



## Week 1: December 30, 2012 – January 5, 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.

#### National:

- According to CDC, influenza activity is increasing nationwide and is most elevated in the eastern half of the country. Nationwide, influenza A H3N2 is the most commonly detected influenza subtype.
- There were no new cases of variant H3N2 influenza A (H3N2v) reported in week 1, 2013. **No cases of H3N2v have been reported in Florida.** More information on H3N2v is at: <http://www.cdc.gov/flu/swineflu/influenza-variant-viruses-h3n2v.htm>

#### State:

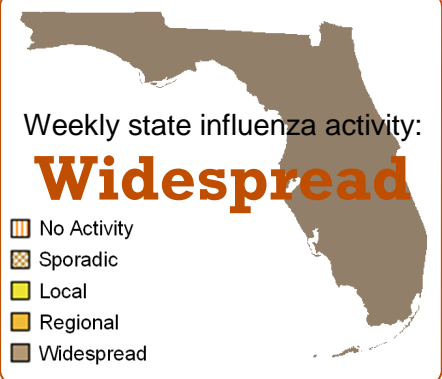
- **Influenza-like illness (ILI) activity is increasing statewide.**
  - Currently, influenza and ILI activity is elevated in all regions of Florida.
  - Panhandle, Central, and South Florida regions are showing higher than expected ILI activity in emergency department (ED) visits for ILI, as monitored through ESSENCE-FL.
  - Twenty counties across all regions of Florida report moderate influenza activity in week 1, 2013.
  - **Because of the statewide reports of elevated influenza and ILI activity, FDOH is reporting Widespread influenza activity to CDC for week 1, 2013.**
    - The activity level refers to the geographic spread of influenza, not its severity or intensity.
- **Influenza A is now the most common flu type in Florida this season; this is a change from previous weeks, when influenza B was more common.**
  - The Bureau of Public Health Laboratories (BPHL) tests select influenza surveillance specimens, such as those from outbreak investigations and sentinel healthcare providers.
  - Of the tests that have been influenza positive in the past five weeks, most have been positive for influenza A H3; the rest have been influenza B, with the exception of one 2009 H1N1 influenza A. All three of these are seasonal subtypes of influenza.
    - This is a change from previous weeks, when influenza B was more common.
    - In week 1, BPHL tested 46 specimens. Thirty tested positive: seven for influenza B, 14 for influenza A H3, seven for influenza A (not yet subtyped).
  - Of the sixteen ILI outbreaks reported this season, eight had confirmed influenza A infections, three had confirmed influenza B infections, and one had both influenza A and B infections.
- **There was one influenza outbreak reported in week 1, 2013.**
  - Orange County reported 19 staff in a nursing home with ILI. One specimen tested rapid-antigen positive for influenza of unknown type.
- **No pediatric influenza-associated mortalities were reported in week 1, 2013.**
  - Two pediatric influenza-associated mortalities have been reported in the 2012-2013 season.

January 10, 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)

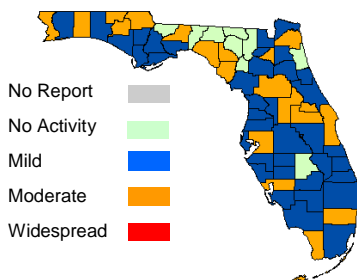
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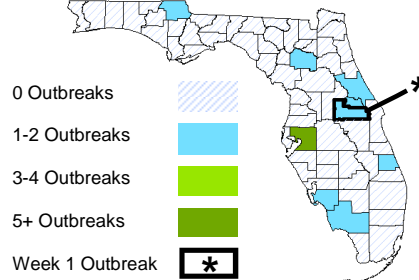
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### County Influenza Activity Week 1, 2012



Most counties report mild or moderate influenza activity. Twenty report moderate activity in week 1. For more information, see page 6.

### Influenza Outbreaks Weeks 40-1, 2012



Sixteen outbreaks of influenza or ILI have been reported since October, 2012 (one in week 1). For more information, see page 10.

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

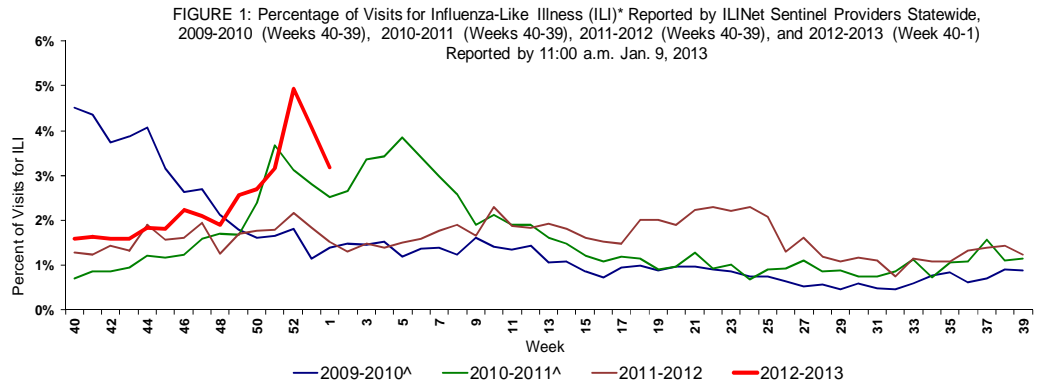
TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 1

Measure	Difference from previous week	Current week 1	Previous week 52	Page of Report
Overall statewide activity code reported to CDC	No Change	Widespread	Widespread	1
Percent of visits to ILINet providers for ILI	▼ 1.7	3.2%	4.9%	2
Percent of emergency department visits (from ESSENCE-FL) due to ILI	No Change	5.0%	5.0%	3
Percent of laboratory specimens that were positive for influenza	▼ 3.5	65.2%	68.7%	5
Number of counties reporting moderate influenza activity	No Change	20	20	6
Number of counties reporting widespread influenza activity	No Change	0	0	6
Number of counties reporting increasing influenza activity	▲ 2	40	38	7
Number of counties reporting decreasing influenza activity	▼ 3	0	3	7
Number of ILI outbreaks reported in EpiCom	No Change	0	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. 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.



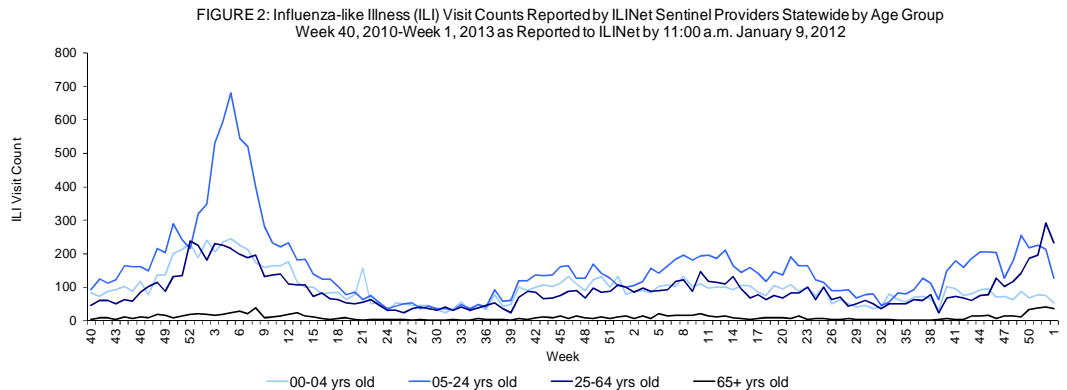
\*ILI = Influenza-like illness, fever >100°F AND sore throat and/or cough *in the absence* of another known cause.  
 ^There is no week 53 during the 2009-2010, 2010-2011, and 2011-12 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

ILI percent positive has increased in recent weeks.

70 of 110 ILINet Sentinels reported visit counts as of 12:30 p.m., January 9, 2013.

11 of 14 ILINet Super-Sentinels reported visit counts as of 12:30 p.m., January 9, 2013.

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



ILI visit counts decreased slightly in all age groups in week 1, 2013. While traditionally most visits are typically in younger age groups, in the last two weeks the most visits have been in the 25-64 year old age group.

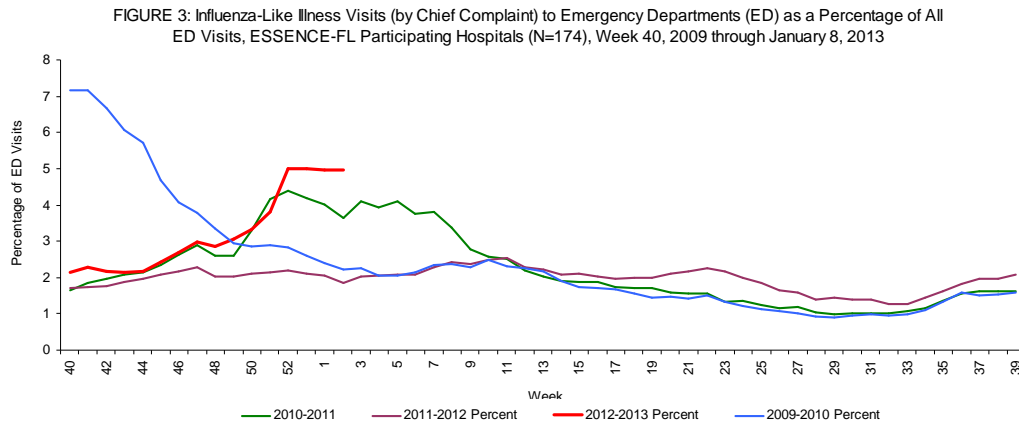
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†Data presented here are counts, not proportions as included in Figure 2. This is because age group denominator data is not available through ILINet.

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.

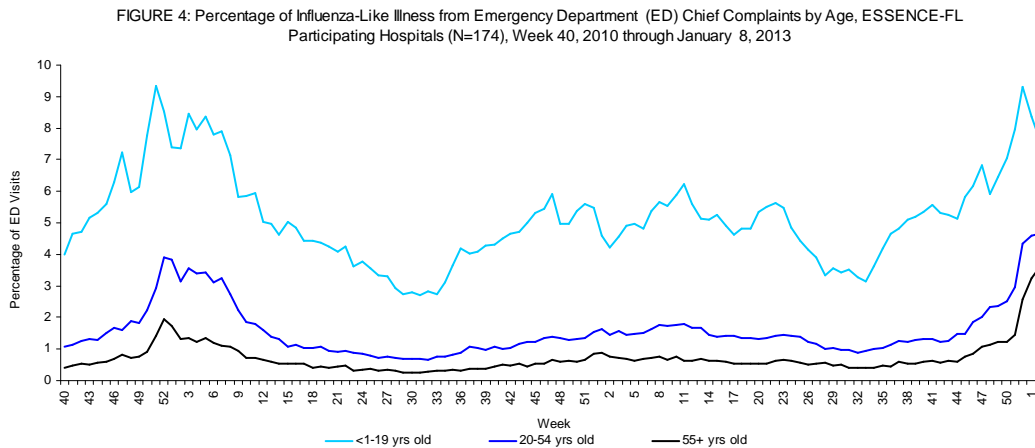
Percent ILI in ESSENCE-FL is elevated statewide.



\*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.

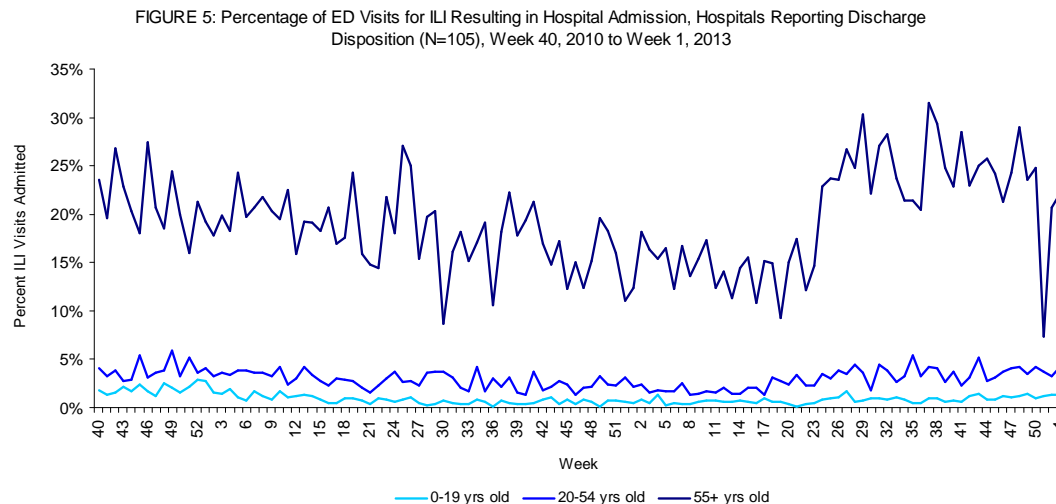
**FIGURE 4** shows percentage of ILI among all ED visits by age group.

Percent ILI in the 0 to 19 age group declined in week 1. ILI in the 20-55+ age group increased in week 1.



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.

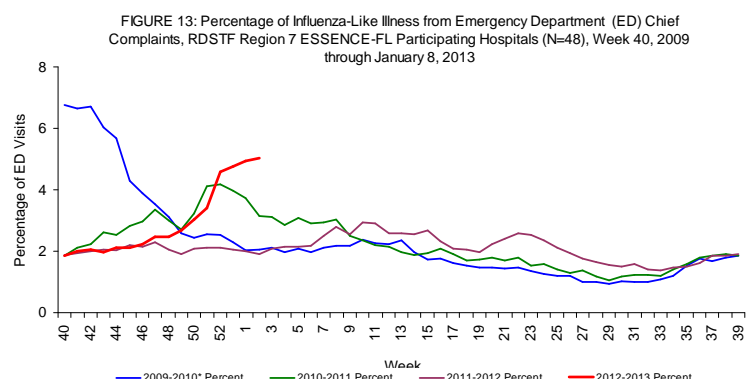
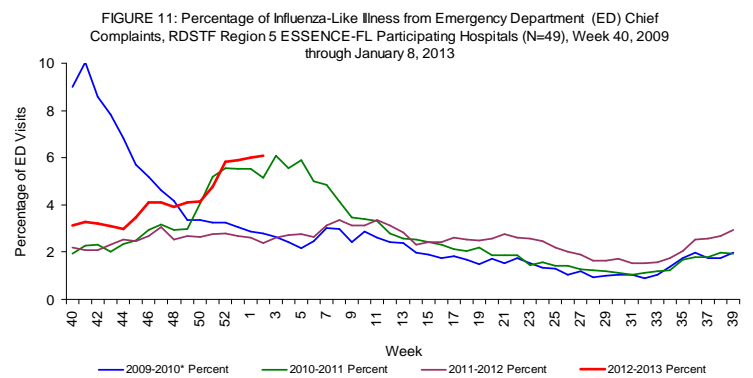
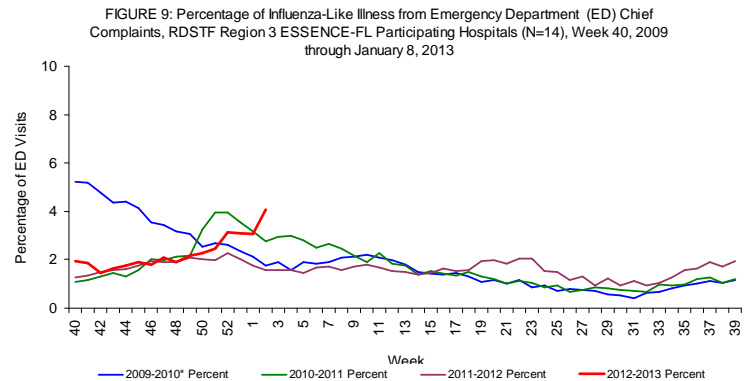
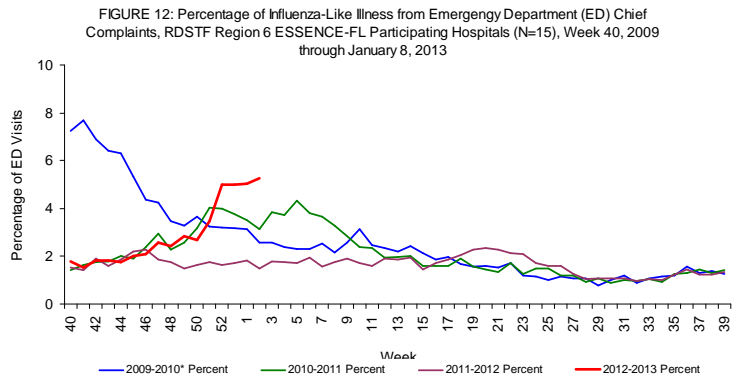
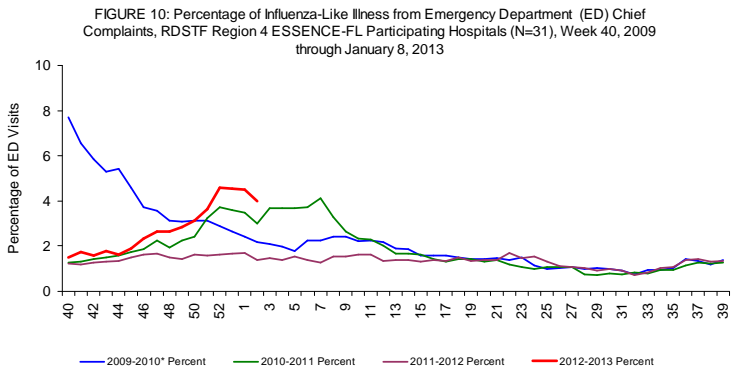
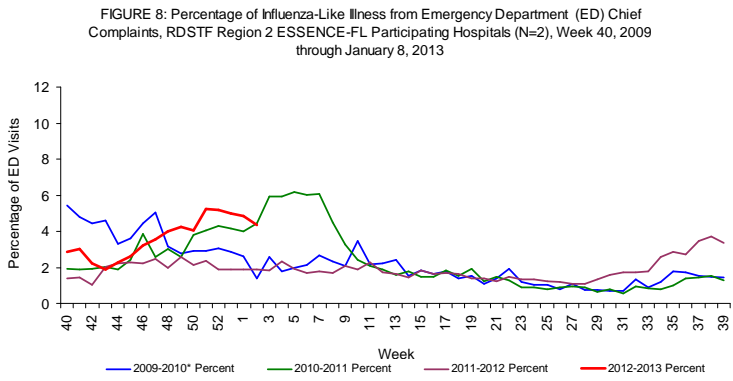
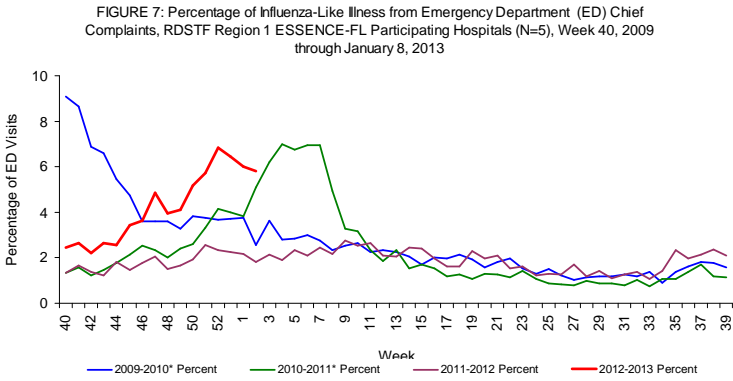
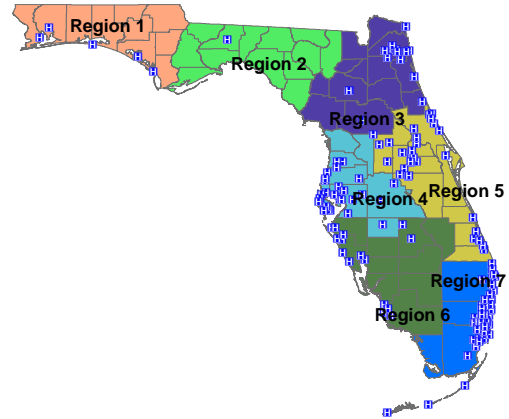
**FIGURE 5** shows the percentage of ED visits for ILI that resulted in hospitalization, by age group.



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

Percent ILI in ESSENCE-FL is elevated in all regions of Florida.

Map 1: Hospitals Reporting Emergency Department (ED) Data to ESSENCE-FL, January 9, 2013 (N=174)



**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 found for the positive influenza specimens.

**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 uses culture testing for influenza specimens, including those positive for influenza B.

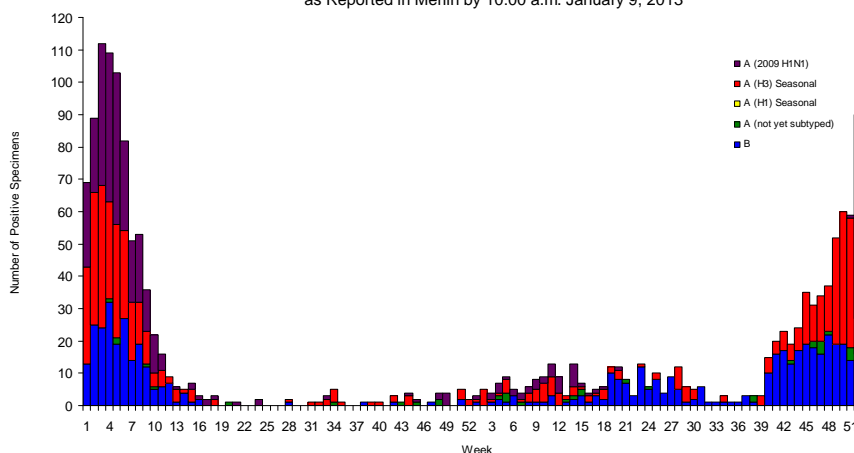
There are two distinct antigenic lineages of influenza B, known as Victoria and Yamagata. Both have circulated in Florida in the past year.

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 receive culture testing. FDOH will continue to monitor subtype and lineage for influenza viruses.

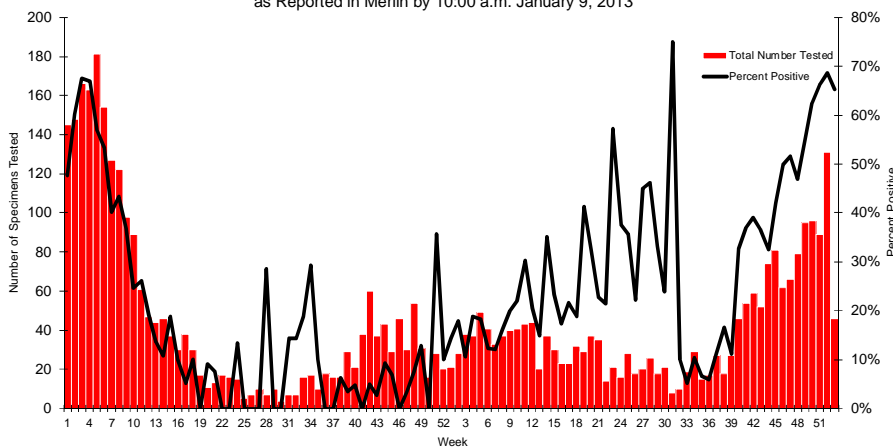
**Table 2: Bureau of Public Health Laboratories (BPHL) Viral Surveillance for Week 1 by Lab Event Date\* as reported by 10:00 a.m. January 9, 2013**

	Current Week 1	Previous Week 52
<b>Total Specimens Tested</b>	<b>46</b>	<b>131</b>
Influenza Positive Specimens (% of total)	30 (65.2%)	90 (68.7%)
H1N1 Positive Specimens (% of influenza positives)	-	-
H3 Influenza A	14 (46.7%)	63 (70.0%)
Influenza A Unspecified	9 (30.0%)	11 (12.2%)
Influenza B Unspecified	7 (23.3%)	16 (17.8%)

**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 1, 2013 as Reported in Merlin by 10:00 a.m. January 9, 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 1, 2013 as Reported in Merlin by 10:00 a.m. January 9, 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](http://www.doh.state.fl.us/disease_ctrl/epi/htopics/flu/FluLabReportGuide.pdf)



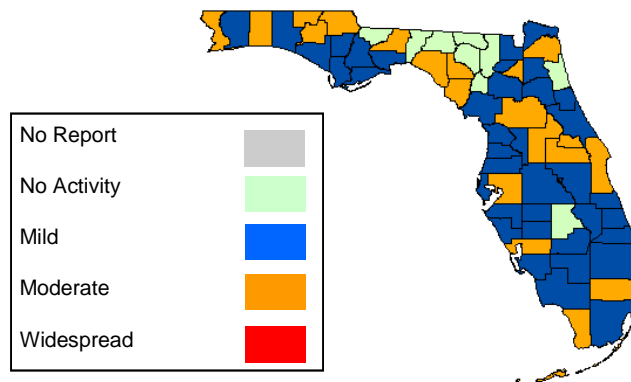
As of 9:00 a.m. January 9, 2013 a total of 67 (100%) counties had reported their weekly level of influenza activity. *Please note that data reported by counties after the deadline Tuesday at 5 p.m. are recorded but may not be included in the activity map for previous weeks.*

**TABLE 3: Weekly County Influenza Activity for Week 1 (ending January 5, 2013) as Reported by 9:00 a.m. January 9, 2013**

Activity Level	Week 52 Number of Counties	Week 1 Number of Counties	Week 1 Counties
No Report	-	-	
No Activity	14	9	Columbia, Gadsden, Gilchrist, Hamilton, Highlands, Jefferson, Madison, St. Johns, Suwannee
Mild	33	38	Alachua, Baker, Bay, Calhoun, Citrus, Clay, Collier, Dade, Desoto, Flagler, Franklin, Glades, Gulf, Hardee, Hendry, Hernando, Indian River, Lee, Levy, Liberty, Manatee, Martin, Nassau, Okeechobee, Osceola, Palm Beach, Pasco, Pinellas, Polk, Putnam, Santa Rosa, Sarasota, St. Lucie, Sumter, Union, Volusia, Wakulla, Walton
Moderate	20	20	Bradford, Brevard, Broward, Charlotte, Dixie, Duval, Escambia, Hillsborough, Holmes, Jackson, Lafayette, Lake, Leon, Marion, Monroe, Okaloosa, Orange, Seminole, Taylor, Washington
Widespread	-	-	

**Map 2: Weekly County Influenza Activity for Week 1 as Reported by 10:00 a.m. January 9, 2013**

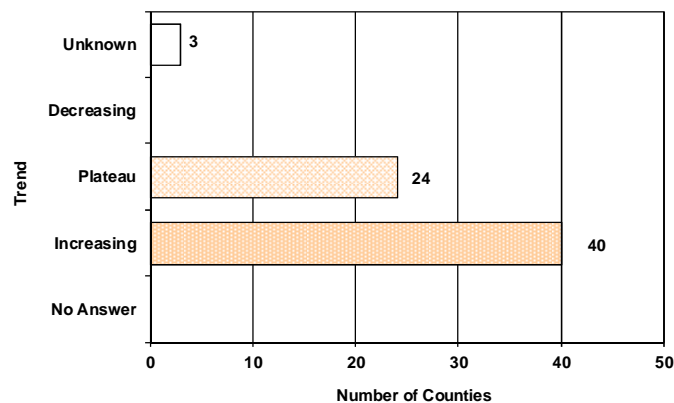
Most counties report mild or moderate activity. Twenty counties report moderate activity.



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 1, 2013 no counties indicated that activity was decreasing, 24 indicated it was about the same as previous weeks, and 40 indicated that activity was increasing.

**FIGURE 16: Assessment of Overall Influenza Activity Trend**

**FIGURE 16** shows the assessment of the overall influenza activity trend in each county as reported by county health department flu coordinators for week 1 as of 10:00 a.m. January 9, 2013.



Definitions for the County Influenza Activity Trends are available at: [http://www.doh.state.fl.us/disease\\_ctrl/epi/CountyInfluenzaTrendGuide.html](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.

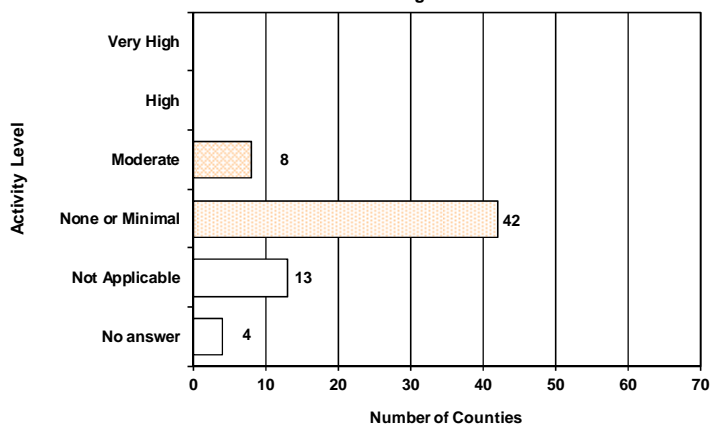
High activity -- Absenteeism elevated above baseline (in range of 10 to 25%) in more than half of schools; most schools sending several or many children home each day because of ILI.

Very high activity -- Absenteeism high enough to force curtailment of some or all school activities.

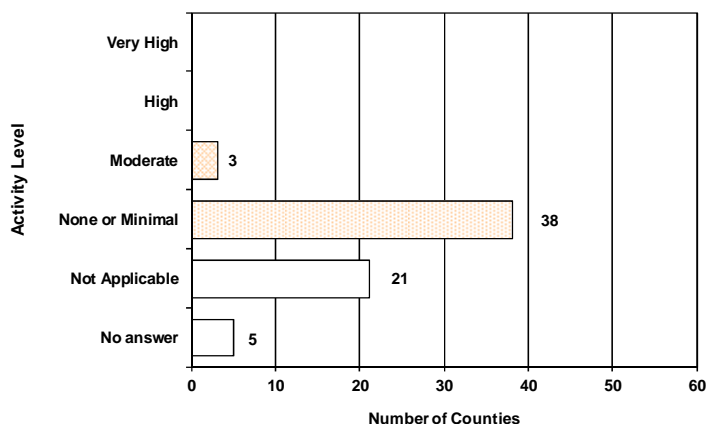
County influenza settings assessment guides are available at:  
[http://www.doh.state.fl.us/disease\\_ctrl/epi/FluAssessment.htm](http://www.doh.state.fl.us/disease_ctrl/epi/FluAssessment.htm)

**FIGURE 17 - FIGURE 20** show the activity levels in various facilities by county as reported by county health department flu coordinators for week 1 as of 10:00 a.m. January 9, 2013.

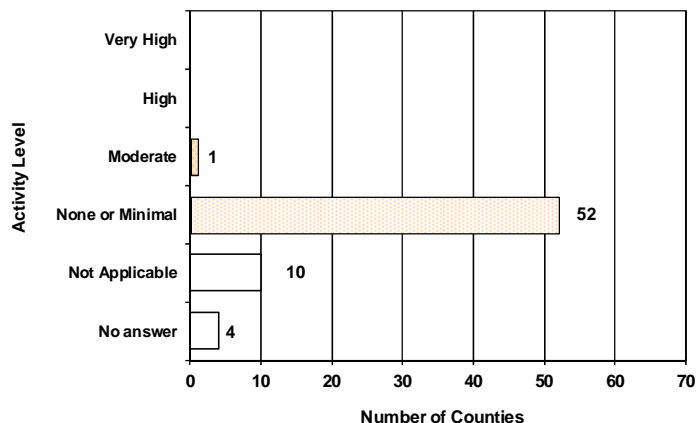
**FIGURE 17: Assessment of Influenza Activity in Elementary, Middle, and High Schools**



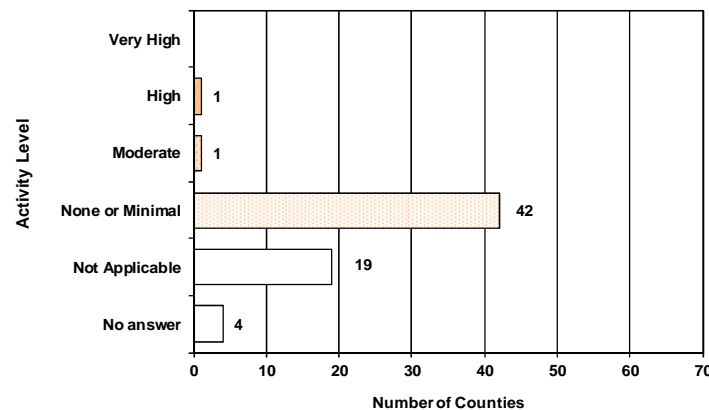
**FIGURE 18: Assessment of Influenza Activity in Colleges and Universities**



**FIGURE 19: Assessment of Influenza Activity in Jails/Prisons**

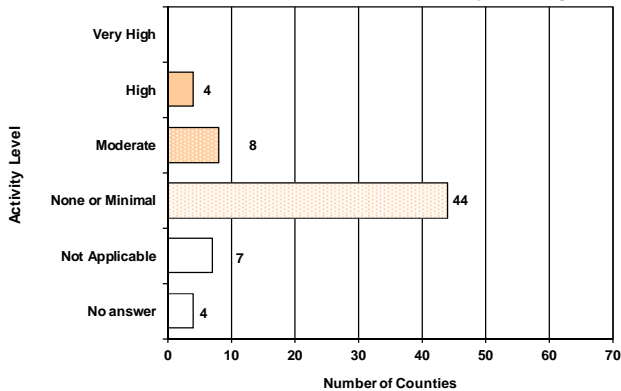


**FIGURE 20: Assessment of Influenza Activity in Retirement Facilities**

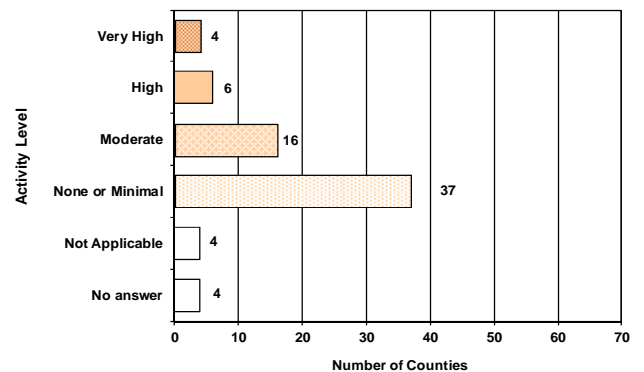


**FIGURE 21 - FIGURE 25** show the activity levels in various facilities by county as reported by county health department flu coordinators for week 1 as of 9:00 a.m. January 9, 2013.

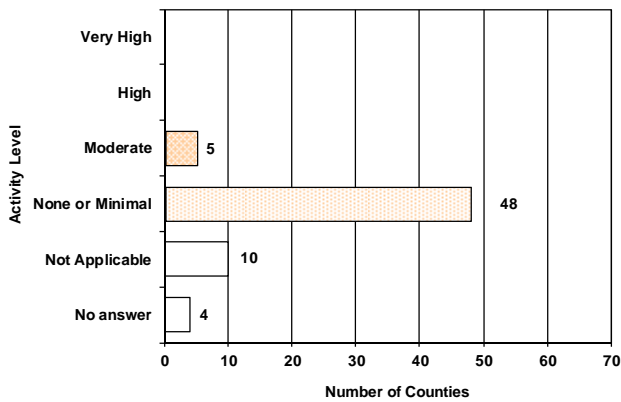
**FIGURE 21: Assessment of Influenza Activity in Nursing Homes**



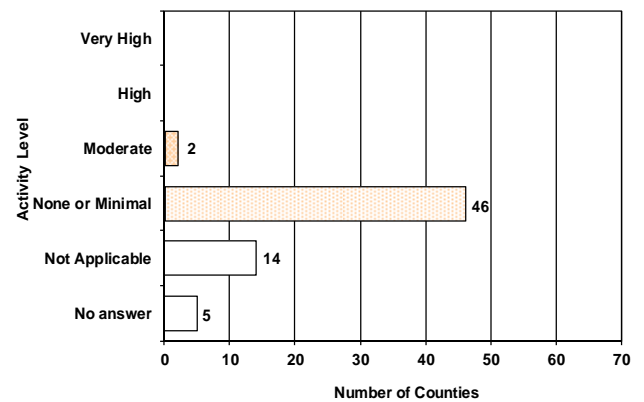
**FIGURE 22: Assessment of Influenza Activity in Health Care Facilities**



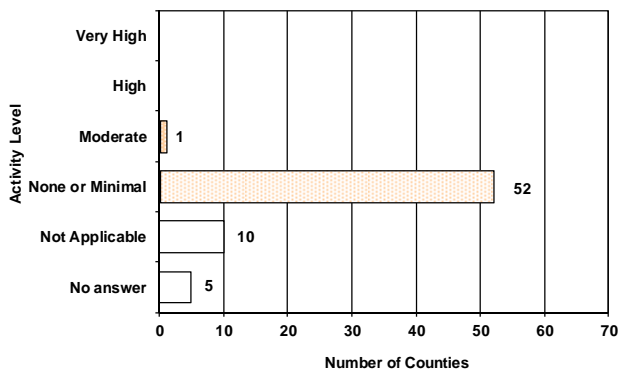
**FIGURE 23: Assessment of Influenza Activity in Daycare Centers**



**FIGURE 24: Assessment of Influenza Activity in Businesses**



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



## Pediatric Influenza-Associated Mortality

In week 1 there were no reported influenza-associated pediatric deaths.

**Two** influenza-associated pediatric deaths have been reported in Florida so far in the 2012-13 season.



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 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 vital statistics death records data are currently considered to be complete through week 52, 2012.*

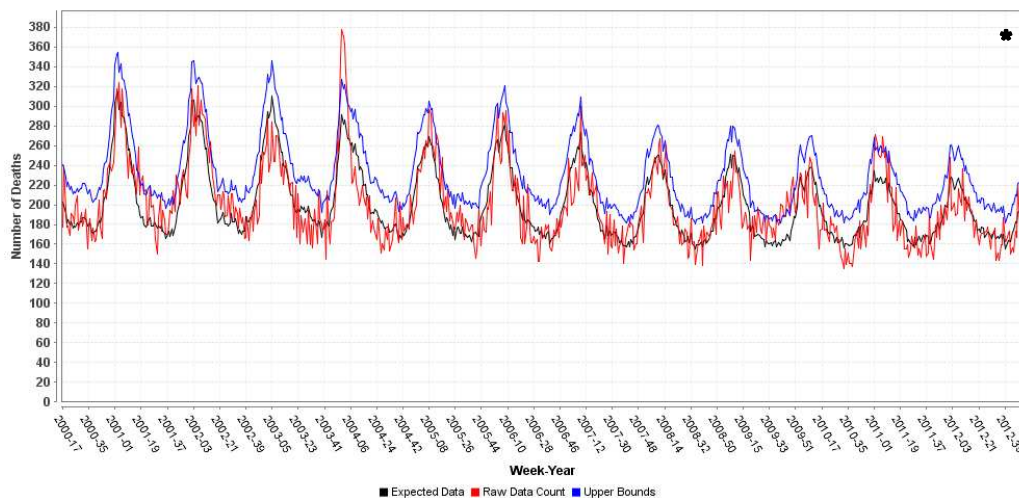
**FIGURE 26** shows the reported count of pneumonia and influenza deaths for all Florida counties, the number of deaths predicted using a multi-year regression model, and the upper bound of the 95% confidence interval for this prediction

For week 52 (ending December 29, 2012) there were:

- 192 deaths reported**
- Upper bound of 95% confidence interval for prediction: 211 deaths**
- NO excess deaths.**

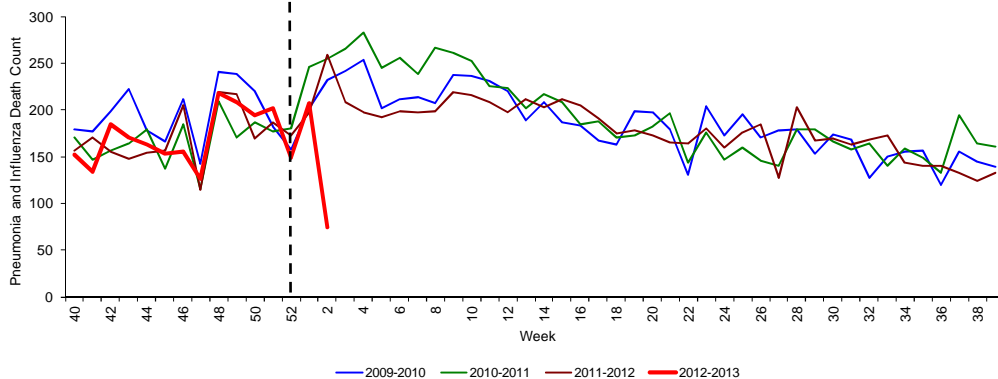
The majority of the deaths are in those aged 75 years and older.

Figure 26: Pneumonia and Influenza Deaths for all Florida Counties, Multi-Year Regression Model Week 17, 2000-Week 52, 2012, as reported into ESSENCE-FL



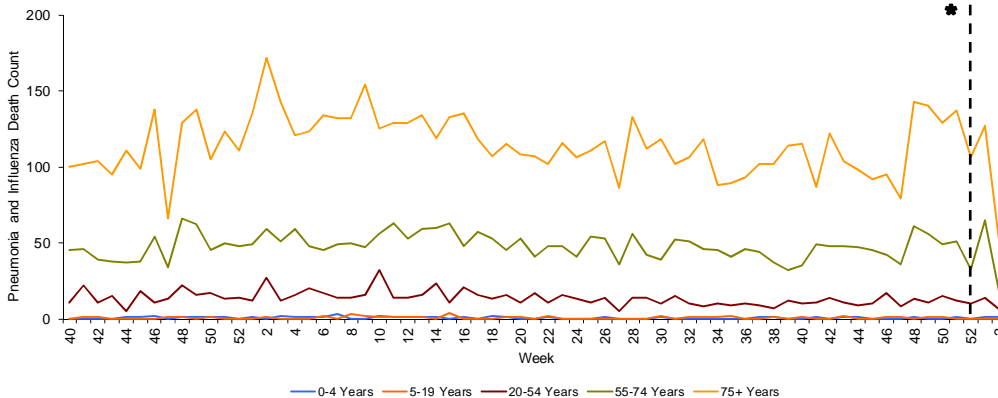
**FIGURE 27** shows pneumonia and influenza deaths for all Florida counties, Week 40, 2010 - Week 2, 2013, as reported into ESSENCE-FL

FIGURE 27: ESSENCE-FL Vital Statistics Statewide Pneumonia and Influenza Deaths, Week 40, 2009-Week 2, 2013



**FIGURE 28** shows pneumonia and influenza deaths for all Florida counties by age group, Week 40, 2010 - Week 2, 2013, as reported into ESSENCE-FL

FIGURE 28: ESSENCE-FL Vital Statistics Florida Pneumonia and Influenza Deaths by Age Group, Week 40, 2010-Week 2, 2013



\* Death records data reported into ESSENCE-FL are currently considered to be complete through week 52, 2012.

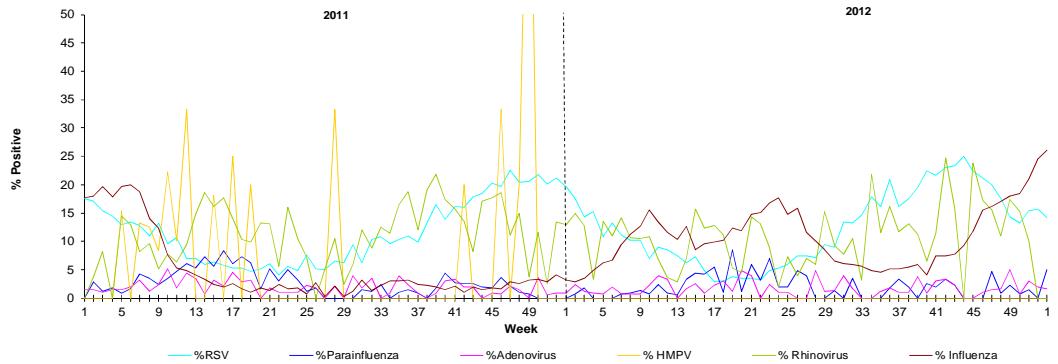
The National Respiratory and Enteric Virus Surveillance System (NREVSS) collects data from laboratories around the country on a weekly basis. NREVSS monitors temporal and geographic patterns of six common respiratory viruses. Twenty facilities reported in week 1.

**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 January 9, 2013



## Influenza and ILI Outbreaks

In week 1, 2013 there was one ILI outbreak reported in EpiCom.

- Orange County: A nursing home reported 19 staff with ILI. One employee tested rapid antigen positive for influenza of unknown type. Vaccination status is unknown. Infection control measures were implemented.

Map 3: Weekly County Influenza Outbreak Activity for Week 1 as Reported by 11:00 a.m. January 9, 2013

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

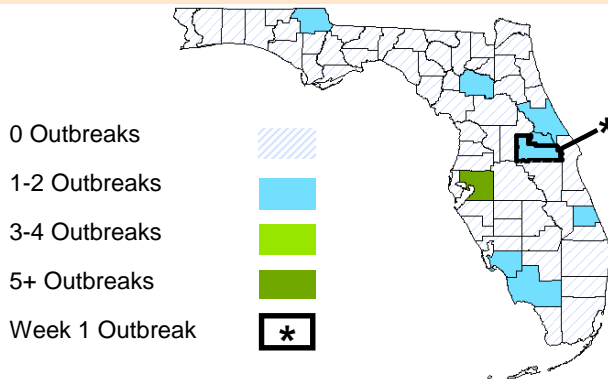


TABLE 29 : Summary of Florida ILI Outbreaks by facility status, Week 40, 2012-Week 1 2013

Setting	Number of outbreaks	Implicated Viruses
Correctional facility	3	<ul style="list-style-type: none"> <li>• One outbreak due to influenza A H3</li> <li>• One outbreak was due to influenza B</li> <li>• One outbreak was due to influenza A (subtype not identified)</li> </ul>
Domestic violence shelter	1	<ul style="list-style-type: none"> <li>• One outbreak was due to influenza that was not typed as influenza A or B</li> </ul>
Facility for persons with disability	1	<ul style="list-style-type: none"> <li>• One outbreak was due to influenza A H3</li> </ul>
Nursing home	1	<ul style="list-style-type: none"> <li>• One outbreak was due to influenza that was not typed as influenza A or B</li> </ul>
School	10	<ul style="list-style-type: none"> <li>• Five outbreaks were due to influenza A (subtype not identified)</li> <li>• Two outbreaks were due to influenza B</li> <li>• One outbreak was due to influenza A (subtype not identified) and influenza B</li> <li>• Two outbreaks were due to influenza that was not typed as influenza A or B</li> </ul>
<b>Total</b>	<b>16</b>	<ul style="list-style-type: none"> <li>• Six outbreaks were due to influenza A (subtype not identified)</li> <li>• Three outbreaks were due to influenza B</li> <li>• Two outbreaks were due to influenza A H3</li> <li>• Four outbreaks were due to influenza that was not typed as influenza A or B</li> <li>• One outbreak was due to influenza A (subtype not identified) and influenza B</li> </ul>

## Florida ILINet

- Network of volunteer healthcare providers who:
  - Report ILI and total visit counts every week
  - Submit specimens for confirmatory testing

## ESSENCE-FL Syndromic Surveillance

- 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 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

- 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

- CHD epidemiologists report outbreaks of influenza or ILI into EpiCom, Florida's online disease communication system

## 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

- Network of laboratories who report counts of test results for common respiratory viruses, including influenza, RSV, rhinovirus, and others