



Week 7: February 13, 2011-February 19, 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 levels of influenza around the country ranging from minimal to high during week 6, and high levels of activity in the southeast region. The CDC calculated moderate 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. No counties currently report widespread activity, and 16 counties reported moderate activity. Twenty counties reported increasing influenza activity.
- ESSENCE and ILINet ILI data are elevated over previous pandemic and non-pandemic seasons at this time in most regions of Florida.
- Current influenza strains circulating in Florida are influenza A H3, 2009 H1N1 and influenza B. In recent weeks circulation of 2009 H1N1 has increased. Other viruses known to be currently circulating, potentially causing influenza-like illness, include adenovirus, rhinovirus, parainfluenza and RSV. RSV activity is currently elevated, but has been decreasing. RSV can cause severe respiratory illness in infants.
- There were two ILI or influenza outbreaks and one respiratory illness outbreak reported into EpiCom during week 7. There have been twenty-three influenza or ILI outbreaks and three respiratory outbreaks reported in the 2010-11 influenza season. Most of these outbreaks have been in nursing homes and long-term care facilities. Influenza A H3 is implicated in all PCR confirmed outbreaks.

Weekly state influenza activity: Regional

Florida is currently reporting Regional influenza activity statewide, due to plateaued or declining activity levels in many 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. Note that the color scheme for our statewide flu activity indicator has changed to match the CDC nationwide map.

Pediatric influenza Mortality

One pediatric influenza mortality in a 9-year-old Clay county resident was reported in week 7. There have been **two** pediatric influenza mortalities reported in the 2010-11 season. Influenza-associated deaths among those less than 18 years old are reportable in Florida.

TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 7

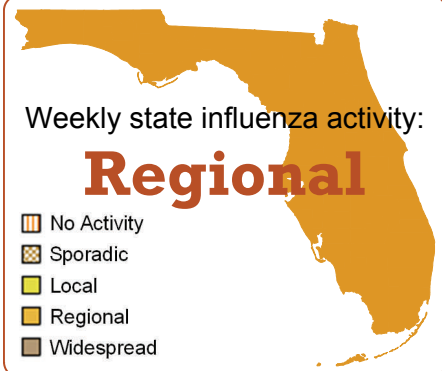
Measure	Difference from previous week	Current week 7	Previous week 6	Page of Report
Overall statewide activity code reported to CDC	▼ 1	Regional	Widespread	1
Percent of visits to ILINet providers for ILI	▼ 0.5	3.0%	3.5%	2
Percent of emergency department visits (from ESSENCE) due to ILI	▲ 0.2	4.0%	3.8%	4
Percent of hospital admissions (from ESSENCE) due to ILI	▼ 0.1	0.8%	0.9%	4
Percent of laboratory specimens that were positive for influenza	▼ 14.9	38.0%	52.9%	6
Number of ILI outbreaks reported in Epi Com	No Change	2	2	6
Number of counties reporting moderate influenza activity	▼ 7	16	23	7
Number of counties reporting widespread influenza activity	No Change	0	0	7
Number of counties reporting increasing influenza activity	▼ 1	20	21	8
Number of counties reporting decreasing influenza activity	▼ 2	10	12	8

February 23, 2011

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

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In this Issue:

Summary	1
NREVSS Respiratory Virus Surveillance	1
Outpatient Influenza-like Illness Surveillance Network (ILINet)-Statewide	2
Outpatient Influenza-like Illness Surveillance Network (ILINet)-Regional	3
ESSENCE Syndromic Surveillance Summary-Statewide	4
ESSENCE Syndromic Surveillance Summary-Regional	5
Florida Bureau of Laboratories Viral Surveillance	6
Influenza and ILI outbreaks reported in EpiCom	6
County Influenza Activity Map	7
County Influenza Activity Trend	8
Florida Pneumonia and Influenza Mortality Surveillance (FPIMSS)	10

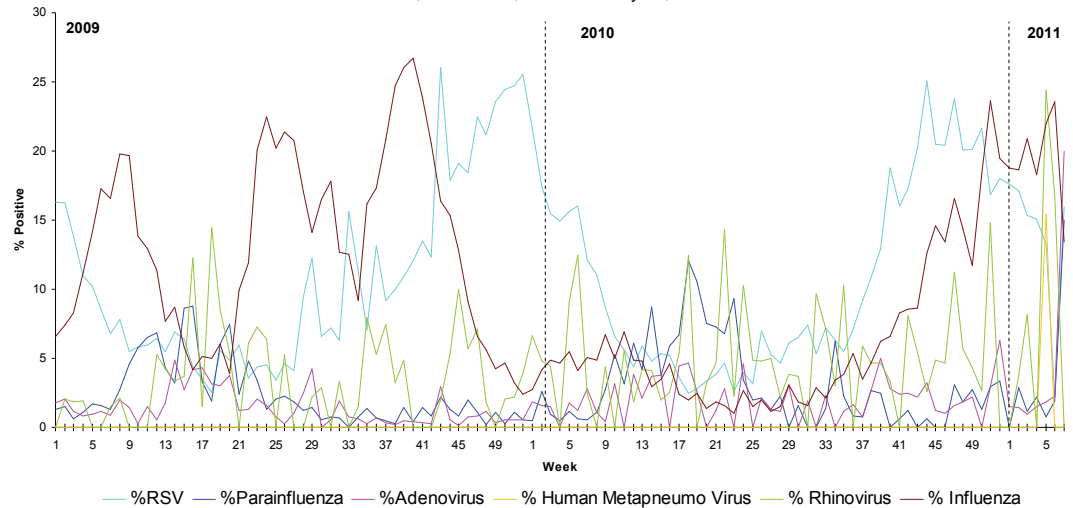
The National Respiratory and Enteric Virus Surveillance System (NREVSS) collects data from laboratory facilities around the country on a weekly basis. NREVSS monitors temporal and geographic patterns of respiratory syncytial virus (RSV), human parainfluenza viruses (HPIV), respiratory and enteric adenoviruses 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 February 22, 2011

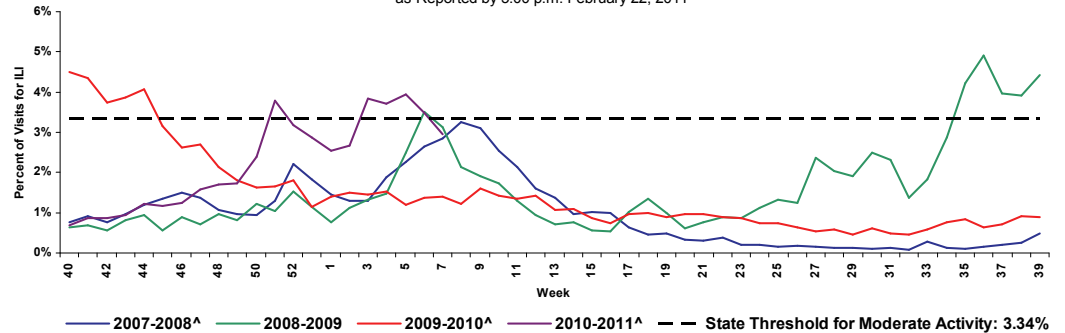


ILINET Influenza-like Illness-Statewide

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 at levels near the peak of previous non-pandemic influenza seasons.

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 40-7) as Reported by 5:00 p.m. February 22, 2011

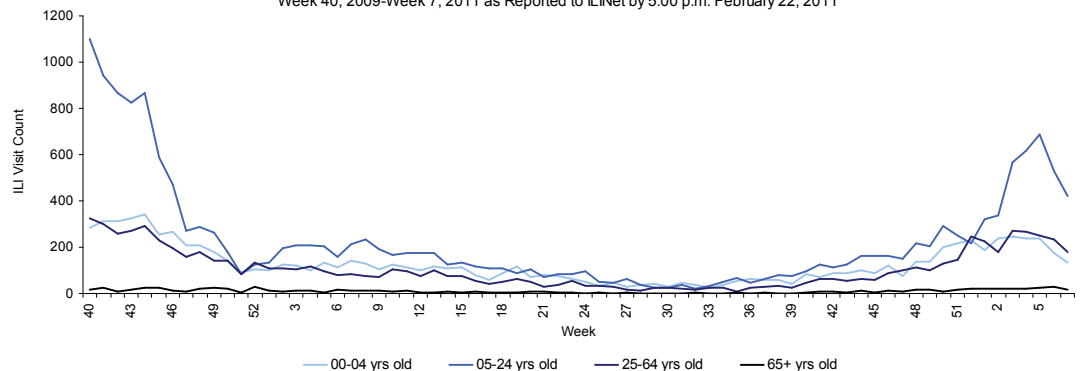


*ILI = Influenza-like illness, fever >100°F AND sore throat and/or cough *in the absence* of another known cause.
 **The 2009—2010 threshold for moderate activity is calculated from ILINet data. The threshold for moderate activity is the mean percentage of patient visits for ILI during influenza weeks 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.

ILI visit counts are highest in the 5-24 age group.

FIGURE 3: Influenza-like Illness (ILI) Visit Counts Reported by ILINet Sentinel Providers Statewide by Age Group Week 40, 2009-Week 7, 2011 as Reported to ILINet by 5:00 p.m. February 22, 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

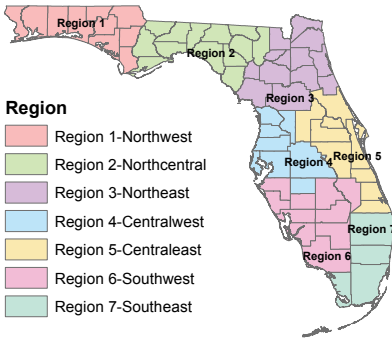


TABLE 2: ILINet Providers and Percent of Visits for ILI by Region, Week 7, as Reported by 5:00 p.m. February 22, 2011

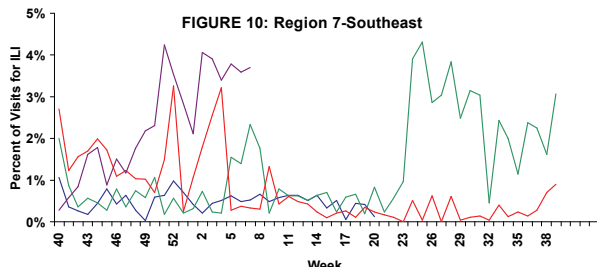
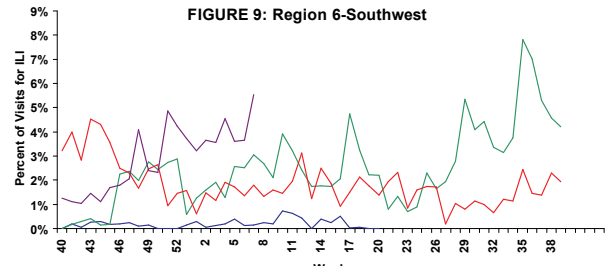
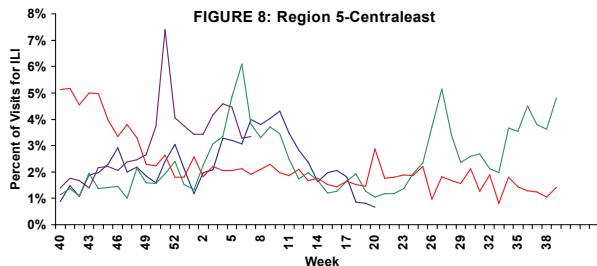
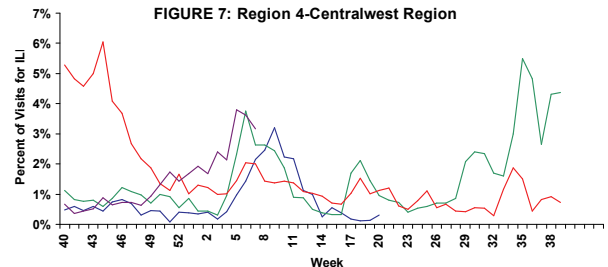
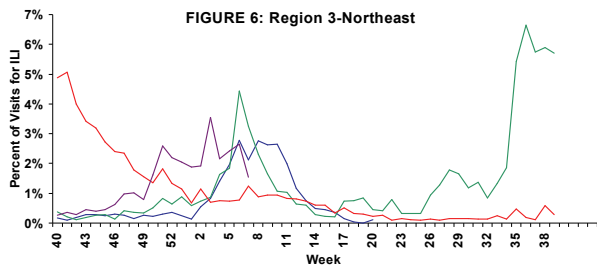
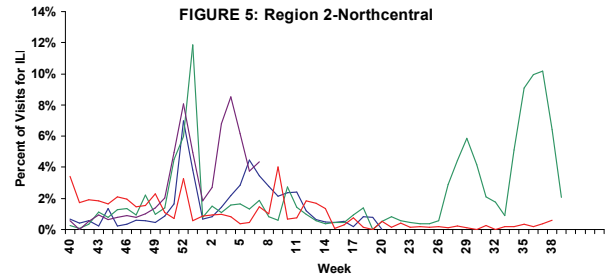
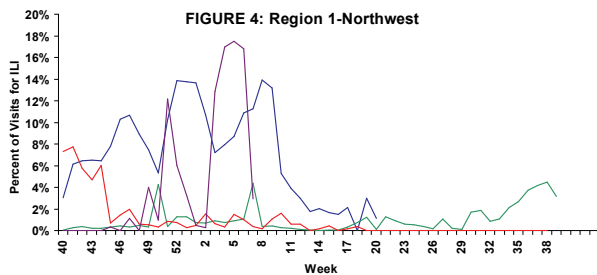
	Number of Participating Providers	Providers that Reported		Percent Visits for ILI
		(n)	(%)	
Region 1-Northwest	14	5	35.71%	2.94%
Region 2-Northcentral	6	2	33.33%	4.36%
Region 3-Northeast	26	16	61.54%	1.53%
Region 4-Centralwest	40	14	35.00%	3.16%
Region 5-Centraleast	45	33	73.33%	3.34%
Region 6-Southwest	14	4	28.57%	5.54%
Region 7-Southeast	25	7	28.00%	3.70%
Total	170	81	47.65%	2.95%

TABLE 2 shows the ILI activity by Regional Domestic Security Task Force (RDSTF) as reported by Florida ILINet physicians for week 7 (ending February 19, 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, 3 and 4 continue to decrease in ILI while region 6 has seen an increase in activity. Regions 2, 5 and 7 show similar ILI levels to last 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 40-7) as Reported by 5:00 p.m. February 22, 2011.



Graph Legend

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

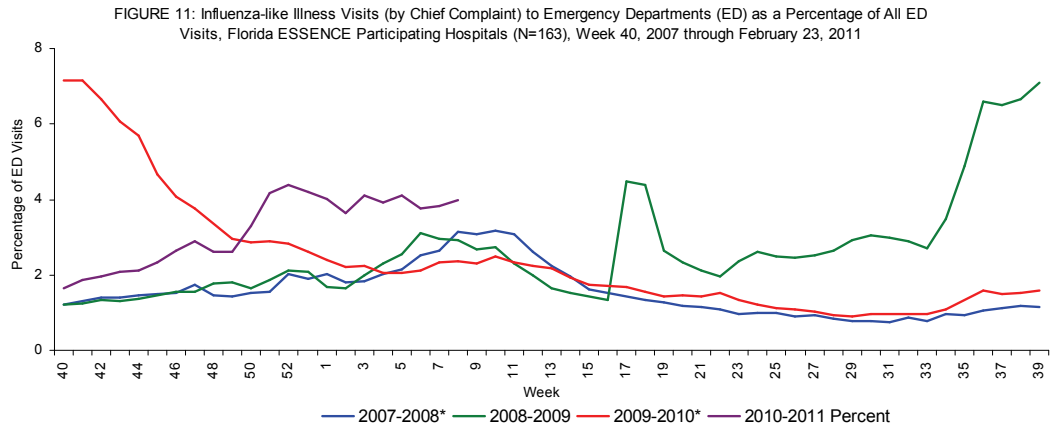
*There is no week 53 during the 2006-07, 2007-08, and 2009-10 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

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 has reached a plateau at levels elevated over the same time period in pandemic and non-pandemic years.

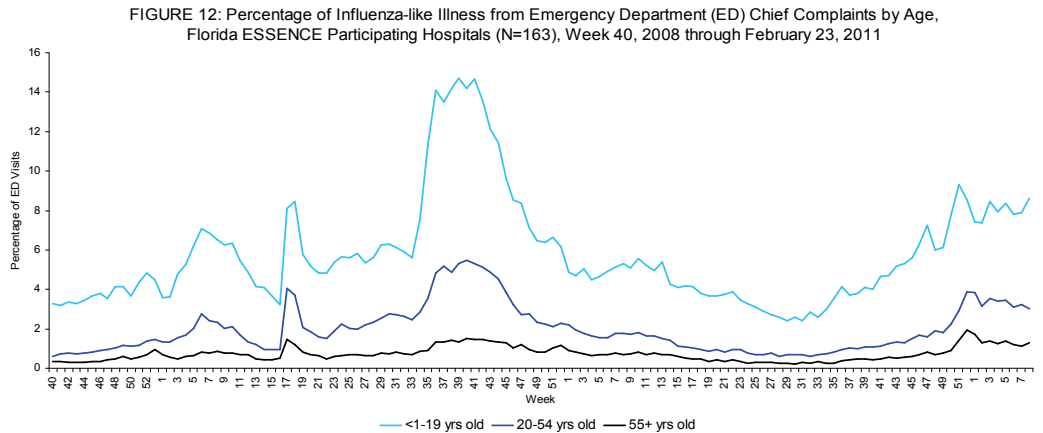
The majority of the increase in ED visits is occurring in younger age groups.



*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 ILI activity has plateaued in all 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.

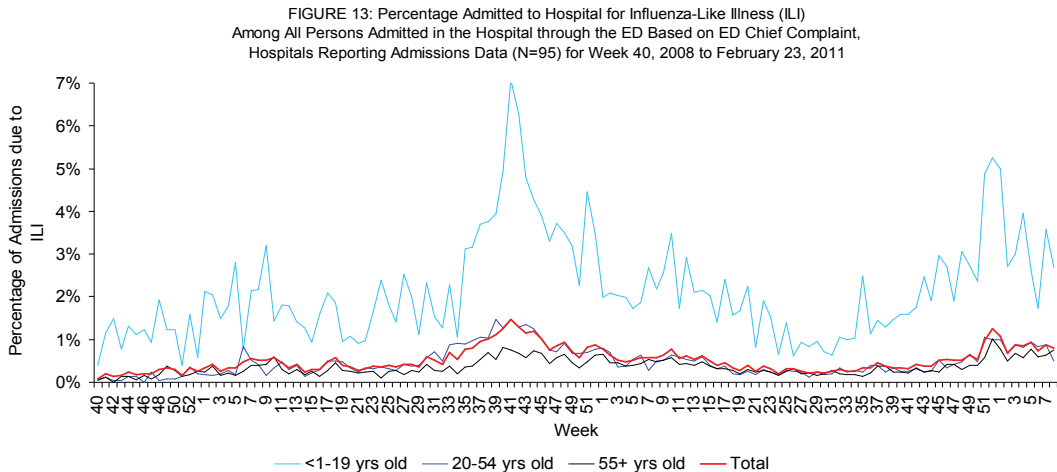
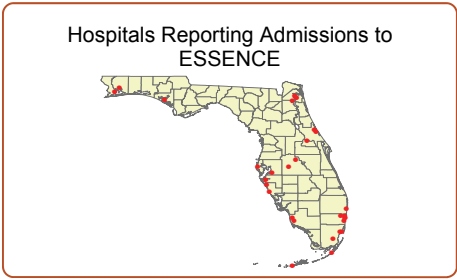


FIGURE 14 - FIGURE 20 describe emergency department chief complaint data from ESSENCE by Domestic Security Task Force Region

ILI activity in ESSENCE has plateaued in many regions of the state. ILI levels in Regions 1, 2, 4 and 5 have shown slight decreases in ILI. Regions 3, 6 and 7 have shown slight increases in ILI activity.

Map 2: Hospitals Reporting Emergency Department (ED) Data to Florida ESSENCE, February 23, 2011 (N=163)

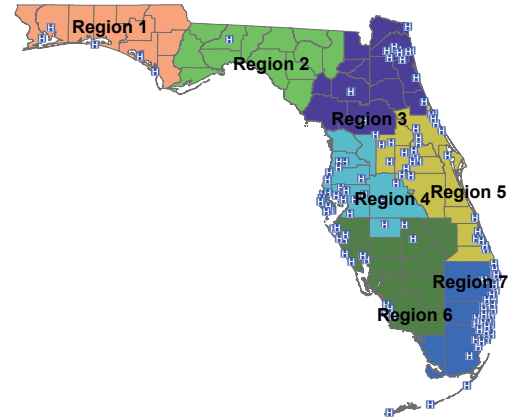


FIGURE 14: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 1 ESSENCE Participating Hospitals (N=5), Week 40, 2007 through February 23, 2011

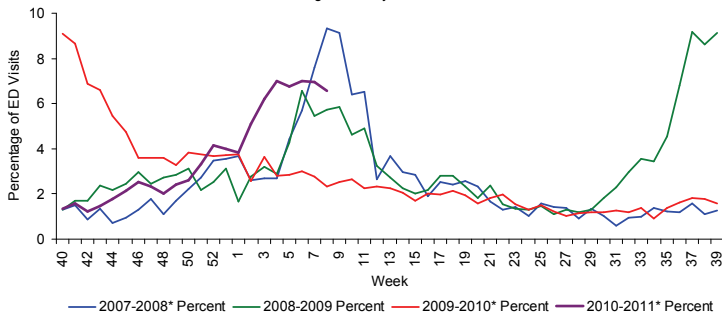


FIGURE 15: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 2 ESSENCE Participating Hospitals (N=1), Week 1, 2009 through February 23, 2011

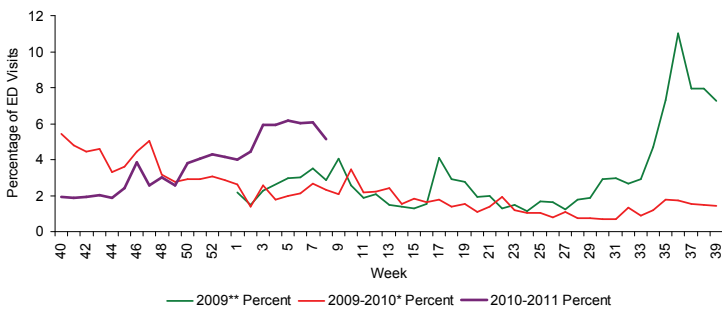


FIGURE 16: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 3 ESSENCE Participating Hospitals (N=14), Week 40, 2007 through February 23, 2011

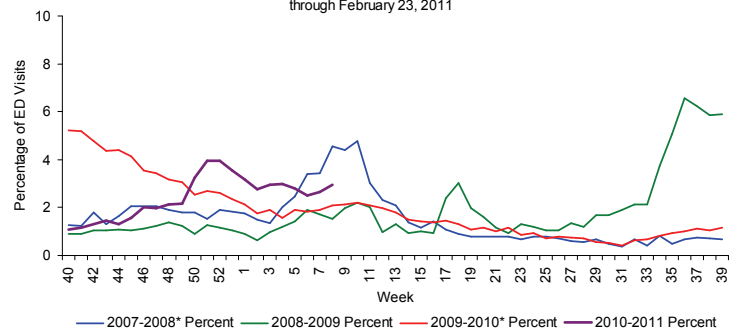


FIGURE 17: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 4 ESSENCE Participating Hospitals (N=31), Week 40, 2007 through February 16, 2011

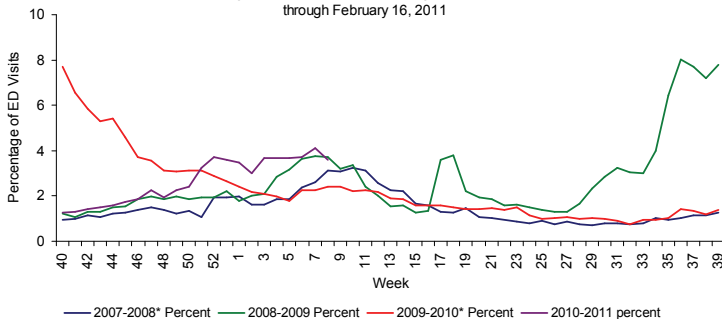


FIGURE 18: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 5 ESSENCE Participating Hospitals (N=49), Week 40, 2007 through February 23, 2011

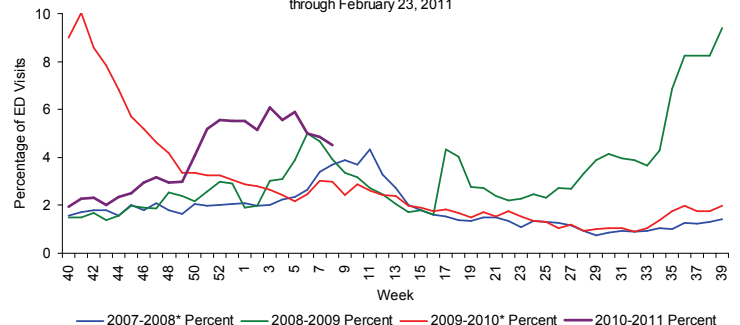


FIGURE 19: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 6 ESSENCE Participating Hospitals (N=15), Week 40, 2007 through February 23, 2011

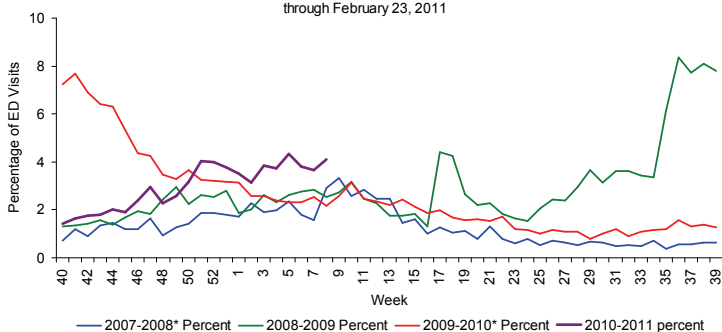


FIGURE 20: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 7 ESSENCE Participating Hospitals (N=48), Week 40, 2006 through February 23, 2011

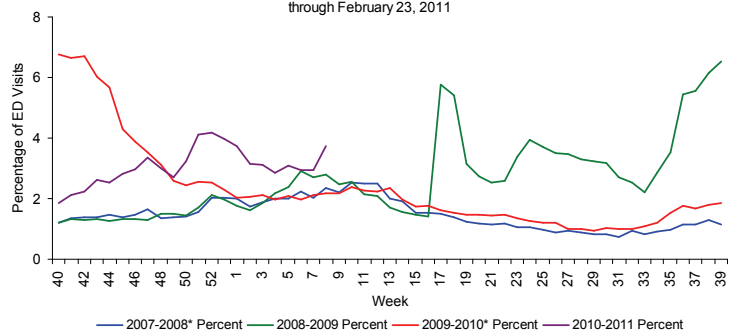


Table 3 shows the number of specimens tested by the Bureau of Laboratories (BOL), how many are influenza positive, and how many are H1N1 or other influenza subtypes.

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.

Current influenza strains circulating in Florida are influenza A H3, 2009 H1N1 and influenza B. In recent weeks circulation of 2009 H1N1 has increased.

A subset of BOL influenza specimens are forwarded to CDC for further strain analysis. Of these specimens, 49 of 49 influenza A specimens and 15 of 16 influenza B specimens matched the strains included in the 2010-11 influenza vaccine.

Table 3: Bureau of Laboratories Viral Surveillance for Week 7 by Lab Event Date* as reported by 2:00 p.m. February 23, 2011

	Current Week 7	Previous Week 6
Total Specimens Tested	100	153
Influenza Positive Specimens (% of total)	38 (38.0%)	81 (52.9%)
H1N1 Positive Specimens (% of influenza positives)	12 (31.6%)	26 (32.1%)
H3 Influenza A	7 (18.4%)	25 (30.9%)
Influenza A Unspecified	9 (23.7%)	3 (3.7%)
Influenza B Unspecified	10 (26.3%)	27 (33.3%)

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 7, 2011 as Reported in Merlin by 2:00 p.m. February 23, 2011

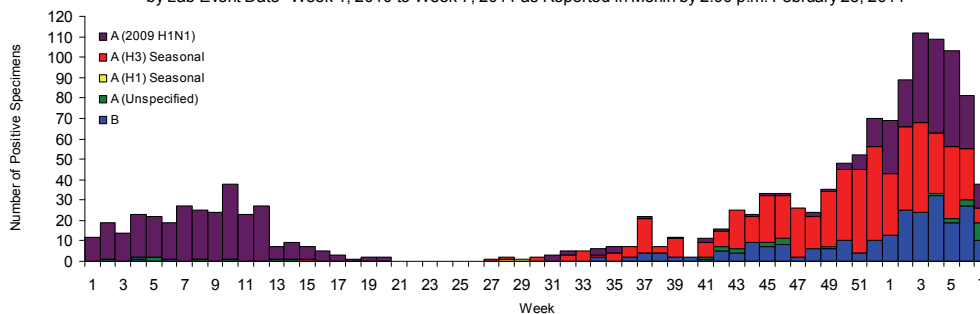
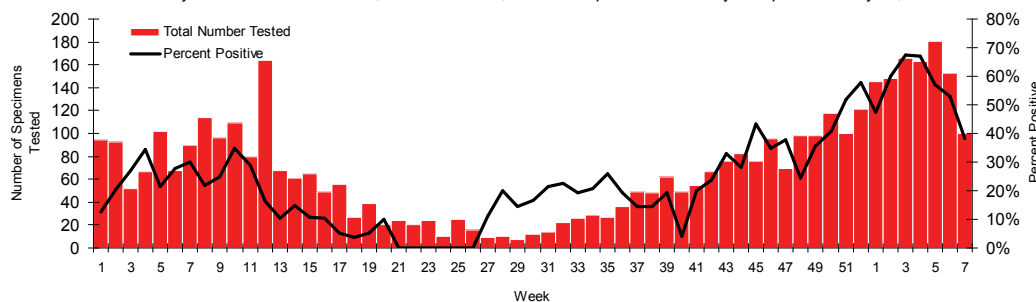


FIGURE 22: Number of Specimens Tested by Florida Bureau of Laboratories (BOL) and Percent Positive for Influenza by Lab Event Date* Week 1, 2010 to Week 7, 2011 as Reported in Merlin by 2:00 p.m. February 23, 2011



*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 7 there were **two** influenza or ILI outbreaks and **one** respiratory disease outbreak reported into EpiCom.

- Palm Beach County: an assisted living facility outbreak of respiratory illness. Twenty-one of 52 residents were reported with acute respiratory symptoms including cough, rhinorrhea, and lung congestion. Seven of 58 workers also reported respiratory symptoms. All but one resident received influenza vaccine. Specimens could not be collected for testing. Control measures were advised and implemented.
- Nassau County: a nursing home outbreak of ILI. Two of 108 residents and 1 of 160 staff reported ILI symptoms, including fever, cough, and runny nose. No testing was performed. Patients received influenza vaccine in 10/2010. Patients were isolated early in illness and CHD advised of proper control measures. Active surveillance is ongoing.
- Duval County: a long-term care facility outbreak of influenza A H3. Forty-four of 225 residents reported respiratory symptoms and 10 reported ILI. Fourteen of 316 staff were ill. Three specimens were forwarded to BOL, and two tested PCR-positive for influenza A H3. Duval CHD provided information on control measures.

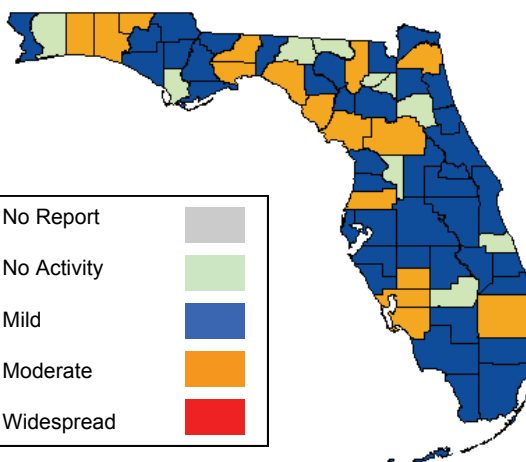
A total of **twenty-three** influenza or ILI outbreaks and **four** respiratory disease outbreaks have been reported into EpiCom in the 2010-11 influenza season. Influenza A H3 has been isolated in all PCR-confirmed influenza outbreaks.

As of 3:00 p.m. February 23, 2011 a total of 67 (100%) counties had reported their weekly level of influenza activity. We have achieved 100% reporting for the nineteenth 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 7 (ending February 16, 2011) as Reported by 3:00 p.m. February 23, 2011

Activity Level	Week 6 Number of Counties	Week 7 Number of Counties	Week 7 Counties
No Report	0	0	-
No Activity	7	10	Bradford, Glades, Gulf, Hamilton, Indian River, Madison, Putnam, Santa Rosa, Sumter, Union
Mild	37	41	Alachua, Baker, Bay, Brevard, Broward, Calhoun, Citrus, Clay, Collier, Dade, Escambia, Flagler, Franklin, Gadsden, Gilchrist, Hardee, Hendry, Hernando, Highlands, Hillsborough, Jackson, Jefferson, Lafayette, Lake, Liberty, Manatee, Martin, Monroe, Nassau, Okeechobee, Orange, Osceola, Pinellas, Polk, St. Johns, St. Lucie, Sarasota, Seminole, Suwannee, Volusia, Washington
Moderate	23	16	Charlotte, Columbia, Desoto, Dixie, Duval, Holmes, Lee, Leon, Levy, Marion, Okaloosa, Palm Beach, Pasco, Taylor, Wakulla, Walton
Widespread	0	0	-

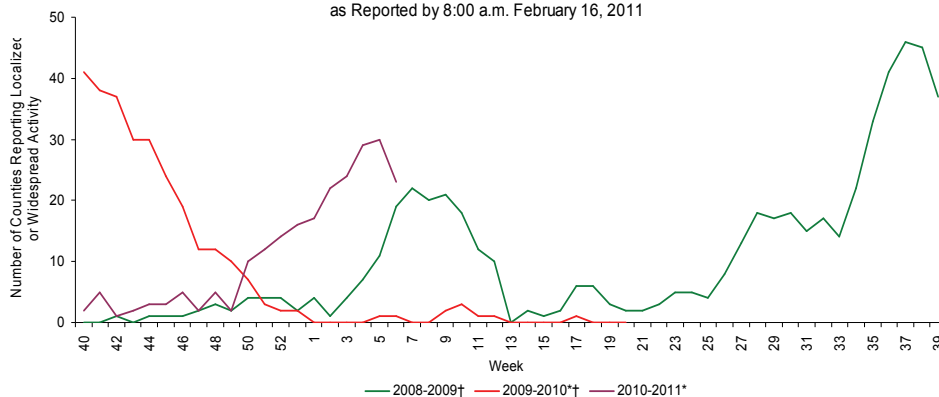
Map 3: Weekly County Influenza Activity for Week 7 as Reported by 3:00 p.m. February 23, 2011



No counties report widespread activity, and 16 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 40-6) as Reported by 8:00 a.m. February 16, 2011

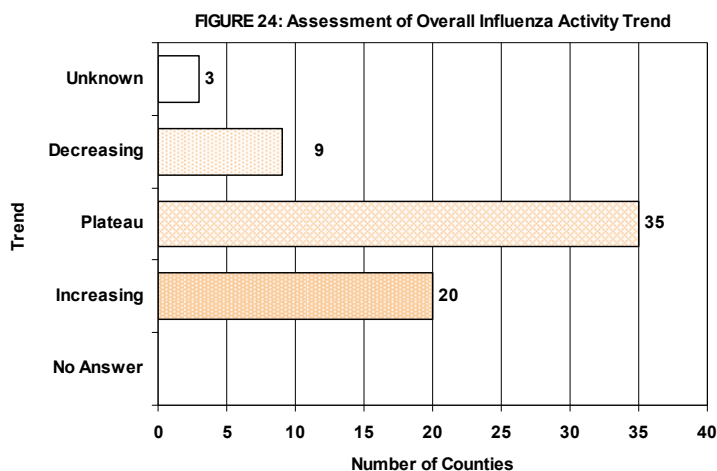


*there is no week 53 in 2009 or 2010.

† 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 February 12, 9 counties indicated that activity was decreasing, 35 indicated it was about the same, and 20 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 7 as of 3:00 p.m. February 23, 2011.



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 7 as of 3:00 p.m. February 23, 2011.

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

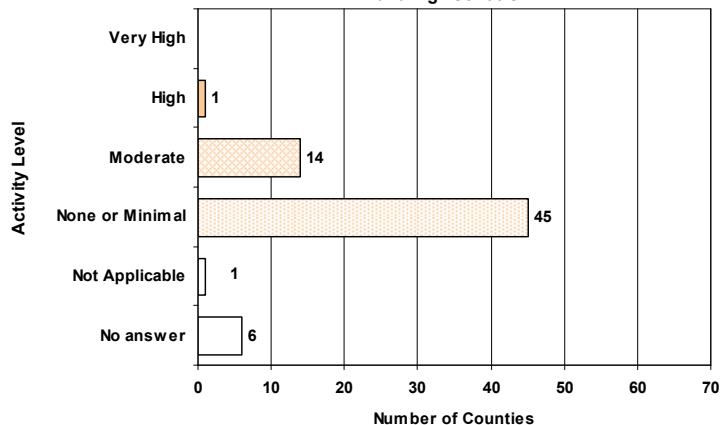


FIGURE 26: Assessment of Influenza Activity in Colleges and Universities

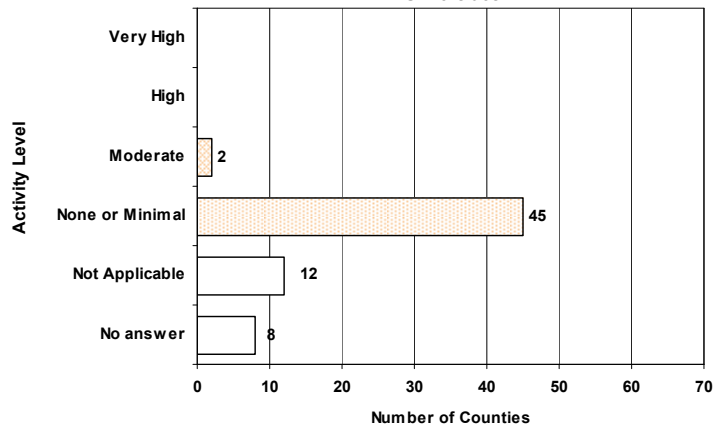


FIGURE 27 - FIGURE 32 show the activity levels in Various Facilities by county as reported by county health department flu coordinators week 7 as of 3:00 p.m. February 23, 2011.

FIGURE 27: Assessment of Influenza Activity in Jails/Prisons

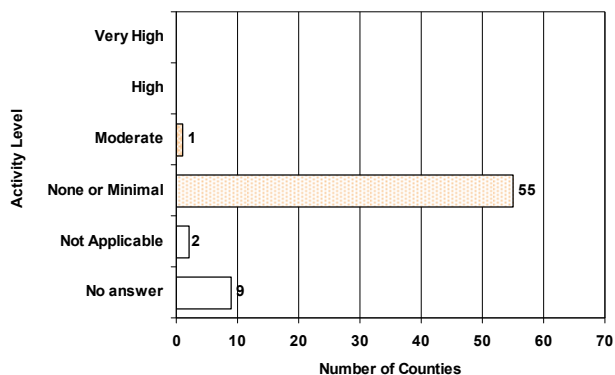


FIGURE 28: Assessment of Influenza Activity in Retirement Facilities

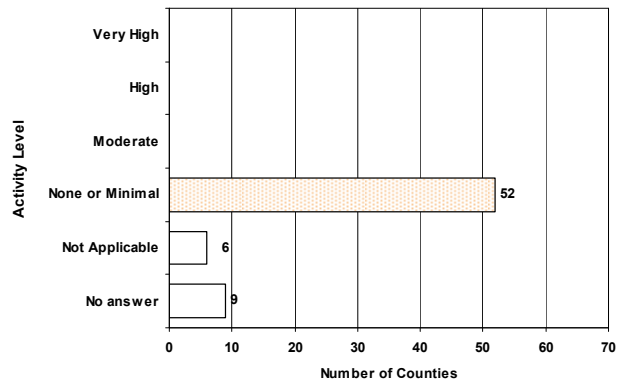


FIGURE 29: Assessment of Influenza Activity in Nursing Homes

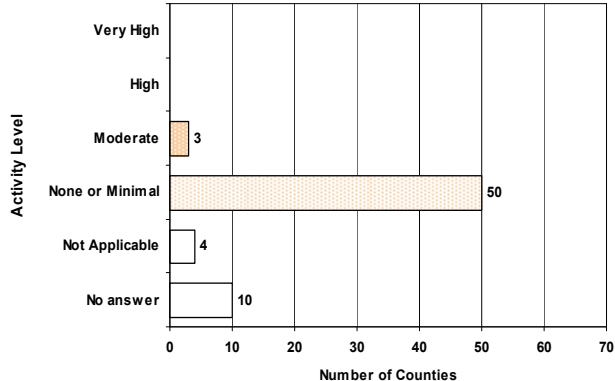


FIGURE 30: Assessment of Influenza Activity in Health Care Facilities

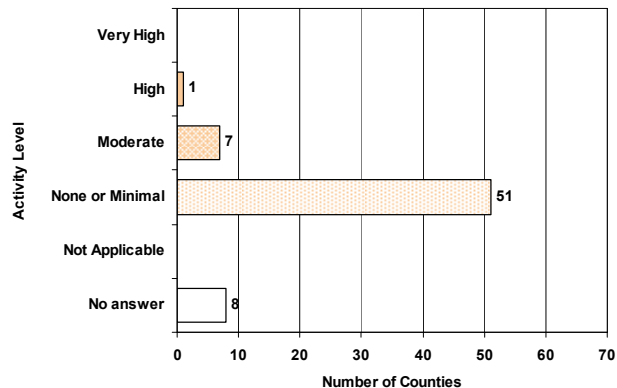


FIGURE 31: Assessment of Influenza Activity in Daycare Centers

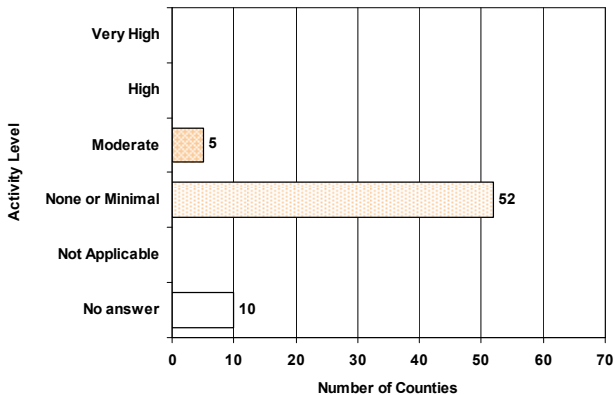


FIGURE 32: Assessment of Influenza Activity in Businesses

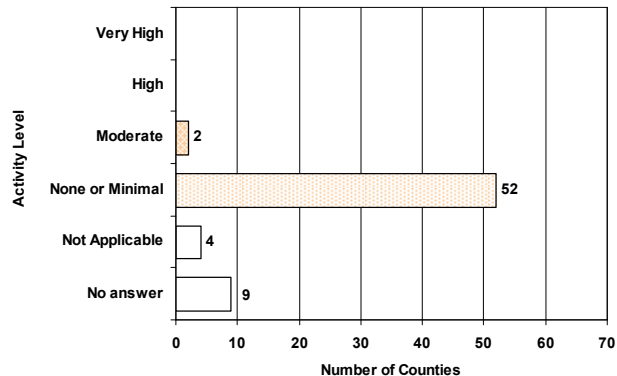
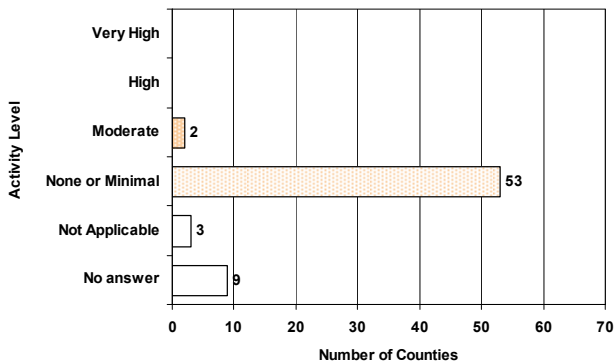


FIGURE 33: Assessment of Influenza Activity in State or Local Government Offices



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 7 (ending February 19) there were:

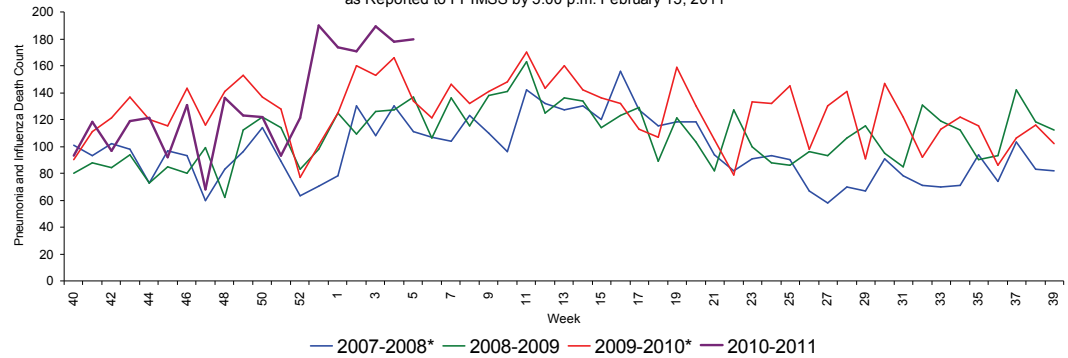
- **188 deaths reported**
- **Upper bound of 95% confidence interval for prediction: 212 deaths**
- **No excess deaths**

The majority of the deaths are in those aged 75 years and older. After a rise in overall P&I mortality driven by the 75+ age group, mortality appears to have plateaued.

24 of 24 counties reported data for week 7.

FIGURE 35 shows Pneumonia and Influenza Deaths for 24 Florida Counties, week 1, 2008 - week 7, 2011 as reported to FPIMSS by 5:00 p.m. February 22, 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 40-6) as Reported to FPIMSS by 5:00 p.m. February 15, 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 7, 2011 as Reported to FPIMSS by 5:00 p.m. February 22, 2011

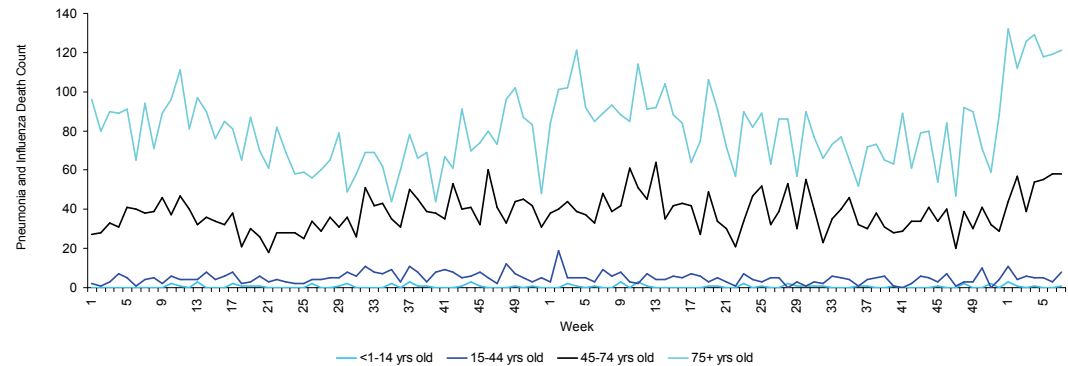


Figure 36: Pneumonia and Influenza Deaths for 24 Counties, Serfling Model January 24, 2009-February 19, 2011 as Reported to FPIMSS as of 5:00 p.m. February 22, 2011

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

