

Update on 2009 H1N1 Influenza

Anne Schuchat, MD

Director, National Center for Immunization and
Respiratory Diseases
Centers for Disease Control and Prevention
Assistant Surgeon General, US Public Health Service

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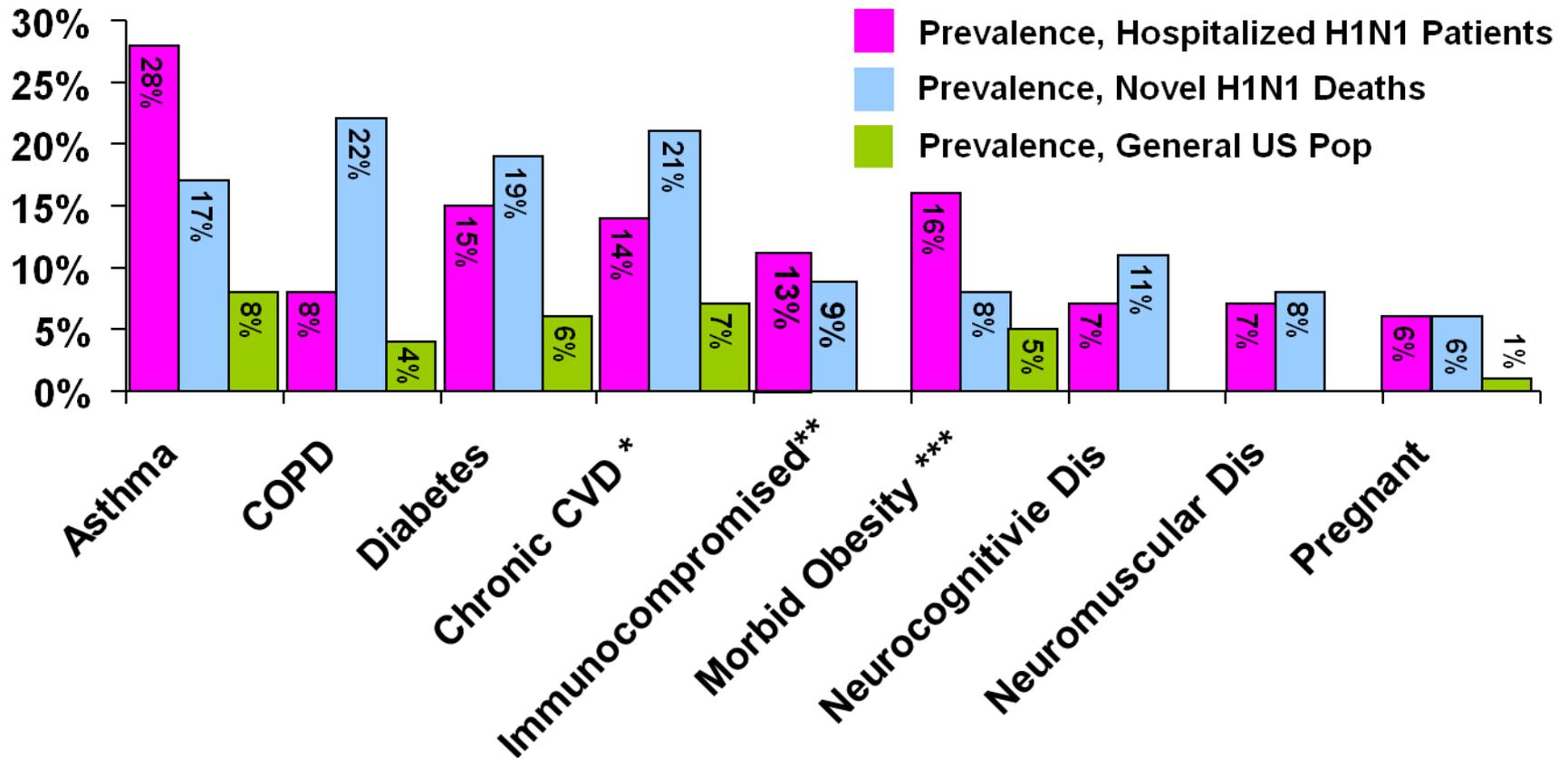


H1N1 Spring Outbreak

- Occurred very late in the flu season
- Remarkable heterogeneity across US
- Affected young people disproportionately
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- Caused widespread illness; some severe or fatal
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- Socially disruptive, especially for schools
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- Tens of thousands of health workers and others responding worldwide



Underlying Conditions



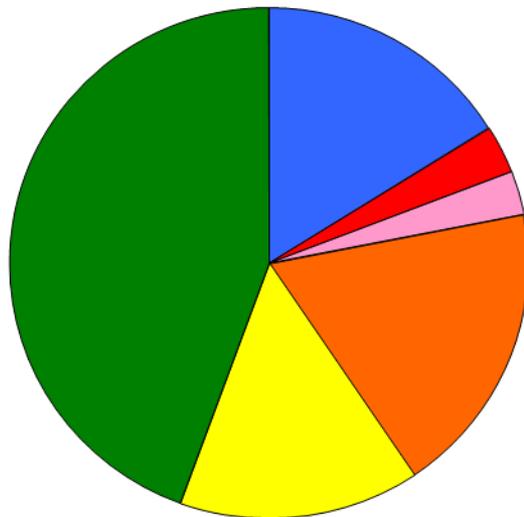
*Excludes hypertension

**No NHANES data available for comparison with US population estimates

*** Morbid obesity is defined as BMI of 40 or higher. For Hospitalized H1N1 patients, BMI calculation was performed on non-pregnant adults ≥ 20 years ($n=119$). 45% of 119 non-pregnant hospitalized adults ≥ 20 years were missing height and weight information. For Novel H1N1 Deaths, morbid obesity % was calculated for adults only. Prevalence for US non-pregnant adults is based on NHANES (JAMA. 2006;295(13):1577)

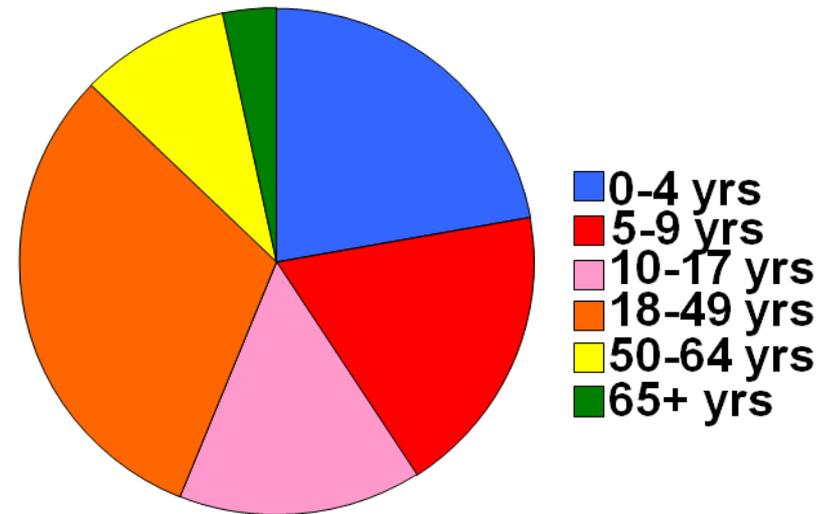
Teens and Young Adults Disproportionately Affected -- Few Cases Among Elderly

Seasonal 2007-08



N=3,930

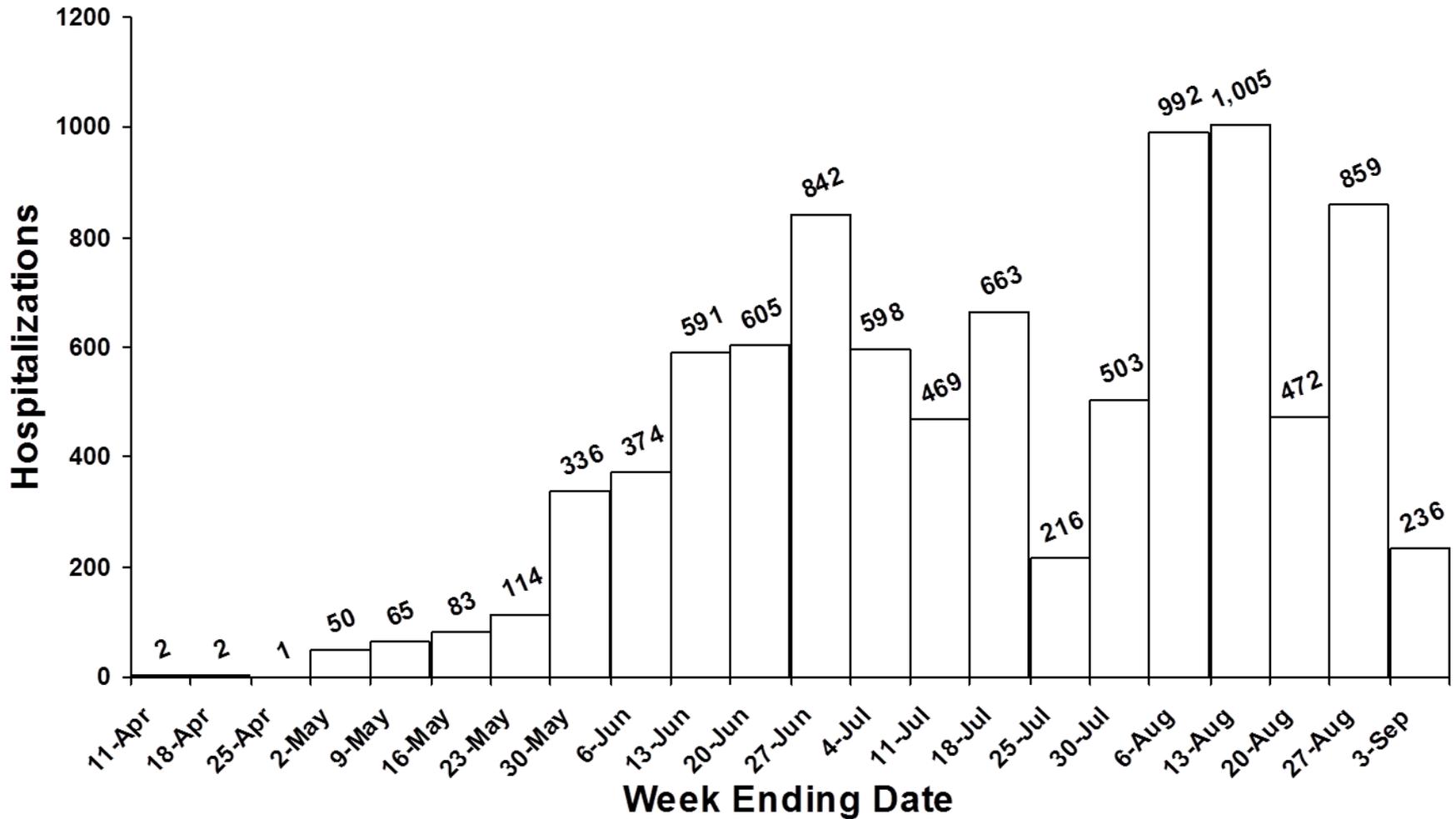
2009 H1N1 (April - Jun)



N=312

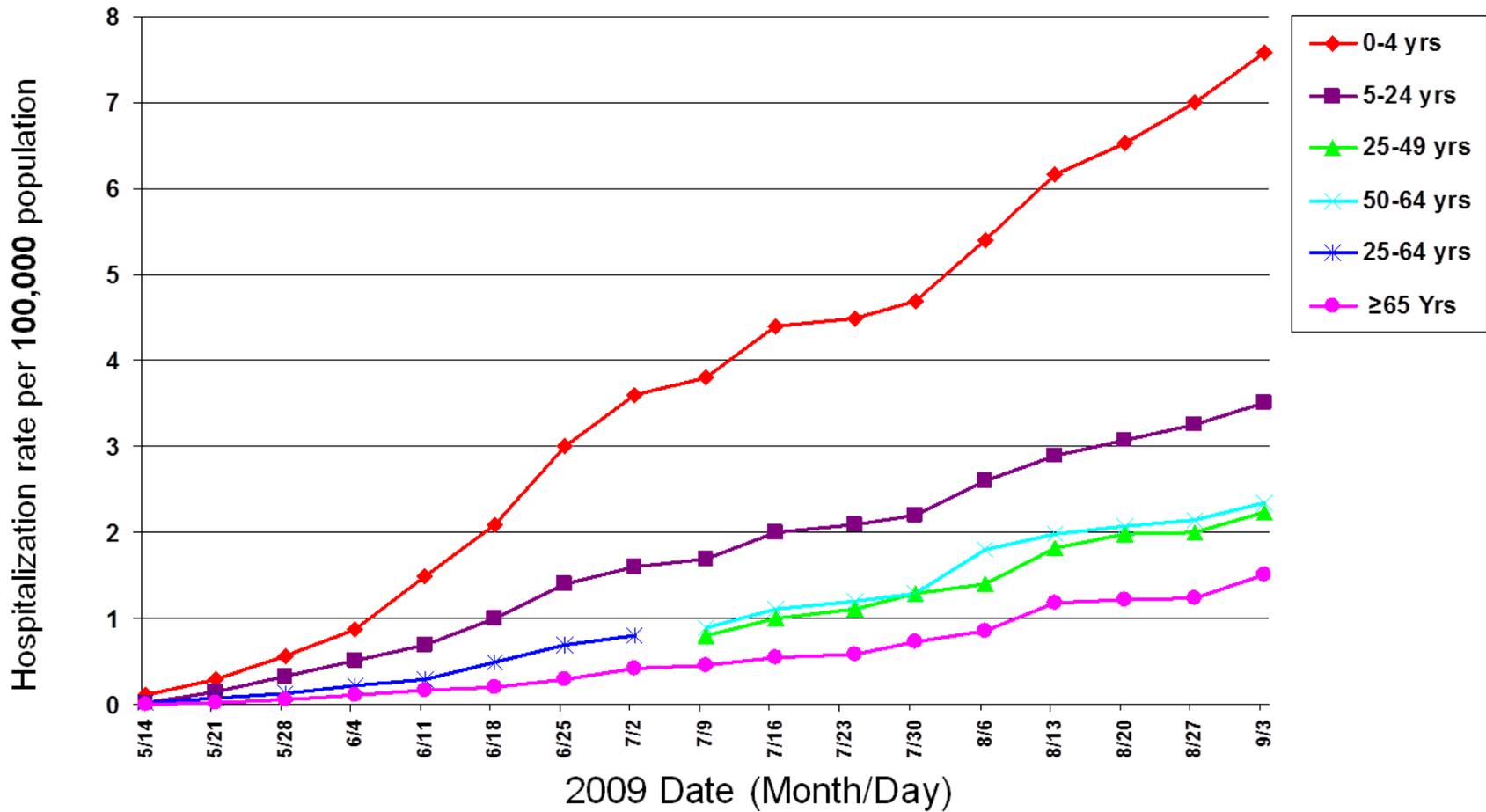
*April 12-June 30

2009-H1N1 Influenza Hospitalizations by Report Date
3 SEPT 2009 (n=9,079) (Weekly*)



*Data for week ending 25 July 2009 include reports submitted between 1:00 AM EDT 6/25/2009 and 11:00 AM

2009-H1N1 CUMULATIVE HOSPITALIZATION RATES PER 100,000 US POPULATION FROM
 STATE AGGREGATE DATA
 2009-H1N1 – MAY 14 TO SEPTEMBER 3, 2009

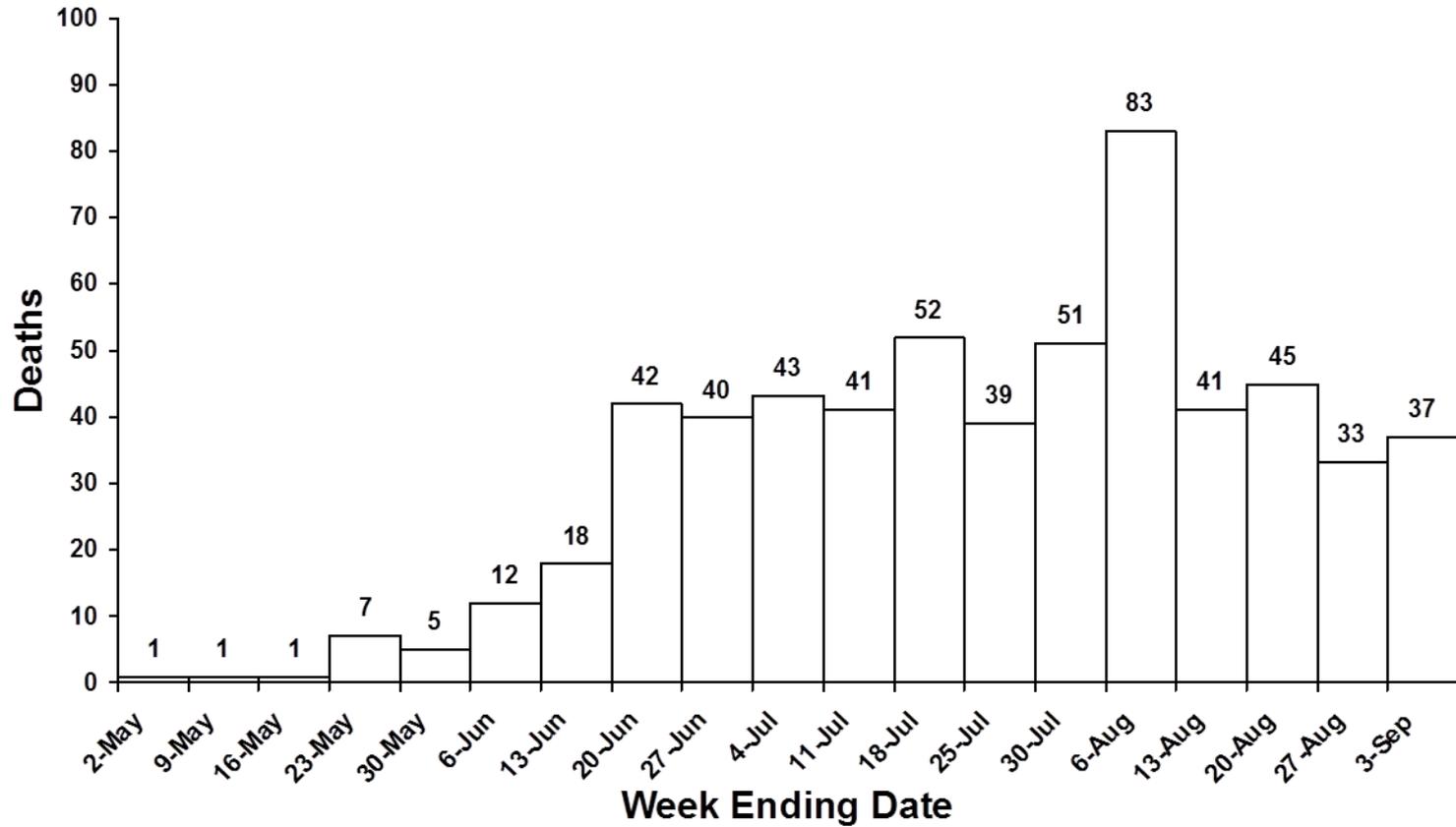


*Hospitalizations with unknown ages are not included

*Rate / 100,000 by Single Year Age Groups: Denominator source: 2008 Census Estimates, U.S. Census Bureau at:

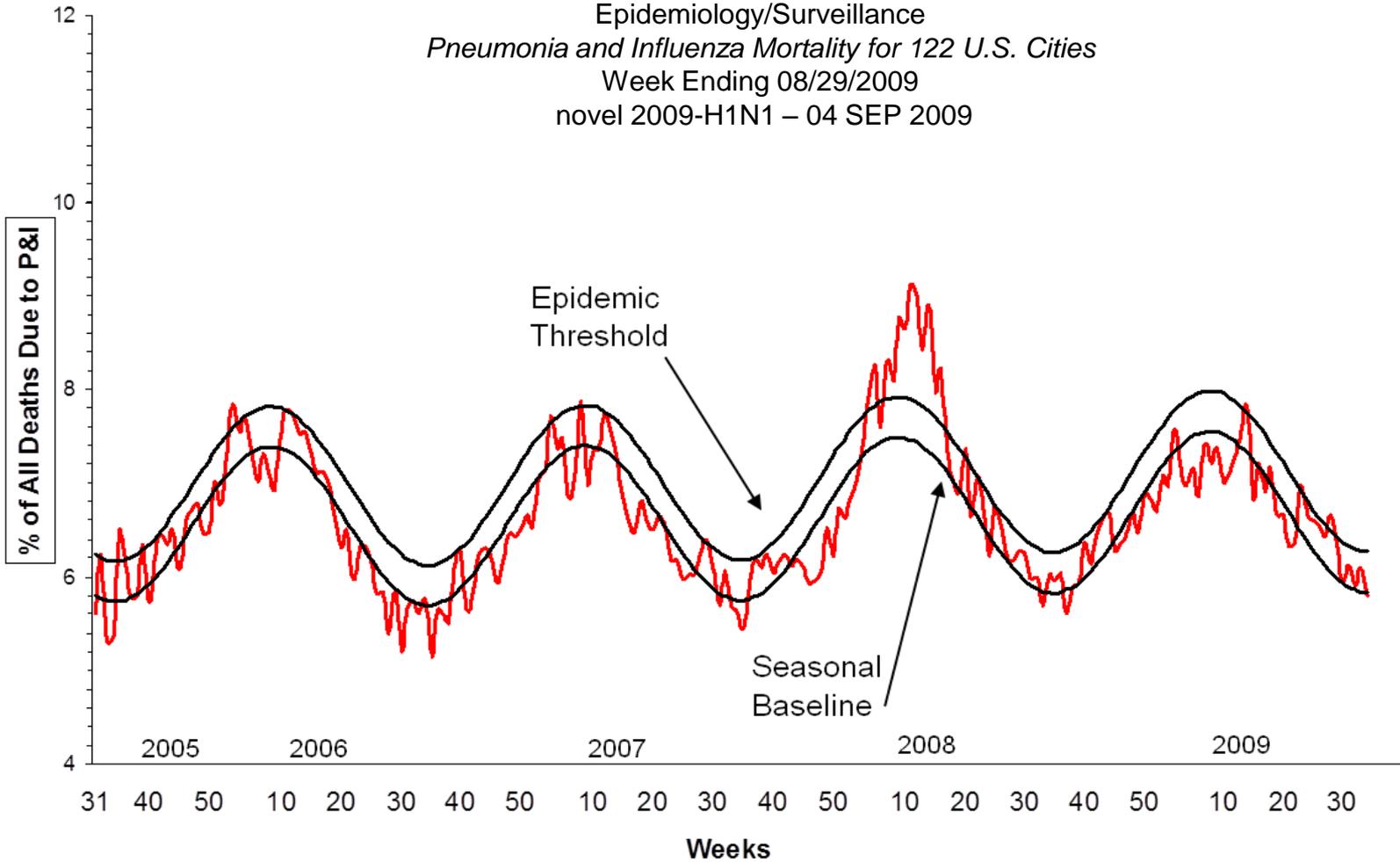
<http://www.census.gov/popest/national/asrh/files/NC-EST2007-ALLDATA-R-File24.csv>

2009-H1N1 Influenza Deaths by Report Date
3 SEPT 2009 (n=593) (Weekly*)



*Data for week ending 30 July 2009 include reports submitted between 1:00 AM EDT 6/25/2009 and 11:00 AM

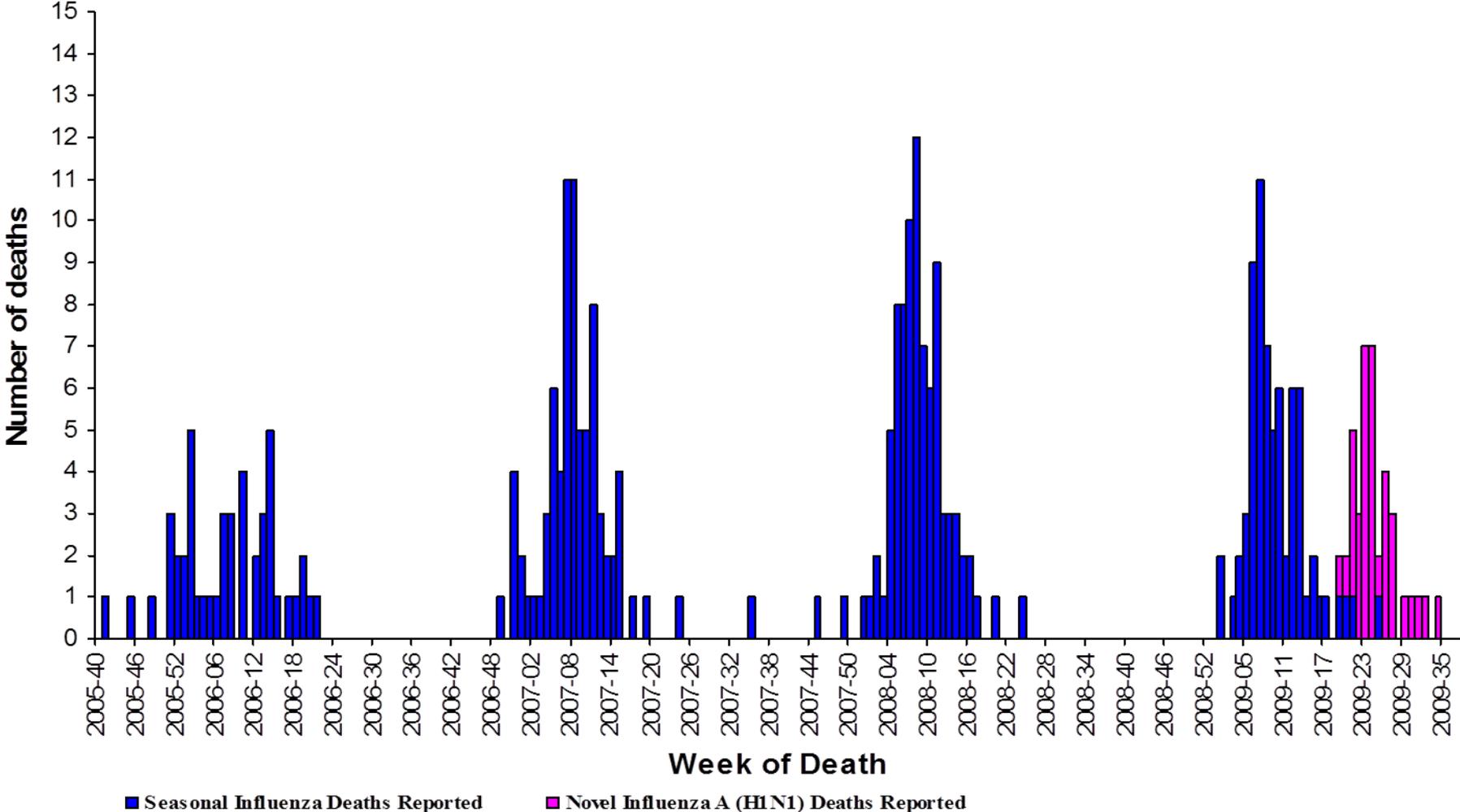
Epidemiology/Surveillance
Pneumonia and Influenza Mortality for 122 U.S. Cities
Week Ending 08/29/2009
novel 2009-H1N1 – 04 SEP 2009



Influenza Associated Pediatric Mortality

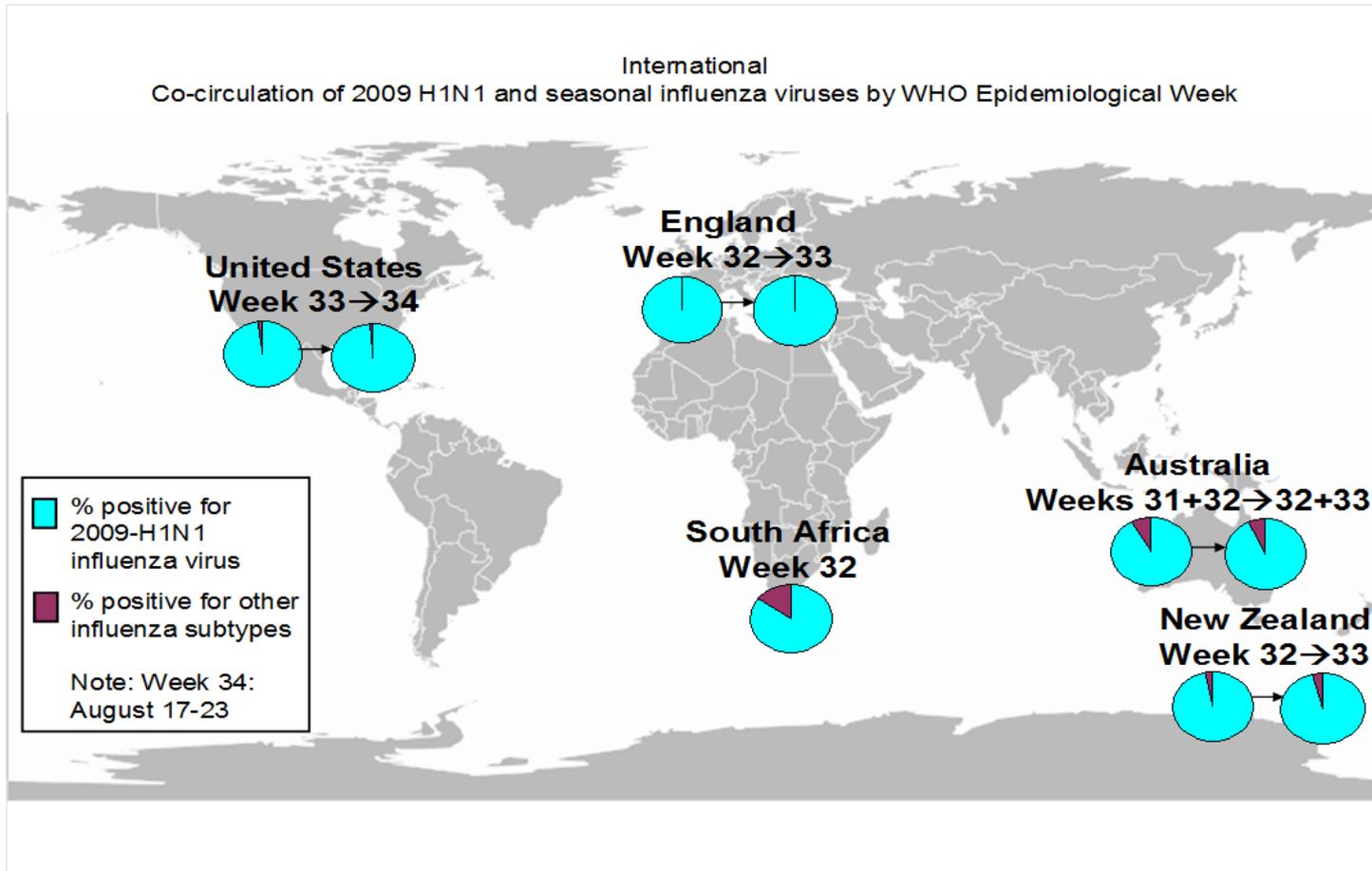
Number of Influenza-Associated Pediatric Deaths by Week of Death

2005-06 season to September 4, 2009



Influenza in Southern Hemisphere - 2009

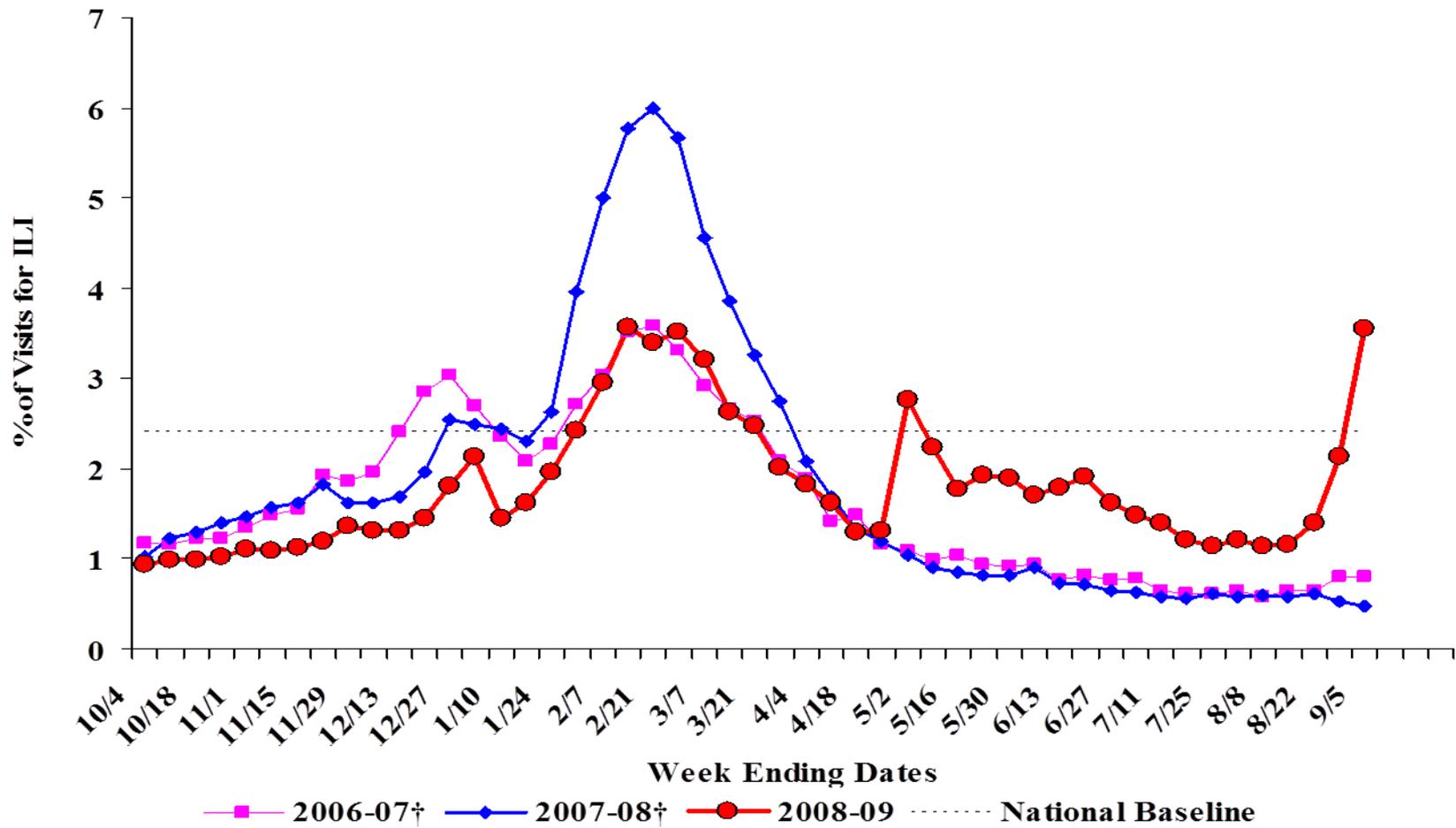
Both 2009 H1N1 & Seasonal Flu



International Update

- The 2009 H1N1 influenza virus is the predominant influenza virus in circulation worldwide.
- The 2009 H1N1 influenza virus in the Southern Hemisphere is very similar to that described in the United States this past spring.
- WHO has reported over 254,206 laboratory-confirmed cases of 2009 H1N1 influenza virus with at least 2,837 deaths, likely a substantial underestimation of total cases.

Epidemiology/Surveillance
**Percentage of Visits for Influenza-like Illness (ILI) Reported by
the *US Outpatient Influenza-like Illness Surveillance Network (ILINet)*,
National Summary 2008-09 and Previous Two Seasons**
novel 2009-H1N1 – 11 SEPT 2009

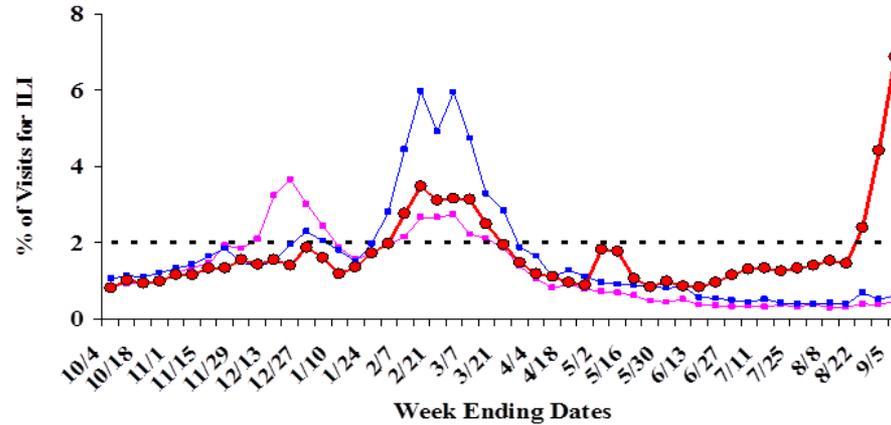


Epidemiology/Surveillance

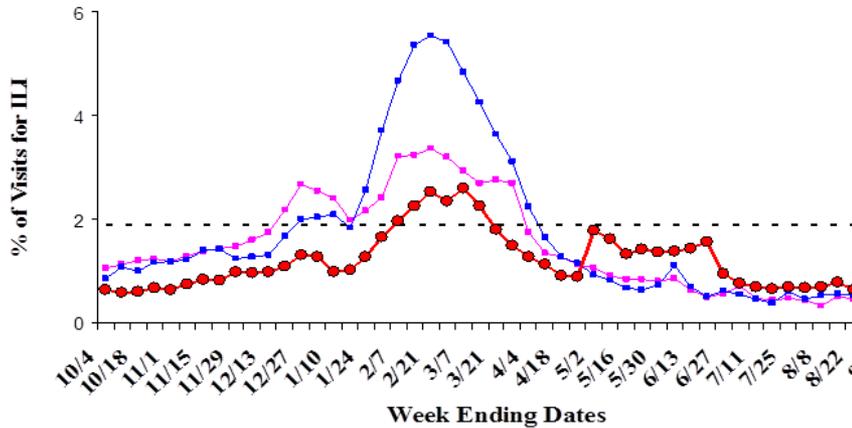
Current Influenza Surveillance – *ILINet* Regions 4-6

novel 2009-H1N1 – 11 SEPT 2009

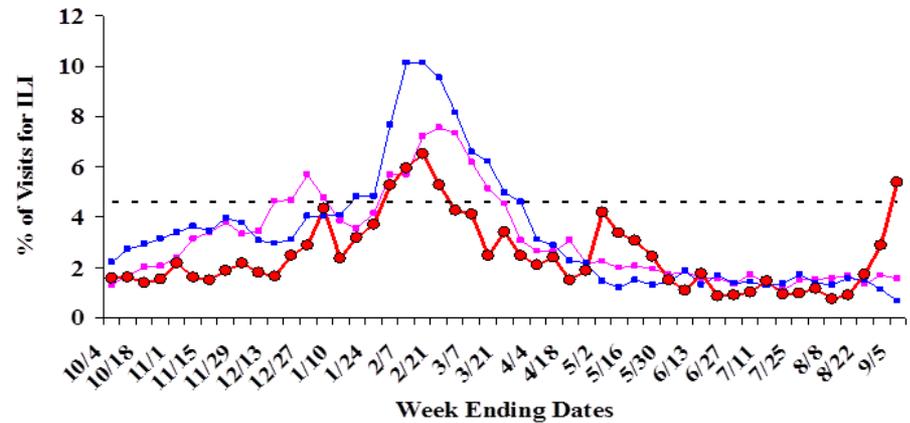
Region 4 - AL, FL, GA, KY, MS, NC, SC, TN



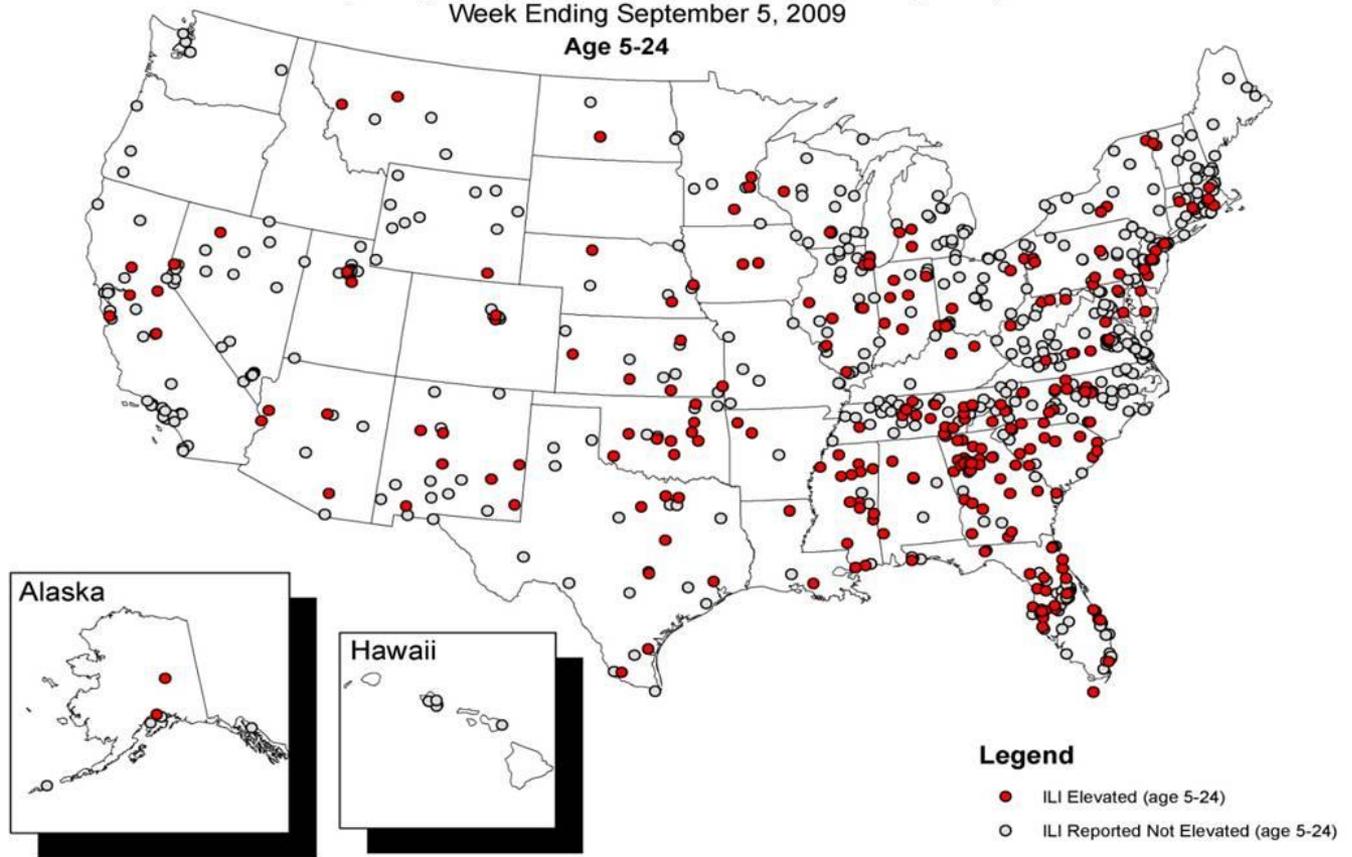
Region 5 - IL, IN, MI, MN, OH, WI



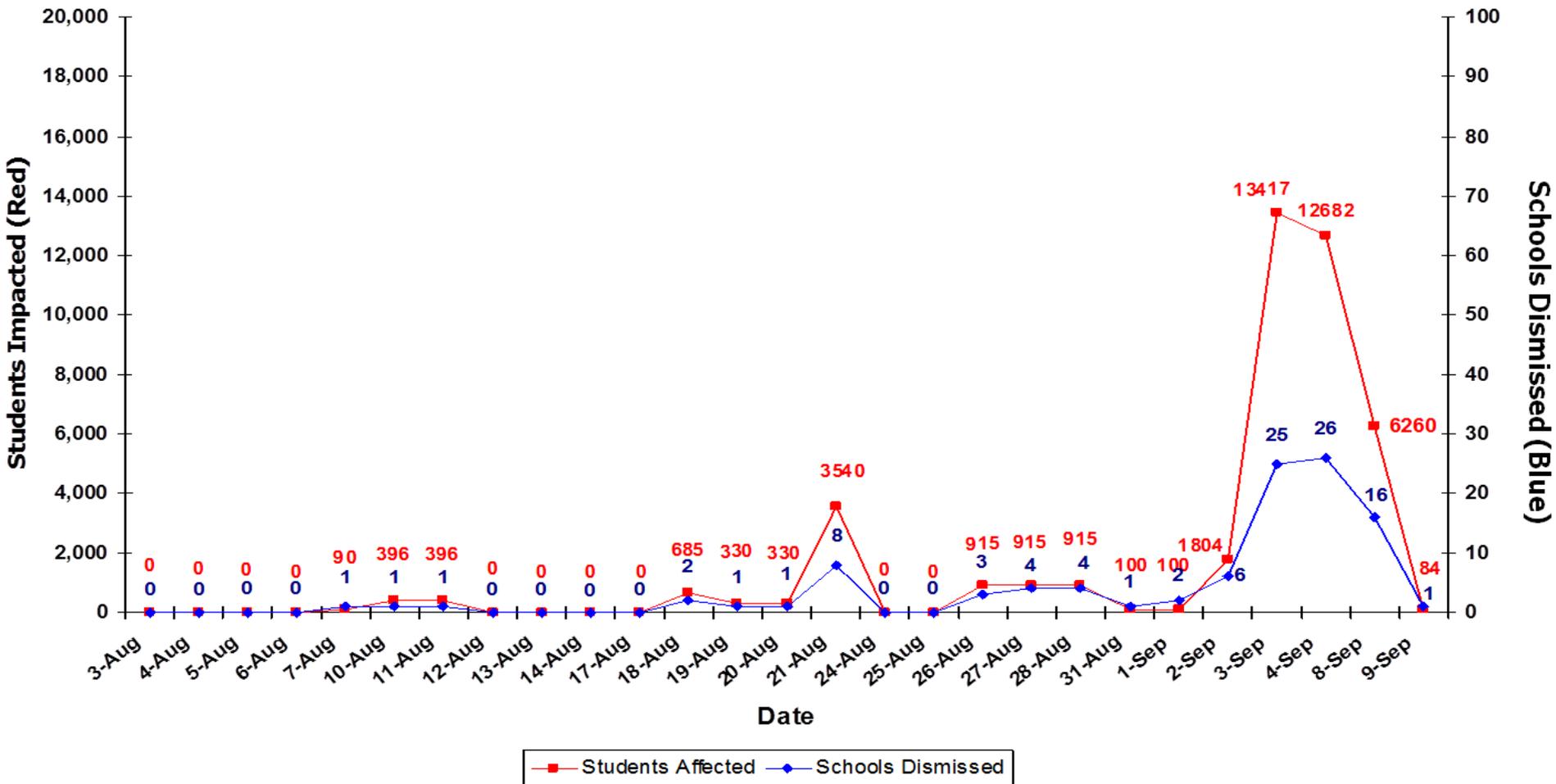
Region 6 - AR, LA, NM, OK, TX



Influenza-like Illness (ILI) Reported from U.S. Outpatient Influenza-like Illness
Surveillance Network (ILINet)
Analyzed by the Early Aberration Reporting System (EARS)
Week Ending September 5, 2009
Age 5-24



School Dismissals in the U.S. 3 Aug – 9 Sep 2009



National Framework for 2009-H1N1 Response

- Surveillance/Situational Awareness
- Mitigation (medical and community measures)
- Vaccination
- Communication