



Weeks 21-23: May 23-June 12, 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), National Respiratory and Enteric Virus Surveillance System (NREVSS), EpiCom, and Florida ILINet in order to track influenza activity in the state.

National:

- National influenza reporting to CDC has ended for the summer months. As of week 20, the last week statewide influenza activity codes were reported, all states reported either sporadic or no influenza activity.

State:

- Influenza-like illness (ILI) activity is low in many of our monitoring systems. Influenza activity levels seen in ESSENCE and ILINet are similar to previous non-pandemic years at this time.
- In weeks 20-23, no specimens tested by the Bureau of Laboratories (BOL) tested positive for influenza. There were no influenza hospitalizations, deaths, or outbreaks reported.
- No other pathogens are currently causing significant levels of influenza-like illness in Florida.

June 17, 2010

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

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TABLE 1: Summary of Florida Influenza-Like Illness (ILI) Activity for Week 23

Measure	Difference from previous week	Current week 23	Previous week 22	Page of Report
Percent of visits to ILINet providers for ILI	▼ 0.4	0.6%	1.0%	2
Percent of emergency department visits (from ESSENCE) due to ILI	▼ 0.2	1.3%	1.5%	3
Percent of hospital admissions (from ESSENCE) due to ILI	No Change	0.2%	0.2%	3
Percent of laboratory specimens that were positive for influenza	No Change	0.0%	0.0%	2
Percent of positive influenza specimens that were identified as 2009 H1N1	No Change	0.0%	0.0%	2
Number of recent deaths in confirmed 2009 H1N1 influenza cases	No Change	0	0	6
Number of recent hospitalizations in confirmed 2009 H1N1 influenza cases	No Change	0	0	6
Number of ILI outbreaks reported in Epi Com	No Change	0	0	6

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FIGURE 1: Percent of Specimens Tested by Florida Bureau of Laboratories Positive for Influenza and Percent Visits for ILI to ILINet Sites, 2008-2009 (Weeks 40-39), and 2009-2010 (Week 40-23)

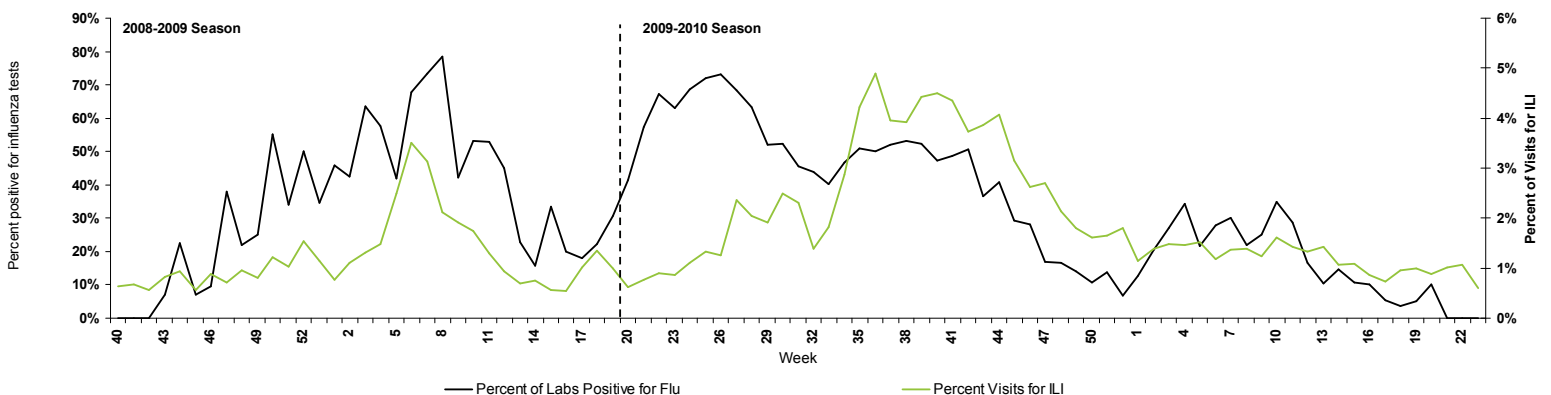
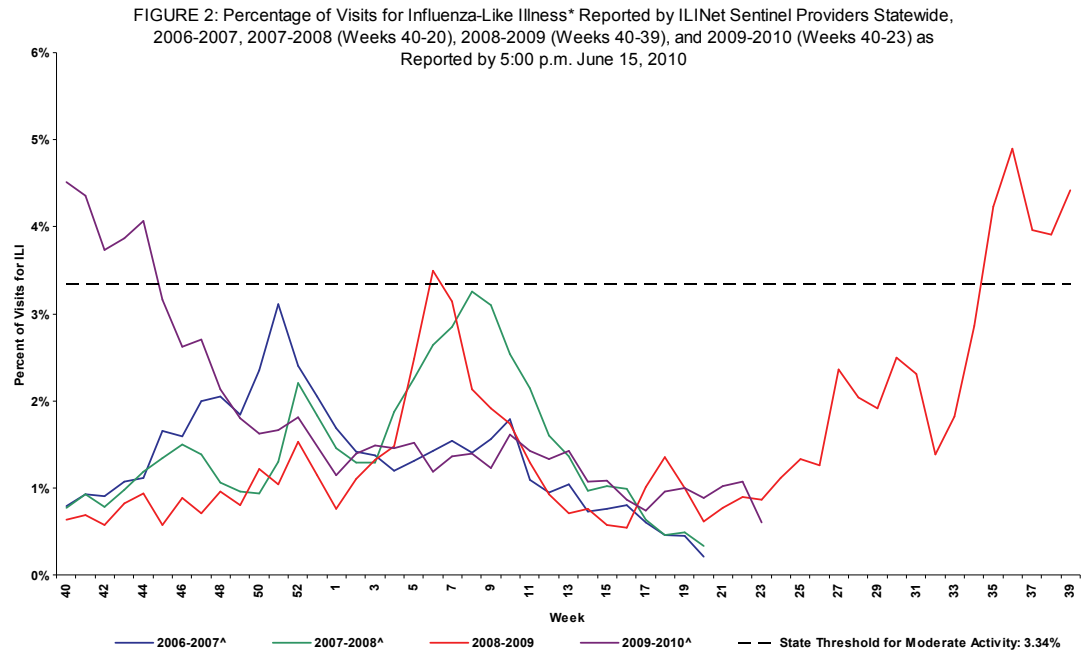


FIGURE 2 shows the percentage of visits for influenza-like illness* reported by ILINet Sentinel Providers statewide.

Percentage of visits for ILINet Sentinel providers continue to be at low levels.

Note: Small numbers of sentinels reporting year-round may make ILI estimates inaccurate.



*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.

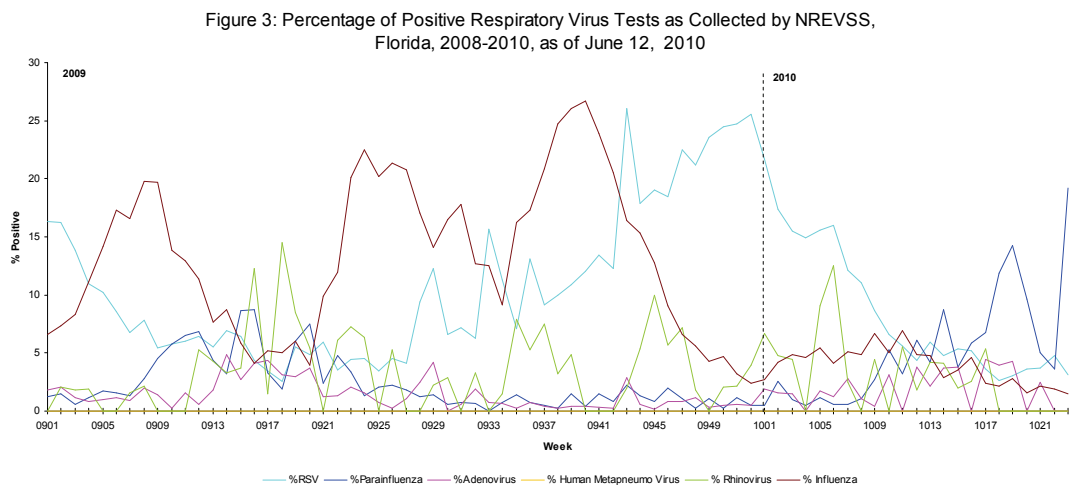
NREVSS Respiratory Virus Surveillance

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 45 participating laboratory facilities.

FIGURE 3 shows the percentage of positive tests for multiple respiratory viruses reported by NREVSS-participating laboratories in Florida

The six respiratory viruses summarized in Figure 3 are:

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



Note: In April, May, and June, the percentage of positive parainfluenza tests has increased dramatically. Concurrently, the number of parainfluenza tests performed each week declined, resulting in an increase in percent positive. During peak activity in 2009, there were 400-800 tests performed each week, compared with between 25-100 each week in recent months. The majority of parainfluenza viruses are type 3.

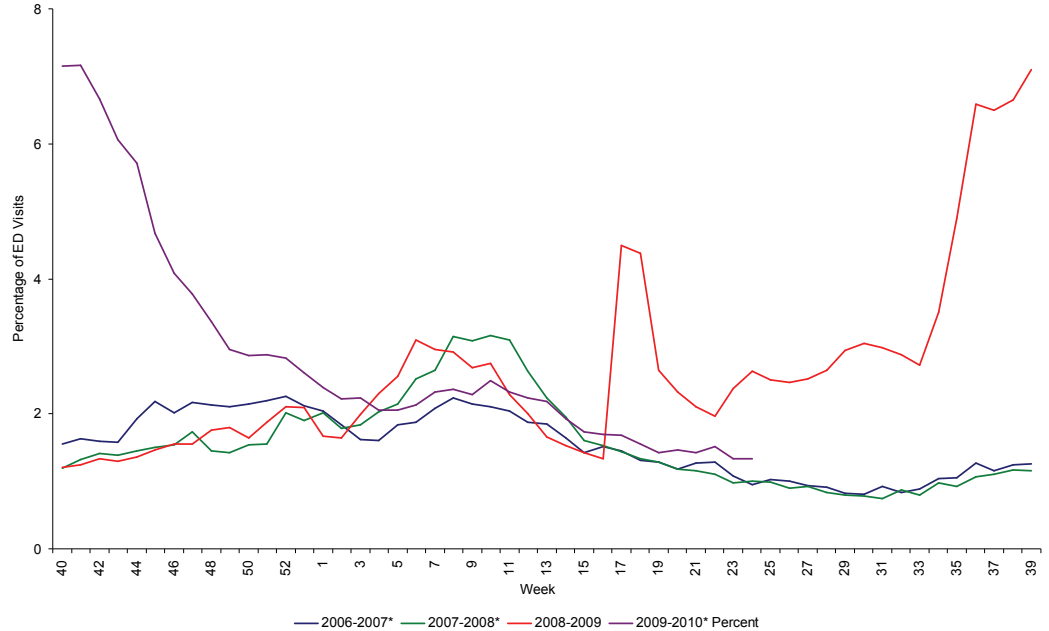
Florida uses the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) for syndromic surveillance, which currently collects data daily from 135 hospital emergency departments (ED). These data are processed into 11 different syndrome categories based on the patient's 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 4 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.

Percentage of ILI visits to Florida ED are slightly higher than previous summers, but much lower than during the 2009 H1N1 pandemic.

FIGURE 4: Influenza-like Illness Visits (by Chief Complaint) to Emergency Departments (ED) as a Percentage of All ED Visits, Florida ESSENCE Participating Hospitals (N=138), Week 40, 2006 through June 16, 2010

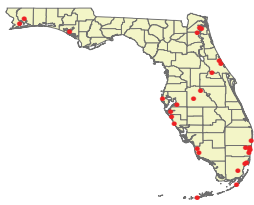


*There is no week 53 for the 2006-2007, 2007-2008, or 2009-2010 seasons; the week 53 data point for those seasons is an average of weeks 52 and 1.

Thirty facilities participating in ESSENCE have been able to provide historical admissions data and are included here. These data are based on the patient's chief complaint when presenting to the emergency department and may not reflect the actual diagnosis.

FIGURE 5 shows hospital admissions due to ILI as a percentage of all hospital admissions.

Hospitals Reporting Admissions to ESSENCE



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 are less variable and shows a distinct increase starting around week 32.

Overall, the percentage of admissions due to ILI is very low.

FIGURE 5: 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 23, 2010

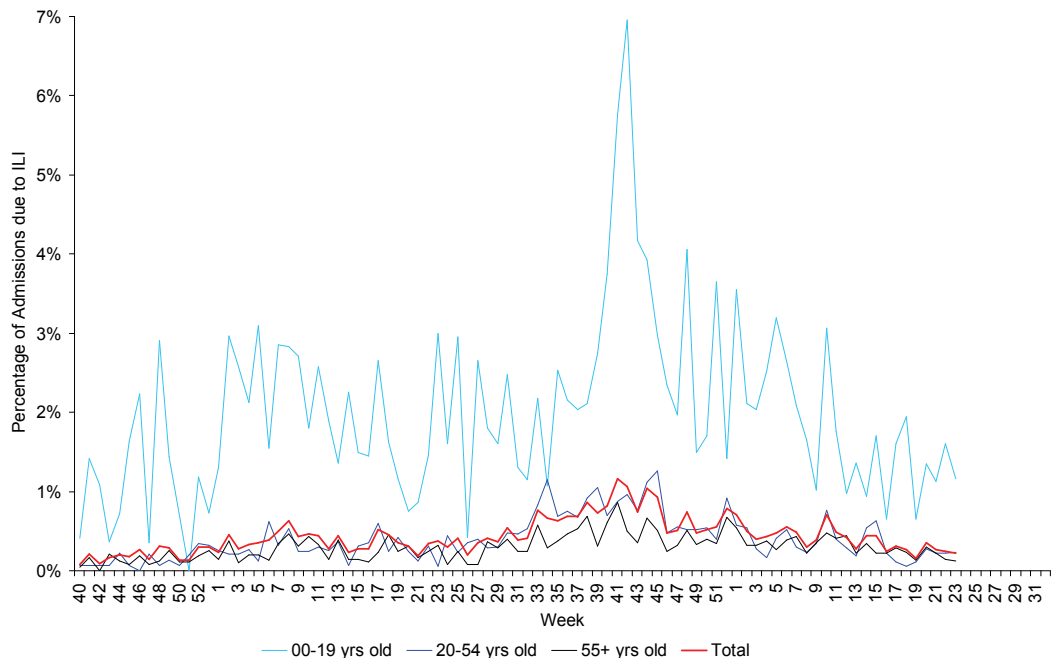


FIGURE 6- FIGURE 12 describe emergency department chief complaint data from ESSENCE by Domestic Security Task Force Region

All regions' percentage of ILI among emergency department (ED) visits are near levels seen in non-pandemic years at this time.

Map 1: Hospitals Reporting Emergency Department (ED) Data to Florida ESSENCE, June 16, 2010 (N=138)

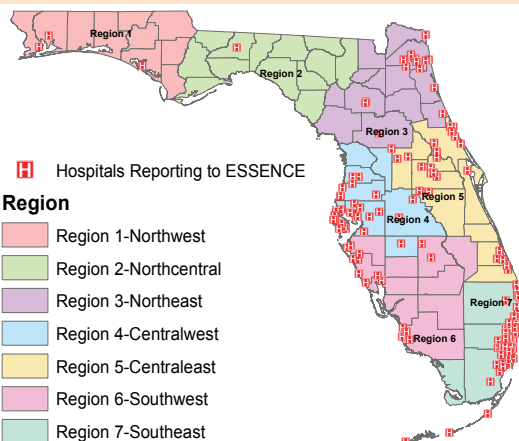


FIGURE 6: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 1 ESSENCE Participating Hospitals (N=3), Week 40, 2007 through June 16, 2010

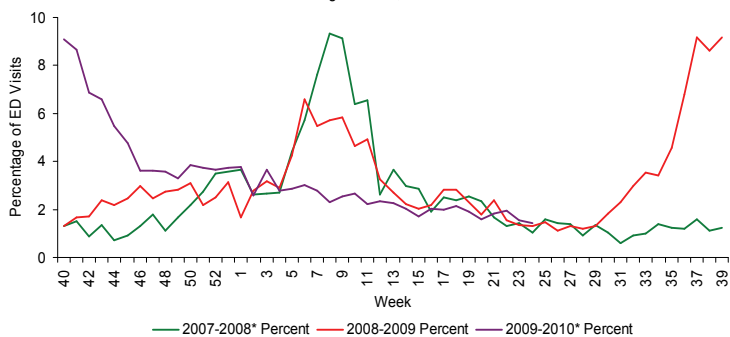


FIGURE 7: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 2 ESSENCE Participating Hospitals (N=1), Week 1, 2009 through June 16, 2010

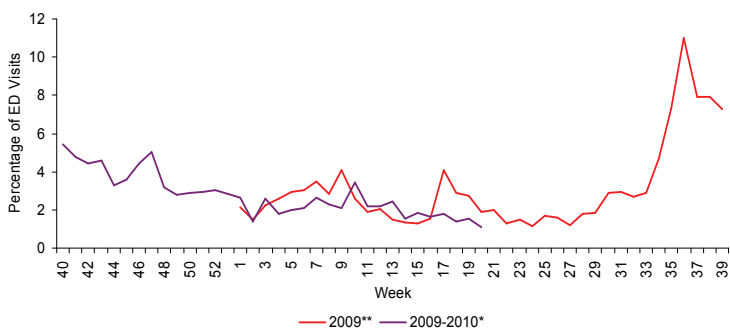


FIGURE 8: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 3 ESSENCE Participating Hospitals (N=14), Week 40, 2007 through June 16, 2010

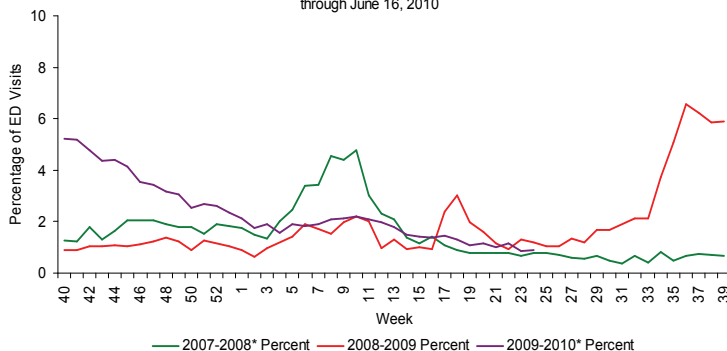


FIGURE 9: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 4 ESSENCE Participating Hospitals (N=31), Week 40, 2006 through June 16, 2010

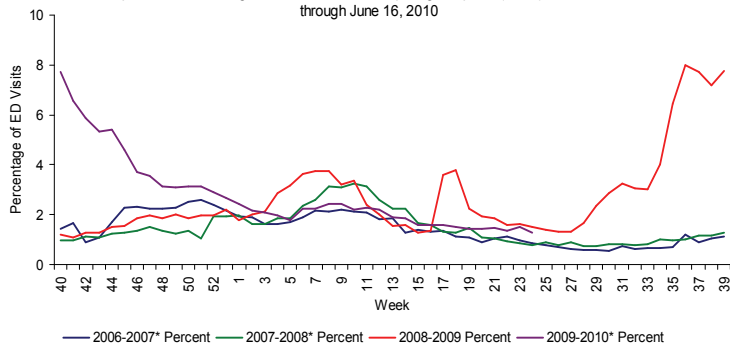


FIGURE 10: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 5 ESSENCE Participating Hospitals (N=26), Week 40, 2007 through June 16, 2010

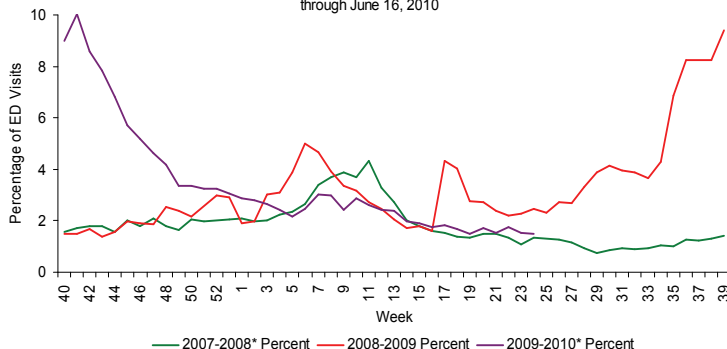


FIGURE 11: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 6 ESSENCE Participating Hospitals (N=15), Week 40, 2007 through June 16, 2010

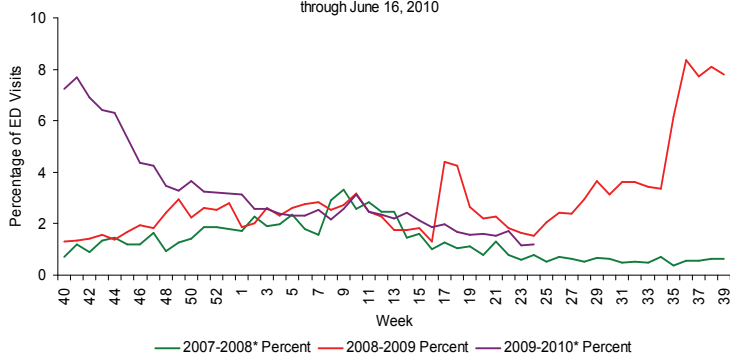


FIGURE 12: Percentage of Influenza-Like Illness from Emergency Department (ED) Chief Complaints, RDSTF Region 7 ESSENCE Participating Hospitals (N=48), Week 40, 2006 through June 16, 2010

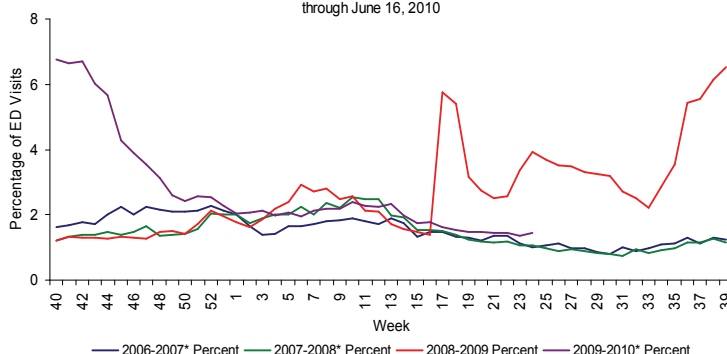


Table 2 shows the number of specimens tested by the Bureau of Laboratories (BOL), how many are influenza positive, and how many are H1N1 or other influenza subtypes.

Table 2: Bureau of Laboratories Viral Surveillance for Weeks 21-23 by Lab Event Date* as reported by 12:00 p.m. June 16, 2010

	Current Week 23	Previous Week 22	Previous Week 21
Total Specimens Tested	21	18	24
Influenza Positive Specimens (% of total)	0 (0.0%)	0 (0.0%)	0 (0.0%)
H1N1 Positive Specimens (% of influenza positives)	-	-	-

*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

Florida Pneumonia and Influenza Mortality Surveillance

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

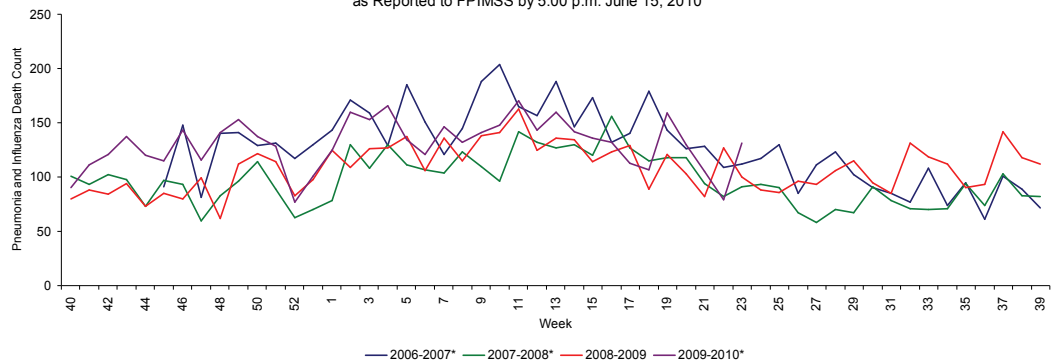
For week 23 (ending April 24, 2010) there were:

- **131 deaths reported**
- **Upper bound of 95% confidence interval for prediction: 148 deaths**
- **NO excess deaths**

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

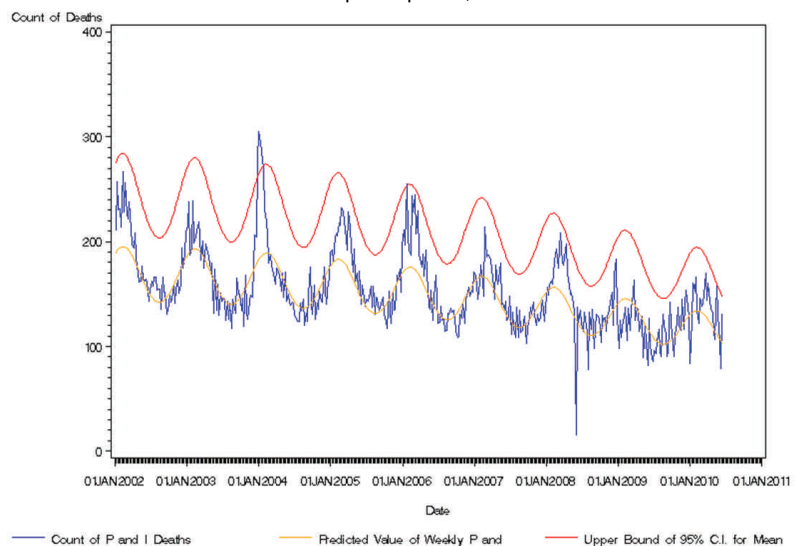
FIGURE 14 shows the reported count of pneumonia and influenza deaths for 24 Florida counties, the number of deaths predicted using the Serfling Model, and the upper bound of the 95% confidence interval for this prediction

FIGURE 13: 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 40-23) as Reported to FPIMSS by 5:00 p.m. June 15, 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 14: 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



H1N1 Hospitalization* and Death** Reports

- **No** hospitalizations in novel H1N1 cases were reported in weeks 21-23 (May 23-June 12, 2010). There are a total of 1324 hospitalizations in reported novel H1N1 cases since case reporting began.
- **No** deaths in persons with novel H1N1 were reported in weeks 21-33. There are a total of 230 deaths reported in persons with novel H1N1 since case reporting began.

***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.

Notifiable Disease Reports: Influenza-Associated Pediatric Mortality

Influenza-Associated Pediatric Mortality***

- **No** influenza-associated death among those <18 years of age was reported in weeks 21-23, 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).

*****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/diss/nndss/casedef/Influenza-Associated_current.htm

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

Influenza or ILI Outbreaks

- **No** confirmed or suspect novel H1N1 or ILI outbreaks been reported in weeks 21-23.
- 433 confirmed or suspect outbreaks of novel H1N1 influenza or ILI have been reported as of June 15, 2010.

County health department epidemiologists should report influenza and ILI outbreaks via the Influenza Forum in EpiCom:

<https://fdens.com/vabtrs/GateStart.aspx>