

# Illinois Department of Public Health Influenza Surveillance Final Report 2007 – 2008 Season



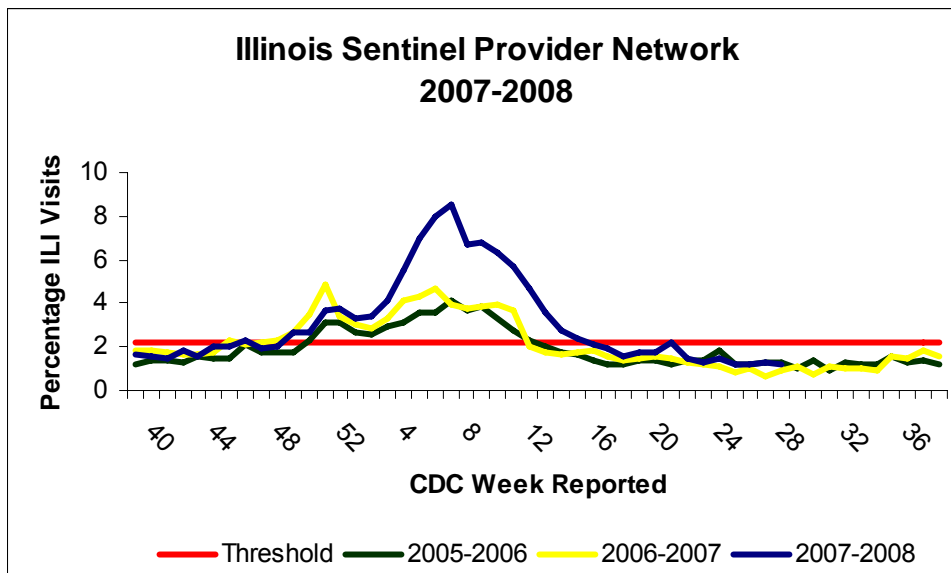
## Program Objectives

The primary objective of influenza surveillance in Illinois is: to assess the morbidity and mortality of influenza while identifying at risk populations, identify and type the circulating strains during flu season, rapidly detect outbreaks and implement disease control measures, and to detect unusual or novel influenza strains.

## Summary

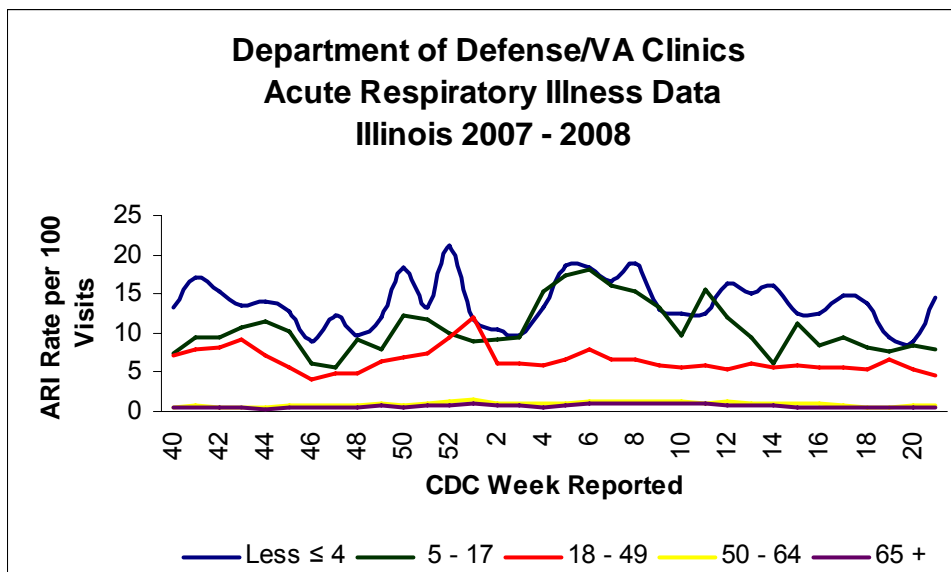
The 2007 -2008 Influenza season was considered more severe compared to previous seasons in Illinois. Vaccine coverage and influenza resistant strains contributed to the increase of seasonal influenza morbidity in Illinois. A recent study reported this year's vaccine's efficacy rate was 44%<sup>1</sup>.

Although influenza is not reportable to the Illinois Department of Public Health (IDPH) unless a novel strain is identified, hospitals, health care providers, schools, and local health departments voluntarily report to IDPH. Data is passively reported using a web based reporting system. Laboratory surveillance involves monitoring the results of laboratory cultured specimens submitted to the state laboratory in Chicago for testing. The Influenza Report is created by Illinois Department of Public Health, Division of Infectious Diseases, Immunization Section. Questions can be directed to Sharon Anderson Renier, MPH at 217-785-1455 or by e-mail at [dph.influenza@illinois.gov](mailto:dph.influenza@illinois.gov).



## Sentinel Provider Surveillance

The number of visits to Illinois sentinel providers exceeded the Illinois baseline of 2.2% from December 15<sup>th</sup> – April 26<sup>th</sup>. The number of visits for influenza like illness peaked at 8.53% during the week ending February 23, 2008. Children less than four years old were disproportionately affected by influenza when compared to the other combined age groups.



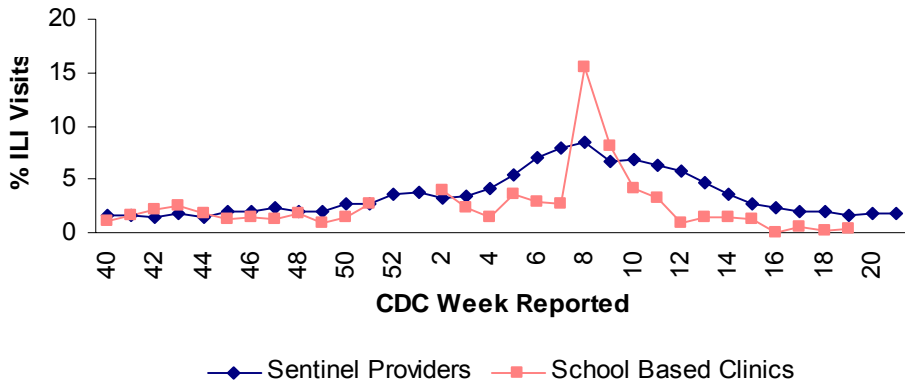
## Department of Defense/VA Outpatient Clinics - Illinois

Weekly visits to VA or Department of Defense outpatient clinics for acute respiratory illnesses exceed the national baseline 3.2 per 100 visits for all ages less than 50 years old. Children less than four years old were most affected this season. The rate per visit in this age group remained above baseline the entire season.

<sup>1</sup> CDC. Interim within-season estimate of the effectiveness of trivalent inactivated vaccine—Marshfield, Wisconsin, 2007-08 season. MMWR 2008;57:393-8.

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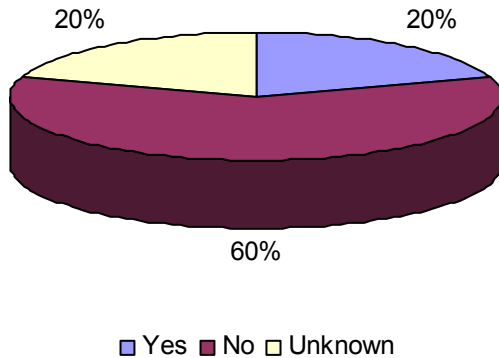
**School Based Clinics and Sentinel Provider ILI Visits 2007 - 2008**



## School Based Clinics/School Absenteeism Surveillance

Influenza like illness was tracked by health care providers and school nurses this season and the results were found to correlate ( $r=.65$ ). The percentage of ILI in both groups peaked during CDC week 8, (week ending February 23, 2008). However, Influenza surveillance in schools did not yield similar results. Absences only exceeded the mean threshold twice, the first week in December and the second week in February.

**Pediatric Influenza Death - Influenza Vaccination Status (N=5)**

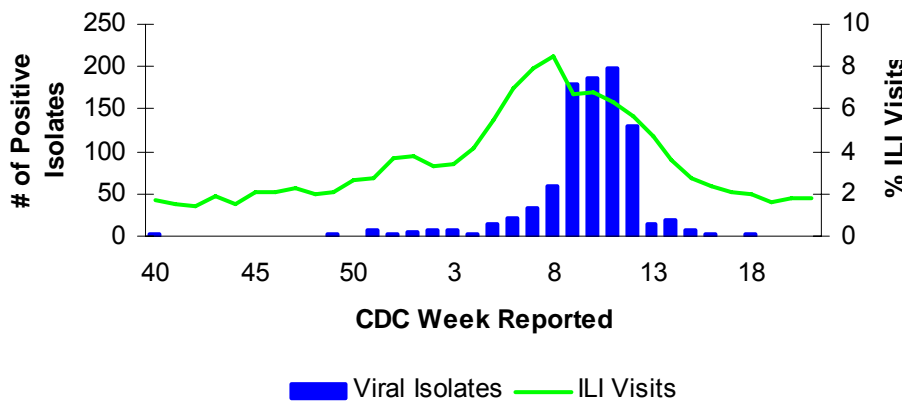


## Pediatric Influenza Death Surveillance

This season, five pediatric influenza deaths were reported to IDPH. Four cases were male and one was female. Ages ranged from less than six months to 13 years of age with a median age of one year old. Influenza A infection contributed to three deaths and Influenza B two cases. All cases were diagnosed with other co-morbidities.

Pediatric influenza deaths are reportable by law to the IDPH Immunization Section within seven days.

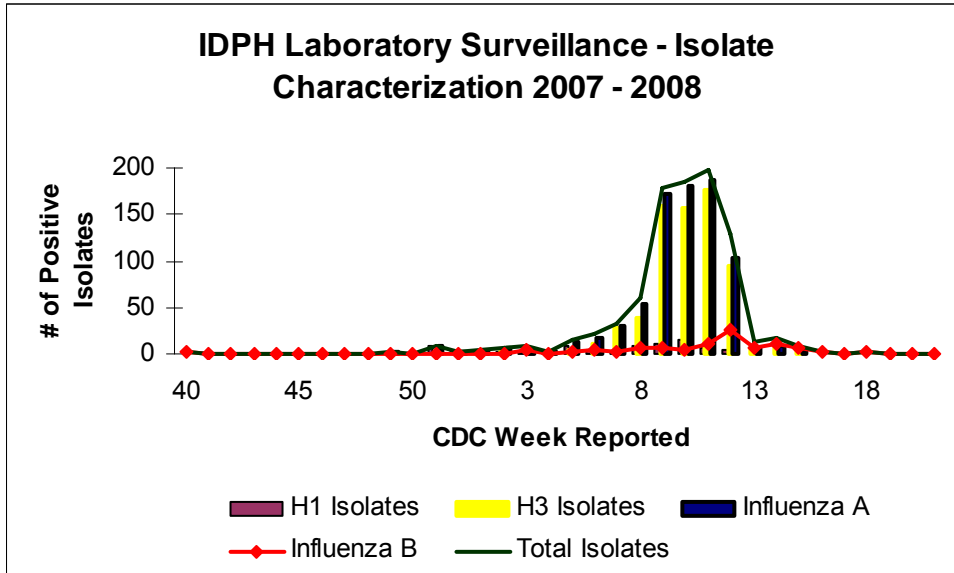
**Laboratory Confirmed Influenza Cases - Sentinel Provider Visits 2007 - 2008**



## Laboratory Surveillance

There was an increase in laboratory specimens submitted to the state lab for testing this season. Vaccine ineffectiveness and antiviral resistance contributed to a 3.8 fold increase in testing compared to last season. The increase in cases was related ( $r=.67$ ) to Sentinel Provider ILI visits.

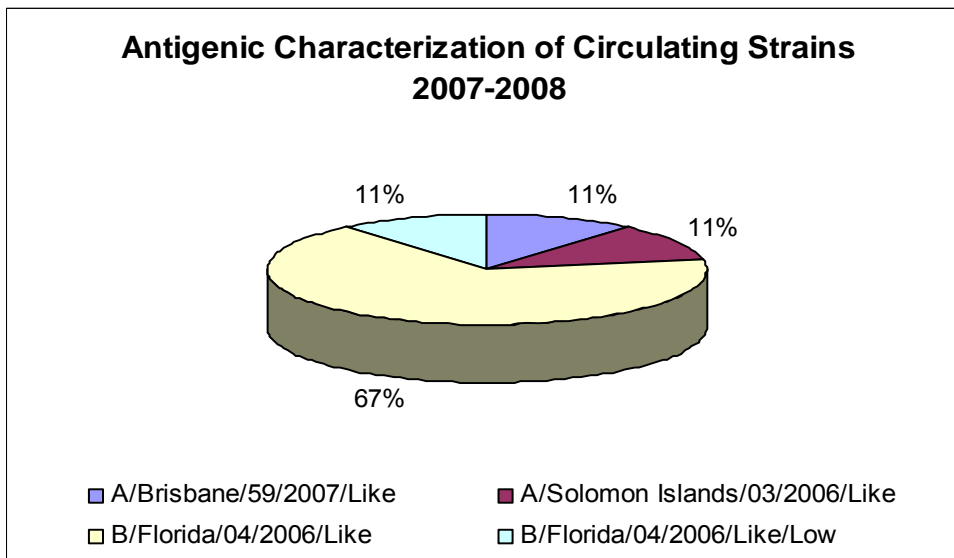
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Influenza A (H1N1) predominated earlier this season, however A (H3N1) became more prevalent in January and Influenza B increased in circulation towards the end of the season.

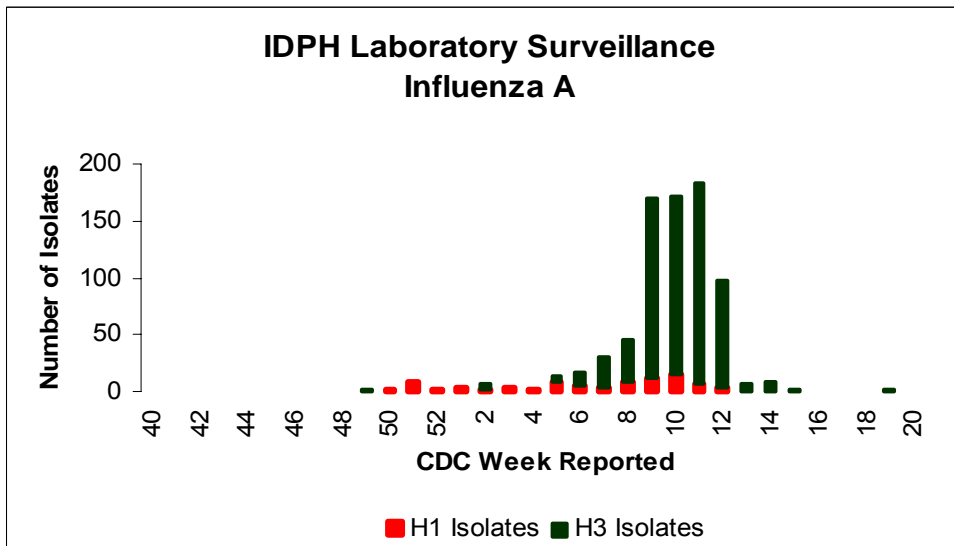
### Antigenic Characterization

Virus isolates were sent from the state laboratory to CDC in Atlanta for further sub typing and characterization. Circulating strains identified were Influenza A/Brisbane/59/2007Like (H1N1), and A/Solomon Islands/03/Like (H1N1). The Solomon island strain was not included in this season's influenza vaccine.



Influenza B circulating strains identified in Illinois were identified as B/Florida/04/2006 Like. This strain was also not included in this year's vaccine.

Approximately 5% of the Influenza A (H1N1) isolates identified from laboratory testing were resistant to oseltamivir (Tamiflu™). The majority of these cases were linked to a facility related outbreak located in the metropolitan Chicago area.



### 2008-2009 Vaccine Recommendation

The Advisory Committee on Immunization Practices (ACIP) recommends all children aged 6 months to 18 years be vaccinated for influenza.

Next season's trivalent influenza vaccine will include the following virus strains: A/Brisbane/59/2007 (H1N1)-like, A/Brisbane/10/2007 (H3N2)-like, and B/Florida/4/2006-like antigen.