Florida Flu Review

2009-2010 season

Week 16: April 18 – April 24, 2010

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:

- There were low levels of influenza activity in the United States during week 15. Florida's national surveillance region, Region 4, shows elevated activity compared to the rest of the country, however there are no longer any Region 4 states reporting regional activity. No states reported widespread or regional activity, and the highest proportion of states reported sporadic activity. Nationally, activity is less than previous years at this time.

State:

- Influenza-like illness (ILI) activity is low in many of our monitoring systems. This week no counties reported widespread or localized influenza activity, the highest activity levels.
- Virtually all current influenza infection seen throughout the western hemisphere, and most of the rest of the world, is 2009 H1N1. For the first time in 2010, in week 15, a specimen tested by the Bureau of Laboratories tested positive for H3 influenza A, which is seen in normal influenza seasons. Neither a different influenza virus, nor any other viruses that can cause influenza-like illness, have started causing significant illness in Florida. RSV, a virus that primarily affects infants and toddlers, is active throughout the state, as is usual this time of year.

Weekly state influenza activity: Sporadic

Florida is currently reporting Sporadic influenza activity statewide, due to the continuing low levels of influenza reflected in many of our surveillance systems. Florida is now past the time of year when normal flu seasons begin to decline, and although flu continues to circulate there was not a traditional winter peak in influenza activity.

TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 16

Measure	Difference from previous week	Current week 16	Previous week 15	Page of Report
Overall statewide activity code reported to CDC	No Change	Sporadic	Sporadic	1
Percent of visits to ILINet providers for ILI	▼ 0.2	0.9%	1.1%	2
Percent of emergency department visits (from ESSENCE) due to ILI	▲ 0.1	1.8%	1.7%	4
Percent of hospital admissions (from ESSENCE) due to ILI	▼ 0.2	0.2%	0.4%	4
Percent of laboratory specimens that were positive for influenza	▼ 2.5	8.3%	10.8%	6
Percent of positive influenza specimens that were identified as 2009 H1N1	▲ 14.3	100.0%	85.7%	6
Number of counties reporting localized influenza activity	No Change	0	0	7
Number of counties reporting widespread influenza activity	No Change	0	0	7
Number of counties reporting increasing influenza activity	▼ 1	2	3	8
Number of counties reporting decreasing influenza activity	▼ 2	18	20	8
Number of recent deaths in confirmed 2009 H1N1 influenza cases	▲ 1	1	0	12
Number of recent hospitalizations in confirmed 2009 H1N1 influenza cases	▼ 1	3	4	13
Number of ILI outbreaks reported in Epi Com	No Change	0	0	14

April 28, 2010

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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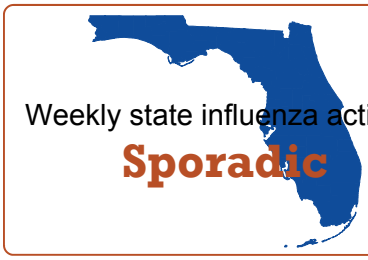
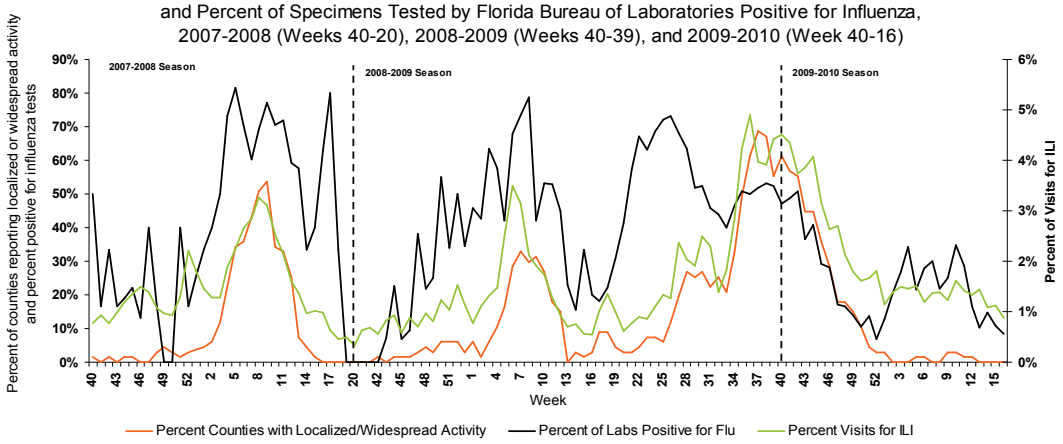


In this Issue:

FIGURE 1 shows the progression of the 2007-2008, 2008-2009, and 2009-2010 Florida influenza seasons as monitored by three surveillance systems: ILINet, Bureau of Laboratories viral surveillance, and county activity levels.

FIGURE 1: Percent Visits for ILI to ILINet Sites, Percent of Counties with Localized or Widespread Activity, and Percent of Specimens Tested by Florida Bureau of Laboratories Positive for Influenza, 2007-2008 (Weeks 40-20), 2008-2009 (Weeks 40-39), and 2009-2010 (Week 40-16)



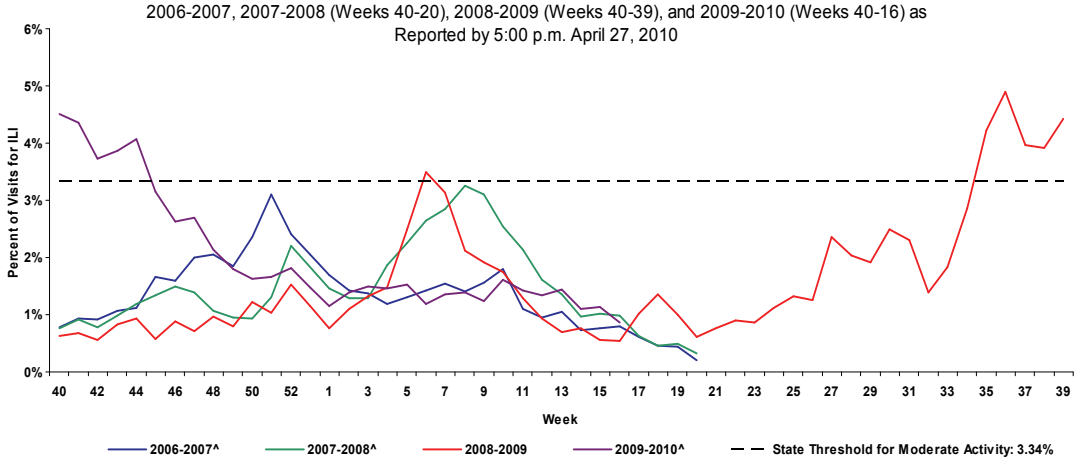
Return to Top

ILINET Influenza-like Illness-Statewide

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

Week 16 is the 23rd week in a row that Florida has been below the threshold for moderate activity. Influenza activity is similar to previous influenza seasons at this time and continues the downward trend seen since week 10.

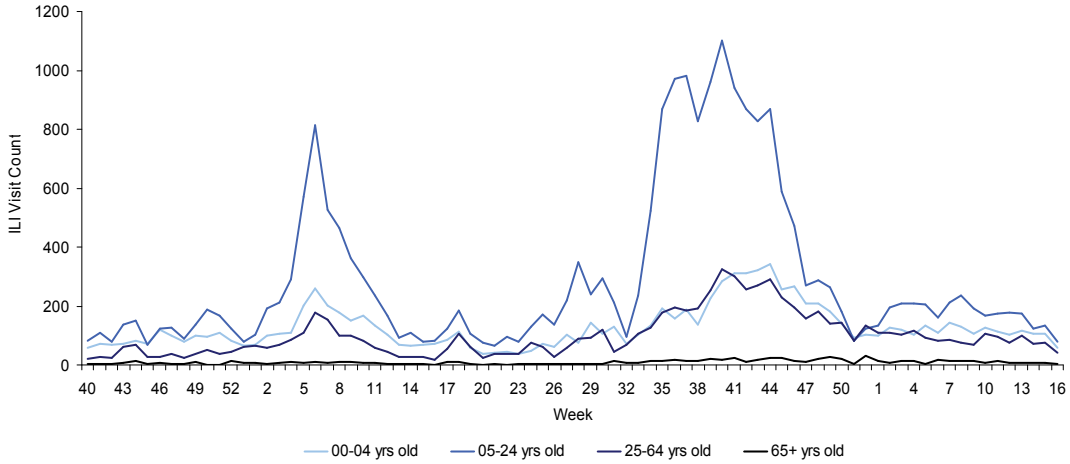
FIGURE 2: Percentage of Visits for Influenza-Like Illness* Reported by ILINet Sentinel Providers Statewide, 2006-2007, 2007-2008 (Weeks 40-20), 2008-2009 (Weeks 40-39), and 2009-2010 (Weeks 40-16) as Reported by 5:00 p.m. April 27, 2010



*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.

FIGURE 3: Influenza-like Illness (ILI) Visit Counts Reported by ILINet Sentinel Providers Statewide by Age Group Week 40, 2008-Week 16, 2010 as Reported to ILINet by 5:00 p.m. April 27, 2010



*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.

Return to Top

Map 1: RDSTF Regions for ILINet Data

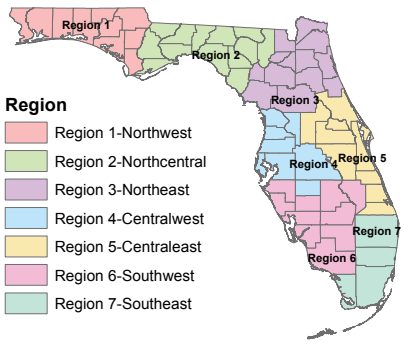


TABLE 2: ILINet Providers and Percent of Visits for ILI by Region, Week 16, as Reported by by 5:00 p.m. April 27, 2010

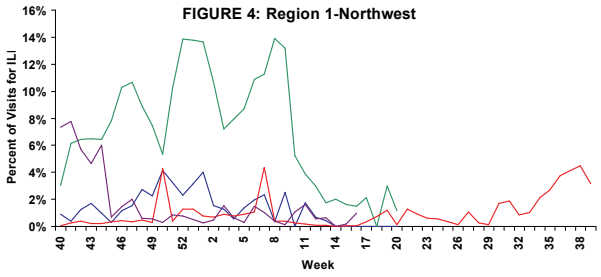
	Number of Participating	Providers that Reported		Percent Visits for ILI
Region 1-Northwest	15	3	20.00%	0.98%
Region 2-Northcentral	5	2	40.00%	0.09%
Region 3-Northeast	22	9	40.91%	0.45%
Region 4-Centralwest	39	20	51.28%	0.47%
Region 5-Centraleast	49	32	65.31%	1.57%
Region 6-Southwest	20	3	15.00%	3.55%
Region 7-Southeast	26	7	26.92%	0.07%
Total	**176**	**76**	**43.18%**	**0.87%**

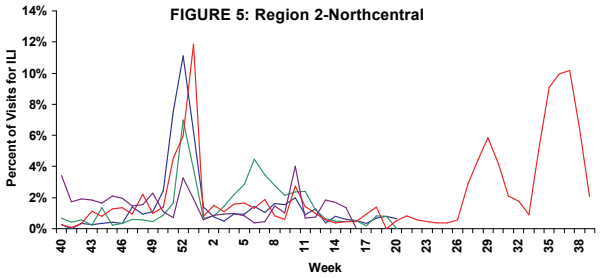
TABLE 2 shows the ILI activity by Regional Domestic Security Task Force (RDSTF) as reported by Florida ILINet physicians for week 16 (ending April 17, 2010).

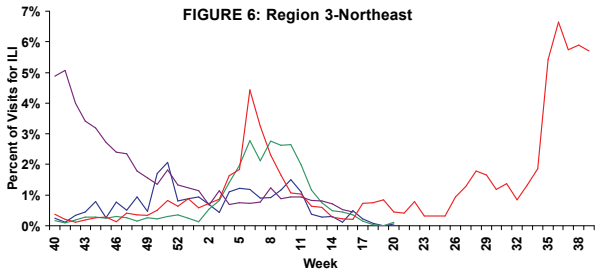
FIGURE 4 - FIGURE 10 include ILI activity as reported by sentinel physicians for the 2006-2007, 2007-2008, 2008-2009, and 2009-2010 seasons.

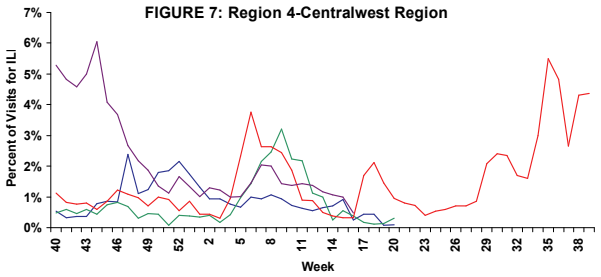
This week regions 1-5 and 7 are reporting a percentage of visits due to ILI similar to what has been seen in previous years, while region 6 is elevated over previous years. Please refer to table above for the number of providers reporting for each region. Data should be interpreted with caution due to the low number of providers reporting in some regions. Numbers will change as more data are received.

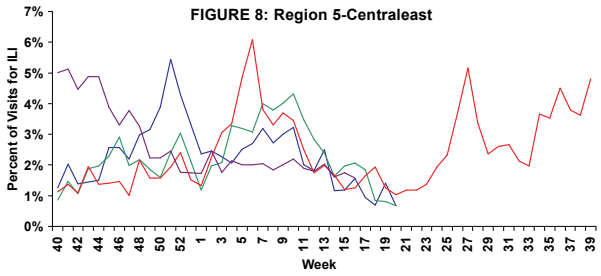
Percentage of Visits for Influenza-Like Illness Reported by ILINet Sentinel Providers by RDSTF Region, 2006-07 (Weeks 40-20), 2007-2008 (Weeks 40-20), 2008-2009 (Weeks 40-39), and 2009-10 (Weeks 40-16) as Reported by 5:00 p.m. April 27, 2010.

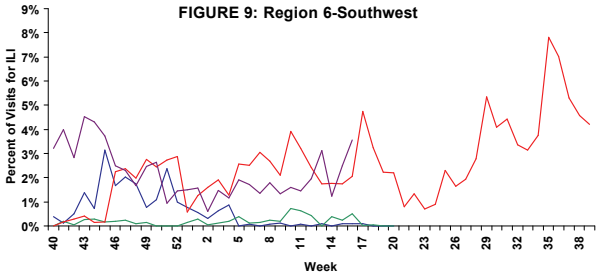


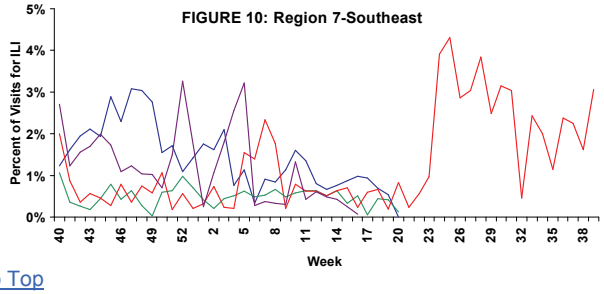












Graph Legend

- 2006-2007*
- 2007-2008*
- 2008-2009
- 2009-2010*

*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.

Return to Top

Florida uses the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) for syndromic surveillance, which currently collects data daily from 135 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. Thirty facilities participating in ESSENCE have been able to provide historical admissions data and are included here.

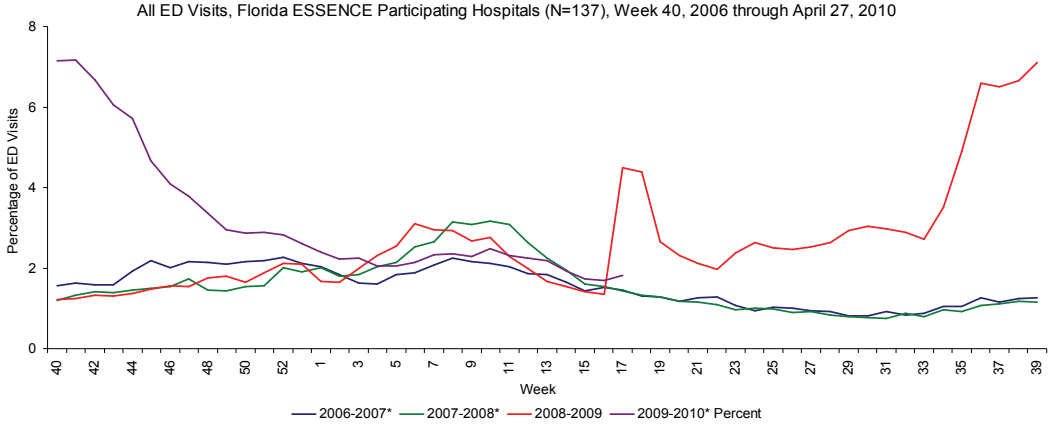
FIGURE 11 shows ESSENCE data on ILI visits to Emergency Departments as a percentage of all ED Visits.

Overall activity for influenza-like illness reported in ESSENCE is near expected levels for this time of year.

Florida has now passed the point at which normal winter influenza activity begins to decline.

The majority of the increase in ED visits is occurring in younger age groups. After a steep decline in late 2009 and small increases beginning in week 6, 2010, ILI visits have stabilized at a level less than most normal seasonal influenza peaks, but greater than normal lows between influenza seasons.

FIGURE 11: Influenza-like Illness Visits (by Chief Complaint) to Emergency Departments (ED) as a Percentage of All ED Visits, Florida ESSENCE Participating Hospitals (N=137), Week 40, 2006 through April 27, 2010

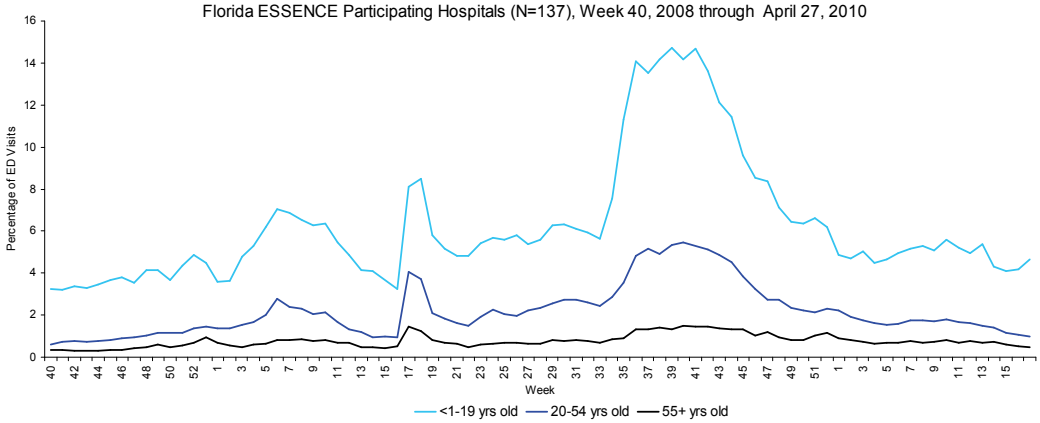


*There is no week 53 for the 2006-2007, 2007-2008, or 2009-2010 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

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), while older age groups have seen slight declines in ILI activity levels.

FIGURE 12: Percentage of Influenza-like Illness from Emergency Department (ED) Chief Complaints by Age, Florida ESSENCE Participating Hospitals (N=137), Week 40, 2008 through April 27, 2010



Thirty 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. The percentages in the older age groups is less variable and shows a distinct increase starting around week 32. 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.

Hospitals Reporting Admissions to ESSENCE

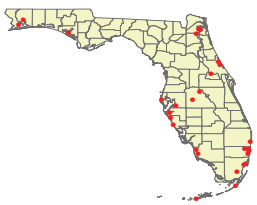
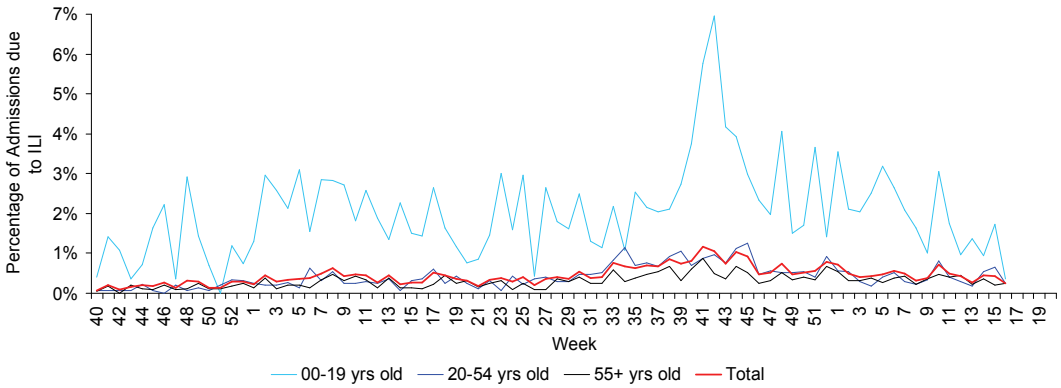


FIGURE 13: Percentage Admitted to Hospital for Influenza-Like Illness (ILI) Among All Persons Admitted in the Hospital through the ED Based on ED Chief Complaint, Hospitals Reporting Admissions Data (N=30) for Week 40, 2008 to Week 16, 2010



Return to Top

FIGURE 14 - FIGURE 19 describe emergency department chief complaint data from ESSENCE by Domestic Security Task Force Region

All regions' percentage of ILI among emergency department (ED) visits have stabilized and are at levels similar to normal influenza seasons.

Map 2: Hospitals Reporting Emergency Department (ED) Data to Florida ESSENCE, April 27, 2010 (N=137)

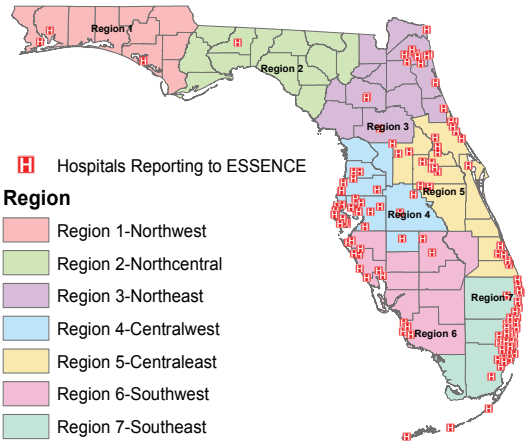


FIGURE 14: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 1 ESSENCE Participating Hospitals (N=3), Week 40, 2007 through April 27, 2010

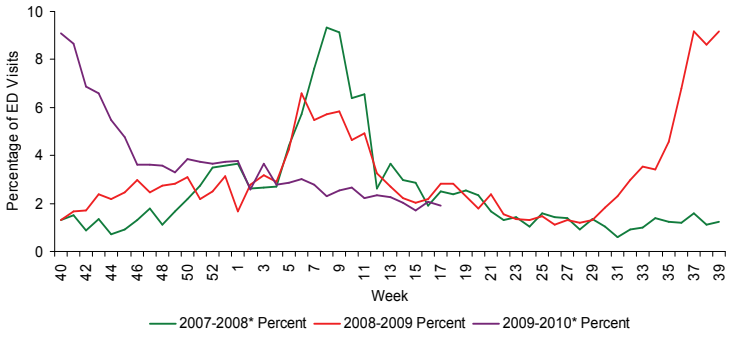


FIGURE 15: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 2 ESSENCE Participating Hospitals (N=1), Week 1, 2009 through April 27, 2010

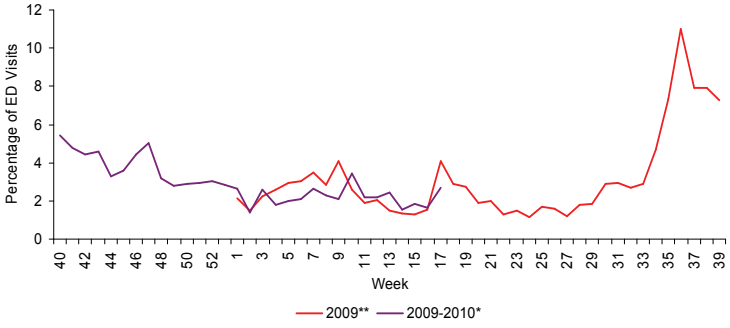


FIGURE 16: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 3 ESSENCE Participating Hospitals (N=14), Week 40, 2007 through April 27, 2010

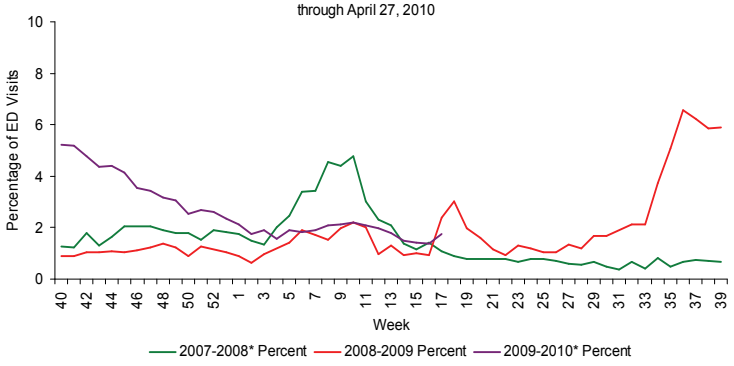


FIGURE 17: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 4 ESSENCE Participating Hospitals (N=31), Week 40, 2006 through April 27, 2010

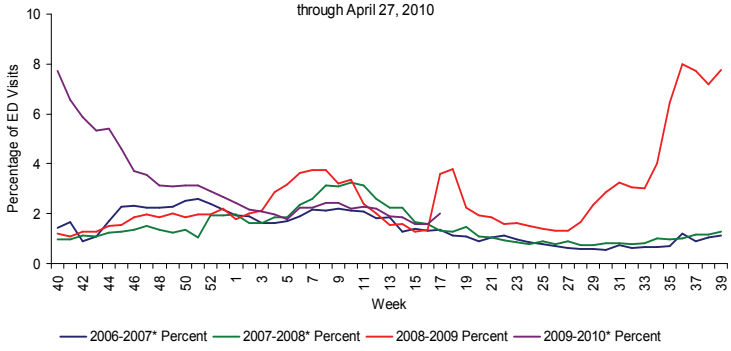


FIGURE 18: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 5 ESSENCE Participating Hospitals (N=25), Week 40, 2007 through April 27, 2010

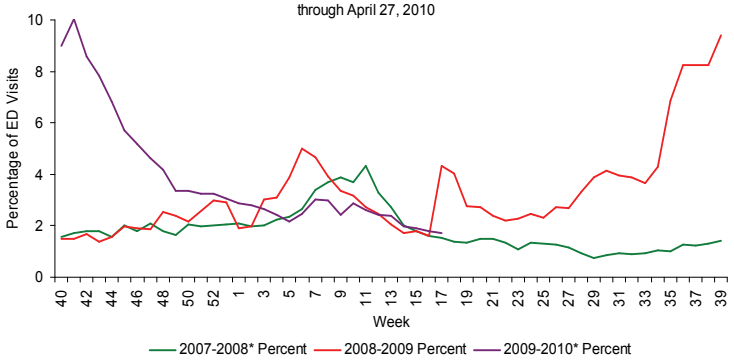


FIGURE 20: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 7 ESSENCE Participating Hospitals (N=48), Week 40, 2006 through April 27, 2010

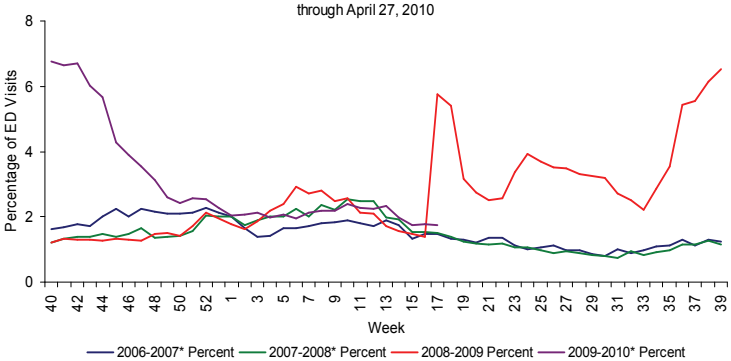
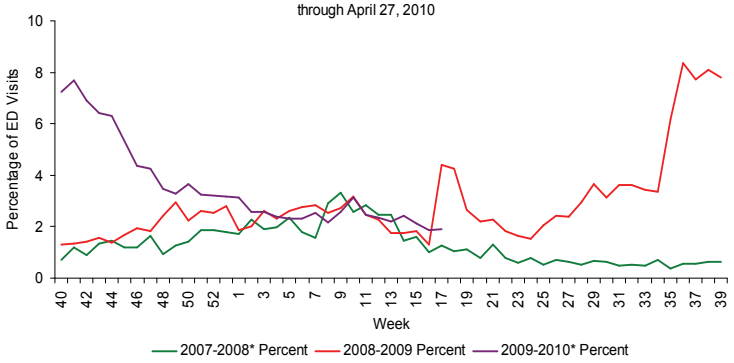


FIGURE 19: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 6 ESSENCE Participating Hospitals (N=15), Week 40, 2007 through April 27, 2010



Return to Top

*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.
**Historical data for region 2 is only available beginning week 1, 2009

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.

Virtually all infections due to novel H1N1 are caused by strains that are sensitive to oseltamivir and zanamivir (Tamiflu and Relenza).

FIGURE 20 - 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

The vast majority of positive influenza specimens are H1N1, with some exceptions:

In week 15, 2010 a specimen tested positive for H3 seasonal Influenza A. This was the first positive H3 specimen in 2010.

Five specimens have tested positive for H3 seasonal Influenza A since week 44, 2009.

- One in week 15, 2010, one in week 49, 2009, one in week 46, and two in week 44.
- H3 seasonal Influenza A has been seen during normal influenza season.

Six specimens have tested positive for Influenza B since week 39.

- One in week 6, 2010, one in week 4, two in week 44, 2009, one in week 40, and one in week 39.
- Influenza B, unlike influenza A, does not have significant pandemic potential.

Laboratory information is preliminary and will change as additional results are received. Totals from previous weeks will be adjusted to reflect correct specimen numbers.

Table 3: Bureau of Laboratories Viral Surveillance for Week 16 by Lab Event Date* as reported by 11:00 a.m. April 28, 2010

	Current Week 16	Previous Week 15
Total Specimens Tested	**36**	**65**
Influenza Positive Specimens (% of total)	3 (8.3%)	7 (10.8%)
H1N1 Positive Specimens (% of influenza positives)	3 (100.0%)	6 (85.7%)
H3 Influenza A	-	1 (14.3%)

FIGURE 20: Number of Influenza-Positive Specimens Tested by the Florida Bureau of Laboratories (BOL) by Subtype by Lab Event Date* Week 40, 2008 to Week 16, 2010 as Reported in Merlin by 11:00 a.m. April 28, 2010

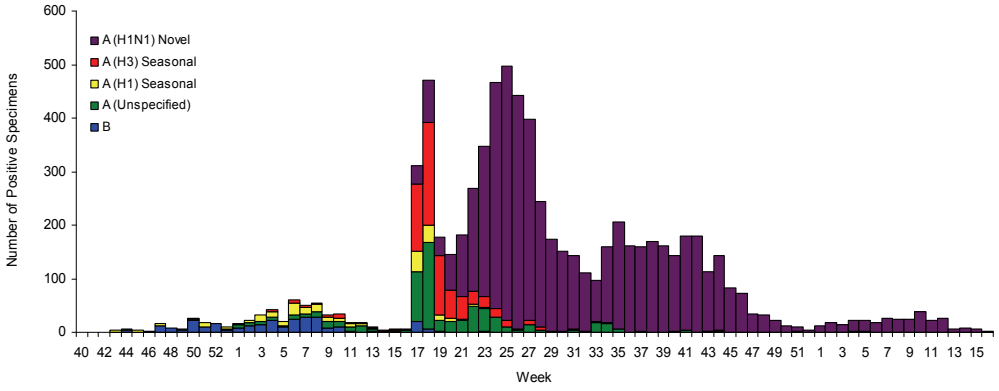


FIGURE 21: Number of Specimens Tested by Florida Bureau of Laboratories (BOL) and Percent Positive for Influenza by Lab Event Date* Week 40, 2008 to Week 16, 2010 as Reported in Merlin by 11:00 a.m. April 28, 2010

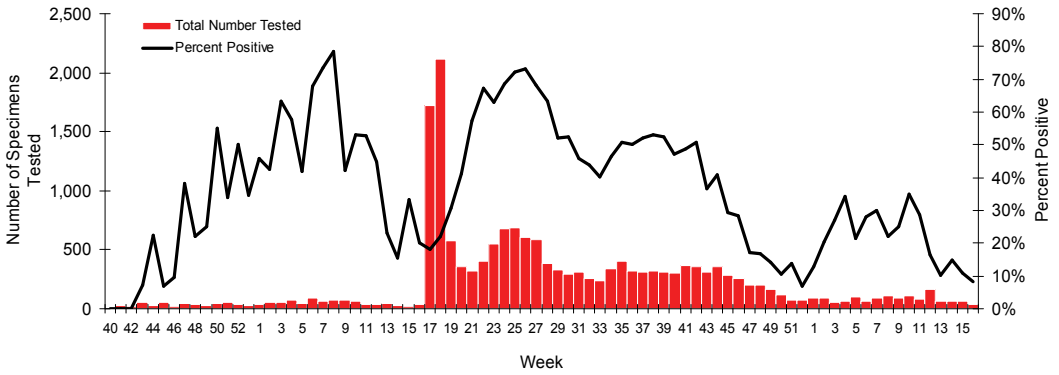
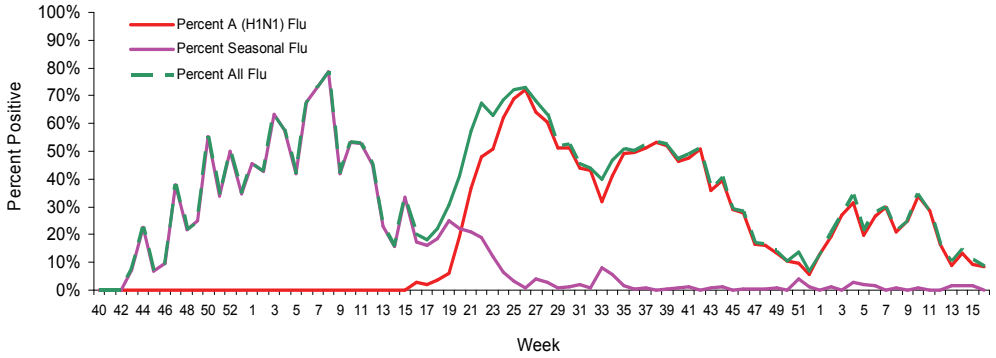


FIGURE 22: Percentage of Specimens Tested by Florida Bureau of Laboratories (BOL) Positive for Influenza by Subtype by Lab Event Date* Week 40, 2008 to Week 16, 2010 as Reported in Merlin by 11:00 a.m. April 28, 2010



*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

Return to Top

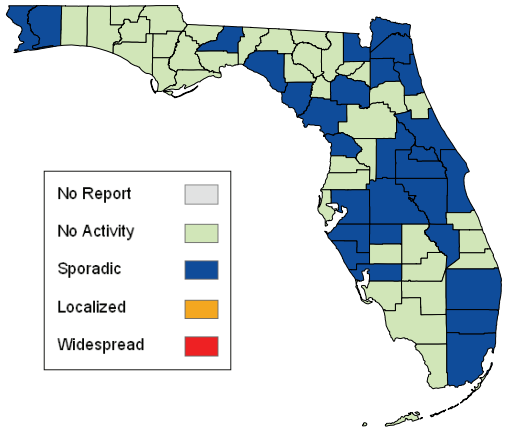
County Influenza Activity

As of 1:00 p.m. April 28, 2010 a total of 67 (100%) counties had reported their weekly level of influenza activity. This is the twentieth week in a row we have achieved 100% reporting, thanks 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 16 (ending April 24, 2010)
as Reported by 1:00 p.m. April 28, 2010

Activity Level	Week 15 Number of Counties	Week 16 Number of Counties	Week 16 Counties
No Report	0	0	-
No Activity	39	38	Bay, Bradford, Calhoun, Collier, Columbia, Desoto, Flagler, Franklin, Gadsden, Gilchrist, Glades, Gulf, Hamilton, Hendry, Hernando, Highlands, Holmes, Indian River, Jackson, Jefferson, Lafayette, Lee, Liberty, Madison, Marion, Martin, Monroe, Okaloosa, Pasco, Pinellas, Putnam, St. Lucie, Sumter, Suwannee, Union, Wakulla, Walton, Washington
Sporadic	28	29	Alachua, Baker, Brevard, Broward, Charlotte, Citrus, Clay, Dade, Dixie, Duval, Escambia, Hardee, Hillsborough, Lake, Leon, Levy, Manatee, Nassau, Okeechobee, Orange, Osceola, Palm Beach, Polk, Santa Rosa, Sarasota, Seminole, St. Johns, Taylor, Volusia
Localized	0	0	-
Widespread	0	0	-

Map 3: Weekly County Influenza Activity for Week 16
as Reported by 1:00 p.m. April 28, 2010



This is the fourth week in a row in which no counties reported widespread or localized influenza activity.

FIGURE 23: Number of Counties Reporting Localized or Widespread Actitvity,
2007-2008 (Weeks 40-20), 2008-2009 (Weeks 40-39), and 2009-2010 (Weeks 40-16)
as Reported by 1:00 p.m. April 28, 2010

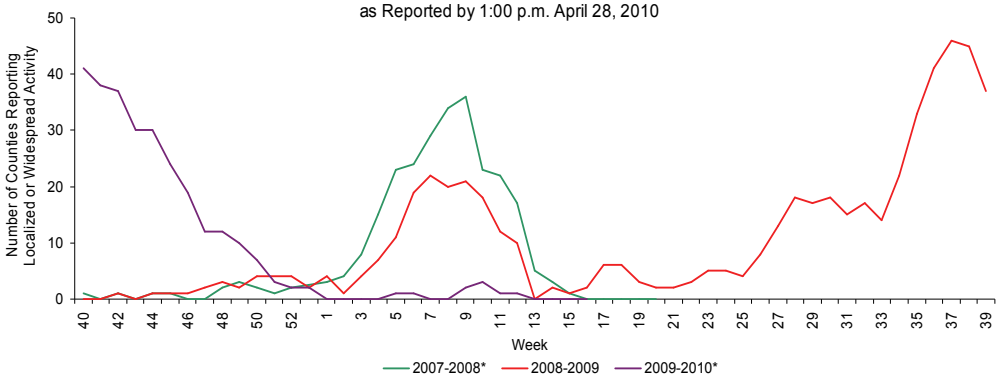


FIGURE 23 shows the number of counties reporting localized or widespread activity, 2007-2008, 2008-2009, and 2009-2010.

County flu activity level definitions are now available online at:
http://www.doh.state.fl.us/disease_ctrl/epi/FluActivityDef.htm

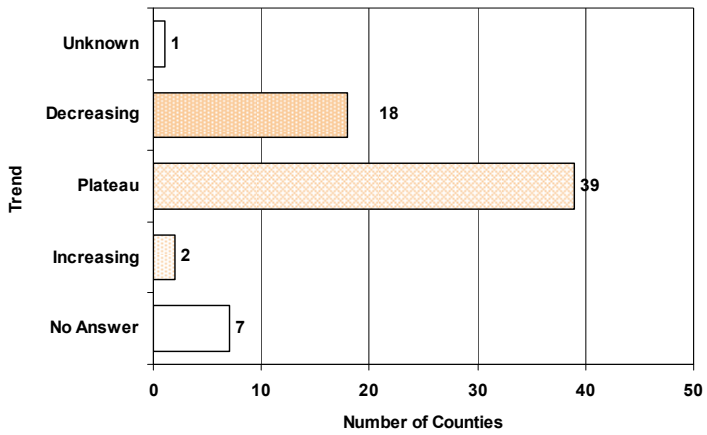
Return to Top

New County Influenza Activity

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 April 24th, 18 counties indicated that activity was decreasing, 39 indicated it was about the same, and 2 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 16 as of 1:00 p.m. April 28, 2010.

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 16 as of 1:00 p.m. April 28, 2010.

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

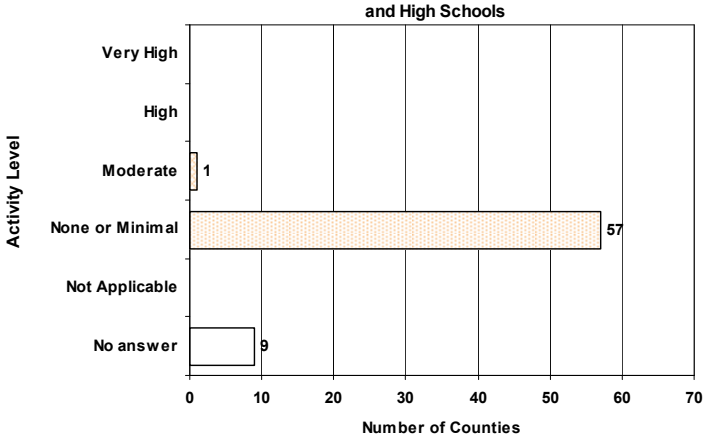
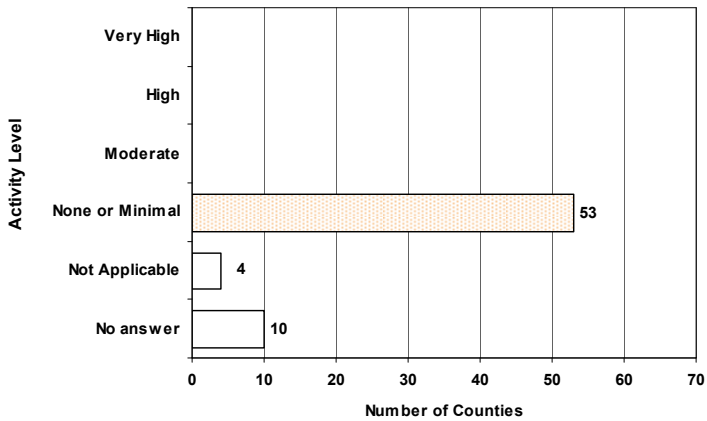


FIGURE 26: Assessment of Influenza Activity in Colleges and Universities



Return to Top

New County Influenza Activity-Continued

FIGURE 27 - FIGURE 32 show the activity levels in Various Facilities by county as reported by county health department flu coordinators for week 16 as of 1:00 p.m. April 28, 2010.

FIGURE 27: Assessment of Influenza Activity in Jails/Prisons

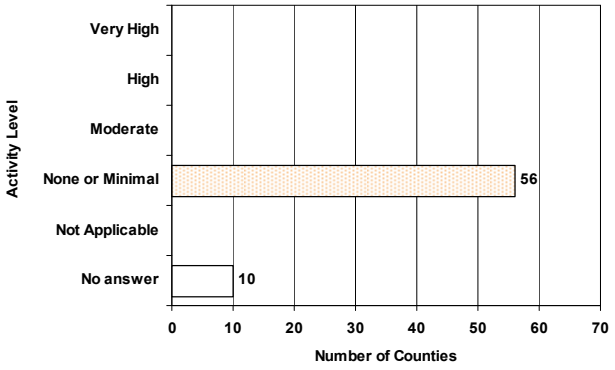


FIGURE 28: Assessment of Influenza Activity in Retirement Facilities

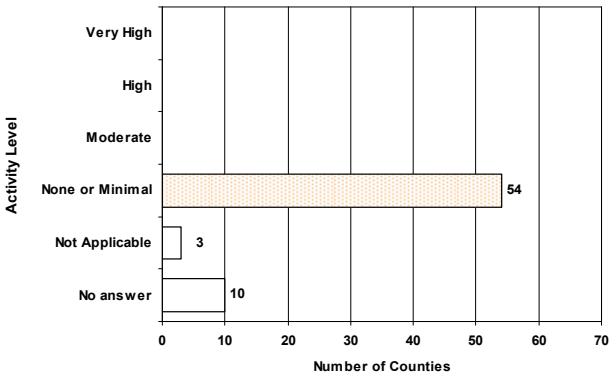


FIGURE 31: Assessment of Influenza Activity in Daycare Centers

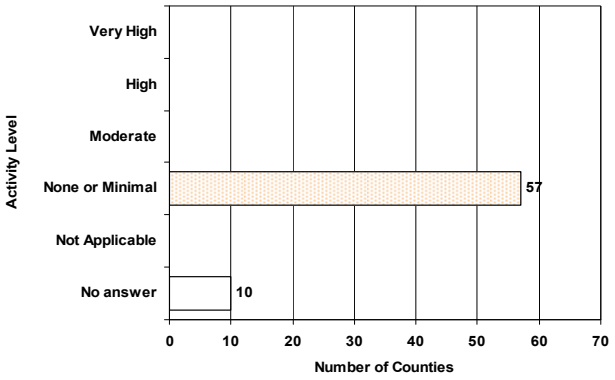


FIGURE 29: Assessment of Influenza Activity in Nursing Homes

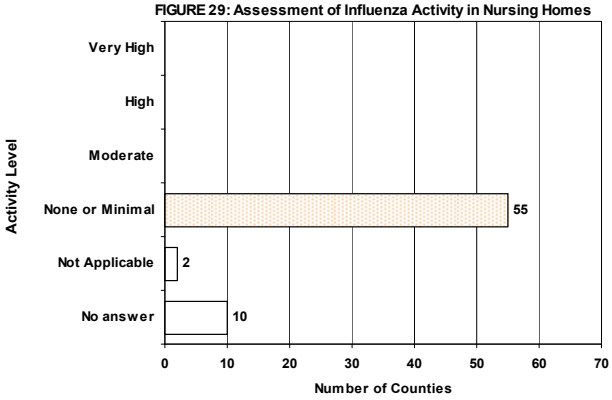


FIGURE 30: Assessment of Influenza Activity in Health Care Facilities

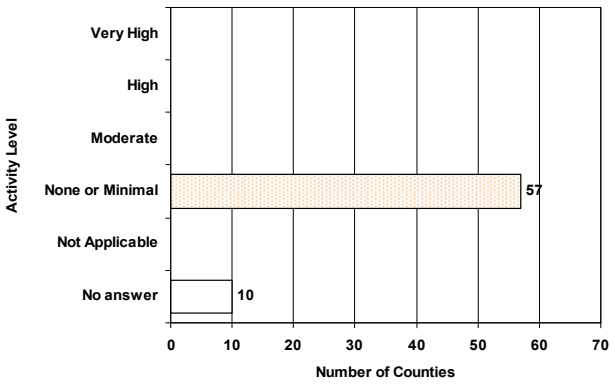


FIGURE 32: Assessment of Influenza Activity in Businesses

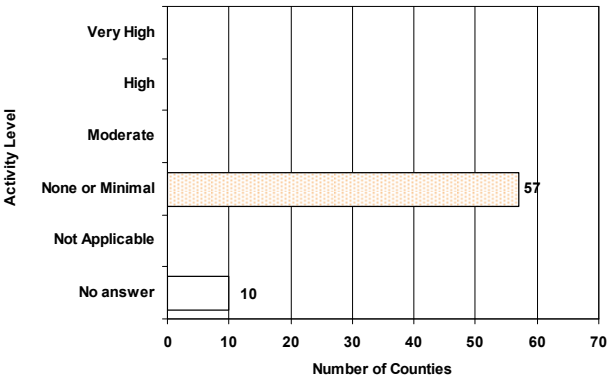
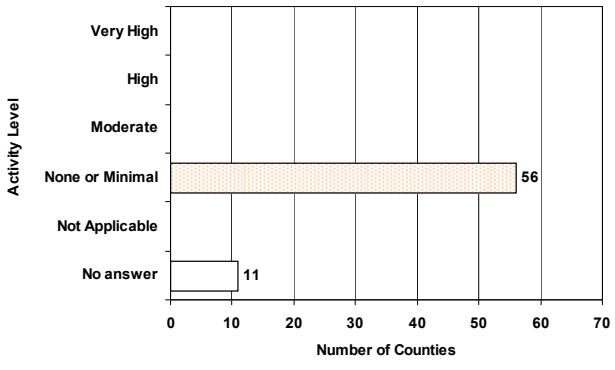


FIGURE 33: Assessment of Influenza Activity in State or Local Government Offices



Return to Top

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. Note that as of week 44 we are now using a Serfling model to more accurately calculate our predicted values for weekly pneumonia and influenza mortality. Expect continued updates in the coming weeks.

FIGURE 33 shows Pneumonia and Influenza Deaths for 24 Florida Counties, 2006-2007, 2007-2008, 2008-2009, and 2009-2010

For week 16 (ending April 24, 2010) there were:

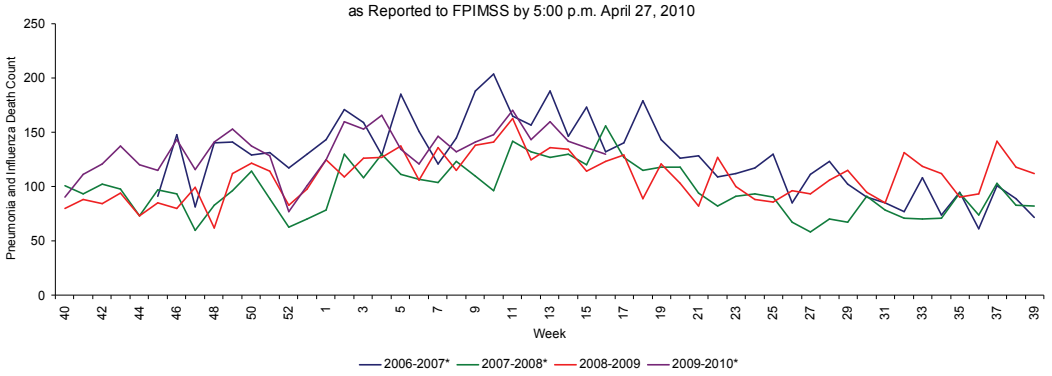
- **130 deaths reported**
- **Upper bound of 95% confidence interval for prediction: 166 deaths**
- **NO excess deaths**

The majority of the deaths are in those aged 45 years and older.

23 out of 24 participating counties reported their data for week 16.

FIGURE 34 shows Pneumonia and Influenza Deaths for 24 Florida Counties, week 1, 2008 - week 16, 2010 as reported to FPIMSS by 5:00 p.m. April 27, 2010

FIGURE 34: Pneumonia and Influenza Deaths for 24 Florida Counties,
2006-2007 (Weeks 40-39), 2007-2008 (Weeks 40-39), 2008-2009 (Weeks 40-39), and 2009-2010 (Weeks 40-16)
as Reported to FPIMSS by 5:00 p.m. April 27, 2010



*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 3 Age Groups for 24 Florida Counties,
Week 1, 2008-Week 16, 2010 as Reported to FPIMSS by 5:00 p.m. April 27, 2010

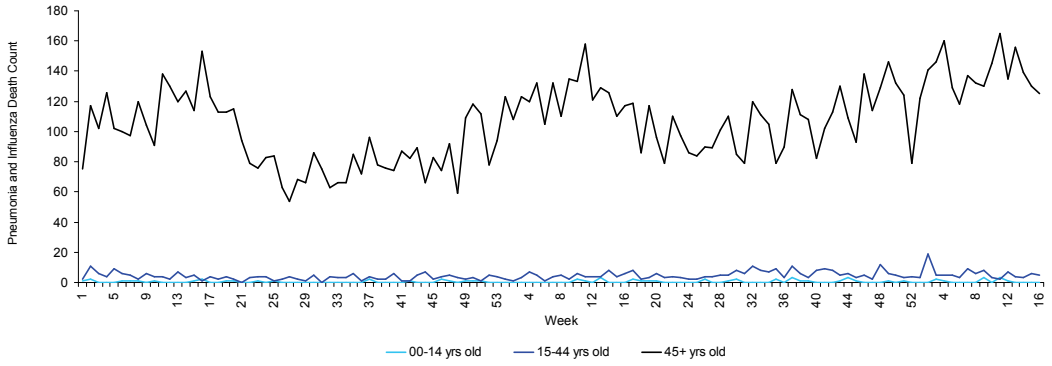
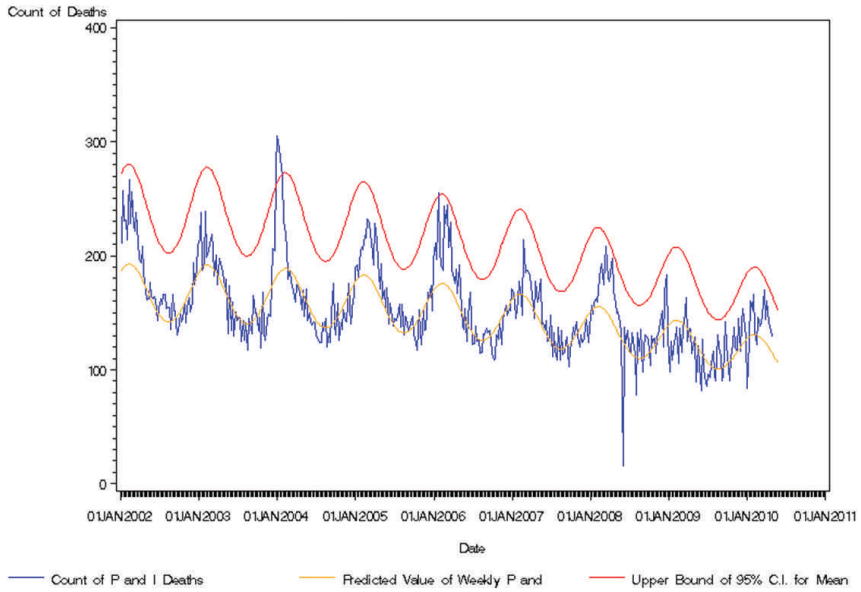


FIGURE 35 shows the reported count of pneumonia and influenza deaths for 24 Florida counties, the number of deaths predicted using the Serfling Model, and the upper bound of the 95% confidence interval for this prediction

Figure 36: Pneumonia and Influenza Deaths for 24 Counties, Serfling Model
January 24, 2009-April 17, 2010 as Reported to FPIMSS
as of 5:00 p.m. April 27, 2010



Return to Top

FIGURE 36 shows deaths in patients with novel H1N1*, hospitalizations due to H1N1**, and outbreaks of Influenza or ILI***, from week 17, when confirmed or probable cases of novel H1N1 in patients with life-threatening illness became reportable, to week 16, 2010

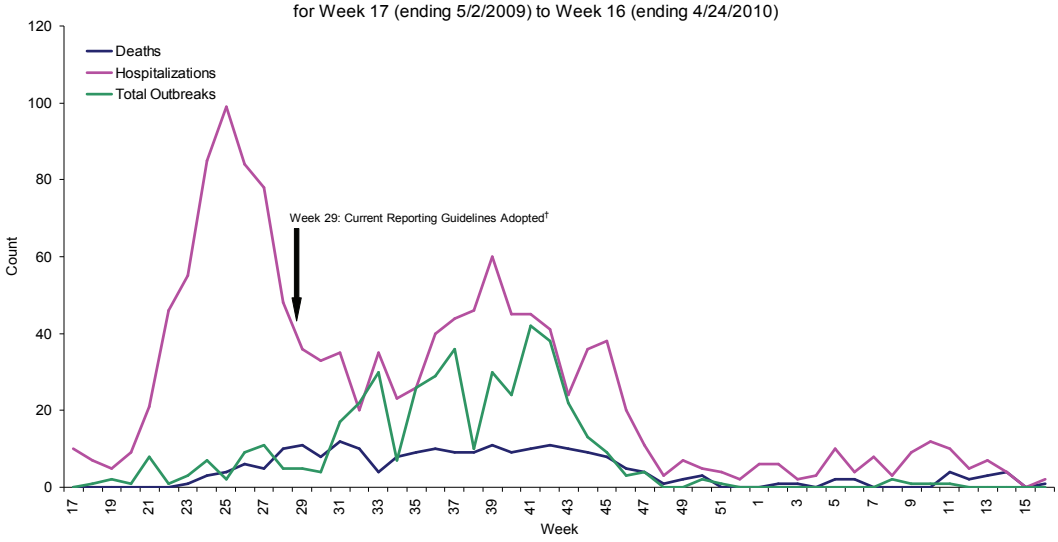
Deaths: Note that the exact contribution of H1N1 to the death is variable and may be unknown, as many of these deaths occur in people with complicated medical histories. Novel influenza A H1N1 infection would be coded as the underlying or primary cause on a death certificate for **some but not all** of these deaths. About 20 percent of deaths due to H1N1 are in persons with no underlying conditions.

The case definition for novel H1N1 deaths can be found at: http://www.doh.state.fl.us/disease_ctrl/epi/swineflu/ReportingDeaths8-11.pdf

Hospitalizations: Note that under the current surveillance strategy, case reporting is only required for confirmed or probable cases of novel H1N1 influenza in a) patients with life-threatening illness, b) pregnant women who are hospitalized, and c) deaths.

Use caution when interpreting hospitalization data, as only hospitalized patients with life-threatening illness are reportable and there is some variability in communities as to how "life-threatening illness" is interpreted. is interpreted.

Figure 37: Cumulative Deaths† and Hospitalizations†† in Novel H1N1 Cases, and Outbreaks of Influenza or ILI†† for Week 17 (ending 5/2/2009) to Week 16 (ending 4/24/2010)



* Deaths are classified by date of death.
** Hospitalizations are classified by event date which is defined as the earliest of the following dates associated with the case: date of onset, date of diagnosis, lab report date, or date reported to CDH.
*** Outbreaks are classified by when they are reported into EpiCom.
† In week 29 Florida stopped making all cases of lab-confirmed H1N1 influenza reportable, and adopted the current guidelines for reporting hospitalizations and deaths.

Notifiable Disease Reports: Influenza-Associated Pediatric Mortality

Influenza-associated deaths among those <18 years of age and/or post-influenza infection encephalitis are reportable; case report forms can be accessed at: http://www.doh.state.fl.us/disease_ctrl/epi/topicscrforms.htm.

Note that the case definition for pediatric influenza mortality is different than the case definition for mortality with novel H1N1. Pediatric influenza-associated mortality cases are only counted after influenza is determined to be the cause of death.

The case definition is available at: http://www.cdc.gov/ncphi/disss/nndss/casedef/Influenza-Associated_current.htm

Influenza-Associated Pediatric Mortality

- **No** influenza-associated death among those <18 years of age was reported in week 16, for a total of 7 cases for the 2009-2010 season.
- **Seven** influenza-associated deaths among those <18 years of age were reported for the 2008-2009 influenza season (week 40, 2008 to week 39, 2009).

Return to Top

TABLE 5 - TABLE 7 The number of deaths reported each week since July 26, 2009 has ranged from 0 (weeks 52, 1, 2, 4, 7, 8 and 10) to 13 (week 38), with an average of 4.8 deaths reported per week. ^As of week 41, underlying conditions include pregnancy unless otherwise noted. The case definition for novel H1N1 deaths can be found at: http://www.doh.state.fl.us/disease_ctrl/epi/swineflu/ReportingDeaths8-11.pdf

Note that the exact contribution of H1N1 to the death is variable and may be unknown, as many of these deaths occur in people with complicated medical histories. Novel influenza A H1N1 infection would be coded as the underlying or primary cause on a death certificate for **some but not all** of these deaths. About 20 percent of deaths due to H1N1 are in persons with no underlying conditions.

TABLE 6: Recent Deaths in Novel H1N1 Influenza Cases by County, 12:00 Noon April 20 to 12:00 Noon April 27, 2010

Total	**1**	**100.0**
Sarasota	1	100.0

TABLE 7: Cumulative deaths in Novel H1N1 Influenza Cases by Age as of 12:00 Noon April 27, 2010

Age	Number	Percent	Deaths per million population	NO underlying condition^
Total	**225**	**100**	**11.8**	**36 16.0**
0-4	6	2.7	5.3	1 16.7
5-24	24	10.7	5.0	8 33.3
25-49	89	39.6	14.4	20 22.5
50-64	82	36.4	22.4	7 8.5
65+	24	10.7	7.2	0 0.0

Figure 38: Cumulative Laboratory-Confirmed Death Rate in Novel H1N1 Cases and Cumulative Deaths in Novel H1N1 Cases by Age Group as of 12:00 p.m. April 27, 2010

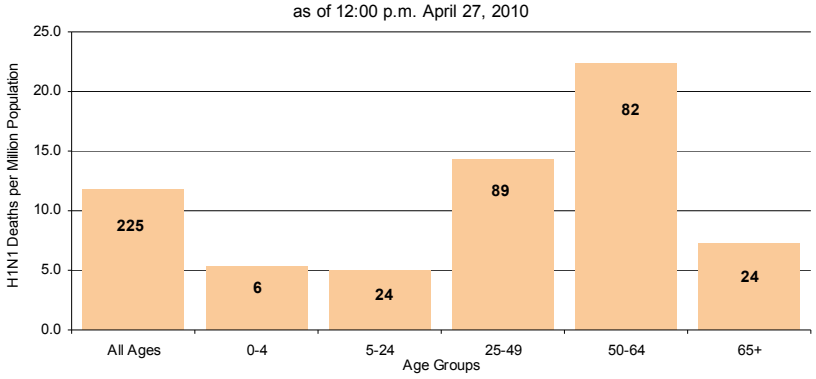


FIGURE 38 shows cumulative rates of H1N1 death by age group, per 1,000,000 population, and cumulative deaths in each age group.

TABLE 5: Cumulative deaths in Novel H1N1 Influenza Cases by County as of 12:00 Noon April 27, 2010

County	Number	Percent
Total	**225**	**100.0**
Alachua	7	3.1
Baker	1	0.4
Brevard	5	2.2
Broward	13	5.8
Calhoun	1	0.4
Charlotte	2	0.9
Citrus	3	1.3
Clay	1	0.4
Dade	40	17.8
Desoto	1	0.4
Duval	13	5.8
Escambia	3	1.3
Hardee	1	0.4
Hernando	2	0.9
Highlands	2	0.9
Hillsborough	19	8.4
Indian River	2	0.9
Jackson	1	0.4
Lake	2	0.9
Lee	5	2.2
Levy	2	0.9
Manatee	3	1.3
Marion	2	0.9
Monroe	2	0.9
Nassau	1	0.4
Okaloosa	2	0.9
Okeechobee	2	0.9
Orange	13	5.8
Osceola	1	0.4
Palm Beach	13	5.8
Pasco	3	1.3
Pinellas	13	5.8
Polk	9	4.0
Putnam	1	0.4
Santa Rosa	2	0.9
Sarasota	7	3.1
Seminole	4	1.8
St. Johns	2	0.9
St. Lucie	8	3.6
Sumter	1	0.4
Taylor	1	0.4
Volusia	8	3.6
Walton	1	0.4

Return to Top

TABLE 9 - TABLE 10 The number of hospitalizations reported weekly since July 26, 2009 ranges from 3 (week 1, 2010) to 54 (week 40, 2009), an average of 19.8 hospitalizations reported per week. ^As of week 41, underlying conditions include pregnancy unless otherwise noted.

*Please note that under the current surveillance strategy, case reporting is only required for confirmed or probable cases of novel H1N1 influenza in a) hospitalized pregnant women, b) deaths, and c) hospitalized patients with life-threatening illness. *Note: there is some variability in communities as to how "life-threatening illness" is interpreted.*

TABLE 8: Cumulative hospitalizations* in all Reported Novel H1N1 Influenza Cases by County as of 12:00 Noon April 27, 2010

County	Number	Percent	ICU (percent of hospitalized)
Total	**1318**	**100.0**	**553 (42.0)**
Alachua	16	1.2	13 (81.3)
Baker	2	0.2	2 (100.0)
Bay	3	0.2	0 (0.0)
Bradford	1	0.1	0 (0.0)
Brevard	15	1.1	9 (60.0)
Broward	92	7.0	36 (39.1)
Calhoun	2	0.2	0 (0.0)
Charlotte	6	0.5	2 (33.3)
Citrus	19	1.4	5 (26.3)
Clay	7	0.5	2 (28.6)
Collier	4	0.3	3 (75.0)
Columbia	3	0.2	0 (0.0)
Dade	485	36.8	150 (30.9)
Duval	67	5.1	39 (58.2)
Escambia	7	0.5	1 (14.3)
Flagler	1	0.1	0 (0.0)
Gadsden	4	0.3	1 (25.0)
Hardee	2	0.2	0 (0.0)
Hendry	3	0.2	0 (0.0)
Hernando	7	0.5	3 (42.9)
Highlands	10	0.8	2 (20.0)
Hillsborough	53	4.0	24 (45.3)
Indian River	8	0.6	2 (25.0)
Jackson	2	0.2	1 (50.0)
Lake	8	0.6	3 (37.5)
Lee	31	2.4	21 (67.7)
Levy	5	0.4	0 (0.0)
Manatee	15	1.1	6 (40.0)
Marion	13	1.0	5 (38.5)
Martin	7	0.5	4 (57.1)
Monroe	6	0.5	0 (0.0)
Nassau	6	0.5	6 (100.0)
Okaloosa	8	0.6	7 (87.5)
Okeechobee	5	0.4	0 (0.0)
Orange	114	8.6	50 (43.9)
Osceola	10	0.8	3 (30.0)
Palm Beach	95	7.2	48 (50.5)
Pasco	4	0.3	0 (0.0)
Pinellas	32	2.4	22 (68.8)
Polk	26	2.0	15 (57.7)
Putnam	5	0.4	4 (80.0)
Santa Rosa	6	0.5	2 (33.3)
Sarasota	17	1.3	11 (64.7)
Seminole	28	2.1	13 (46.4)
St. Johns	7	0.5	2 (28.6)
St. Lucie	12	0.9	8 (66.7)
Sumter	1	0.1	1 (100.0)
Taylor	3	0.2	1 (33.3)
Volusia	33	2.5	24 (72.7)
Walton	2	0.2	2 (100.0)

Note: One hospitalization reported in Sarasota county in week 15 was not indicated in the week 15 Florida Flu Review, which brings the total number of week 15 hospitalizations to 4. All tables are now correct.

TABLE 9: Recent Hospitalizations* in Novel H1N1 Influenza Cases by County, 12:00 Noon April 20 to 12:00 Noon April 27, 2010

County	Number	Percent	ICU (percent of hospitalized)
Total	**3**	**100.0**	**2 (66.7)**
Broward	1	33.3	1 (100.0)
Palm Beach	1	33.3	1 (100.0)
Volusia	1	33.3	0 (0.0)

TABLE 10: Cumulative hospitalizations* in all Reported Novel H1N1 Influenza Cases by Age as of 12:00 Noon April 27, 2010

Age group	Number	Percent	Hospitalizations per million population	NO underlying condition^	ICU
Total	**1318**	**100.0**	**69.0**	**194 (14.7)**	**553 (42.0)**
0-4	167	12.7	147.7	41 (24.6)	56 (33.5)
5-24	355	26.9	74.0	43 (12.1)	110 (31.0)
25-49	448	34.0	72.3	74 (16.5)	204 (45.5)
50-64	268	20.3	73.1	29 (10.8)	146 (54.5)
65+	80	6.1	24.1	7 (8.8)	37 (46.3)

TABLE 11: Cumulative hospitalizations* in all Pregnant Women with Novel H1N1 Influenza Cases by Status of Underlying Medical Conditions Other than Pregnancy as of 12:00 Noon April 27, 2010

Underlying medical condition status	Number	Percent	ICU	Death
Total	**172**	**100.0**	**42 24.4**	**9 (5.2)**
No underlying medical condition	96	55.8	21 21.9	3 (3.1)
Underlying medical condition	60	34.9	19 31.7	6 (10.0)
Unknown	16	9.3	2 12.5	0 (0.0)

Figure 39: Cumulative Laboratory-Confirmed Novel H1N1 Hospitalization Rate and Cumulative hospitalizations in Reported Novel H1N1 Cases by Age Group as of 12:00 p.m. April 27, 2010

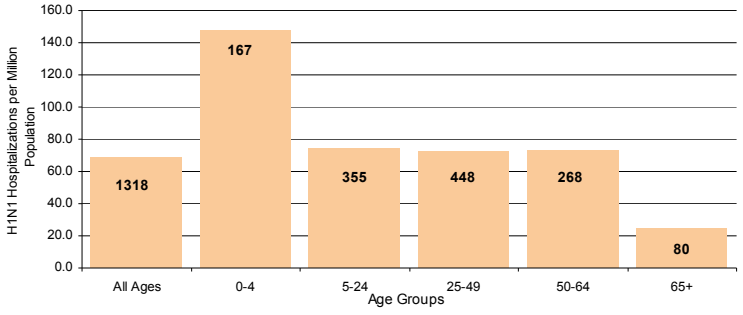


FIGURE 39 shows cumulative rates of H1N1 hospitalization by age group, per 1,000,000 population, and cumulative hospitalizations in each age group.

Return to Top

Reports of Influenza or Influenza-like Illness (ILI) Outbreaks

433 confirmed or suspect outbreaks of novel H1N1 influenza or ILI have been reported as of April 26, 2010
Schools have been the most heavily impacted setting with 257 (59.4%) of the 433 outbreaks. Summer camps accounted for 50 (11.5%) of the outbreaks, daycares accounted for 27 (6.2%), and correctional facilities accounted for 26 (56.0%).

No confirmed or suspect outbreaks of novel influenza A (H1N1) or ILI were reported during week 16 (ending April 24, 2010)
There were no outbreaks reported during the previous week, week 15, and at least one outbreak was reported into EpiCom during weeks 8-11. Before week 8, Florida saw a decline in the total number of new outbreaks reported per week, from approximately 30 new outbreaks per week down to no outbreaks reported during weeks 48, 49, and 52 through week 7.

County health department epidemiologists should report influenza and ILI outbreaks via the Influenza Forum in EpiCom:
https://fdens.com/vabtrs/GateStart.aspx

TABLE 12: Cumulative outbreaks Reported via EpiCom by County as of Week 16 (Ending April 24, 2010)

County	Number	Percent
Total	**433**	**100.0%**
Alachua	2	0.5%
Baker	2	0.5%
Bradford	1	0.2%
Brevard	1	0.2%
Clay	4	0.9%
Collier	28	6.5%
Columbia	2	0.5%
Duval	11	2.5%
Escambia	42	9.7%
Glades	1	0.2%
Hamilton	1	0.2%
Hendry	3	0.7%
Hernando	1	0.2%
Hillsborough	56	12.9%
Holmes	1	0.2%
Indian River	3	0.7%
Jackson	2	0.5%
Lake	64	14.8%
Madison	1	0.2%
Marion	4	0.9%
Martin	1	0.2%
Miami-Dade	24	5.5%
Nassau	21	4.8%
Okaloosa	5	1.2%
Orange	43	9.9%
Osceola	28	6.5%
Palm Beach	49	11.3%
Pasco	7	1.6%
Pinellas	3	0.7%
Polk	2	0.5%
Putnam	1	0.2%
Sarasota	7	1.6%
Seminole	5	1.2%
St. Johns	5	1.2%
St Lucie	1	0.2%
Volusia	1	0.2%

TABLE 13: Cumulative outbreaks Reported via EpiCom by Setting as of Week 16 (Ending April 24, 2010)

Setting	Number	Percent
Total	**433**	**100.0%**
Athletics	3	0.7%
Church	1	0.2%
College/University	3	0.7%
Community Center	5	1.2%
Correctional Facility	26	6.0%
Day Care	27	6.2%
Group/Foster Home	2	0.5%
Healthcare Facility	12	2.8%
Home	4	0.9%
Home/School	1	0.2%
Long-term Care Facility	4	0.9%
Military Facility	3	0.7%
Out of State Trip	5	1.2%
School	257	59.4%
Special Needs Facility	14	3.2%
Summer Camp	50	11.5%
Work	13	3.0%
Work/Home	3	0.7%

TABLE 14: Recent Outbreaks Reported via EpiCom by Setting during Week 16 (Ending April 24, 2010)

Setting	Number	Percent
Total	**0**	**-**

Return to Top