# Week 13: March 23-29, 2014

**FLU REVIEV** 

#### Summary

Florida

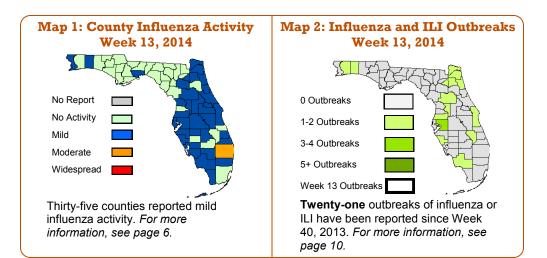
The Florida Department of Health (FDOH) uses many different surveillance systems to measure influenza activity. A summary of all these systems can be found on page 11.

#### National:

- Influenza activity continues to decline nationally. In certain parts of the county, activity remains elevated.
- The predominant circulating strain this year continues to be influenza A (2009 H1N1).
- The Centers for Disease Control and Prevention continue to recommend vaccination as long as influenza viruses are circulating.

#### State:

- This season, FDOH has received reports of severe influenza illness, including hospitalizations, requiring intensive care unit (ICU) care among pregnant women.
  - None of these women received the 2013-2014 influenza vaccine.
- Most Florida counties are reporting mild influenza activity. In week 13, 36 counties reported decreasing
  influenza activity; 26 counties indicated activity is at a plateau.
- Emergency department (ED) and urgent care center (UCC) influenza-like illness (ILI) visits have decreased in recent weeks and is as expected for this time of year; preliminary data suggest that the influenza season has peaked.
  - While activity statewide is generally decreasing, those at high risk for infection, such as pregnant women, are among those presenting to EDs and UCCs for care.
  - Pregnant women are among those at high risk for severe complications due to influenza infection. More information can be found here: <u>http://www.floridahealth.gov/diseases-and-conditions/influenza/</u> <u>documents/2013/flu-fact-sheet-pregnant-women.pdf</u>.
- In Florida, the most common influenza subtype detected at the Bureau of Public Health Laboratories (BPHL) in recent weeks has been influenza A (2009 H1N1).
  - In week 13, 2 of 11 specimens submitted for influenza testing at BPHL were PCR positive for influenza. One was PCR positive for influenza A unspecified and one was PCR positive for influenza B. All of these are seasonal strains of influenza.
  - Nationally (including Florida), almost all circulating influenza is a good match for the vaccine.
- No influenza or ILI outbreaks (epidemiologically-linked cases of influenza in a single setting) were reported in week 13.
- No pediatric influenza-associated deaths were reported in week 13. Four pediatric influenza-associated deaths have been reported in the 2013-2014 season.
- The preliminary estimated number of Florida deaths due to pneumonia or influenza in week 12 is lower than the seasonal baseline, based on previous years' data. Estimated deaths due to pneumonia and influenza are identified using preliminary death certificate data.
- Because of local influenza activity in some areas of the state, Florida reported local influenza activity to CDC in week 13. This activity level represents the geographic spread of influenza in Florida.



#### April 2, 2014 Posted on the Bureau of Epidemiology website:

2013 - 2014 Season

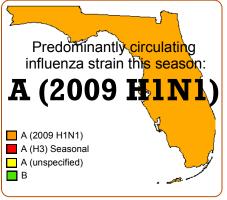
#### http://www.floridahealth.gov/floridaflu

Florida HEALTH

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TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 13				
Measure	Difference from Previous Week	Current Week 13	Previous Week 12	Page of Report
Overall statewide activity code reported to CDC	No Change	Local	Local	1
Percent of visits to ILINet providers for ILI	▲ 0.3	1.3%	1.0%	2
Percent of ED and UCC visits (from ESSENCE-FL) due to ILI	▼ 0.1	2.1%	2.2%	3
Percent of laboratory specimens that were positive for influenza	▲ 1	18.2%	17.2%	5
Number of counties reporting moderate influenza activity	▲ 1	1	0	6
Number of counties reporting widespread influenza activity	No Change	0	0	6
Number of counties reporting increasing influenza activity	No Change	2	2	6
Number of counties reporting decreasing influenza activity	▲ 1	36	35	6
Number of ILI outbreaks reported in EpiCom	▼ 1	0	1	10

## ILINet Influenza-Like Illness-Statewide

ILINet is a nationwide surveillance system composed of sentinel providers. Florida has 107 providers enrolled in ILINet who submit weekly ILI and total visit counts, as well as submit ILI specimens to the BPHL for confirmatory testing. For this season, the Bureau of Epidemiology (DCBE) has designated 13 of these ILINet physicians' offices as Super-Sentinels. These Super-Sentinels receive more active follow-up from DCBE and participating county health departments (CHDs), with the goal of increasing data quality and surveillance specimen submission.

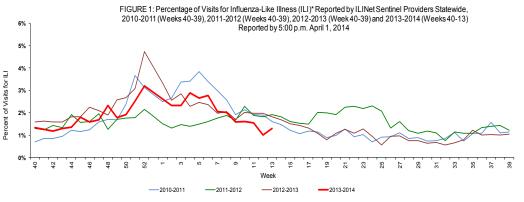
**FIGURE 1** shows the percentage of visits for ILI\* reported by ILINet sentinel providers statewide.

The percent of visits to ILINet sentinel outpatient physicians for ILI is at or near levels seen at this time in previous years

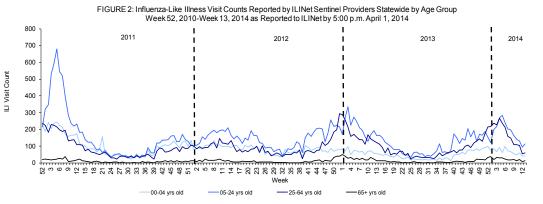
- Fifty-seven of 107 ILINet providers reported visit counts as of 5:30 p.m., April 1, 2014.
- Nine of 13 ILINet Super-Sentinels reported visit counts as of 5:30 p.m., April 1, 2014.

**FIGURE 2** shows ILI visit counts reported by ILINet sentinel providers statewide by age group.

In week 13, the number of visits to ILINet sentinels for ILI decreased in the 0-4 age group and increased in all other age groups.







†Data presented here are counts, not proportions as included in Figure 1. This is because age group denominator data is not available through ILINet.

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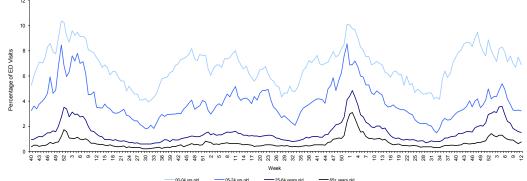
#### **ESSENCE-FL Syndromic Surveillance-Statewide**

ESSENCE-FL collects data daily from 197 EDs and UCCs. These data are processed into 11 different syndrome categories based on the patient's chief complaint. One of the categories is ILI, which is composed of chief complaints that include the words "influenza" or "flu," or complaints that contain fever plus cough or sore throat.

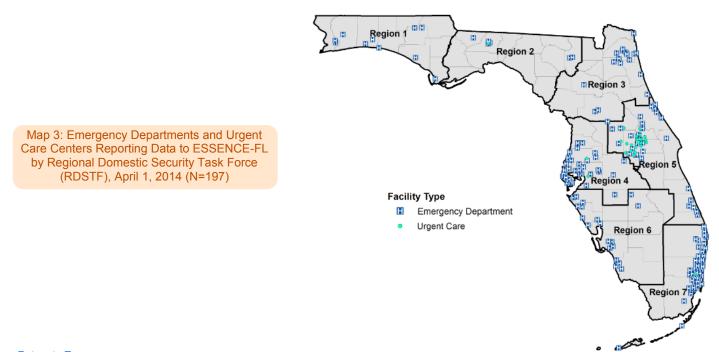
FIGURE 3: Percentage of ILI visits from Emergency Department (ED) and Urgent Care Center (UCC) Chief Complaints, ESSENCE-FL Participating Facilities (N=197), Week 40, 2010 through Week 13, 2014 accessed April 1, 2014 FIGURE 3 shows ESSENCE-FL data on ILI visits to EDs and UCCs as a percentage of all visits. Percent of ED Visits The percent of visits to EDs and UCCs for ILI are at or below levels seen in 5 previous years at this time. Ş ₽ 7 9 ' ≌ 8 ้เช e 33 52 5 ଷ . . ່ສ 35 5 ່ 🙊 FIGURE 4: Percentage ILI visits from Emergency Department and Urgent Care Center Chief Complaints by Age, ESSENCE-FL Participating Facilities (N=197), Week 40, 2010 through Week 13, 2014 accessed April 1, 2014 FIGURE 4 shows percentage of ILI 12 10 The percent of ED and UCC visits for

among all ED and UCC visits by age.

ILI is similar to previous years at this time.



## **ESSENCE-FL Syndromic Surveillance-Regional**



### **ESSENCE-FL Syndromic Surveillance-Regional (Continued)**

page 4

FIGURE 5 - FIGURE 11 describe ED and UCC chief complaint data from ESSENCE-FL by Regional Domestic Security Task Force (RDSTF) regions.

FIGURE 5: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 1 ESSENCE-FL Participating Hospitals (N=10), Week 40, 2010 through Week 13, 2014 accessed April 1, 2014

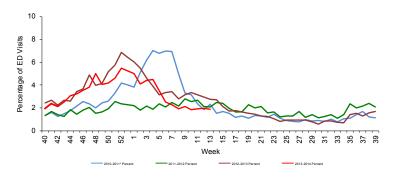


FIGURE 6: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 2 ESSENCE-FL Participating Facilities (N=6), Week 40, 2010 through Week 13, 2014 accessed April 1, 2014

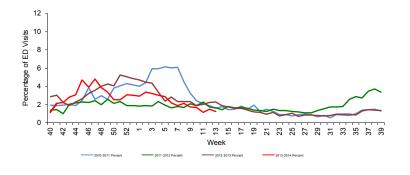
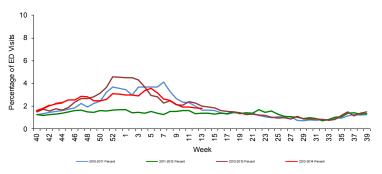
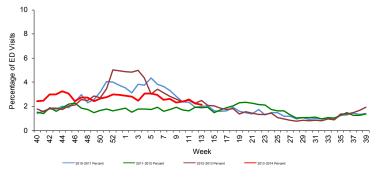


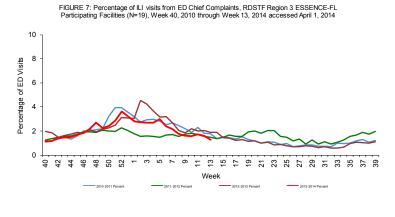
FIGURE 8: Percentage of ILI visits from ED and UCC Chief Complaints, RDTSF Region 4 ESSENCE-FL Participating Facilities (N=39), Week 40, 2010 through Week 13, 2014 accessed April 1, 2014







- The percent of ED and UCC visits for ILI is near expected levels.
- RDSTF Regions 1-7 reported decreasing visits for ILI to EDs and UCCs in week 13, 2014.
- New facilities were recently added to RDSTF Region 6. Historical data for figure 12 will be revised to reflect these new facilities as it becomes available.



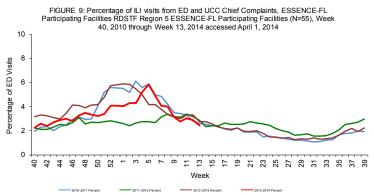
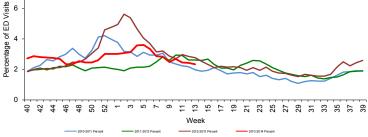


FIGURE 11: Percentage of ILI visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities, RDSTF Region 7 ESSENCE-FL Participating Facilities (N=49), Week 40, 2010 through Week 13, 2014 accessed April 1, 2014



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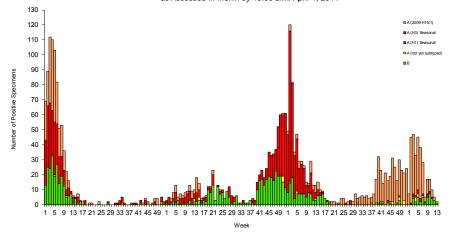
## **Bureau of Public Health Laboratories Viral Surveillance**

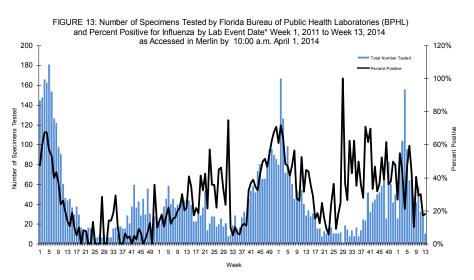
**TABLE 2** shows the number of specimens tested by BPHL, how many are influenza positive and their subtypes.

Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for Week 13 by Lab Event Date\* as reported by 10:00 a.m. April 2, 2014

	Current Week 13	Previous Week 12
Total Specimens Tested	11	29
Influenza positive specimens (% of total)	2 (18.2%)	5 (17.2%)
Influenza A (2009 H1N1) (% of influenza positives)	-	2 (40.0%)
Influenza A (H3) (% of influenza positives)	-	-
Influenza A not yet subtyped (% of influenza positives)	1 (50.0%)	-
Influenza B unspecified (% of influenza positives)	1 (50.0%)	3 (60.0%)

FIGURE 12: Number of Influenza-Positive Specimens Tested by the Florida Bureau of Public Health Laboratories (BPHL) by Subtype by Lab Event Date\* Week 1, 2011 to Week 13, 2014 as Accessed in Merlin by 10:00 a.m. April 1, 2014





\*Please note that lab event date is defined as the earliest of the following dates associated with the lab: date specimen collected, date received by the laboratory, date reported or date inserted.

For county-specific laboratory data, please refer to the Flu Lab Report in Merlin.

For instructions on how to use the Flu Lab Report, please see the Guide to Flu Lab Report on the Bureau of Epidemiology website: <u>http://www.floridahealth.gov/disease-and-conditions/disease-reporting-and-management/surveillance-and-investigations-guidance/surveillance-disease-reporting/\_documents/flulabreportguide.pdf</u>

# **FIGURE 12 - FIGURE 13** use BPHL viral surveillance data to track the progress of influenza infection over time. They include weekly information on how many specimens are tested by the BPHL, what proportion of those test positive for influenza and what subtypes are identified.

- Influenza A (2009 H1N1), influenza A (H3) and influenza B have been identified by BPHL this season.
- In recent weeks, influenza specimens submitted to BPHL tested positive for influenza A 2009 H1N1, influenza A (H3) and influenza B.
- Influenza A (2009 H1N1) has been the most common strain of influenza detected by BPHL so far in the 2013-2014 influenza season.

## **County Influenza and ILI Activity**

As of 11:30 a.m. April 2, 2014, a total of 67 (100%) counties had reported their weekly level of influenza activity. Please note that data reported by counties after the deadline Tuesday at 5 p.m. are recorded but may not be included in the activity map for previous weeks.

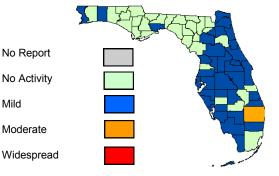
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TABLE 3: Weekly County Influenza Activity for Week 13 (ending March 29, 2014) as Reported by 11:30 a.m. April 2, 2014			
Activity Level	Week 13 Number of Counties	Week 12 Number of Counties	Week 13 Counties
No Report	0	0	-
No Activity	31	33	Baker, Bay, Calhoun, Columbia, Dade, Desoto, Dixie, Franklin, Gadsden, Gilchrist, Glades, Gulf, Hamilton, Hernando, Holmes, Indian River, Jackson, Jefferson, Lafayette, Leon, Levy, Liberty, Madison, Okeechobee, Putnam, Santa Rosa, Suwannee, Taylor, Union, Walton, Washington
Mild	35	34	Alachua, Bradford, Brevard, Broward, Charlotte, Citrus, Clay, Collier, Duval, Escambia, Flagler, Hardee, Hendry, Highlands, Hillsborough, Lake, Lee, Manatee, Marion, Martin, Monroe, Nassau, Okaloosa, Orange, Osceola, Pasco, Pinellas, Polk, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, Volusia, Wakulla
Moderate	1	0	Palm Beach
Widespread	-	-	-

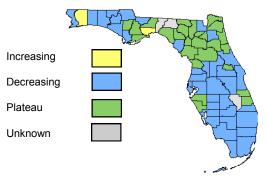
Map 4: Weekly County Influenza Activity Level for Week 13 as Reported by 11:30 a.m. April 2, 2014



One county reported moderate activity.

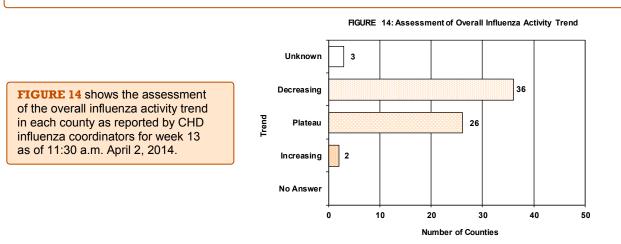
Map 5: Weekly County Influenza Activity Trend for Week 13 as Reported by 11:30 a.m. April 2, 2014

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Thirty-six counties reported decreasing influenza and ILI activity.

County influenza activity data are reported to DCBE through EpiGateway on a weekly basis by each county influenza coordinator. Specific information is requested about laboratory results, outbreak reports and surveillance system activity. Figures 14-23, displayed below reflect a county's assessment of influenza activity within their county as a whole as well as influenza activity within specific settings. For week 13, 36 counties indicated that activity was decreasing, 26 indicated activity was about the same as previous weeks and 2 indicated that activity was increasing.



#### **County Influenza and ILI Activity (Continued)**

Counties are asked to evaluate influenza activity in certain settings within their county. Each setting has a scale for activity that ranges from none or minimal activity to very high activity. What defines each of the values varies by facility type, but the example of the assessment in elementary, middle and high schools is included below. More detailed information on the meanings of the levels for each setting can be found on the webpage also included below.

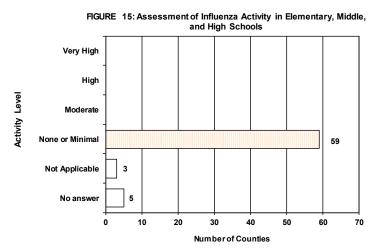
No or very minimal activity -- Scattered cases of ILI with no increase in absenteeism or disruption of school activities.

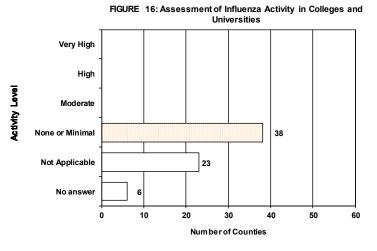
Moderate activity -- Absenteeism elevated above baseline (in range of 10 to 25%) in some but fewer than half of schools where it is known; occasional children sent home because of ILI.

High activity -- Absenteeism elevated above baseline (in range of 10 to 25%) in more than half of schools; most schools sending several or many children home each day because of ILI.

Very high activity -- Absenteeism high enough to force curtailment of some or all school activities.

**FIGURE 15 - FIGURE 18** show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 13 as of 11:30 a.m., April 2, 2014.





Very High High Moderate None or Minimal 54 Not Applicable 8 No answer 5 0 10 20 30 40 50 60 70

Number of Counties

FIGURE 17: Assessment of Influenza Activity in Jails/Prisons

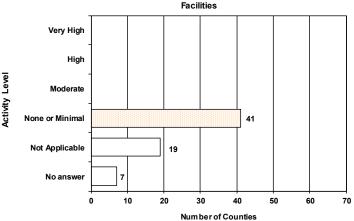
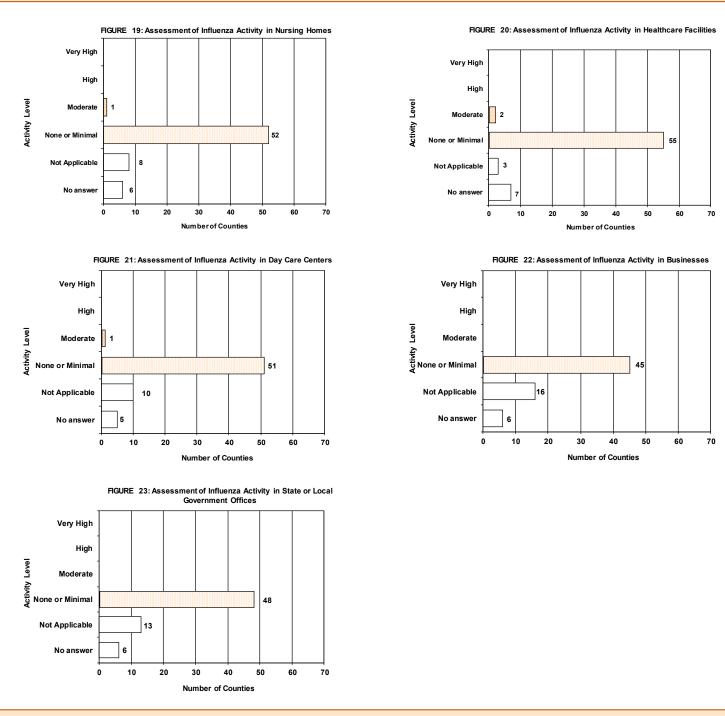


FIGURE 18: Assessment of Influenza Activity in Retirement

Activity Level

## **County Influenza and ILI Activity (Continued)**

FIGURE 19 - FIGURE 23 show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 13 as of 11:30 a.m., April 2, 2014.



# **Pediatric Influenza-Associated Mortality**

In week 13, 2014, no influenza-associated pediatric deaths were reported in Florida.

Four influenza-associated pediatric deaths have been reported so far in the 2013-2014 influenza season.

# **ESSENCE-FL Pneumonia and Influenza Mortality**

Over the past year, the FDOH Bureau of Vital Statistics and CHDs have been rolling out an electronic death record system for Florida. ESSENCE-FL now displays electronic vital statistics death record data from all 67 Florida counties. For pneumonia and influenza surveillance, death record literals are queried in ESSENCE-FL using a free-text query that searches for references to pneumonia and influenza on death certificates. Any mention of pneumonia or influenza in the death certificate literals, with certain exceptions, is counted as a pneumonia and influenza death. Current season pneumonia and influenza death numbers are preliminary estimates, and may change as more data are received. *The most recent data available are displayed here. ESSENCE-FL vital statistics death records data are currently considered to be complete through week 12, 2014.* 

**FIGURE 24** shows the count of preliminary estimated pneumonia and influenza deaths for all Florida counties, the number of deaths predicted using a multi-year regression model and the upper bound of the 95% confidence interval for this prediction.

For week 12 (ending March 22, 2014):

- 201 preliminary estimated pneumonia and influenza deaths were reported.
- Upper bound of 95% confidence interval for prediction: 248 deaths.
- <u>No excess deaths.</u>

FIGURE 25 shows pneumonia and influenza deaths for all Florida counties, week 40, 2010 - week 14 2014, as reported into ESSENCE-FL. Deaths due to pneumonia and influenza are at levels seen during previous years at this time.

**FIGURE 26** shows pneumonia and influenza deaths for all Florida counties by age group, week 40, 2010 - week 14, 2014, as reported into ESSENCE-FL.

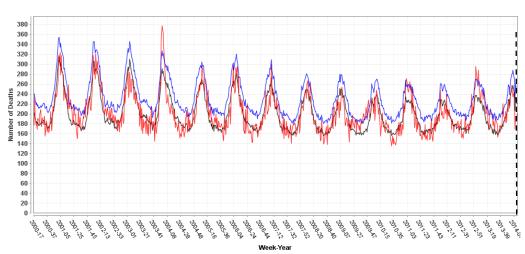


Figure 24: Vital Statistics Statewide Pneumonia and Influenza Deaths, Multi-Year Regression Model

Week 17, 2000-Week 14, 2014, as reported into ESSENCE-FL



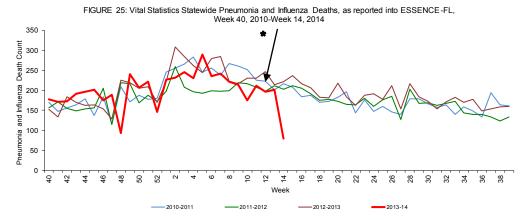
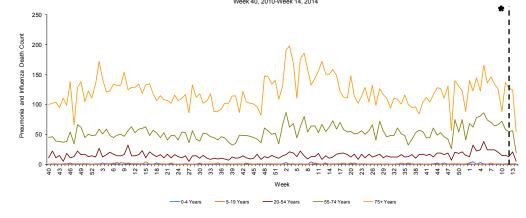


FIGURE 26: Vital Statistics Florida Pneumonia and Influenza Deaths by Age Group, as reported into ESSENCE-FL, Week 40, 2010-Week 14, 2014



Death records data reported into ESSENCE-FL are currently considered to be complete through week 12, 2014.

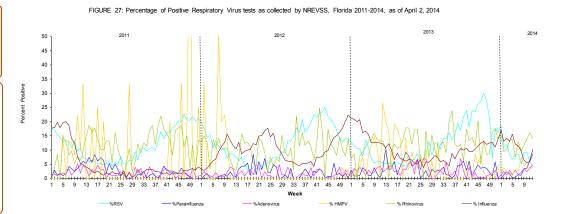
## **NREVSS Respiratory Virus Surveillance**

The National Respiratory and Enteric Virus Surveillance System (NREVSS) collects data from laboratories around the country on a weekly basis. NREVSS monitors temporal and geographic patterns of six common respiratory viruses. Eight Florida facilities reported in week 13.

**FIGURE 27** shows the percentage of positive tests for multiple respiratory viruses reported by NREVSS-participating laboratories in Florida.

The 6 respiratory viruses summarized in Figure 27 are:

- Respiratory Syncytial Virus (RSV)
- Parainfluenza 1-3
- Adenovirus
- Human Metapneumovirus (HMPV)
- Rhinovirus
- Influenza

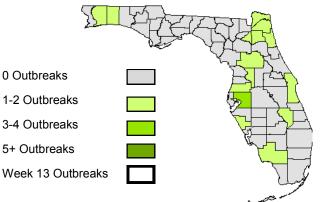


# Influenza and ILI Outbreaks Reported in EpiCom

In week 13 2014, no influenza or ILI outbreaks were reported in EpiCom.

Map 6: Influenza and ILI outbreaks by county, Week 40, 2012 - Week 13, 2014 as Reported by 11:30 a.m. April 1, 2014

**Twenty-one** influenza or ILI outbreaks have been reported into EpiCom so far in the 2013-2014 season.



#### Influenza and ILI Outbreaks (Continued)

TABLE 4 : Summar	ry of Florida Influenza and ILI Outbreaks b	y Facility Status, Week 40, 2013 -13, 2014
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Setting	Number of outbreaks	Implicated Viruses
Schools	7	<ul> <li>5 outbreaks due to influenza A of unknown subtype</li> </ul>
		2 outbreaks due to influenza B
Colleges and universities	0	No outbreaks
Daycares	1	<ul> <li>1 outbreak due to influenza A of unknown subtype</li> </ul>
Private businesses	0	No outbreaks
Local and state government offices	0	No outbreaks
	5	<ul> <li>2 outbreaks due to influenza A (2009 H1N1)</li> </ul>
Jails and prisons		<ul> <li>2 outbreaks due to influenza A of unknown subtype</li> </ul>
		<ul> <li>1 outbreak, virus information not yet available</li> </ul>
	4	<ul> <li>2 outbreaks, virus information not available</li> </ul>
Retirement homes		<ul> <li>1 outbreak due to influenza A of unknown subtype</li> </ul>
		<ul> <li>1 outbreak due to influenza A (H3)</li> </ul>
Nursing homes	1	<ul> <li>1 outbreak, RSV and coronavirus identified</li> </ul>
Healthcare facilities	0	No outbreaks
Other	3	<ul> <li>2 household outbreaks due to influenza A (2009 H1N1)</li> </ul>
Other		<ul> <li>1 household outbreak due to influenza A of unknown subtype</li> </ul>
	21	<ul> <li>3 outbreaks, virus information not available</li> </ul>
		<ul> <li>2 outbreaks due to influenza B</li> </ul>
Total		<ul> <li>10 outbreaks due to influenza A of unknown subtype</li> </ul>
Total		<ul> <li>4 outbreaks due to influenza A (2009 H1N1)</li> </ul>
		<ul> <li>1 outbreak due to RSV and coronavirus</li> </ul>
		<ul> <li>1 outbreak due to influenza A (H3)</li> </ul>

## Florida ILI Surveillance System Summary

#### Florida ILINet

#### Measures trends in ILI visits to outpatient doctor's offices

Network of volunteer healthcare providers who:

Report ILI and total visit counts every week

Submit specimens for confirmatory testing

ESSENCE-FL Syndromic Surveillance

Measures trends in ILI visits and hospital admissions from emergency departments and urgent care clinics

EDs and UCCs electronically transmit visit data into ESSENCE-FL daily

Visit data summarized in the Florida Flu Review include:

Percent of ED/urgent care visits due to ILI

Percent of ED/urgent care visitors with ILI who are admitted to the hospital

ESSENCE-FL Vital Statistics Portal

Measures influenza mortality by using death certificates with pneumonia or influenza listed as a cause of death.

Death certificate data from the Bureau of Vital Statistics can be accessed through ESSENCE-FL and are used for pneumonia and influenza mortality surveillance County Influenza Activity in EpiGateway

Uses data provided by CHDs to create a county-by-county breakdown of influenza and ILI activity around the state

CHD epidemiologists report their county's influenza and ILI surveillance data weekly into the EpiGateway website

Influenza activity is classified as: No Activity, Mild, Moderate or Widespread

Setting-specific influenza activity and influenza trend is also reported

Outbreak Reporting in EpiCom

Tracks influenza and ILI outbreak investigations by CHDs and shows what types of influenza are responsible for outbreaks and where outbreaks are occurring

CHD epidemiologists report outbreaks of influenza or ILI into EpiCom, Florida's online disease communication system

Outbreaks are defined as two or more cases of influenza or ILI in a specific setting

BPHL

BPHL performs confirmatory testing and subtyping on surveillance specimens from ILINet sentinel providers, outbreak investigations, patients with severe or unusual influenza presentations and medical examiners

#### Case-Based Influenza Surveillance

Pediatric Influenza-Associated Mortality

Deaths in children with laboratory-confirmed influenza infection are reportable in Florida

Influenza due to Novel or Pandemic Strains

Patients with influenza infection due to novel or pandemic strains are reportable in Florida

#### National Respiratory and Enteric Virus Surveillance System (NREVSS)

Measures trends in different viruses that cause respiratory disease

Network of laboratories who report counts of test results for common respiratory viruses, including influenza, RSV, rhinovirus and others

Information on locating influenza vaccination can be found using the flu vaccine locator at: http://flushot.healthmap.org/