## Week 19: May 10 - May 16, 2015

## Summary

## National influenza activity:

Influenza activity continues to decrease 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 offers reduced protection. Individuals at high risk of complications from influenza infection with suspected influenza 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.
- The overall hospitalization rate for the season (Between October 1, 2014 and April 30, 2015) was 65.4 per 100,000 population. The highest rate of hospitalization was among adults aged $\geq 65$ years ( 322.2 per 100,000 population), this is the hospitalization rate recorded since data collection on laboratory-confirmed influenza-associated hospitalization in adults began during the 2005-2006 season. Higher morbidity and mortality is expected in years where H 3 N 2 is the predominately circulating strain.
State Influenza and influenza-like illness (ILI) activity:
- Influenza activity continues to decline overall or remain at low levels across the state.
- This season, influenza and ILI activity started early and 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 adults $\geq 65$ years old.
- 75 ( $71 \%$ ) of reported outbreaks of ILI have been in facilities primarily serving adults $\geq 65$ years old.
- Most Florida counties are reporting mild influenza activity. In week 19, 33 counties reported decreasing influenza activity; 33 counties indicated activity is at a plateau.
- Emergency department (ED) and urgent care center (UCC) ILI visits have decreased in recent weeks and are slightly below levels typical for this time of year. The number of pneumonia and influenza (P\&I) associated deaths have declined overall in recent weeks and are above levels seen in previous years at this time.
- In Florida, the most common influenza subtype detected at the Bureau of Public Health Laboratories (BPHL) in recent weeks has been influenza B although influenza $A(H 3)$ has been the predominantly circulating strain for the majority of the season. The increase in influenza $B$ late in the season follows previous yearly trends.
- In the past week, three ( $23.1 \%$ ) of 13 specimens submitted to BPHL for influenza testing were PCR positive for seasonal strains of influenza: one was positive for influenza B Yamagata lineage, and two were influenza B not yet subtyped.
- No outbreaks of influenza-like illness (two or more cases of influenza or ILI in a specific setting) were reported to EpiCom in week 19.
- No pediatric influenza-associated deaths were reported in week 19.


## Map 1: County Influenza Activity Week 19, 2015 <br> 

Thirty-three counties reported mild influenza activity. For more information, see page 7.

Map 2: Influenza and ILI Outbreaks Week 19, 2015


One hundred and five outbreaks of ILI or influenza have been reported since Week 40, 2014. For more information, see page 11.

## May 20, 2015

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http://www.floridahealth.gov/floridaflu
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Florida ILI Surveillance SystemSummary12

Descriptions of Florida influenza and ILI surveillance systems can be found on page 12.
TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 19

| Measure | Difference from Previous Week | Current Week 19 | Previous Week 18 | Page of Report |
| :---: | :---: | :---: | :---: | :---: |
| Overall statewide activity code reported to CDC | No Change | Sporadic | Sporadic | 1 |
| Percent of visits to ILINet providers for ILI | V 0.2\% | 0.7\% | 0.9\% | 2 |
| Percent of ED and UCC visits (from ESSENCE-FL) due to ILI | V 0.1\% | 1.5\% | 1.6\% | 3 |
| Percent of laboratory specimens that were positive for influenza | - $4.9 \%$ | 23.1\% | 18.2\% | 6 |
| Number of counties reporting moderate influenza activity | No Change | 1 | 1 | 7 |
| Number of counties reporting widespread influenza activity | No Change | 0 | 0 | 7 |
| Number of counties reporting increasing influenza activity | V 1 | 2 | 3 | 7 |
| Number of counties reporting decreasing influenza activity | - 1 | 35 | 34 | 7 |
| Number of ILI outbreaks reported in EpiCom | No Change | 0 | 0 | 11 |

## 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.

In week 19, percent of visits to ILINet sentinel providers for ILI decreased and is slightly 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 19, the number of ILI visits to ILINet sentinel providers has increased in the 0-4 age group, and has decreased in all other age groups.


$\dagger$ 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 $>100^{\circ} \mathrm{F}$ AND sore throat and/or cough in the absence of another known cause.

ESSENCE-FL collects data daily from 236 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.

In week 19, the percent of visits to EDs and UCCs for ILI is below 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 levels seen in previous years at this time.
In week 19, the proportion of ED and UCC visits for ILI has remained at lower levels for age groups.

FIGURE 3: Percentage of Influenza Like-IIIness Visits from Emergency Department (ED) and Urgent Care Center (UCC) Chief Complaints,
ESSENCE-FLParticipating Facilities $(\mathrm{N}=236)$, Week 40, 2011 Through Week 19, 2015 Accessed May 20, 2015 ESSENCE-FLParticipating Facilities ( $\mathrm{N}=236$ ), Week 40, 2011 Through Week 19, 2015 Accessed May 20, 2015
 Participating Facilities ( $\mathrm{N}=236$ ), Week 40, 2011 Through Week 19, 2015 Accessed May 20, 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), May 20, 2015 ( $\mathrm{N}=236$ )


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


ED and UCC visits for ILI in RDSTF Regions 2, 4 and 6 are at or near levels seen in previous years at this time.
ED and UCC visits for ILI in RDSTF Regions 1, 3, 5 and 7 are slightly below levels seen in previous years at this time.




[^0]ESSENCE-FL collects data daily from 236 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. The Department of Heath (DOH) uses ED and UCC chief complaint data to monitor influenza and ILI activity in a timely manner in groups at higher risk of severe heath outcomes (such as hospitalization and death) from influenza infection. These at-risk groups include pregnant women, children $\leq 18$ years old and adults $\geq 65$ years old.

FIGURE 12 shows ESSENCE-FL data on the number of visits* where influenza was mentioned in the chief complaint when presenting for care at EDs and UCCs by pregnant women.

In week 19, the number of visits* by pregnant women presenting to EDs and UCCs with mention of influenza is below levels seen in previous years at this time.
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/ Other/influenza-guidance-for-health-care-providers.pdf.

FIGURE 13 shows the percentage of ILI among all ED and UCC visits for children $\leq 18$ years old.

The percent of ED and UCC visits for ILI in children $\leq 18$ years old is below levels seen in previous years at this time.

FIGURE 14 shows the percentage of ILI among all ED and UCC visits for adults $\geq 65$ years old.

The percent of ED and UCC visits for ILI in adults $\geq 65$ years old is at or near levels seen in previous years at this time.

FIGURE 12: Influenza Visits by Pregnant Women* to Emergency Department (ED) and Urgent Care Center (UCC) Chief Complaints, ESSENCE-FLParticipating Facilities (N=236), Week 40, 2011 Through Week 19, 2015 Accessed May 20, 2015


* This count under-represents the true number of pregnant women presenting for care to EDs and UCCs with influenza and under-represents the true number of pregnant women seeking care for influenza. The overall trend has been validated through review of hospital discharge data collected by the Agency for Health Care Administration.


FIGURE 14: Percentage of ILI Visits from Emergency Department (ED) and Urgent Care Center (UCC) Chief Complaints in Adults $\geq 65$ Years Old, ESSENCE-FLParticipating Facilities ( $\mathrm{N}=236$ ), Week 40, 2011 Through

Week 19, 2015 Accessed May 20, 2015


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

FIGURE 15 - FIGURE 18 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 BPHL, what proportion of those test positive for influenza and what subtypes are identified.

Influenza A and influenza B have been identified by BPHL this season.
In recent weeks, influenza specimens submitted to BPHL tested positive for influenza $A(\mathrm{H} 3)$, influenza B Yamagata lineage, and influenza B Victoria lineage.
Overall, influenza A (H3) has been the most common strain of influenza detected by BPHL so far in the 20142015 influenza season, although in recent weeks, a greater proportion of influenza $B$ viruses have been isolated.
The drifted influenza A (H3) strain has been detected in Florida.

Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for

| Week 19 by Lab Event Date* as reported by 10:00 a.m. May 20, 2015 |  |  |
| :--- | :---: | :---: |
|  | Current <br> Week 19 | Previous <br> Week 18 |
| Total Specimens Tested | $\mathbf{1 3}$ | $\mathbf{2 2}$ |
| Influenza positive specimens (\% of total) | $3(23.1 \%)$ | $4(18.2 \%)$ |
| Influenza A (2009 H1N1) (\% of influenza positives) | - | - |
| Influenza A (H3) (\% of influenza positives) | - | - |
| Influenza A not yet subtyped (\% of influenza positives) | - | - |
| Influenza B Yamagata (\% of influenza positives) | $1(33.3 \%)$ | $4(100 \%)$ |
| Influenza B Victoria (\% of influenza positives) | - | - |
| Influenza B not yet subtyped (\% of influenza positives) | $2(66.7 \%)$ | - |

FIGURE 15: Number of Influenza-Positive Specimens Tested by the Florida Bureau of Public Health Laboratories (BPHL) by Subtype by Lab Event Date*, Week 1, 2012 Through Week 19, 2015 as Accessed in Merlin by 10:00 a.m. May 20, 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

As of 11:30 a.m. May 20, 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 19 (ending May 16, 2015) as Reported by 11:30 a.m. May 20, 2015

| Activity Level | Week 19 <br> Number of <br> Counties | Week 18 <br> Number of <br> Counties | Week 19 Counties |
| :--- | :---: | :---: | :--- |

Map 4: Weekly County Influenza Activity Level for Week 19 Reported by 11:30 a.m. May 20, 2015


Thirty-three counties reported mild activity in week 19.

Map 5: Weekly County Influenza Activity Trend for Week 19 Reported by 11:30 a.m. May 20, 2015


Thirty-five counties reported decreasing influenza and ILI activity in week 19.

County influenza activity data are reported 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 17-26, 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 19, 35 counties indicated that activity was decreasing, 30 indicated activity was about the same as previous weeks and two indicated that activity was increasing.

FIGURE 17 shows the assessment of the overall influenza activity trend in each county as reported by CHD influenza coordinators for week 19 as of 11:30 a.m. May 20, 2015.

FIGURE 17: Assessment of Overall Influenza Activity Trend


Counties are asked to evaluate influenza activity in certain facilities within their county. Each facility 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.

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 18 - FIGURE 21 show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 19 as of 11:30 a.m., May 20, 2015.


FGGURE 20: Assessment of Influenza Activity in Jails/Prisons


FIGURE 19: Assessment of Influenza Activity in Colleges and


FIGURE 21:Assessment of Influenza Activity in Retirement


FIGURE 22 - FIGURE 26 show the activity levels in various facilities by county as reported by CHD influenza coordinators for week 19 as of 11:30 a.m., May 20, 2015.



FGURE 26: Assessment of Influenza Activity in State or Local Government Offices


FIGURE 23: Assessment of Influenza Activity in Healthcare Facilities


## Pediatric Influenza-Associated Mortality

No influenza-associated pediatric deaths were reported in week 19.
Three influenza-associated pediatric deaths have been reported so far in the 2014-15 influenza season.

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 18, 2015.

FIGURE 27 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 18:

- 204 preliminary estimated P\&I deaths were reported.
- Upper bound of $95 \%$ confidence interval for prediction is 224 deaths.
- No excess deaths.
- Flu deaths commonly reach higher levels later in the season since mortality tends to lag behind other indicators.

FIGURE 28 shows P\&I deaths for all Florida counties, week 40, 2010 through week 19, 2015, as reported into ESSENCE-FL.

## As of week 19:

- 7,794 P\&I deaths have been reported so far in Florida during the 2014-15 influenza season.
- The number of P\&I deaths are above levels seen in previous years at this time.

FIGURE 29 shows P\&I deaths for all Florida counties by age group, week 40, 2012 through week 19, 2015, as reported into ESSENCE-FL.

- The number of P\&I deaths reported in recent weeks has decreased overall in adults $\geq 75$ years old but is slightly above levels seen in previous years at this time.
- The number of P\&I deaths is similar in all other age groups to levels seen in previous years at this time.
- Seasons where influenza A (H3) is the predominantly circulating strain are associated with higher mortality and morbidity, particularly in adults $\geq 65$ years old.



FIGURE 29: Vital Statistics Florida Pneumonia and Influenza Deaths by Age Group, Week 40, 2012 Through Week 19, 2015 Accessed via ESSENCE-FL, May 20, 2015


* Death records data reported into ESSENCE-FL are currently considered to be complete through week 18, 2015.

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.

FIGURE 30 shows the percentage of positive tests for multiple respiratory viruses reported by NREVSSparticipating 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 19, 2015, no outbreaks of influenza or ILI were reported in to EpiCom.

Map 6: Influenza and ILI Outbreaks by County Week 19, 2015

- 105 outbreaks of influenza or ILI have been reported in to EpiCom so far in the 2014-2015 season.
- No outbreaks of ILI were reported in week 19.


TABLE 4 : Summary of Florida Influenza and ILI Outbreaks by Facility Status, Week 40-19, 2015

| Setting | Number of <br> outbreaks |  |
| :--- | :--- | :--- |
| Daycares |  |  |

## 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


[^0]:    *There is no week 53 for the 2010-2011, 2011-2012, and 2013-2014 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

