Florida FLUREVIEW 2014 - 2015 season

Week 3: January 18 - 24, 2015

Summary

National influenza activity:

Influenza activity is elevated nationally.

- The Centers for Disease Control and Prevention (CDC) has identified an antigenically drifted influenza A (H3N2) strain circulating nationally and in Florida that is different from the strain of influenza A (H3N2) contained in the current 2014-15 influenza vaccine formulations.
- The CDC indicates this season's vaccine is offering reduced protection, as such, use of neuraminidase inhibitor antiviral medications, for treatment and prevention of influenza, is more important than ever. High risk individuals with suspected flu should be treated with antivirals as early as possible (even prior to laboratory confirmation). More information can be found here: http://www.floridahealth.gov/diseases-and-conditions/influenza/documents/Other/influenza-letter-for-health-care-providers.pdf.

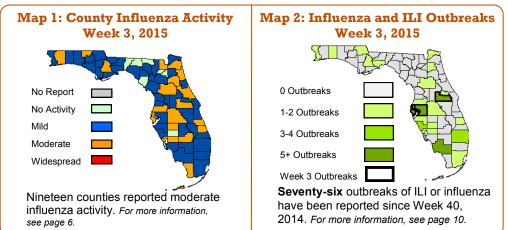
•The CDC indicates that antiviral medications are underutilized; one study estimates antivirals were only used one out of five times where antivirals use would be recommended.

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

- Flu activity remains high in Florida and is widespread. Widespread refers to the geographic spread of influenza across Florida.
 - •The 2014-15 flu season began early and is now in full swing in Florida.
- Although influenza activity has decreased in recent weeks in some surveillance systems, overall
 activity levels remain high and it is too early to tell if the season has peaked.
- Seasons like this one, where influenza A (H3) is the predominantly circulating strain, are typically associated with higher morbidity and mortality, particularly in the 65+ age group.
 More hospitalizations and deaths are typical of H3N2-seasons, which hit young children and older people harder.
- While biggest increases in ED visits for ILI have most recently been identified in the 65+ age group, activity is still greatest in children.
 - •55 (72%) of reported outbreaks of ILI have been in facilities that primarily serve the 65+ years old age group.
- In the past week, the number of pneumonia and influenza associated deaths, particularly in those over the age of 65 are at or above levels seen during previous years at this time. Increases in hospitalizations and deaths at this point in the season are expected during severe flu years, like this one.

• During flu season, increases in ED visits typically come before increases hospitalizations and deaths.

- In Florida, the most common influenza subtype detected at the Bureau of Public Health Laboratories (BPHL) in recent weeks has been influenza A (H3).
- In the past week, 31 of 58 (53.5%) specimens submitted for influenza testing at BPHL were PCR positive for seasonal strains of influenza: 24 were positive for influenza A (H3), four were influenza A not yet subtyped, one was influenza B Yamagata lineage and two were influenza B not yet subtyped.
- Five outbreaks of influenza (two or more cases of influenza or ILI in a specific setting) were reported to EpiCom in week 3.
- No pediatric influenza-associated deaths were reported in week 3.



Florida HEALTH

January 28, 2015 Posted on the Bureau of Epidemiology (BOE) website: http://www.floridahealth.gov/floridaflu

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B Yamagata

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Summary (Continued)

Descriptions of Florida influenza and ILI surveillance systems can be found on page 11.

TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 3				
Measure	Difference from Previous Week	Current Week 3	Previous Week 2	Page of Report
Overall statewide activity code reported to CDC	No Change	Widespread	Widespread	1
Percent of visits to ILINet providers for ILI	No Change	1.9%	1.9%	2
Percent of ED and UCC visits (from ESSENCE-FL) due to ILI	▼ 0.2	3.1%	3.3%	3
Percent of laboratory specimens that were positive for influenza	▲ 2.9	53.5%	50.6%	5
Number of counties reporting moderate influenza activity	▲ 4	19	15	6
Number of counties reporting widespread influenza activity	▼ 1	0	1	6
Number of counties reporting increasing influenza activity	▼ 6	7	13	6
Number of counties reporting decreasing influenza activity	▼ 1	20	21	6
Number of ILI outbreaks reported in EpiCom	▼ 4	5	9	10

ILINet Influenza-Like Illness-Statewide

ILINet is a nationwide surveillance system composed of sentinel providers: most of which are sentinel outpatient physicians. Florida has 107 sentinel providers enrolled in ILINet who submit weekly ILI and total visit counts, as well as submit ILI specimens to the BPHL for confirmatory testing.

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

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

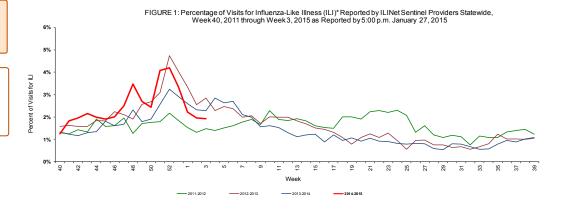
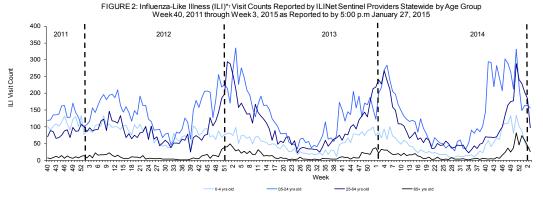


FIGURE 2 shows ILI visit counts reported by ILINet sentinel providers statewide by age group.

In week 3, the number of ILI visits to ILINet sentinel providers decreased in the all age groups in concordance with the decline seen in recent weeks.



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†Data presented here are counts, not proportions as included in Figure 1. This is because age group denominator data is not available through ILINet.

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

ESSENCE-FL Syndromic Surveillance-Statewide

ESSENCE-FL collects data daily from 219 Emergency Departments (EDs) and Urgent Care Centers (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 similar to levels seen in previous years at this time.

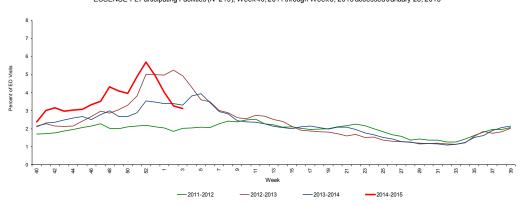
There continues to be increased levels of influenza in pregnant women presenting to EDs for care that is above expected levels for this time of year. Pregnant women are among those at high risk for severe complications due to influenza infection. More information can be found here:

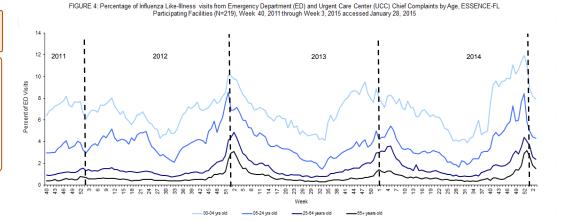
http://www.floridahealth.gov/diseasesand-conditions/influenza/_documents/ Other/influenza-guidance-for-healthcare-providers.pdf

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 levels seen in previous years in all age groups at this time.

While the proportion of ED and UCC visits for ILI has decreased in all age groups in the past few weeks, activity still remains highest in children.





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), January 28, 2015 (N=219)

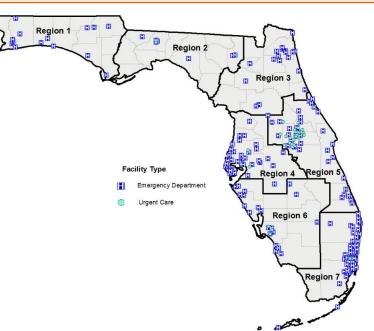


FIGURE 3: Percentage of Influenza Like-Illness visits from Emergency Department (ED) and Urgent Care Center (UCC) Chief Complaints, ESSENCE-FL Participating Facilities (N=219), Week 40, 2011 through Week 3, 2015 accessed January 28, 2015

ESSENCE-FL Syndromic Surveillance-Regional (Continued)

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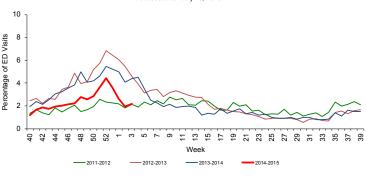


FIGURE 6: Percentage of Influenza Like-Illness Visits from ED and UCC Chief Complaints, RDSTF Region 2 ESSENCE-FL Participating Facilities (N=7), Week 40, 2011 through Week 3, 2015 accessed January 26, 2015

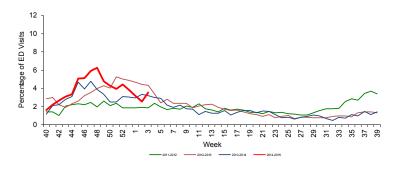


FIGURE 8: Percentage of httuenza Like-Illness Visits from ED and UCC Chief Complaints, RDSTF Region 4 ESSENCE-FL Participating Facilities (N=42), Week 40, 2011 through Week 3, 2015 accessed January 28, 2015

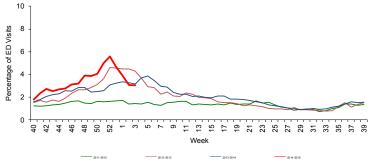
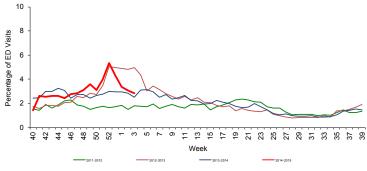
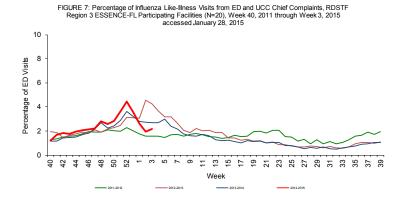


FIGURE 10: Percentage of of Influenza Like-Illness Visits from ED and UCC Chief Complaints, RDSTF Region 6 ESSENCE-FL Participating Facilities (N=23), Week 40, 2011 through Week 3, 2015 accessed January 28, 2015



After having been elevated, ED and UCC visits for ILI in RDSTF Regions 1-7 are at or near levels seen during previous years at this time.



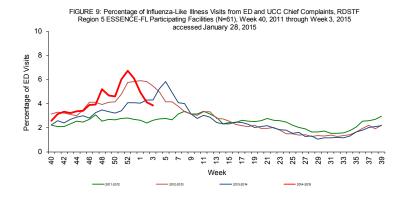
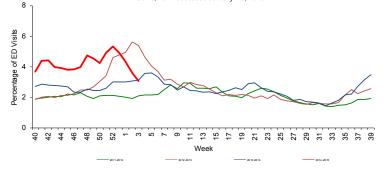


FIGURE 11: Percentage of Influenza Like-Illness Visits from ED and UCC Chief Complaints, RDSTF Region 7 ESSENCE-FL Participating Facilities (N=52), Week 40, 2011 through Week 3, 2014 accessed January 28, 2015



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Bureau of Public Health Laboratories Viral Surveillance

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

Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for Week 3 by Lab Event Date* as reported by 10:00 a.m. January 28, 2015

	Current Week 3	Previous Week 2
Total Specimens Tested	58	85
Influenza positive specimens (% of total)	31 (53.5%)	43 (50.6%)
Influenza A (2009 H1N1) (% of influenza positives)	-	1 (1.2%)
Influenza A (H3) (% of influenza positives)	24 (77.4%)	37 (86.1%)
Influenza A not yet subtyped (% of influenza positives)	4 (12.9%)	-
Influenza B Yamagata (% of influenza positives)	1 (3.2%)	4 (9.3%)
Influenza B Victoria (% of influenza positives)	-	1 (2.3%)
Influenza B not yet subtyped (% of influenza positives)	2 (6.5%)	-

FIGURE 12: Number of Influenza-Positive Specimens Tested by the Florida Bureau of Public Health



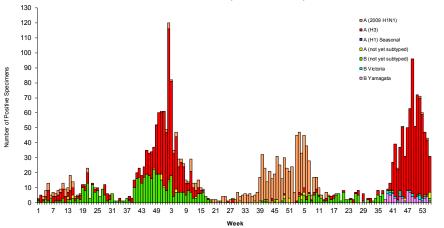
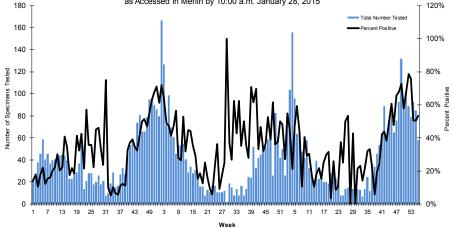


FIGURE 13: Number of Specimens Tested by Florida Bureau of Public Health Laboratories (BPHL) and Percent Positive for Influenza by Lab Event Date* Week 1, 2012 to Week 3, 2015 as Accessed in Merlin by 10:00 a.m. January 28, 2015



*Please note that lab event date is defined as the earliest of the following dates associated with the lab: date specimen collected, date received by the laboratory, date reported or date inserted.

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

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

Influenza A (H3) and influenza B have been identified by BPHL this season.

In recent weeks, influenza specimens submitted to BPHL tested positive for influenza A (H3), influenza A (2009 H1N1), influenza B Yamagata lineage, and influenza B Victoria lineage.

Influenza A (H3) has been the most common strain of influenza detected by BPHL so far in the 2014-2015 influenza season.

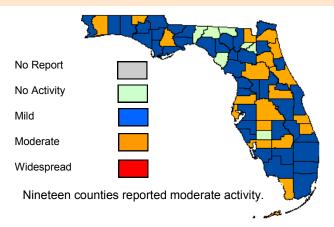
The drifted Influenza A (H3) strain has been detected in Florida.

County Influenza and ILI Activity

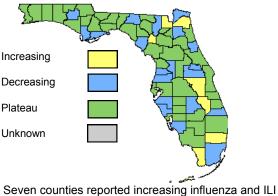
As of 11:30 a.m. January 28, 2015, a total of 67 (100%) counties reported their weekly level of influenza activity. *Please note that data reported by counties after the deadline Tuesday at 5 p.m. are recorded but may not be included in the activity map for previous weeks.*

TABLE 3: Weekly County Influenza Activity for Week 3 (ending January 24, 2015) as Reported by 11:30 a.m. January 28, 2015				
Activity Level	Week 3 Number of Counties	Week 2 Number of Counties	Week 3 Counties	
No Report	0	0	-	
No Activity	7	6	Bradford, Desoto, Dixie, Hamilton, Jefferson, Madison, Union	
Mild	41	45	Alachua, Bay, Brevard, Broward, Calhoun, Citrus, Clay, Collier, Columbia, Dade, Escambia, Flagler, Franklin, Gadsden, Gilchrist, Gulf, Hendry, Hernando, Highlands, Hillsborough, Jackson, Lafayette, Lake, Lee, Leon, Levy, Manatee, Martin, Nassau, Okaloosa, Okeechobee, Osceola, Palm Beach, Sarasota, Seminole, Sumter, Suwannee, Taylor, Wakulla, Walton, Washington	
Moderate	19	15	Baker, Charlotte, Duval, Glades, Hardee, Holmes, Indian River, Liberty, Marion, Monroe, Orange, Pasco, Pinellas, Polk, Putnam, Santa Rosa, St. Johns, St. Lucie, Volusia	
Widespread	0	1	-	

Map 4: Weekly County Influenza Activity Level for Week 3 Reported by 11:30 a.m. January 28, 2015

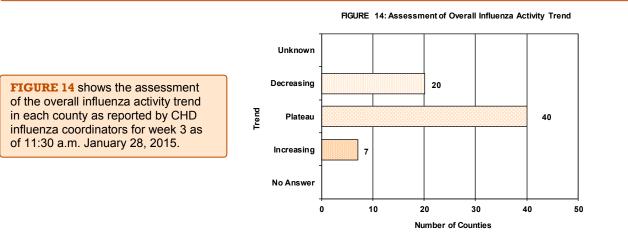


Map 5: Weekly County Influenza Activity Trend for Week 3 Reported by 11:30 a.m. January 28, 2015



Seven counties reported increasing influenza and ILI activity.

County influenza activity data are reported to BOE through EpiGateway on a weekly basis by each county influenza coordinator. Specific information is requested about laboratory results, outbreak reports and surveillance system activity. Figures 14-23, displayed below, reflect a county's assessment of influenza activity within their county as a whole as well as influenza activity within specific settings. For week 3, 20 counties indicated that activity was decreasing, 40 indicated activity was about the same as previous weeks and seven indicated that activity was increasing.



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County Influenza and ILI Activity (Continued)

Counties are asked to evaluate influenza activity in certain settings within their county. Each setting has a scale for activity that ranges from no 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.

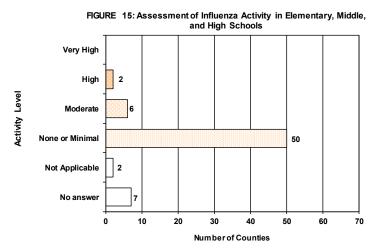
No or very minimal activity -- Scattered cases of ILI with no increase in absenteeism or disruption of school activities.

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 3 as of 11:30 a.m., January 28, 2015.



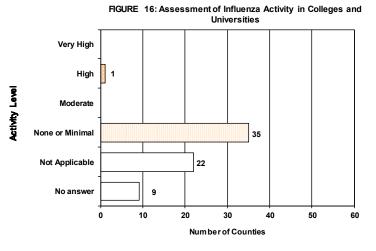


FIGURE 17: Assessment of Influenza Activity in Jails/Prisons

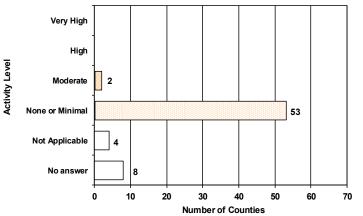
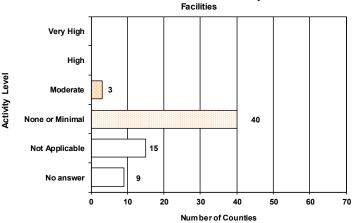


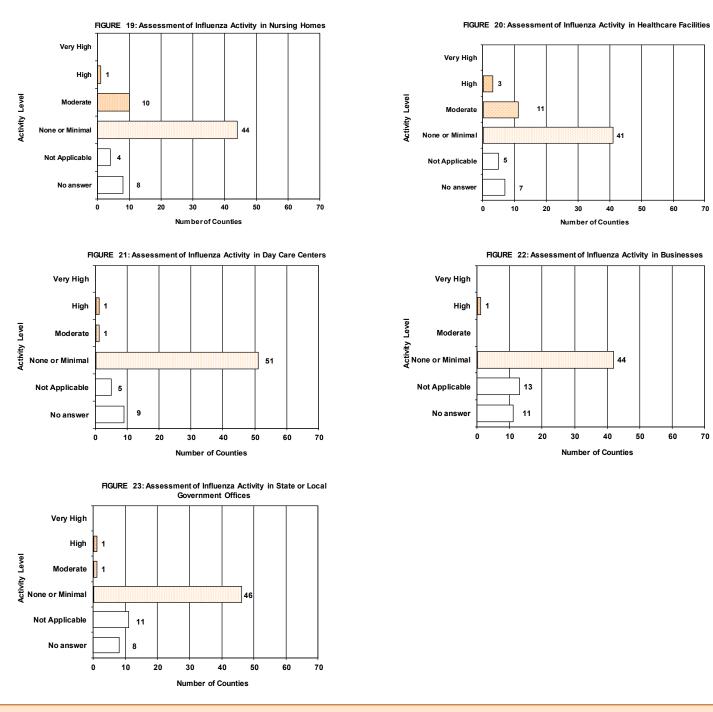
FIGURE 18: Assessment of Influenza Activity in Retirement



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County Influenza and ILI Activity (Continued)

FIGURE 19 - FIGURE 23 show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 3 as of 11:30 a.m., January 28, 2015.



Pediatric Influenza-Associated Mortality

No influenza-associated pediatric deaths were reported in week 3.

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

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ESSENCE-FL Pneumonia and Influenza Mortality

FDOH Bureau of Vital Statistics and county health departments (CHDs) collect death record data electronically in all 67 Florida counties, which can be accessed using ESSENCE-FL. For pneumonia and influenza (P&I) surveillance, death record literals are queried in ESSENCE-FL using a free-text query that searches for references to P&I on death certificates. Any mention of P&I in the death certificate literals, with certain exceptions, is counted as a P&I death. Current season P&I 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 2, 2015.*

FIGURE 24 shows the count of preliminary estimated P&I 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 2 (ending Jan 17, 2015):

- 293 preliminary estimated P&I deaths were reported.
- Upper bound of 95% confidence interval for prediction: 269 deaths.
- 24 excess deaths.

FIGURE 25 shows P&I deaths for all Florida counties, week 40, 2010 - week 2 2015, as reported into ESSENCE-FL. Deaths due to P&I are at or near levels seen during previous years at this time.

As of week 3 (ending Jan 24, 2015):

• 3,666 P&I deaths have been reported so far in the 2014-15 influenza season.

FIGURE 26 shows P&I deaths for all Florida counties by age group, week 40, 2012 - week 3, 2015, as reported into ESSENCE-FL.

Seasons were influenza A (H3) is the predominantly circulating strain are associated with higher mortality and morbidity, particularly in the over 65 age group.

It is common that flu deaths reach higher levels later in the season since mortality tends to lag behind other indicators.

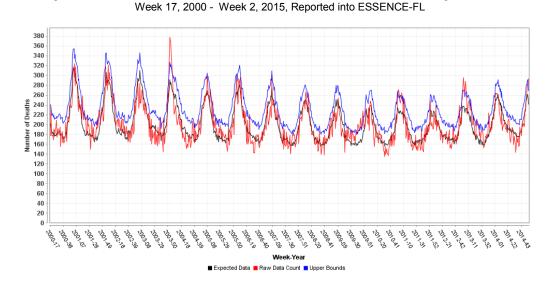


Figure 24: Vital Statistics Statewide Pneumonia and Influenza Deaths, Multi-Year Regression Model

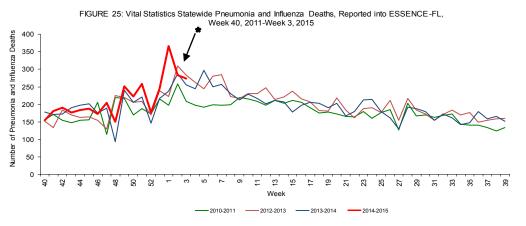
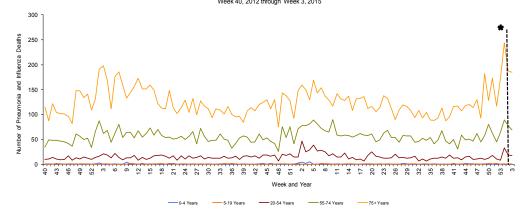


FIGURE 26: Vital Statistics Florida Pneumonia and Influenza Deaths by Age Group, Reported into ESSENCE-FL, Week 40, 2012 through Week 3, 2015



 Death records data reported into ESSENCE-FL are currently considered to be complete through week 2, 2015.

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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. Eight Florida facilities reported in week 3.

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

FIGURE 27: Percentage of Positive Respiratory Virus Tests as Collected by NREVSS, Florida Week 40, 2012 to Week 3, 2015, as of January 28, 2015

Influenza and ILI Outbreaks Reported in EpiCom

ositiv

Percent

In week 3, 2015, five outbreaks of influenza or ILI were reported in to EpiCom.

Hillsborough County

- A nursing facility reported 32 residents and eight staff with ILI. Two ill residents were hospitalized. One ill resident died and tested positive for influenza A by rapid antigen test at local healthcare providers. Four ill staff tested positive for influenza A, one ill staff tested positive for influenza B by rapid antigen test, and three ill staff tested negative for influenza by rapid antigen test at local healthcare providers. Chemoprophylaxis was recommended for all residents. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- A nursing facility reported 13 residents and two staff with ILI. Three ill residents were hospitalized. Two ill residents died: one tested positive for influenza A by rapid antigen test and the other tested negative for influenza by rapid antigen test at local healthcare providers. One of the ill staff and the remaining 12 ill residents tested negative for influenza by rapid antigen test at local healthcare providers. Chemoprophylaxis was administered to all residents. The 2014-15 vaccination rate was 100% among residents and 50% among staff. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

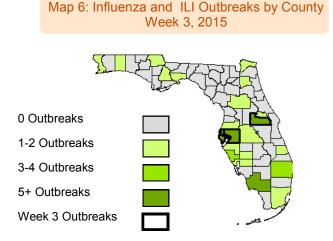
Orange County

- A long term care facility reported three residents and eight staff with ILI. Specimens were collected and sent to BPHL and to local healthcare providers. Results are pending. One of the three ill residents had received the 2014-15 vaccine. Infection control measures were reviewed with facility leadership. This investigation is ongoing.
- A nursing facility reported four residents with ILI. All four ill residents tested positive for influenza A by rapid antigen test at local healthcare providers. The 2014-15 vaccination rate for ill residents was 100%. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Pinellas County

 A nursing facility reported two residents with ILI. Both ill residents tested positive for influenza at local healthcare providers. Chemoprophylaxis was recommended at the facility. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Seventy-six outbreaks of influenza or ILI have been reported into EpiCom so far in the 2014-2015 season.





Influenza and ILI Outbreaks (Continued)

TABLE 4 : Summary of Florida Influenza and ILI Outbreaks by Facility Status, Week 40-3, 2015

Setting	Number of outbreaks	Implicated Viruses	
Schools	13	 One outbreak due to influenza (H3) Seven outbreaks due to influenza A unspecified Two outbreaks due to influenza A unspecified and influenza B unspecified Three outbreaks, virus information not yet available 	
Daycares	9	 Three outbreaks due to influenza (H3) Three outbreaks due to influenza A unspecified One outbreak due to influenza A unspecified and influenza B unspecified One outbreak due to RSV One outbreak due to parainfluenza III 	
Jails and prisons	1	One outbreak due to influenza A unspecified and influenza B unspecified	
Nursing homes and long term care facilities	53	 Seven outbreaks due to influenza A (H3) Thirty-one outbreaks due to influenza A unspecified Three outbreaks due to influenza A unspecified and influenza B unspecified One outbreak due to influenza A (H3) and rhinovirus One outbreak due to influenza A (H3) and rkinovirus One outbreak due to influenza A (H1N1) One outbreak due to influenza B Yamagata One outbreak due to RSV Six outbreaks, virus information not yet available 	
Colleges and universities, private businesses, local and state government offices, retirement homes, healthcare facilities, other	0	No outbreaks	
Total	76	 Eleven outbreaks due to influenza A (H3) Thirty outbreaks due to influenza A unspecified Six outbreaks due to influenza A unspecified and influenza B unspecified One outbreak due to influenza A unspecified and RSV One outbreak due to influenza B Yamagata One outbreak due to influenza B unspecified One outbreak due to H1N1 Two outbreaks due to RSV One outbreak due to parainfluenza III Nine outbreaks, virus information not yet available 	

Florida ILI Surveillance System Summary

Florida ILINet

Measures trends in ILI visits to outpatient doctor's offices

Network of volunteer healthcare providers who:

Report ILI and total visit counts every week

Submit specimens for confirmatory testing

ESSENCE-FL Syndromic Surveillance

Measures trends in ILI visits and hospital admissions from emergency departments and urgent care clinics

EDs and UCCs electronically transmit visit data into ESSENCE-FL daily

Visit data summarized in the Florida Flu Review include:

Percent of ED/urgent care visits due to ILI

Percent of ED/urgent care visitors with ILI who are admitted to the hospital

ESSENCE-FL Vital Statistics Portal

Measures influenza mortality by using death certificates with pneumonia or influenza listed as a cause of death. Death certificate data from the Bureau of Vital Statistics can be accessed through ESSENCE-FL and are used for pneumonia and influenza mortality

surveillance

County Influenza Activity in EpiGateway

Uses data provided by CHDs to create a county-by-county breakdown of influenza and ILI activity around the state

CHD epidemiologists report their county's influenza and ILI surveillance data weekly into the EpiGateway website

Influenza activity is classified as: No Activity, Mild, Moderate or Widespread

Setting-specific influenza activity and influenza trend is also reported

Outbreak Reporting in EpiCom

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

CHD epidemiologists report outbreaks of influenza or ILI into EpiCom, Florida's online disease communication system

Outbreaks are defined as two or more cases of influenza or ILI in a specific setting

BPHL

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

Case-Based Influenza Surveillance

Pediatric Influenza-Associated Mortality

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

Influenza due to Novel or Pandemic Strains

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

National Respiratory and Enteric Virus Surveillance System (NREVSS) Measures trends in different viruses that cause respiratory disease

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