



Week 45: November 4 – 10, 2012



Summary

The Florida Department of Health (FDOH) monitors multiple surveillance systems such as the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE-FL), the Florida Pneumonia and Influenza Mortality Surveillance System (FPIMSS), notifiable disease reports (Merlin), EpiCom, and Florida ILINet in order to track influenza activity in the state.

National:

- In 2012, 307 people in 11 states have been infected with a variant strain of influenza A H3N2, also known as H3N2v. The H3N2v strain originates from influenza that circulates in pigs. Nearly all persons infected with H3N2v have reported direct or indirect contact with swine. Most cases have occurred in children; one death has been reported in an adult with underlying health conditions. **No cases of H3N2v infection have been reported in Florida.** More information can be found at: <http://www.cdc.gov/flu/swineflu/influenza-variant-viruses-h3n2v.htm>

State:

- After experiencing elevated influenza-like illness (ILI) levels statewide during the summer months, ESSENCE-FL emergency department ILI levels in some regions are above expected levels for this time of year. The most elevated levels in ESSENCE-FL ILI are currently in Regions 1, 4, and 5. Three counties report moderate influenza activity in week 45. There were two ILI outbreaks reported into EpiCom in week 45. The first was a lab-confirmed influenza A outbreak in a correctional institution in Volusia County and the second was an outbreak of influenza B in a Hillsborough County elementary school.
- In week 45, eleven specimens tested PCR positive for influenza B, two specimens tested PCR positive for influenza A H3 and another two tested PCR positive for influenza A unspecified at the state public health laboratory. In recent weeks, influenza B has been the most common influenza subtype identified by the state public health laboratory. Respiratory syncytial virus (RSV) activity is elevated above previous years at this time although recent increases are in keeping with seasonal trends.

Weekly state influenza activity: Sporadic

Florida is currently reporting Sporadic influenza activity statewide, due to low activity levels in all regions of Florida as shown in our influenza surveillance systems. This activity level represents the statewide spread of influenza, and is not a measure of flu intensity, morbidity, or mortality.

Pediatric Influenza-Associated Mortality

Pediatric influenza-associated deaths among those less than 18 years old are reportable in Florida. No influenza-associated pediatric deaths have been reported so far in the 2012-2013 influenza season.

November 14, 2012

Posted on the Bureau of Epidemiology website: <http://www.doh.state.fl.us/floridaflu/>

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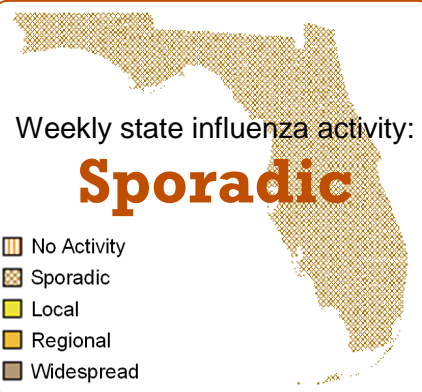


TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 45

Measure	Difference from previous week	Current week 45	Previous week 44	Page of Report
Overall statewide activity code reported to CDC	No Change	Sporadic	Sporadic	1
Percent of visits to ILINet providers for ILI	▲ 0.3	1.9%	1.6%	2
Percent of emergency department visits (from ESSENCE-FL) due to ILI	▲ 0.5	2.9%	2.4%	3
Percent of laboratory specimens that were positive for influenza	▲ 0.2	32.6%	32.4%	5
Number of counties reporting moderate influenza activity	▲ 1	3	2	6
Number of counties reporting widespread influenza activity	No Change	0	0	6
Number of counties reporting increasing influenza activity	▲ 3	21	18	7
Number of counties reporting decreasing influenza activity	▼ 5	0	5	7
Number of ILI outbreaks reported in EpiCom	▲ 1	1	0	10

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ILINet is a nationwide surveillance system composed of sentinel providers. Florida has 110 providers enrolled in ILINet who submit weekly ILI and total visit counts, as well as submitting ILI specimens to the Bureau of Public Health Laboratories (BPHL) for confirmatory testing. For this season, the Bureau of Epidemiology (BOE) has designated 16 of these ILINet physicians' offices as Super-Sentinels. These Super-Sentinels will receive more active follow-up from BOE and participating county health departments, with the goal of increasing data quality and surveillance specimen submission. Complete laboratory and visit data from Florida ILINet Super-Sentinels will be presented in the Florida Flu Review in future weeks.

FIGURE 1 shows the percentage of visits for ILI* reported by ILINet Sentinel Providers statewide.

ILI percent positive remains low and similar to other non-pandemic seasons at this time.

70 of 110 ILINet Sentinels reported visit counts as of 11:30 a.m., November 14, 2012.

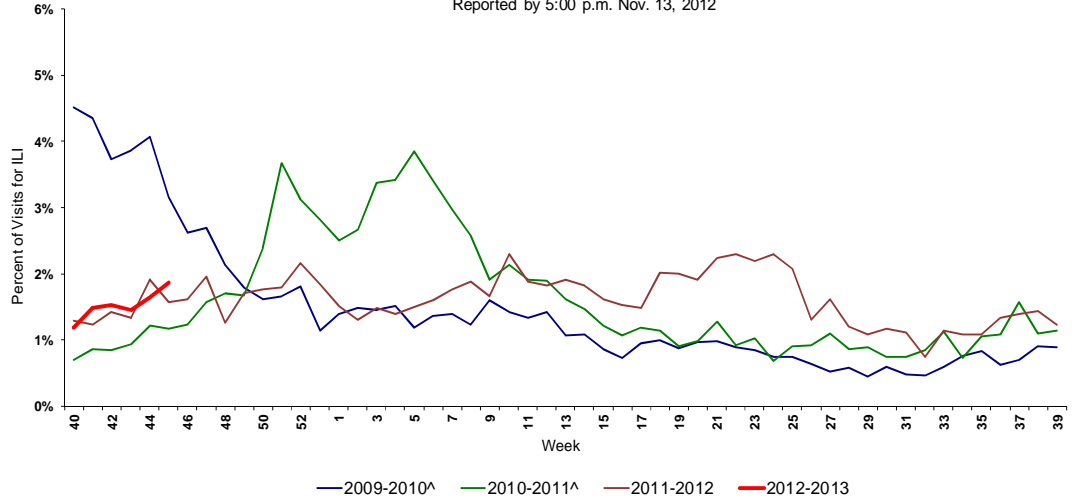
11 of 15 ILINet Super-Sentinels reported visit counts as of 11:30 a.m., November 14, 2012.

Note: In response to several states' identifying recent infections due to H3N2v, FDOH enhanced virologic surveillance. ILINet Sentinels have been advised to submit more specimens to BPHL from children under age 18. BPHL is able to detect presumptive positives for both seasonal and novel influenza viruses through routine testing. **No cases of variant H3N2 influenza A have been reported in Florida.** Detailed guidance documents have been sent to sentinel sites and county health departments.

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

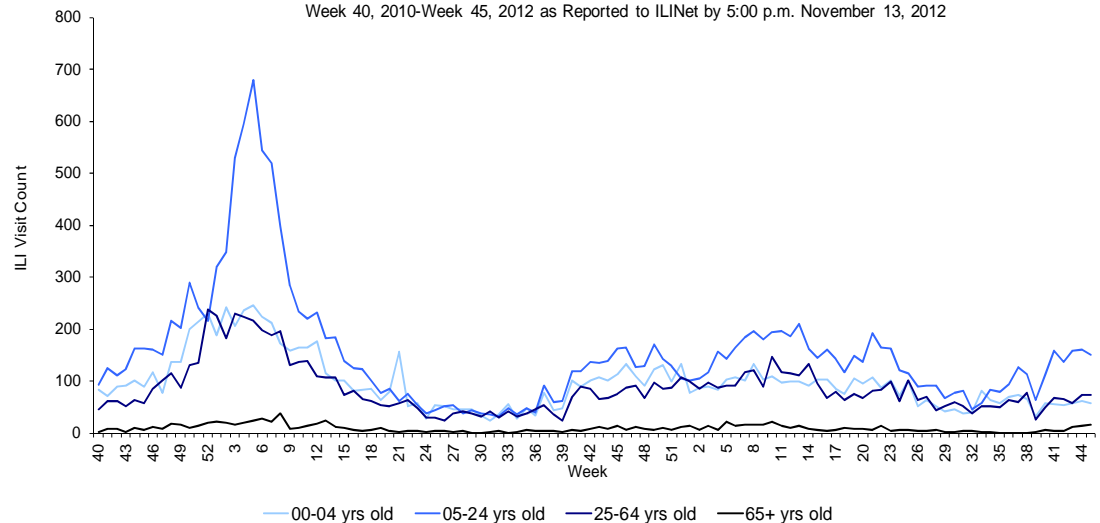
ILI visit counts are flat in the 0-65+ age groups in week 45.

FIGURE 1: Percentage of Visits for Influenza-Like Illness (ILI)* Reported by ILINet Sentinel Providers Statewide, 2009-2010 (Weeks 40-39), 2010-2011 (Weeks 40-39), 2011-2012 (Weeks 40-39), and 2012-2013 (Week 40-45) Reported by 5:00 p.m. Nov. 13, 2012



*ILI = Influenza-like illness, fever >100°F AND sore throat and/or cough *in the absence* of another known cause.
 ^There is no week 53 during the 2009-2010, 2010-2011, and 2011-12 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

FIGURE 2: Influenza-like Illness (ILI) Visit Counts Reported by ILINet Sentinel Providers Statewide by Age Group Week 40, 2010-Week 45, 2012 as Reported to ILINet by 5:00 p.m. November 13, 2012



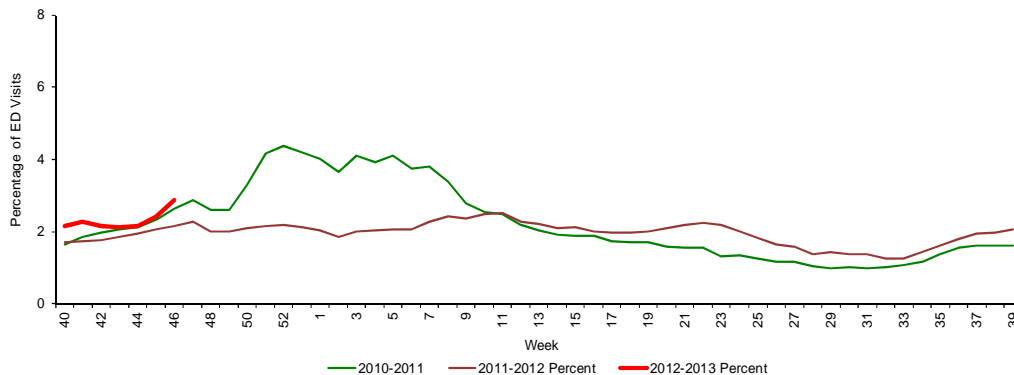
†Data presented here are counts, not proportions as included in Figure 2. This is because age group denominator data is not available through ILINet.

Florida uses ESSENCE-FL for syndromic surveillance, which currently collects data daily from 174 hospital emergency departments (ED). 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 as a percentage of all ED Visits.

Overall activity for influenza-like illness reported in ESSENCE-FL is similar to levels seen during the 2010-2011 seasons at this time, but higher than 2011-2012 seasons.

FIGURE 3: Influenza-Like Illness Visits (by Chief Complaint) to Emergency Departments (ED) as a Percentage of All ED Visits, ESSENCE-FL Participating Hospitals (N=174), Week 40, 2010 through November 13, 2012

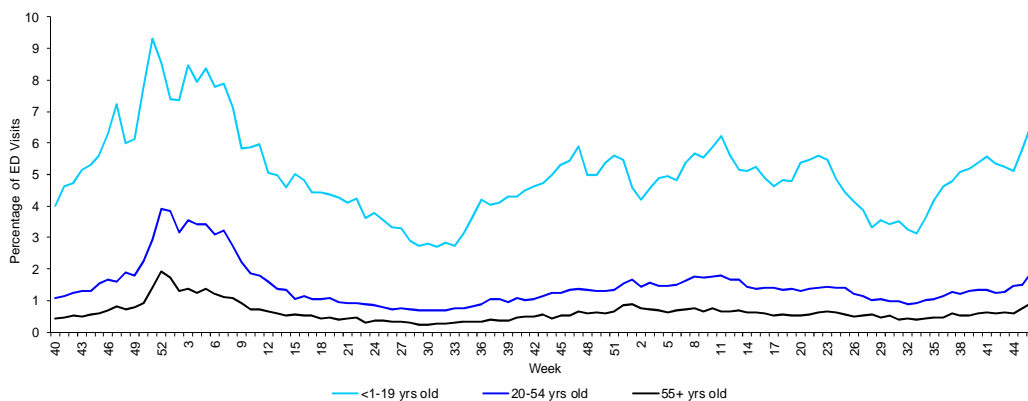


*There is no week 53 for the 2007-2008, 2009-2010, and 2010-2011 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

FIGURE 4 shows percentage of ILI among all ED visits by age group.

Age-specific trends show that percent ILI in the 0-55+ age groups is increasing for week 45.

FIGURE 4: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints by Age, ESSENCE-FL Participating Hospitals (N=174), Week 40, 2010 through November 13, 2012



One hundred five ESSENCE-FL participating facilities are able to provide discharge disposition data for their ED visits going back to week 40, 2010. Using this information, the percent of ED visits for ILI that result in hospitalization can be calculated. The highest percentage of admissions is in the 55+ years old age group. The low number of visits in the 55+ age group causes variability in the ILI admission percentage from week to week.

FIGURE 5 shows the percentage of ED visits for ILI that resulted in hospitalization, by age group.

FIGURE 5: Percentage of ED Visits for ILI Resulting in Hospital Admission, Hospitals Reporting Discharge Disposition (N=105), Week 40, 2010 to Week 45, 2012

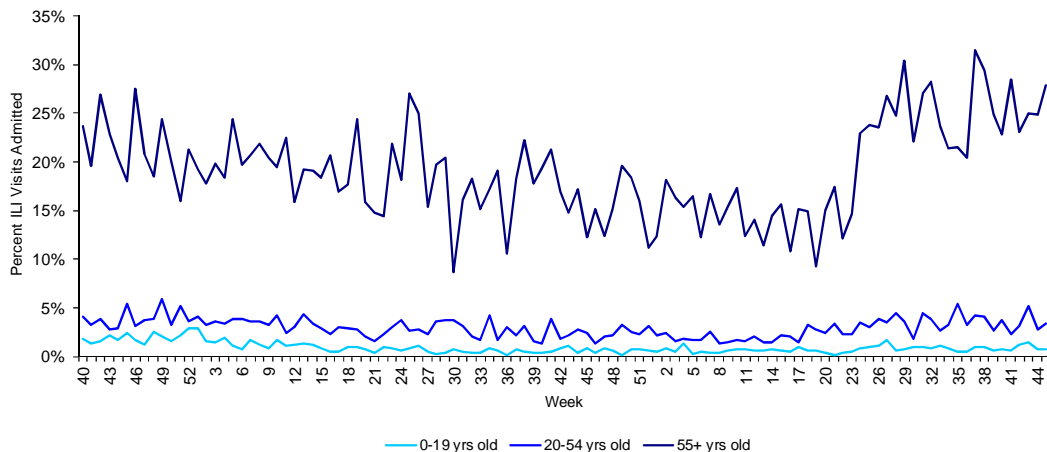


FIGURE 6 - FIGURE 12 describe ED chief complaint data from ESSENCE-FL by Regional Domestic Security Task Force (RDSTF).

ILI activity in ESSENCE-FL is elevated in Regions 1, 4 and 5. ILI levels in all other regions are at or below levels seen in previous non-pandemic seasons at this time.

Map 1: Hospitals Reporting Emergency Department (ED) Data to ESSENCE-FL, November 14, 2012 (N=174)

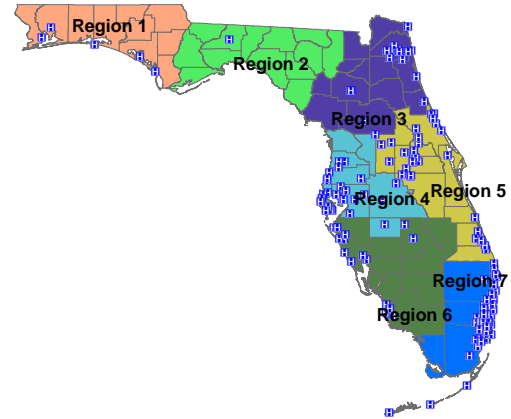


FIGURE 7: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 1 ESSENCE-FL Participating Hospitals (N=5), Week 40, 2009 through November 13, 2012

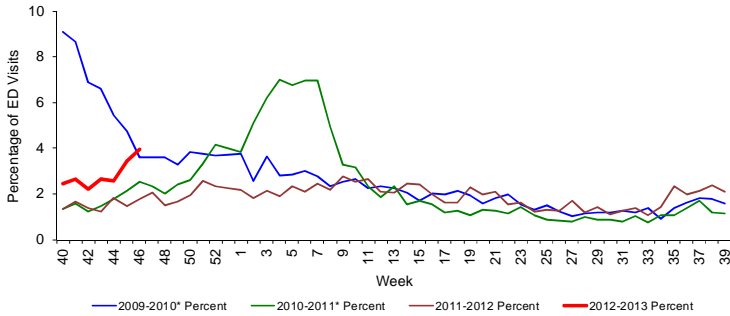


FIGURE 8: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 2 ESSENCE-FL Participating Hospitals (N=2), Week 40, 2009 through November 13, 2012

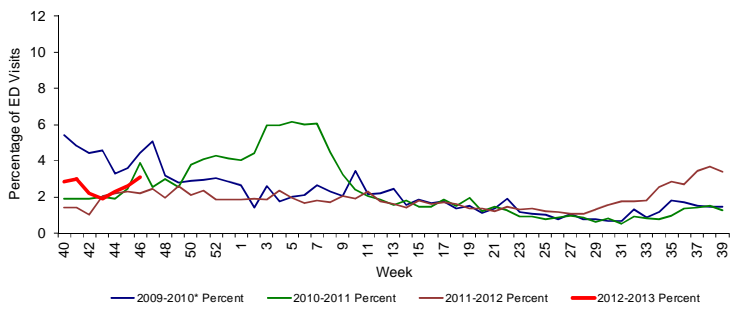


FIGURE 9: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 3 ESSENCE-FL Participating Hospitals (N=14), Week 40, 2009 through November 13, 2012

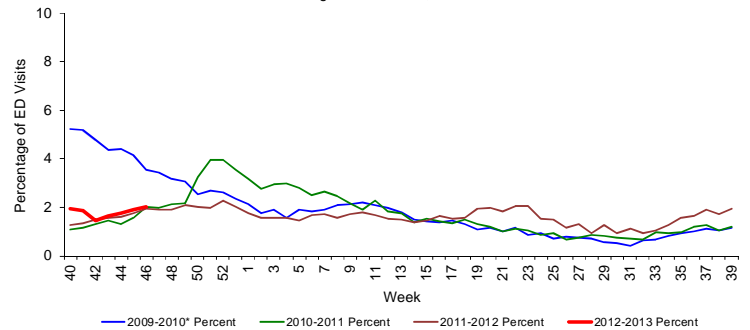


FIGURE 10: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 4 ESSENCE-FL Participating Hospitals (N=31), Week 40, 2009 through November 13, 2012

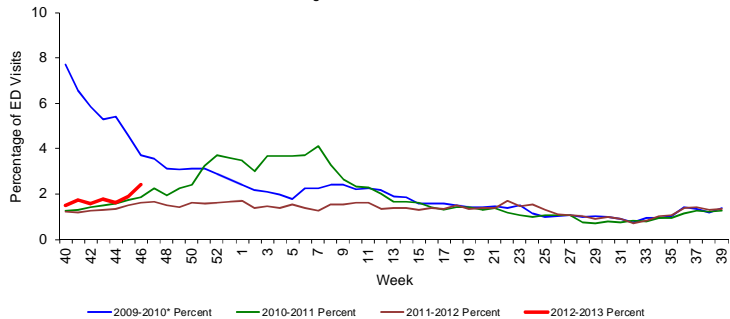


FIGURE 11: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 5 ESSENCE-FL Participating Hospitals (N=49), Week 40, 2009 through November 13, 2012

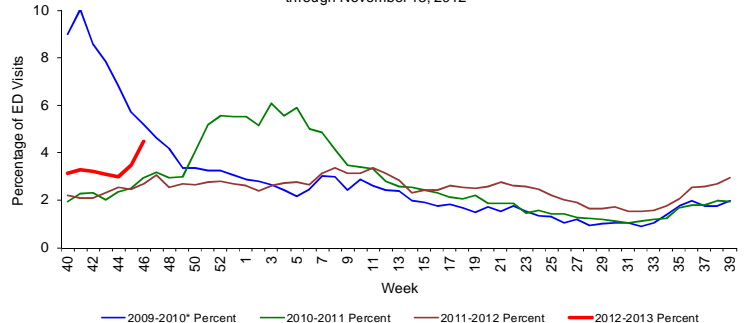


FIGURE 12: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 6 ESSENCE-FL Participating Hospitals (N=15), Week 40, 2009 through November 13, 2012

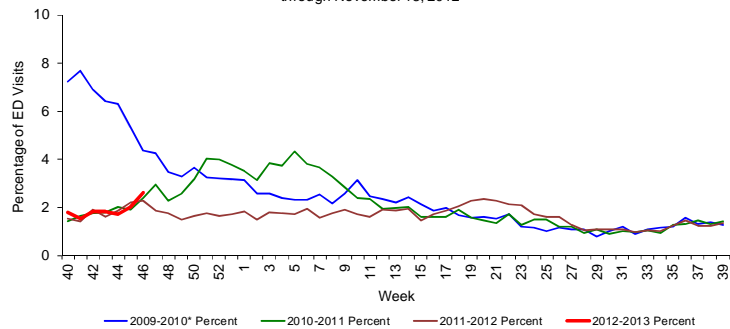


FIGURE 13: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 7 ESSENCE-FL Participating Hospitals (N=48), Week 40, 2009 through November 13, 2012

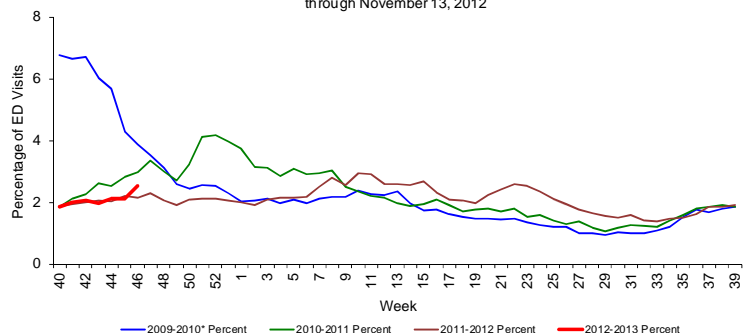


TABLE 2 shows the number of specimens tested by the BPHL, how many are influenza positive, and their subtypes.

Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for Week 45 by Lab Event Date* as reported by 10:00 a.m. November 14, 2012

	Current Week 45	Previous Week 44
Total Specimens Tested	46	74
Influenza Positive Specimens (% of total)	15 (32.6%)	24 (32.4%)
H1N1 Positive Specimens (% of influenza positives)	-	-
H3 Influenza A	2 (13.3%)	7 (29.2%)
Influenza A Unspecified	2 (13.3%)	-
Influenza B Unspecified	11 (73.4%)	17(70.8%)

FIGURE 14 - FIGURE 15 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 found for the positive influenza specimens.

Small numbers of influenza specimens submitted to BPHL tested positive for influenza A H3, 2009 H1N1, and influenza B.

Influenza B has been the most common strain detected by BPHL in recent weeks.

In addition to PCR testing, BPHL also uses culture testing for influenza specimens, including those positive for influenza B.

There are two distinct lineages of influenza B, known as Victoria and Yamagata. Both have circulated in Florida in the past year.

This season, 8 specimens have tested positive for influenza B, Victoria lineage. Last year's 2011-12 vaccine included a Victoria lineage virus, while this year's 2012-2013 vaccine includes a Yamagata lineage virus. Influenza viruses that circulate at the beginning of the flu season may be different than those that circulate later in the year, and these specimens represent a very small sample of statewide influenza activity. Not all flu positive specimens receive culture testing. FDOH will continue to monitor subtype and lineage for influenza viruses.

FIGURE 14: Number of Influenza-Positive Specimens Tested by the Florida Bureau of Public Health Laboratories (BPHL) by Subtype by Lab Event Date* Week 1, 2011 to Week 45, 2012 as Reported in Merlin by 10:00 a.m. November 14, 2012

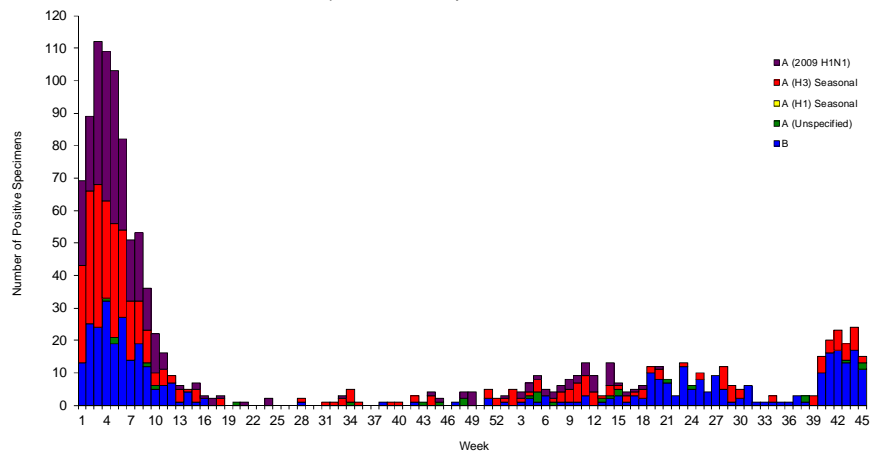
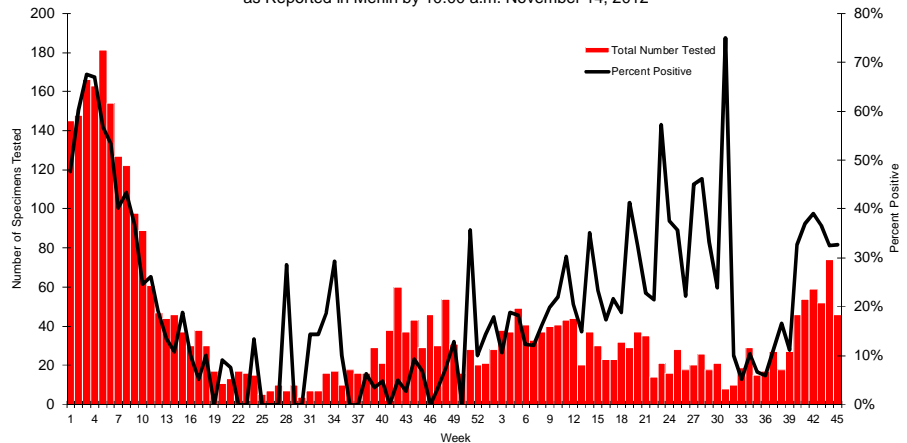


FIGURE 15: Number of Specimens Tested by Florida Bureau of Public Health Laboratories (BPHL) and Percent Positive for Influenza by Lab Event Date* Week 1, 2011 to Week 45, 2012 as Reported in Merlin by 10:00 a.m. November 14, 2012



*Please note that lab event date is defined as the earliest of the following dates associated with the lab: date 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.doh.state.fl.us/disease_ctrl/epi/htopics/flu/FluLabReportGuide.pdf

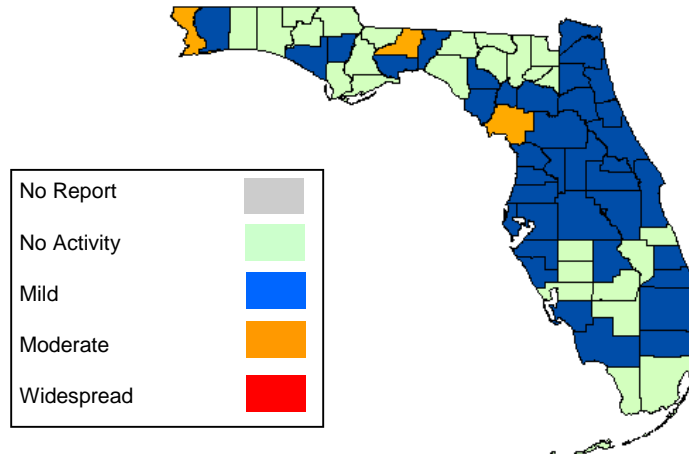
As of 10:00 a.m. November 14, 2012 a total of 67 (100%) counties had reported their weekly level of influenza activity. *Please note that data reported by counties after the deadline Tuesday at 5 p.m. are recorded but may not be included in the activity map for previous weeks.*

TABLE 3: Weekly County Influenza Activity for Week 45 (ending November 10, 2012) as Reported by 10:00 a.m. November 14, 2012

Activity Level	Week 44 Number of Counties	Week 45 Number of Counties	Week 45 Counties
No Report	-	-	
No Activity	30	26	Baker, Bradford, Charlotte, Columbia, Dade, Desoto, Franklin, Gadsden, Glades, Gulf, Hamilton, Hardee, Hendry, Holmes, Indian River, Jackson, Liberty, Madison, Monroe, Okaloosa, Okeechobee, Suwannee, Taylor, Union, Walton, Washington
Mild	35	38	Alachua, Bay, Brevard, Broward, Calhoun, Citrus, Clay, Collier, Dixie, Duval, Flagler, Gilchrist, Hernando, Highlands, Hillsborough, Jefferson, Lafayette, Lake, Lee, Manatee, Marion, Martin, Nassau, Orange, Osceola, Palm Beach, Pasco, Pinellas, Polk, Putnam, Santa Rosa, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, Volusia, Wakulla
Moderate	2	3	Escambia, Leon, Levy
Widespread	-	-	-

Map 2: Weekly County Influenza Activity for Week 45 as Reported by 10:00 a.m. November 14, 2012

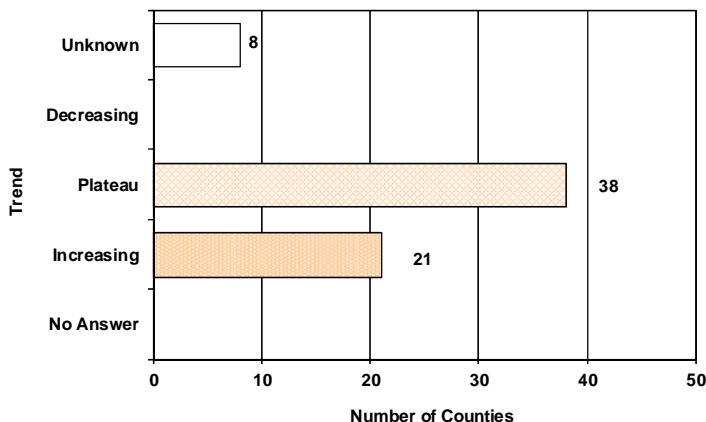
Most counties report no or mild activity. Three counties report moderate activity.



County influenza activity data is reported to the BOE through EpiGateway on a weekly basis by the county influenza coordinator. Specific information is requested about laboratory results, outbreak reports, and surveillance system activity. Figures 16-25 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 45, no counties indicated that activity was decreasing, 38 indicated it was about the same as previous weeks, and 21 indicated that activity was increasing.

FIGURE 16 shows the assessment of the overall influenza activity trend in each county as reported by county health department flu coordinators for week 45 as of 10:00 a.m. November 14, 2012.

FIGURE 16: Assessment of Overall Influenza Activity Trend



Definitions for the County Influenza Activity Trends are available at: http://www.doh.state.fl.us/disease_ctrl/epi/CountyInfluenzaTrendGuide.html

Counties are asked to evaluate influenza activity in certain settings within their county. Each setting has a scale for activity that ranges from none 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.

County influenza settings assessment guides are available at: http://www.doh.state.fl.us/disease_ctrl/epi/FluAssessment.htm

FIGURE 17 - FIGURE 18 show the activity levels in various facilities by county as reported by county health department flu coordinators for week 45 as of 10:00 a.m. November 14, 2012.

FIGURE 17: Assessment of Influenza Activity in Elementary, Middle, and High Schools

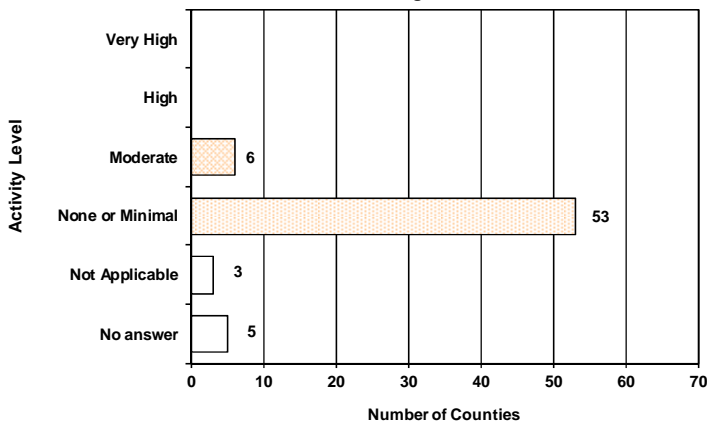


FIGURE 18: Assessment of Influenza Activity in Colleges and Universities

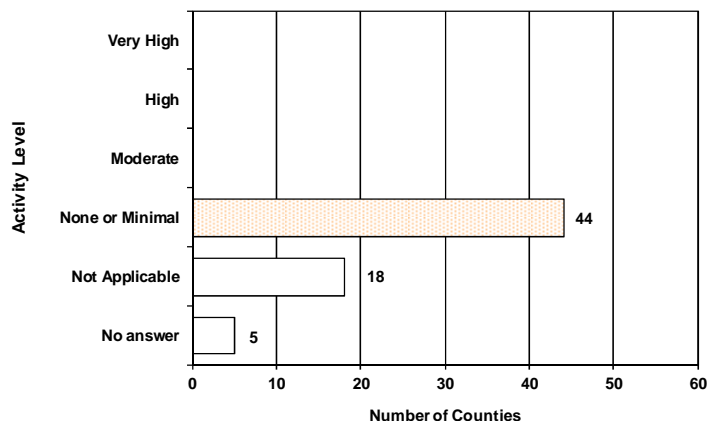


FIGURE 19 - FIGURE 25 show the activity levels in various facilities by county as reported by county health department flu coordinators for week 44 as of 10:00 a.m. November 14, 2012.

FIGURE 19: Assessment of Influenza Activity in Jails/Prisons

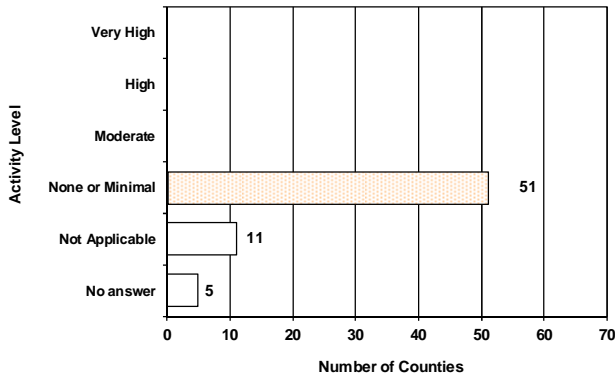


FIGURE 20: Assessment of Influenza Activity in Retirement Facilities

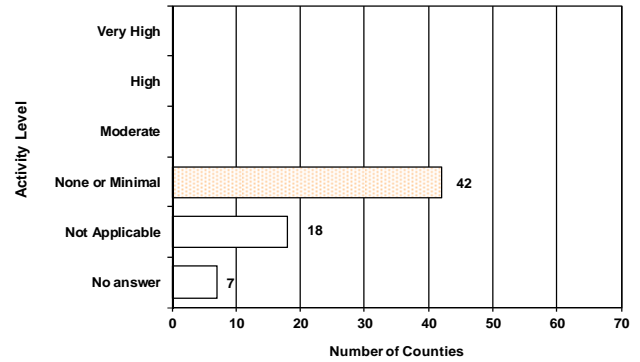


FIGURE 21: Assessment of Influenza Activity in Nursing Homes

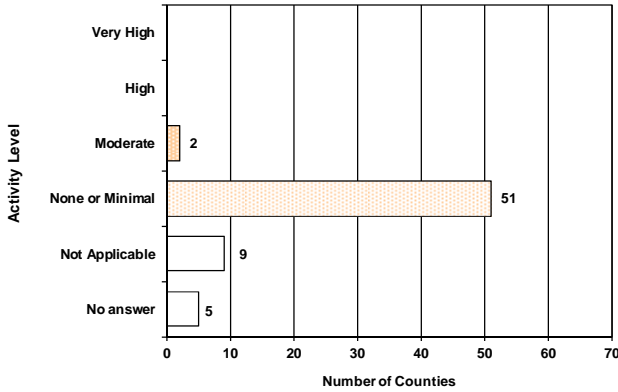


FIGURE 22: Assessment of Influenza Activity in Health Care Facilities

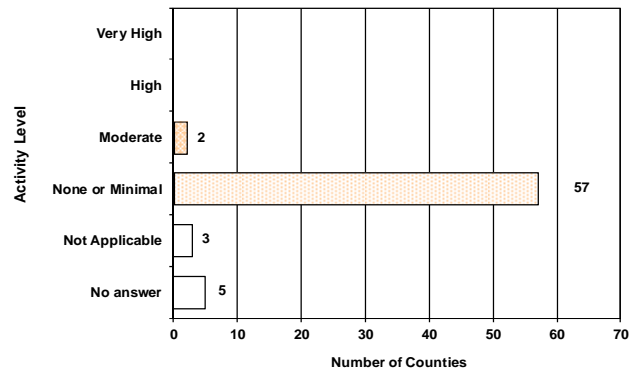


FIGURE 23: Assessment of Influenza Activity in Daycare Centers

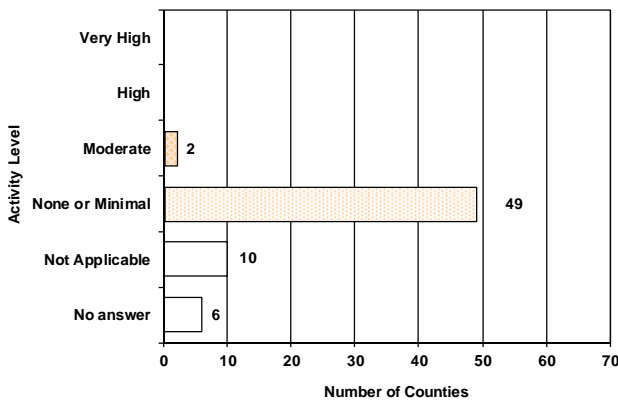


FIGURE 24: Assessment of Influenza Activity in Businesses

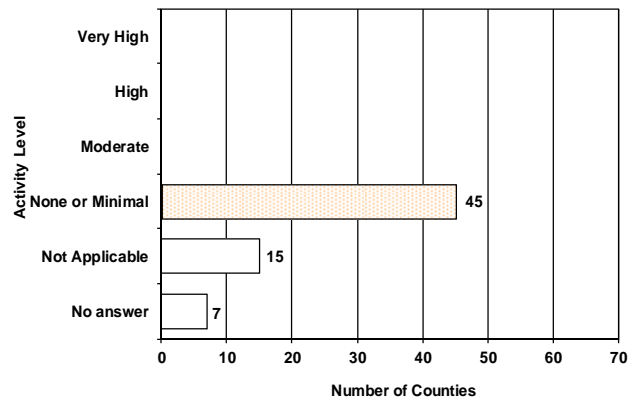
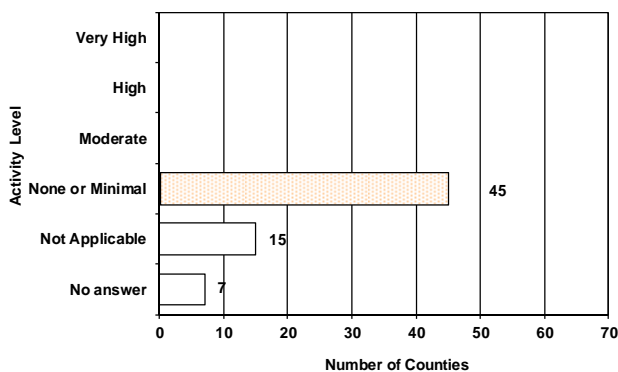


FIGURE 25: Assessment of Influenza Activity in State or Local Government Offices



Because of less than 100% reporting in the Florida Pneumonia and Influenza Mortality Surveillance System in week 45, pneumonia and influenza (P&I) mortality data from ESSENCE-FL are used in this report. Over the past year, the FDOH Bureau of Vital Statistics and County Health Departments have been rolling out an electronic death record system for Florida. ESSENCE-FL now displays electronic death record data from all 67 Florida counties. For P&I surveillance, death record literals are queried in ESSENCE-FL using a free-text query that searches for references to pneumonia and influenza on death certificates. Any mention of pneumonia or influenza in the death certificate literals, with certain exceptions, is counted as a P&I death. Numbers may change as more data are received. *The most recent data available are displayed here. ESSENCE-FL death records data are currently considered to be reliable through week 44, 2012.*

FIGURE 26 shows the reported count of pneumonia and influenza 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 3rd, 2012) there were:

- 134 deaths reported
- Upper bound of 95% confidence interval for prediction: 180 deaths
- NO excess deaths

The majority of the deaths are in those aged 75 years and older.

Figure 26: Pneumonia and Influenza Deaths for all Florida Counties, Multi-Year Regression Model Week 1, 2009-Week 44, 2012, as reported into ESSENCE-FL

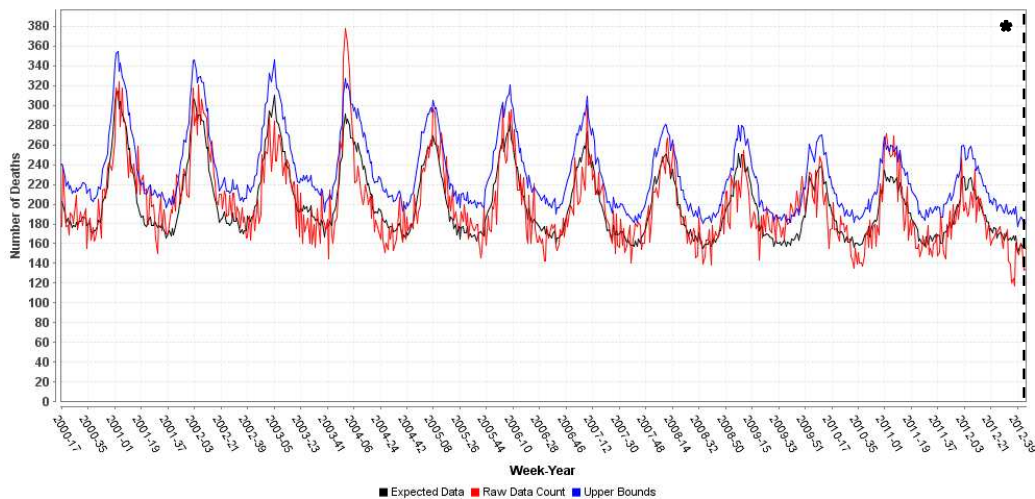


FIGURE 27 shows pneumonia and influenza deaths for all Florida counties, Week 40, 2010 - Week 46, 2012, as reported into ESSENCE-FL

FIGURE 27: ESSENCE-FL Pneumonia and Influenza Deaths, Week 40, 2009-Week 46, 2012

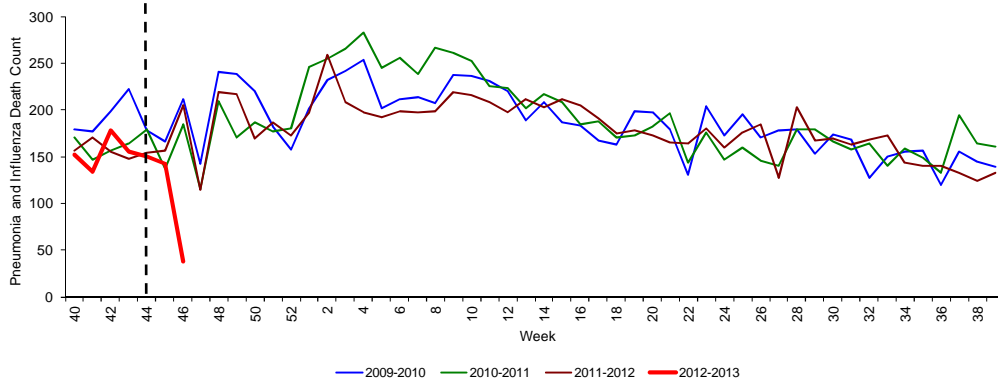
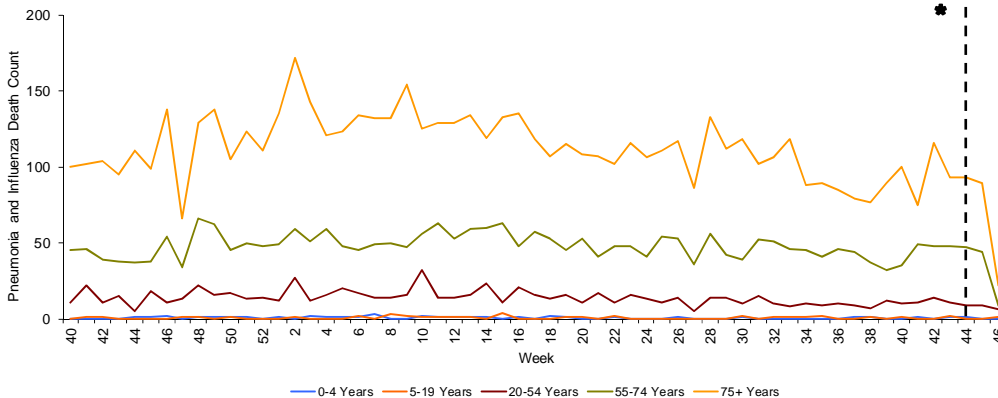


FIGURE 28 shows pneumonia and influenza deaths for all Florida counties by age group, Week 40, 2010 - Week 46, 2012, as reported into ESSENCE-FL

FIGURE 28: ESSENCE-FL Florida Pneumonia and Influenza Deaths by Age Group, Week 40, 2010-Week 46, 2012



* ESSENCE-FL death records data are currently considered to be reliable through week 43, 2012.

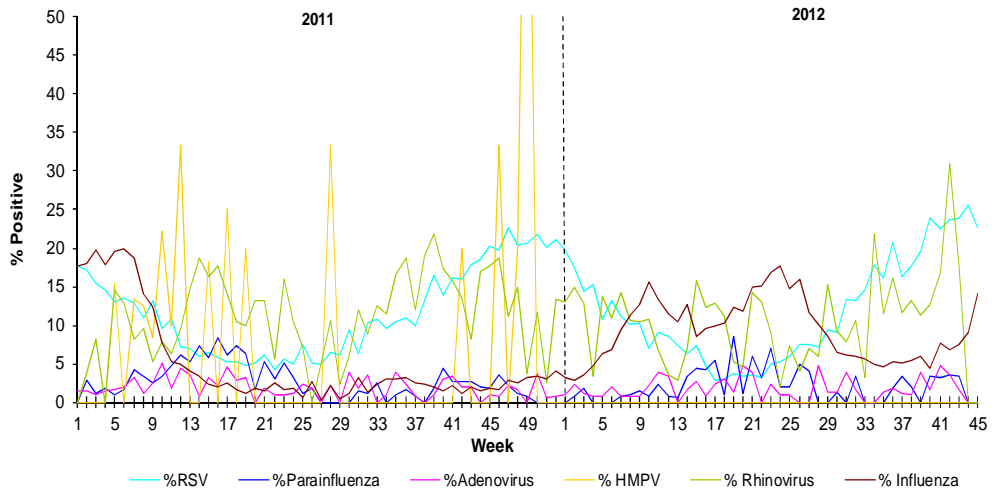
The National Respiratory and Enteric Virus Surveillance System (NREVSS) collects data from laboratories around the country on a weekly basis. NREVSS monitors temporal and geographic patterns of six common respiratory viruses. Twenty-four facilities reported in week 45.

FIGURE 29 shows the percentage of positive tests for multiple respiratory viruses reported by NREVSS-participating laboratories in Florida

The 6 respiratory viruses summarized in Figure 1 are:

- Respiratory Syncytial Virus (RSV)
- Parainfluenza 1-3
- Adenovirus
- Human Metapneumovirus (HMPV)
- Rhinovirus
- Influenza

FIGURE 29: Percentage of Positive Respiratory Virus Tests as Collected by NREVSS, Florida, 2010-2012, as of November 14, 2012



Influenza and ILI Outbreaks

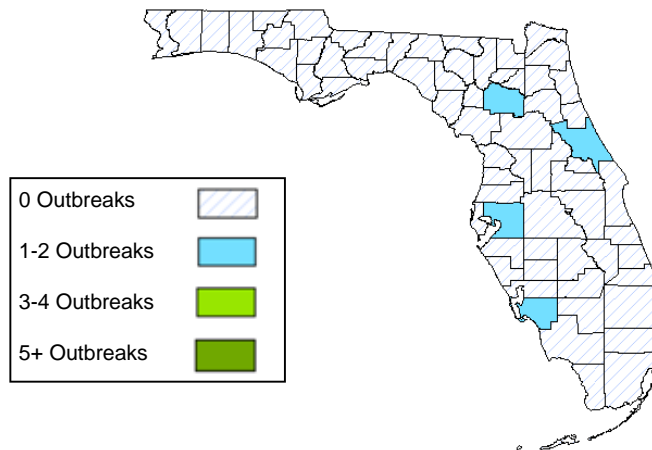
In week 45 there were two ILI outbreaks reported into EpiCom.

Volusia County: Seven inmates in a Correctional Facility had ILI. Three specimens were collected and tested PCR positive for influenza A at the state lab. The dorm housing the inmates was quarantined (224 inmates). No new cases have been detected. The vaccination rate for inmates and employees is unknown.

Hillsborough County: An elementary school reported that 17 out of 797 students had ILI. All 17 specimens tested rapid-antigen positive for influenza B. None of the 17 students had been vaccinated.

Map 3: Weekly County Influenza Outbreak Activity for Week 45 as Reported by 11:00 a.m. November 14, 2012

Four influenza or ILI outbreaks have been reported into EpiCom in the 2012-2013 season.



Pediatric Influenza-Associated Mortality

In week 45 there were no influenza-associated pediatric deaths reported statewide.

No influenza-associated pediatric deaths have been reported in Florida so far in the 2012-13 season.