



Week 50: December 8 - 14, 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.

National:

- **Influenza and influenza-like illness (ILI) levels are increasing nationwide, particularly in the South East region according to Centers for Disease Control and Prevention (CDC) reports.**
- Using Florida ILINet data, CDC calculated minimal ILI intensity for Florida in week 49.

State:

- **In recent weeks the Florida Department of Health has received reports of severe influenza illness, including hospitalizations requiring ICU care, among pregnant women.**
 - None of these women had received the 2013-2014 influenza vaccine.
- **Most Florida counties reported mild influenza activity.** In week 49 nineteen counties reported increasing influenza activity.
- **Emergency department (ED) and urgent care center (UCC) ILI visits have increased overall in recent weeks and the statewide percent of ED visits for ILI is at typical levels for this time of year.**
 - While activity statewide is at expected levels, in recent weeks there has been an increase in the number of pregnant women presenting to EDs for care that is above expected levels for this time of year.
- **In Florida, the most common influenza subtype detected at the Bureau of Public Health Laboratories (BPHL) in recent weeks has been influenza A (2009 H1N1).**
 - In week 50, 14 of 29 specimens submitted for influenza testing at BPHL tested PCR positive for influenza. Eleven tested PCR positive for influenza A (2009 H1N1) and three tested PCR positive for influenza A unspecified. All of these are seasonal strains of influenza.
 - Nationally (including Florida), almost all circulating influenza is a good match for the vaccine.
- **No influenza or ILI outbreaks (epidemiologically-linked cases of influenza in a single setting) were reported in week 49.**
- **No pediatric influenza-associated deaths were reported in week 49.** One pediatric influenza-associated death has been reported in the 2013-2014 season.
- **The preliminary estimated number of Florida deaths due to pneumonia or influenza in week 49 is lower than the seasonal baseline, based on previous years' data.** Estimated deaths due to pneumonia and influenza are identified using preliminary death certificate data.
- **Because of moderate influenza activity in some regions of the state, Florida reported regional influenza activity to CDC in week 50.** This activity level represents the geographic spread of influenza in Florida.

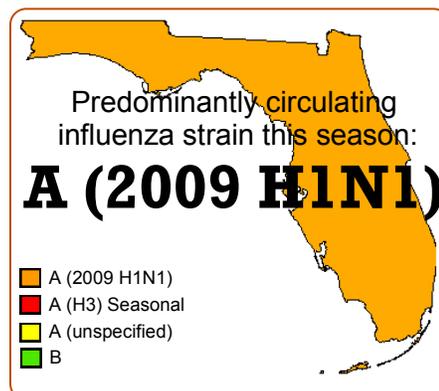
December 18, 2013

Posted on the Bureau of Epidemiology website:

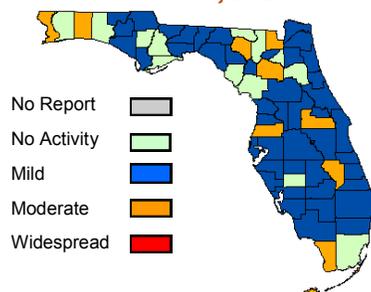
<http://www.floridahealth.gov/floridaflu>

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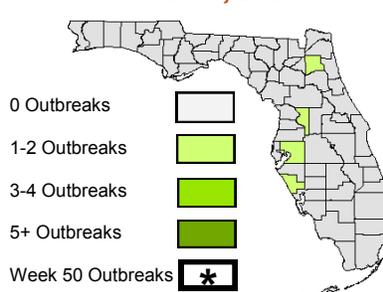


Map 1: County Influenza Activity Week 50, 2013



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

Map 2: Influenza and ILI Outbreaks Week 50, 2013



Four outbreaks of influenza or ILI have been reported since Week 40, 2013. For more information, see page 10.

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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 50

Measure	Difference from Previous Week	Current Week 50	Previous Week 49	Page of Report
Overall statewide activity code reported to CDC	No Change	Regional	Regional	1
Percent of visits to ILINet providers for ILI	▲ 0.1	1.9%	1.8%	2
Percent of ED and UCC visits (from ESSENCE-FL) due to ILI	No Change	2.7%	2.7%	3
Percent of laboratory specimens that were positive for influenza	▲ 12.4	48.2%	35.8%	5
Number of counties reporting moderate influenza activity	▼ 2	9	11	6
Number of counties reporting widespread influenza activity	No Change	0	0	6
Number of counties reporting increasing influenza activity	▲ 5	24	19	6
Number of counties reporting decreasing influenza activity	▼ 1	7	8	6
Number of ILI outbreaks reported in EpiCom	No Change	0	0	10

ILINet Influenza-Like Illness-Statewide

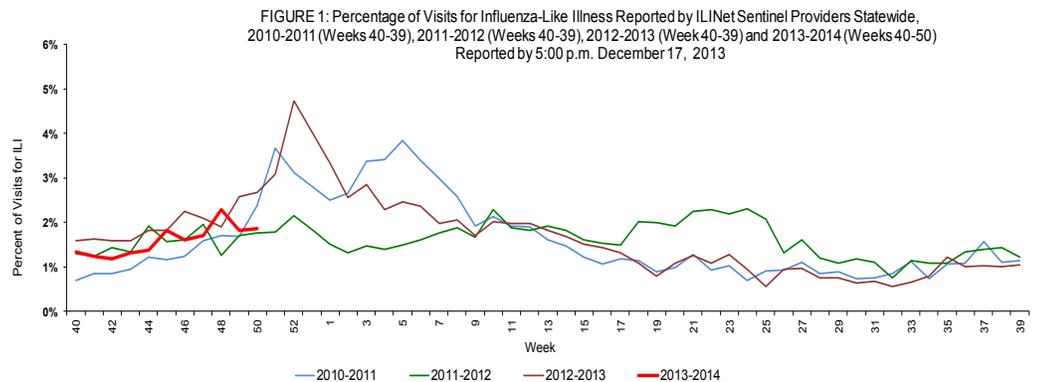
ILINet is a nationwide surveillance system composed of sentinel providers. Florida has 102 providers enrolled in ILINet who submit weekly ILI and total visit counts, as well as submit ILI specimens to the BPHL for confirmatory testing. For this season, the Bureau of Epidemiology (DCBE) has designated 13 of these ILINet physicians' offices as Super-Sentinels. These Super-Sentinels receive more active follow-up from DCBE and participating county health departments (CHDs), with the goal of increasing data quality and surveillance specimen submission.

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

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

Sixty-seven of 102 ILINet sentinels reported visit counts as of 5:00 p.m., December 17, 2013.

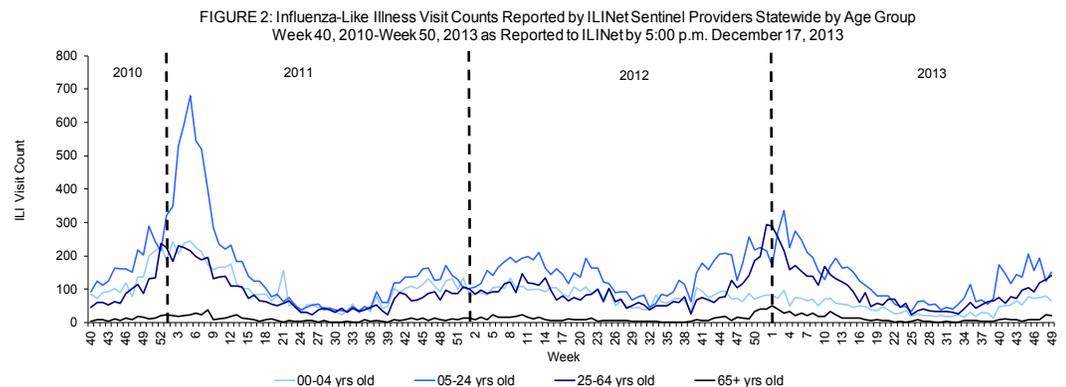
Twelve of 13 ILINet Super-Sentinels reported visit counts as of 5:00 p.m., December 17, 2013.



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

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

In week 50, the number of visits to ILINet sentinels for ILI increased in the 5-24 and 25-64 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.

ESSENCE-FL collects data daily from 191 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 near expected levels for this time of year.

FIGURE 3: Percentage of ILI visits from Emergency Department (ED) and Urgent Care Center (UCC) Chief Complaints, ESSENCE-FL Participating Facilities (N=190), Week 40, 2010 through Week 50, 2013 accessed December 18, 2013

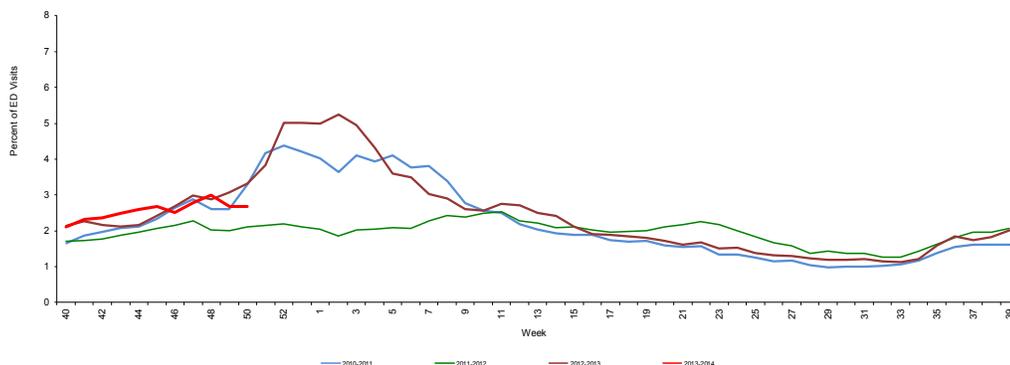
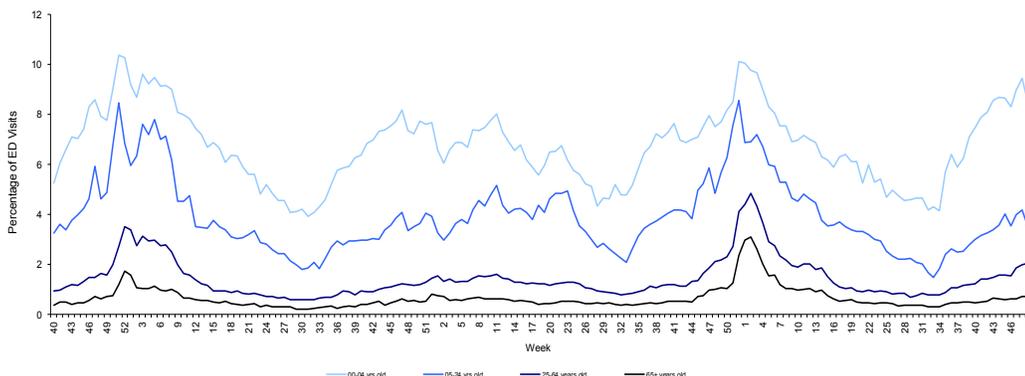


FIGURE 4 shows percentage of ILI among all ED and UCC visits by age

The percent of ED and UCC visits for ILI is similar to previous years at this time for the 0-4, 5-24 and 25-64 age groups. ILI visits for the 0-4 age group are higher than previous years at this time.

FIGURE 4: Percentage ILI visits from Emergency Department and Urgent Care Center Chief Complaints by Age, ESSENCE-FL Participating Facilities (N=190), Week 40, 2010 through Week 50, 2013 accessed December 17, 2013



ESSENCE-FL Syndromic Surveillance Summary-Regional

Map 3: Emergency Departments and Urgent Care Centers Reporting Data to ESSENCE-FL by Regional Domestic Security Task Force (RDSTF), December 18, 2013 (N=191)

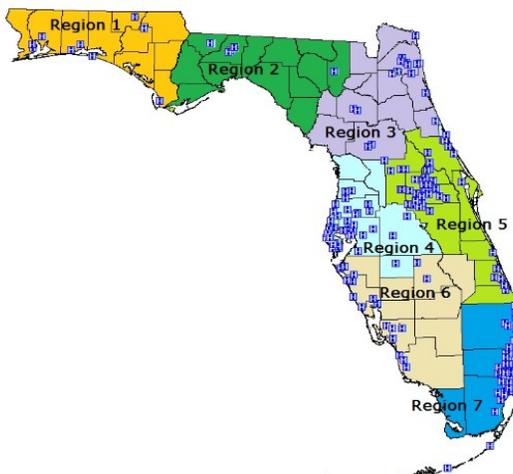


FIGURE 5 - FIGURE 11 describe ED and UCC chief complaint data from ESSENCE-FL by Regional Domestic Security Task Force (RDSTF) regions.

FIGURE 5: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 1 ESSENCE-FL Participating Hospitals (N=10), Week 40, 2010 through December 18, 2013

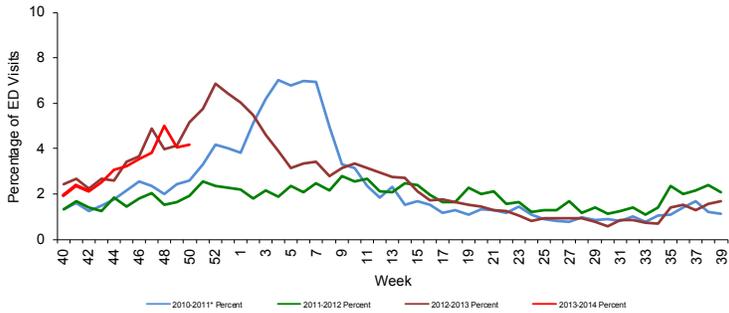


FIGURE 6: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 2 ESSENCE-FL Participating Facilities (N=5), Week 40, 2010 through December 18, 2013

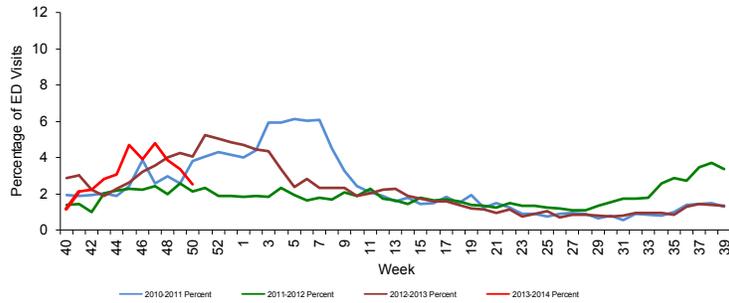


FIGURE 8: Percentage of ILI visits from ED and UCC Chief Complaints, RDSTF Region 4 ESSENCE-FL Participating Facilities (N=37), Week 40, 2010 through December 18, 2013

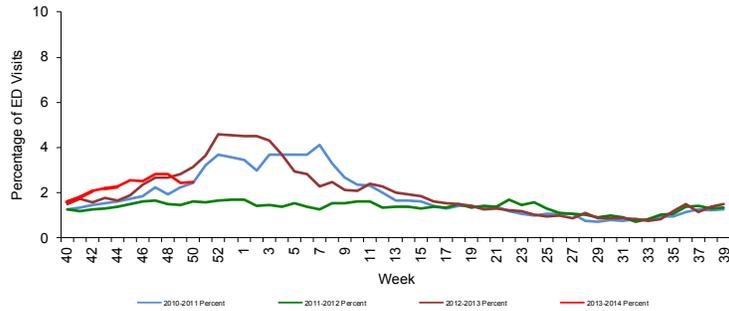
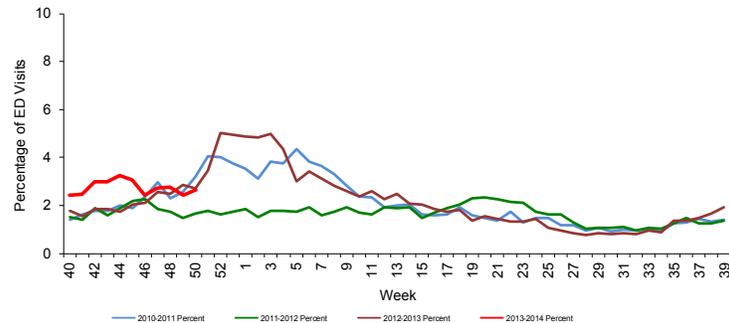


FIGURE 10: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 6 ESSENCE-FL Participating Facilities (N=19), Week 40, 2010 through December 18, 2013



- The percent of ED and UCC visits for ILI is near expected levels.
- RDSTF Regions 2 and 5 report decreasing visits for ILI to EDs and UCCs in week 50, 2013.
- RDSTF Regions 1, 3 and 6 report increasing visits for ILI to EDs and UCCs in week 50, 2013.
- RDSTF Regions 4 and 7 report stable visits for ILI to EDs and UCCs in week 50, 2013.
- New facilities were recently added to RDSTF Region 6. Historical data for figure 10 will be revised to reflect these new

FIGURE 7: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 3 ESSENCE-FL Participating Facilities (N=18), Week 40, 2010 through December 18, 2013

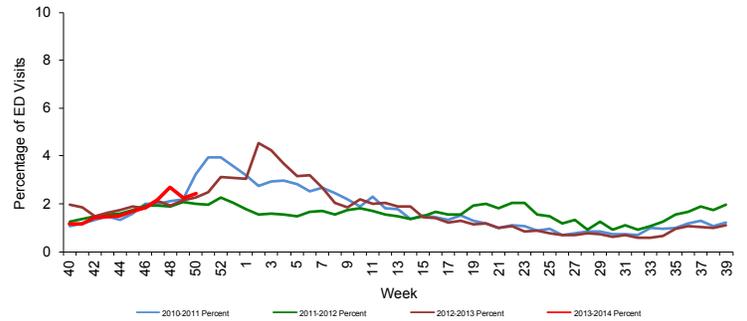


FIGURE 9: Percentage of ILI visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities RDSTF Region 5 ESSENCE-FL Participating Facilities (N=52), Week 40, 2010 through December 18, 2013

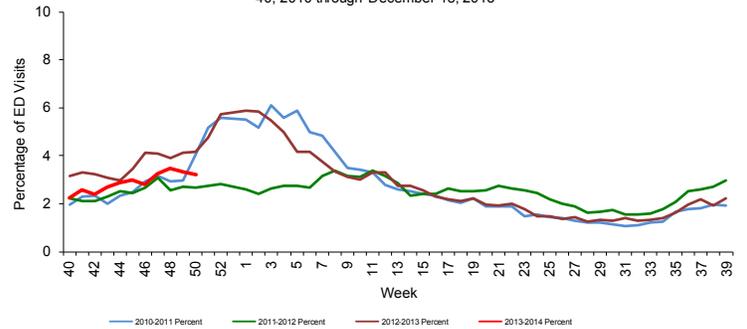


FIGURE 11: Percentage of ILI visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities, RDSTF Region 7 ESSENCE-FL Participating Facilities (N=49), Week 40, 2010 through December 18, 2013

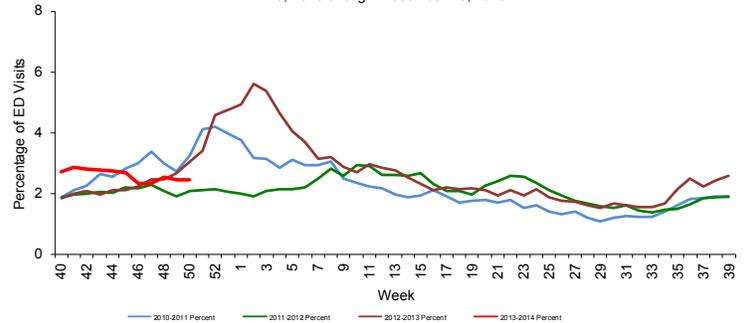


TABLE 2 shows the number of specimens tested by BPHL, how many are influenza positive and their subtypes.

Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for Week 50 by Lab Event Date* as reported by 10:00 a.m. December 18, 2013

	Current Week 50	Previous Week 49
Total Specimens Tested	29	81
Influenza positive specimens (% of total)	14 (48.2%)	29 (35.8%)
Influenza A (2009 H1N1) (% of influenza positives)	11 (78.6%)	19 (65.5%)
Influenza A (H3) (% of influenza positives)	-	1 (3.5%)
Influenza A not yet subtyped (% of influenza positives)	3 (21.4%)	6 (25.7%)
Influenza B unspecified (% of influenza positives)	-	3 (10.3%)

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

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

FIGURE 12: Number of Influenza-Positive Specimens Tested by the Florida Bureau of Public Health Laboratories (BPHL) by Subtype by Lab Event Date* Week 1, 2011 to Week 50, 2013 as Accessed in Merlin by 10:00 a.m. December 18, 2013

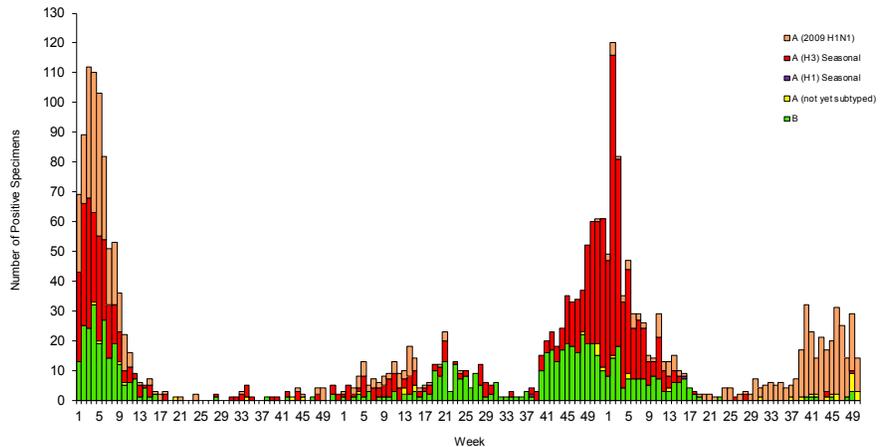
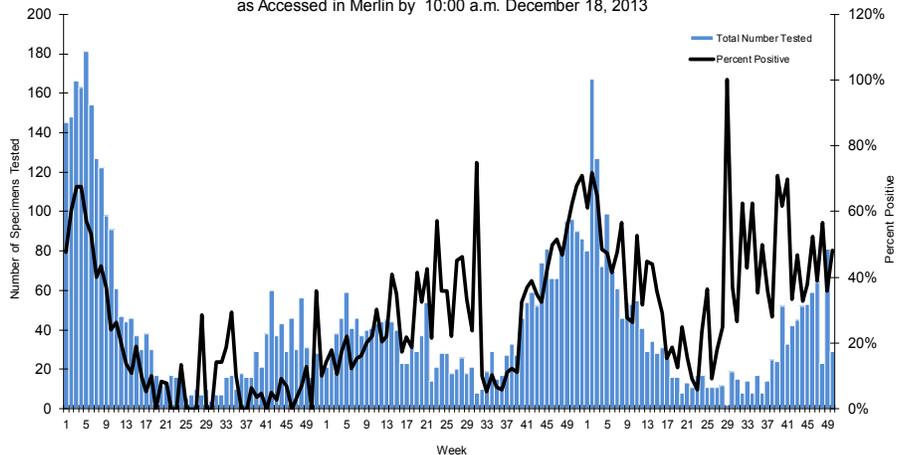


FIGURE 13: Number of Specimens Tested by Florida Bureau of Public Health Laboratories (BPHL) and Percent Positive for Influenza by Lab Event Date* Week 1, 2011 to Week 50, 2013 as Accessed in Merlin by 10:00 a.m. December 18, 2013



*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:

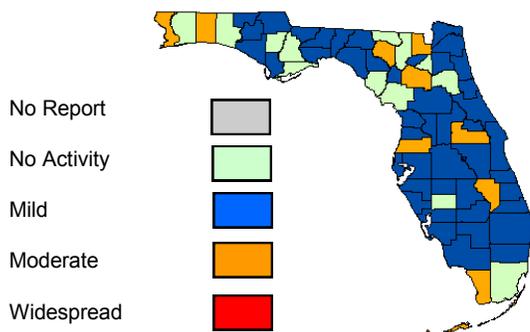
http://www.floridahealth.gov/diseases-and-conditions/disease-reporting-and-management/surveillance-and-investigations-guidance/surveillance-disease-reporting/_documents/flulabreportguide.pdf

As of 4:30 p.m. December 18, 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 50 (ending December 18, 2013) as Reported by 4:30 p.m. December 18, 2013

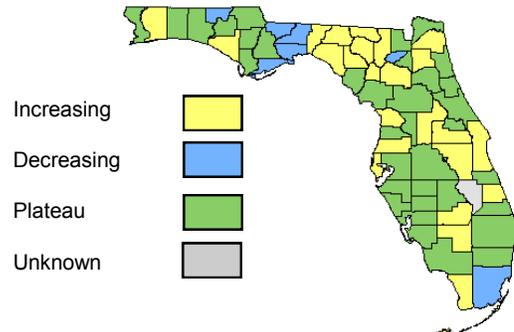
Activity Level	Week 50 Number of Counties	Week 49 Number of Counties	Week 50 Counties
No Report	0	0	-
No Activity	13	11	Bradford, Calhoun, Columbia, Dade, Desoto, Dixie, Franklin, Hamilton, Levy, Liberty, Putnam, Santa Rosa, Walton
Mild	45	45	Bay, Brevard, Broward, Charlotte, Citrus, Clay, Collier, Duval, Flagler, Gadsden, Gilchrist, Glades, Gulf, Hardee, Hendry, Hernando, Highlands, Hillsborough, Holmes, Indian River, Jackson, Jefferson, Lafayette, Lake, Lee, Leon, Madison, Manatee, Marion, Martin, Nassau, Osceola, Palm Beach, Pinellas, Polk, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, Taylor, Union, Volusia, Wakulla, Washington
Moderate	9	11	Alachua, Baker, Escambia, Monroe, Okaloosa, Okeechobee, Orange, Pasco, Suwannee
Widespread	-	-	-

Map 5: Weekly County Influenza Activity Level for Week 50 as Reported by 4:30 p.m. December 18, 2013



Nine counties report moderate activity.

Map 6: Weekly County Influenza Activity Trend for Week 50 as Reported by 4:30 p.m. December 18, 2013

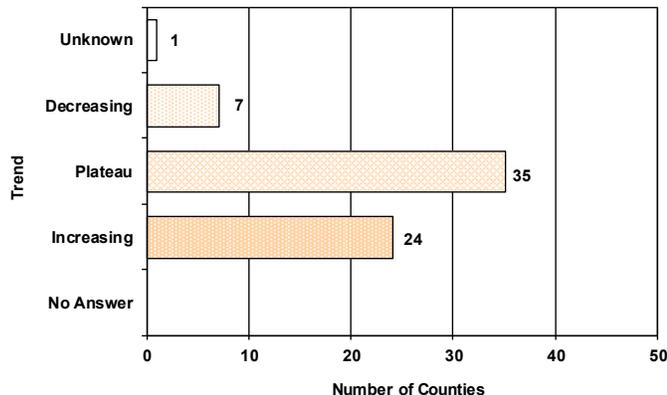


Nineteen counties report increasing influenza and ILI activity.

County influenza activity data are reported to DCBE through EpiGateway on a weekly basis by each county influenza coordinator. Specific information is requested about laboratory results, outbreak reports and surveillance system activity. Figures 14-23 displayed below reflect a county's assessment of influenza activity within their county as a whole as well as influenza activity within specific settings. For week 50, seven counties indicated that activity was decreasing, 35 indicated activity was about the same as previous weeks and 24 indicated that activity was increasing.

FIGURE 14 shows the assessment of the overall influenza activity trend in each county as reported by CHD influenza coordinators for week 50 as of 4:30 p.m. December 18, 2013.

FIGURE 14: 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.

FIGURE 15 - FIGURE 18 show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 50 as of 4:30 p.m., December 18, 2013.

FIGURE 15: Assessment of Influenza Activity in Elementary, Middle, and High Schools

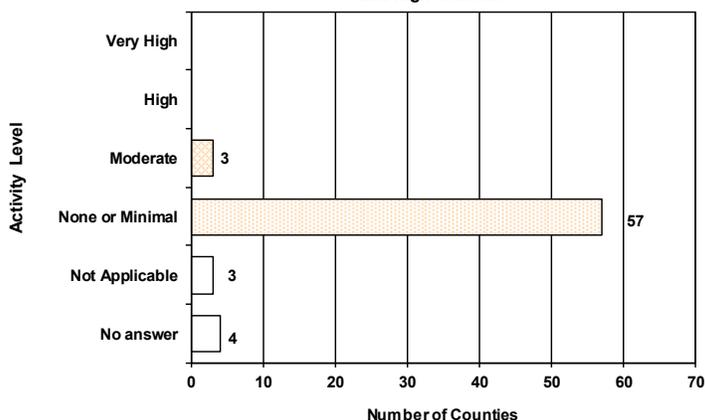


FIGURE 16: Assessment of Influenza Activity in Colleges and Universities

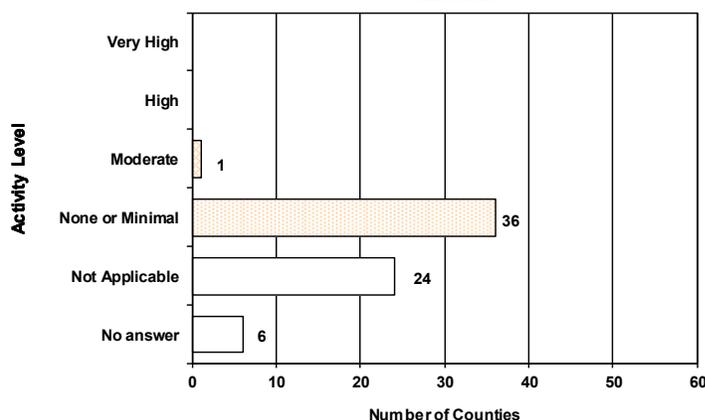


FIGURE 17: Assessment of Influenza Activity in Jails/Prisons

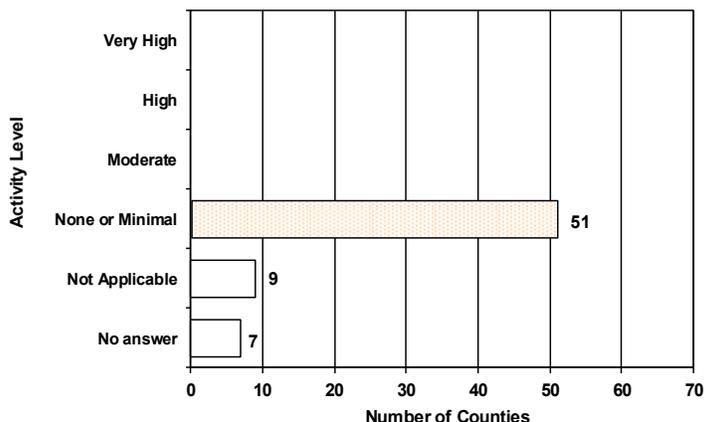


FIGURE 18: Assessment of Influenza Activity in Retirement Facilities

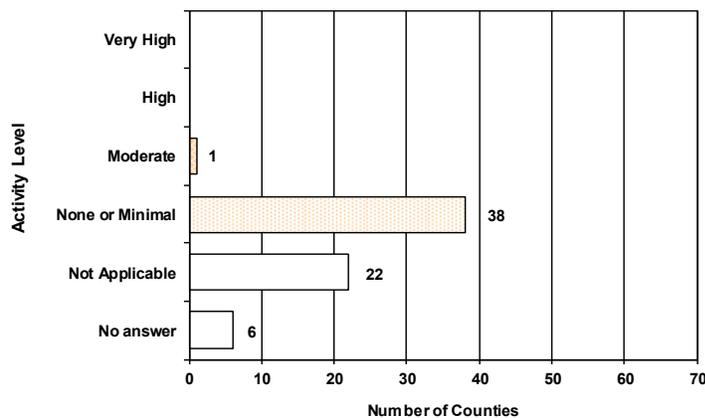
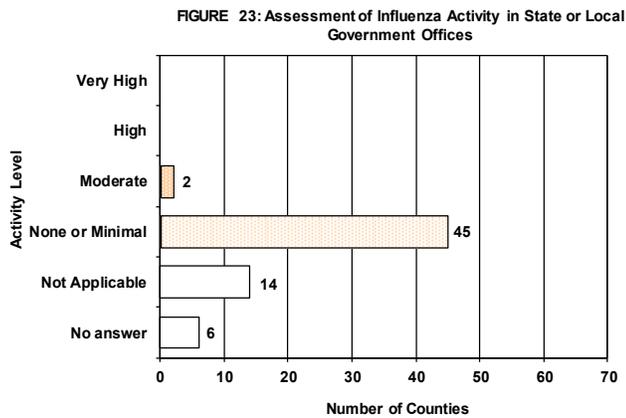
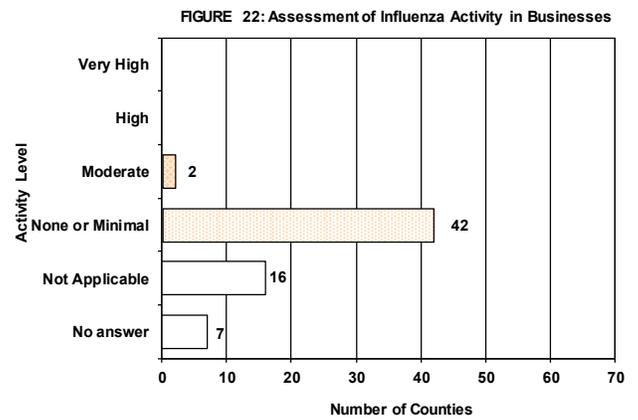
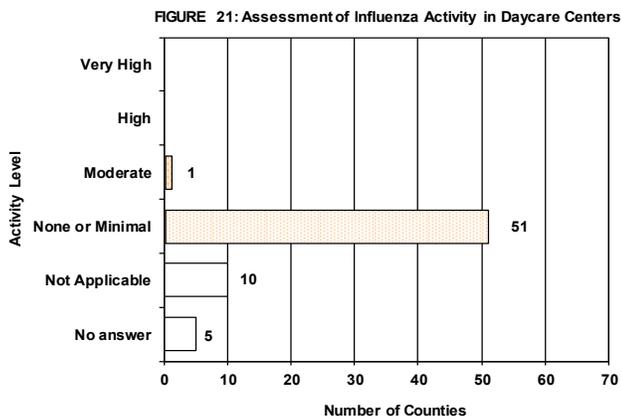
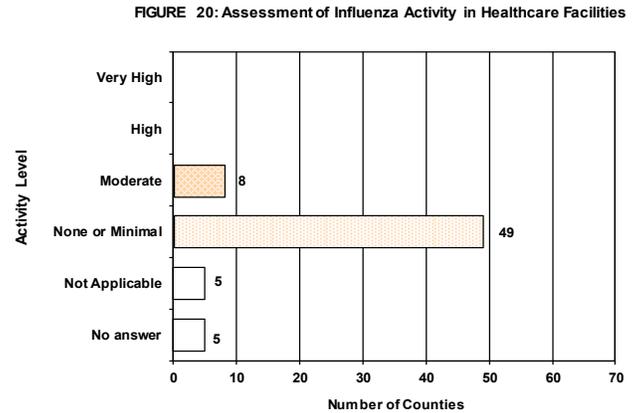
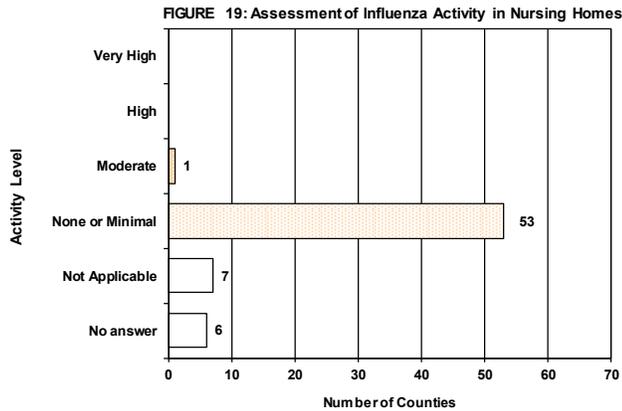


FIGURE 19 - FIGURE 23 show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 49 as of 4:30 p.m., December 18, 2013.



Pediatric Influenza-Associated Mortality

In week 50, 2013, no influenza-associated pediatric deaths were reported.

One influenza-associated pediatric mortality has been reported so far in the 2013-2014 influenza season.

Over the past year, the FDOH Bureau of Vital Statistics and CHDs have been rolling out an electronic death record system for Florida. ESSENCE-FL now displays electronic vital statistics death record data from all 67 Florida counties. For pneumonia and influenza surveillance, death record literals are queried in ESSENCE-FL using a free-text query that searches for references to pneumonia and influenza on death certificates. Any mention of pneumonia or influenza in the death certificate literals, with certain exceptions, is counted as a pneumonia and influenza death. Current season pneumonia and influenza death numbers are preliminary estimates, and may change as more data are received. *The most recent data available are displayed here. ESSENCE-FL vital statistics death records data are currently considered to be complete through week 49, 2013.*

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 49 (ending December 7, 2013):
- **181 preliminary estimated pneumonia and influenza deaths reported**
 - **Upper bound of 95% confidence interval for prediction: 215 deaths**
 - **No excess deaths.**

FIGURE 25 shows pneumonia and influenza deaths for all Florida counties, week 40, 2010 - week 51, 2013, as reported into ESSENCE-FL.

FIGURE 26 shows pneumonia and influenza deaths for all Florida counties by age group, week 40, 2010 - week 51, 2013, as reported into ESSENCE-FL.

Figure 24: Vital Statistics Statewide Pneumonia and Influenza Deaths, Multi-Year Regression Model Week 17, 2000-Week 49, 2013, as reported into ESSENCE-FL

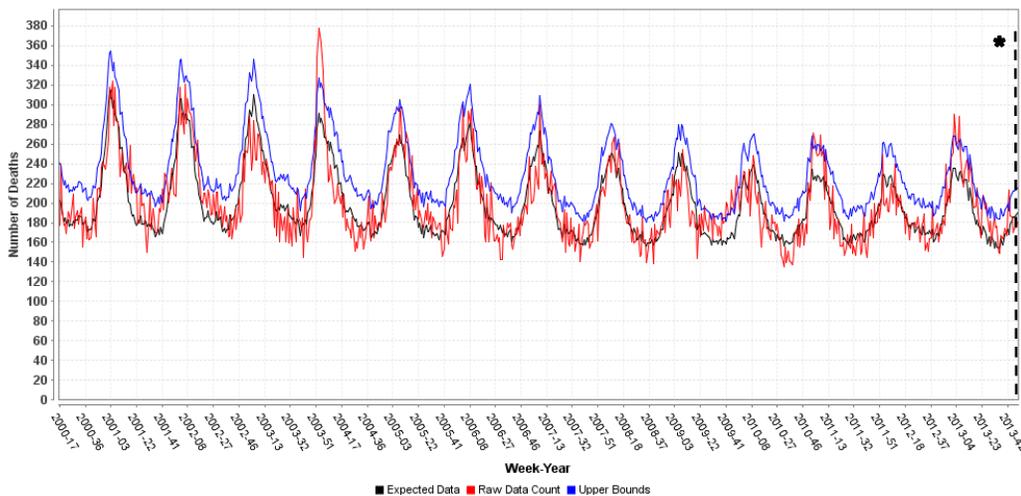


FIGURE 25: Vital Statistics Statewide Pneumonia and Influenza Deaths, as reported into ESSENCE-FL, Week 40, 2010-Week 51, 2013

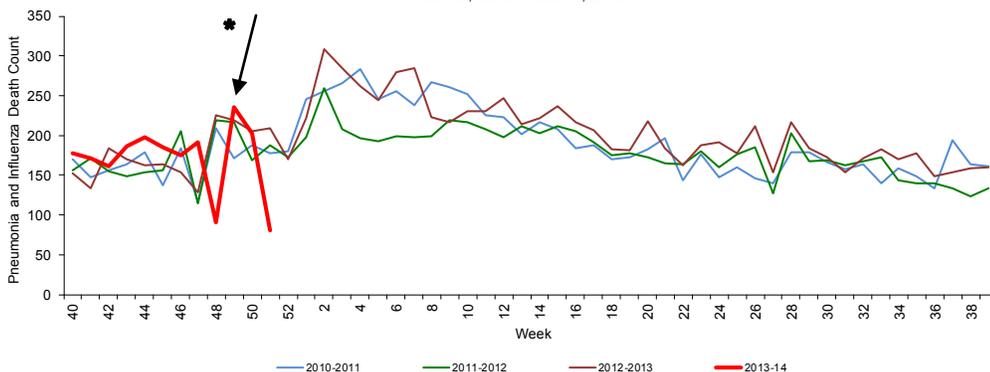
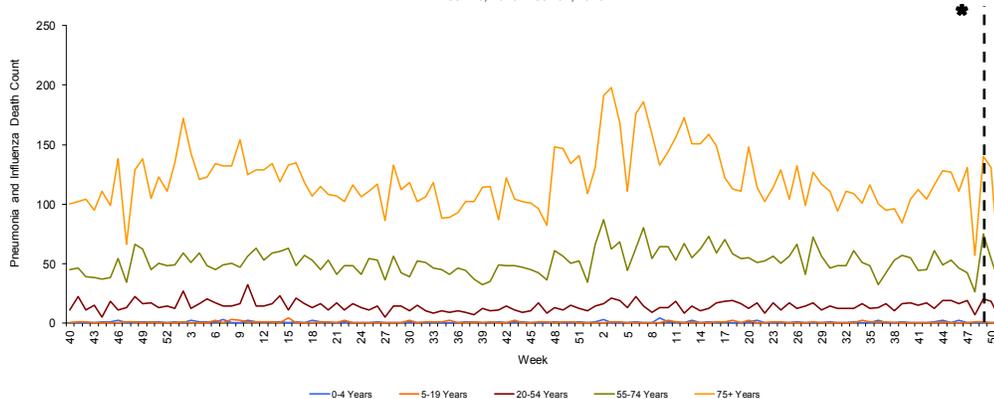


FIGURE 26: Vital Statistics Florida Pneumonia and Influenza Deaths by Age Group, as reported into ESSENCE-FL, Week 40, 2010-Week 51, 2013



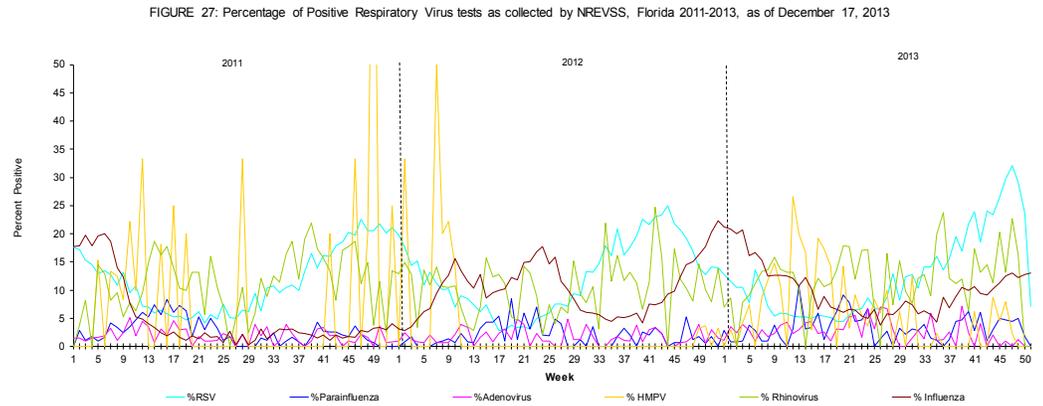
* Death records data reported into ESSENCE-FL are currently considered to be complete through week 49, 2013.

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. Ten Florida facilities reported in week 50.

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

In week 50, 2013 no influenza or ILI outbreaks were reported in EpiCom.

Four outbreaks of influenza or ILI have been reported so far in the 2013-2014 influenza season.

Map 7: Influenza and ILI outbreaks by county, Week 40, 2012 - Week 50, 2013 as Reported by 9:30 a.m. December 17, 2013

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

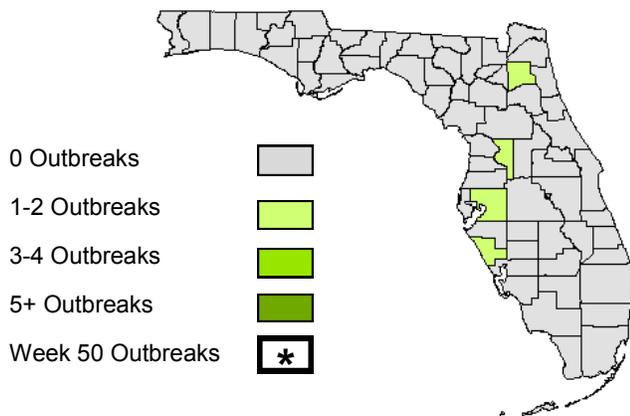


TABLE 4 : Summary of Florida Influenza and ILI Outbreaks by Facility Status, Weeks 40-50, 2013

Setting	Number of outbreaks	Implicated Viruses
Schools	3	<ul style="list-style-type: none"> • 3 outbreaks were due to influenza A of unknown subtype.
Colleges and universities	0	<ul style="list-style-type: none"> • No outbreaks
Daycares	0	<ul style="list-style-type: none"> • No outbreaks
Private businesses	0	<ul style="list-style-type: none"> • No outbreaks
Local and state government offices	0	<ul style="list-style-type: none"> • No outbreaks
Jails and prisons	0	<ul style="list-style-type: none"> • No outbreaks
Retirement homes	1	<ul style="list-style-type: none"> • 1 outbreak, virus information not available.
Nursing homes	0	<ul style="list-style-type: none"> • No outbreaks
Healthcare facilities	0	<ul style="list-style-type: none"> • No outbreaks
Other	0	<ul style="list-style-type: none"> • No outbreaks
Total	4	<ul style="list-style-type: none"> • 1 outbreak, virus information not available. • 3 outbreaks were due to influenza A of unknown subtype

Florida 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

BPPL

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

Case-Based Influenza Surveillance

Pediatric Influenza-Associated Mortality

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

Influenza due to Novel or Pandemic Strains

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

National Respiratory and Enteric Virus Surveillance System (NREVSS)

Measures trends in different viruses that cause respiratory disease

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

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