



Week 9: February 24 – March 2, 2013



Summary

The Florida Department of Health (FDOH) uses many different surveillance systems to measure influenza activity. A summary of all these systems can be found on page 11.

- **Most Florida counties report Mild or No influenza activity.** Seven counties report Moderate influenza activity.
- **Thirty-four counties reported that influenza activity is declining.** Most counties report flat or decreasing activity. One county reports increasing influenza activity.
- **Emergency department influenza-like illness (ILI) visits have decreased in recent weeks.** In emergency departments reporting to ESSENCE-FL, the statewide percent of emergency department visits that are for ILI is less than 3%.
 - In the Panhandle and Northeast Florida, ILI visits increased in week 9.
 - In the Northeast, Central, and South Florida, emergency department visits for ILI continue to decline.
- **Nationally, the most common subtype of influenza detected is influenza A H3, followed by influenza B.** Florida is showing the same trend.
 - In week 9, around a third of the specimens that have been submitted for influenza testing at BPHL are testing positive for influenza. Most of these are influenza A H3, but influenza B is also circulating, and small numbers of 2009 influenza A H1N1 specimens have also been reported. All of these are seasonal strains of influenza.
 - Specimen submission and has declined in recent weeks.
 - Nationally (including Florida) almost all circulating influenza is a good match for the vaccine.
- **Influenza outbreaks (epidemiologically linked cases of influenza in a single setting) continue to be reported by counties around the state.** Most of these are caused by influenza A and are occurring in skilled nursing facilities, nursing homes, and other long-term care facilities.
- **No pediatric influenza-associated mortalities were reported in week 9, 2013.**
 - Seven pediatric influenza-associated mortalities have been reported in the 2012-2013 season.
- **The preliminary estimated number of Florida deaths due to pneumonia or influenza in week 8 is lower than the seasonal baseline, based on previous years' data.** Estimated deaths due to pneumonia and influenza are identified using preliminary death certificate data.
 - Nationwide data from CDC show higher than expected numbers of pneumonia and influenza deaths for week 8.
 - There were no excess preliminary estimated pneumonia and influenza deaths for week 8.
- **Because of lower activity in the Panhandle and declining activity in other regions, Florida is reporting Regional influenza activity to CDC in week 9.**
 - This activity level represents the geographic spread of influenza in Florida.

March 6, 2013

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

Produced by: Bureau of Epidemiology, Florida Department of Health (FDOH)

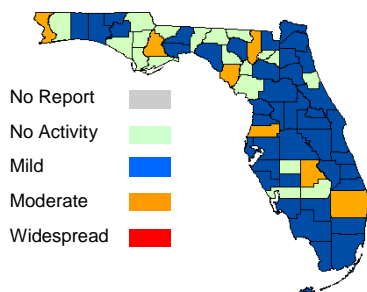
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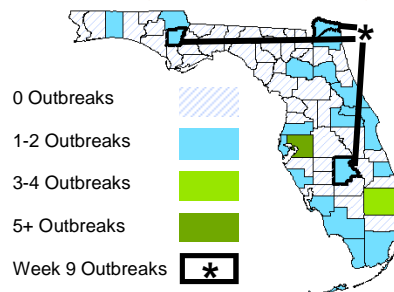
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County Influenza Activity Week 9, 2013



Sixty counties reported mild or moderate influenza activity. For more information, see page 6.

Influenza Outbreaks Week 40, 2012 – Week 9, 2013



Forty-nine outbreaks of influenza or ILI have been reported since October, 2012 (3 in week 9, 2013). For more information, see page 10.

Descriptions of Florida influenza and ILI surveillance systems can be found on page 11.

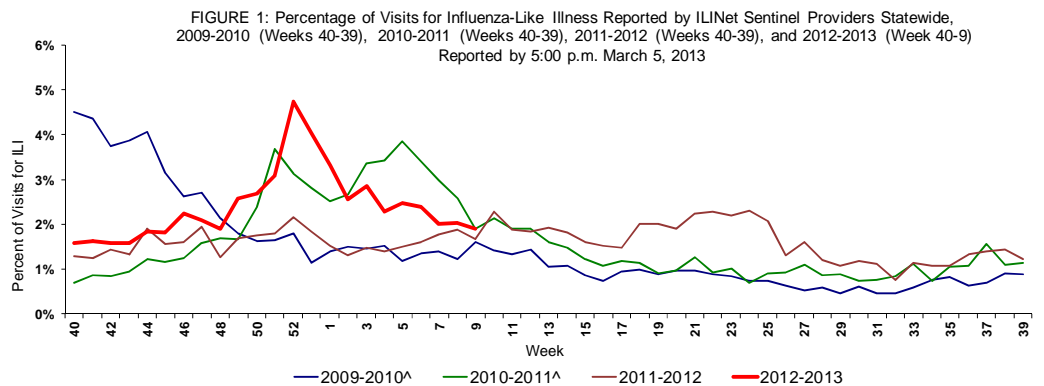
TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 9

Measure	Difference from Previous Week	Current Week 9	Previous Week 8	Page of Report
Overall statewide activity code reported to CDC	No Change	Regional	Regional	1
Percent of visits to ILINet providers for ILI	▼ 0.1	1.9%	2.0%	2
Percent of emergency department visits (from ESSENCE-FL) due to ILI	▼ 0.1	2.6%	2.7%	3
Percent of laboratory specimens that were positive for influenza	▼ 24.9	31.3%	56.2%	5
Number of counties reporting moderate influenza activity	▲ 1	7	6	6
Number of counties reporting widespread influenza activity	No Change	0	0	6
Number of counties reporting increasing influenza activity	▼ 4	1	5	7
Number of counties reporting decreasing influenza activity	▲ 10	34	24	7
Number of ILI outbreaks reported in EpiCom	▲ 1	1	0	10

ILINet Influenza-Like Illness-Statewide

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 14 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.

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



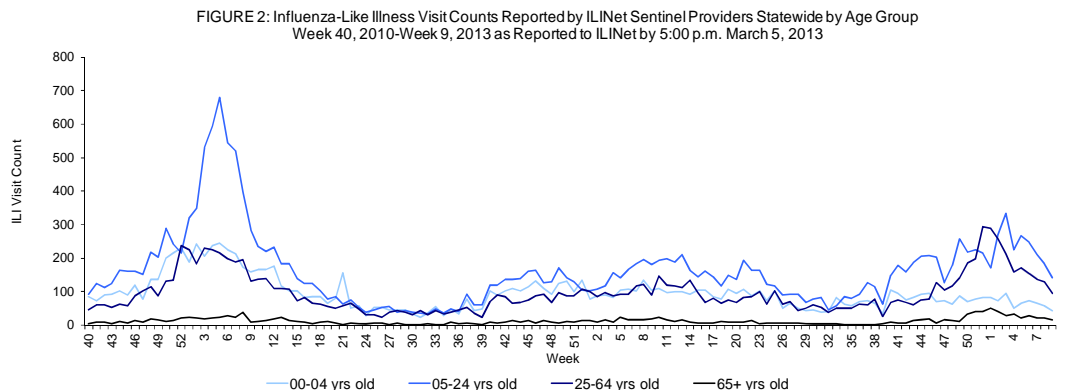
The percent of visits to sentinel outpatient physicians for ILI has increased slightly in the last three weeks after declining for several weeks.

61 of 110 ILINet Sentinels reported visit counts as of 12:00 p.m., March 6, 2013.

6 of 13 ILINet Super-Sentinels reported visit counts as of 12:00 p.m., March 6, 2013.

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



In week 9, the number of visits to sentinel outpatient physicians decreased in all age groups.

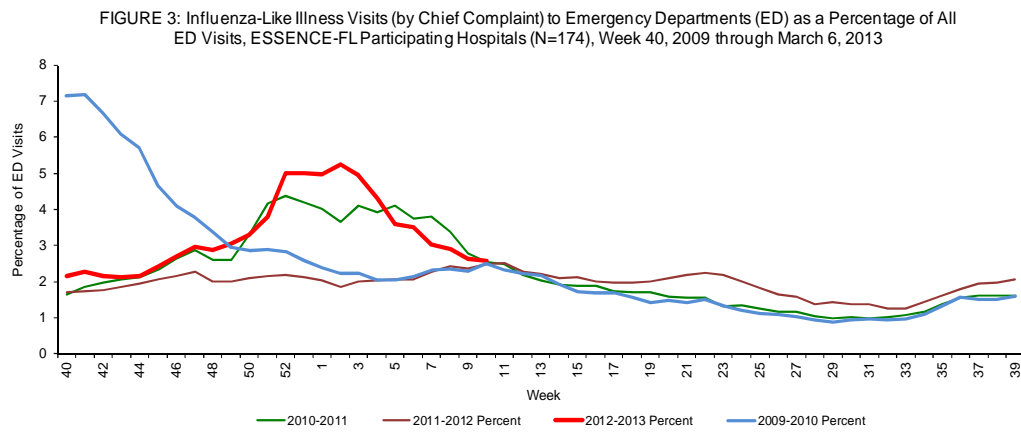
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†Data presented here are counts, not proportions as included in Figure 2. This is because age group denominator data is not available through ILINet.

ESSENCE-FL 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.

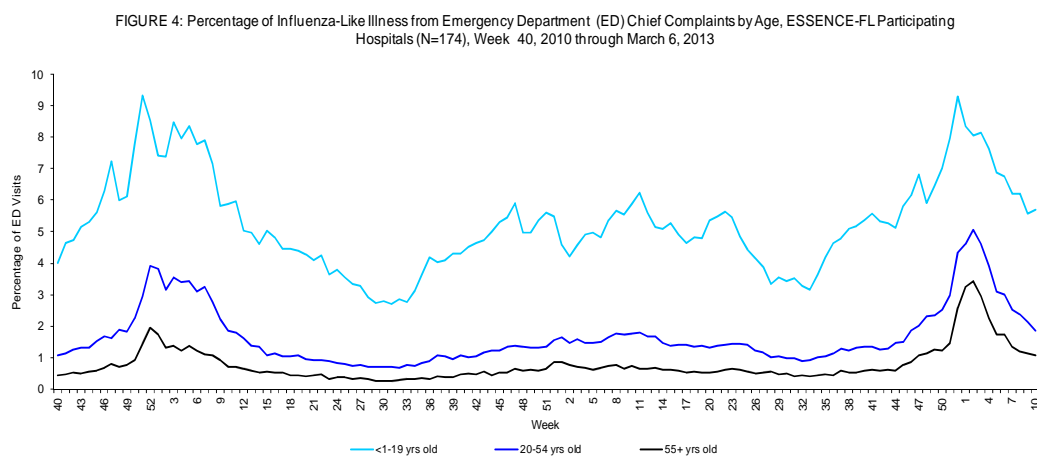
The percent of visits to emergency departments for ILI has declined in recent weeks.



*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.

In week 9, the percent of visits to emergency departments for ILI increased in the 0-19 age group and decreased in all other age groups.



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.

Of persons 55 years and older that visited the emergency department for complaints of ILI, between 25% and 30% were admitted.

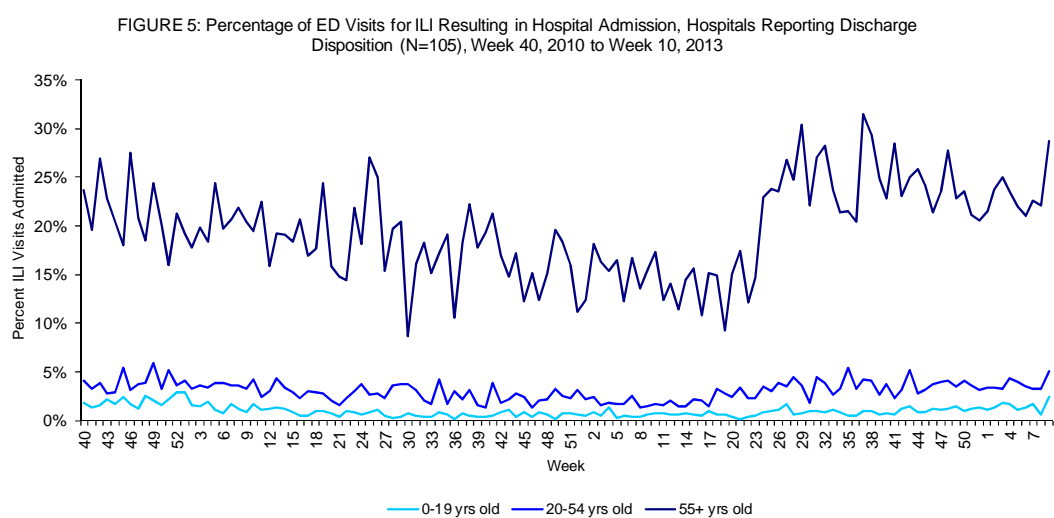
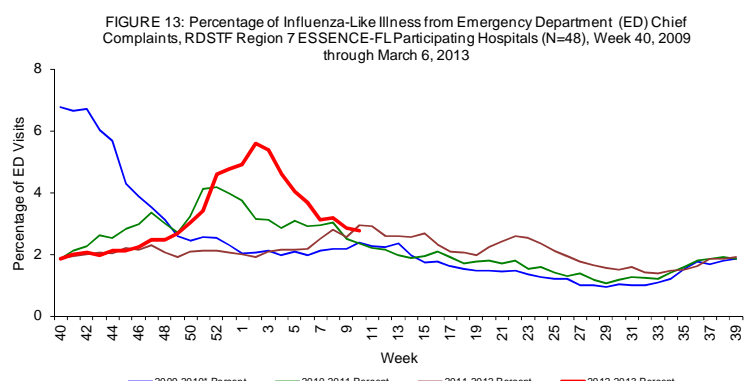
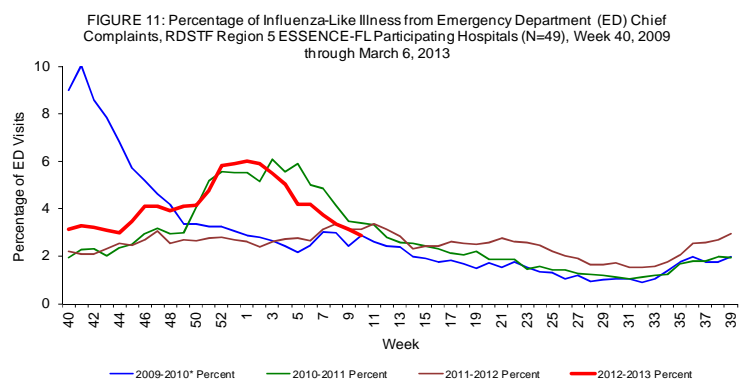
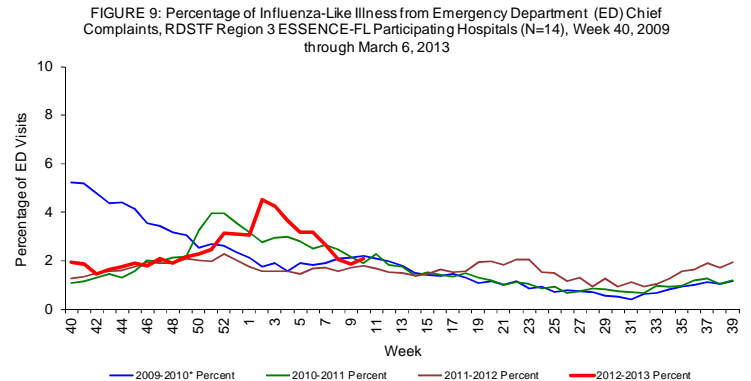
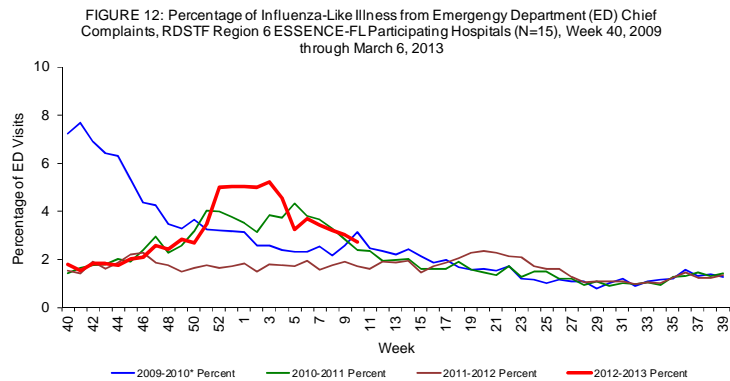
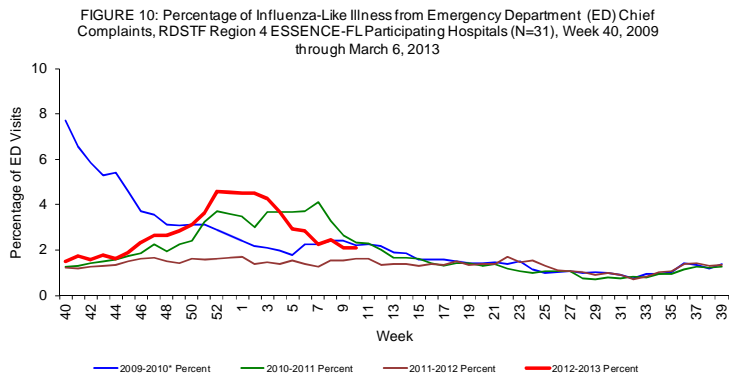
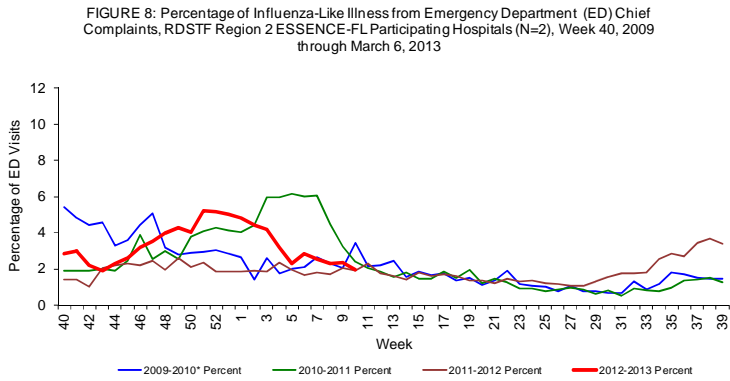
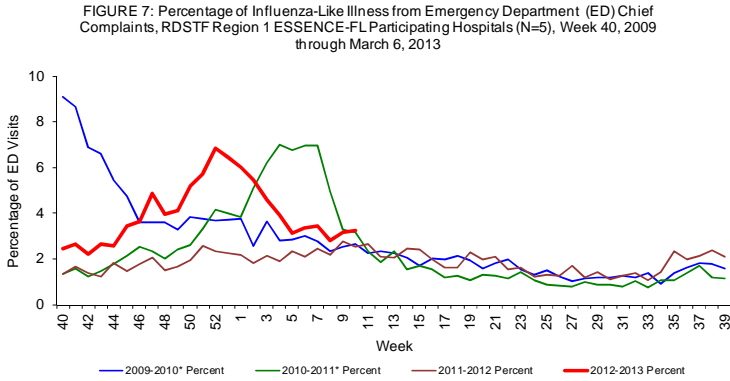
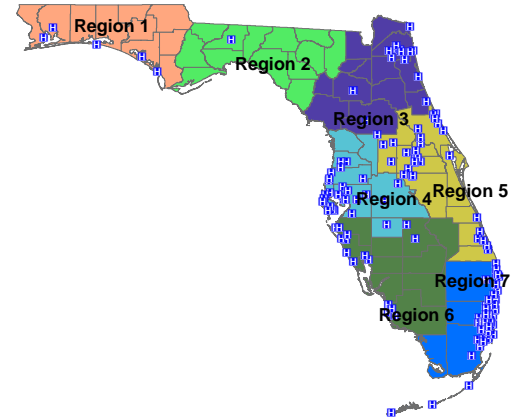


FIGURE 6 - FIGURE 12 describe ED chief complaint data from ESSENCE-FL by Regional Domestic Security Task Force (RDSTF).

The percent of emergency department visits for ILI decreased in Regions 2 and 5-7, and increased in Regions 1 and 3 and stayed flat in Region 4. All Regions are showing ILI visit levels consistent with previous influenza seasons.

Map 1: Hospitals Reporting Emergency Department (ED) Data to ESSENCE-FL, March 6, 2013 (N=174)



*There is no week 53 for the 2009-2010, 2010-2011 and 2011-2012 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.
 **Historical data for region 2 is only available beginning week 1, 2009

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

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 identified.

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

In recent weeks, influenza A H3 has been the most common strain detected by BPHL. Influenza B was the most common strain type in the early weeks of the 2012-2013 influenza season.

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

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

At BPHL this season, 12 specimens have tested positive for Victoria lineage influenza B and one specimen has tested positive for Yamagata lineage influenza B. 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 are cultured. FDOH will continue to monitor subtype and lineage for influenza viruses.

Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for Week 9 by Lab Event Date* as reported by 10:00 a.m. March 6, 2013

	Current Week 9	Previous Week 8
Total Specimens Tested	35	46
Influenza Positive Specimens (% of total)	11 (31.3%)	26 (56.2%)
H1N1 Positive Specimens (% of influenza positives)	1 (9.1%)	2 (7.7%)
H3 Influenza A	6 (54.5%)	17 (65.4%)
Influenza A Unspecified	2 (18.2%)	-
Influenza B Unspecified	2 (18.2%)	7 (26.9%)

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 9, 2013 as Reported in Merlin by 10:00 a.m. March 6, 2013

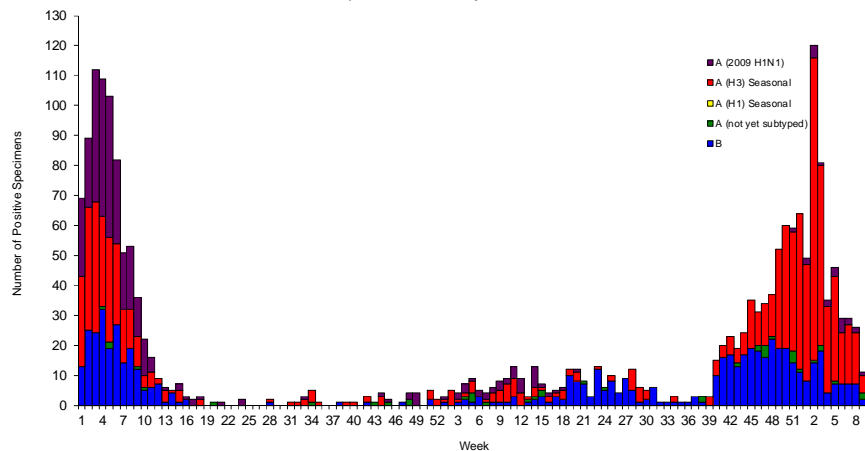
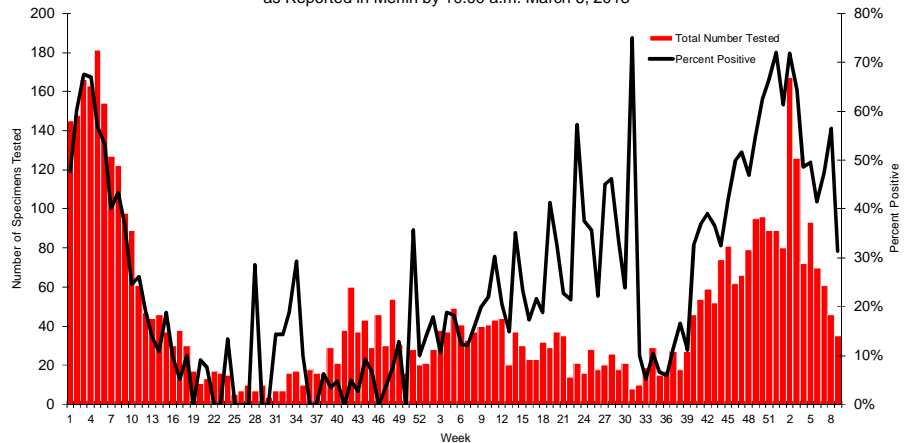


FIGURE 15: Number of Specimens Tested by Florida Bureau of Public Health Laboratories (BPHL) and Percent Positive for Influenza by Lab Event Date* Week 1, 2011 to Week 9, 2013 as Reported in Merlin by 10:00 a.m. March 6, 2013



*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

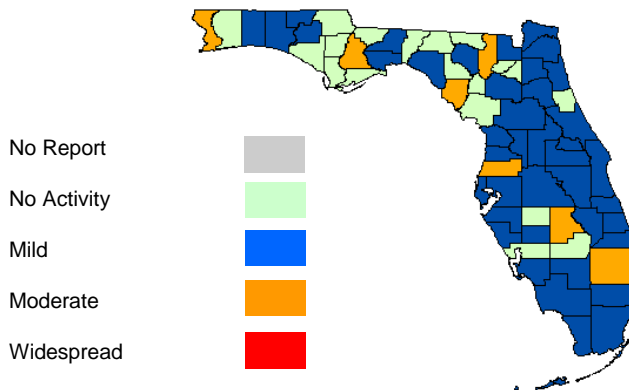
As of 12:00 p.m. March 6, 2013 a total of 67 (100%) counties had reported their weekly level of influenza activity. *Please note that data reported by counties after the deadline Tuesday at 5 p.m. are recorded but may not be included in the activity map for previous weeks.*

TABLE 3: Weekly County Influenza Activity for Week 9 (ending March 2, 2013) as Reported by 12:00 p.m. March 6, 2013

Activity Level	Week 8 Number of Counties	Week 9 Number of Counties	Week 9 Counties
No Report	-	-	-
No Activity	19	19	Bay, Bradford, Calhoun, Charlotte, Flagler, Franklin, Gadsden, Gilchrist, Glades, Gulf, Hamilton, Hardee, Jackson, Jefferson, Lafayette, Levy, Madison, Santa Rosa, Union
Mild	42	41	Alachua, Baker, Brevard, Broward, Citrus, Clay, Collier, Dade, Desoto, Duval, Hendry, Hernando, Hillsborough, Holmes, Indian River, Lake, Lee, Leon, Manatee, Marion, Martin, Monroe, Nassau, Okaloosa, Okeechobee, Orange, Osceola, Pinellas, Polk, Putnam, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, Suwannee, Taylor, Volusia, Wakulla, Walton, Washington
Moderate	6	7	Columbia, Dixie, Escambia, Highlands, Liberty, Palm Beach, Pasco
Widespread	-	-	-

Map 2: Weekly County Influenza Activity for Week 9 as Reported by 12:00 p.m. March 6, 2013

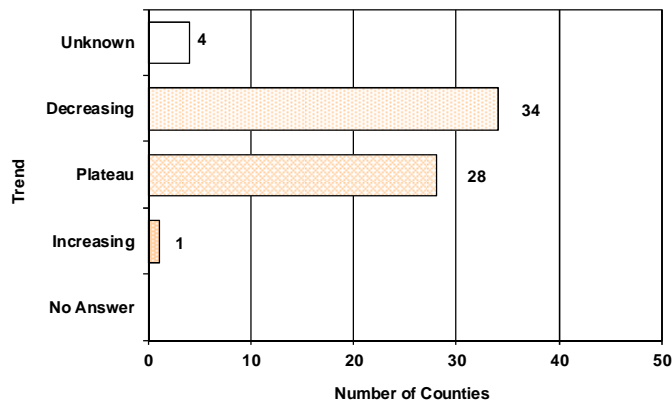
Most counties report mild or moderate activity. Seven counties report moderate activity.



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 9, 2013 thirty-four counties indicated that activity was decreasing, 28 indicated it was about the same as previous weeks, and 1 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 9 as of 12:00 p.m. March 6, 2013.

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 20 show the activity levels in various facilities by county as reported by county health department flu coordinators for week 9 as of 12:00 p.m. march 6, 2013.

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

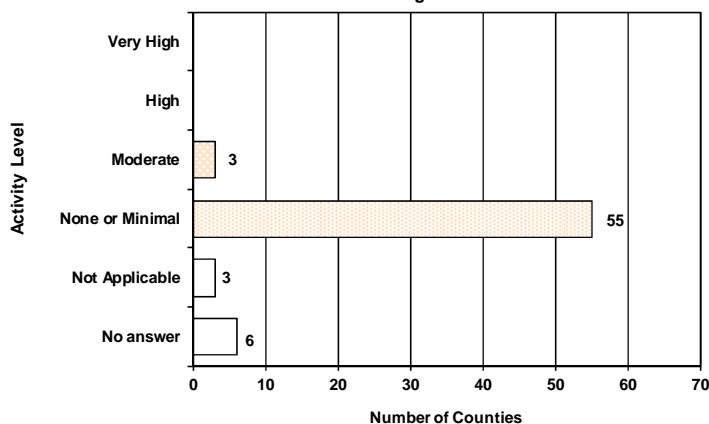


FIGURE 18: Assessment of Influenza Activity in Colleges and Universities

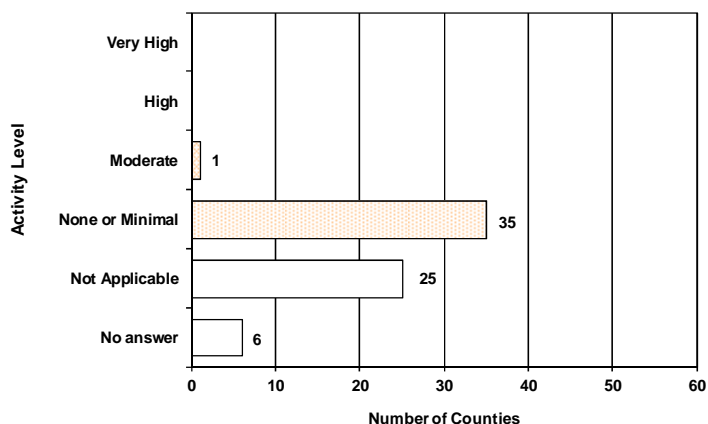


FIGURE 19: Assessment of Influenza Activity in Jails/Prisons

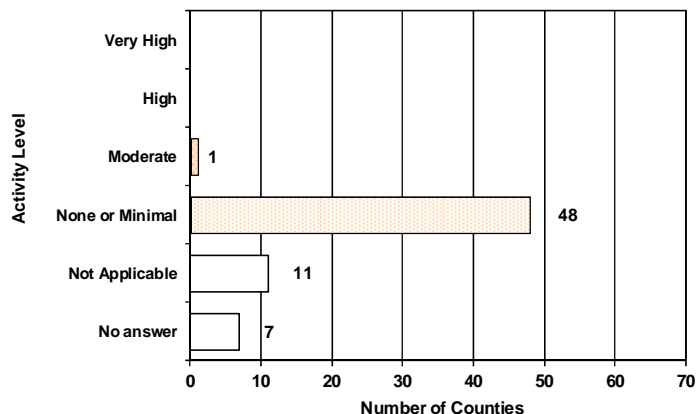


FIGURE 20: Assessment of Influenza Activity in Retirement Facilities

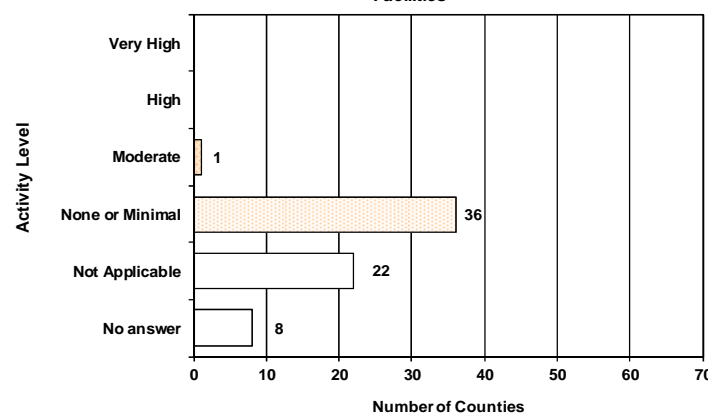
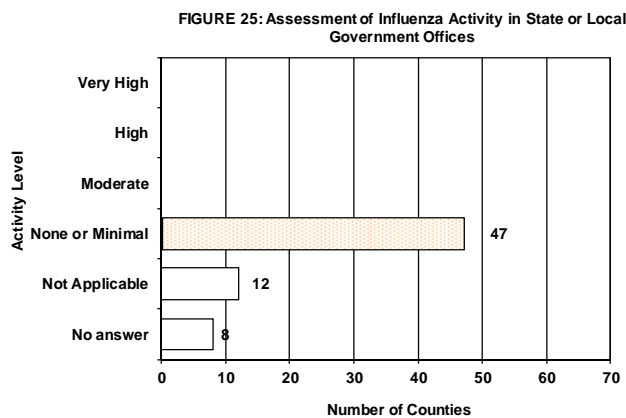
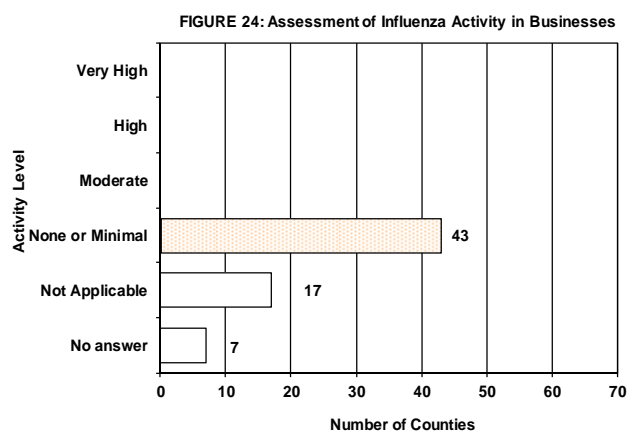
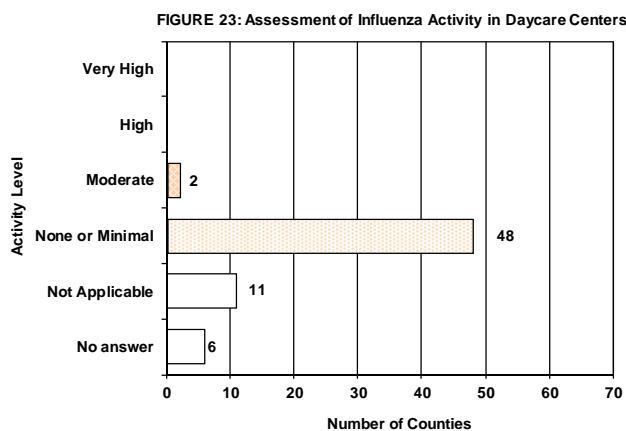
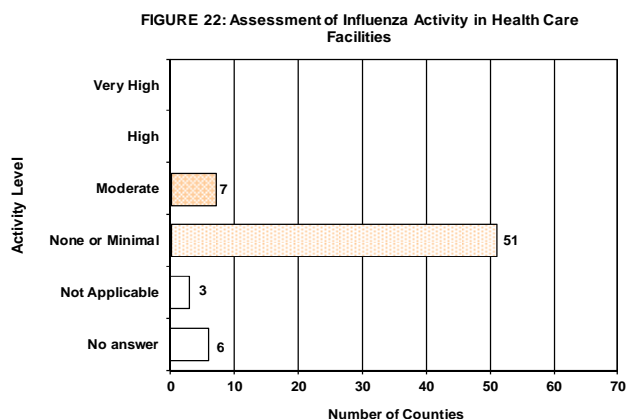
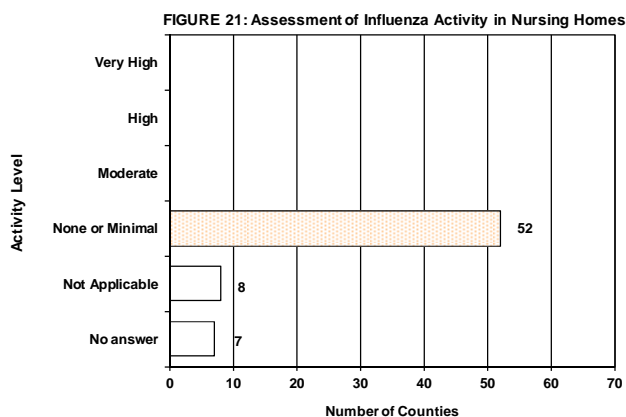


FIGURE 21 - FIGURE 25 show the activity levels in various facilities by county as reported by county health department flu coordinators for week 9 as of 12:00 p.m. March 6, 2013.



Pediatric Influenza-Associated Mortality

In week 9, 2013 there were no reported influenza-associated pediatric mortalities.

Seven influenza-associated pediatric mortalities have been reported in Florida since October, 2012.

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 vital statistics death record data from all 67 Florida counties. For pneumonia and influenza 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 pneumonia and influenza death. Current season pneumonia and influenza 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 8, 2013.*

FIGURE 26 shows the reported count of preliminary estimated 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 8 (ending February 23, 2013) there were:

- **202 preliminary estimated pneumonia and influenza deaths reported**
- **Upper bound of 95% confidence interval for prediction: 232 deaths**

No excess deaths

In several recent weeks, preliminary pneumonia and influenza associated deaths have exceeded the upper bound of the 95% confidence interval for prediction.

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

FIGURE 27 shows pneumonia and influenza deaths for all Florida counties, Week 40, 2010 - Week 10, 2013, as reported into ESSENCE-FL

FIGURE 28 shows pneumonia and influenza deaths for all Florida counties by age group, Week 40, 2010 - Week 10, 2013, as reported into ESSENCE-FL.

Figure 26: Vital Statistics Statewide Pneumonia and Influenza Deaths, Multi-Year Regression Model Week 17, 2000-Week 8, 2013, as reported into ESSENCE-FL

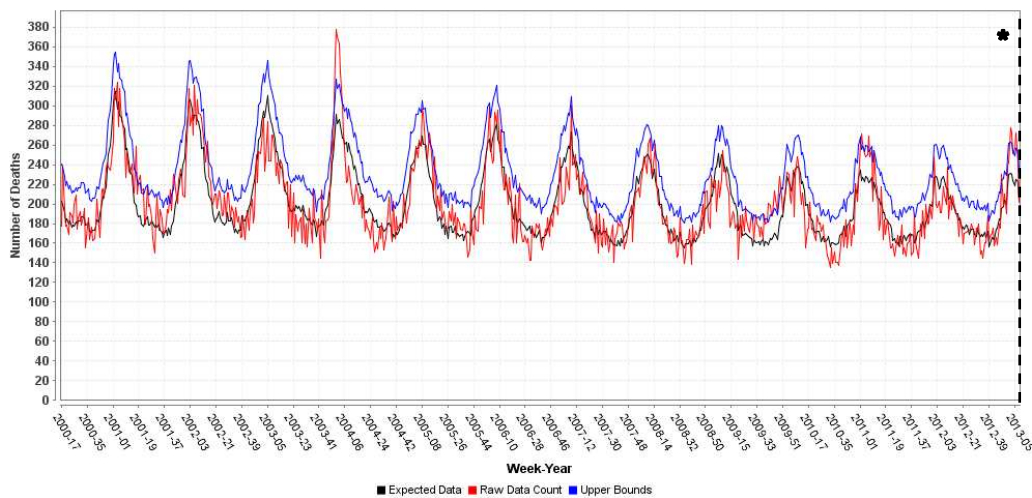


FIGURE 27: Vital Statistics Statewide Pneumonia and Influenza Deaths, as reported into ESSENCE-FL, Week 40, 2009-Week 10, 2013

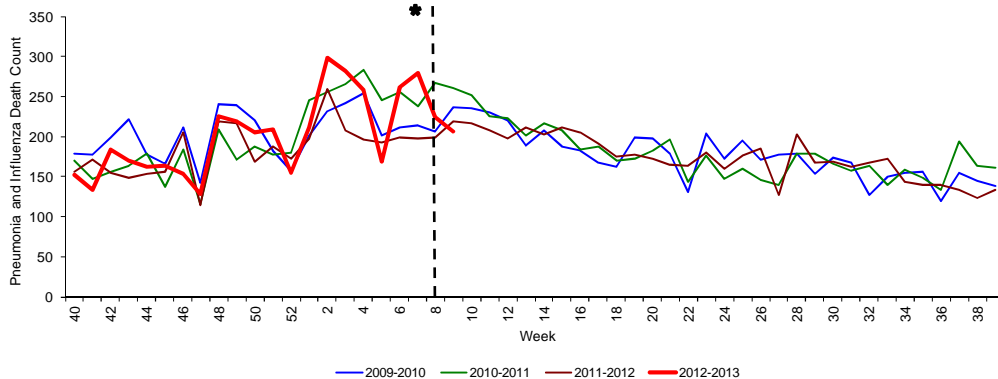
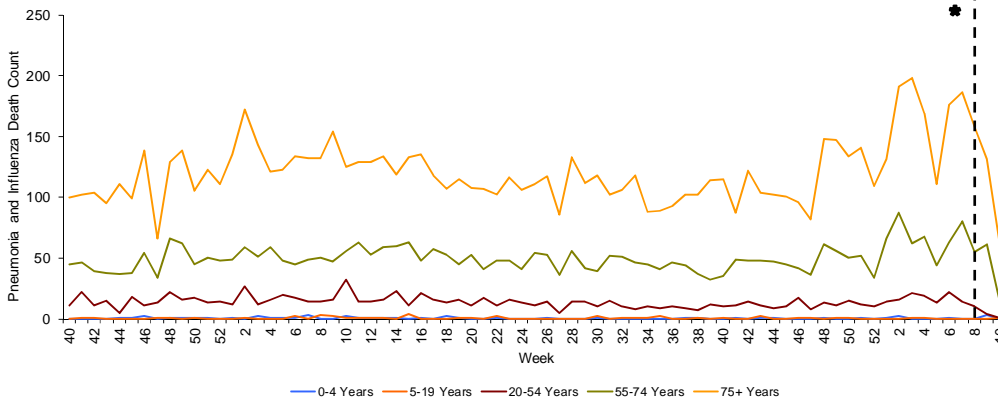


FIGURE 28: Vital Statistics Florida Pneumonia and Influenza Deaths by Age Group, as reported into ESSENCE-FL, Week 40, 2010-Week 10, 2013



* Death records data reported into ESSENCE-FL are currently considered to be complete through week 8, 2013.

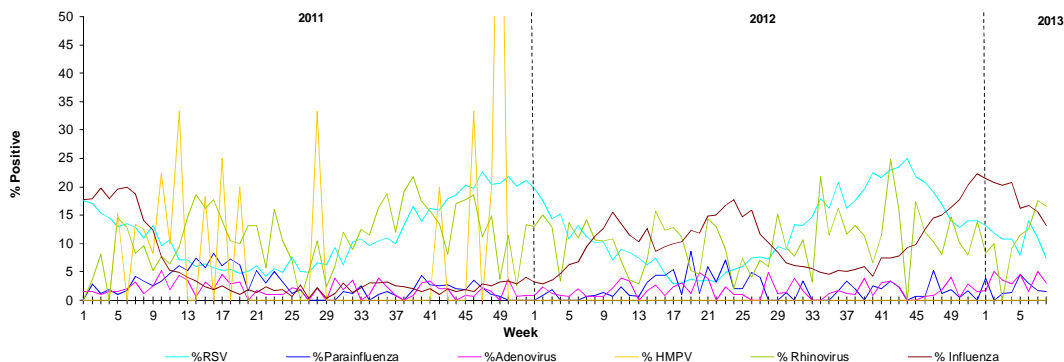
The National Respiratory and Enteric Virus Surveillance System (NREVSS) collects data from laboratories around the country on a weekly basis. NREVSS monitors temporal and geographic patterns of six common respiratory viruses. Seventeen facilities reported in week 9.

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 29 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 March 6, 2013



Influenza and ILI Outbreaks

In week 9, 2013 there were **three** influenza and ILI outbreaks reported in EpiCom.

- **Calhoun County:** A long-term care facility reported six residents and two staff with ILI. All affected individuals tested rapid antigen positive for influenza A. Four specimens were collected and tested positive for influenza A-H3 at BPHL. One resident was hospitalized. All affected resident had been vaccinated. Vaccination status for the affected staff is unknown at this time.
- **Nassau County:** A pre-Kindergarten reported 16 students and one faculty with ILI. Two students tested rapid antigen positive for influenza A. Vaccination status is unknown at this time. Infection control measures were discussed with the school nurse.
- **Highlands County:** A local child development center reported four students with ILI. One students tested positive for influenza A by rapid antigen test. Two other students tested rapid andntigen positive for influenza B by rapid antigen test. None of the affected residents had been vaccinated against influenza this season. Two affected students were prophylaxed with Oseltamivir at their physician’s office. Infection control measures were discussed with the director of the center.

Forty-nine outbreaks of influenza or ILI have been reported so far in the 2012-2013 flu season

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

Map 3: Weekly County Influenza Outbreak Activity for Week 9 as Reported by 11:00 a.m. March 6, 2013

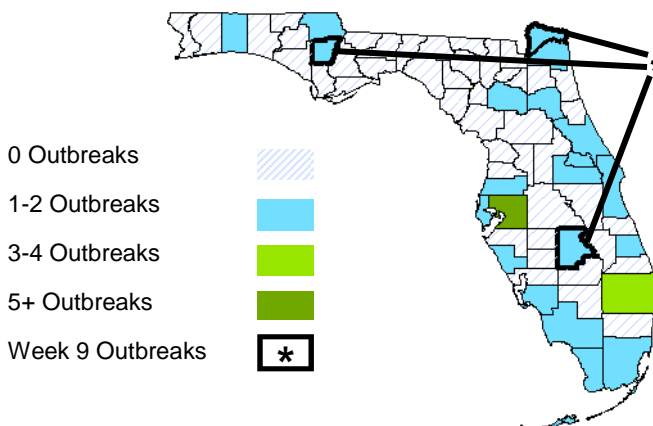


TABLE 4 : Summary of Florida ILI Outbreaks by Facility Status, Week 40, 2012-Week 9, 2013

Setting	Number of outbreaks	Implicated Viruses
Correctional facility or jail	4	<ul style="list-style-type: none"> Two outbreaks due to influenza A H3 One outbreak was due to influenza B One outbreak was due to influenza A (subtype not identified)
Domestic violence shelter	1	<ul style="list-style-type: none"> One outbreak was due to influenza that was not typed as influenza A or B
Facility for persons with disability	1	<ul style="list-style-type: none"> One outbreak was due to influenza A H3
Nursing home	12	<ul style="list-style-type: none"> Three outbreaks were due to influenza that was not typed as influenza A or B Eight outbreaks were due to influenza A (subtype not identified) One outbreak was due to influenza A (subtype not identified) and influenza B
Long-term care facility	9	<ul style="list-style-type: none"> Two outbreaks were due to influenza A H3 One outbreak was due to influenza B Six outbreaks were due to influenza A (subtype not identified)
Assisted living facility	6	<ul style="list-style-type: none"> Five outbreaks were due to influenza A (subtype not identified) One outbreak was due to influenza that was not typed as influenza A or B
Short-term rehabilitation facility	1	<ul style="list-style-type: none"> One outbreak was due to influenza A (subtype not identified)
School or Daycare facility	15	<ul style="list-style-type: none"> Seven outbreaks were due to influenza A (subtype not identified) Two outbreaks were due to influenza B Three outbreaks were due to influenza A (subtype not identified) and influenza B Three outbreaks were due to influenza that was not typed as influenza A or B
Total	49	<ul style="list-style-type: none"> Twenty-seven outbreaks were due to influenza A (subtype not identified) Four outbreaks were due to influenza B Five outbreaks were due to influenza A H3 Eight outbreaks were due to influenza that was not typed as influenza A or B Five outbreaks were due to influenza A (subtype not identified) and influenza B

Florida Surveillance System Summary

Florida ILINet

Measures trends in ILI visits to outpatient doctor's offices

Doctors submit specimens from ill patients for influenza testing

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

Emergency departments and urgent care clinics 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

Death certificates with pneumonia or influenza listed as a cause of death are used as a proxy to measure influenza mortality

Death certificate data from the Bureau of Vital Statistics can be accessed through ESSENCE-FL

Vital statistics data in ESSENCE 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

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 Viral Surveillance

BPHL performs confirmatory testing and subtyping on surveillance specimens

Surveillance specimens come 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

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

Information on locating influenza vaccination can be found using the flu vaccine locator at: <http://flushot.healthmap.org/>