

Week 47: November 16 - 22, 2014

Summary

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

National influenza activity:

Influenza activity continues to increase nationally.

The Centers for Disease Control and Prevention recommend vaccination as long as influenza viruses are circulating.

State Influenza and influenza-like illness (ILI) activity:

- Due to increased influenza activity in some regions of the state, Florida reported regional influenza activity to CDC in week 47.
 - This activity level represents the geographic spread of influenza in Florida.
- Emergency department (ED) and urgent care center (UCC) influenza-like illness (ILI) visits are increased at this time and suggest an earlier start flu season this year. The increase in visits is particularly noticeable among children less than 19.
- In Florida, the most common influenza subtype detected at the Bureau of Public Health Laboratories (BPHL) in recent weeks has been influenza A (H3): In week 47, 34 of 49 (70.6%) specimens submitted for influenza testing at BPHL were PCR positive for influenza. 24 were positive for influenza A (H3) 6 were positive for A not yet subtyped 3 were positive for influenza B not yet subtyped and 1 was positive for influenza B Yamagata lineage. These are seasonal strains of influenza that are also circulating at the national level.
- Three outbreaks of influenza (epidemiologically-linked cases of influenza in a single setting) were reported to EpiCom in week 47.
- Most Florida counties report increasing influenza activity. In week 47, 37 counties reported increasing influenza activity; 27 counties indicated activity is at a plateau.
- Two pediatric influenza-associated deaths were reported in week 47.
 - These are the first reported influenza-associated pediatric deaths of the 2014-15 influenza season.
- The preliminary estimated number of Florida deaths due to pneumonia or influenza in week 46 was below the excess threshold.



November 26, 2014

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Produced by: Bureau of Epidemiology, Florida Department of Health

Contributors: Heather Rubino, PhD; Ellen Dugan, MPH, Leah Eisenstein, MPH; Lea Heberlein-Larson, MPH; Valerie Mock; Janet Hamilton, MPH



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Summary (Continued)

Descriptions of Florida influenza and ILI surveillance systems can be found on page 11.

TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 47					
Measure	Difference from Previous Week	Current Week 46	Previous Week 45	Page of Report	
Overall statewide activity code reported to CDC	No Change	Regional	Regional	1	
Percent of visits to ILINet providers for ILI	▲0.7	2.5%	1.8%	2	
Percent of ED and UCC visits (from ESSENCE-FL) due to ILI	▲0.2	3.7%	3.5%	3	
Percent of laboratory specimens that were positive for influenza	▲ 21.7	69.4%	47.7%	5	
Number of counties reporting moderate influenza activity	▲ 8	19	11	6	
Number of counties reporting widespread influenza activity	▼ 1	0	1	6	
Number of counties reporting increasing influenza activity	▼ 2	37	39	6	
Number of counties reporting decreasing influenza activity	▼ 1	2	3	6	
Number of ILI outbreaks reported in EpiCom	▲ 2	3	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 (BOE) has designated 13 of these ILINet physicians' offices as Super-Sentinels. These Super-Sentinels receive more active follow-up from BOE and participating county health departments (CHDs), with the goal of increasing data guality and surveillance specimen submission.

FIGURE 1 shows the percentage of FIGURE 1: Percentage of Visits for Influenza-Like Illness (ILI)* Reported by ILINet Sentinel Providers Statewide. Week 40, 2011 through Week 47, 2014 as Reported by 5:00 p.m. November 25, 2014 visits for ILI* reported by ILINet sentinel 6% providers statewide. 5% 4% Percent of Visits for ILI The percent of visits to ILINet sentinel outpatient physicians for ILI is above 3% levels seen at this time in previous 2% years 1% Fifty-four of 107 ILINet providers reported visit counts as of 5:00 p.m., November 25, 2014. Ξ 9 2 g ß Week Eight of 13 ILINet Super-Sentinels reported visit counts as of 5:00 p.m., November 25, 2014. FIGURE 2: Influenza-Like Illness (ILI)*: Visit Counts Reported by ILINet Sentinel Providers Statewide by Age Group

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

In week 47, the number of visits to ILINet sentinels for ILI increased in all 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.

25-64 yrs old

- 65+ yrs old

*ILI = Influenza-like illness, fever >100°F AND sore throat and/or cough in the absence of another known cause.

05-24 vrs old

0-4 vrs old

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ESSENCE-FL Syndromic Surveillance-Statewide

ESSENCE-FL collects data daily from 216 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 shows ESSENCE-FL data on ILI visits to EDs and UCCs as a percentage of all visits.

The percent of visits to EDs and UCCs for ILI is above levels seen in previous years at this time.



FIGURE 4: Percentage of Influenza Like-Illness visits from Emergency Department (ED) and Urgent Care Center (UCC) Chief Complaints

FIGURE 3: Percentage of Influenza Like -Illness visits from Emergency Department (ED) and Urgent Care Center (UCC) Chief Complain ts, ESSENCE-FL Participating Facilities (N=216), Week 40, 2011 through Week 47, 2014 Accessed November 26, 2014

FIGURE 4 shows percentage of ILI among all ED and UCC visits by age.

The percent of ED and UCC visits for ILI is above levels seen in previous years at this time for all age groups.



ESSENCE-FL Syndromic Surveillance-Regional



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ESSENCE-FL Syndromic Surveillance-Regional (Continued)

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



FIGURE 6: Percentage of of Influenza Like-Illness Visits from ED Chief Complaints, RDSTF Region 2 ESSENCE-FL Participating Facilities (N=7), Week 40, 2011 through Week 47, 2014 accessed November 26, 2014



FIGURE 8: Percentage of of Influenza Like-Illness Visits from ED and UCC Chief Complaints, RDTSF Region 4 ESSENCE-FL Participating Facilities (N=43), Week 40, 2011 through Week 47, 2014 accessed November 26, 2014



FIGURE 10: Percentage of of Influenza Like-Illness Visits from ED Chief Complaints, RDSTF Region 6 ESSENCE-FL Participating Facilities (N=23), Week 40, 2011 through Week 47, 2014 accessed November 26, 2014



- ED and UCC visits for ILI in RDSTF Region 2-4, 6 and 7 are above levels seen during previous years at this time.
- ED and UCC visits for ILI in RDSTF Regions 1, and 5 are at or near levels seen during previous years at this time.



FIGURE 9: Percentage of ILI visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities RDSTF Region 5 ESSENCE-FL Participating Facilities (N=60), Week 40, 2011 through Week 47, 2014 accessed November 26, 2014



FIGURE 11: Percentage of Influenza Like-Illness Visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities , RDSTF Region 7 ESSENCE-FL Participating Facilities (N=49), Week 40, 2011 through Week 47, 2014 accessed November 26, 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.

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 (H3) and influenza B have been identified by BPHL this season.
- In recent weeks, influenza specimens submitted to BPHL tested positive for influenza A (H3), influenza B Yamagata lineage and influenza B Victoria lineage.
- Influenza A (H3) has been the most common strain of influenza detected by BPHL so far in the 2014-2015 influenza season.

Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance forWeek 47 by Lab Event Date* as reported by 4:00 p.m. November 26, 2014

	Current Week 47	Previous Week 46
Total Specimens Tested	49	65
Influenza positive specimens (% of total)	34 (69.4%)	31 (47.7%)
Influenza A (2009 H1N1) (% of influenza positives)	-	-
Influenza A (H3) (% of influenza positives)	24 (70.6%)	28 (90.3%)
Influenza A not yet subtyped (% of influenza positives)	6 (17.7%)	2 (6.5%)
Influenza B Yamagata (% of influenza positives)	1 (2.9%)	1 (3.2%)
Influenza B Victoria (% of influenza positives)	-	-
Influenza B not yet subtyped (% of influenza positives)	6 (8.8%)	-

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, 2012 to Week 47, 2014 as Accessed in Merlin by 4:00 p.m. November 26, 2014



FIGURE 13: Number of Specimens Tested by Florida Bureau of Public Health Laboratories (BPHL) and Percent Positive for Influenza by Lab Event Date* Week 1, 2012 to Week 47, 2014 as Accessed in Merlin by 10:00 a.m. November 26, 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: http://www.floridahealth.gov/diseases-and-conditions/influenza/ documents/flulabreportguide.pdf

County Influenza and ILI Activity

As of 11:30 a.m. November 26, 2014, a total of 67 (100%) counties 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.

TABLE 3: Weekly County Influenza Activity for Week 47 (ending November 22, 2014)as Reported by 11:30 a.m. November 26, 2014			
Activity Level	Week 47 Number of Counties	Week 46 Number of Counties	Week 47 Counties
No Report	0	0	-
No Activity	9	11	Desoto, Dixie, Gilchrist, Hamilton, Jefferson, Okeechobee, Santa Rosa, Taylor, Union
Mild	39	44	Bay, Bradford, Brevard, Broward, Calhoun, Charlotte, Citrus, Clay, Collier, Dade, Duval, Escambia, Flagler, Gadsden, Hernando, Highlands, Indian River, Jackson, Lafayette, Lake, Lee, Levy, Liberty, Madison, Manatee, Martin, Monroe, Nassau, Okaloosa, Osceola, Palm Beach, Pinellas, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, Volusia, Washington
Moderate	19	11	Alachua, Baker, Columbia, Franklin, Glades, Gulf, Hardee, Hendry, Hillsborough, Holmes, Leon, Marion, Orange, Pasco, Polk, Putnam, Suwannee, Wakulla, Walton
Widespread	0	1	-

Map 4: Weekly County Influenza Activity Level for Week 47 Reported by 11:30 a.m. November 26, 2014



Nineteen counties reported moderate activity.

Map 5: Weekly County Influenza Activity Trend for Week 47 Reported by 11:30 a.m. November 26, 2014



Thirty-seven counties reported increasing influenza and ILI activity.

County influenza activity data are reported to BOE 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 47, two counties indicated that activity was decreasing, 27 indicated activity was about the same as previous weeks and 37 indicated that activity was increasing.



FIGURE 14: Assessment of Overall Influenza Activity Trend

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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 47 as of 11:30 a.m., November 26, 2014.







30

40

Number of Counties

50

FIGURE 17: Assessment of Influenza Activity in Jails/Prisons





60

70



Not Applicable

No answer

0

10

20

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 47 as of 11:30 a.m., November 26, 2014.



Pediatric Influenza-Associated Mortality

Two influenza-associated pediatric deaths were reported in week 47 of in the 2014-2015 influenza season, one in an Orange county resident and one in a Pasco county resident. Both had underlying health conditions.

These are the first reported influenza-associated pediatric deaths of the 2014-15 influenza season.

ESSENCE-FL Pneumonia and Influenza Mortality

FDOH Bureau of Vital Statistics and county health departments (CHDs) collect death record data electronically in all 67 Florida counties, which can be accessed using ESSENCE-FL. 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 46, 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 46 (ending Nov 15, 2014):

- 177 preliminary estimated pneumonia and influenza deaths were reported.
- Upper bound of 95% confidence interval for prediction: 219 deaths.
- No excess deaths.

FIGURE 25 shows pneumonia and influenza deaths for all Florida counties, week 40, 2010 - week 47 2014, as reported into ESSENCE-FL. Deaths due to pneumonia and influenza are at or near levels seen during previous years at this time.

FIGURE 26 shows pneumonia and influenza deaths for all Florida counties by age group, week 40, 2012 - week 47, 2014, as reported into ESSENCE-FL.



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

Week 17, 2000-Week 46, 2014, Reported into ESSENCE-FL

Expected Data Raw Data Count Upper Bounds



FIGURE 26: Vital Statistics Florida Pneumonia and Influenza Deaths by Age Group, Reported into ESSENCE-FL, Week 40, 2012 through Week 47, 2014



Death records data reported into ESSENCE-FL are currently considered to be complete through week 46, 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 47.

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 47, 2014, three outbreaks of influenza or ILI were reported in to EpiCom.

Pinellas County: A nursing home reported 14 residents ill with ILI. Specimens were collected and sent to BPHL for further characterization. Infection control measures were discussed with facility leadership. This investigation is ongoing.

Orange County: A daycare reported 12 attendees and four staff ill with ILI. Of the 12 ill, only nine had accessible vaccination information. Of the nine, only one child was vaccinated against influenza this season. One of the ill children tested positive for influenza B by rapid antigen test at their healthcare provider's office. Only one of the ill staff had received this year's influenza vaccine. Infection control measures were discussed with facility leadership. This investigation is ongoing.

Miami-Dade: an elementary school reported 12 students with ILI. None of the six student for whom vaccination information was available had received this year's influenza vaccine. Of the 12, four students tested positive for influenza A by rapid antigen test at their local health care providers offices. Infection control measures were discussed with facility leadership. This investigation is ongoing.

Thirteen influenza outbreaks have been reported into EpiCom so far in the 2013-2014 season.





Influenza and ILI Outbreaks (Continued)

Setting Number of outbrea		s Implicated Viruses	
Schools		One outbreak, due to influenza A unspecified and influenza B unspecified	
	6	 Three outbreaks, virus information not yet available 	
		 Two outbreaks, due to influenza A unspecified 	
Colleges and universities	0	No outbreaks	
Daycares		 One outbreak, due to parainfluenza III 	
	2	 One outbreak, due to RSV 	
		 One outbreak, due to influenza A unspecified and influenza B unspecified 	
Private businesses	0	No outbreaks	
Local and state government offices	0	No outbreaks	
Jails and prisons	0	No outbreaks	
Retirement homes	0	No outbreaks	
Nursing homes	3	 Two outbreaks, due to influenza A (H3) 	
	5	 Two outbreaks, due to influenza A unspecified 	
Healthcare facilities	0	No outbreaks	
Other	0	No outbreaks	
Total		 Two outbreaks, due to influenza A unspecified and influenza B unspecified 	
		 Three outbreaks, virus information not yet available 	
	13	 Four outbreaks, due to influenza A unspecified 	
	13	One outbreak, due to parainfluenza III	
		One outbreak, due to RSV	
		 Two outbreaks, due to influenza A (H3) 	

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 LLI 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 unusu
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/

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