



# INFLUENZA WATCH LOS ANGELES COUNTY

**Los Angeles County (LAC)** The total number of positive flu tests as well as the percent of flu tests that tested positive decreased in week 43 (Figure 1). Four severe pediatric flu cases occurred during week 43. Sixty-two new ILI (influenza-like illness) outbreaks (39 in elementary schools, 17 in other schools, and 6 in skilled nursing facilities) were reported during week 43. The percent of emergency department visits due to ILI seems to be leveling off but still is substantially higher relative to the same time in previous years (Figure 2), especially in those 5-14 years old (Figure 3).

**Table 1: Surveillance System Overview**

SURVEILLANCE SYSTEM*	Week 43	2009-2010 YTD
Percent Positive Influenza Tests <sup>±</sup>	23.4	19.4
Percent Positive RSV Tests <sup>‡</sup>	0.6	0.3
Percent Flu A / Flu B <sup>‡</sup>	100 / 0	99.7 / 0.3
Severe Pediatric Influenza Cases <sup>†</sup>	4 (0)	43 (5)
Respiratory Outbreaks	62	241
Influenza Deaths	1	25

\*See <http://lapublichealth.org/acd/flu.htm> for a description of surveillance methods.

± Sentinel sites (9 participating facilities in week 43)

‡ Sentinel sites (4 participating facilities in week 43)

†The number of deaths is indicated by the parenthesis.

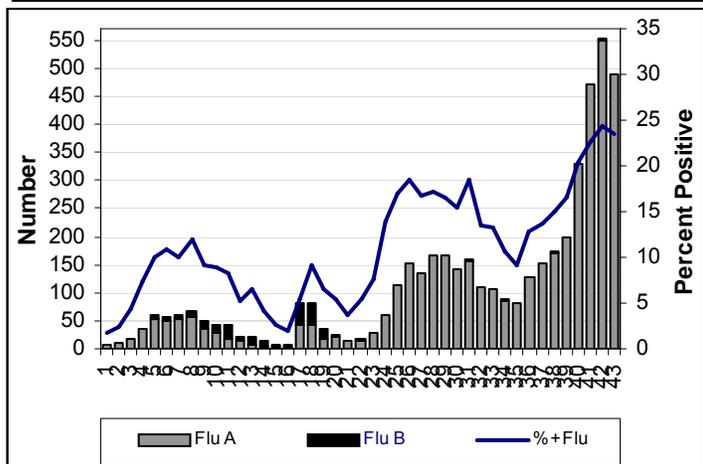
**California** During week 43 (October 25-October 31), influenza activity in California remained **widespread**.

<http://www.cdph.ca.gov/PROGRAMS/VRDL/Pages/CaliforniaInfluenzaSurveillanceProject.aspx>

**United States** Influenza activity increased in the United States during week 42 (October 18-October 24). In week 42, 48 states reported widespread activity and 2 states reported regional activity. All subtyped influenza A viruses being reported to CDC in week 42 were novel influenza A (H1N1) viruses. <http://www.cdc.gov/flu/weekly>

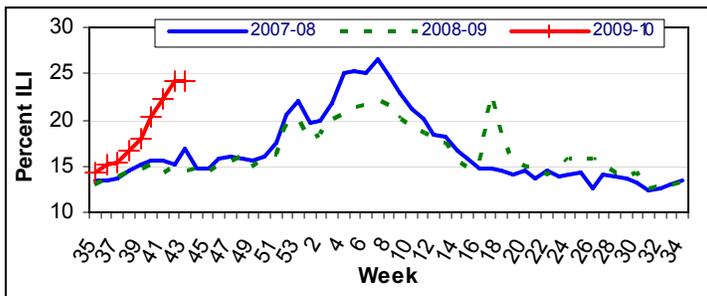
**In the News** In a study published in the *Journal of the American Medical Association (JAMA)* on Nov. 4, researchers from the California Department of Public Health describe the characteristics of the first 1088 cases of hospitalization or death due to pandemic 2009 influenza A (H1N1) in California. Of all 1088 cases, 31% were admitted to the ICU and 11% died. The overall rate of hospitalization was highest in infants. However, the case fatality proportion once hospitalized was lowest in persons under the age of 18 years and highest in persons aged 50 years or older. A total of 68% of all cases had underlying conditions previously associated with severe influenza. Of the cases aged 20 years or older with known body mass index, 58% were obese (BMI ≥30); of these obese cases, 66% had underlying conditions such as cardiac disease, chronic lung disease, immunosuppression, diabetes mellitus, and renal disease which are associated with influenza complications. (This data is fairly consistent with LA County data. See Table 2 on page 2). <http://jama.ama-assn.org/cgi/content/short/302/17/1896>

**Figure 1: Total Positive Flu and % Positive Flu by Week**

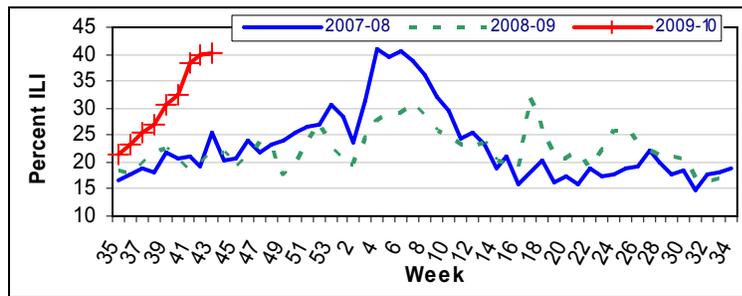


\*Influenza data represent testing completed in nine facilities.

**Figure 2: Percent of ED Visits for ILI by Week, All Ages**



**Figure 3: Percent of ED Visits for ILI by Week, 5-14 Years**





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## Analysis of Influenza Cases in Los Angeles County (LAC)

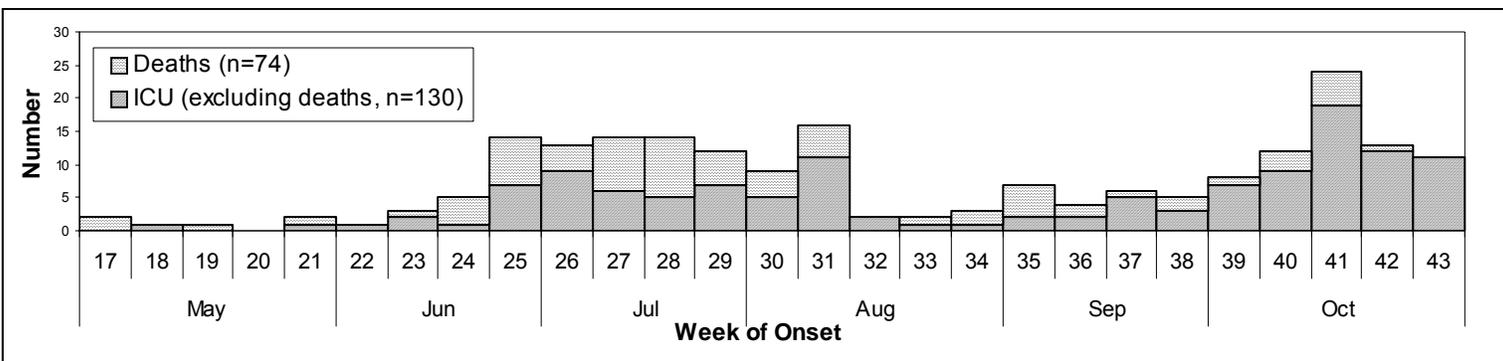
Table 2: Characteristics of LAC and CA hospitalized H1N1 cases, 4/23/09 - 8/11/09	CA (n=1088)	LAC (n=237)
Median Age (years)	27	21
Rate of hospitalization per 100,000		
< 1 yr	11.9	18.6
≥ 70 yrs	1.5	0.4
All ages	2.8	2.4
Percent of hospitalized cases that were fatal		
<18 yrs	2.3	8.1
≥ 18 yrs	14.8	26.3
All ages	10.8	21.1
Percent with positive rapid test (of those tested)		
<18 yrs	85.0	83.1
≥ 18 yrs	56.5	57.3
All ages	66.3	68.1
Percent of cases with		
Chronic lung disease	37.0	30.9
Chronic cardiac disease	15.3	15.4
Metabolic disease	20.5	20.4
Immunosuppressive conditions	18.8	10.8*
Neruomuscular disorder	10.6	14.6
Pregnancy	9.6	10.9
Obesity (cases ≥ 18 years)	52.0	53.5
Percent admitted to ICU	31.3	31.4
Percent receiving antiviral tx	79.3	82.4
Median # days from onset to hospitalization	2.0	2.0
Median # days from onset to death	12.0	16.0

Data from Los Angeles County through August 11 show a similar pattern to the data from the entire state of California as published by the California Department of Public Health in *JAMA* on Nov. 4 with some notable differences. LAC cases have a lower median age compared to CA cases. The percentage of hospitalized H1N1 cases that were fatal was higher in LAC (21.1%) than in CA as a whole (10.8%). Both LAC and CA data show that, among hospitalized cases, rapid tests may be more sensitive at detecting influenza infection in children than in adults. The percentage of cases with chronic cardiac disease, metabolic disease, pregnancy, and obesity were relatively similar in LAC and CA. However, LAC cases seem to suffer less from immunosuppressive conditions relative to CA cases. Approximately 31% of both LAC and CA cases were admitted to the ICU. About 82% of LAC cases and 79% of CA cases received antiviral treatment. For fatal cases, the median time from onset of illness to death was 16 days for LAC compared to 12 days for CA cases (Table 2). <http://jama.ama-assn.org/cgi/content/short/302/17/1896>

Since April 23, 2009 there have been 204 ICU/deaths due to confirmed pandemic influenza A type H1N1. Of these cases 74 have been deaths. The number of ICU/deaths due to H1N1 seems to have peaked during week 41 (Figure 4), and the number of hospitalizations due to any influenza seems to have leveled off during Week 42 (Figure 5).

\*Fisher's exact test yielded a p-value of < 0.05

**Figure 4: Number of Pandemic H1N1 by Week of Onset as of October 21, 2009 (Individual Case Reporting)**



**Figure 5: Number and Rate of Hospitalized Influenza (Any Influenza) Cases, Aggregate Reporting**

