

Week 49: November 30 - December 6, 2014

Summary

National influenza activity:

•Influenza activity continues to increase nationally.

- The Centers for Disease Control and Prevention (CDC) has identified an antigenically drifted influenza A (H3N2) strain circulating nationally and in Florida that is different from the strain of influenza A (H3N2) contained in the current 2014-15 influenza vaccine formulations.
- Vaccination is still recommended as it provides some protection against drifted viruses and it can also
 protect against other circulating strains. People who have not yet been vaccinated should get vaccinated
 now.
- The CDC recommends the use of neuraminidase inhibitor antiviral medications when indicated for treatment and prevention to influenza, as an adjunct to vaccination. More information can be found here: http://www.floridahealth.gov/diseases-and-conditions/influenza/_documents/Other/influenza-letter-for-health-care-providers.pdf

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

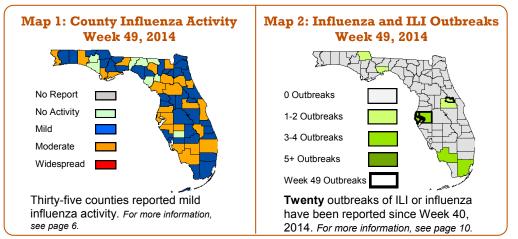
•The 2014-15 flu season is off to an early start this year in Florida.

- While it is not uncommon for influenza and ILI activity levels to increase during this time of year, current activity levels are above levels seen during previous years at this time. Influenza activity is highest in children but overall is widely spread throughout Florida.
- •Due to increased influenza activity in all regions of the state, Florida reported widespread influenza activity to CDC in week 49. This is the second week reporting widespread activity; this represents the geographic spread of influenza in Florida.
- •Most Florida counties report increasing influenza activity. In week 49, 42 counties reported increasing influenza activity; 20 counties indicated activity is at a plateau.

• Emergency department (ED) and urgent care center (UCC) ILI visits are increasing in all regions.

- The proportion of visits to EDs and UCCs with a chief complaint of ILI and the proportion of visits resulting in a discharge diagnosis of influenza for those 19 years and under are at or near what we typically see at the peak of flu season. Increased influenza activity in children typically comes ahead of increases in activity in adults and the elderly.
- Recently there has been an increase in pregnant women presenting to EDs for care that is above expected levels for this time of year. Pregnant women are among those at high risk for severe complications due to influenza infection. More information can be found here: http://www.floridahealth.gov/ diseases-and-conditions/influenza/_documents/2013/flu-fact-sheet-pregnant-women.pdf
- •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 49, 67 of 93 (72.0%) specimens submitted for influenza testing at BPHL were PCR positive for seasonal strains of influenza: 61 were positive for influenza A (H3), one was positive for influenza A not yet subtyped, three were positive for influenza B Yamagata lineage, and two were positive for influenza B Victoria lineage. While it is too early to tell if this flu season will be worse than other years, seasons when influenza A (H3) predominantly circulates are often associated with higher morbidity and mortality, particularly in the elderly and very young.
- •Four outbreaks of influenza (epidemiologically-linked cases of influenza in a single setting) were reported to EpiCom in week 49.
- •No pediatric influenza-associated deaths were reported in week 49.

•The preliminary estimated number of Florida deaths due to pneumonia or influenza in week 48 was below the excess threshold.



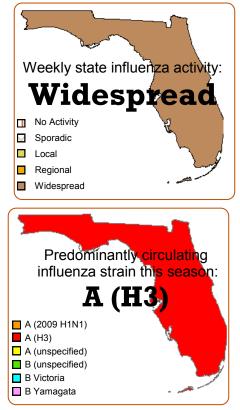
December 10, 2014 Posted on the Bureau of Epidemiology website:

http://www.floridahealth.gov/floridaflu

Florida HEALTH

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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 49				
Measure	Difference from Previous Week	Current Week 49	Previous Week 48	Page of Report
Overall statewide activity code reported to CDC	No Change	Widespread	Widespread	1
Percent of visits to ILINet providers for ILI	▼ 0.6	2.9%	3.5%	2
Percent of ED and UCC visits (from ESSENCE-FL) due to ILI	▼ 0.2	4.1%	4.3%	3
Percent of laboratory specimens that were positive for influenza	▲ 4.3	72.0%	67.7%	5
Number of counties reporting moderate influenza activity	▼ 3	16	19	6
Number of counties reporting widespread influenza activity	No Change	0	0	6
Number of counties reporting increasing influenza activity	No Change	42	42	6
Number of counties reporting decreasing influenza activity	▼ 1	3	2	6
Number of ILI outbreaks reported in EpiCom	▲ 1	4	3	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 quality and surveillance specimen submission.

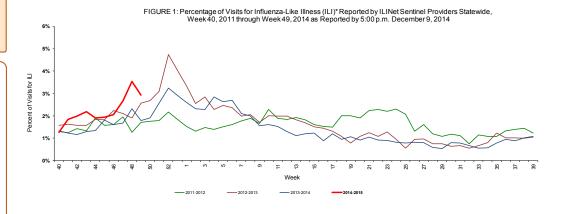
FIGURE 1 shows the percentage of visits for ILI* reported by ILINet sentinel providers statewide.

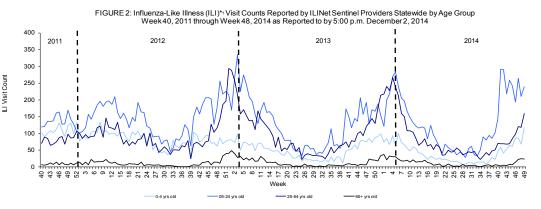
The percent of visits to ILINet sentinel outpatient physicians for ILI is above levels seen at this time in previous years

- Fifty-four of 107 ILINet providers reported visit counts as of 5:00 p.m., December 9, 2014.
- Eight of 13 ILINet Super-Sentinels reported visit counts as of 5:00 p.m., December 9, 2014.

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

In week 49, 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.

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

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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.

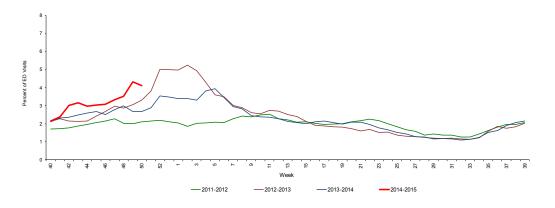
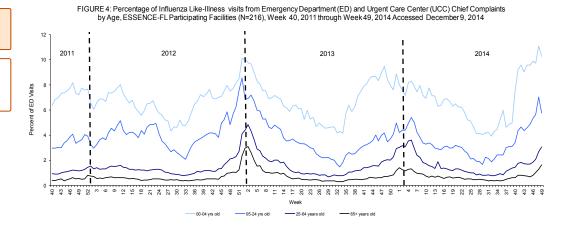
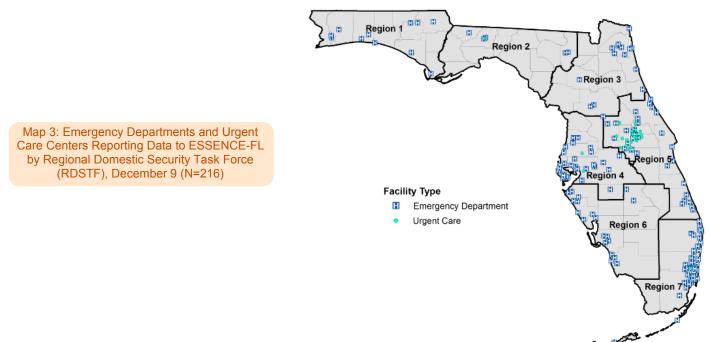


FIGURE 4 shows percentage of ILI among all ED and UCC visits by age.

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



ce-Statewide

FIGURE 3: Percentage of Influenza Like-Illness visits from Emergency Department (ED) and Urgent Care Center (UCC) Chief Complaints, ESSENCE-FL Participating Facilities (N=216), Week 40, 2011 through Week 49, 2014 Accessed December 9, 2014

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ESSENCE-FL Syndromic Surveillance-Regional (Continued)

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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.

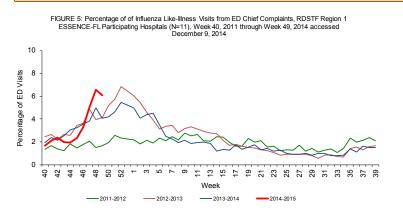


FIGURE 6: Percentage of of Influenza Like-Illness Visits from ED Chief Complaints, RDSTF Region 2 ESSENCE-FL Participating Facilities (N=7), Week 40, 2011 through Week 49, 2014 accessed December 9, 2014

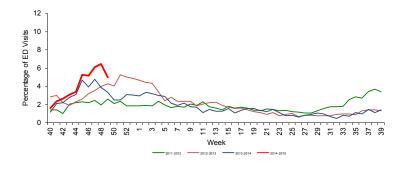


FIGURE 8: Percentage of of Influenza Like-Illness Visits from ED and UCC Chief Complaints, RDTSF Region 4 ESSENCE-FL Participating Facilities (N=43), Week 40, 2011 through Week 49, 2014 accessed December 9, 2014

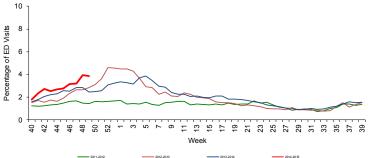
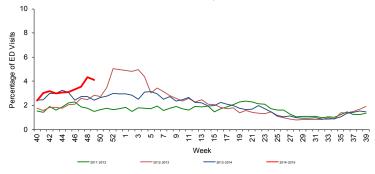


FIGURE 10: Percentage of of Influenza Like-Illness Visits from ED Chief Complaints, RDSTF Region 6 ESSENCE-FL Participating Facilities (N=23), Week 40, 2011 through Week 49, 2014 accessed December 9, 2014



- ED and UCC visits for ILI in RDSTF Regions 1, 2, 6 and 7 are above levels seen during previous years at this time.
- ED and UCC visits for ILI in RDSTF Regions 3, 4 and 5 are at or near levels seen during previous years at this time.

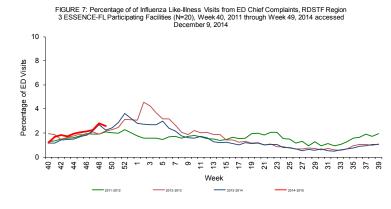


FIGURE 9: Percentage of ILI visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities RDSTF Region 5 ESSENCE-FL Participating Facilities (N=60), Week 40, 2011 through Week 49, 2014 accessed December 9, 2014

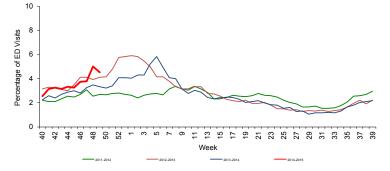
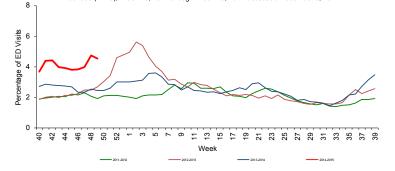


FIGURE 11: Percentage of Influenza Like-Illness Visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities , RDSTF Region 7 ESSENCE-FL Participating Facilities (N=49), Week 40, 2011 through Week 49, 2014 accessed December 9, 2014



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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) and influenza B Yamagata 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 49 by Lab Event Date* as reported by 4:00 p.m. December 10, 2014

	Current Week 49	Previous Week 48
Total Specimens Tested	93	93
Influenza positive specimens (% of total)	67 (72.0%)	55 (67.7%)
Influenza A (2009 H1N1) (% of influenza positives)	-	-
Influenza A (H3) (% of influenza positives)	61 (91.0%)	55 (87.3%)
Influenza A not yet subtyped (% of influenza positives)	1 (1.5%)	-
Influenza B Yamagata (% of influenza positives)	3 (4.5%)	7 (11.1%)
Influenza B Victoria (% of influenza positives)	2 (3.0%)	1 (1.6%)
Influenza B not vet subtyped (% of influenza positives)	-	-

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 49, 2014 as Accessed in Merlin by 10:00 a.m. December 10, 2014

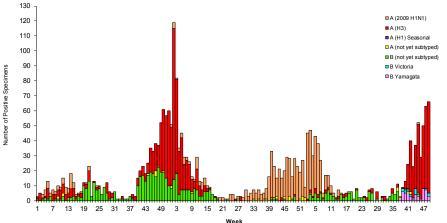
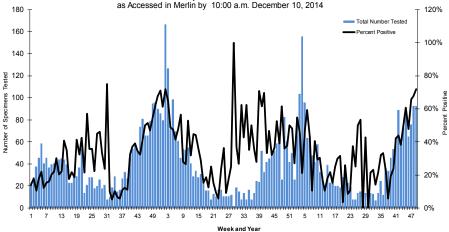


FIGURE 13: Number of Specimens Tested by Florida Bureau of Public Health Laboratories (BPHL) and Percent Positive for Influenza by Lab Event Date* Week 1, 2012 to Week 49, 2014



*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.

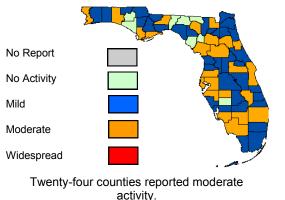
For county-specific laboratory data, please refer to the Flu Lab Report in Merlin. For instructions on how to use the Flu Lab Report, please see the Guide to Flu Lab Report on the Bureau of Epidemiology website: http://www.floridahealth.gov/diseases-and-conditions/influenza/ documents/flulabreportguide.pdf

County Influenza and ILI Activity

As of 11:30 a.m. December 10, 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.*

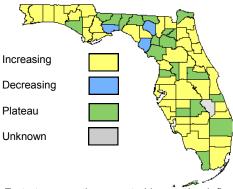
TABLE 3: Weekly County Influenza Activity for Week 49 (ending December 6, 2014)as Reported by 11:30 a.m. December 10, 2014				
Activity Level	Week 49 Number of Counties	er of Number of Week 49 Counties		
No Report	0	0	-	
No Activity	8	8	Bay, Desoto, Dixie, Gilchrist, Hamilton, Jefferson, Madison, Washington	
Mild	35	43	Bradford, Broward, Calhoun, Charlotte, Citrus, Clay, Columbia, Dade, Duval, Gadsden, Glades, Hernando, Highlands, Holmes, Indian River, Jackson, Lafayette, Lake, Liberty, Martin, Monroe, Nassau, Okaloosa, Osceola, Polk, Santa Rosa, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, Taylor, Union, Volusia, Wakulla	
Moderate	24	16	Alachua, Baker, Brevard, Collier, Escambia, Flagler, Franklin, Gulf, Hardee, Hendry, Hillsborough, Lee, Leon, Levy, Manatee, Marion, Okeechobee, Orange, Palm Beach, Pasco, Pinellas, Putnam, Suwannee, Walton	
Widespread	0	0	-	

Map 4: Weekly County Influenza Activity Level for Week 49 Reported by 11:30 a.m. December 10, 2014



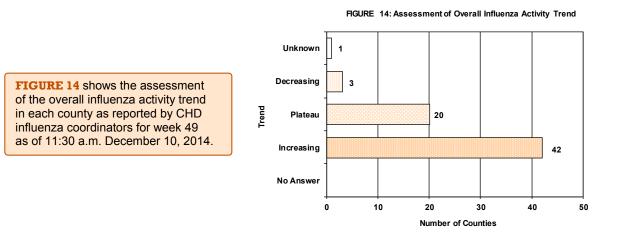
activity.

Map 5: Weekly County Influenza Activity Trend for Week 49 Reported by 11:30 a.m. December 10, 2014



Forty-two 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 49, three counties indicated that activity was decreasing, 20 indicated activity was about the same as previous weeks and 42 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.

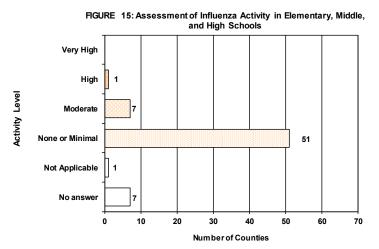
No or very minimal activity -- Scattered cases of ILI with no increase in absenteeism or disruption of school activities.

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 49 as of 11:30 a.m., December 10, 2014.



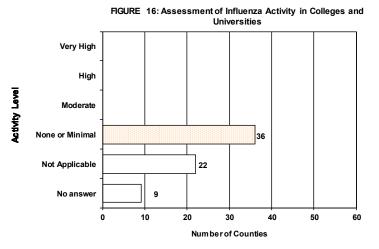




FIGURE 17: Assessment of Influenza Activity in Jails/Prisons

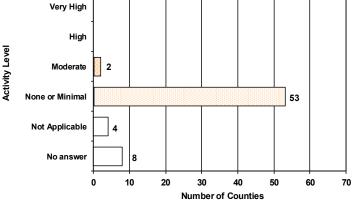
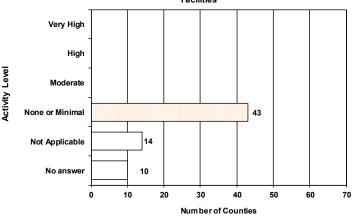


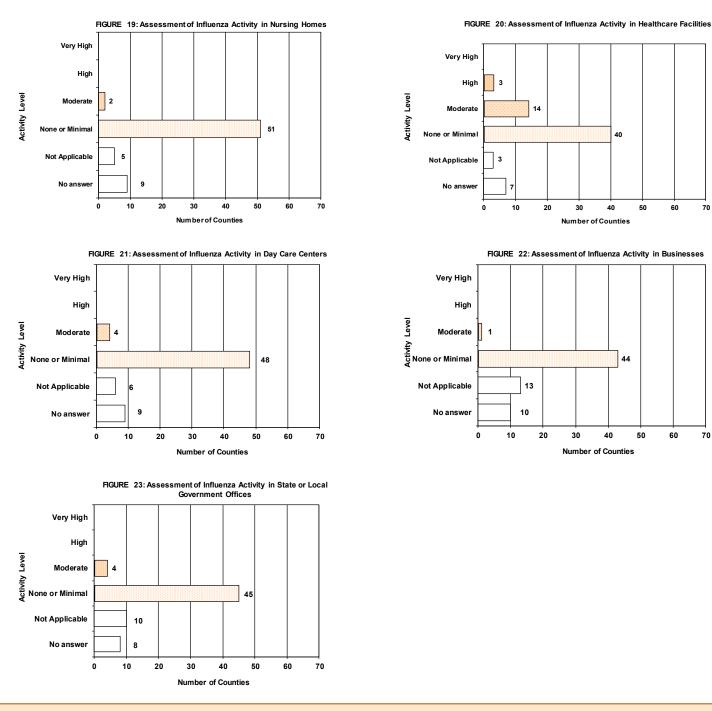
FIGURE 18: Assessment of Influenza Activity in Retirement Facilities



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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 49 as of 11:30 a.m., December 10, 2014.



Pediatric Influenza-Associated Mortality

No influenza-associated pediatric deaths were reported in week 49.

Two influenza-associated pediatric deaths have been reported so far in the 2014-15 influenza season.

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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 48, 2014.*

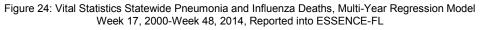
FIGURE 24 shows the count of preliminary estimated pneumonia and influenza deaths for all Florida counties, the number of deaths predicted using a multi-year regression model and the upper bound of the 95% confidence interval for this prediction.

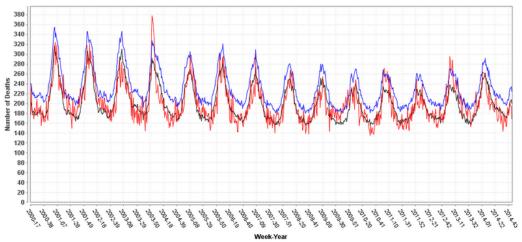
For week 48 (ending Nov 29, 2014):

- 169 preliminary estimated pneumonia and influenza deaths were reported.
- Upper bound of 95% confidence interval for prediction: 225 deaths.
- No excess deaths.

FIGURE 25 shows pneumonia and influenza deaths for all Florida counties, week 40, 2010 - week 49 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 49, 2014, as reported into ESSENCE-FL.







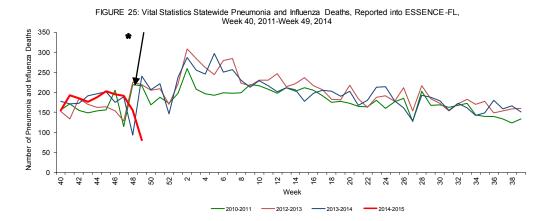
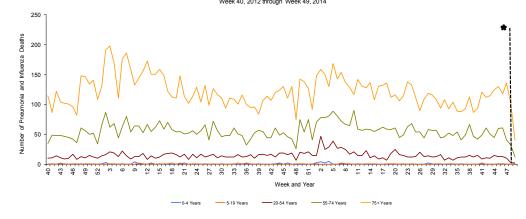


FIGURE 26: Vital Statistics Florida Pneumonia and Influenza Deaths by Age Group, Reported into ESSENCE-FL, Week 40, 2012 through Week 49, 2014



Death records data reported into ESSENCE-FL are currently considered to be complete through week 48, 2014.

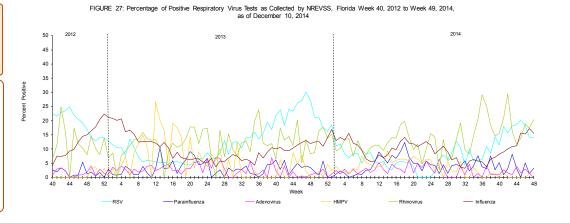
NREVSS Respiratory Virus Surveillance

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 49.

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 49, 2014, four outbreaks of influenza or ILI were reported in to EpiCom.

Seminole County

 A nursing home reported five of 76 residents with ILI. Two of these five were hospitalized and tested positive for influenza A (H3) by PCR at the hospital laboratory. Only 46% of residents and 16.4% of staff were vaccinated against influenza this year. Infection control measures were discussed with facility leadership. This investigation is ongoing.

Hillsborough County

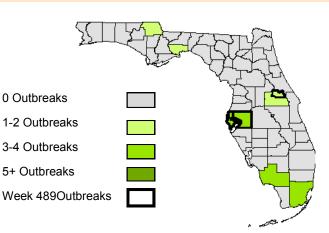
- An assisted living facility reported twenty-eight residents with ILI. Thirteen of the 28 ill were vaccinated against influenza this season. Four
 specimens were collected and tested positive by PCR at BPHL for influenza A (H3). Infection control measures were discussed with facility
 leadership.
- A daycare reported five students with ILI. Four of the ill tested positive for influenza A by rapid antigen test at their local healthcare providers. Infection control measures were discussed with facility leadership.

Pinellas County

• An assisted living facility reported ten of 43 residents with ILI. All residents were vaccinated against influenza this season. One resident was transferred to the emergency department and tested positive for influenza A. Infection control measures were discussed with facility leadership. This investigation is ongoing.

Map 6: Influenza and ILI outbreaks by county, Week 49, 2014 as Reported by 11:30 a.m., December 10, 2014

Twenty influenza outbreaks have been reported into EpiCom so far in the 2014-2015 season.



Influenza and ILI Outbreaks (Continued)

		nd ILI Outbreaks by Facility Status, Week 40-49, 2014
Setting	Number of outbreaks	Implicated Viruses
		One outbreak, due to influenza A unspecified and influenza B unspecified
Schools	6	 Three outbreaks, virus information not yet available
		 Two outbreaks, due to influenza A unspecified
Colleges and universities	0	No outbreaks
	4	 One outbreak, due to parainfluenza III
Daycares		 One outbreak, due to RSV
Daycales		One outbreak, due to influenza A unspecified and influenza B unspecified
		 One outbreak, due to influenza A unspecifed
Private businesses	0	No outbreaks
Local and state government offices	0	No outbreaks
Jails and prisons	0	No outbreaks
Retirement homes	0	No outbreaks
		 Four outbreaks, due to influenza A (H3)
Nursing homes and long term care facilities	10	 Four outbreaks, due to influenza A unspecified
Nursing homes and long term care facilities		One outbreak, due to influenza A unspecified and influenza B unspecified
		 One outbreak, virus information not yet available
Healthcare facilities	0	No outbreaks
Other	0	No outbreaks
		Three outbreaks, due to influenza A unspecified and influenza B unspecified
	20	 Four outbreaks, virus information not yet available
Total		 Seven outbreaks, due to influenza A unspecified
וטומו		One outbreak, due to parainfluenza III
		One outbreak, due to RSV
		 Four 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 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