

Week 18: April 28 - May 3, 2014



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.

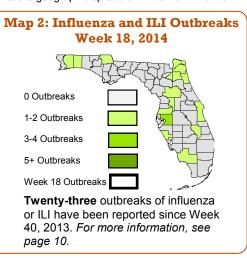
National:

- In week 18, the first case of MERS-CoV was identified in Indiana and was a traveler returning from the Middle East. No cases of MERS-CoV have been identified in Florida or anywhere else in the United States.
 More information can be found here: http://www.cdc.gov/CORONAVIRUS/MERS/INDEX.HTML
- Influenza activity continues to decline nationally. In certain parts of the country, activity remains elevated.
- The predominant circulating strain this year continues to be influenza A (2009 H1N1).
- The Centers for Disease Control and Prevention continue to recommend vaccination as long as influenza viruses are circulating.

State:

- Influenza activity continues to decline overall or remain at low levels across the state.
- This season, FDOH has received reports of severe influenza illness, including hospitalizations, requiring intensive care unit (ICU) care among pregnant women.
 - None of these women received the 2013-2014 influenza vaccine.
- Most Florida counties are reporting mild influenza activity. In week 18, 29 counties reported decreasing
 influenza activity; 33 counties indicated activity is at a plateau.
- Emergency department (ED) and urgent care center (UCC) influenza-like illness (ILI) visits have
 decreased in recent weeks although it is slightly above levels typical for this time of year; current data
 suggest that the influenza season has peaked.
 - While activity statewide is generally decreasing, those at high risk for infection, such as pregnant women, are among those presenting to EDs and UCCs for care.
 - 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 B.
 - In week 18, 5 of 14 specimens submitted for influenza testing at BPHL were PCR positive for influenza.
 All were PCR positive for influenza B. This is a seasonal strain of influenza.
 - Nationally (including Florida), the vaccine is a good match for identified circulating strains.
 - No influenza or ILI outbreaks (epidemiologically-linked cases of influenza in a single setting) were reported to EpiCom in week 18.
 - No pediatric influenza-associated deaths were reported in week 18. Four pediatric influenza-associated deaths have been reported in the 2013-2014 season.
- The preliminary estimated number of Florida deaths due to pneumonia or influenza in week 17 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 sporadic influenza activity in some areas of the state, Florida reported sporadic influenza activity to CDC in week 18. This activity level represents the geographic spread of influenza in Florida.

No Report No Activity Mild Moderate Widespread Thirty-five counties reported mild influenza activity. For more information, see page 6.

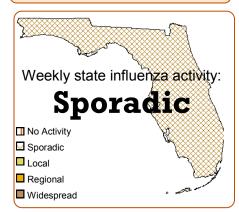


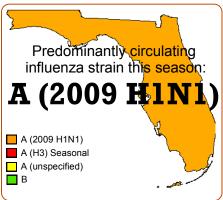
May 7, 2014
Posted on the Bureau of Epidemiology website:

http://www.floridahealth.gov/floridaflu

Produced by: Bureau of Epidemiology, Florida Department of Health

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





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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 17

| Measure | Difference from Previous Week | Current Week 17 | Previous Week 16 | 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 | 1.1% | 1.2% | 2 |
| Percent of ED and UCC visits (from ESSENCE-FL) due to ILI | ▼ 0.1 | 2.1% | 2.2% | 3 |
| Percent of laboratory specimens that were positive for influenza | ▲ 10.7 | 35.7% | 25.0% | 5 |
| Number of counties reporting moderate influenza activity | No Change | 0 | 0 | 6 |
| Number of counties reporting widespread influenza activity | No Change | 0 | 0 | 6 |
| Number of counties reporting increasing influenza activity | ▼ 2 | 2 | 4 | 6 |
| Number of counties reporting decreasing influenza activity | ▼ 1 | 29 | 30 | 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 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 (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 guality and surveillance specimen submission.

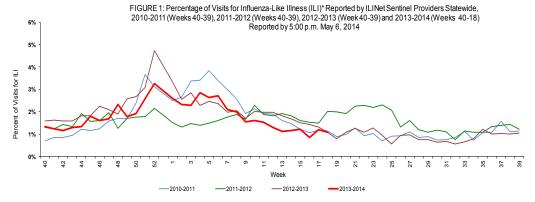
FIGURE 1 shows the percentage of visits for ILI* reported by ILINet sentinel providers statewide.

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

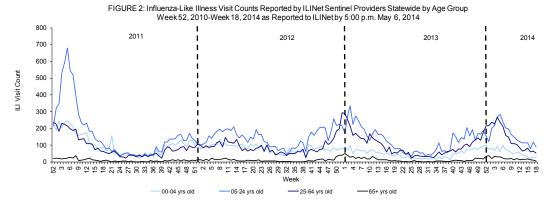
- Fifty-two of 107 ILINet providers reported visit counts as of 5:00 p.m., May 6, 2014.
- Nine of 13 ILINet Super-Sentinels reported visit counts as of 5:00 p.m., May 6, 2014.

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

In week 18, the number of visits to ILINet sentinels for ILI decreased in all age groups.



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



†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 198 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 slightly above levels seen in previous years at this time.



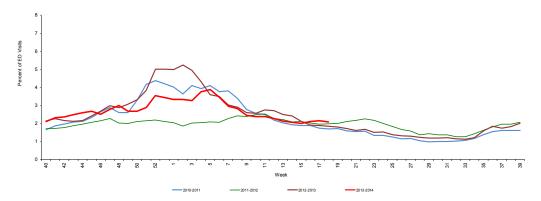
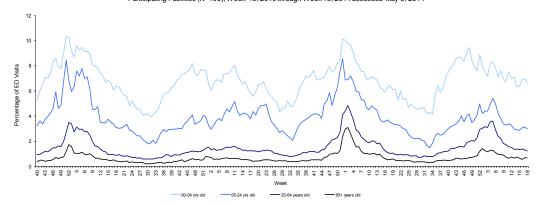


FIGURE 4 shows percentage of ILI among all ED and UCC visits by age.

The percent of ED and UCC visits for ILI is similar to 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=198), Week 40, 2010 through Week 18, 2014 accessed May 6, 2014



ESSENCE-FL Syndromic Surveillance-Regional

Map 3: Emergency Departments and Urgent Care Centers Reporting Data to ESSENCE-FL by Regional Domestic Security Task Force (RDSTF), May 7, 2014 (N=198)

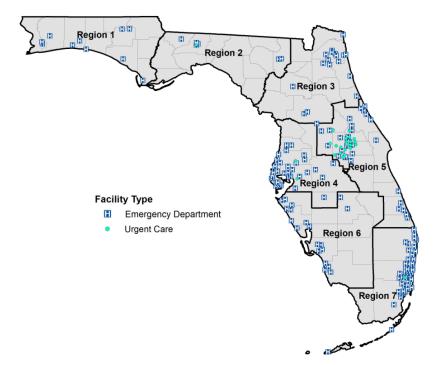


FIGURE 5 - FIGURE 11 describe ED and UCC chief complaint data from ESSENCE-FL by Regional Domestic Security Task Force (RDSTF) regions.

FIGURE 5: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 1 ESSENCE-FL Participating Hospitals (N=10), Week 40, 2010 through Week 18, 2014 accessed May 6, 2014

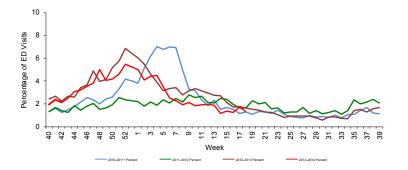


FIGURE 6: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 2 ESSENCE-FL Participating Facilities (N=6), Week 40, 2010 through Week 18, 2014 accessed May 6, 2014

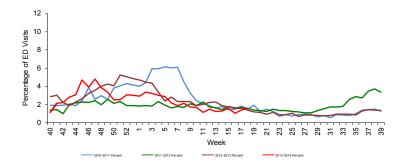


FIGURE 8: Percentage of ILI visits from ED and UCC Chief Complaints, RDTSF Region 4 ESSENCE-FL Participating Facilities (N=40), Week 40, 2010 through Week 18, 2014 accessed May 6, 2014

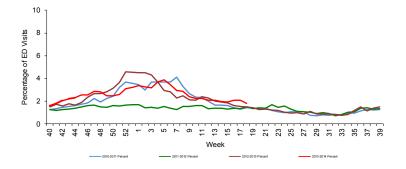
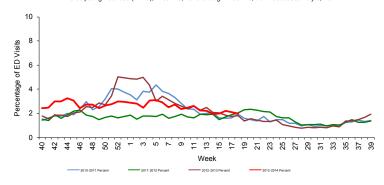


FIGURE 10: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 6 ESSENCE-FL Participating Facilities (N=19), Week 40, 2010 through Week 18, 2014 accessed May 6, 2014



- The percent of ED and UCC visits for ILI is near expected levels.
- RDSTF Regions 1, 4, 5 and 6 reported decreasing visits for ILI to EDs and UCCs in week 18, 2014.
- RDSTF Regions 2, 3 and 7 reported increasing visits for ILI to EDs and UCCs in week 18, 2014.
- New facilities were recently added to RDSTF Region 6.
 Historical data for figure 10 will be revised to reflect these new facilities as it becomes available.

FIGURE 7: Percentage of ILI visits from ED Chief Complaints, RDSTF Region 3 ESSENCE-FL Participating Facilities (N=19), Week 40, 2010 through Week 18, 2014 accessed May 6, 2014

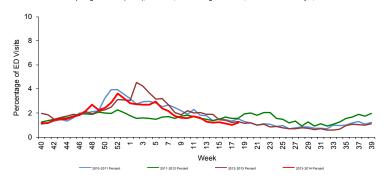


FIGURE 9: Percentage of ILI visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities RDSTF Region 5 ESSENCE-FL Participating Facilities (N=55), Week 40, 2010 through Week 18, 2014 accessed May 6, 2014

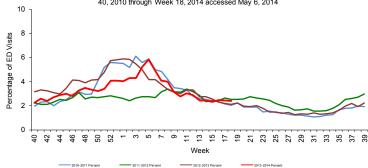


FIGURE 11: Percentage of ILI visits from ED and UCC Chief Complaints, ESSENCE-FL Participating Facilities , RDSTF Region 7 ESSENCE-FL Participating Facilities (N=49), Week

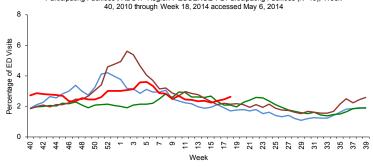


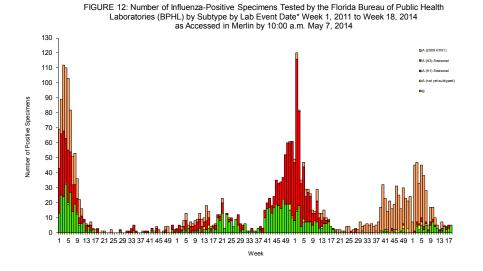
TABLE 2 shows the number of specimens tested by BPHL, how many are influenza positive and their subtypes.

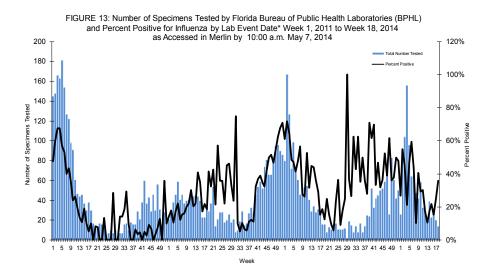
rigure 12 - Figure 13 use BPHL viral surveillance data to track the progress of influenza infection over time. They include weekly information on how many specimens are tested by the BPHL, what proportion of those test positive for influenza and what subtypes are identified.

- Influenza A (2009 H1N1), 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 2009 H1N1, influenza A (H3) and influenza B.
- Influenza A (2009 H1N1) has been the most common strain of influenza detected by BPHL so far in the 2013-2014 influenza season.

Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for Week 18 by Lab Event Date* as reported by 10:00 a.m. May 7, 2014

| | Current Week 18 | Previous Week 17 |
|---|--------------------|---------------------|
| Total Specimens Tested | 14 | 20 |
| Influenza positive specimens (% of total) | 5 (35.7%) | 5 (25.0%) |
| Influenza A (2009 H1N1) (% of influenza positives) | - | - |
| Influenza A (H3) (% of influenza positives) | - | 2 (40.0%) |
| Influenza A not yet subtyped (% of influenza positives) | - | - |
| Influenza B unspecified (% of influenza positives) | 5 (100.0%) | 3 (60.0%) |





^{*}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 11:30 a.m. May 7, 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 18 (ending May 3, 2014) as Reported by 10:00 a.m. May 7, 2014

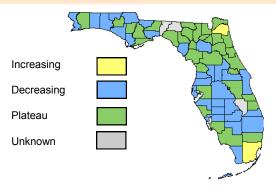
| Activity Level | Week 18 Number of Counties | Week 17 Number of Counties | Week 18 Counties |
|----------------|----------------------------------|----------------------------------|---|
| No Report | 0 | 0 | - |
| No Activity | 32 | 31 | Bay, Bradford, Calhoun, Columbia, Desoto, Dixie, Franklin, Gadsden, Glades, Gulf, Hamilton, Hendry, Hernando, Holmes, Indian River, Jefferson, Lafayette, Levy, Liberty, Madison, Nassau, Okaloosa, Putnam, Santa Rosa, St. Johns, Sumter, Suwannee, Taylor, Union, Wakulla, Walton, Washington |
| Mild | 35 | 36 | Alachua, Baker, Brevard, Broward, Charlotte, Citrus, Clay, Collier, Dade, Duval, Escambia, Flagler, Gilchrist, Hardee, Highlands, Hillsborough, Jackson, Lake, Lee, Leon, Manatee, Marion, Martin, Monroe, Okeechobee, Orange, Osceola, Palm Beach, Pasco, Pinellas, Polk, Sarasota, Seminole, St. Lucie, Volusia |
| Moderate | 0 | 0 | - |
| Widespread | - | - | - |

Map 4: Weekly County Influenza Activity Level for Week 18 Reported by 11:30 a.m. May 7, 2014

No Report
No Activity
Mild
Moderate
Widespread

No counties reported moderate activity.

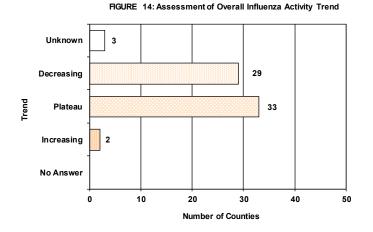
Map 5: Weekly County Influenza Activity Trend for Week 18 Reported by 11:30 a.m. May 7, 2014



Twenty-nine counties reported decreasing 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 18, 29 counties indicated that activity was decreasing, 33 indicated activity was about the same as previous weeks and 2 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 18 as of 11:30 a.m. May 7, 2014.



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.

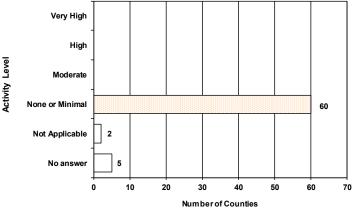
Very high activity -- Absenteeism high enough to force curtailment of some or all school activities.

FIGURE 15 - FIGURE 18 show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 18 as of 11:30 a.m., May 7, 2014.

FIGURE 15: Assessment of Influenza Activity in Elementary, Middle, and High Schools High 60

FIGURE 17: Assessment of Influenza Activity in Jails/Prisons

FIGURE 16: Assessment of Influenza Activity in Colleges and Universities Very High High None or Minimal 39 Not Applicable No answer 0 10 20 40 50 60 Number of Counties



Very High High Activity Level Moderate None or Minimal 53 Not Applicable No answer 0 10 30 40 60 70 **Number of Counties**

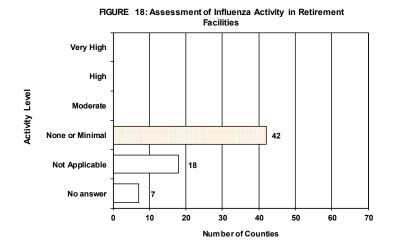
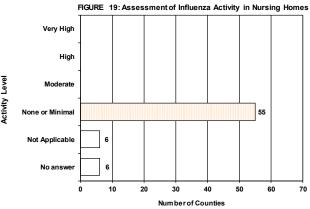
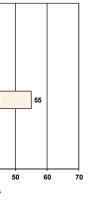
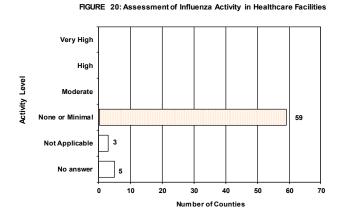
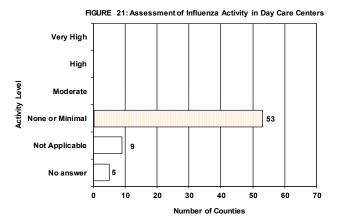


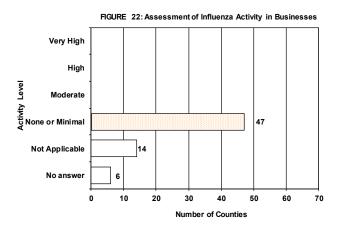
FIGURE 19 - FIGURE 23 show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 18 as of 11:30 a.m., May 7, 2014.

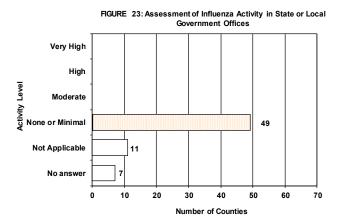












Pediatric Influenza-Associated Mortality

In week 18, 2014, no influenza-associated pediatric deaths were reported in Florida.

Four influenza-associated pediatric deaths have 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 17, 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 17 (ending April 26, 2014):

- 188 preliminary estimated pneumonia and influenza deaths were reported.
- Upper bound of 95% confidence interval for prediction: 218 deaths.
- No excess deaths.

FIGURE 25 shows pneumonia and influenza deaths for all Florida counties, week 40, 2010 - week 19 2014, as reported into ESSENCE-FL. Deaths due to pneumonia and influenza are slightly above levels seen during previous years at this time.

FIGURE 26 shows pneumonia and influenza deaths for all Florida counties by age group, week 40, 2010 - week 19, 2014, as reported into ESSENCE-FL.

Figure 24: Vital Statistics Statewide Pneumonia and Influenza Deaths, Multi-Year Regression Model Week 17, 2000-Week 17, 2014, Reported into ESSENCE-FL

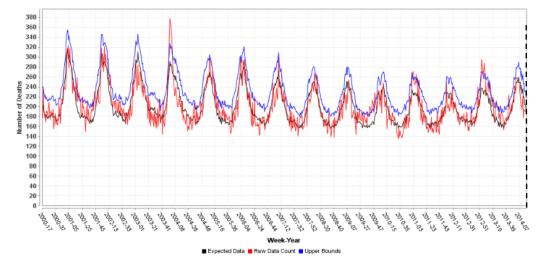
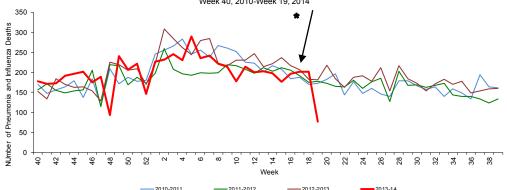
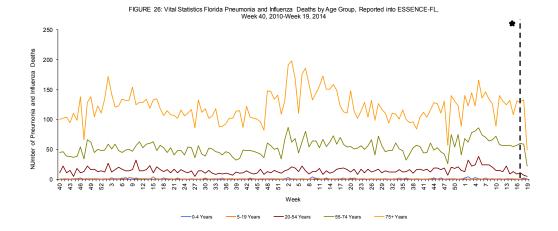


FIGURE 25: Vital Statistics Statewide Pneumonia and Influenza Deaths, Reported into ESSENCE-FL, Week 40, 2010-Week 19, 2014





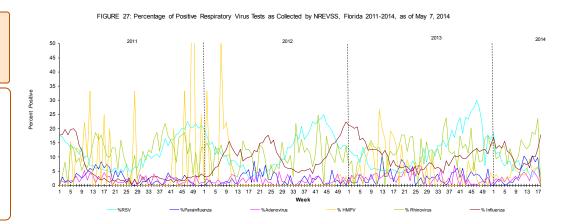
Death records data reported into ESSENCE-FL are currently considered to be complete through week 17, 2014.

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. Nine Florida facilities reported in week 18.

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 18, 2014, no influenza or ILI outbreaks were reported in to EpiCom.

Map 6: Influenza and ILI outbreaks by county, Week 40, 2013 - Week 18, 2014 as Reported by 11:30 a.m. May 7, 2014

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

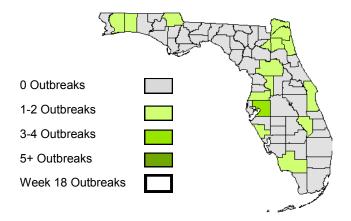


TABLE 4: Summary of Florida Influenza and ILI Outbreaks by Facility Status, Week 40, 2013 -18, 2014

| Setting | Number of outbreaks | Implicated Viruses |
|------------------------------------|---------------------|--|
| Schools | 7 | 5 outbreaks due to influenza A of unknown subtype |
| | | 2 outbreaks due to influenza B |
| Colleges and universities | 0 | No outbreaks |
| Daycares | 1 | 1 outbreak due to influenza A of unknown subtype |
| Private businesses | 0 | No outbreaks |
| Local and state government offices | 0 | No outbreaks |
| | 5 | 2 outbreaks due to influenza A (2009 H1N1) |
| Jails and prisons | | 2 outbreaks due to influenza A of unknown subtype |
| | | 1 outbreak, virus information not yet available |
| | 5 | 3 outbreaks, virus information not available |
| Retirement homes | | 1 outbreak due to influenza A of unknown subtype |
| | | 1 outbreak due to influenza A (H3) |
| Nursing homes | 1 | 1 outbreak, RSV and coronavirus identified |
| Healthcare facilities | 0 | No outbreaks |
| | | 2 household outbreaks due to influenza A (2009 H1N1) |
| Other | 4 | 1 outbreak due to influenza A (2009 H1N1) and coronavirus |
| | | 1 household outbreak due to influenza A of unknown subtype |
| | | 4 outbreaks, virus information not available |
| | | 2 outbreaks due to influenza B |
| | | 10 outbreaks due to influenza A of unknown subtype |
| Total | 23 | 4 outbreaks due to influenza A (2009 H1N1) |
| | | 1 outbreak due to influenza A (2009 H1N1) and coronavirus |
| | | 1 outbreak due to RSV and coronavirus |
| | | 1 outbreak 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

BPHL

Tracks influenza and ILI outbreak investigations by CHDs and shows what types of influenza are responsible for outbreaks and where outbreaks are

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 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/