak of respiratory illness in patients. Ten of the 39 Alzheimer's and dementia residents were experiencing flu like symptoms of fever, cough, and congestion with onset dates from 02/19/08 to 02/22/08. All residents of the facility had been vaccinated for influenza in November 2007. Prophylaxis was initiated in symptomatic individuals and unvaccinated staff received the influenza vaccine along with Tamiflu.

On 02/20/08, the Jackson CHD was notified by a correctional facility in the county that six inmates were ill with ILI. Five of the 6 pharyngeal swabs sent to the state lab were positive for Influenza A.

During Week 8, influenza outbreaks occurred at three correctional facilities. They included Apalachee CI (Jackson County), Cross City CI (Dixie County), and Bay Correctional Facility (Bay County).

In February, the Department of Health received two reports of community associated pneumonia deaths. The deaths were in a 43 year old male and a 42 year old female. Both cases were positive for both MRSA and influenza B. The two cases did not have any previous known health history that would have put them at risk for infections.

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

As of the week ending March 1, 2008, there were no influenza-associated deaths among those <18 years or age and/ or post influenza infection encephalitis were reported in the state of Florida.

Reportable Disease	# of Cases 07-08 Influenza Season
Influenza-associated deaths among those <18 years of age	1
Post-influenza infection encephalitis	0

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.

VIII. SUMMARY OF WORLDWIDE A/H5N1 INFLUENZA ACTIVITY

Update 02/28/2008

Since the recent outbreak activity began at the end of December 2003, there have been a total of 369 confirmed human cases and 234 deaths. Cases and deaths occurred in the following nations: Azerbaijan 8 cases and 5 deaths; Cambodia 7 cases and 7 deaths; China 30 cases and 20 deaths; Djibouti 1 case 0 deaths; Egypt 44 cases and 19 deaths; Indonesia 129 cases and 105 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; Thailand 25 cases and 17 deaths; Turkey 12 cases and 4 deaths; and, Vietnam 105 cases and 51 deaths.

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

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/guidelines/wer8126/en/index.html

During week 9, the Ministry of Health and Population of Egypt announced two new human cases of avian influenza A (H5N1). One was a 11-year old male from the Menofia Governorate and the other was a 25-year-old female from the Fayum Governorate. Both cases had contact with sick and/or dead poultry prior to onset of illness. The case from the Fayum Governorate proved fatal.

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.

