

Week 6: February 8 - 14, 2015

Summary

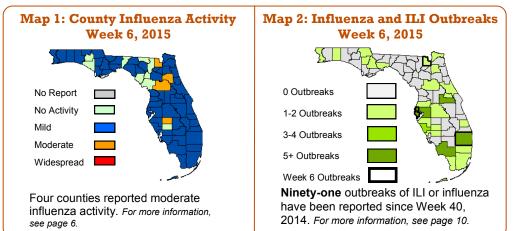
National influenza activity:

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. Individuals at high risk of complications from influenza infection with suspected flu should be treated with antivirals as early as possible, even prior to laboratory confirmation. More information can be found here: <u>http://www.floridahealth.gov/</u> <u>diseases-and-conditions/influenza/_documents/Other/influenza-letter-for-health-careproviders.pdf</u>.
 - 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:

- Due to declining activity across the state, Florida reported regional activity to the CDC in week 6. Regional refers to the geographic spread of influenza across Florida.
 - The 2014-15 flu season began early.
 - Influenza continues to decline in all surveillance systems, and data suggest that the season peaked in week 52.
- 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 and older age group.
- Visits for ILI to emergency departments (ED) have declined in recent weeks and are now at levels similar to previous years at this time. Visits are highest in children <5 and those 65 and over.
 - 63 (69%) of reported outbreaks of ILI have been in facilities that primarily serve the 65+ and older age group.
- The number of pneumonia and influenza (P&I) associated deaths are similar to levels seen during previous years at this time. Increases in deaths at this point in the season are expected during severe flu years where vaccine effectiveness is reduced, like this one.
- 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, 10 of 30 (33.3%) specimens submitted for influenza testing at BPHL were
 PCR positive for seasonal strains of influenza: five were positive for influenza A (H3), one
 was influenza A not yet subtyped, two were influenza B Yamagata lineage, one was
 influenza B Victoria lineage and one was influenza B not yet subtyped.
- Four outbreaks of influenza (two or more cases of influenza or ILI in a specific setting) were reported to EpiCom in week 6.
- No pediatric influenza-associated deaths were reported in week 6.

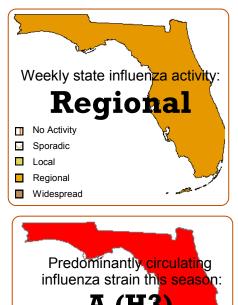


February 18, 2015

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

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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 6				
Measure	Difference from Previous Week	Current Week 6	Previous Week 5	Page of Report
Overall statewide activity code reported to CDC	▼ 1	Regional	Widespread	1
Percent of visits to ILINet providers for ILI	▼ 0.4	1.2%	1.6%	2
Percent of ED and UCC visits (from ESSENCE-FL) due to ILI	▼ 0.2	2.6%	2.8%	3
Percent of laboratory specimens that were positive for influenza	▼ 21.3	33.3%	54.6%	5
Number of counties reporting moderate influenza activity	▼ 2	4	6	6
Number of counties reporting widespread influenza activity	No Change	0	0	6
Number of counties reporting increasing influenza activity	▼ 1	3	4	6
Number of counties reporting decreasing influenza activity	No Change	32	32	6
Number of ILI outbreaks reported in EpiCom	▼ 1	4	5	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 below levels seen in previous years at this time.

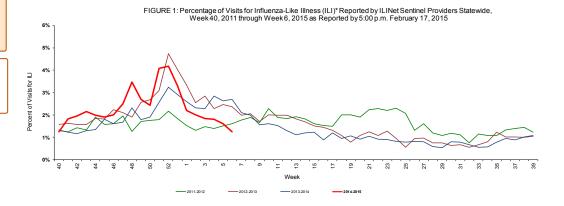
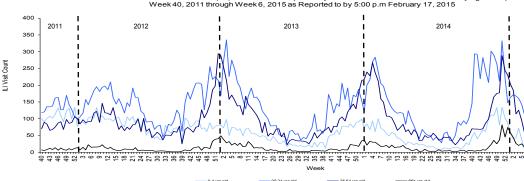


FIGURE 2 shows ILI visit counts reported by ILINet sentinel providers statewide by age group.

In week 6, the number of ILI visits to ILINet sentinel providers continued to decline in all age groups.



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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.

FIGURE 2: Influenza-Like Illness (ILI)*; Visit Counts Reported by ILINet Sentinel Providers Statewide by Age Group Week 40, 2011 through Week 6, 2015 as Reported to by 5:00 p.m February 17, 2015

ESSENCE-FL Syndromic Surveillance-Statewide

ESSENCE-FL collects data daily from 220 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.

In the past few weeks, levels of influenza in pregnant women presenting to EDs has declined. 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.

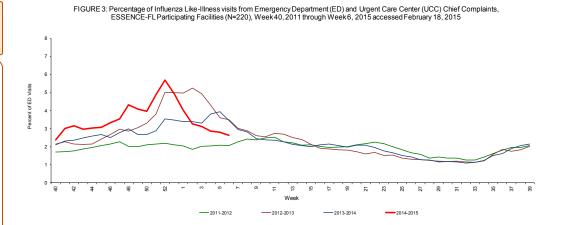
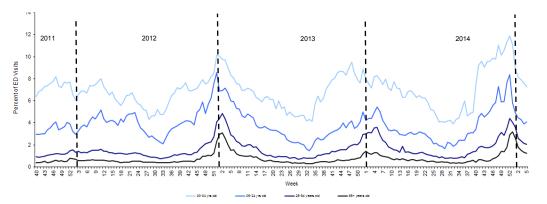
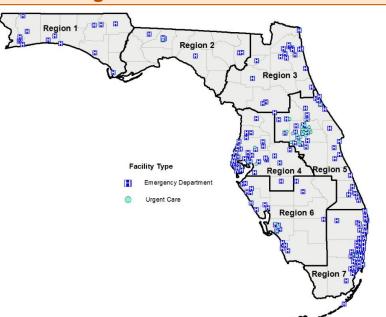


FIGURE 4: Percentage of Influenza Like-Illness visits from Emergency Department (ED) and Urgent Care Center (UCC) Chief Complaints by Age, ESSENCE-FL Participating Facilities (N=220), Week 40, 2011 through Week 6, 2015 accessed February 18, 2015



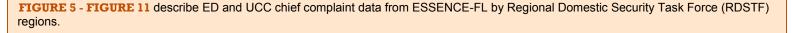
ESSENCE-FL Syndromic Surveillance-Regional

Map 3: Emergency Departments and Urgent Care Centers Reporting Data to ESSENCE-FL by Regional Domestic Security Task Force (RDSTF), February 18, 2015 (N=220)



ESSENCE-FL Syndromic Surveillance-Regional (Continued)

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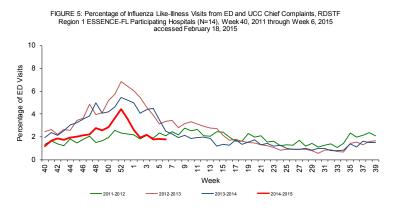


FIGURE 6: Percentage of Influenza Like-Illness Visits from ED and UCC Chief Complaints, RDSTF Region 2 ESSENCE-FL Participating Facilities (№7), Week 40, 2011 through Week 6, 2015 accessed February 18, 2015

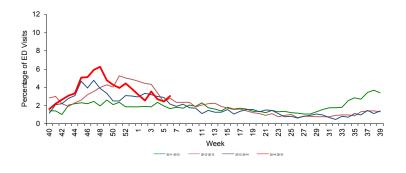


FIGURE 8: Percentage of Influenza Like-Illness Visits from ED and UCC Chief Complaints, RDSTF Region 4 ESSENCE-FL Participating Facilities (N=42), Week 40, 2011 through Week 6, 2015 accessed February 18, 2015

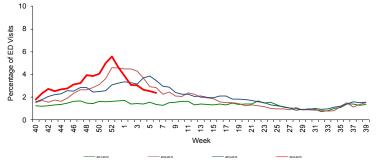
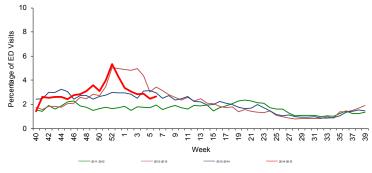
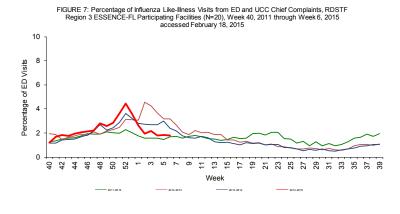


FIGURE 10: Percentage of of Influenza Like-Illness Visits from ED and UCC Chief Complaints, RDSTF Region 6 ESSENCE-FL Participating Facilities (N=24), Week 40, 2011 through Week 6, 2015 accessed February 18, 2015



ED and UCC visits for ILI in RDSTF Regions 1 and 3-7 are at or near levels seen during previous years at this time.

ED and UCC visits for ILI in RDSTF Region 2 is above levels seen during previous years at this time.



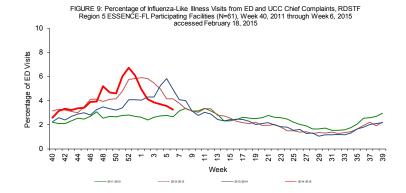
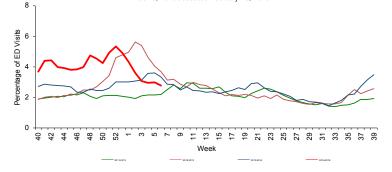


FIGURE 11: Percentage of Influenza Like-Illness Visits from ED and UCC Chief Complaints, RDSTF Region 7 ESSENCE-FL Participating Facilities (N=52), Week 40, 2011 through Week 6, 2015 accessed February 18, 2015



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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

	Current Week 6	Previous Week 5
Total Specimens Tested	30	44
Influenza positive specimens (% of total)	10 (33.3%)	24 (54.6%)
Influenza A (2009 H1N1) (% of influenza positives)	-	-
Influenza A (H3) (% of influenza positives)	5 (50.0%)	22 (91.7%)
Influenza A not yet subtyped (% of influenza positives)	1 (10.0%)	-
Influenza B Yamagata (% of influenza positives)	2 (20.0%)	2 (8.3%)
Influenza B Victoria (% of influenza positives)	1 (10.0%)	-
Influenza B not yet subtyped (% of influenza positives)	1 (10.0%)	-

Week 6 by Lab Event Date* as reported by 10:00 a.m. February 18, 2015

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, 2012 to Week 6, 2015 as Accessed in Merlin by 10:00 a.m. February 18, 2015

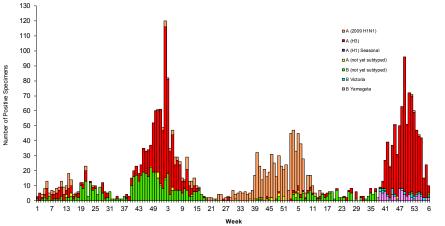
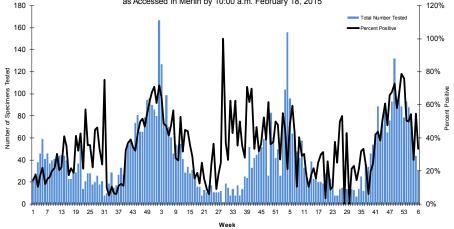


FIGURE 13: Number of Specimens Tested by Florida Bureau of Public Health Laboratories (BPHL) and Percent Positive for Influenza by Lab Event Date* Week 1, 2012 to Week 6, 2015 as Accessed in Merlin by 10:00 a.m. February 18, 2015



*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 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.

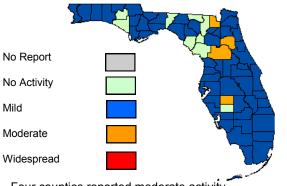
The drifted influenza A (H3) strain has been detected in Florida.

County Influenza and ILI Activity

As of 11:30 a.m. February 18, 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.*

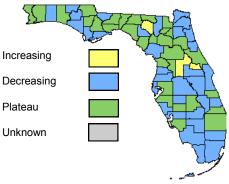
TABLE 3: Weekly County Influenza Activity for Week 6 (ending February 14, 2015) as Reported by 11:30 a.m. February 18, 2015					
Activity Level	Week 6 Number of Counties	Week 5 Number of Counties	Week 6 Counties		
No Report	0	0	-		
No Activity	9	8	Bay, Columbia, Desoto, Dixie, Gilchrist, Hamilton, Jefferson, Levy, Washington		
Mild	54	53	Alachua, Bradford, Brevard, Broward, Calhoun, Charlotte, Citrus, Clay, Collier, Dade, Duval, Escambia, Flagler, Franklin, Gadsden, Glades, Gulf, Hendry, Hernando, Highlands, Hillsborough, Holmes, Indian River, Jackson, Lafayette, Lake, Lee, Leon, Liberty, Madison, Manatee, Martin, Monroe, Nassau, Okaloosa, Okeechobee, Orange, Osceola, Palm Beach, Pasco, Pinellas, Polk, Santa Rosa, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, Suwannee, Taylor, Union, Volusia, Wakulla, Walton		
Moderate	4	6	Baker, Hardee, Marion, Putnam		
Widespread	0	0	-		

Map 4: Weekly County Influenza Activity Level for Week 6 Reported by 11:30 a.m. February 18, 2015



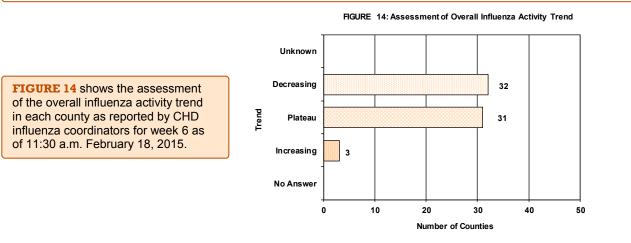
Four counties reported moderate activity.

Map 5: Weekly County Influenza Activity Trend for Week 6 Reported by 11:30 a.m. February 18, 2015



Three 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 6, 32 counties indicated that activity was decreasing, 31 indicated activity was about the same as previous weeks and three 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.

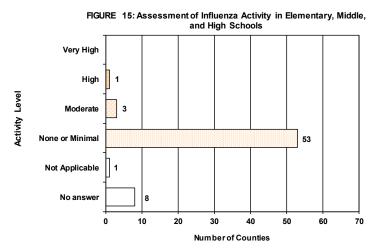
No or very minimal activity -- Scattered cases of ILI with no increase in absenteeism or disruption of school activities.

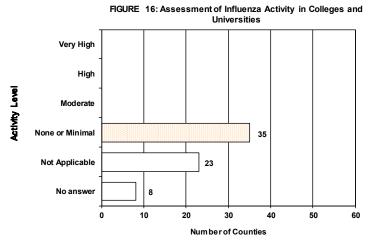
Moderate activity -- Absenteeism elevated above baseline (in range of 10 to 25%) in some but fewer than half of schools where it is known; occasional children sent home because of ILI.

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 6 as of 11:30 a.m., February 18, 2015.





 $\label{eq:FIGURE-17} \textit{FIGURE-17}: Assessment of Influenza Activity in Jails/Prisons$

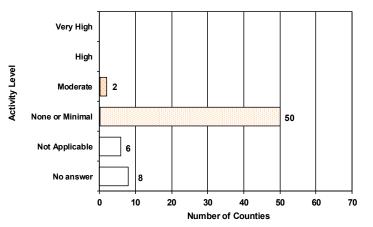
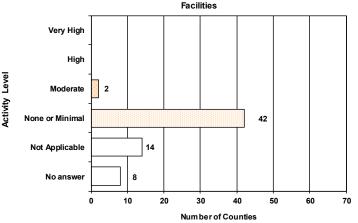
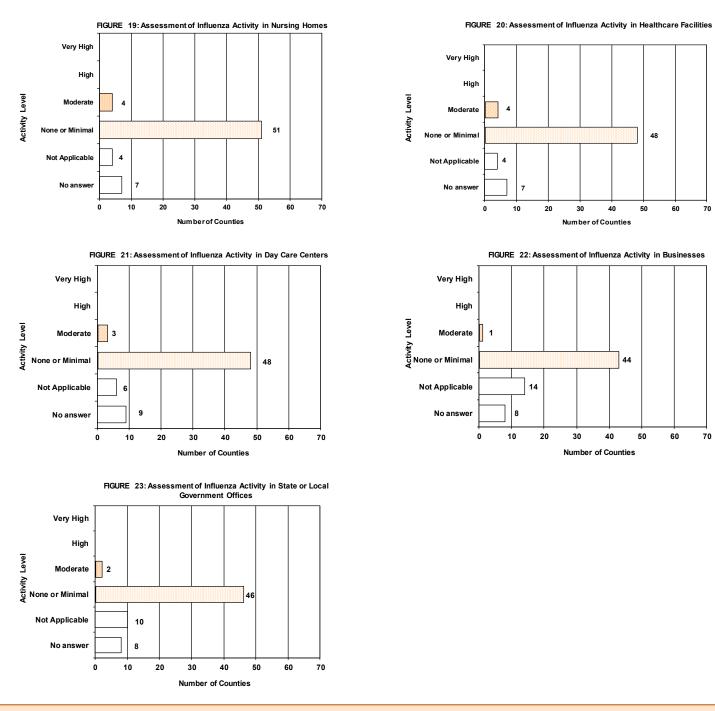


FIGURE 18: Assessment of Influenza Activity in Retirement



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 6 as of 11:30 a.m., February 18, 2015.



Pediatric Influenza-Associated Mortality

No influenza-associated pediatric deaths were reported in week 6.

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 5, 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 5 (ending Feb 7, 2015):

- 252 preliminary estimated P&I deaths were reported.
- Upper bound of 95% confidence interval for prediction: 275 deaths.
- No excess deaths.
- It is common that flu deaths reach higher levels later in the season since mortality tends to lag behind other indicators.

FIGURE 25 shows P&I deaths for all Florida counties, week 40, 2010 - week 6, 2015, as reported into ESSENCE-FL.

As of week 6 (ending Feb 14, 2015):

- 4,553 P&I deaths have been reported so far in the 2014-15 influenza season.
- After having been elevated, the number of P&I deaths has decreased in recent weeks.

FIGURE 26 shows P&I deaths for all Florida counties by age group, week 40, 2012 - week 6, 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 65 and older age group.

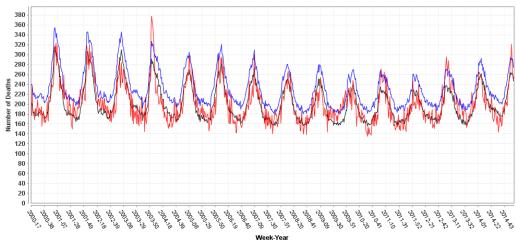
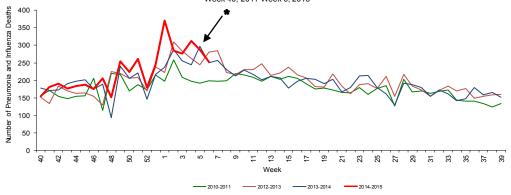
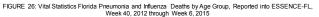


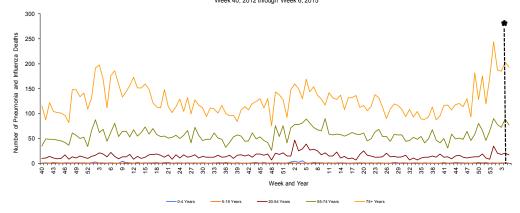
Figure 24: Vital Statistics Statewide Pneumonia and Influenza Deaths, Multi-Year Regression Model Week 17, 2000 - Week 5, 2015, Reported into ESSENCE-FL



FIGURE 25: Vital Statistics Statewide Pneumonia and Influenza Deaths, Reported into ESSENCE-FL, Week 40, 2011-Week 6, 2015







Death records data reported into ESSENCE-FL are currently considered to be complete through week 5, 2015.

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 6.

FIGURE 27 shows the percentage of positive tests for multiple respiratory viruses reported by NREVSS-participating laboratories in Florida.

Figure 27: Percentage of Positive Respiratory Virus Tests as Collected by NREVSS, Florida Week 40, 2012 to Week 6, 2015, as of February 18, 2015

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

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Percent

In week 6, 2015, four outbreaks of influenza or ILI were reported in to EpiCom.

Baker County

- An adult living facility reported three residents and two staff with ILI. All three ill residents were hospitalized. Two specimens were collected
 and tested positive for influenza and one specimen tested positive for influenza A. One of the two ill staff and two of the three ill residents
 had declined 2014-15 influnza vaccination. The 2014-15 influenza vaccination rate was reported as high among residents and 50% among
 staff. Antiviral treatment was administered to all ill residents and prophylaxis was provided to all non-ill residents in the affected area of the
 facility. This investigation is closed.
- An adult living facility reported six residents with ILI. Specimens from all six ill residents were collected and tested positive for influenza A by rapid antigen test at local healthcare providers. All six residents were started on antiviral treatment. The 2014-15 influenza vaccination rate was 100% among residents and 26% among staff. Infection control measures were reviewed with facility leadership. This investigation is closed.

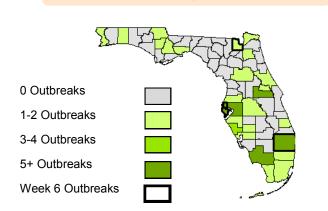
Palm Beach County

An assisted living facility reported 11 residents and two staff with ILI. One ill resident was hospitalized. Specimens from four ill residents were collected and two tested positive for influenza A at local healthcare providers. The 2014-15 influenza vaccination rate was 96% among residents and 37% among staff. Antiviral treatment was administered to all ill residents and chemoprophylaxis was administered to all non-ill residents and staff. Infection control measures were reviewed with facility leadership. No new cases have been reported. This investigation is closed.

Pinellas County

A long term care facility reported five residents and four staff with ILI. Specimen from all five ill residents were collected, four specimens
tested negative for influenza and one specimen tested positive for influenza A at local healthcare providers. Infection control measures
were reviewed with facility leadership. No new cases have been reported. This investigation is closed.

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



Map 6: Influenza and ILI Outbreaks by County Week 6, 2015

Influenza and ILI Outbreaks (Continued)

TABLE 4 : Summary of Florida Influenza and ILI Outbreaks by Facility Status, Week 40-6, 2015

Setting	Number of outbreaks	Implicated Viruses
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	3	 Two outbreaks due to influenza A (H3) One outbreak due to influenza A unspecified and influenza B unspecified
Mental health facilities	1	One outbreak, virus information not yet available
Nursing homes and long term care facilities	63	 Seven outbreaks due to influenza A (H3) Forty 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 Two outbreaks due to influenza A (U3) and rhinovirus Two outbreaks due to influenza A (2009 H1N1) One outbreak due to influenza B Yamagata One outbreak due to influenza B unspecified One outbreak due to influenza B unspecified Six outbreaks, virus information not yet available
Rehabilitation facilities	1	 One outbreak due to influenza A unspecified
Schools	14	 Two outbreaks 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
Colleges and universities, private businesses, local and state government offices, retirement homes, healthcare facilities, other	0	No outbreaks
Total	91	 Fourteen outbreaks due to influenza A (H3) Fifty-one outbreaks due to influenza A unspecified Seven outbreaks due to influenza A unspecified and influenza B unspecified One outbreaks due to influenza A (H3) and rhinovirus Two outbreaks due to influenza A (H3) and rhinovirus Two outbreaks due to influenza A (2009 H1N1) One outbreak due to influenza B Yamagata One outbreaks due to influenza B unspecified Two outbreaks due to influenza B Inspecified Two outbreaks due to parainfluenza III Ten 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