



Summary

Week 45: November 8-14, 2015

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

- Florida reported sporadic activity to the Centers for Disease Control and Prevention (CDC) in week 45.
- **Influenza activity has remained relatively stable in recent weeks.** While activity has remained low, these early season low activity levels are not uncommon and are not predictive of an overall mild influenza season.
 - Of concern, seasons where influenza A (H3) circulates predominantly are generally more severe, particularly in children <5 and adults ≥65 years old.
 - Statewide emergency department (ED) and urgent care center (UCC) ILI visits have remained stable in all age groups (for the last five weeks).
- The preliminary estimated number of deaths due to pneumonia and influenza is similar to levels seen in previous years at this time.
- All Florida counties reported mild or no influenza activity in week 45.
- No influenza-associated pediatric deaths were reported in week 45 and none have been reported so far during the 2015-16 influenza season.
- One outbreak of rhinovirus was reported in an assisted living facility in Pasco County in week 45.
- The proportion of specimens testing positive for influenza at the Bureau of Public Health Laboratories (BPHL) has remained low in recent weeks but is expected to increase as the 2015-16 influenza season progresses.
- Influenza A (H3) is the most commonly circulating virus identified by BPHL so far in the 2015-16 season.

National influenza activity:

- Influenza activity levels remain low nationally but are increasing.
- The predominantly circulating strain identified nationally so far this season is influenza A (H3). Other strains of influenza are also circulating, but at lower levels.
- The CDC recommends vaccination as long as influenza viruses are circulating.
 - To learn more, please visit: <http://www.cdc.gov/flu/weekly/>.
- 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 human HPAI infections have been identified in Florida or the rest of the nation.
 - To learn more about HPAI, please visit: www.floridahealth.gov/novelflu.

Weekly State Influenza Activity

Sporadic

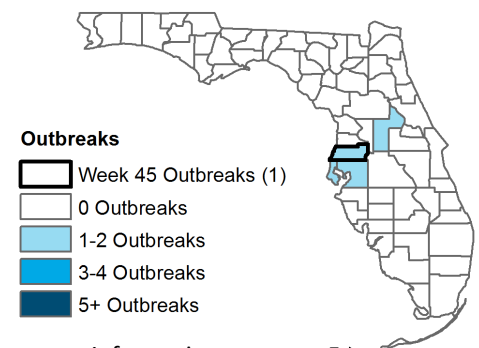
For more information
see page 2 ▶

A (H3)

For more information
see page 6 ▶

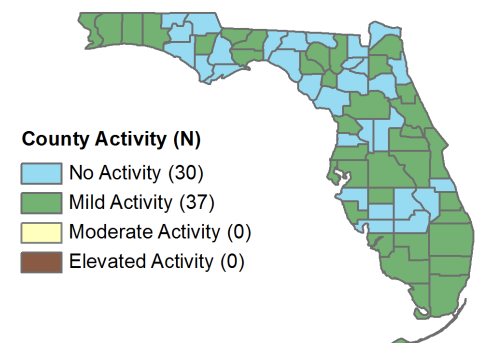
Predominately Circulating Strain

Influenza and ILI Outbreaks Reported as of 11/18/15



For more information see page 5 ▶

County Influenza Activity



For more information see page 4 ▶

**Table of Contents
on the next page ▶**

Table of Contents

In This Issue 2

Statewide ILI Visits 2

Statewide ILI Outpatient Visits and P&I Deaths 3

County influenza and ILI Activity Maps 4

Influenza-Associated Pediatric Deaths 4

ILI Activity and Outbreaks by Setting 5

Respiratory Virus Surveillance 6, 11

Regional ILI Visits 7

Age Groups: ILI Visits and P&I Deaths 8

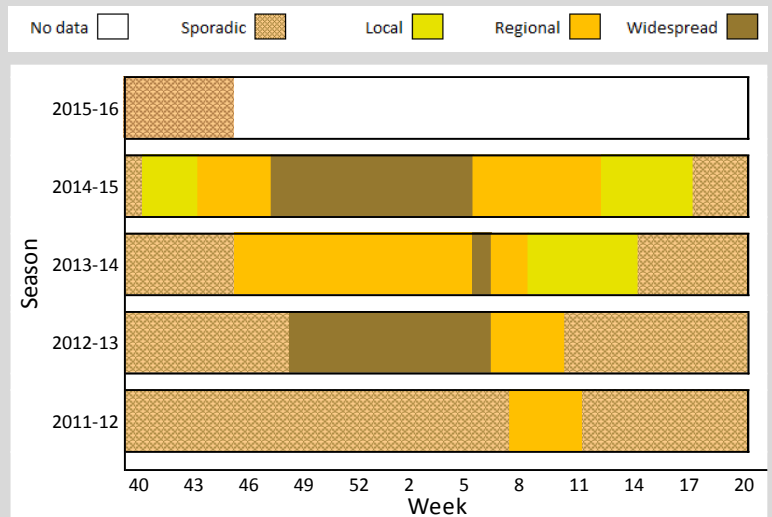
At-Risk Populations: ILI Visits 9

Setting ILI Activity by Population Type 10

Florida ILI Surveillance System Summary 11

Weekly State Influenza Activity Reporting

Below is the state influenza activity level reported to CDC each week since the 2011-12 influenza season. **Florida reported sporadic influenza activity for week 45.**



The graphic above shows how influenza activity in Florida can vary widely from year to year. This unpredictability underscores the importance of influenza surveillance in our state.

Influenza surveillance goals:

- Influenza surveillance is conducted to detect changes in the influenza virus, which is used to help determine the annual vaccine composition and to prepare for potential epidemics or pandemics.
- Surveillance is conducted to identify unusually severe presentations of influenza infection, detect outbreaks, and determine seasonal influenza trends in order to guide influenza prevention, particularly in high-risk populations like children, 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 $\geq 100^{\circ}\text{F}$ 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

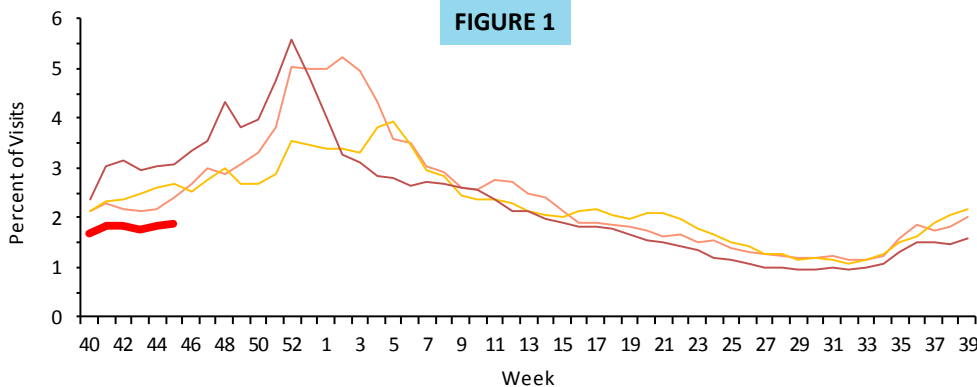


Figure 1 shows the percent of ILI visits from emergency department (ED) and urgent care center (UCC) chief complaints, for ESSENCE-FL participating facilities (N=259), week 40, 2011 through week 45, 2015.

The percent of visits to EDs and UCCs for ILI has increased slightly in recent weeks but remains below levels seen in previous years at this time.



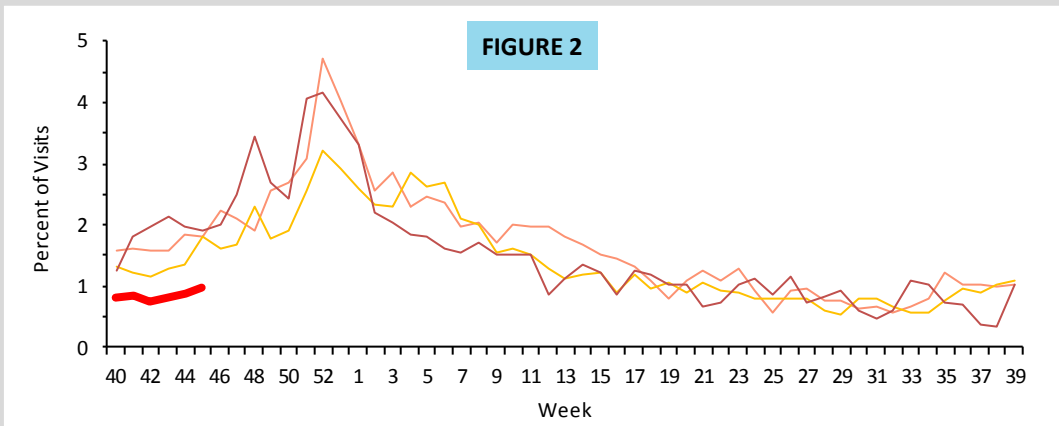


Visits for ILI to Outpatient Providers by Flu Season

ILI = influenza-like illness

Figure 2 shows the percent of visits for ILI reported by ILINet outpatient providers statewide (n=42), week 40, 2011 through week 45, 2015.

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



P&I Deaths* from Vital Statistics by Flu Season

P&I = pneumonia and influenza

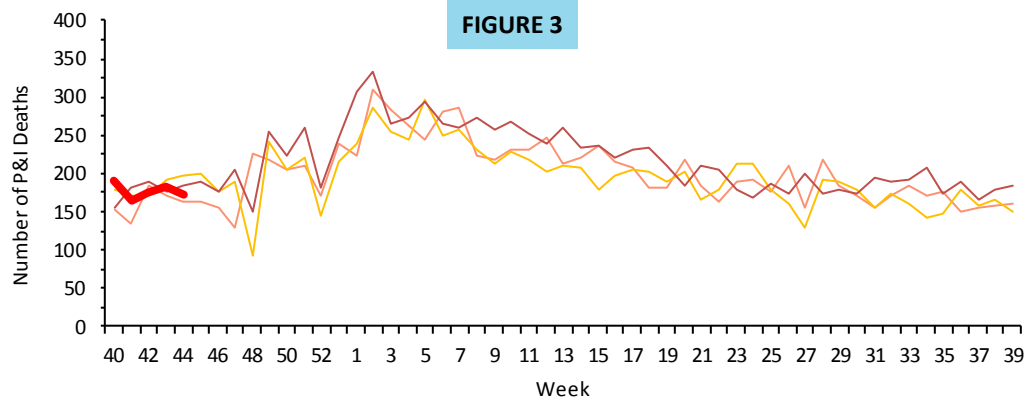


Figure 3 shows pneumonia and influenza (P&I) deaths* for all Florida counties, week 40, 2010 through week 44, 2015, from the Bureau of Vital Statistics as reported into ESSENCE-FL.

As of week 44 (ending November 7, 2015), 884 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

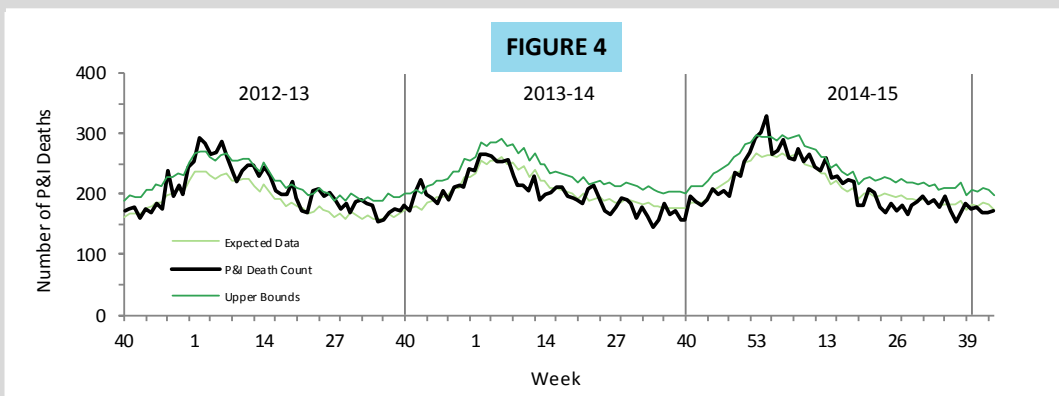
Figure 4 shows the count of preliminary estimated pneumonia and influenza (P&I) deaths* for all Florida counties, the number of deaths predicted using a multi-year regression model, and the upper bound of the 95% confidence interval for this prediction.

For week 44 (ending November 7, 2015):

180 preliminary estimated P&I deaths were reported.

The upper bound of the 95% confidence interval for prediction is 205 deaths with no excess deaths.

The number of P&I deaths are similar to recent years at this time. P&I deaths tend to occur later in the season as at-risk populations become ill with influenza.



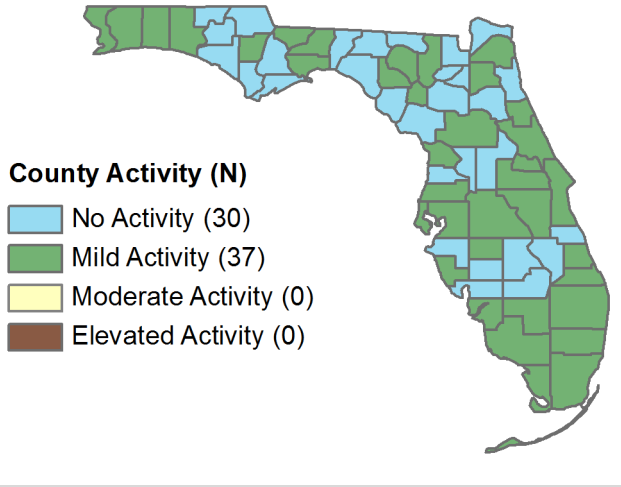
* Current season P&I death numbers are preliminary estimates, and may change as more data are received. The most recent data available are displayed here. Vital statistics death records received in ESSENCE-FL are currently considered to be complete through week 44, 2015.

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 below reflect a county's assessment of influenza activity within their county as a whole. For week 45, 11 counties indicated that activity is increasing, 53 counties indicated that activity is at a plateau, and three counties reported that activity is increasing.**

County Influenza Activity

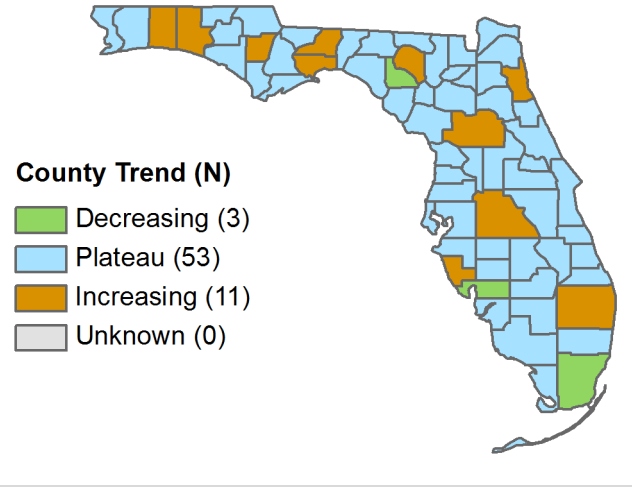
Map 1

County Influenza Activity Level for Week 45
Reported by 9:30 a.m. November 18, 2015



Map 2

County Influenza Activity Trend for Week 45
Reported by 9:30 a.m. November 18, 2015



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

Influenza-Associated Pediatric Deaths

Influenza-Associated Pediatric Deaths

ILI = influenza-like illness

FIGURES 5 - 7

No influenza-associated pediatric deaths have been reported to the Department of Health so far in the 2015-16 influenza season.

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 please visit: <http://www.cdc.gov/flu/protect/whoshouldvax.htm#annual-vaccination>.

Figure 5: Influenza-Associated Pediatric Deaths by Vaccination Status

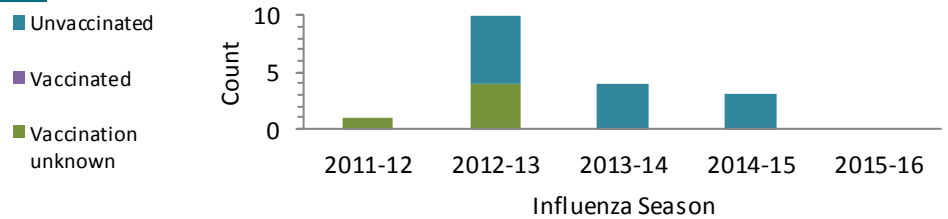


Figure 6: Influenza-Associated Pediatric Deaths by Medical History

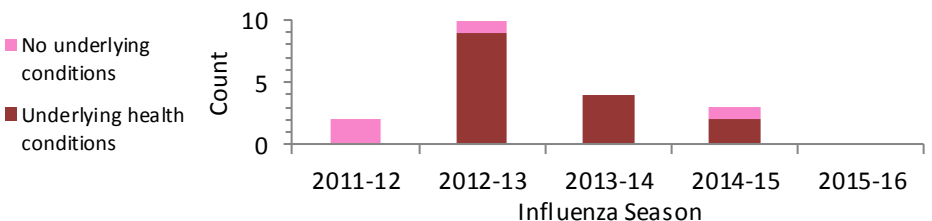
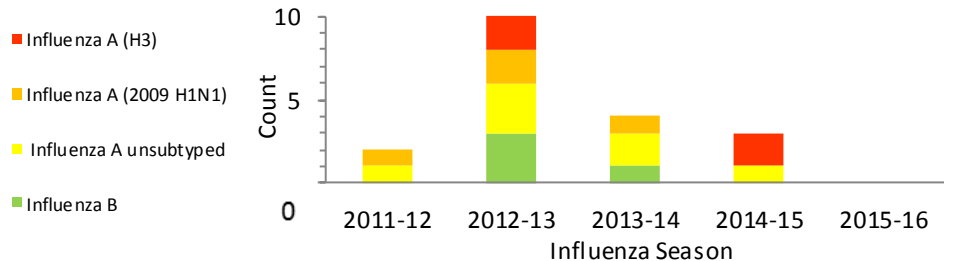


Figure 7: Influenza-Associated Pediatric Deaths by Strain Type



Reported Influenza and ILI Outbreaks

ILI = influenza-like illness

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

Pasco County:

An assisted living facility reported 25 residents and eight staff with ILI. Four specimens from ill residents tested negative for influenza by rapid antigen test with local healthcare providers. An additional seven specimens were collected from ill residents and five tested positive for rhinovirus by polymerase chain reaction (PCR) at the Bureau of Public Health Laboratories (BPHL). Of the 33 ill individuals, 30 (91%) were located in the same wing of the facility. Influenza vaccination for the 2015-16 season was scheduled for a week following first report of illness. Infection control measures were reviewed with facility leadership and implemented. This investigation is ongoing.

Map 3 Influenza and ILI Outbreaks by County Week 40-45, 2015

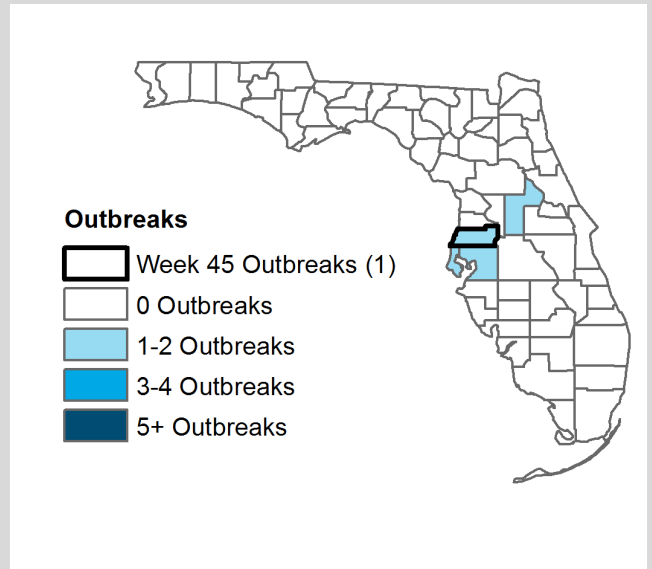


TABLE 1: Summary of Florida Influenza and ILI Outbreaks by Setting, Week 40-45, 2015

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	1	-	-	-	-	-	-	1- respiratory syncytial virus (RSV)	-
Jails & prisons	-	-	-	-	-	-	-	-	-
Mental health facilities	-	-	-	-	-	-	-	-	-
Nursing homes & long term care facilities	2	-	-	1	-	-	-	1- rhinovirus	-
Healthcare facilities	-	-	-	-	-	-	-	-	-
Other	-	-	-	-	-	-	-	-	-
Total	4	0	0	1	0	0	0	2	1

Reported Influenza and ILI Outbreaks by Facility Type

ILI = influenza-like illness

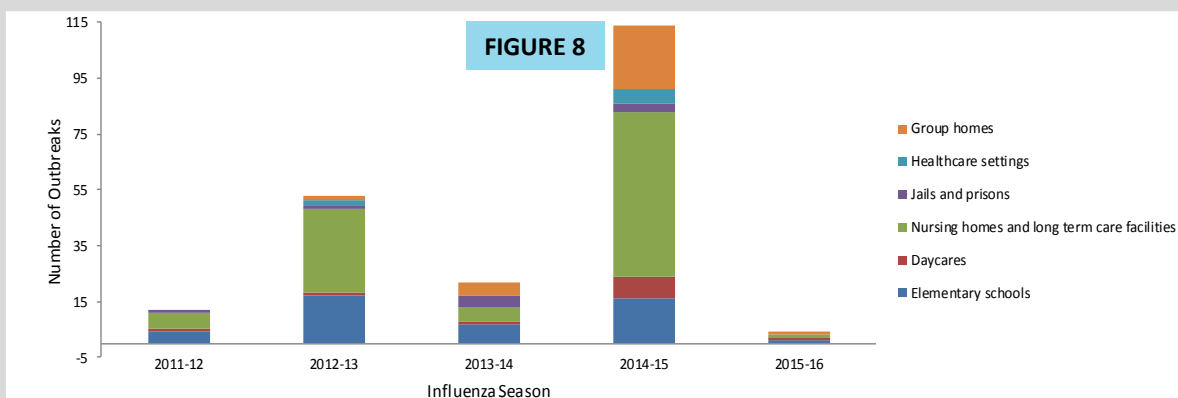
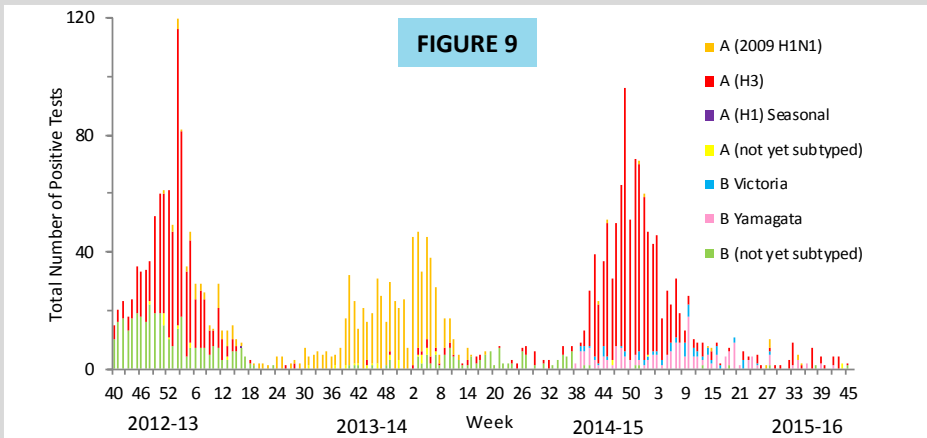


Figure 8 shows the distribution of outbreaks by facility type and season.

In Florida, influenza and ILI activity often increases first 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.

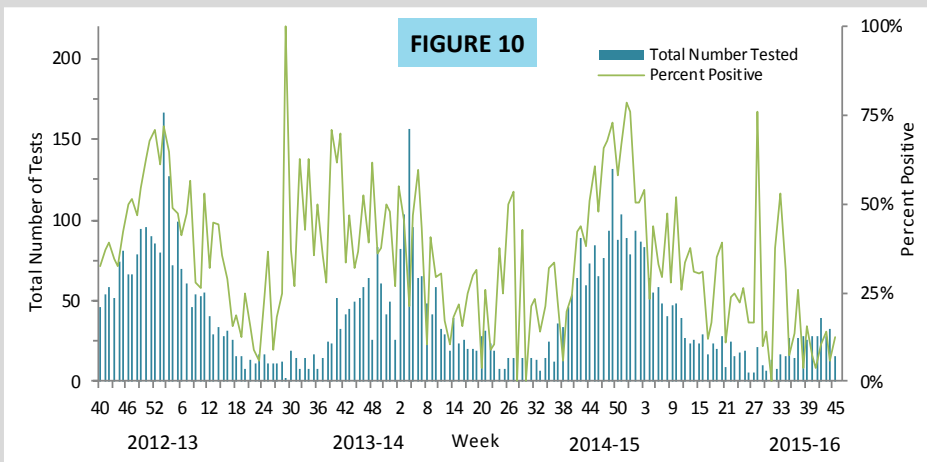
Figure 9 shows the number of influenza-positive specimens tested by subtype and lab event date*.

Influenza A (H3) is the most commonly circulating virus identified by BPHL in recent weeks. This is consistent with the national trend.

Low levels of influenza B Yamagata lineage have also been identified circulating in Florida by BPHL this season.

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

The total number of samples tested and percent positivity for influenza are below levels seen in previous years at this time.



**TABLE 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance by Lab Event Date*
Reported by 10:00 a.m. November 18, 2015**

Specimen	Current Week 45	Previous Week 44	Current 2015-16 Season
Total Specimens Tested	16	33	172
Influenza positive specimens (% of total)	2 (13%)	2 (6%)	15 (9%)
Influenza A (2009 H1N1) (% of influenza positives)	-	-	-
Influenza A (H3) (% of influenza positives)	1 (50%)	-	9 (60%)
Influenza A not yet subtyped (% of influenza positives)	-	2 (100%)	2 (13%)
Influenza A inconclusive** (% of influenza positives)	-	-	2 (13%)
Influenza B Yamagata (% of influenza positives)	-	-	1 (7%)
Influenza B Victoria (% of influenza positives)	-	-	-
Influenza B not yet subtyped (% of influenza positives)	1 (50%)	-	1 (7%)

*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.

**Influenza A inconclusive test results are due to technical difficulties including insufficient sample for testing or internal sample control failure and occur occasionally in routine laboratory testing.

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:

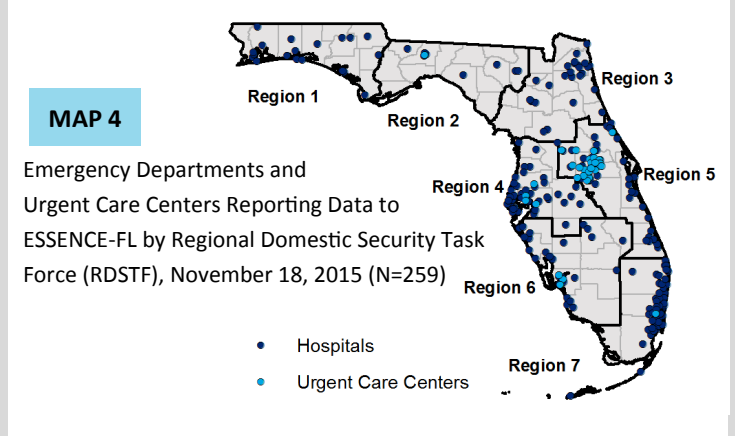
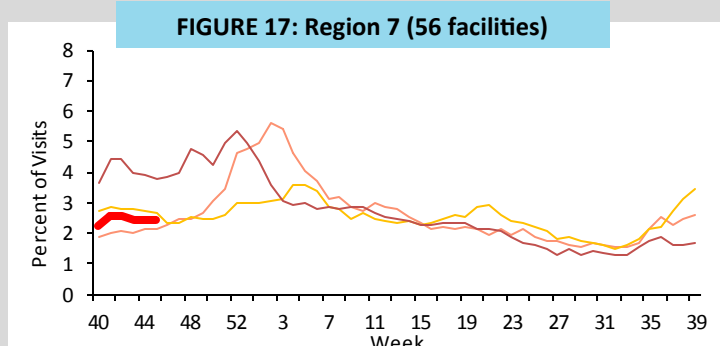
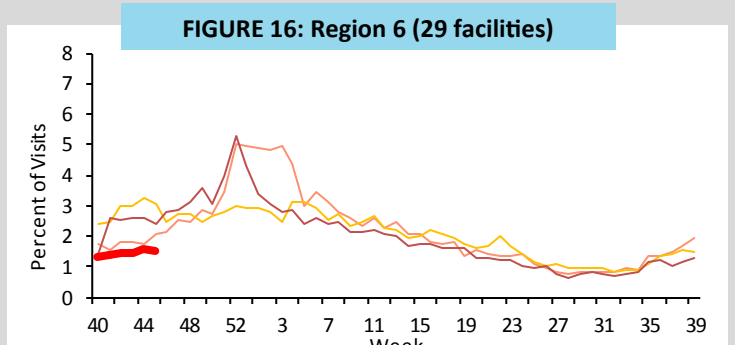
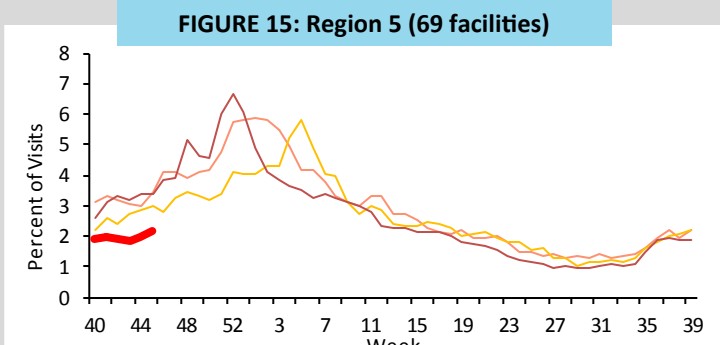
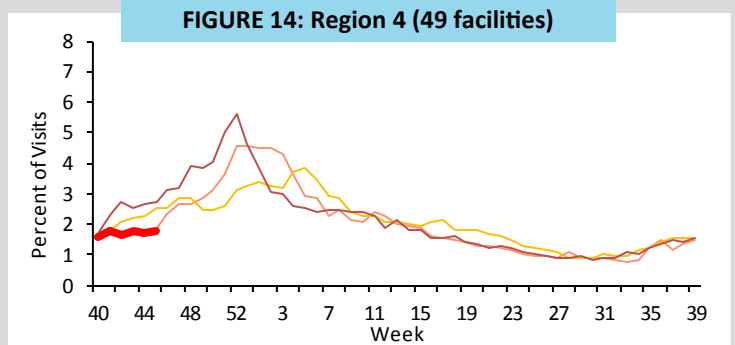
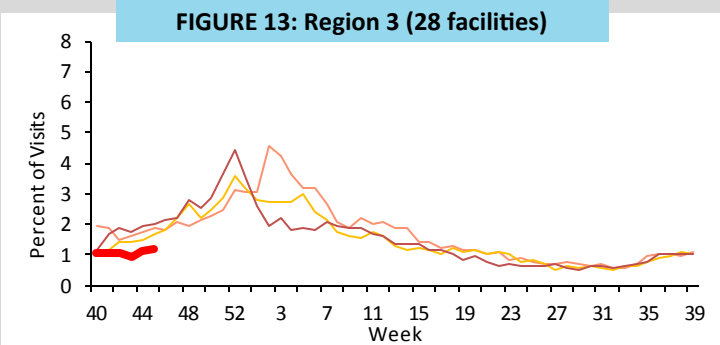
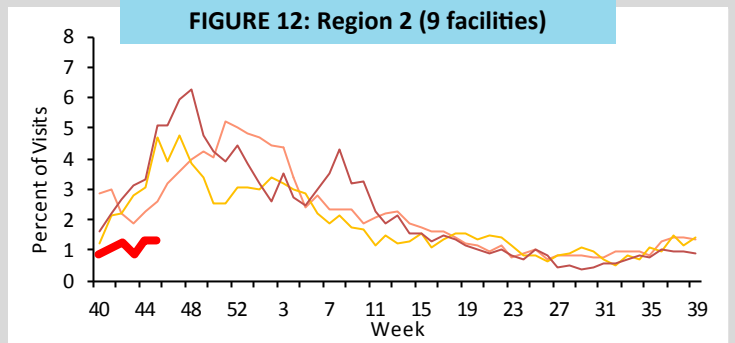
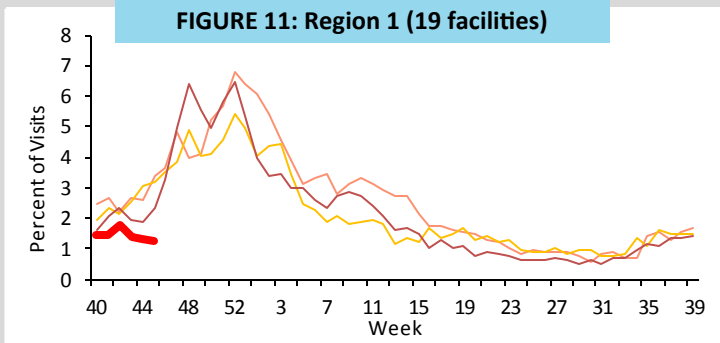
http://www.floridahealth.gov/diseases-and-conditions/influenza/_documents/flulabreportguide.pdf

ED and UCC Visits by Region

ED = emergency department, UCC = urgent care center

Figures 11-17 shows the percent of ILI visits from emergency department (ED) and urgent care center (UCC) chief complaints for ESSENCE-FL participating facilities (N=259), by ESSENCE-FL Regional Domestic Security Task Force (RDSTF) regions (see map 4) from week 40, 2012 through week 45, 2015*, accessed November 18, 2015. **ED and UCC visits for ILI in all regions remain at low levels and in most regions are below levels seen in previous years at this time. Low activity levels early in the season are not predictive of overall season severity.**

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



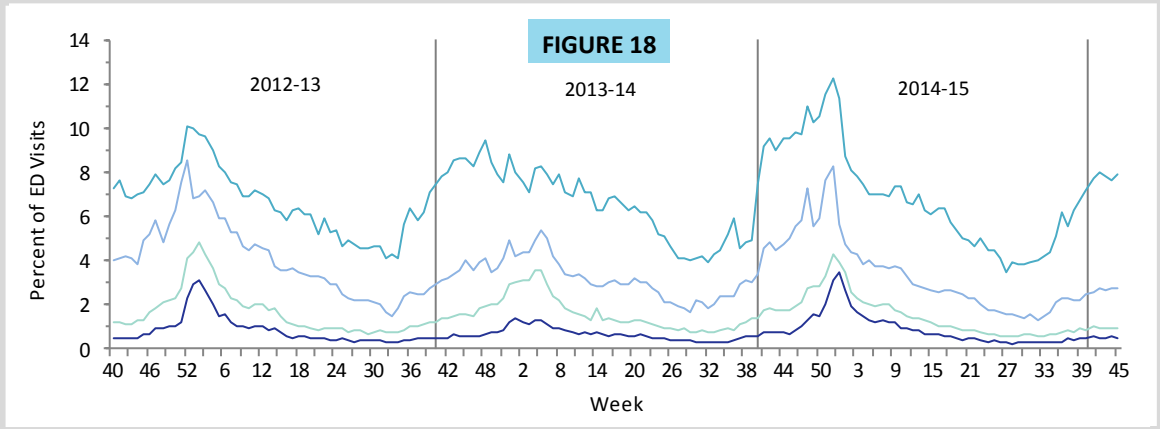
*There is no week 53 for the 2010-2011, 2011-2012, and 2013-2014 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.



ED and UCC Visits for ILI by Age Group

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

Figure 18 shows the percent ILI among all ED and UCC visits by age group. The percent of ED and UCC visits for ILI in the 0-4 and 65+ age groups are similar to levels seen in previous years at this time. Activity in the 5-24 and 25-64 age groups is slightly below levels seen in previous years at this time.



Visits to Outpatient Providers for ILI by Age Group*

ILI = influenza-like illness

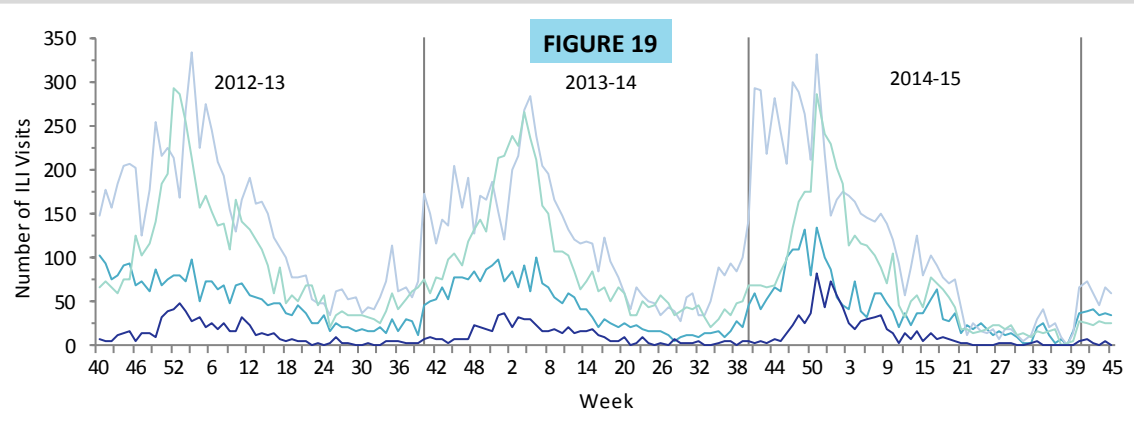


Figure 19 shows ILI visit counts reported by ILINet outpatient providers by age group. The number of ILI visits to ILINet outpatient providers have remained relatively low in all age groups so far this season and are below levels seen in previous years at this time for all age groups.

*Data presented here are counts, not proportions. 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

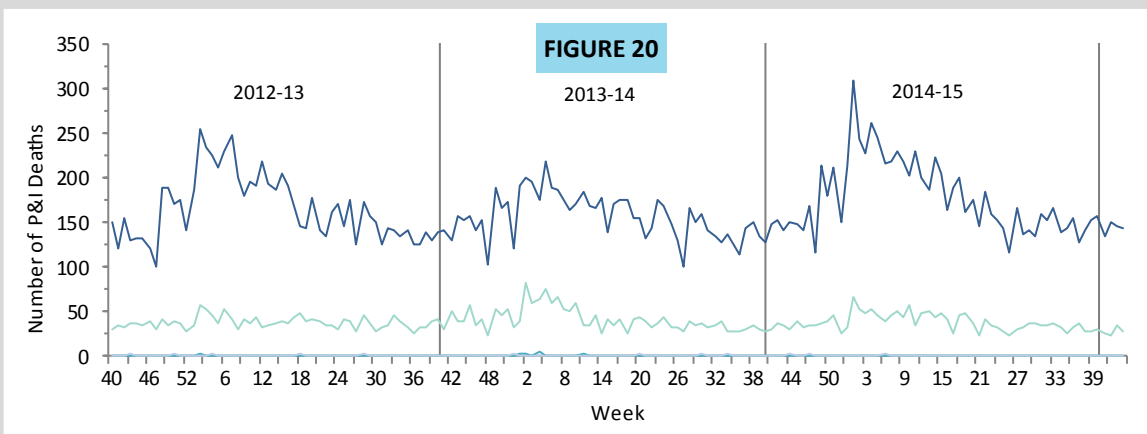


Figure 20 shows P&I deaths* for all Florida counties by age group, week 40, 2012 through week 44, 2015, as reported into ESSENCE-FL. The number of P&I deaths has remained flat in all age groups in recent weeks and are similar to levels seen in previous years in all age groups at this time.

*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 44, 2015.

ESSENCE-FL collects data daily from 259 emergency departments (ED), and urgent care centers (UCCs). 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 Health 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

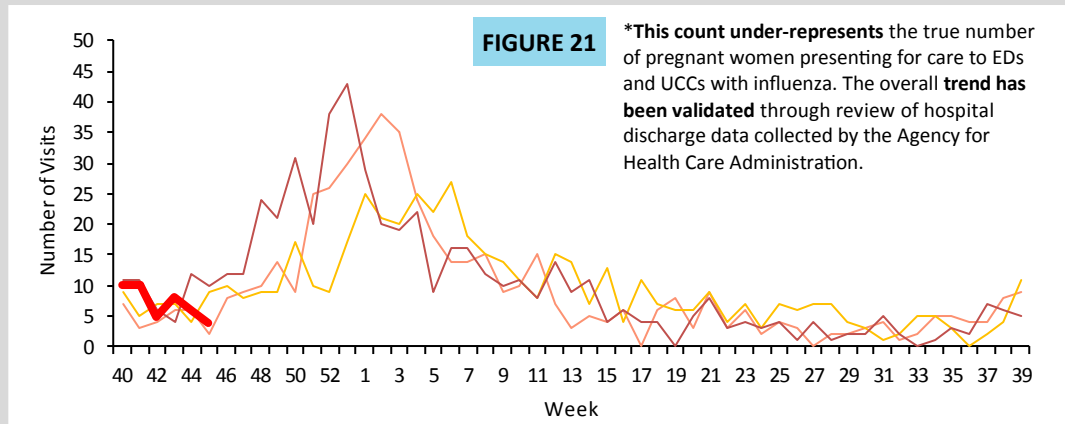
ED and UCC Visits for ILI by Pregnant Women

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

Pregnant women are 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 45, the number of visits by pregnant women presenting to EDs and UCCs with mention of influenza has decreased and is similar to 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

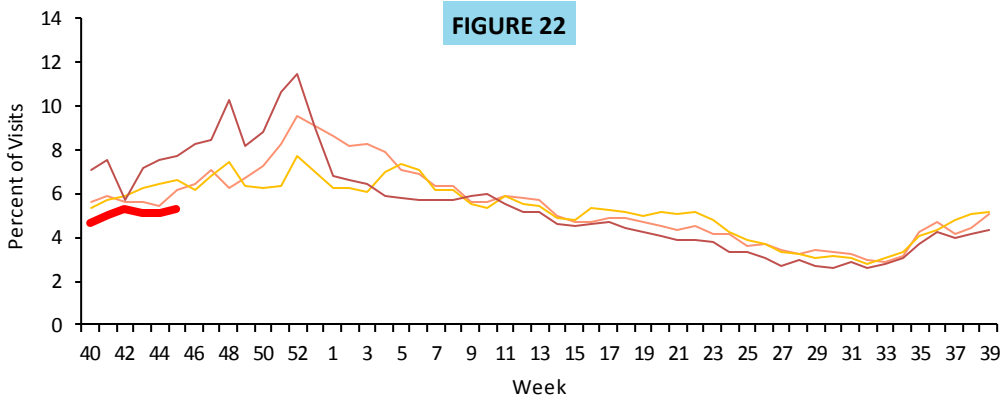


Figure 22 shows the percent of ILI among all ED and UCC visits for children ≤ 18 years old.

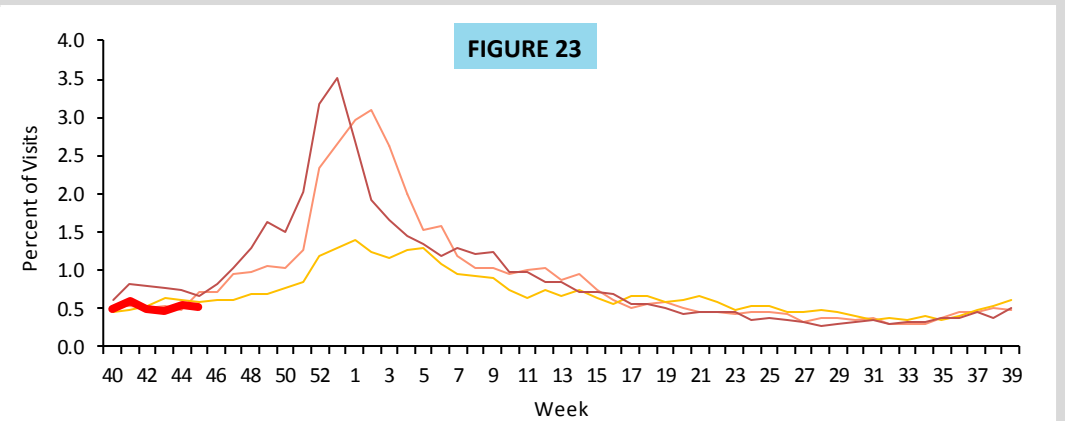
The percent of ED and UCC visits for ILI in children ≤ 18 years old is increasing but remains below levels seen in previous years at this time.

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 percent of ILI among all ED and UCC visits for adults ≥ 65 years old.

The percent 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 none or minimal activity to very high activity.

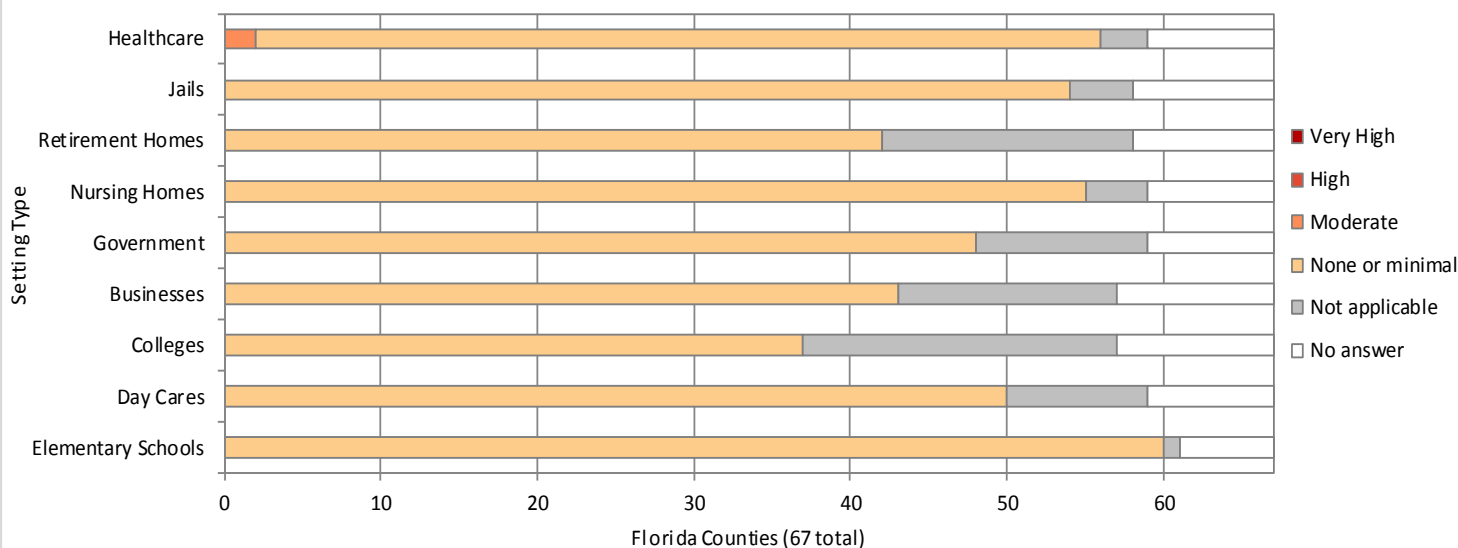
Figure 24 shows the results of the influenza activity assessment for week 45, 2015 accessed November 18, 2015.

Counties that reported “not applicable” for the listed settings are excluded from the denominator in the calculations below.

ILI activity levels:

- None or very minimal activity
- Moderate activity
- High activity
- Very high activity

FIGURE 24



Settings for Children under 18*

In elementary schools, 60 counties (91%) reported none or minimal 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, 55 counties (87%) reported none or minimal influenza and ILI activity.

In retirement homes, 42 counties (82%) reported none or minimal influenza and ILI activity.

Settings for Adults ages 18 to 65*

In colleges and universities, 37 (79%) counties reported none or minimal influenza and ILI activity.

In private businesses, 43 (81%) 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, 54 (86%) counties reported none or minimal influenza and ILI activity.

In healthcare settings, including rehabilitation facilities and mental health facilities, two counties (3%) reported moderate influenza and ILI activity.

Viral Respiratory Surveillance with NREVSS Laboratories

NREVSS = National Respiratory and Enteric Viral Surveillance System

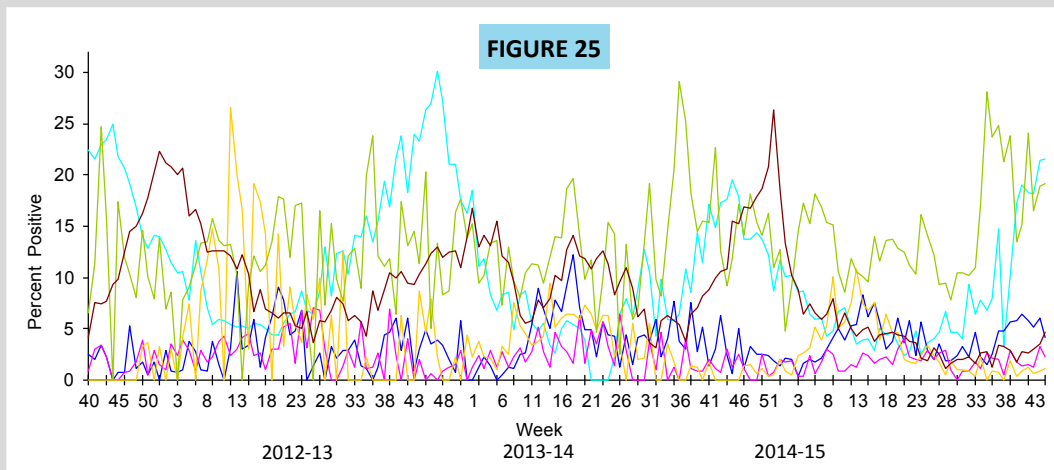
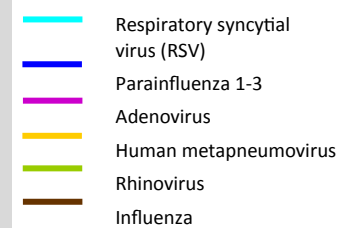


Figure 25 shows the percent of positive tests by respiratory virus type reported by NREVSS participating laboratories (n=11) via electronic lab reporting (ELR) to the Department of Health.

In recent weeks, respiratory syncytial virus (RSV) has seen large increases. Rhinovirus and parainfluenza have also been identified.



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 and 2

- County health department (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 Elevated. 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/