



Week 3: January 16, 2011-January 22, 2011



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), 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:

- CDC reported moderate levels of influenza around the country during week 2, and high levels of activity in the southeast region. The CDC calculated low ILI intensity for the state of Florida using Florida's ILINet sentinel surveillance data.

State:

- Influenza-like illness (ILI) activity is moderate and increasing in many of our monitoring systems. This week no counties reported widespread activity, and 24 counties reported moderate activity. Forty counties reported increasing influenza activity.
- ESSENCE and ILINet ILI data are elevated over previous years, especially in the southern and central regions of Florida.
- Current influenza strains circulating in Florida are primarily influenza A H3, with some 2009 H1N1 and influenza B. Other viruses known to be currently circulating, potentially causing influenza-like illness, include adenovirus, rhinovirus, parainfluenza and RSV. RSV activity is currently elevated, as is expected during the RSV season. RSV can cause severe respiratory illness in infants.
- There were two influenza or ILI outbreaks reported into EpiCom during week 3. There have been thirteen influenza or ILI outbreaks and two respiratory disease outbreaks reported in the 2010-11 influenza season. The majority of these outbreaks have been in nursing homes and long-term care facilities, and influenza A H3 has been implicated in all PCR confirmed influenza outbreaks

Weekly state influenza activity: Regional

Florida is currently reporting Regional influenza activity statewide, due to moderate influenza activity levels reported across Florida, continued high percent positive for influenza specimens, and elevated and increasing ILI levels in ESSENCE and ILINet.

Pediatric influenza Mortality

No pediatric influenza mortalities were reported in week 3. There has been **one** pediatric influenza mortality reported in the 2010-11 season. Influenza-associated deaths among those less than 18 years old are reportable in Florida. The case definition is available at:

http://www.cdc.gov/ncphi/diss/nndss/casedef/Influenza-Associated_current.htm

TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 3

Measure	Difference from previous week	Current week 3	Previous week 2	Page of Report
Overall statewide activity code reported to CDC	No Change	Regional	Regional	1
Number of ILI outbreaks reported in Epi Com	▼ 3	2	5	1
Percent of visits to ILINet providers for ILI	▲ 1.1	4.0%	2.9%	2
Percent of emergency department visits (from ESSENCE) due to ILI	▲ 0.1	4.2%	4.1%	4
Percent of hospital admissions (from ESSENCE) due to ILI	▲ 0.1	0.9%	0.8%	4
Percent of laboratory specimens that were positive for influenza	▲ 3.4	55.1%	51.7%	6
Number of counties reporting moderate influenza activity	▲ 8	24	16	7
Number of counties reporting widespread influenza activity	▼ 1	0	1	7
Number of counties reporting increasing influenza activity	▲ 15	40	25	8
Number of counties reporting decreasing influenza activity	▼ 1	5	6	8

January 26, 2011

Posted on the Bureau of Epidemiology website: http://www.doh.state.fl.us/disease_ctrl/epi/swineflu/Reports/reports.htm

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

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Weekly state influenza activity:

Regional

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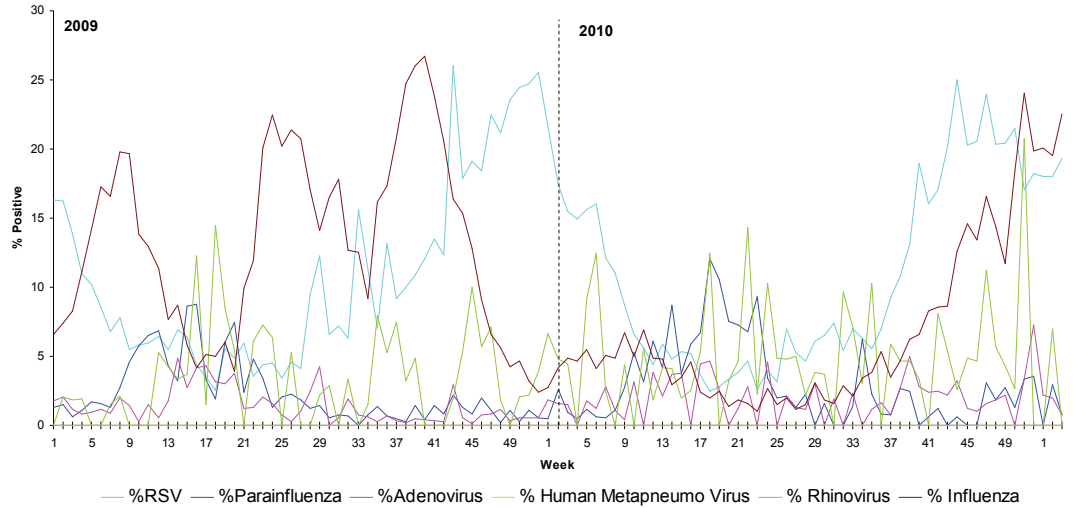
The National Respiratory and Enteric Virus Surveillance System (NREVSS) collects data from laboratory facilities around the country on a weekly basis. NREVSS monitors temporal and geographic patterns of respiratory syncytial virus (RSV), human parainfluenza viruses (HPIV), respiratory and enteric adenoviruses and rotavirus. Florida has over 30 participating laboratory facilities.

FIGURE 1 shows the percentage of positive tests for multiple respiratory viruses reported by NREVSS-participating laboratories in Florida

The six respiratory viruses summarized in Figure 1 are:

- RSV
- Parainfluenza 1-3 (HPIV)
- Adenovirus
- Human Metapneumo Virus
- Rhinovirus
- Influenza

Figure 1: Percentage of Positive Respiratory Virus Tests as Collected by NREVSS, Florida, 2009-2011, as of January 26, 2011

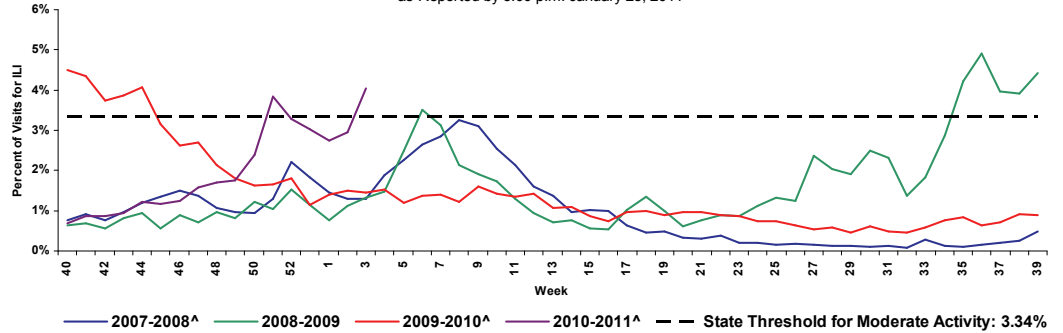


ILINET Influenza-like Illness-Statewide

FIGURE 2 shows the percentage of visits for influenza-like illness* reported by ILINet Sentinel Providers statewide.

ILI activity is near the moderate threshold and above previous pandemic and non-pandemic influenza seasons at this time.

FIGURE 2: Percentage of Visits for Influenza-Like Illness* Reported by ILINet Sentinel Providers Statewide, 2007-2008 (Weeks 40-20), 2008-2009 (Weeks 40-39), 2009-2010 (Weeks 40-39), and 2010-2011 (Week 40-3) as Reported by 5:00 p.m. January 25, 2011

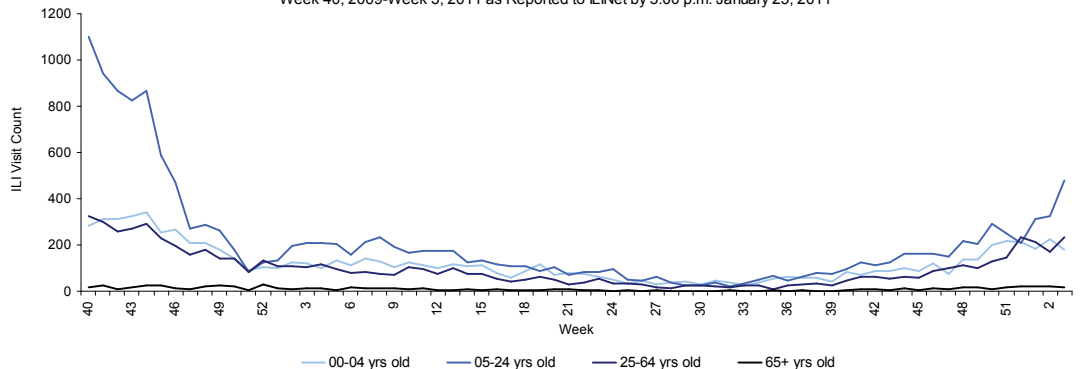


*ILI = Influenza-like illness, fever >100°F AND sore throat and/or cough *in the absence* of another known cause.
 **The 2009—2010 threshold for moderate activity is calculated from ILINet data. The threshold for moderate activity is the mean percentage of patient visits for ILI during influenza weeks for the previous three seasons plus two standard deviations. Only weeks with 10% or greater of laboratory specimens testing positive are included in the calculation. Due to wide variability in regional level data, it is not appropriate to apply the state baseline to regional data.
 ^There is no week 53 during the 2006-2007, 2007-2008, and 2009-2010 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

FIGURE 3 shows influenza-like illness (ILI) visit counts reported by ILINet sentinel providers statewide by age group.

Recent ILI increases have been in those age 5-24 and 65+.

FIGURE 3: Influenza-like Illness (ILI) Visit Counts Reported by ILINet Sentinel Providers Statewide by Age Group Week 40, 2009-Week 3, 2011 as Reported to ILINet by 5:00 p.m. January 25, 2011



*ILI = Influenza-like illness, fever >100°F AND sore throat and/or cough *in the absence* of another known cause.
 †Data presented here are counts, not proportions as included in Figure 2. This is because age group denominator data is not available through ILINet.

Map 1: RDSTF Regions for ILINet Data

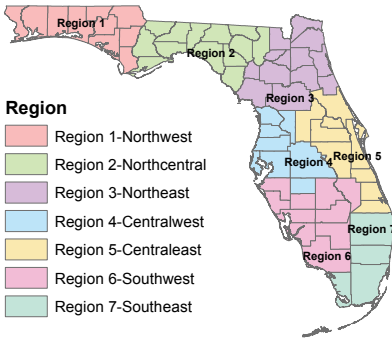


TABLE 2: ILINet Providers and Percent of Visits for ILI by Region, Week 3, as Reported by 5:00 p.m. January 25, 2011

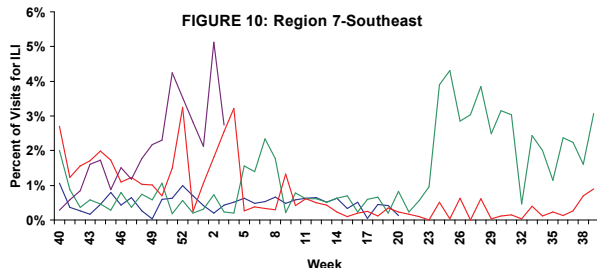
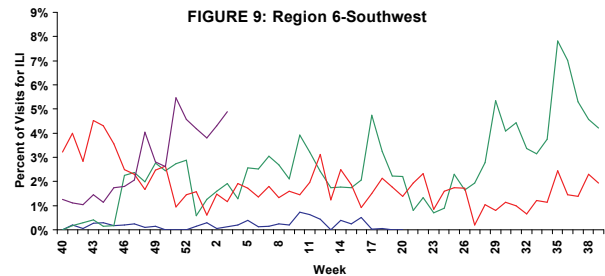
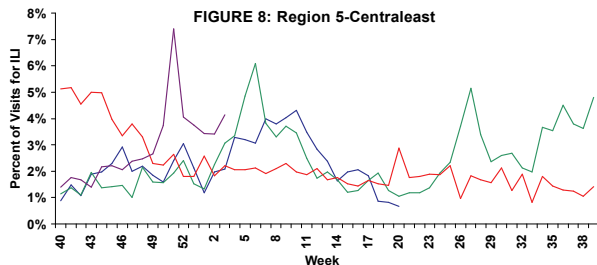
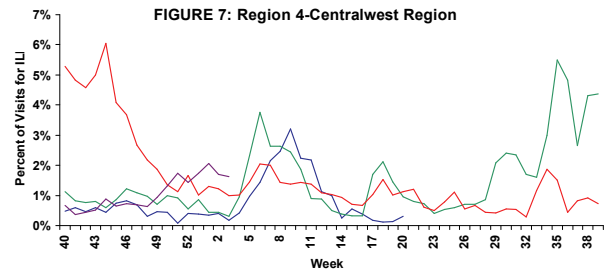
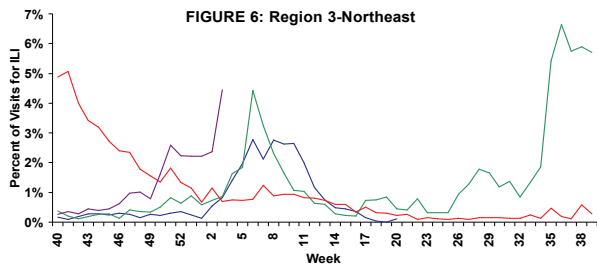
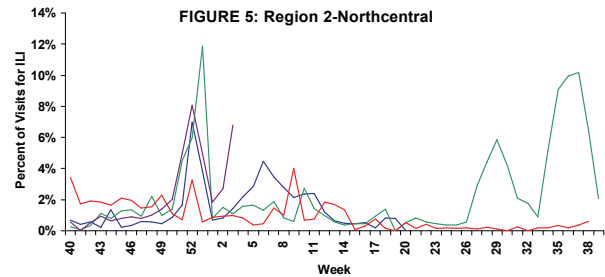
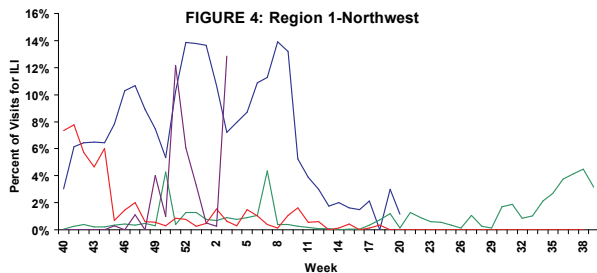
	Number of Participating Providers	Providers that Reported		Percent Visits for ILI
		(n)	(%)	
Region 1-Northwest	15	6	40.00%	12.84%
Region 2-Northcentral	6	3	50.00%	6.79%
Region 3-Northeast	28	16	57.14%	4.45%
Region 4-Centralwest	40	17	42.50%	1.62%
Region 5-Centraeast	45	34	75.56%	4.14%
Region 6-Southwest	17	4	23.53%	4.90%
Region 7-Southeast	26	10	38.46%	2.74%
Total	177	90	50.85%	4.04%

TABLE 2 shows the ILI activity by Regional Domestic Security Task Force (RDSTF) as reported by Florida ILINet physicians for week 3 (ending January 22, 2011).

FIGURE 4 - FIGURE 10 include ILI activity as reported by sentinel physicians for the 2007-2008, 2008-2009, 2009-2010, 2010-2011 seasons.

Regions 1,2,3, 5 and 6 are showing increases in ILI activity this week above pandemic and non-pandemic years. Region 4 ILI activity has leveled off for now while region 7 is the only region showing a decrease in ILI activity for the week. Data should be interpreted with caution due to the low number of providers reporting in some regions. Numbers will change as more data are received.

Percentage of Visits for Influenza-Like Illness Reported by ILINet Sentinel Providers by RDSTF Region, 2007-2008 (Weeks 40-20), 2008-2009 (Weeks 40-39), and 2009-10 (Weeks 40-39) and 2010-2011 (Weeks 40-3) as Reported by 5:00 p.m. January 25, 2011.



Graph Legend

- 2007-2008*
- 2008-2009*
- 2009-2010
- 2010-2011*

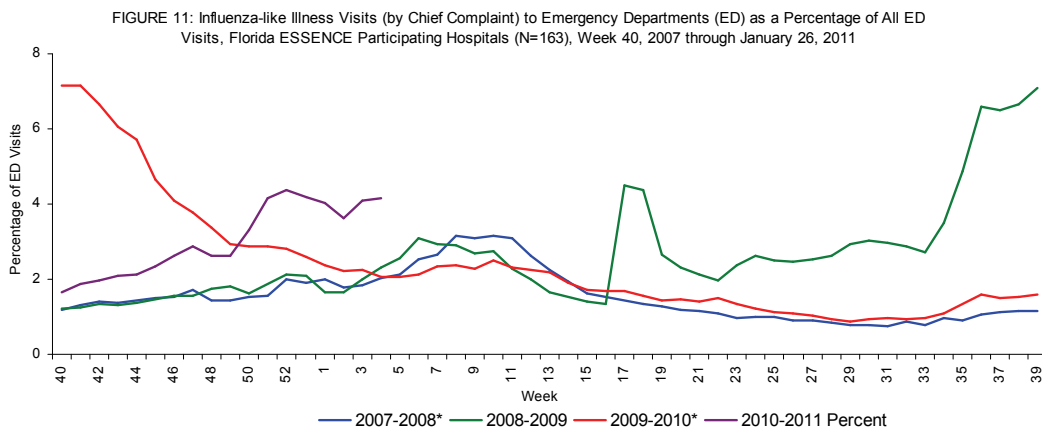
*There is no week 53 during the 2006-07, 2007-08, and 2009-10 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

Florida uses the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) for syndromic surveillance, which currently collects data daily from 163 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 influenza-like illness (ILI), which is composed of chief complaints that include the words "influenza" or "flu," or either fever and cough or sore throat. Ninety-five facilities participating in ESSENCE have been able to provide historical admissions data and are included here.

FIGURE 11 shows ESSENCE data on ILI visits to Emergency Departments as a percentage of all ED Visits.

Overall activity for influenza-like illness reported in ESSENCE is elevated above levels during the same time period in the 2009-10 pandemic influenza season.

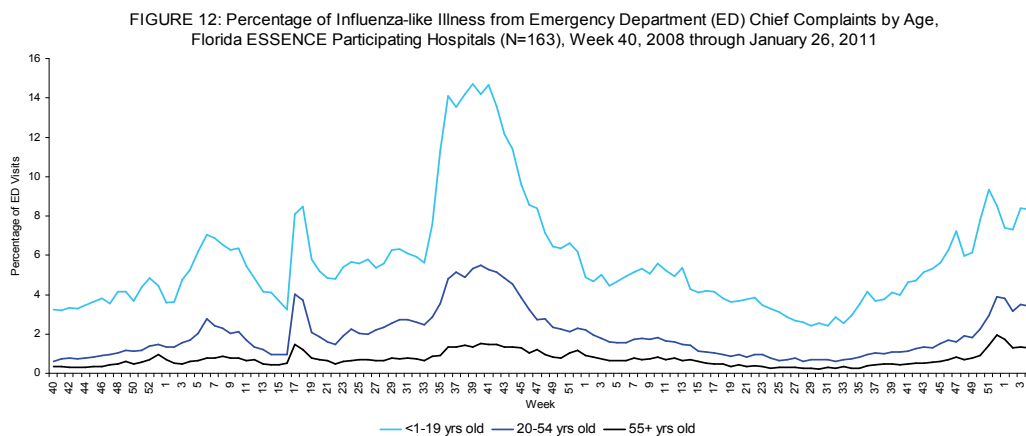
The majority of the increase in ED visits is occurring in younger age groups.



*There is no week 53 for the 2006-2007, 2007-2008, or 2009-2010 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

FIGURE 12 shows percentage of ILI among all ED visits by age group.

Age-specific trends show that there are increases in ILI activity for younger age groups (<1-19), with smaller increases in the older age groups.



Ninety-five facilities participating in ESSENCE have been able to provide historical admissions data and are included here. The percentage of admissions for ILI is highest in those less than 20 years old, but the small numerators and denominators in this age group result in high variability. Overall, the percentage of admissions due to ILI is very low. These data are based on the patient's chief complaint when presenting to the emergency department and may not reflect the actual diagnosis.

FIGURE 13 shows hospital admissions due to ILI as a percentage of all hospital admissions.

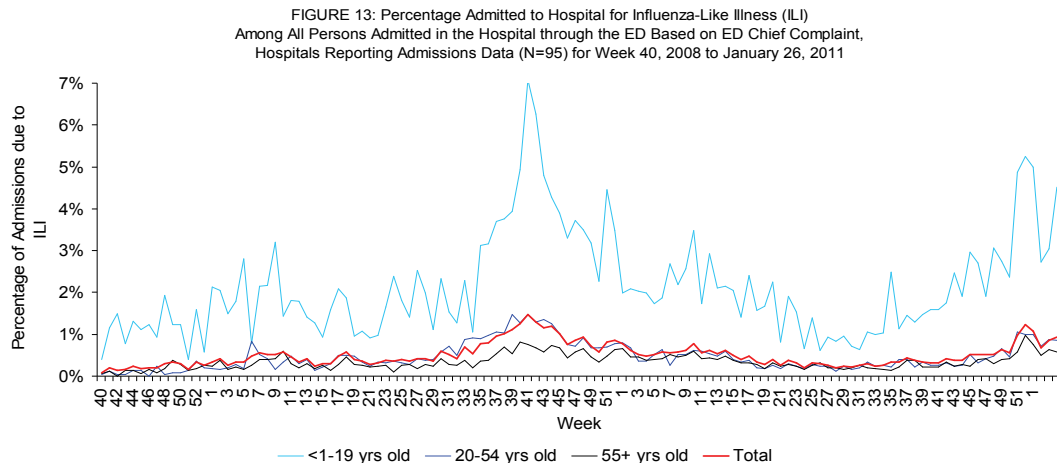
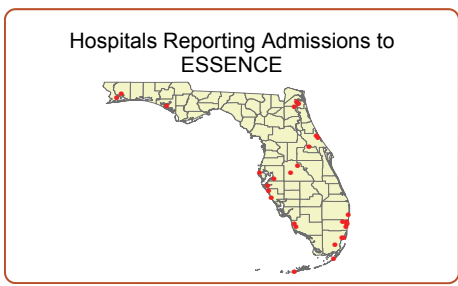


FIGURE 14 - FIGURE 20 describe emergency department chief complaint data from ESSENCE by Domestic Security Task Force Region

ILI continues to rise in regions 1 and 2. After leveling off or decreasing for a few weeks ILI is again on the rise and above non-pandemic years in regions 3, 4, and 7. Regions 5 and 6 are seeing decreases in ILI activity after slight increases in previous weeks.

Map 2: Hospitals Reporting Emergency Department (ED) Data to Florida ESSENCE, January 26, 2011 (N=163)

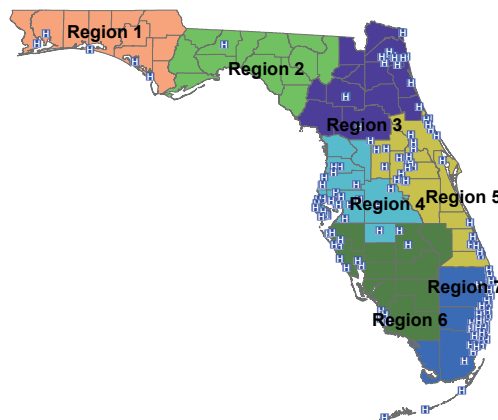


FIGURE 14: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 1 ESSENCE Participating Hospitals (N=5), Week 40, 2007 through January 26, 2011

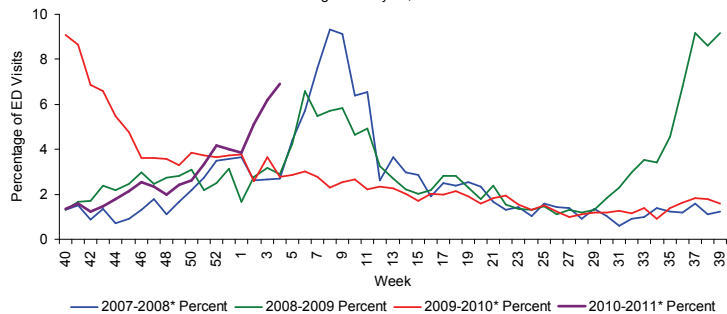


FIGURE 15: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 2 ESSENCE Participating Hospitals (N=1), Week 1, 2009 through January 26, 2011

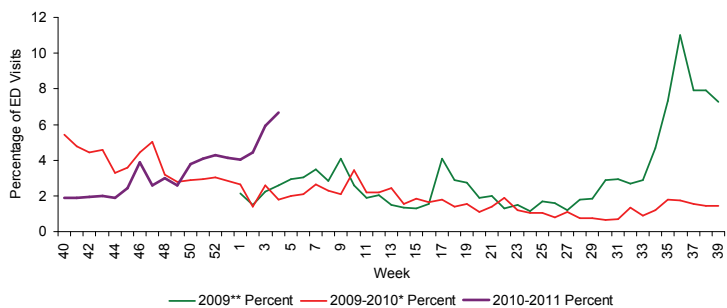


FIGURE 16: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 3 ESSENCE Participating Hospitals (N=14), Week 40, 2007 through January 26, 2011

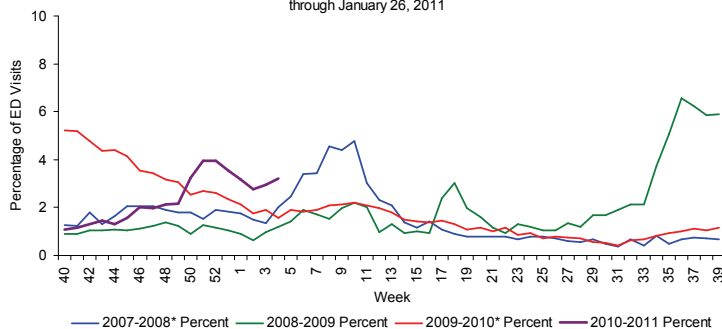


FIGURE 17: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 4 ESSENCE Participating Hospitals (N=31), Week 40, 2007 through January 26, 2011

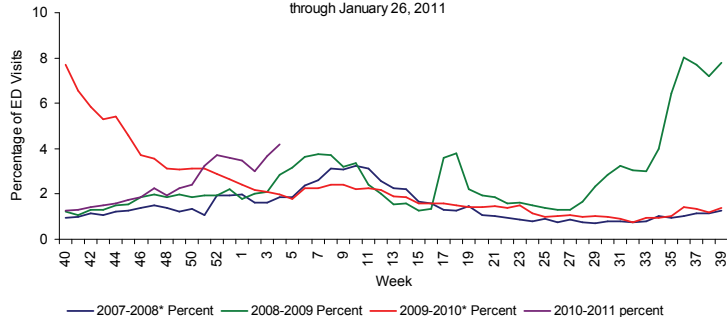


FIGURE 18: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 5 ESSENCE Participating Hospitals (N=49), Week 40, 2007 through January 26, 2011

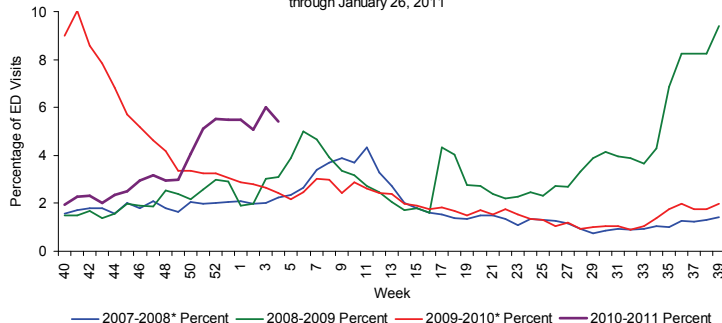


FIGURE 19: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 6 ESSENCE Participating Hospitals (N=15), Week 40, 2007 through January 26, 2011

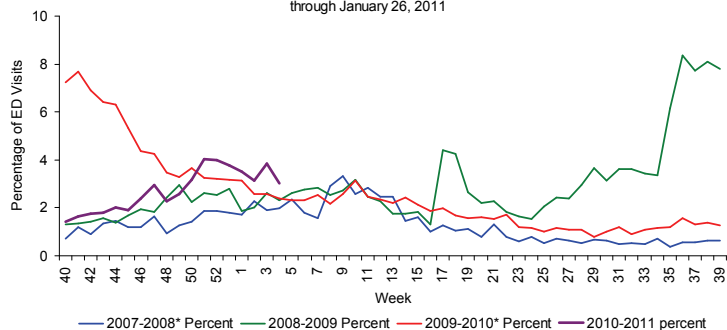


FIGURE 20: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 7 ESSENCE Participating Hospitals (N=48), Week 40, 2006 through January 26, 2011

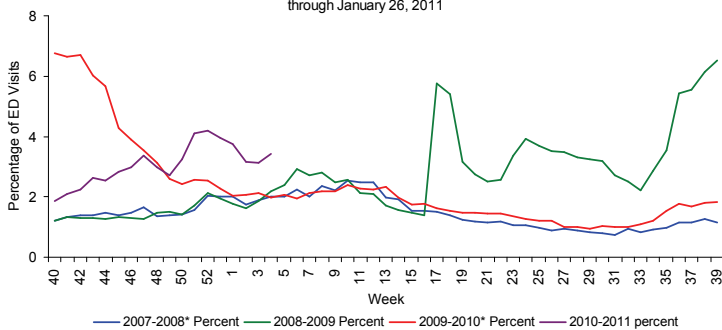


Table 3 shows the number of specimens tested by the Bureau of Laboratories (BOL), how many are influenza positive, and how many are H1N1 or other influenza subtypes.

FIGURE 21 - FIGURE 22 use BOL viral surveillance data to track the progress of influenza infection over time. They include weekly information on how many specimens are tested by the BOL, what proportion of those test positive for influenza, and what subtypes are found for the positive influenza specimens.

In recent weeks the Bureau of Laboratories has had specimens test positive for 2009 H1N1 influenza A, H3 seasonal influenza A, and influenza B unspecified.

The majority of influenza seen in Florida is influenza A H3, with fewer specimens testing positive for influenza B and 2009 H1N1 influenza A.

A subset of BOL influenza specimens are forwarded to CDC for further strain analysis. Of these specimens, 46 of 46 influenza A specimens and 14 of 15 influenza B specimens matched the strains included in the 2010-11 influenza vaccine.

Table 3: Bureau of Laboratories Viral Surveillance for Week 03 by Lab Event Date* as reported by 12:00 p.m. January 26, 2011

	Current Week 03	Previous Week 02
Total Specimens Tested	178	176
Influenza Positive Specimens (% of total)	98 (55.1%)	91 (51.7%)
H1N1 Positive Specimens (% of influenza positives)	37(37.8%)	18(19.8%)
H3 Influenza A	41 (41.8%)	49 (53.6%)
Influenza A Unspecified	-	-
Influenza B Unspecified	20 (20.4%)	24 (26.4%)

FIGURE 21: Number of Influenza-Positive Specimens Tested by the Florida Bureau of Laboratories (BOL) by Subtype by Lab Event Date* Week 1, 2010 to Week 3, 2011 as Reported in Merlin by 12:00 p.m. January 26, 2011

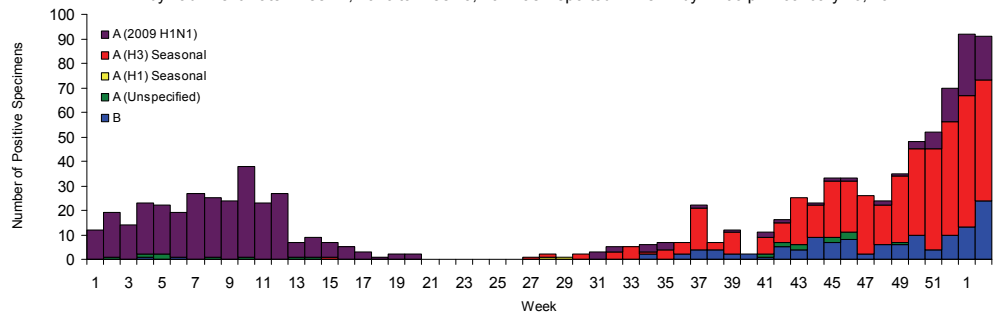
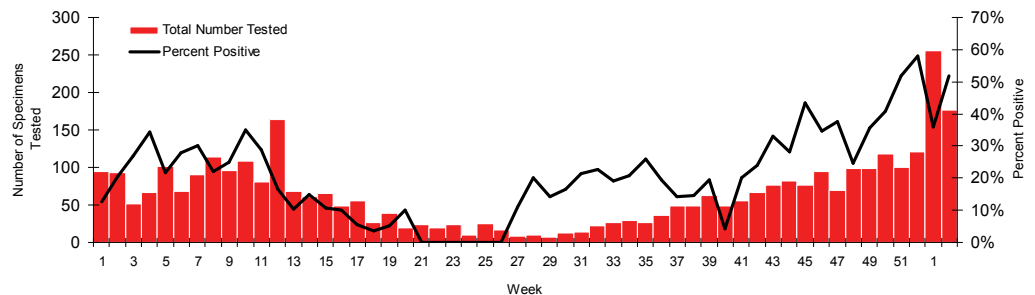


FIGURE 22: Number of Specimens Tested by Florida Bureau of Laboratories (BOL) and Percent Positive for Influenza by Lab Event Date* Week 1, 2010 to Week 3, 2011 as Reported in Merlin by 12:00 p.m. January 26, 2011



*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

Influenza and ILI Outbreaks

In week 3 there were **two** influenza or ILI outbreaks reported into EpiCom.

- Hillsborough County: A skilled nursing facility (SNF) outbreak of influenza A. Nineteen residents were reported ill with ILI, a 35% attack rate. Two residents were rapid-test positive for influenza. Control measures were instituted, including prophylactic oseltamivir for residents.
- Hillsborough County: A childcare center outbreak of influenza A. Fourteen children and two staff became ill with ILI. Five children received a rapid flu test; all five tested positive for influenza A.

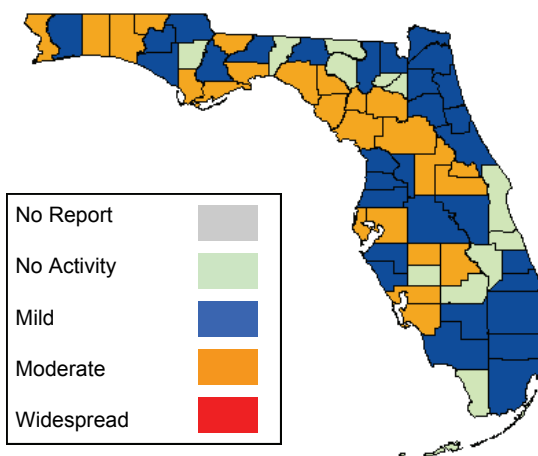
A total of **fifteen** influenza or ILI outbreaks and **two** respiratory disease outbreaks have been reported into EpiCom in the 2010-11 influenza season. Influenza A H3 has been isolated in all PCR-confirmed influenza outbreaks.

As of 2:00 p.m. January 26, 2011 a total of 67 (100%) counties had reported their weekly level of influenza activity. We have achieved 100% reporting for the sixteenth consecutive week, due to enhanced follow-up with counties. *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 4: Weekly County Influenza Activity for Week 3 (ending January 22, 2011) as Reported by 2:00 p.m. January 26, 2011

Activity Level	Week 2 Number of Counties	Week 3 Number of Counties	Week 3 Counties
No Report	0	0	-
No Activity	19	12	Bradford, Brevard, Calhoun, Desoto, Glades, Hamilton, Indian River, Jefferson, Monroe, Okeechobee, Suwannee, Union
Mild	31	31	Baker, Bay, Broward, Citrus, Clay, Collier, Columbia, Dade, Duval, Flagler, Hendry, Hernando, Jackson, Leon, Liberty, Madison, Manatee, Martin, Nassau, Osceola, Palm Beach, Pasco, Polk, Putnam, St. Johns, St. Lucie, Santa Rosa, Sarasota, Sumter, Volusia, Washington
Moderate	16	24	Alachua, Charlotte, Dixie, Escambia, Franklin, Gadsden, Gilchrist, Gulf, Hardee, Highlands, Hillsborough, Holmes, Lafayette, Lake, Lee, Levy, Marion, Okaloosa, Orange, Pinellas, Seminole, Taylor, Wakulla, Walton
Widespread	1	0	-

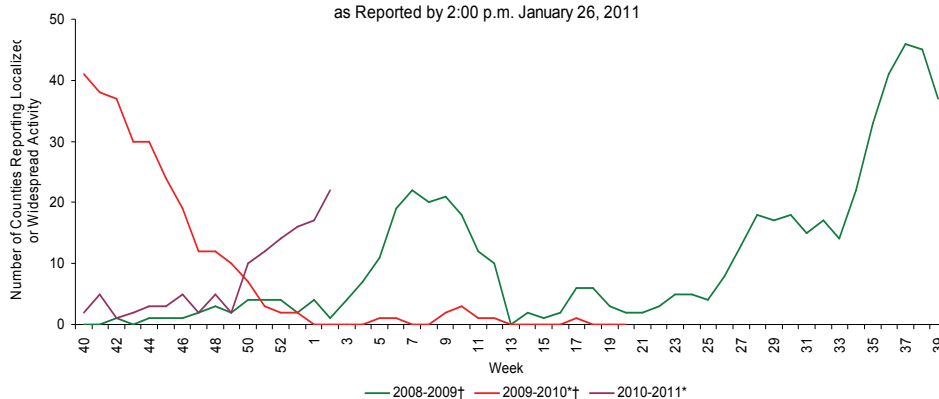
Map 3: Weekly County Influenza Activity for Week 3 as Reported by 2:00 p.m. January 26, 2011



No counties report widespread activity, and 22 report moderate activity.

FIGURE 23 shows the number of counties reporting localized or widespread activity, 2008-2009, 2009-2010, and 2010-2011.

FIGURE 23: Number of Counties Reporting Moderate (Localized) or Widespread Activity, 2008-2009 (Weeks 40-39), 2009-2010 (Weeks 40-20), and 2010-2011 (Weeks 40-3) as Reported by 2:00 p.m. January 26, 2011



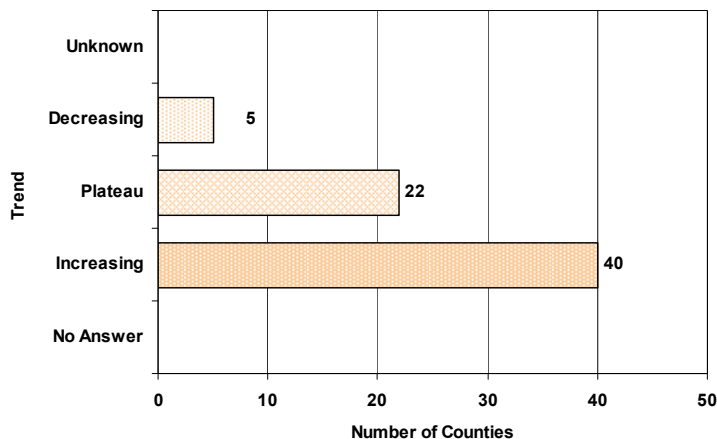
*there is no week 53 in 2009 or 2010.

† As of Week 40 2010, the influenza activity code categorizations have changed. Please see http://www.doh.state.fl.us/disease_ctr/epi/FluActivityDef.htm for explanations of previous year activity code interpretations.

County influenza activity data is reported to the Bureau of Epidemiology 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 24-33 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 the week ending January 22nd, 5 counties indicated that activity was decreasing, 22 indicated it was about the same, and 40 indicated that activity was increasing.

FIGURE 24 shows the assessment of Overall Influenza Activity Trend in County as Reported by County Health Department Flu Coordinators for week 3 as of 3:00 p.m. January 26, 2011.

FIGURE 24: 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 25 - FIGURE 26 show the activity levels in various facilities by county as reported by county health department flu coordinators for week 3 as of 3:00 p.m. January 26, 2011.

FIGURE 25: Assessment of Influenza Activity in Elementary, Middle, and High Schools

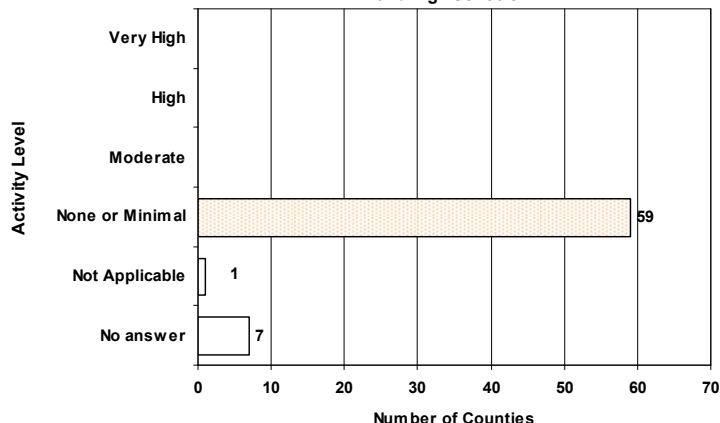


FIGURE 26: Assessment of Influenza Activity in Colleges and Universities

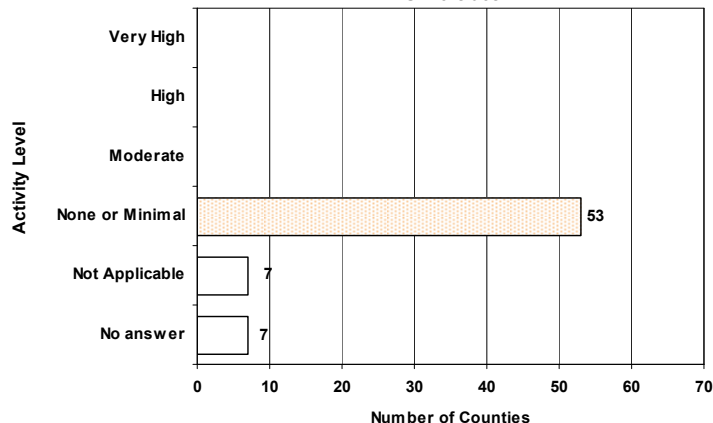


FIGURE 27 - FIGURE 32 show the activity levels in Various Facilities by county as reported by county health department flu coordinators week 3 as of 3:00 p.m. January 26, 2011.

FIGURE 27: Assessment of Influenza Activity in Jails/Prisons

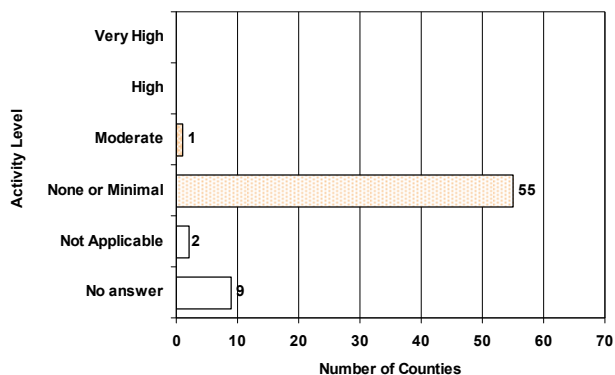


FIGURE 28: Assessment of Influenza Activity in Retirement Facilities

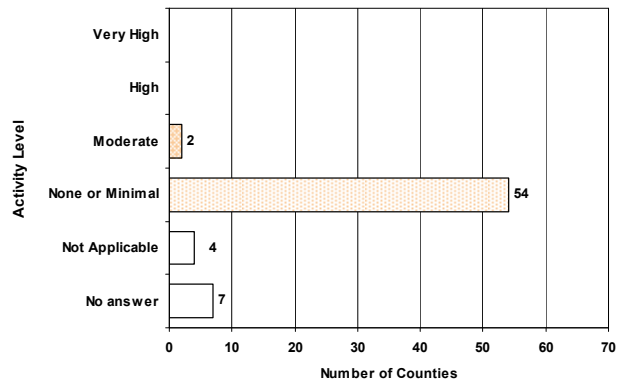


FIGURE 29: Assessment of Influenza Activity in Nursing Homes

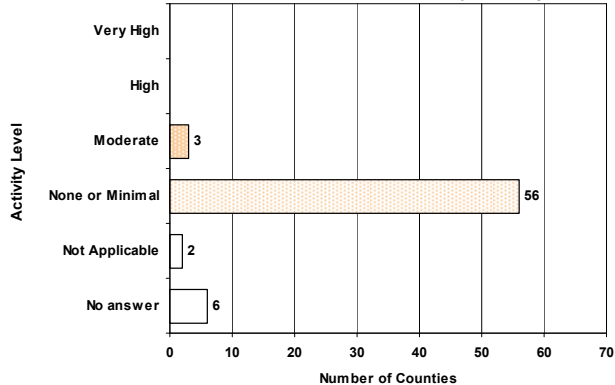


FIGURE 30: Assessment of Influenza Activity in Health Care Facilities

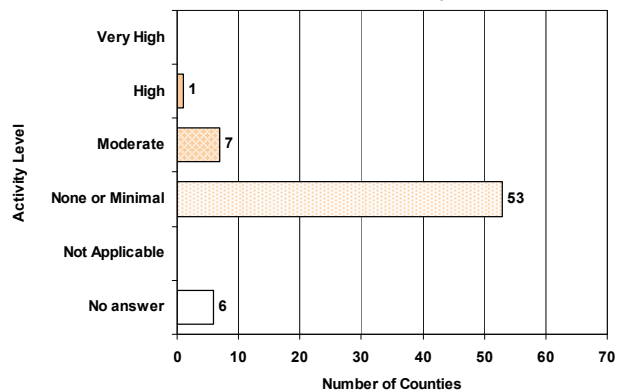


FIGURE 31: Assessment of Influenza Activity in Daycare Centers

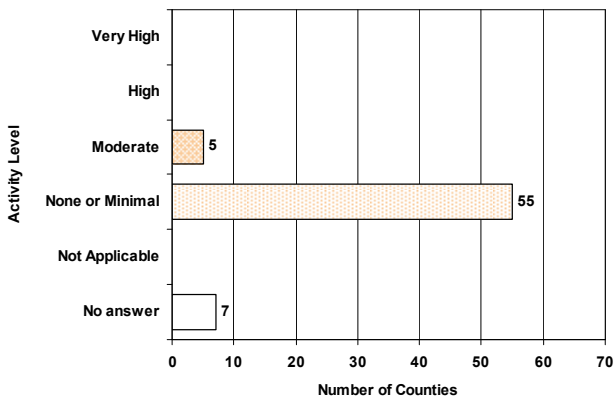


FIGURE 32: Assessment of Influenza Activity in Businesses

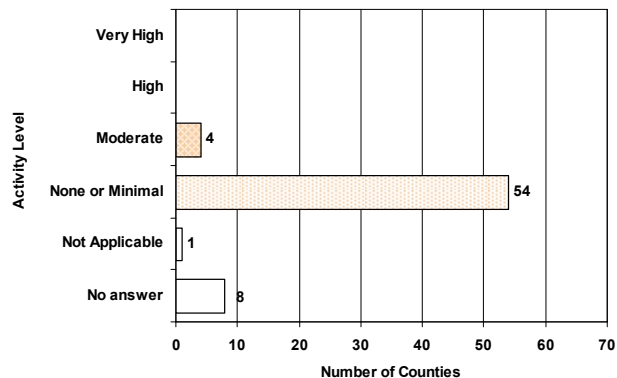
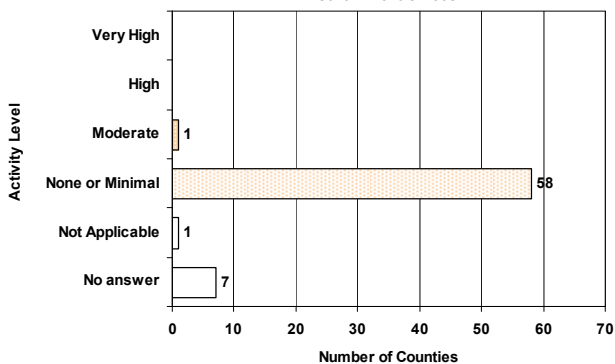


FIGURE 33: Assessment of Influenza Activity in State or Local Government Offices



The Florida Department of Health started the Florida Pneumonia and Influenza Mortality Surveillance System (FPIMSS) in 2006 in order to more timely assess the number of pneumonia and influenza deaths occurring in the state. This system was modeled on the CDC's 122 cities surveillance system. Each week, the vital statistics office in the 24 most populous counties in Florida manually reviews the death certificates received for the previous week. Any mention of pneumonia or influenza on the death certificate, with certain prescribed exceptions, is counted as a pneumonia or influenza death. These counts, by age group, are then reported to the state via the EpiGateway web-interface.

FIGURE 34 shows Pneumonia and Influenza Deaths for 24 Florida Counties, 2007-2008, 2008-2009, 2009-2010, and 2010-11

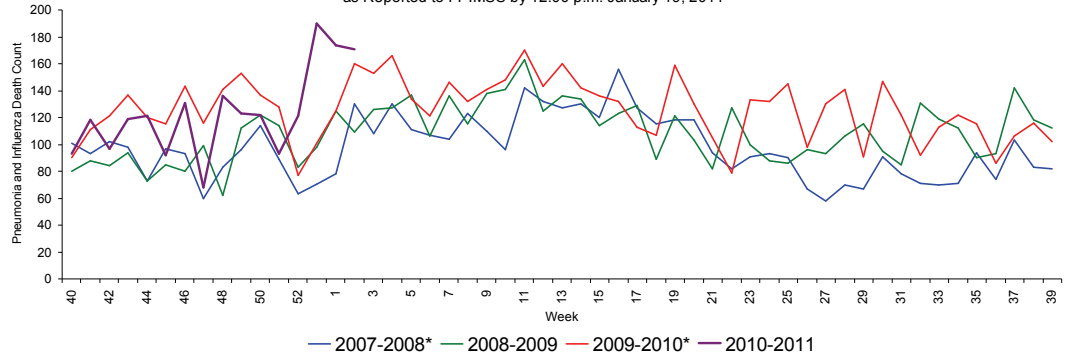
- For week 3 (ending January 22) there were:
- **171 deaths reported**
 - **Upper bound of 95% confidence interval for prediction: 191 deaths**
 - **No excess deaths**

The majority of the deaths are in those aged 75 years and older. The increase in P&I mortality in the past two weeks has also been primarily in the oldest age groups.

24 of 24 counties reported data for week 3.

FIGURE 35 shows Pneumonia and Influenza Deaths for 24 Florida Counties, week 1, 2008 - week 3, 2011 as reported to FPIMSS by 12:00 p.m. January 25, 2011

FIGURE 34: Pneumonia and Influenza Deaths for 24 Florida Counties, 2007-2008 (Weeks 40-39), 2008-2009 (Weeks 40-39), 2009-2010 (Weeks 40-39), and 2010-2011 (Week 40-3) as Reported to FPIMSS by 12:00 p.m. January 19, 2011



*There is no week 53 for the 2006-2007, 2007-2008, or 2009-2010 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

FIGURE 35: Pneumonia and Influenza Deaths in 4 Age Groups for 24 Florida Counties, Week 1, 2009-Week 2, 2011 as Reported to FPIMSS by 12:00 p.m. January 25, 2011

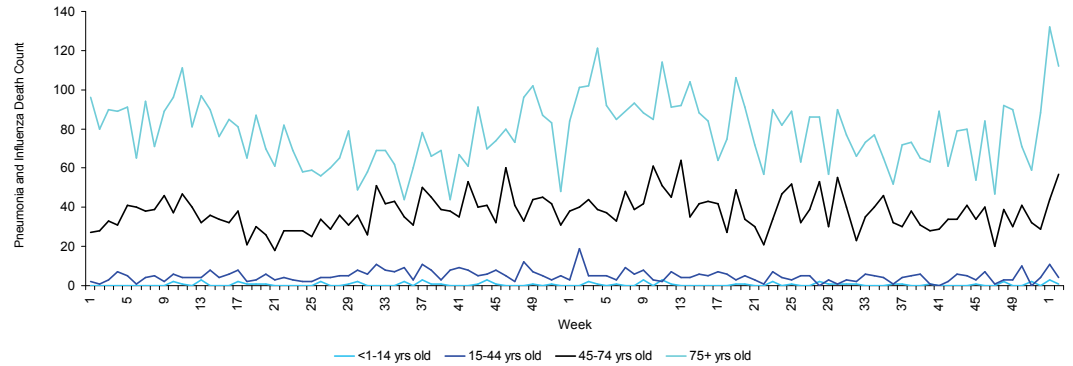


Figure 36: Pneumonia and Influenza Deaths for 24 Counties, Serfling Model January 24, 2009-January 22, 2011 as Reported to FPIMSS as of 12:00 p.m. January 25, 2011

FIGURE 36 shows the reported count of pneumonia and influenza deaths for 24 Florida counties, the number of deaths predicted using the Serfling Model, and the upper bound of the 95% confidence interval for this prediction

