Florida

FLU REVIEW





Week 15: April 7-13, 2013



Summary

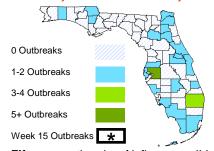
The Florida Department of Health (FDOH) uses many different surveillance systems to measure influenza activity. A summary of all these systems can be found on page 11.

- On April 1, 2013, the World Health Organization reported that confirmed human infection with novel avian influenza A (H7N9) was identified in China. The first onset of illness was on February 19, 2013.
 Eighty-two total confirmed cases have been reported as of April 17, all in China. Seventeen infected individuals have died
 - There is no evidence that novel influenza A H7N9 is capable of sustained person-to-person transmission.
 - There is no evidence of novel influenza A H7N9 infection in the United States or any countries other than China. No travel advisories to China are in effect.
 - On April 5, FDOH distributed a <u>CDC Novel Influenza A (H7N9) Health Advisory</u> to state, county and community health partners via EpiCom, Florida's health alert notification system
 - More information on influenza A H7N9 and other novel and variant influenza viruses can be found at: http://www.doh.state.fl.us/Environment/medicine/arboviral/zoonoses/Zoonotic-avian.html
 - Influenza A H7N9 is a kind of influenza normally found in birds. These are the first identified cases of human infection with influenza A H7N9.
- Sixty-six Florida counties reported Mild or No influenza activity. One county reported Moderate influenza activity. Twenty-nine counties reported declining influenza activity.
- Emergency department and urgent care center influenza-like illness (ILI) visits have decreased overall in recent weeks. In emergency departments and urgent care centers reporting to ESSENCE-FL, the statewide percent of emergency department visits for ILI was less than 3%.
 - In the Panhandle, Central, and South Florida, ILI visits decreased in the current week.
 - In Northeast, emergency department visits for ILI increased in the current week.
- Nationally (including Florida), the most common subtypes of influenza detected this season have been influenza A H3, followed by influenza B. In the last few weeks, Influenza B is the most commonly detected subtype in Florida and nationwide.
 - In week 15, nine of the 23 specimens submitted for influenza testing at BPHL tested positive for influenza. Influenza B, influenza A H3 and 2009 influenza A H1N1 have been detected. All of these are seasonal strains of influenza.
 - Specimen submission continues to decline.
 - 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 15.
- No pediatric influenza-associated deaths were reported in week 15, 2013.
 - Eight pediatric influenza-associated deaths have been reported in the 2012-2013 season.
- The preliminary estimated number of Florida deaths due to pneumonia or influenza in week 14 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.
 - Nationwide data from CDC show pneumonia and influenza deaths for week 14 within expected levels.
- Because of low activity in most regions of the state, Florida reported Sporadic influenza activity to CDC in week 15.
 - This activity level represents the geographic spread of influenza in Florida.

County Influenza Activity Week 15, 2013 No Report No Activity Mild Moderate Widespread

Forty counties reported mild influenza activity. For more information, see page 6.

Influenza Outbreaks Week 40, 2012 – Week 15, 2013



Fifty-one outbreaks of influenza or ILI have been reported since October, 2012 (none in week 15, 2013). For more information, see page 10.

April 17, 2013

Posted on the Bureau of Epidemiology website: http://www.doh.state.fl.us/floridaflu/

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Weekly state influenza activity: Sporadic □ No Activity □ Sporadic □ Local □ Regional □ Widespread

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Summary

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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 15

Measure	Difference from Previous Week	Current Week 15	Previous Week 14	Page of Report
Overall statewide activity code reported to CDC	No Change	Sporadic	Sporadic	1
Percent of visits to ILINet providers for ILI	▼ 0.3	1.5%	1.8%	2
Percent of emergency department visits (from ESSENCE-FL) due to ILI	▼ 0.1	2.0%	2.1%	3
Percent of laboratory specimens that were positive for influenza	▼ 5	39.1%	44.1%	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	1	2	1	7
Number of counties reporting decreasing influenza activity	▲ 3	29	26	7
Number of ILI outbreaks reported in EpiCom	No Change	0	0	10

ILINet Influenza-Like Illness-Statewide

ILINet is a nationwide surveillance system composed of sentinel providers. Florida has 110 providers enrolled in ILINet who submit weekly ILI and total visit counts, as well as submitting ILI specimens to the Bureau of Public Health Laboratories (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, 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.

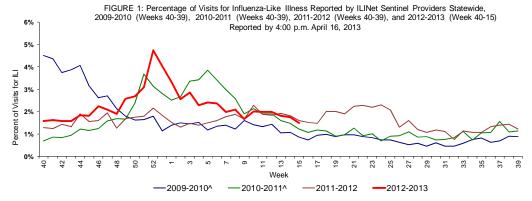
The percent of visits to sentinel outpatient physicians for ILI has increased slightly in the last three weeks after declining for several weeks.

58 of 110 ILINet Sentinels reported visit counts as of 12:00 p.m., April 17, 2013.

7 of 13 ILINet Super-Sentinels reported visit counts as of 12:00 p.m., April 17, 2013.

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

In week 15, the number of visits to sentinel outpatient physicians decreased in all age groups.



*ILI = Influenza-like illness, fever >100°F AND sor e throat and/or cough *in the absence* of another known cause. ^There is no week 53 during the 2009-2010, 2010-2011, and 2011-12 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

FIGURE 2: Influenza-Like Illness Visit Counts Reported by ILINet Sentinel Providers Statewide by Age Group Week 40, 2010-Week 15, 2013 as Reported to ILINet by 4:00 p.m. April 16, 2013

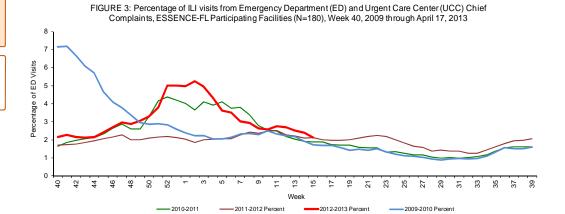
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†Data presented here are counts, not proportions as included in Figure 2. This is because age group denominator data is not available through ILINet.

ESSENCE-FL collects data daily from 180 hospital emergency departments (ED) and urgent care centers (UCC). 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.

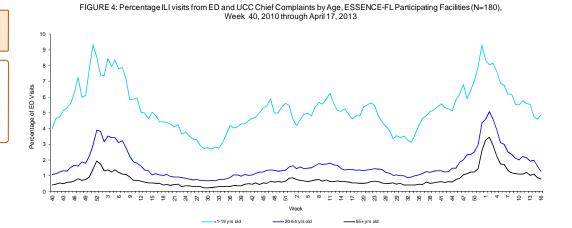
The percent of visits to emergency departments for ILI decreased for the past few weeks.



*There is no week 53 for the 2007-2008, 2009-2010, and 2010-2011 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

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

In the current week, the percent of visits to emergency departments and urgent care centers for ILI is similar to previous years at this time for all age groups.



One hundred five ESSENCE-FL participating facilities are able to provide discharge disposition data for their ED visits going back to week 40, 2010. Using this information, the percent of ED visits for ILI that result in hospitalization can be calculated. The highest percentage of admissions is in the 55+ years old age group. The low number of visits in the 55+ age group causes variability in the ILI admission percentage from week to week.

FIGURE 5 shows the percentage of ED and UCC visits for ILI that resulted in hospitalization, by age group.

Of persons 55 years and older that visited an emergency department with ILI complaints, between 20% and 25% were admitted.

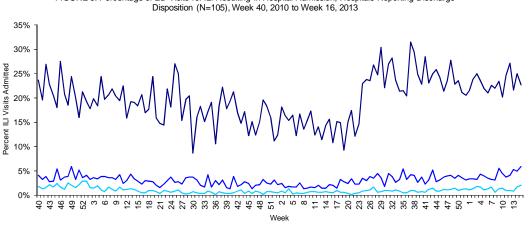


FIGURE 5: Percentage of ED Visits for ILI Resulting in Hospital Admission, Hospitals Reporting Discharge

FIGURE 6 - FIGURE 12 describe ED and UCC chief complaint data from ESSENCE-FL by Regional Domestic Security Task Force (RDSTF).

The percent of emergency department and urgent care center visits for ILI is near expected levels in all regions of Florida. Percent ILI increased slightly in Regions 3 and 5 this week.

FIGURE 6: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 1 ESSENCE-FL Participating Hospitals (N=9), Week 40, 2009 through April 17, 2013

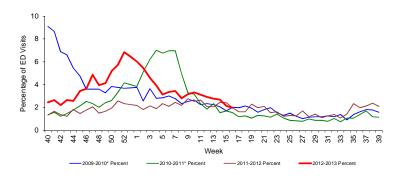


FIGURE 7: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 2 ESSENCE-FL Participating Facilities (N=4), Week 40, 2009 through April 17, 2013

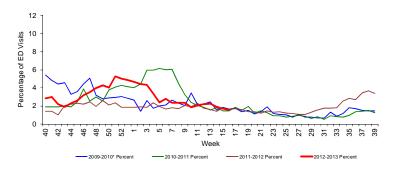


FIGURE 9: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 4 ESSENCE-FL Participating Facilities (N=35), Week 40, 2009 through April 17, 2013

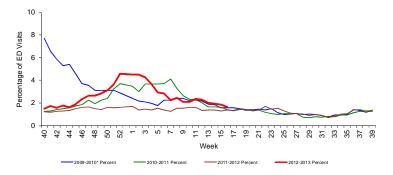
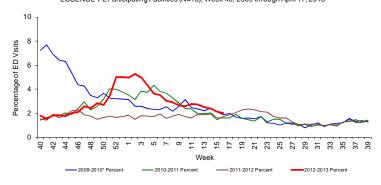


FIGURE 11: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 6 ESSENCE-FL Participating Facilities (N=15), Week 40, 2009 through April 17, 2013



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Map 1: Emergency Departments and Urgent Care Centers reporting data to ESSENCE-FL, April 17, 2013 (N=180)

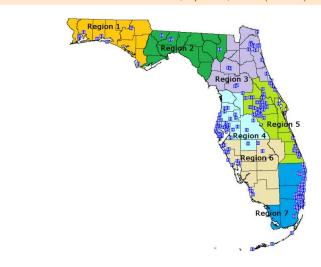


FIGURE 8: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 3 ESSENCE-FL Participating Facilities (N=17), Week 40, 2009 through April 17, 2013

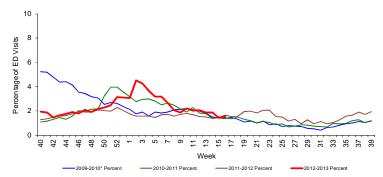


FIGURE 10: Percentage of ILI visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities, RDSTF Region 5 ESSENCE-FL Participating Facilities (N=51), Week 40, 2009 through April 17, 2013

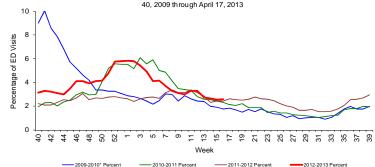
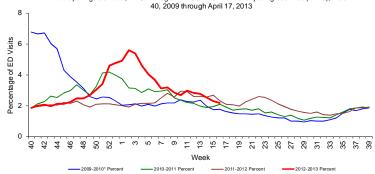


FIGURE 12: Percentage of ILI visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities , RDSTF Region 7 ESSENCE-FL Participating Facilities (N=49), Week



^{*}There is no week 53 for the 2009-2010, 2010-2011 and 2011-2012 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

^{**}Historical data for region 2 is only available beginning week 1, 2009

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

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.

Recent influenza specimens submitted to BPHL tested positive for influenza A H3, 2009 H1N1, and influenza B.

In recent weeks, influenza B has been the most common strain detected by BPHL. The numbers of submitted specimens have decreased with declining rates of ILI seen throughout the state.

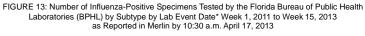
In addition to PCR testing, BPHL also cultures influenza specimens, including those positive for influenza B.

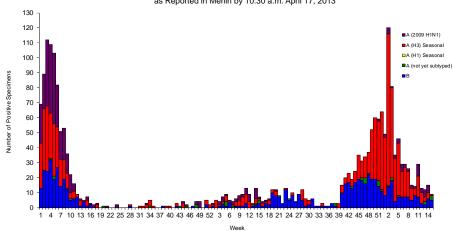
There are two distinct antigenic lineages of influenza B, known as Victoria and Yamagata. Both have circulated in Florida in the past year.

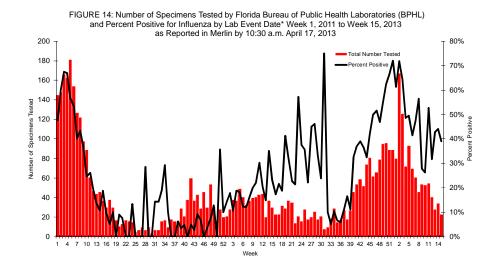
At BPHL this season, 27 specimens have tested positive for Victoria lineage influenza B and 9 specimens have tested positive for Yamagata lineage influenza B. Last year's 2011-12 vaccine included a Victoria lineage virus, while this year's 2012-2013 vaccine includes a Yamagata lineage virus. Influenza viruses that circulate at the beginning of the flu season may be different than those that circulate later in the year, and these specimens represent a very small sample of statewide influenza activity. Not all flu positive specimens are cultured. FDOH will continue to monitor subtype and lineage for influenza viruses.

Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for Week 15 by Lab Event Date* as reported by 9:30 a.m. April 17, 2013

	Current Week 15	Previous Week 14
Total Specimens Tested	23	34
Influenza positive specimens (% of total)	9 (39.1%)	15 (44.1%)
H1N1 positive specimens (% of influenza positives)	-	5 (33.3%)
Influenza A H3	1 (11.1%)	4 (26.7%)
Influenza A not yet subtyped	3 (33.3%)	-
Influenza B unspecified	5 (55.6%)	6 (40.0%)







^{*}Please note that lab event date is defined as the earliest of the following dates associated with the lab: date 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.doh.state.fl.us/disease_ctrl/epi/htopics/flu/FluLabReportGuide.pdf

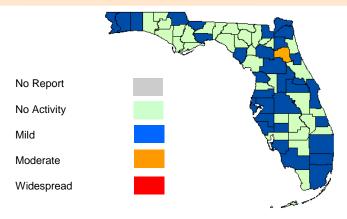
As of 9:30 a.m. April 17, 2013 a total of 67 (100%) counties had reported their weekly level of influenza activity. *Please note that data reported by counties after the deadline Tuesday at 5 p.m. are recorded but may not be included in the activity map for previous weeks.*

TABLE 3: Weekly County Influenza Activity for Week 15 (ending April 13, 2013) as Reported by 9:30 a.m. April 17, 2013

Activity Level	Week 14 Number of Counties	Week 15 Number of Counties	Week 15 Counties
No Report	-	-	-
No Activity	27	34	Bay, Bradford, Calhoun, Charlotte, Columbia, Franklin, Gilchrist, Glades, Gulf, Hamilton, Hardee, Hendry, Hernando, Highlands, Holmes, Indian River, Jefferson, Lafayette, Leon, Levy, Liberty, Madison, Martin, Monroe, Okeechobee, Osceola, St. Johns, Sumter, Suwannee, Taylor, Union, Volusia, Walton, Washington
Mild	40	32	Alachua, Baker, Brevard, Broward, Citrus, Clay, Collier, Dade, Desoto, Dixie, Duval, Escambia, Flagler, Gadsden, Hillsborough, Jackson, Lake, Lee, Manatee, Marion, Nassau, Okaloosa, Orange, Palm Beach, Pasco, Pinellas, Polk, Santa Rosa, Sarasota, Seminole, St. Lucie, Wakulla
Moderate	-	1	Putnam
Widespread	-	-	-

Map 2: Weekly County Influenza Activity for Week 15 as Reported by 9:30 a.m. April 17, 2013

One county reports Mild or No Activity.



County influenza activity data is reported to the DCBE through EpiGateway on a weekly basis by the county influenza coordinator. Specific information is requested about laboratory results, outbreak reports, and surveillance system activity. Figures 16-25 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 14, 28 counties indicated that activity was decreasing, 35 indicated it was about the same as previous weeks, and one indicated that activity was increasing.

FIGURE 15 shows the assessment of the overall influenza activity trend in each county as reported by county health department flu coordinators for week 15 as of 9:30 a.m. April 17, 2013.

Unknown

Decreasing

Plateau

Increasing

No Answer

0 10 20 30 40 50

Number of Counties

FIGURE 15: Assessment of Overall Influenza Activity Trend

Definitions for the County Influenza Activity Trends are available at: http://www.doh.state.fl.us/disease_ctrl/epi/CountyInfluenzaTrendGuide.html

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.

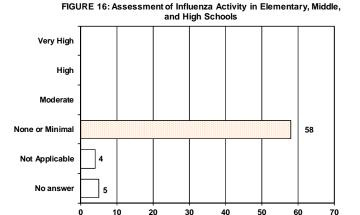
Moderate activity -- Absenteeism elevated above baseline (in range of 10 to 25%) in some but fewer than half of schools where it is known; occasional children sent home because of ILI.

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.

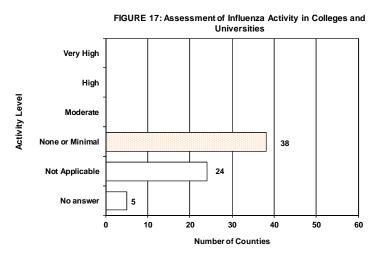
Very high activity -- Absenteeism high enough to force curtailment of some or all school activities.

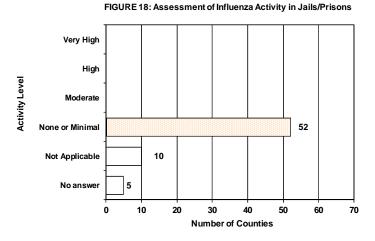
County influenza settings assessment guides are available at: http://www.doh.state.fl.us/disease_ctrl/epi/FluAssessment.htm

FIGURE 16 - FIGURE 19 show the activity levels in various facilities by county as reported by county health department flu coordinators for week 15 as of 9:30 a.m., April 17, 2013.



Number of Counties





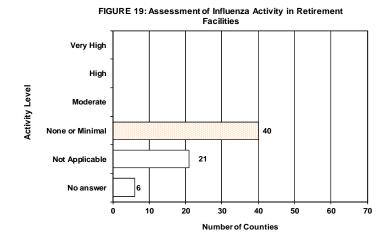
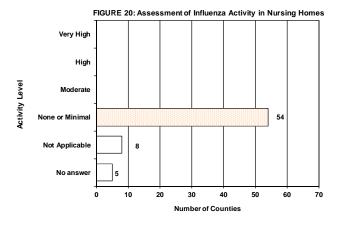
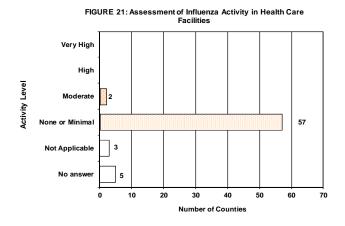
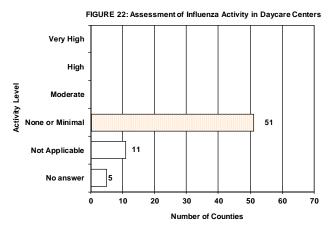
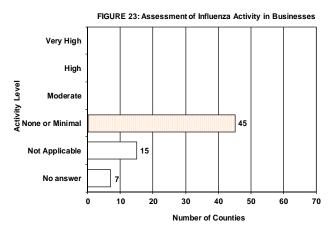


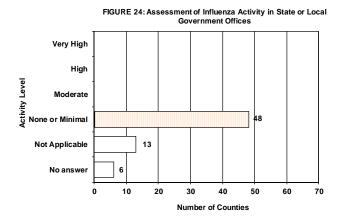
FIGURE 20 - FIGURE 24 show the activity levels in various facilities by county as reported by county health department flu coordinators for week 15 as of 9:30 a.m., April 17, 2013.











Pediatric Influenza-Associated Mortality

In week 15 2013, there were no influenza-associated pediatric deaths reported in Florida.

Eight influenza-associated pediatric deaths have been reported in Florida since October, 2012.

Over the past year, the FDOH Bureau of Vital Statistics and county health departments 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 14, 2013.

FIGURE 25 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 14 (ending April 6, 2013) there were:

- 209 preliminary estimated pneumonia and influenza deaths reported
- Upper bound of 95% confidence interval for prediction: 229 deaths
- · No excess deaths.

In several recent weeks, preliminary pneumonia and influenza associated deaths have exceeded the upper bound of the 95% confidence interval for prediction.

FIGURE 26 shows pneumonia and influenza deaths for all Florida counties, Week 40, 2010 - Week 16, 2013, as reported into ESSENCE-FL.

FIGURE 27 shows pneumonia and influenza deaths for all Florida counties by age group, Week 40, 2010 - Week 16, 2013, as reported into ESSENCE-FL.

Figure 25: Vital Statistics Statewide Pneumonia and Influenza Deaths, Multi-Year Regression Model Week 17, 2000-Week 14, 2013, as reported into ESSENCE-FL

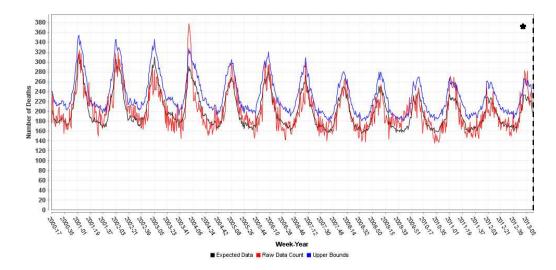


FIGURE 26: Vital Statistics Statewide Pneumonia and Influenza Deaths, as reported into ESSENCE-FL,

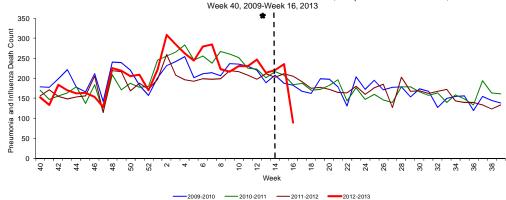
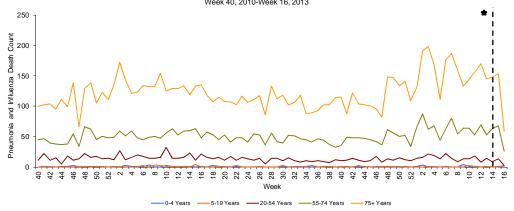


FIGURE 27: Vital Statistics Florida Pneumonia and Influenza Deaths by Age Group, as reported into ESSENCE-FL, Week 40, 2010-Week 16, 2013



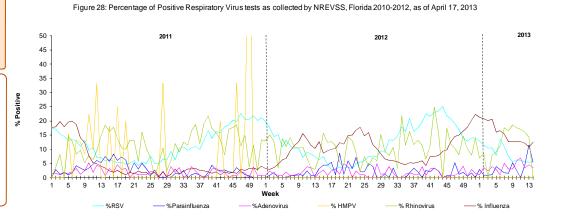
Death records data reported into ESSENCE-FL are currently considered to be complete through week 16, 2013.

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. Fifteen Florida facilities reported in week 15.

FIGURE 29 shows the percentage of positive tests for multiple respiratory viruses reported by NREVSS-participating laboratories in Florida.

The 6 respiratory viruses summarized in Figure 29 are:

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



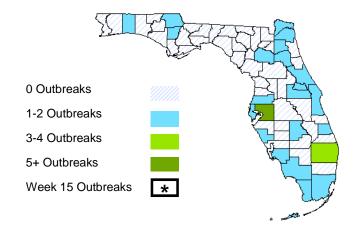
Influenza and ILI Outbreaks

In week 15, 2013 there were **no** influenza and ILI outbreaks reported in EpiCom.

Fifty-one outbreaks of influenza or ILI have been reported so far in the 2012-2013 flu season.

Fifty-one influenza or ILI outbreaks have been reported into EpiCom in the 2012-2013 season.

Map 3: Influenza and ILI outbreaks by county, Week 40, 2012 - Week 15, 2013 as Reported by 10:00 a.m. April 17, 2013



m = p = = 4			
'l'ABLE 4 : Summary o	of Florida ILI Outbreaks by F	'acility Status, Week 40), 2012-Week 15, 2013

Setting	Number of outbreaks	Implicated Viruses
Correctional facility or jail	4	 Two outbreaks due to influenza A H3 One outbreak was due to influenza B One outbreak was due to influenza A (subtype not identified)
Domestic violence shelter	1	One outbreak was due to influenza that was not typed as influenza A or B
Facility for persons with disability	1	One outbreak was due to influenza A H3
Nursing home	12	 Three outbreaks were due to influenza that was not typed as influenza A or B Eight outbreaks were due to influenza A (subtype not identified) One outbreak was due to influenza A (subtype not identified) and influenza B
Long-term care facility	9	 Two outbreaks were due to influenza A H3 One outbreak was due to influenza B Six outbreaks were due to influenza A (subtype not identified)
Assisted living facility	8	 Six outbreaks were due to influenza A (subtype not identified) One outbreak was due to influenza that was not typed as influenza A or B One outbreak was due to influenza A H3
Short-term rehabilitation facility	1	One outbreak was due to influenza A (subtype not identified)
School or Daycare facility	15	 Seven outbreaks were due to influenza A (subtype not identified) Two outbreaks were due to influenza B Three outbreaks were due to influenza A (subtype not identified) and influenza B Three outbreaks were due to influenza that was not typed as influenza A or B
Total	51	 Twenty-eight outbreaks were due to influenza A (subtype not identified) Four outbreaks were due to influenza B Six outbreaks were due to influenza A H3 Eight outbreaks were due to influenza that was not typed as influenza A or B Five outbreaks were due to influenza A (subtype not identified) and influenza B

Florida Surveillance System Summary

Florida ILINet

Measures trends in ILI visits to outpatient doctor's offices

Doctors submit specimens from ill patients for influenza testing

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

Emergency departments and urgent care clinics 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

Death certificates with pneumonia or influenza listed as a cause of death are used as a proxy to measure influenza mortality

Death certificate data from the Bureau of Vital Statistics can be accessed through ESSENCE-FL

Vital statistics data in ESSENCE 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

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 Viral Surveillance

BPHL performs confirmatory testing and subtyping on surveillance specimens

Surveillance specimens come 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

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/