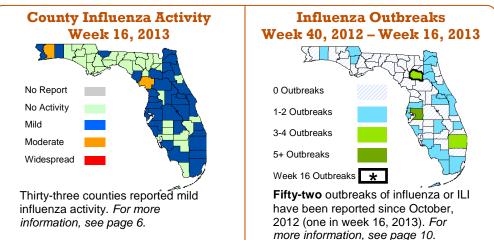


Week 16: April 14-20, 2013

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) virus was identified in China. The first onset of illness was on February 19, 2013. One hundred four total confirmed cases have been reported as of April 23, all in China. Twenty-two infected individuals have died. FDOH continues to actively monitor the situation.
 - There is no evidence that avian influenza A(H7N9) virus is capable of sustained person-toperson transmission.
 - There is no evidence of avian influenza A(H7N9) virus 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 CDC Avian Influenza A(H7N9) virus Health Advisory to state, county and community health partners via EpiCom, Florida's health alert notification system.
 - More information on avian influenza A(H7N9) virus and other novel and variant influenza viruses can be found at: http://www.doh.state.fl.us/Environment/medicine/arboviral/zoonoses/Zoonotic-avian.html
 - Avian influenza A(H7N9) virus is a kind of influenza normally found in birds. These are the first identified cases of human infection with avian influenza A(H7N9) virus.
- · Sixty-five Florida counties reported Mild or No influenza activity. Two counties reported Moderate influenza activity. Thirty-two 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, and South Florida, ILI visits increased in the current week.
 - In Northeast and Central Florida, emergency department visits for ILI decreased 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 16, seven of the 25 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.
 - Nationally (including Florida), almost all circulating influenza is a good match for the vaccine.
- One influenza outbreak (epidemiologically linked cases of influenza in a single setting) was reported in week 16.
- No pediatric influenza-associated deaths were reported in week 16, 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 15 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 15 within expected levels.
- · Because of low influenza activity in most regions of the state, Florida reported Sporadic influenza activity to CDC in week 16.
 - This activity level represents the geographic spread of influenza in Florida.



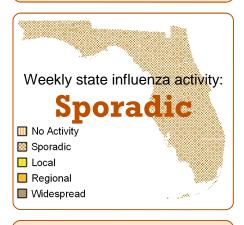
April 24, 2013

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

Florida HEALTH

Produced by: Bureau of Epidemiology, Florida **Department of Health**

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TABLE 1: Summary of Florid	da Influenza-Like Illnes	s (ILI) Activity for V	Veek 16	
Measure	Difference from Previous Week	Current Week 16	Previous Week 15	Page of Report
Overall statewide activity code reported to CDC	No Change	Sporadic	Sporadic	1
Percent of visits to ILINet providers for ILI	▲ 0.1	1.5%	1.4%	2
Percent of emergency department visits (from ESSENCE-FL) due to ILI	▲ 0.2	2.3%	2.1%	3
Percent of laboratory specimens that were positive for influenza	▼ 7.7	28.0%	35.7%	5
Number of counties reporting moderate influenza activity	▲ 1	2	1	6
Number of counties reporting widespread influenza activity	No Change	0	0	6
Number of counties reporting increasing influenza activity	▼ 2	0	2	7
Number of counties reporting decreasing influenza activity	▲ 3	32	29	7
Number of ILI outbreaks reported in EpiCom	▲ 1	1	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.

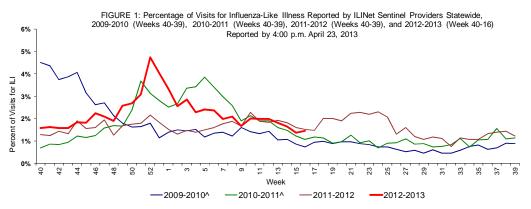
The percent of visits to sentinel outpatient physicians for ILI has increased slightly in the last three weeks after declining for several weeks.

42 of 110 ILINet Sentinels reported visit counts as of 12:00 p.m., April 24, 2013.

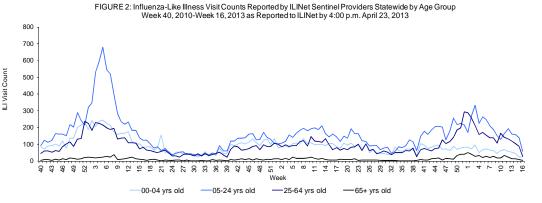
8 of 13 ILINet Super-Sentinels reported visit counts as of 12:00 p.m., April 24, 2013.

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

In week 16, the number of visits to sentinel outpatient physicians decreased in the 5-65+ age group and increased slightly in the 0-4 age group.



*ILI = Influenza-like illness, fever >100⁺ AND sore 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.



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

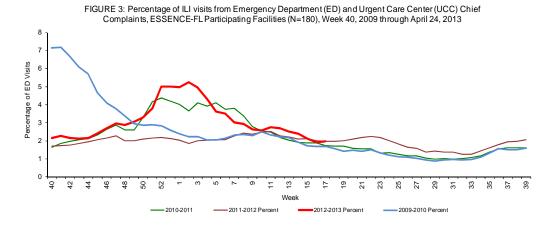
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ESSENCE-FL Syndromic Surveillance Summary-Statewide

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 is declining with the end of the traditional flu season as is currently at levels seen in previous years at this time.



*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: Percentage ILI visits from ED and UCC Chief Complaints by Age, ESSENCE-FL Participating Facilities (N=180),

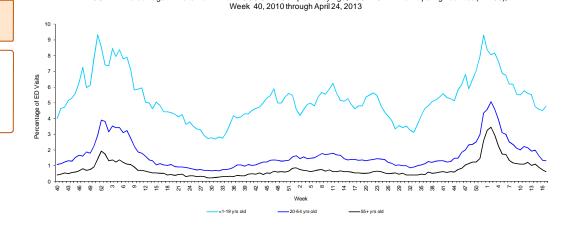


FIGURE 4 shows percentage of ILI among all ED and UCC visits by age

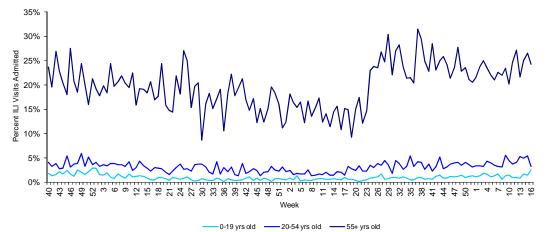
In the current week, the percent of visits to emergency departments and urgent care centers for ILI is similar to previous years at this time for all age groups.

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.

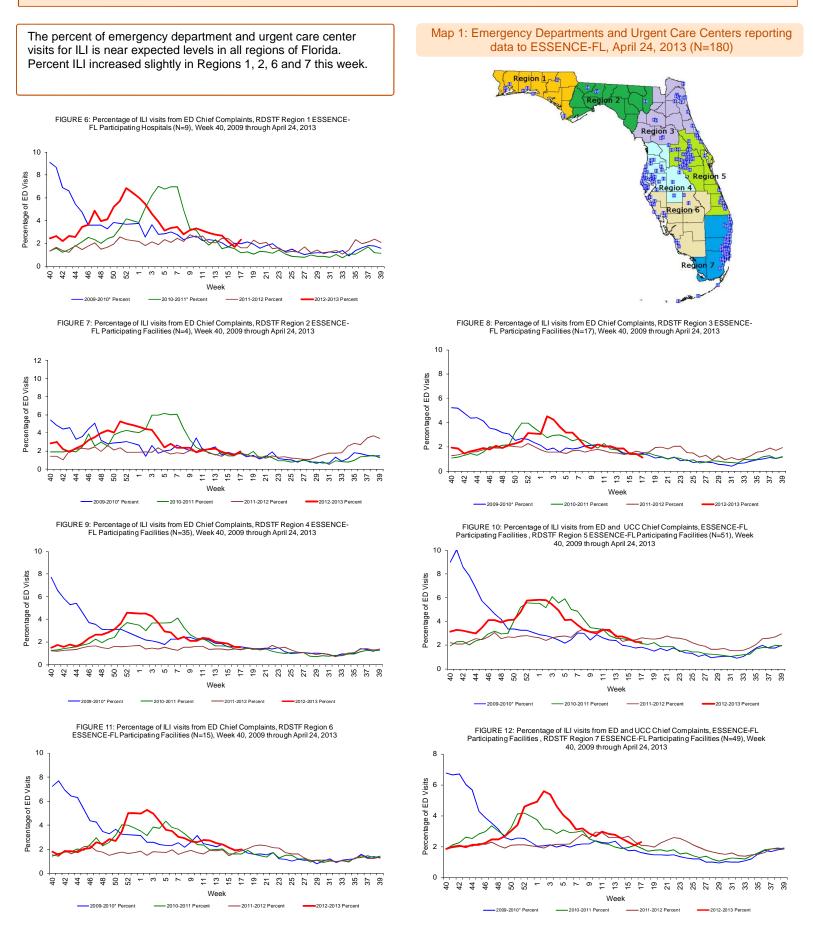
FIGURE 5: Percentage of ED Visits for ILI Resulting in Hospital Admission, Hospitals Reporting Discharge Disposition (N=105), Week 40, 2010 to Week 17, 2013



ESSENCE-FL Syndromic Surveillance Summary-Regional

page 4

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



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*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

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 13 - FIGURE 14 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.

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.

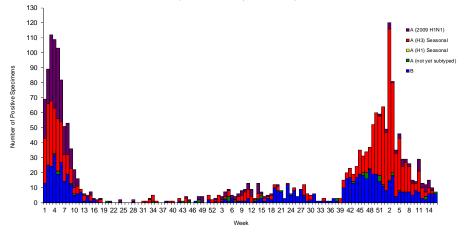
There are two distinct antigenic lineages of influenza B, known as Victoria and Yamagata. Both have circulated in Florida in the past year.

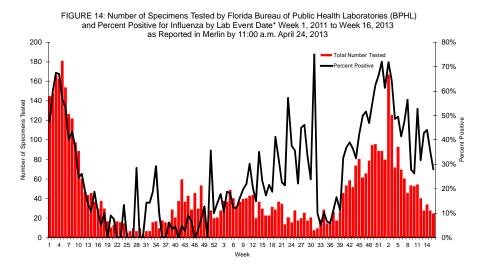
At BPHL this season, 27 specimens have tested positive for Victoria lineage influenza B and 9 specimens have tested positive for Yamagata lineage influenza B. Last year's 2011-12 vaccine included a Victoria lineage virus, while this year's 2012-2013 vaccine includes a Yamagata lineage virus. Influenza 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 16 by Lab Event Date* as reported by 11:00 a.m. April 24, 2013

	Current Week 16	Previous Week 15
Total Specimens Tested	25	34
Influenza positive specimens (% of total)	7 (28.0%)	10 (35.7%)
H1N1 positive specimens (% of influenza positives)	-	2 (20.0%)
Influenza A H3	-	2 (20.0%)
Influenza A not yet subtyped	1 (14.3%)	-
Influenza B unspecified	6 (85.7%)	6 (40.0%)

FIGURE 13: 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 16, 2013 as Reported in Merlin by 11:00 a.m. April 24, 2013





*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: <u>http://www.doh.state.fl.us/disease_ctrl/epi/htopics/flu/FluLabReportGuide.pdf</u>

County Influenza Activity

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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.

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Activity Level	Week 15 Number of Counties	Week 16 Number of Counties	Week 16 Counties		
No Report	-	-	-		
No Activity	34	32	Baker, Bay, Bradford, Calhoun, Charlotte, Columbia, Desoto, Flagler, Franklin, Gilchrist, Glades, Gulf, Hamilton, Hardee, Hendry, Holmes, Indian River, Jackson, Jefferson, Lafayette, Leon, Liberty Madison, Monroe, Okeechobee, Sumter, Suwannee, Taylor, Union, Wakulla, Walton, Washington		
Mild	32	33	Alachua, Brevard, Broward, Citrus, Clay, Collier, Dade, Dixie, Duval, Escambia, Gadsden, Hernando, Highlands, Hillsborough, Lake, Lee, Manatee, Marion, Martin, Nassau, Okaloosa, Orange, Osceola, Palm Beach, Pasco, Pinellas, Polk, Putnam, Sarasota, Seminole, St. Johns, St. Lucie, Volusia		
Moderate	1	2	Levy, Santa Rosa		
Widespread	-	-	-		
			Map 2: Weekly County Influenza Activity for Week 16 as Reported by 11:00 a.m. April 24, 2013		
Two counties report Moderate Activity.		rate	No Benet		
			No Report No Activity		
			Mild		
			Moderate		
			Widespread		

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 16, 32 counties indicated that activity was decreasing, 31 indicated it was about the same as previous weeks, and none 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 16 as of 11:00 a.m. April 24, 2013.

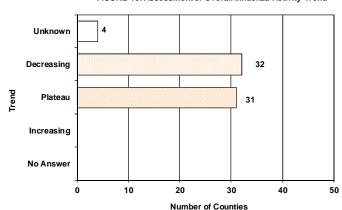


FIGURE 15: Assessment of Overall Influenza Activity Trend

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

County Influenza Activity

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 16 as of 11:00 a.m., April 24, 2013.

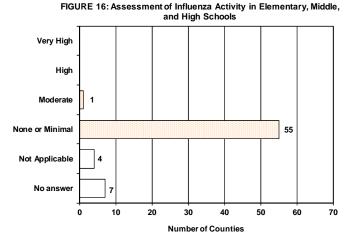
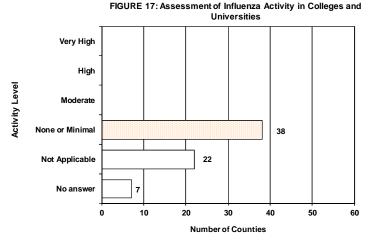
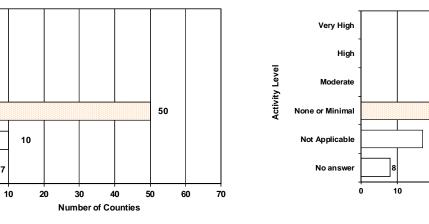
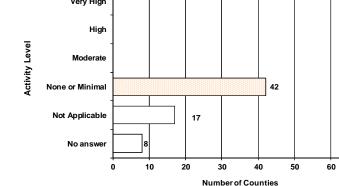


FIGURE 18: Assessment of Influenza Activity in Jails/Prisons











Activity Level

Very High

Moderate

None or Minimal

Not Applicable

No answer

0

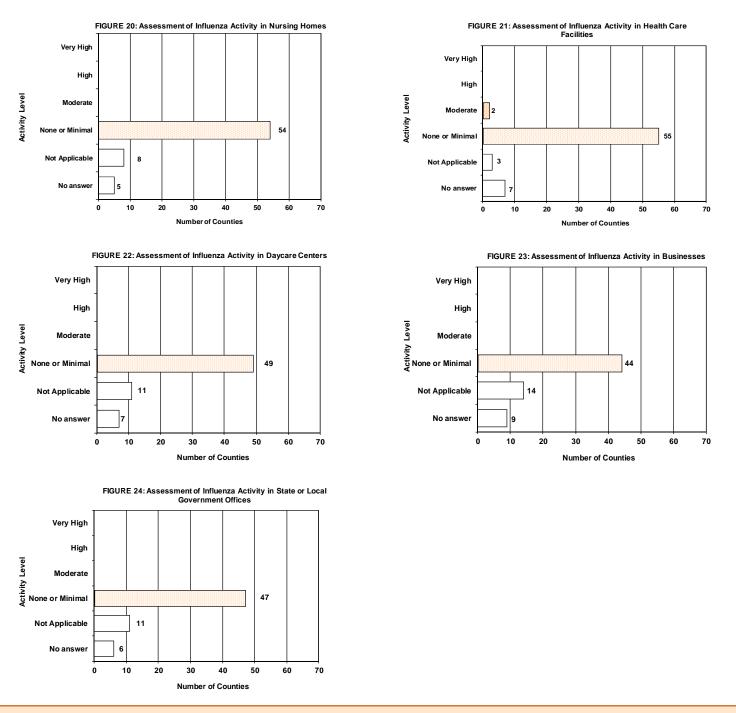
High

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County Influenza Activity-Continued

FIGURE 20 - FIGURE 24 show the activity levels in various facilities by county as reported by county health department flu coordinators for week 16 as of 11:00 a.m., April 24, 2013.



Pediatric Influenza-Associated Mortality

In week 16 2013, there were no influenza-associated pediatric deaths reported in Florida.

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

ESSENCE-FL Pneumonia & Influenza Mortality

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 15, 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 15 (ending April 13, 2013) there were:

- 205 preliminary estimated pneumonia and influenza deaths reported
- Upper bound of 95% confidence interval for prediction: 216 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 17, 2013, as reported into ESSENCE-FL.

FIGURE 27 shows pneumonia and influenza deaths for all Florida counties by age group, Week 40, 2010 - Week 17, 2013, as reported into ESSENCE-FL.

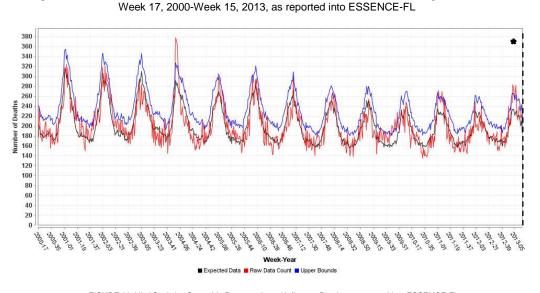
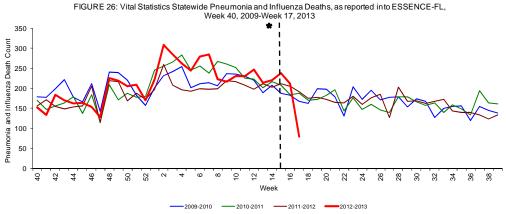
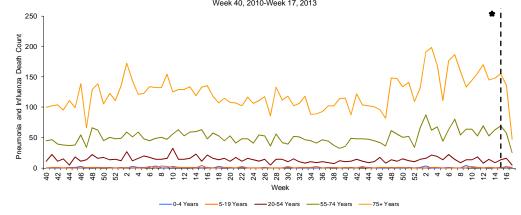


Figure 25: Vital Statistics Statewide Pneumonia and Influenza Deaths, Multi-Year Regression Model







Death records data reported into ESSENCE-FL are currently considered to be complete through week 15, 2013.

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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. Fifteen Florida facilities reported in week 16.

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

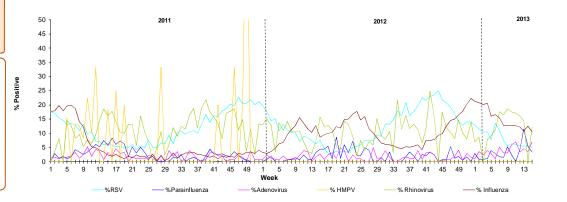


Figure 28: Percentage of Positive Respiratory Virus tests as collected by NREVSS, Florida 2010-2012, as of April 24, 2013

Influenza and ILI Outbreaks

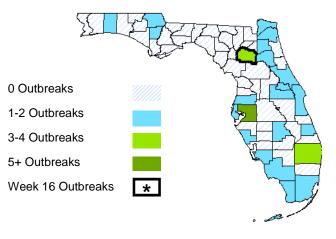
In week 16, 2013 there was one influenza outbreak reported in EpiCom.

Alachua County: A facility for persons with disability reported five residents with ILI. All residents were vaccinated in September of 2012. All
affected residents were prophylaxed. Three specimens were collected and tested positive for influenza B at BPHL.

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

Map 3: Influenza and ILI outbreaks by county, Week 40, 2012 - Week 16, 2013 as Reported by 11:00 a.m. April 24, 2013

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



Influenza and ILI Outbreaks

TABLE 4 :	Summary of Florida ILI Outbre	eaks by Facility Status, Week 40, 2012-Week 15, 2013
Setting	Number of outbreaks	Implicated Viruses
		Two outbreaks due to influenza A H3
Correctional facility or jail	4	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
Eacility for porcens with disability	2	One outbreak was due to influenza A H3
Facility for persons with disability	Z	One outbreak was due to influenza B
		• Three outbreaks were due to influenza that was not typed as influenza A or B
Nursing home	12	Eight outbreaks were due to influenza A (subtype not identified)
		One outbreak was due to influenza A (subtype not identified) and influenza B
		Two outbreaks were due to influenza A H3
Long-term care facility	9	One outbreak was due to influenza B
		Six outbreaks were due to influenza A (subtype not identified)
		Six outbreaks were due to influenza A (subtype not identified)
Assisted living facility	8	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)
		Seven outbreaks were due to influenza A (subtype not identified)
		Two outbreaks were due to influenza B
School or Daycare facility	15	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
		Twenty-eight outbreaks were due to influenza A (subtype not identified)
		Four outbreaks were due to influenza B
Total		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 ILINe

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/

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