



Summary

Week 42: October 18-24, 2015

National influenza activity:

- Influenza virus continues to circulate at low levels nationally.
- The predominantly circulating strain in recent weeks has shifted from influenza B to influenza A (H3), which is typical for this time of year.
- The Centers for Disease Control and Prevention (CDC) recommends vaccination as long as influenza viruses are circulating.
- Highly pathogenic avian influenza (HPAI) H5 viruses have been identified in U.S. backyard and commercial flocks of birds during the spring and summer of 2015. HPAI H5 has not been identified in Florida birds, but identifications are anticipated. No humans have been identified with HPAI infection in Florida or the rest of the nation.
 - To learn more about HPAI, please visit: <http://www.floridahealth.gov/diseases-and-conditions/diseases-from-animals/novel-influenza-viruses.html>

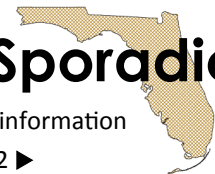
State Influenza and influenza-like illness (ILI) activity:

- Florida reported sporadic activity to the CDC in week 42.
- **Influenza activity has been increasing slightly in recent weeks but remains at low levels across the state.**
- Most Florida counties are reporting mild or no influenza activity. In week 42, eight counties reported moderate influenza activity.
- Statewide emergency department (ED) and urgent care center (UCC) ILI visits are below levels seen in previous years at this time, although ILI visits to EDs and UCCs in the South East are increasing, particularly in the 0-4 age group.
 - Influenza activity in children typically precedes activity in other age groups.
- One outbreak of influenza A was reported in week 42 in a Pinellas County assisted living facility.
- No influenza-associated pediatric deaths were reported in week 42.
 - No influenza-associated pediatric mortalities have been reported so far in the 2015-16 influenza season.
- The preliminary estimated number of deaths due to pneumonia and influenza is similar to levels seen in previous years at this time.
- The most common influenza subtype detected at the Bureau of Public Health Laboratories (BPHL) in recent weeks has been influenza A (H3).
 - In week 42, 22 specimens were submitted to BPHL for influenza testing and one (4.5%) was PCR positive for influenza A not yet subtyped.

Weekly State Influenza Activity

Sporadic

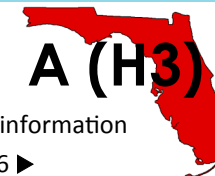
For more information
see page 2 ▶



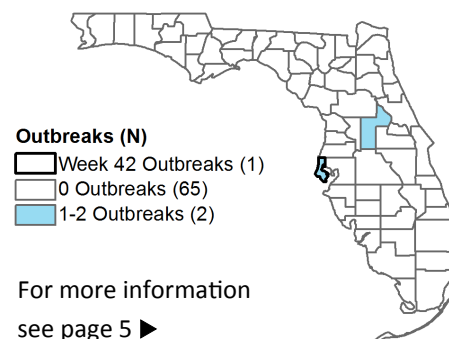
Predominately Circulating Strain

A (H3)

For more information
see page 6 ▶

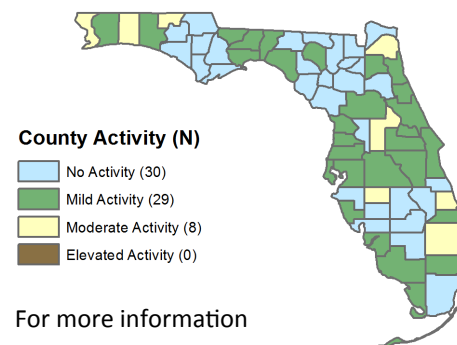


Influenza and ILI Outbreaks Reported Since 10/28/15



For more information
see page 5 ▶

County Influenza Activity



For more information
see page 4 ▶

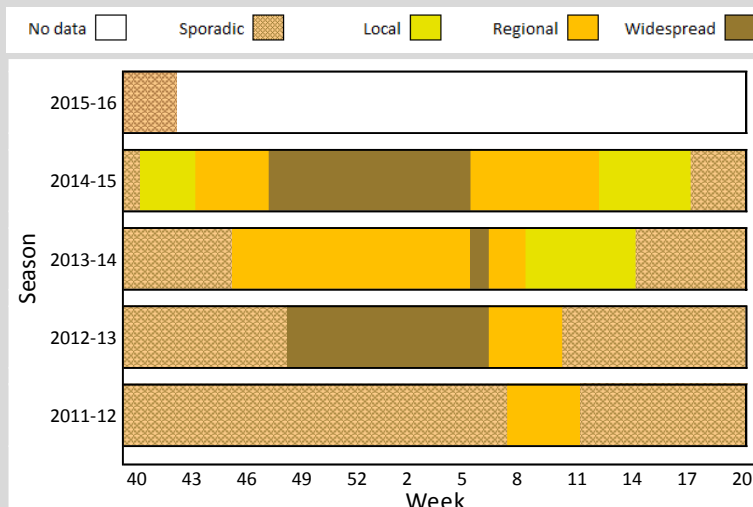
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Weekly State Influenza Activity Reporting

Below shows the state influenza activity level reported to CDC each week since the 2010-11 flu season. **Florida reported sporadic influenza activity for week 42.**



Influenza surveillance goals:

- Surveillance for influenza is conducted to detect changes in the influenza virus, which is used to help determine the vaccine composition each year as well as prepare for epidemics and pandemics.
- Surveillance is conducted to identify unusually severe presentations, detect outbreaks, and determine the seasonal influenza trends in order to assist with influenza prevention, particularly in high-risk populations like the very young, the elderly, and pregnant women.
- See the back page of this report for more information on influenza surveillance systems used in Florida: Page 11 ►

Statewide ILI Visits

Influenza-like illness (ILI) is defined as a fever >100°F AND sore throat and/or cough *in the absence* of another known cause.

ED and UCC Visits for ILI by Flu Season

ED = emergency department, UCC = urgent care center

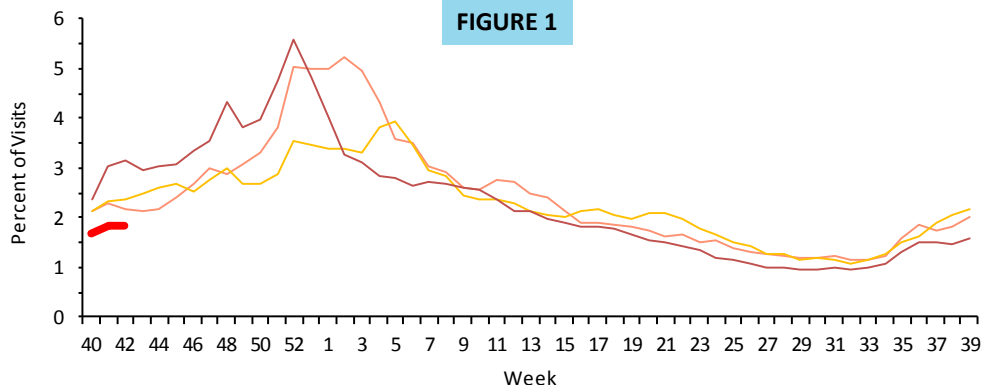


Figure 1 shows the percentage of influenza-like illness visits from emergency department (ED) and urgent care centers (UCC) chief complaints, of ESSENCE-FL participating facilities (N=258), week 40, 2011 through week 42, 2015 accessed October 28, 2015.

The percent of visits to EDs and UCCs for ILI is below levels seen in previous years at this time.



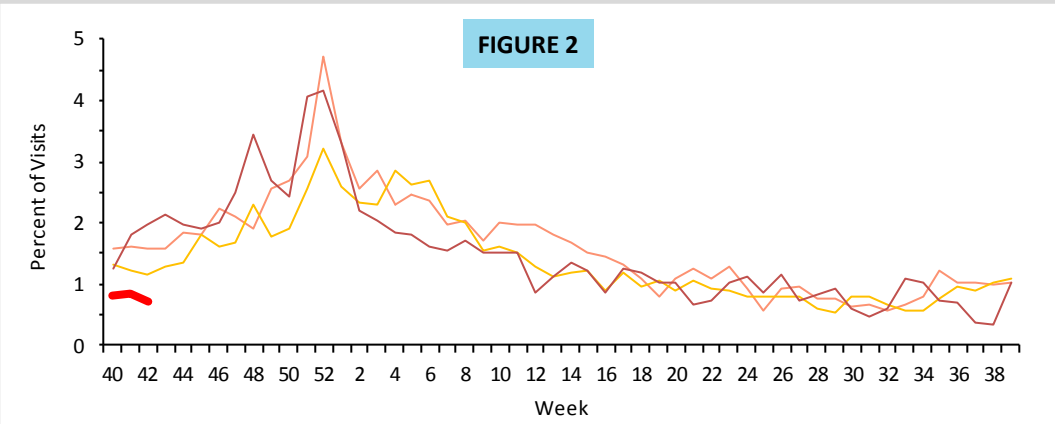


Visits for ILI to Outpatient Providers by Flu Season

ILI = influenza-like illness

Figure 2 shows the percent of visits for ILI reported by ILINet outpatient providers statewide (n=43), week 40, 2011 through week 42, 2015 accessed October 28, 2015.

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



P&I Deaths* from Vital Statistics by Flu Season

P&I = pneumonia and influenza

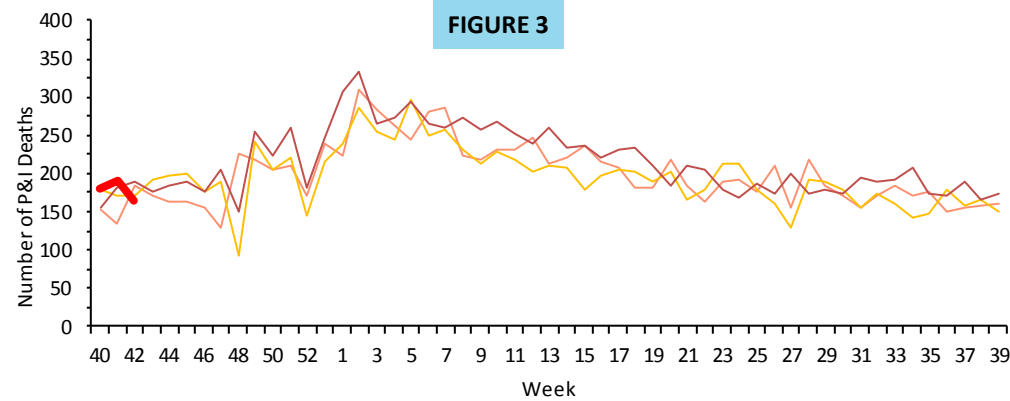


Figure 3 shows pneumonia and influenza (P&I) deaths for all Florida counties, week 40, 2010 - week 41, 2015, from the Bureau of Vital Statistics as reported into ESSENCE-FL.

As of week 41 (ending October 17, 2015), 537 P&I deaths have been reported in the 2015-16 influenza season.

The number of P&I deaths is similar to levels seen in previous years at this time.

P&I Deaths*, Multi-Year Regression Model

P&I = pneumonia and influenza

Figure 4 shows the count of preliminary estimated pneumonia and influenza (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.

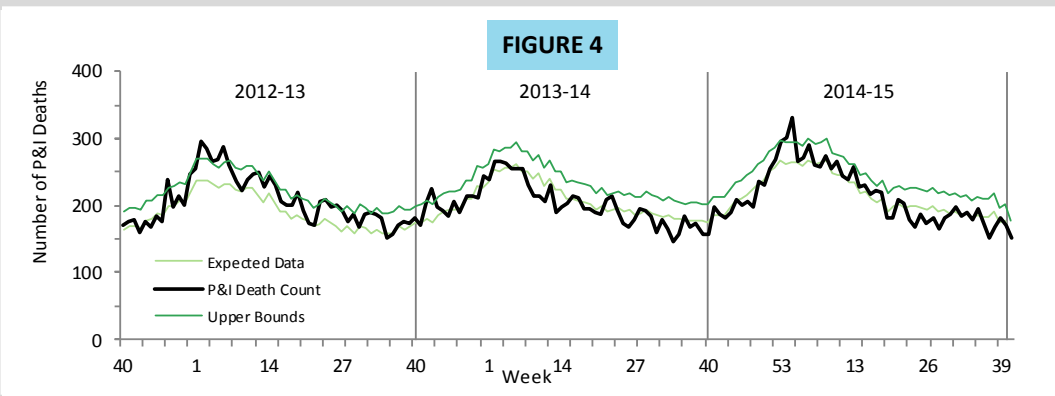
For week 41 (ending October 17, 2015):

153 preliminary estimated P&I deaths were reported.

Upper bound of 95% confidence interval for prediction is 177 deaths.

No excess deaths.

The number of P&I deaths is expected to increase as ILI activity increases throughout the season.



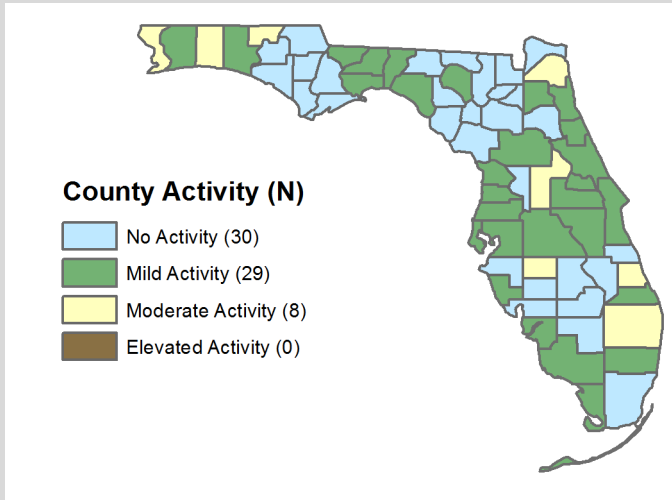
* Current season P&I death numbers are preliminary estimates, and may change as more data are received. *The most recent data available are displayed here. Vital statistics death records received in ESSENCE-FL are currently considered to be complete through week 41, 2015.*

County influenza activity data are reported to by county health departments through EpiGateway on a weekly basis by each county influenza coordinator. Information used to determine county activity includes: laboratory results, outbreak reports and ILI activity. **The figures 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 42, seven counties indicated that activity was increasing and 50 counties indicated that activity was at a plateau.**

County Influenza Activity

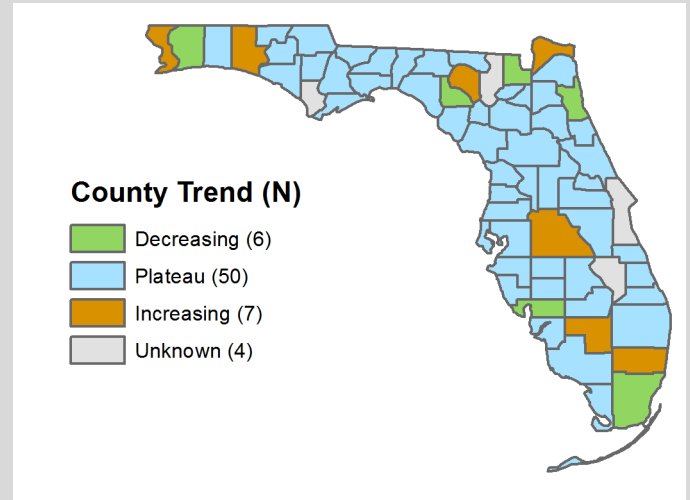
Map 1

County Influenza Activity Level for Week 42
Reported by 9:30 a.m. October 28, 2015



Map 2

County Influenza Activity Trend for Week 42
Reported by 9:30 a.m. October 28, 2015



As of 9:30 a.m. October 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 maps for this week.

Influenza-Associated Pediatric Deaths

Influenza-Associated Pediatric Deaths

ILI = influenza-like illness

FIGURES 5 - 7

In the 2015-16 flu season, there have been no influenza-associated pediatric deaths reported to the Department of Health.

Figures 5-7 show the number of pediatric deaths associated with influenza that have been reported since week 40, 2011 by influenza season.

Children, especially those with underlying health conditions are at higher risk of severe outcomes (including death) from influenza infection. The best way to prevent influenza in children is to get them vaccinated every year. For more information visit: <http://www.cdc.gov/flu/protect/whoshouldvax.htm#annual-vaccination>

Figure 5: Influenza-Associated Pediatric Deaths by Vaccination Status

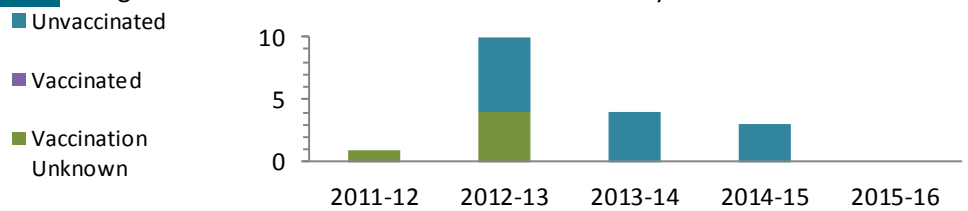


Figure 6: Influenza-Associated Pediatric Deaths by Medical History

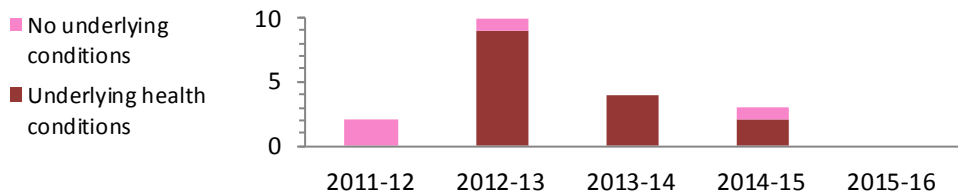
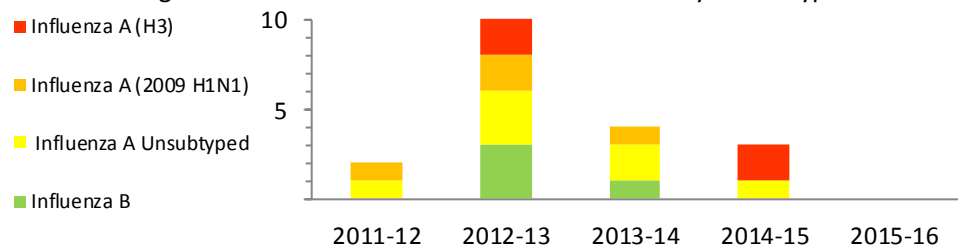


Figure 7: Influenza-Associated Pediatric Deaths by Strain Type



Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

Two outbreaks of influenza or ILI have been reported into EpiCom so far in the 2015-16 season.

Pinellas County

An assisted living facility reported 13 residents and two staff with ILI. Three residents were hospitalized. A specimen from one hospitalized resident tested positive for influenza A by rapid antigen test conducted by a local healthcare provider. The facility did not administer prophylaxis to non-ill residents or non-ill staff; ill persons are recovering from symptoms. Influenza vaccination for the 2015-16 season was given to 27 (40%) residents and an unknown number of staff six days after first report of illness. Infection control measures were reviewed with facility leadership. This investigation is ongoing.

Map 3 Influenza and ILI Outbreaks by County Week 42, 2015

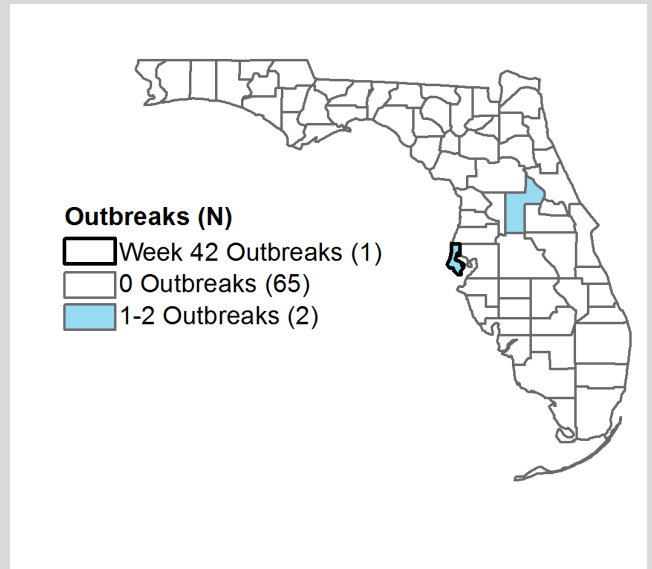


TABLE 1: Summary of Florida Influenza and ILI Outbreaks by Setting, Week 40-42, 2015

| Setting | Total | A (H3) | A (2009 H1N1) | A Unspecified | A & B Unspecified | B Yamagata | B Unspecified | Other respiratory viruses | Currently unknown virus |
|---|----------|----------|---------------|---------------|-------------------|------------|---------------|---------------------------|-------------------------|
| Schools | 1 | - | - | - | - | - | - | - | 1 |
| Daycares | - | - | - | - | - | - | - | - | - |
| Jails & prisons | - | - | - | - | - | - | - | - | - |
| Mental health facilities | - | - | - | - | - | - | - | - | - |
| Nursing homes & long term care facilities | 1 | - | - | 1 | - | - | - | - | - |
| Healthcare facilities | - | - | - | - | - | - | - | - | - |
| Other | - | - | - | - | - | - | - | - | - |
| Total | 2 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |

Reported Influenza and ILI Outbreaks by Facility Type

ILI = influenza-like illness

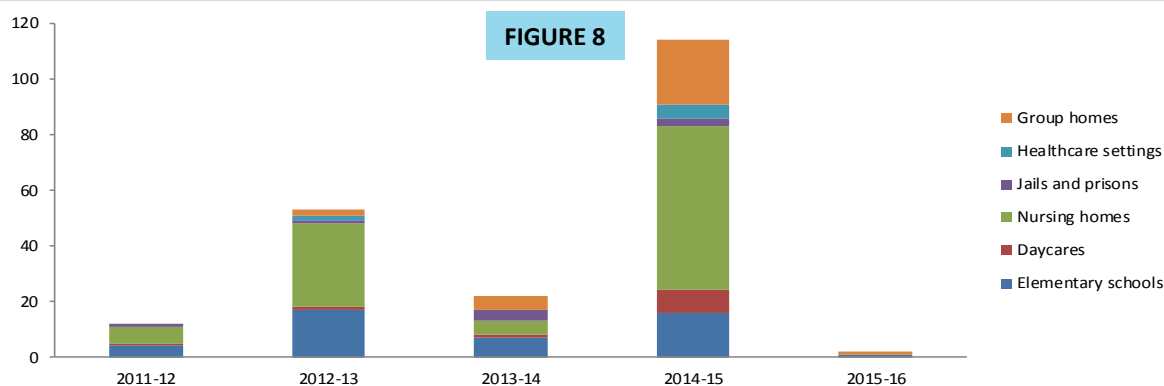
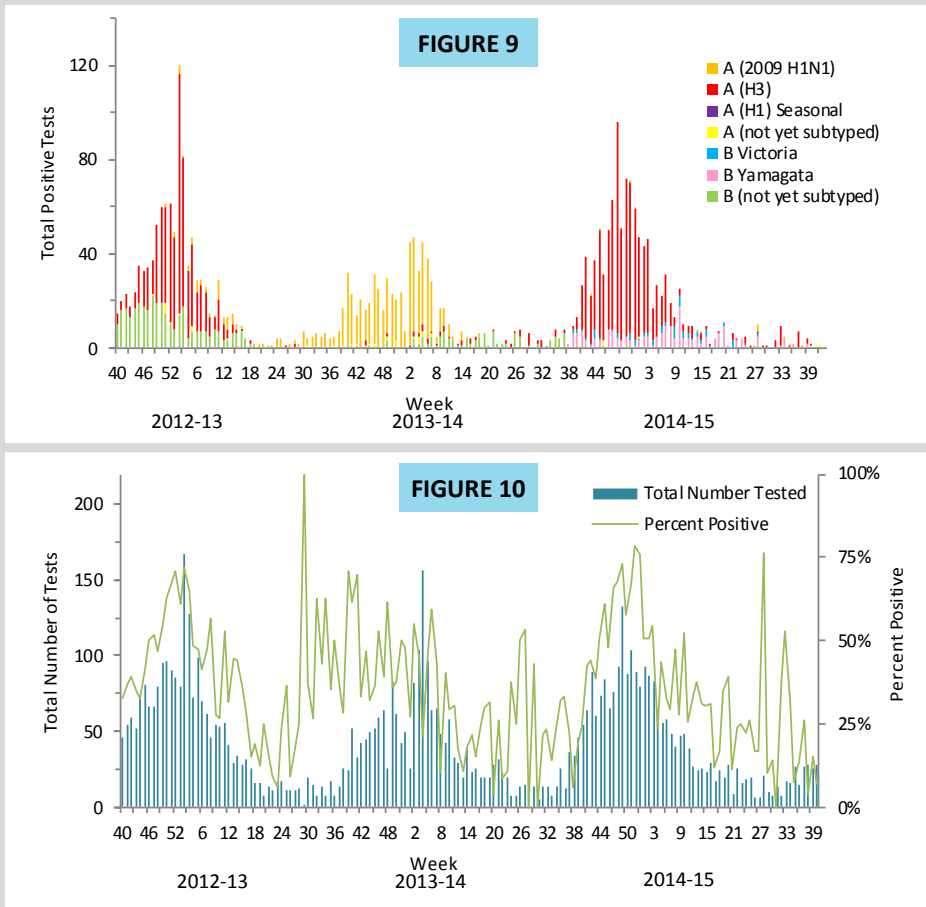


Figure 8 shows the distribution of outbreaks by facility type and season.

In Florida, influenza activity often increases in children and then moves through other age groups. As such, early season outbreaks are expected in facilities serving children, such as schools and daycares.

Viral Influenza Specimen Testing



These figures use Bureau of Public Health Laboratories (BPHL) viral surveillance data.

Figure 9 shows the number of influenza-positive specimens tested by subtype and lab event date*.

Figure 10 shows the number of specimens tested by BPHL and the percent positive by lab event date*.

In recent weeks, influenza specimens submitted to BPHL tested positive for influenza A (H3).

It is too early in the influenza season to predict what will be the predominately circulating strain in Florida for the 2015-16 season. However, influenza A (H3) has been the most commonly circulating virus identified by BPHL. This is consistent with the national trend.

TABLE 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for Week 42 by Lab Event Date* as reported by 10:00 a.m. October 28, 2015

| Specimen | Current Week 42 | Previous Week 41 | Current 2015-16 Season |
|---|-----------------|------------------|------------------------|
| Total Specimens Tested | 22 | 28 | 54 |
| Influenza positive specimens (% of total) | 1 (4.55%) | 1 (3.57%) | 4 (7.41%) |
| Influenza A (2009 H1N1) (% of influenza positives) | - | - | - |
| Influenza A (H3) (% of influenza positives) | - | - | 1 (25.0%) |
| Influenza A not yet subtyped (% of influenza positives) | 1 (100%) | 1 (100%) | 3 (75.0%) |
| Influenza B Yamagata (% of influenza positives) | - | - | - |
| Influenza B Victoria (% of influenza positives) | - | - | - |
| Influenza B not yet subtyped (% of influenza positives) | - | - | - |

*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.

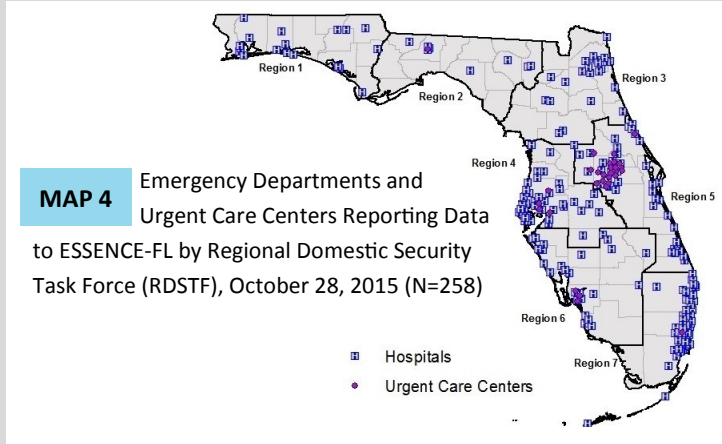
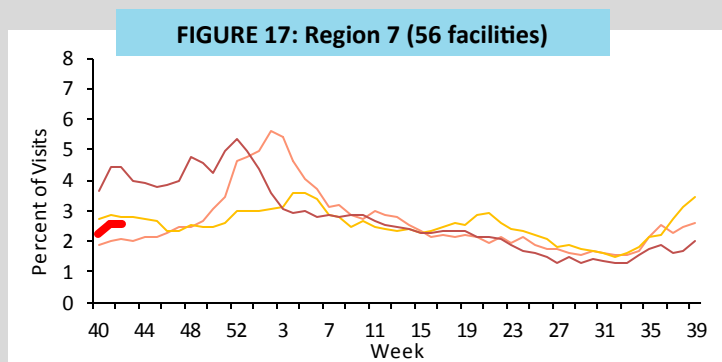
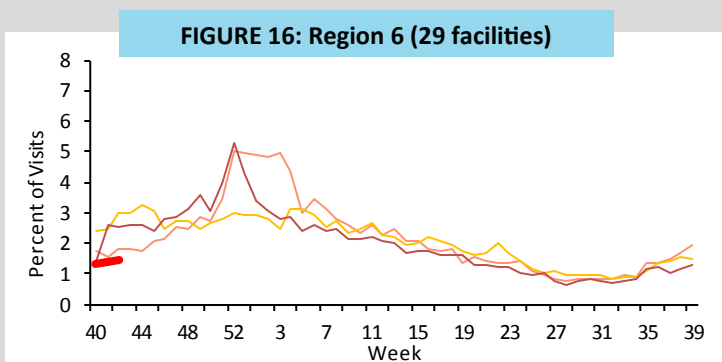
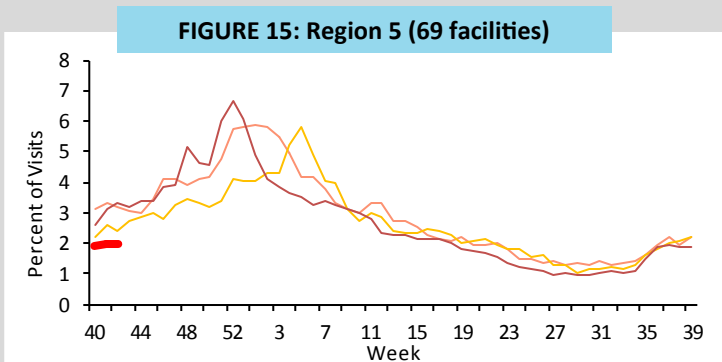
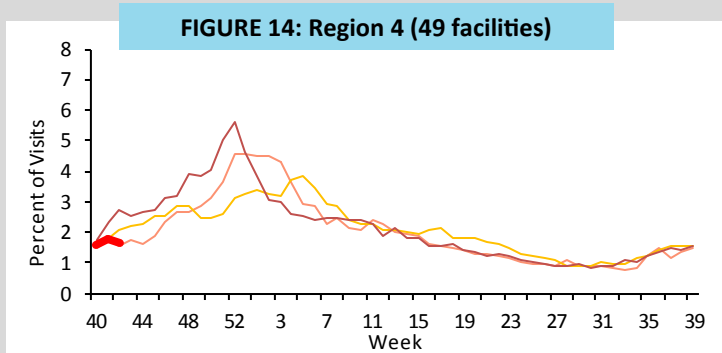
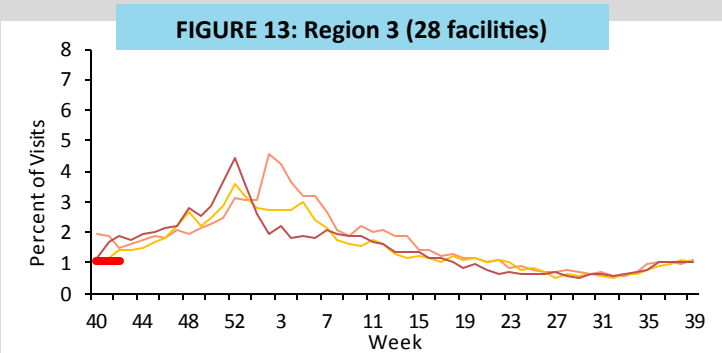
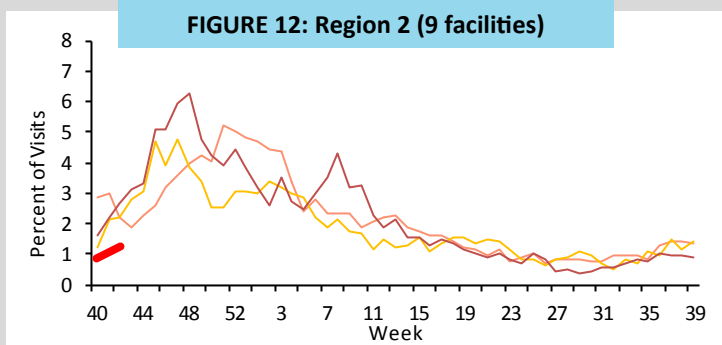
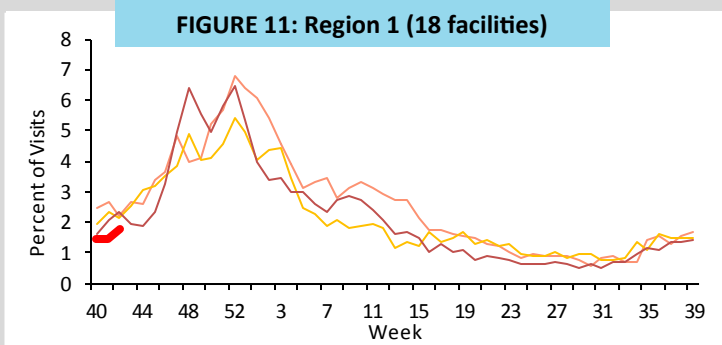
For county-specific laboratory data, please refer to the Flu Lab Report in Merlin. For instructions on how to use the Flu Lab Report, please see the Guide to Flu Lab Report on the Bureau of Epidemiology website:

http://www.floridahealth.gov/diseases-and-conditions/influenza/_documents/flulabreportguide.pdf

ED and UCC Visits by Region

ED = emergency department, UCC = urgent care center

Figures 11-17 show the percentage of influenza-like illness (ILI) visits from ED and UCC chief complaint data from ESSENCE-FL by Regional Domestic Security Task Force (RDSTF) regions (see map 4). Week 40, 2012 through week 42, 2015 data accessed October 28, 2015 is shown in each graph*. ED and UCC visits for ILI in all regions remains low and similar to previous years at this time.



*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.



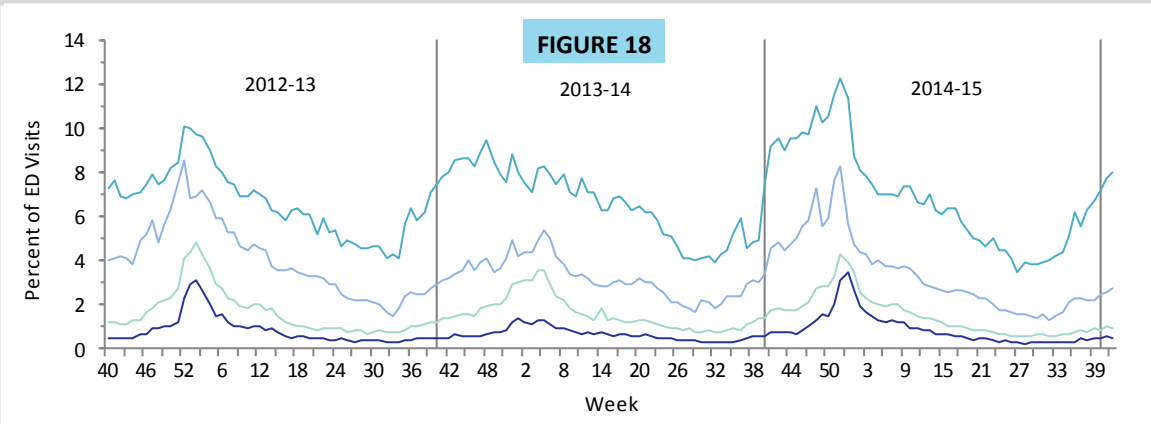
ED and UCC Visits for ILI by Age Group

ED = emergency department, UCC = urgent care center, ILI = influenza-like illness

Figure 18 shows the 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.

In recent weeks, the proportion of ED and UCC visits for ILI has increased most notably in the 0-4 age group.



Visits to Outpatient Providers for ILI by Age Group

ILI = influenza-like illness

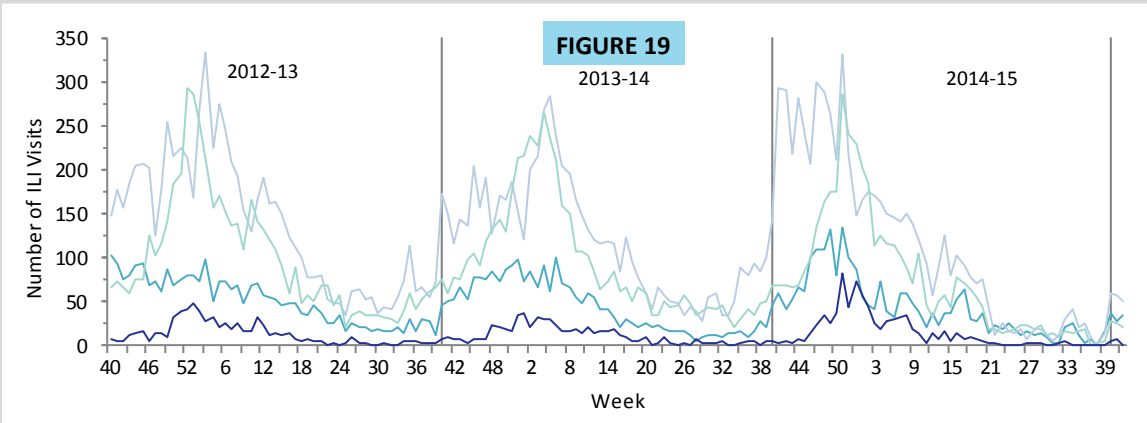


Figure 19 shows ILI visit counts reported by ILINet outpatient providers by age group.

The number of ILI visits to ILINet outpatient providers in week 42 has increased in the 0-4 age group and decreased in all other age groups.

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

P & I Deaths* from Vital Statistics by Age Group

P&I = pneumonia and influenza

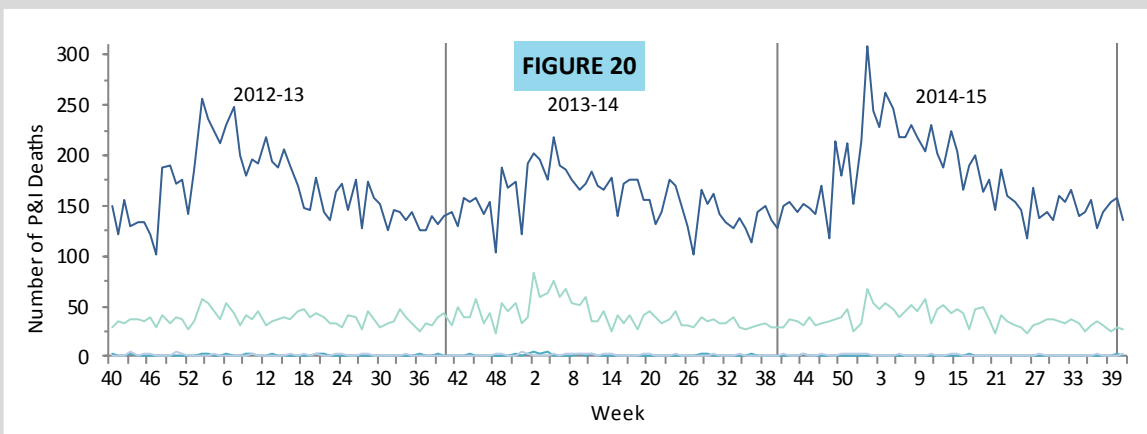


Figure 20 shows P&I deaths* for all Florida counties by age group, week 40, 2012 - week 41, 2015, as reported into ESSENCE-FL.

The number of P&I deaths reported in recent weeks is similar to levels seen in previous years in all age groups.

* 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. Vital statistics death records received in ESSENCE-FL are currently considered to be complete through week 41, 2015.

ESSENCE-FL collects data daily from 258 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. 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 health outcomes (such as hospitalization and death) from influenza infection. These at-risk groups include pregnant women, children ≤ 18 , and adults ≥ 65 years old.

— 2015-16
 — 2014-15
 — 2013-14
 — 2012-13

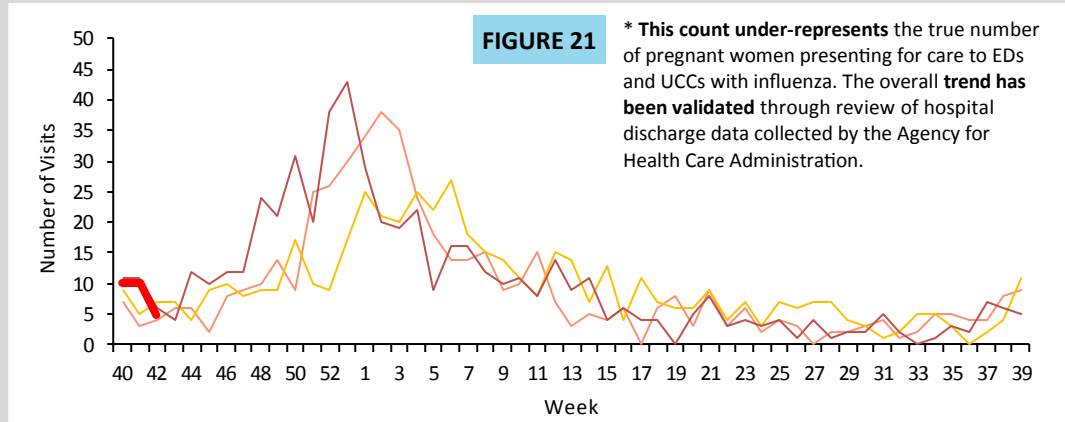
ED and UCC Visits for ILI by Pregnant Women

ED = emergency department, UCC = urgent care center, ILI = influenza-like illness

Pregnant women are among those at high risk for severe complications due to influenza infection.

Figure 21 shows the number of visits* to EDs and UCCs with chief complaints of influenza and pregnancy.

In week 42, the number of visits by pregnant women presenting to EDs and UCCs with mention of influenza is at or near levels seen in previous years at this time.



ED and UCC Visits for ILI by Children ≤ 18 Years Old

ED = emergency department, UCC = urgent care center, ILI = influenza-like illness

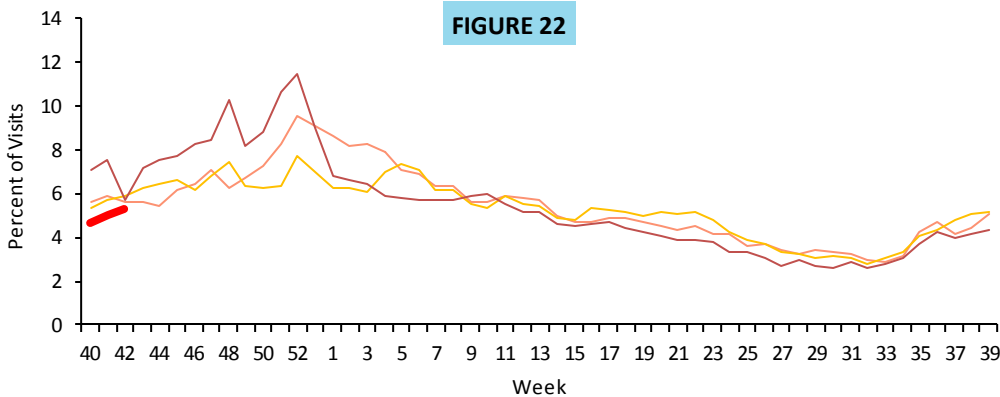


Figure 22 shows the percent of ILI among all ED and UCC visits for children ≤ 18 years old.

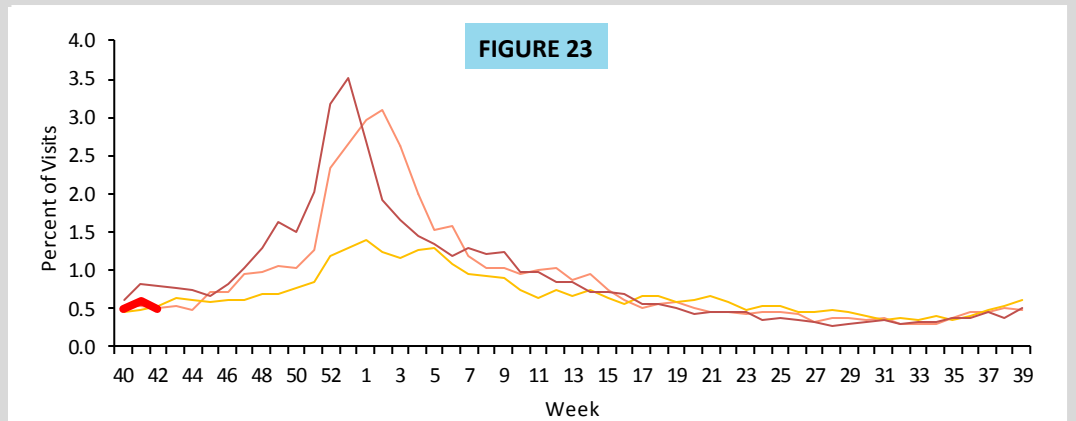
The percentage of ED and UCC visits for ILI in children ≤ 18 years old is below levels seen in previous years at this time.

ED and UCC Visits for ILI by Adults ≥ 65 Years Old

ED = emergency department, UCC = urgent care center, ILI = influenza-like illness

Figure 23 shows the percentage of ILI among all ED and UCC visits for adults ≥ 65 years old.

The percentage of ED and UCC visits for ILI in adults ≥ 65 years old is at or near levels seen in previous years at this time.



ILI Activity by Setting Type

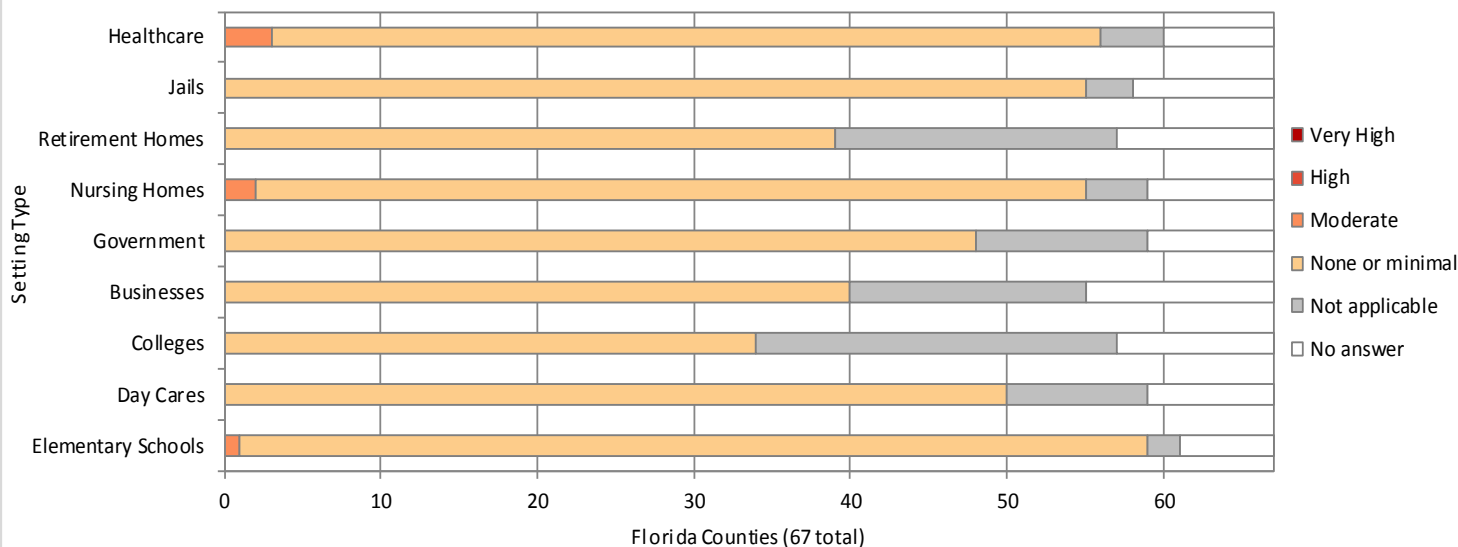
County health departments are asked to evaluate influenza activity in certain settings within their county. The assessment scale for activity ranges from no or minimal activity to very high activity.

Figure 24 shows the results of the influenza activity assessment for week 42, 2015 accessed October 28, 2015.

ILI activity levels:

- No or very minimal activity
- Moderate activity
- High activity
- Very high activity

FIGURE 24



Settings for Children under 18*

In elementary schools, one county (1.5%) reported moderate influenza and ILI activity.

In daycare settings, 50 counties (86%) reported none or minimal influenza and ILI activity.

Settings for Adults over 65*

In nursing homes, 53 counties (84%) reported none or minimal influenza and ILI activity.

In retirement homes, 39 counties (80%) reported none or minimal influenza and ILI activity.

Settings for Adults ages 18 to 65*

In colleges and universities, 34 (77%) counties reported none or minimal influenza and ILI activity.

In private businesses, 40 (77%) counties reported none or minimal influenza and ILI activity.

In government offices, 48 (86%) counties reported none or minimal influenza and ILI activity.

Other Unique settings*

In jails and prisons, 55 (86%) counties reported none or minimal influenza and ILI activity.

In healthcare settings, including rehabilitation facilities and mental health facilities, three counties (4.8%) reported moderate influenza and ILI activity.

*Counties that reported "not applicable" for the settings listed are excluded from the denominator in these calculations.

Viral Respiratory Surveillance with NREVSS Laboratories

NREVSS = National Respiratory and Enteric Viral Surveillance System

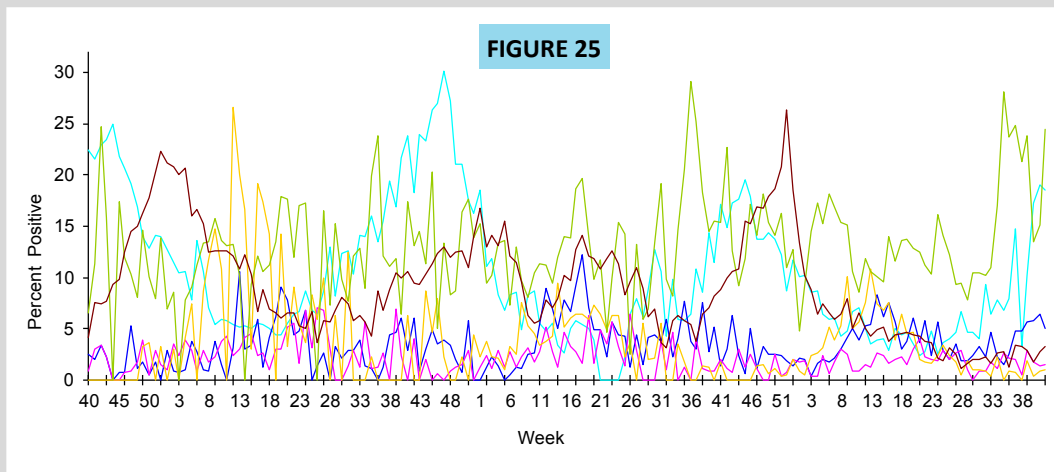
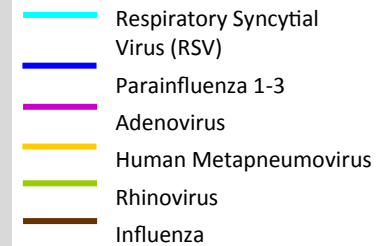


Figure 25 shows the percent of positive tests by respiratory virus type reported by NREVSS-participating laboratories (n=11) via electronic lab reporting (ELR) to the department of health.

In recent weeks, Respiratory Syncytial Virus (RSV) and Rhinovirus activity have increased sharply.



Florida ILI Surveillance System Summary

Florida ILINet · Data source for figures: 2 and 19

- ILINet is a nationwide surveillance system composed of sentinel providers, predominately outpatient healthcare providers. Florida has 88 sentinel providers enrolled in ILINet who submit weekly ILI and total visit counts, as well as submit ILI specimens to the Bureau of Public Health Labs (BPHL) for confirmatory testing.

ESSENCE-FL Syndromic Surveillance and Vital Statistics Portal · Data source for figures 1, 3-7, 11-18, 20-23; map 4

- ESSENCE-FL measures trends in ILI visits from emergency departments (ED) and urgent care clinics (UCC) and influenza mortality by using death certificates from the Bureau of Vital Statistics. EDs and UCCs electronically transmit visit data into ESSENCE-FL daily or hourly.
- For statewide and regional data on influenza-like illness, visits are counted as ED or UCC visits to participating facilities that include influenza-like illness in patient chief complaints.
- For pneumonia and influenza (P&I) surveillance, death record literals are queried 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.

County Influenza Activity in EpiGateway · Data source for figures 19, 24, and maps 1, 2

- 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 information is also reported. EpiGateway data provided by CHDs creates a county-by-county breakdown of influenza and ILI activity around the state.

Outbreak Reporting in EpiCom · Data source for figure 8, map 3, and table 1

- EpiCom tracks influenza and ILI outbreak investigations by county health departments. Reports by county health departments include the type of respiratory disease causing the outbreak and settings 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.

Bureau of Public Health Laboratories (BPHL) · Data source for figures 9,10 and table 2

- 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.
- 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 at www.floridahealth.gov/diseases-and-conditions/influenza/_documents/flulabreportguide.pdf.

National Respiratory and Enteric Virus Surveillance System (NREVSS) · Data source for figure 25

- 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.

Case-Based Influenza Surveillance

Pediatric Influenza-Associated Mortality (Merlin) Data source for figure 5-7

Influenza due to Novel or Pandemic Strains

- Deaths in children with laboratory-confirmed influenza infection and patients with influenza infection due to novel or pandemic strains are reportable in Florida. For more information about reportable diseases please visit www.Floridahealth.gov/diseasereporting