



Director's Update Brief novel 2009-H1N1

**Friday
31 JUL 2009 0815 EDT**

**Day 105
Week of Consultation and Finalizing Plans**



Key Events



novel 2009-H1N1 – 31 JUL 2009

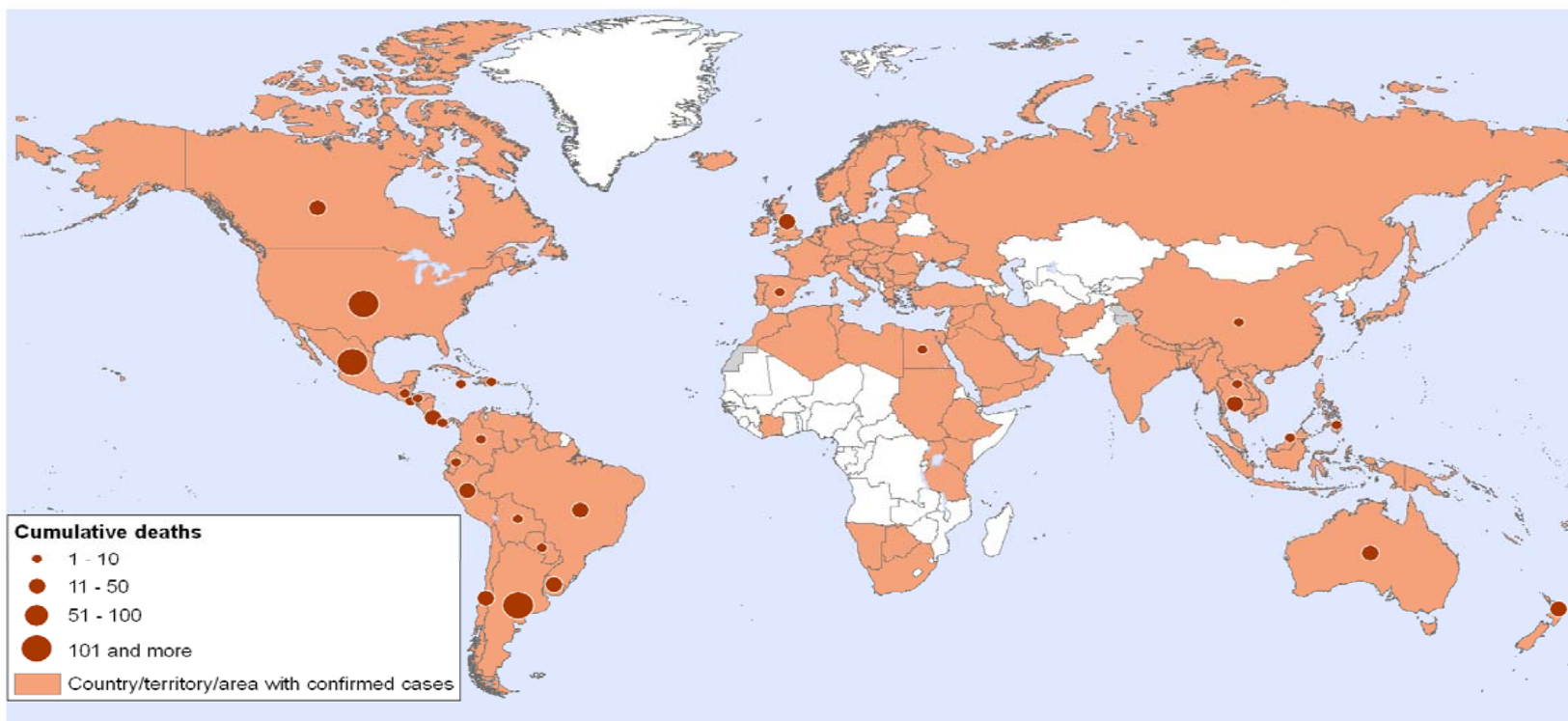
- **novel 2009-H1N1 Declarations**
 - **WHO: Pandemic Phase 6 (11 JUN 2009 1600 EDT)**
 - **Outbreaks in at least one country in > two WHO regions**
 - **USG: Public Health Emergency declared (26 Apr 2009)**
 - **HHS: Downgraded to Phase 1 – Awareness (9 May 2009)**
- **US Cases (as of 30 JUL 2009, next update 07 Aug 2009)**

US TOTALS	HOSP	DEATHS
CASES	5,514	353
SLTTs AFFECTED	47	28

International Global Update novel 2009-H1N1 – 31 JUL 2009

- As of July 27, WHO reports 134,503 cases and 816 deaths
- Countries no longer required to test and report so numbers are underestimate

Pandemic (H1N1) 2009, Status as of 22 July 2009
Countries, territories and areas with lab confirmed cases and number of deaths as reported to WHO



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

Map produced: 24 July 2009 10:00 GMT

Data Source: World Health Organization
Map Production: Public Health Information
and Geographic Information Systems (GIS)
World Health Organization



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International New Web Site – International Situation Update novel 2009-H1N1 – 31 JUL 2009



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H1N1 Flu

- H1N1 Flu**
- General Info
- Info for Specific Groups
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H1N1 Flu Info

- U.S. Info
- Things You Can Do
- Plan & Prepare
- International Info

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Novel H1N1 Flu: International Situation Update

This situation report provides an update of the international situation as of July 28, 2009. As of July 27, WHO regions are reporting 134,503 laboratory-confirmed cases and 816 deaths. The lab-confirmed cases represent an underestimation of total cases in the world as many countries have shifted to strategies of clinical confirmation and prioritization of laboratory testing for only persons with severe illness and/or high risk conditions. Currently, the novel influenza A (H1N1) virus is the dominant influenza virus in circulation in New Zealand, Australia, Chile, Argentina and Brazil. Influenza viruses currently being detected in England and Canada are almost exclusively novel influenza A (H1N1). Following an influenza season that was dominated by influenza A (H3N2) virus circulation, South Africa is now detecting novel influenza A (H1N1) through its routine surveillance system. However, currently influenza A (H3N2) remains the dominant virus in circulation in South Africa. Many seasonal influenza virus detections have not been subtyped. Of those that have been subtyped in Australia, South Africa, and Argentina, the majority are influenza A (H3N2) viruses.

International Situation Update

Map of International Activity Estimates (Including Novel H1N1):

Selected Highlights

- [Novel influenza A \(H1N1\) continues to circulate widely.](#)
Text briefly describing this highlight.
- [Descriptive epidemiology of cases remains similar across countries.](#)
Text briefly describing this highlight.
- [Isolates sequenced at WHO and CDC suggest that circulating novel influenza A \(H1N1\) viruses look similar to A/California/2009.](#)
Text briefly describing this highlight.

International Resources for Novel H1N1 Information

Health Organizations

- [ECDC \(European Centre for Disease Prevention and Control\)](#)
- [H2P \(Humanitarian Pandemic Preparedness\)](#)
- [Public Health Agency of Canada](#)

World Health Organization (WHO) Regional Offices

- [World Health Organization \(WHO\)](#)
- [AFRO \(WHO Regional Office for Africa\)](#)

CDC Website will be Going live tomorrow. International SitRep From HHS (sister agencies To go out each Friday.



Epidemiology/Surveillance
Synopsis of Influenza Morbidity and Mortality
2009 novel 2009-H1N1 – 31 JUL 2009
Week ending July 25



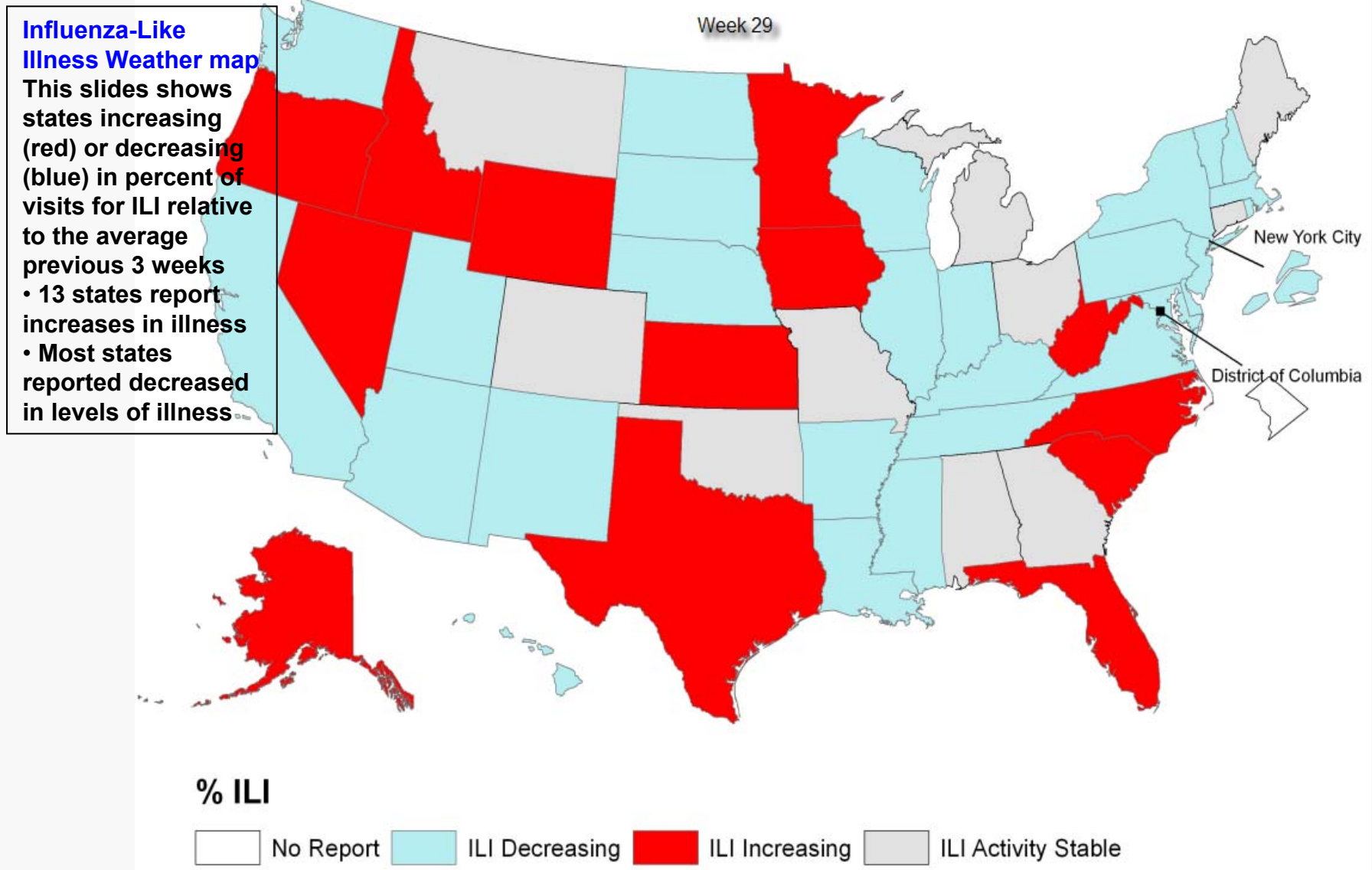
- **ILI Activity**
 - **Percentage of visits due to ILI continues to decline in all regions except Region IV where it is mildly elevated.**
- **Mortality**
 - **The proportion of deaths attributed to pneumonia and influenza was low and within the bounds of what is expected in summer.**
 - **This season 97 influenza-associated pediatric deaths were reported; 29 due to novel influenza A (H1N1) virus infections**
- **Hospitalization**
 - **H1N1 cumulative hospitalization rates for adults and children remain low and well below the seasonal average of last 4 years.**
- **Virologic**
 - **Almost 100% of specimens characterized are influenza A. No oseltamivir novel H1N1 resistant viruses have been identified in the US.**
- **Geographic spread**
 - **4 states reporting widespread activity and most report only sporadic or local activity**



Epidemiology/Surveillance
novel 2009-H1N1 – 31 JUL 2009

Percentage of Visits for ILI Reported by the

US Outpatient Influenza-like Illness Surveillance Network (ILINet) by State



Data are provisional and will not be officially released by the CDC until 1100 EDT

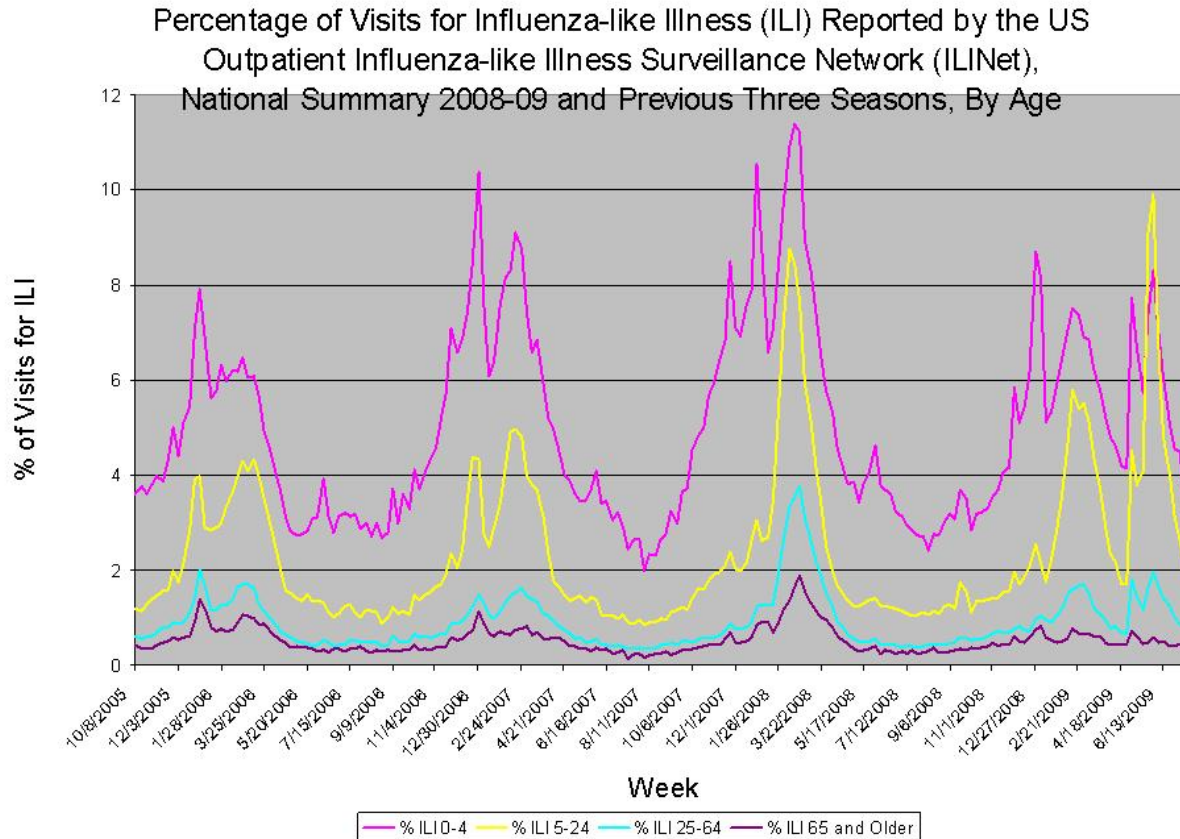
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Epidemiology/Surveillance

novel 2009-H1N1 – 31 JUL 2009

Influenza-Like Illness by Age Group



Influenza-Like Illness by Age Group

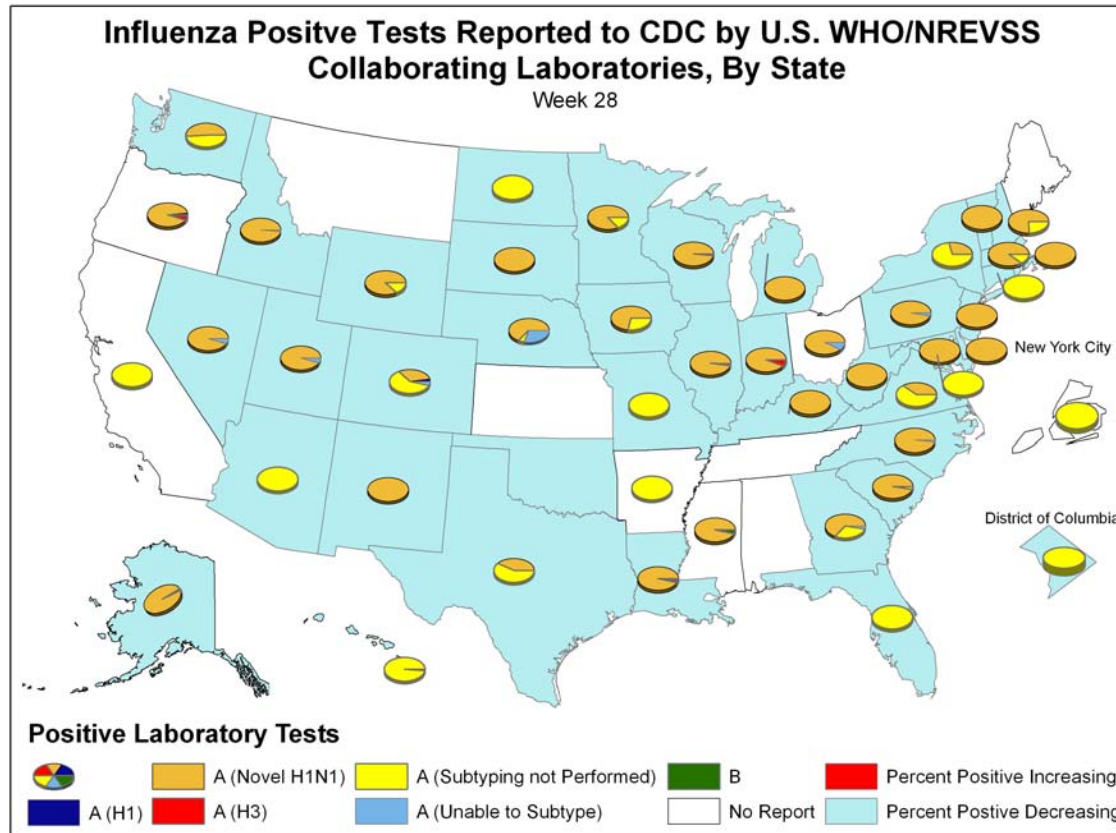
This slide shows percent of visits for ILI by age group

- 2008-09 season has increase in 15-24 age group compared to previous seasons
- Levels of activity declined in all age groups during the last reporting week

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Epidemiology/Surveillance novel 2009-H1N1 – 31 JUL 2009 Virus Weather Map



Virus Weather Map

This slide shows states increasing (red) or decreasing (blue) in percent of specimens for influenza relative to the average previous 3 weeks; pie charts are 3 weeks of influenza subtype data

- No states report increase in % positive
- Novel H1N1 predominate virus

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Epidemiology/Surveillance
novel 2009-H1N1 – 31 JUL 2009
Fall Surveillance - Hospitalizations



Surveillance for hospitalized cases of influenza

- **National estimates of hospitalized cases will be calculated based on data from EIP influenza surveillance**
- **Goal of state-level reporting of hospitalizations is to track progression of outbreak within each state (increasing or decreasing trend).**

< Data are provisional and will not be officially released by the CDC until 1100 EDT >

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Plans for Developing Overall Semi-Quantitative Measure of Influenza Activity

- **Severity Strata Draft**
 - **Mild (“springlike”)**
 - any ILI level + mortality and hospitalizations at levels roughly equal to this spring wave or less than lower confidence limits for moderate; low or no AV resistance.
 - **Moderate**
 - Use 2005-2006; 2006-2007 for calculation of strata
 - **Severe**
 - Use 1999-2000; 2003-2004; 2007-2008 for calculation of strata
 - **Very Severe**
 - ILI Net, mortality and hospitalizations at levels greater than upper confidence limits for severe
- **Action: Leadership Discussion 03 AUG to discuss.**



Epidemiology/Surveillance novel 2009-H1N1 – 31 JUL 2009 Web Site Redesigned




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A-Z Index: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #

H1N1 Flu

H1N1 Flu

- General Info
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- Related Links
- What's New



Novel H1N1 Flu (Swine Flu)

Site last updated July 30, 2009, 1:00 PM ET

Vaccination Recommendations
With the new H1N1 virus continuing to cause illness, hospitalizations and deaths in the US during the normally flu-free summer months and some uncertainty about what the upcoming flu season might bring, CDC's Advisory Committee on Immunization Practices has taken an important step in preparations for a voluntary novel H1N1 vaccination effort to counter a possibly severe upcoming flu season. On July 29, ACIP met to consider who should receive novel H1N1 vaccine when it becomes available.

[Learn More >>](#)

More on the Situation

- Background**
Learn about the emergence of the novel H1N1 virus in the United States and WHO's declaration of a novel H1N1 pandemic.
- General Information**
Basic information about H1N1 flu and you, including how to take care of a sick person and what to do if you get sick.
- Facts and Figures**
A summary of key novel H1N1 disease characteristics.
- FluView**
A Weekly Influenza Surveillance Report Prepared by the Influenza Division.
- CDC Response**
A summary of CDC activities
- International Situation Update**
The Southern Hemisphere is in the middle of its flu season, and we have reports of what is happening there
- Guidance**
- Press Updates**
- Q & A: CDC's Online Reporting**

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CDC Advisors Make Recommendations for Use of Vaccine Against H1N1 Flu

- [July 29 Press Release](#)
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[Things you can do](#)
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[International Info](#)

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Going live at 11am

http://www2a.cdc.gov/podcasts/browse.asp?topic=swine%20flu

Trusted sites 75%



Epidemiology/Surveillance novel 2009-H1N1 – 31 JUL 2009 Web Site Redesigned

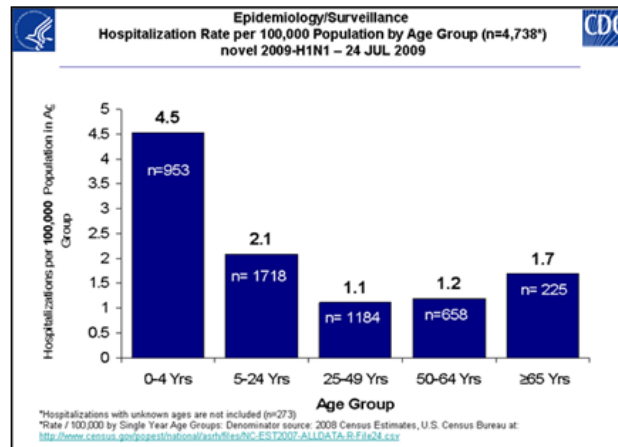


While people 65 years and older are much less likely to become ill with novel H1N1 flu, the increase in the hospitalization rate for people in this age groups indicates that if they do become sick, their risk of hospitalization is increased. This is not surprising given that people 65 and older are generally considered at higher risk of serious flu-related complications, including those requiring hospitalization, from seasonal flu illness.

*Of the total population of hospitalizations (n=4,738) 273 cases were omitted from this analysis due to missing ages.

**The denominator in these calculations is derived from national population census data and is not adjusted for the actual geographic distribution of cases. This reflects a national average. Because only a fraction of people with influenza symptoms are likely to have been tested for novel H1N1, these rate estimates are underestimation of the actual rates. However, the relative difference in rates between age groups is what is most important about these data.

Graph B: Novel H1N1 U.S. Hospitalization Rate per 100,000 Population, By Age Group



Q: How many patients hospitalized with novel H1N1 flu have had underlying medical conditions?

CDC studied the hospital records of 268 patients hospitalized with novel H1N1 flu early on during the outbreak. The analysis found that the prevalence of selected underlying conditions was significantly higher among hospitalized novel H1N1 flu patients compared to the prevalence in the general U.S. populations, except for chronic renal disease and obesity. For example, asthma occurs in 8% of the U.S. population, but 32% of hospitalized novel H1N1 flu patients had asthma. (See Table 1) With seasonal flu, underlying medical conditions like asthma, diabetes, heart disease and pregnancy place people at greater risk of serious flu-related complications. (People may have reported one or more underlying conditions.)

Q: Is obesity considered an underlying medical condition placing people at higher risk of H1N1-related complications?

Obesity is not one of the medical conditions that have previously been recognized to place people at greater risk of serious seasonal flu-related complications; however, obesity has been noted as an underlying medical condition in some hospitalized novel H1N1 patients. In a subset of 268 patients hospitalized with novel H1N1 early on during the outbreak, the body mass index (BMI)* of 227 patients** was calculated. Obesity (defined as a BMI greater than or equal to 30-

Data with brief descriptions

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Laboratory Biosafety Guidelines Update novel 2009-H1N1 – 31 JUL 2009



- **Internal CDC laboratory biosafety guidelines relaxed to classify novel 2009 H1N1 virus as BSL-2**
 - **Containment and laboratory practices now the same as for seasonal influenza**
- **External biosafety guidelines under revision to reflect similar recommendations for clinical and research labs**
 - **This should eliminate some of the confusion/concern expressed by clinicians as to how to handle patient specimens and conduct POC testing**
 - **Emphasis to be on splash rather than aerosol protection in clinical settings**



**Laboratory
Virology Update
novel 2009-H1N1- 31 JUL 2009**



- **All viruses analyzed antigenically by all WHO Collaborating Centers continue to have similar reactivity**
 - **All cross-reactive with A/California/7/2009 vaccine strain**
- **All virus genetic sequences show less variation than usually seen for seasonal viruses**
- **First WHO teleconference to discuss S. Hemisphere vaccine composition scheduled for August 4**

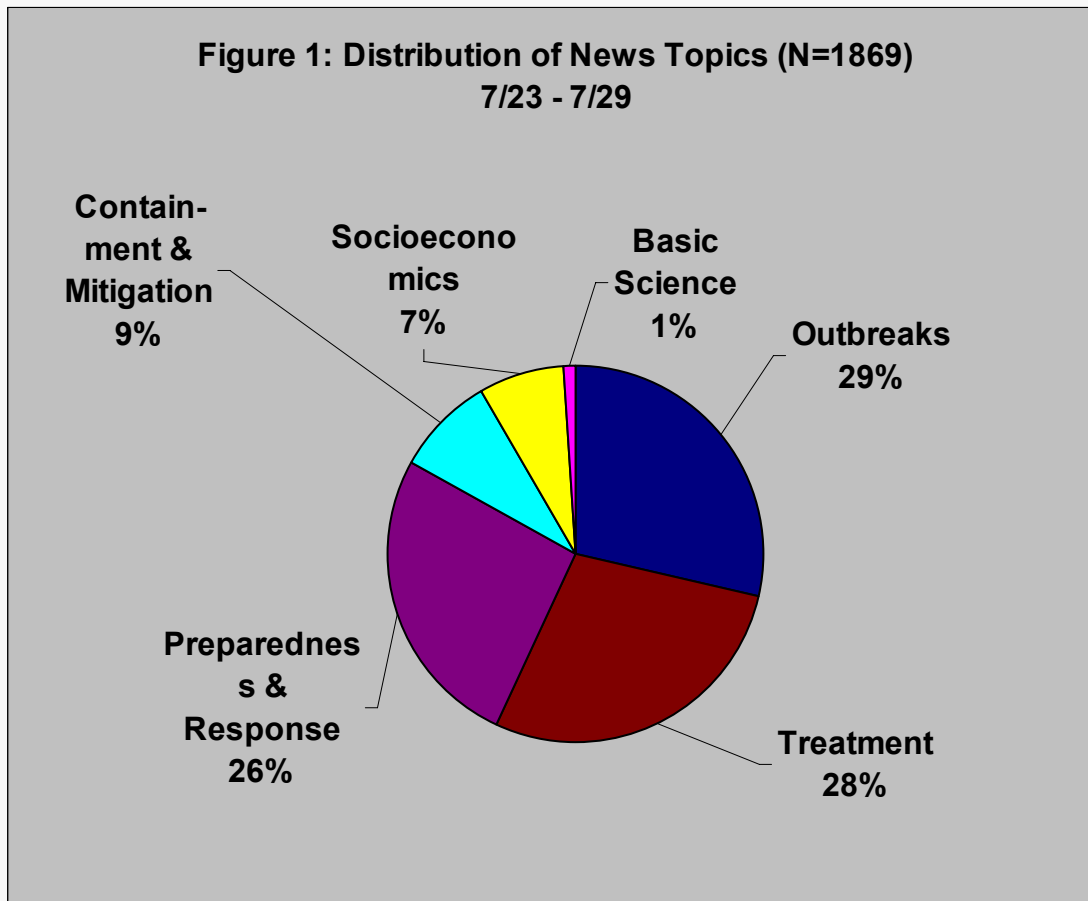


**Healthcare Delivery - Infection Control
Update
novel 2009-H1N1 – 31 JUL 2009**



- ***Managing Calls and Call Centers During a Large-Scale Influenza Outbreak: Implementation Tool**** - posted to the CDC H1N1 Guidance under Clinical and Public Health - “Emergency Personnel Guidance”
- **This is a quick guide to help a community set up a single point Info Line :**
 - **Identify Key Partners** - to help guide the logistical, operational, technological, and legal aspects of managing calls and a call center
 - **Set a Goal and Concept of Operations**
 - **How to accomplish Objectives**

***Note – Full workbook will be ready in September**



Outbreaks:

Widespread coverage continues

- Updated case counts
- Summer camps
- First deaths

Preparedness:

•Projections on virus spread and warnings for pregnant women dominated.

Treatment

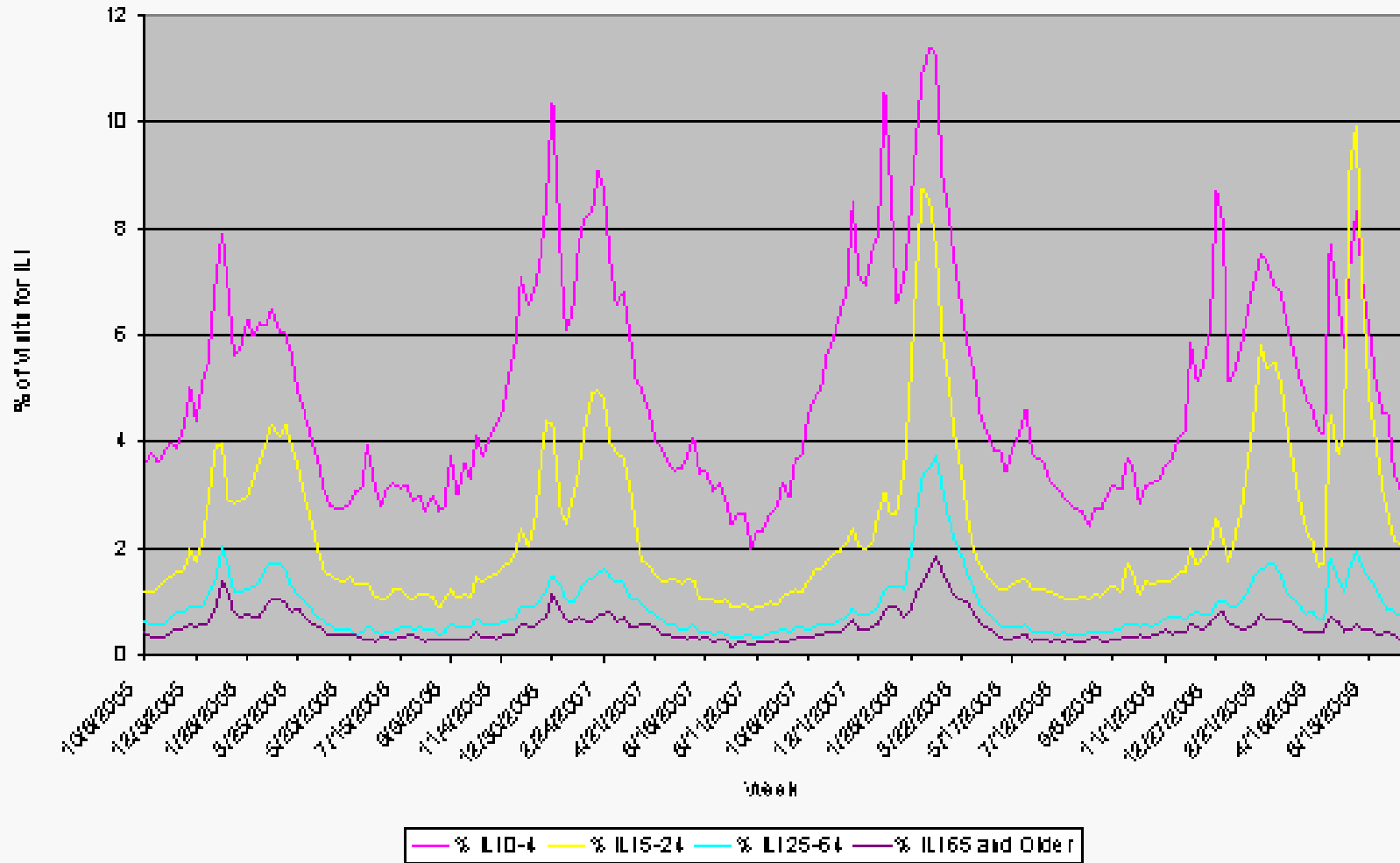
- Vaccine trials
- Vaccine priority
- Public opinion



Supporting Documentation



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 Three Seasons, By Age
novel 2009-H1N1 – 31 JUL 2009



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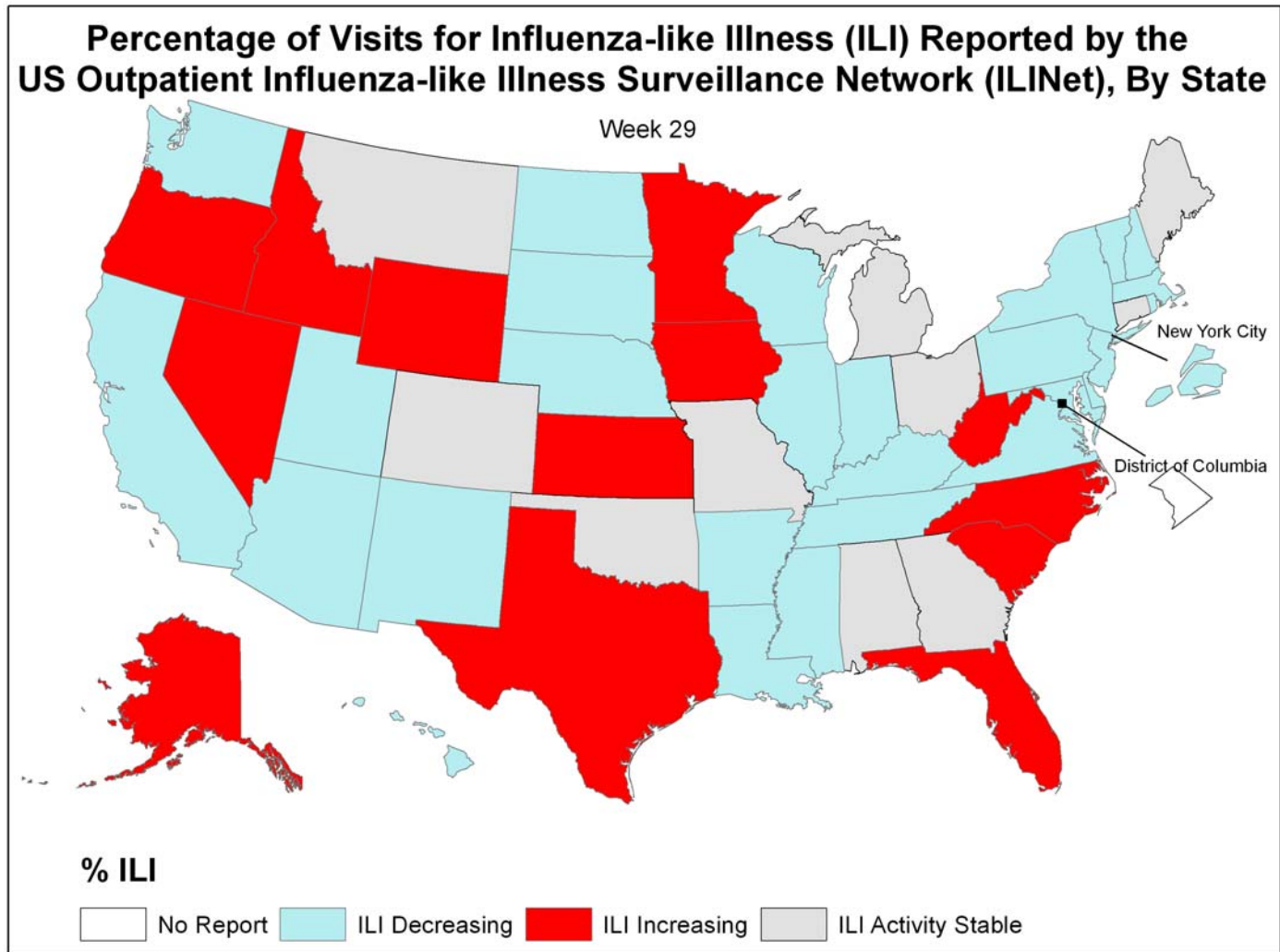
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Epidemiology/Surveillance



novel 2009-H1N1 – 31 JUL 2009



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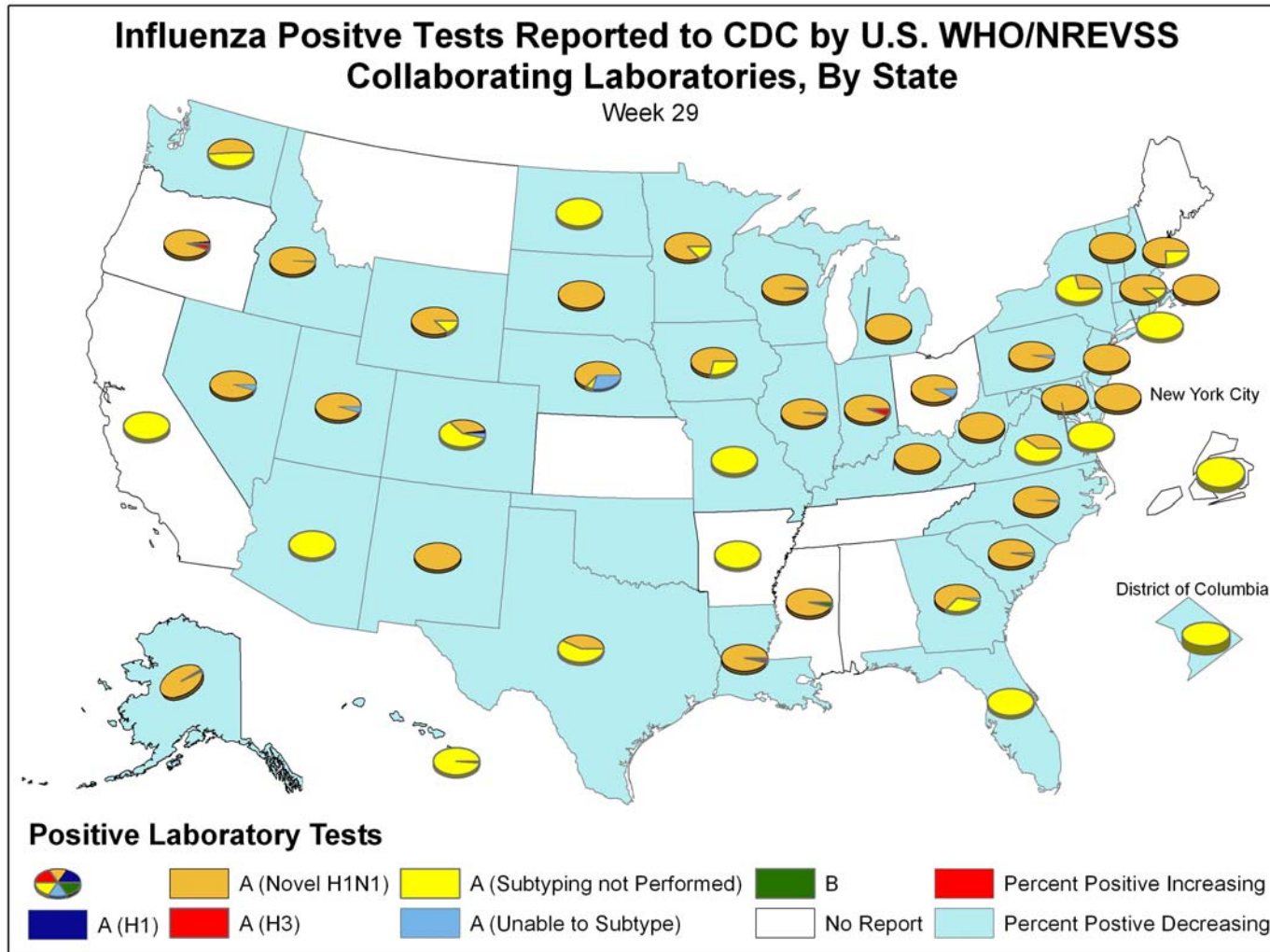
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novel 2009-H1N1 – 31 JUL 2009



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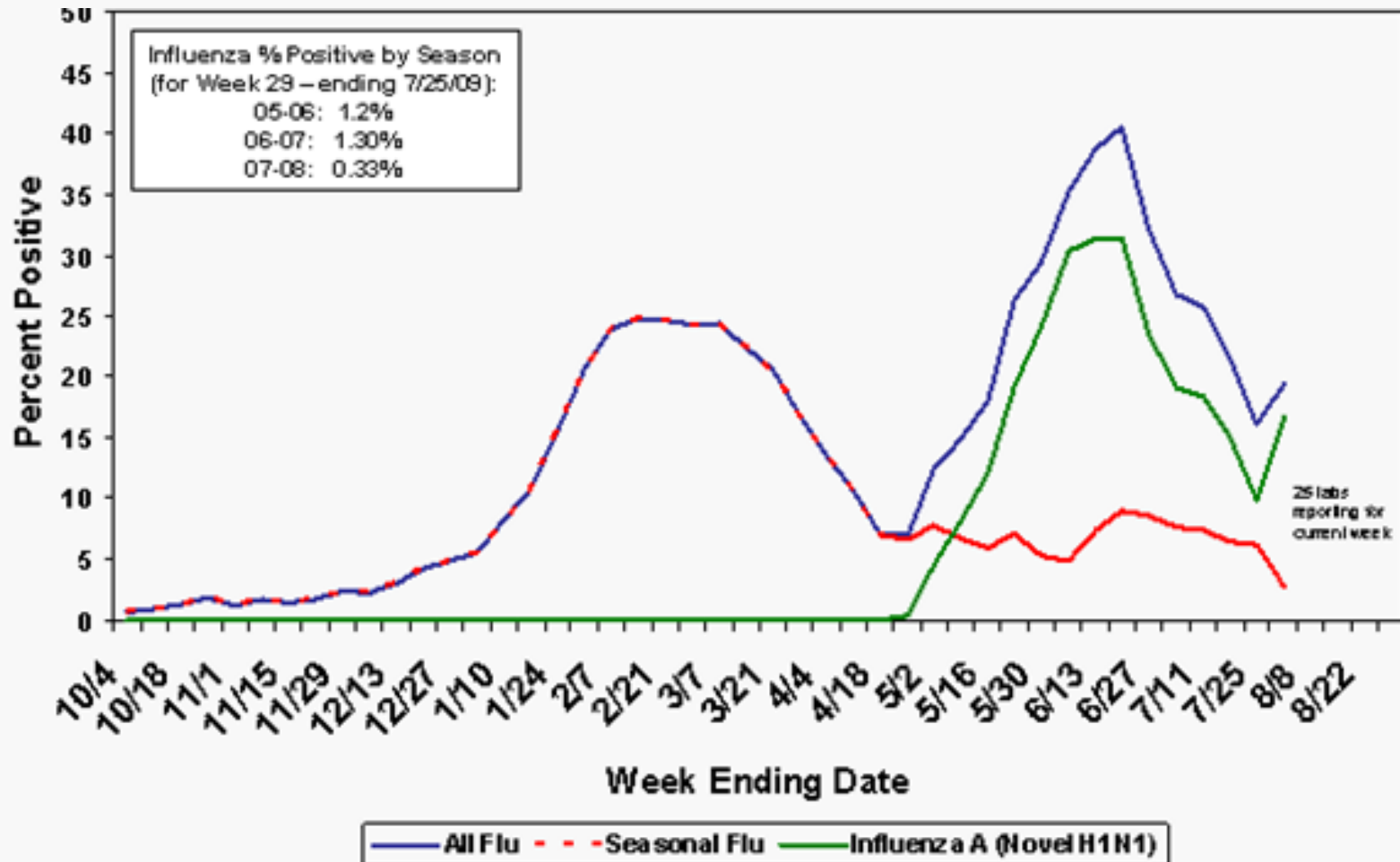
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Epidemiology/Surveillance

Percent of Specimens Positive for Influenza Reported by WHO and NREVSS Labs: Novel Influenza A(H1N1) vs. Seasonal Influenza, by Week

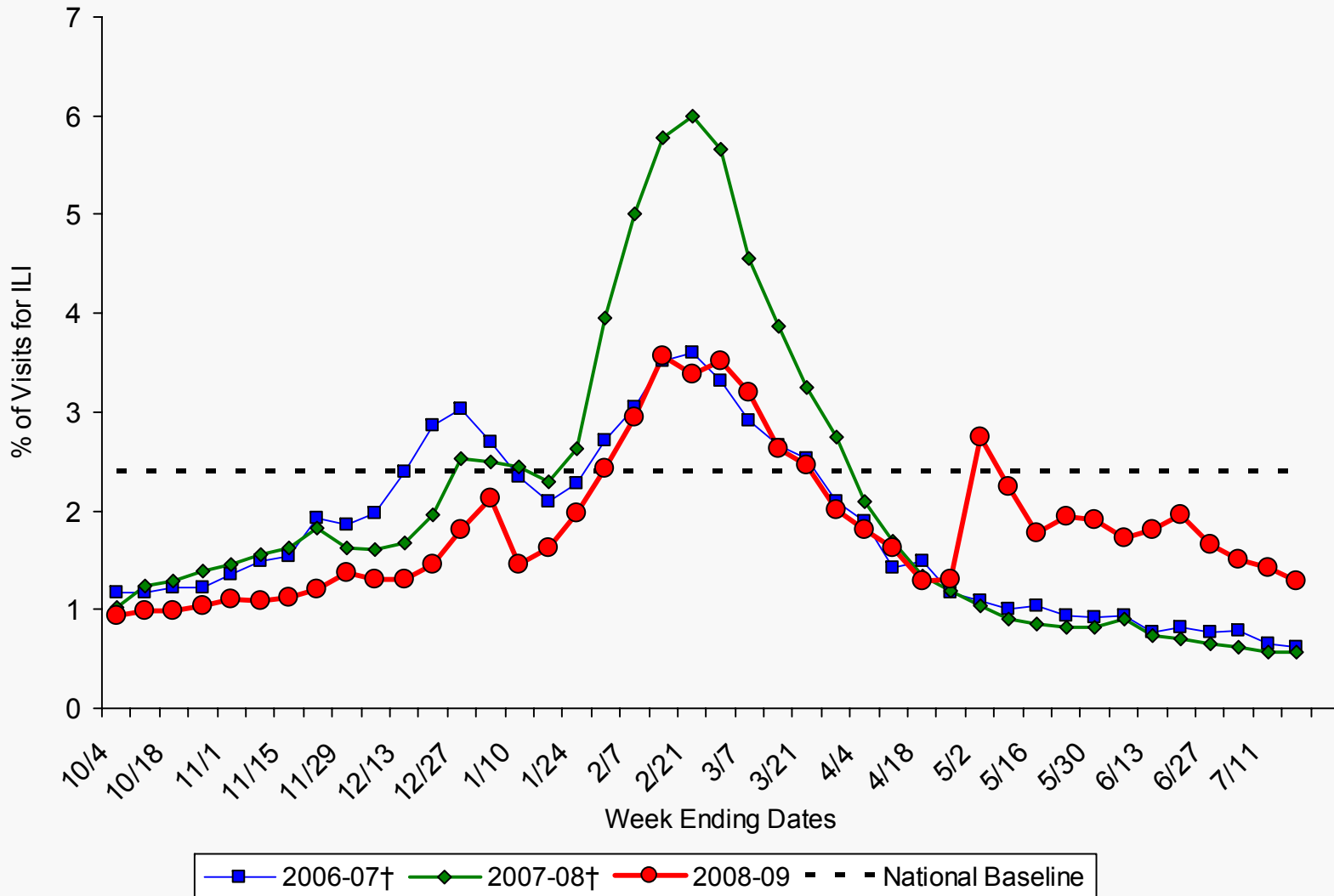
novel 2009-H1N1 – 31 JUL 2009



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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 – 31 JUL 2009



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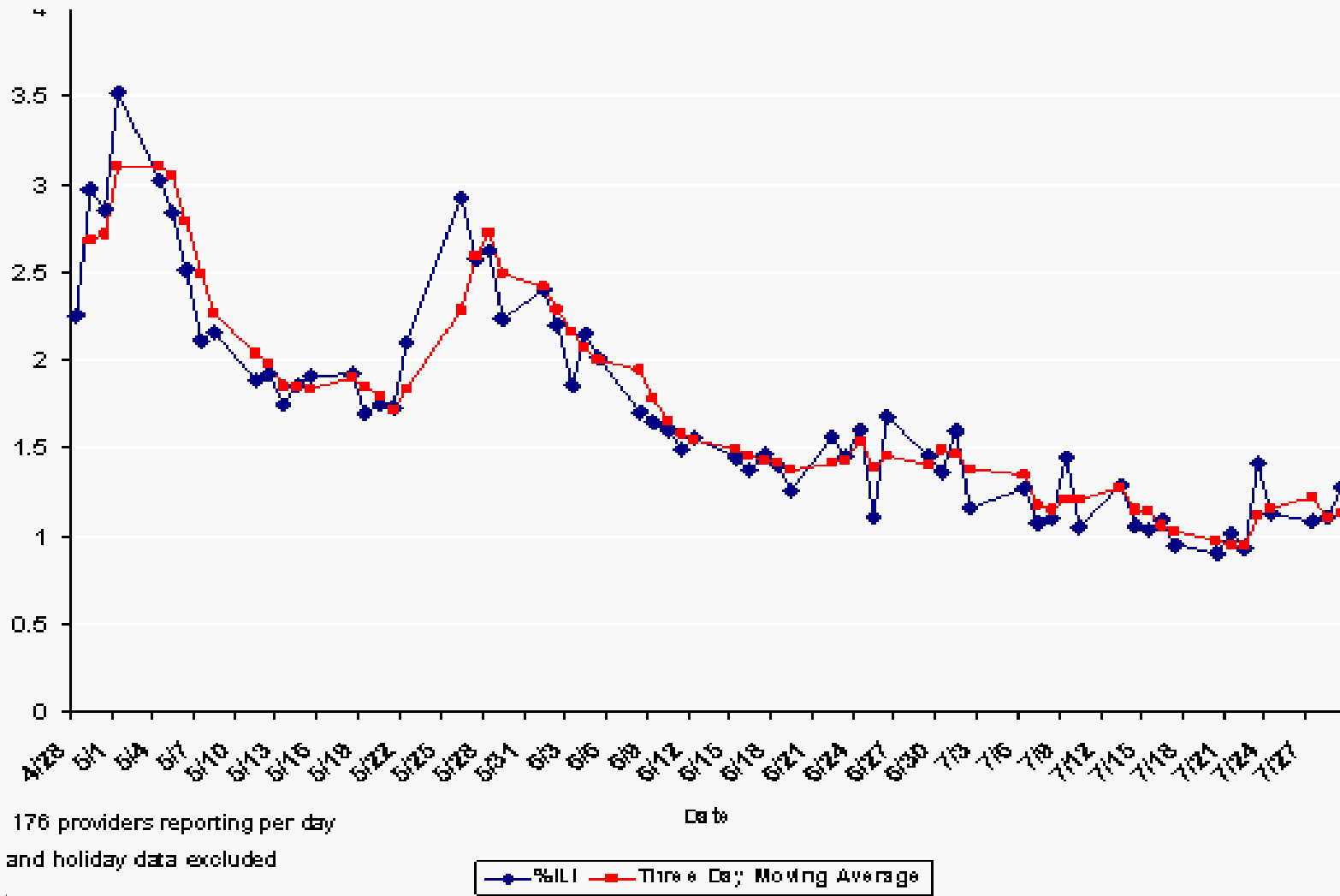
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Epidemiology/Surveillance

Percentage of Visits Due to ILI Reported to ILINet*, by day**

novel 2009-H1N1 – 31 JUL 2009



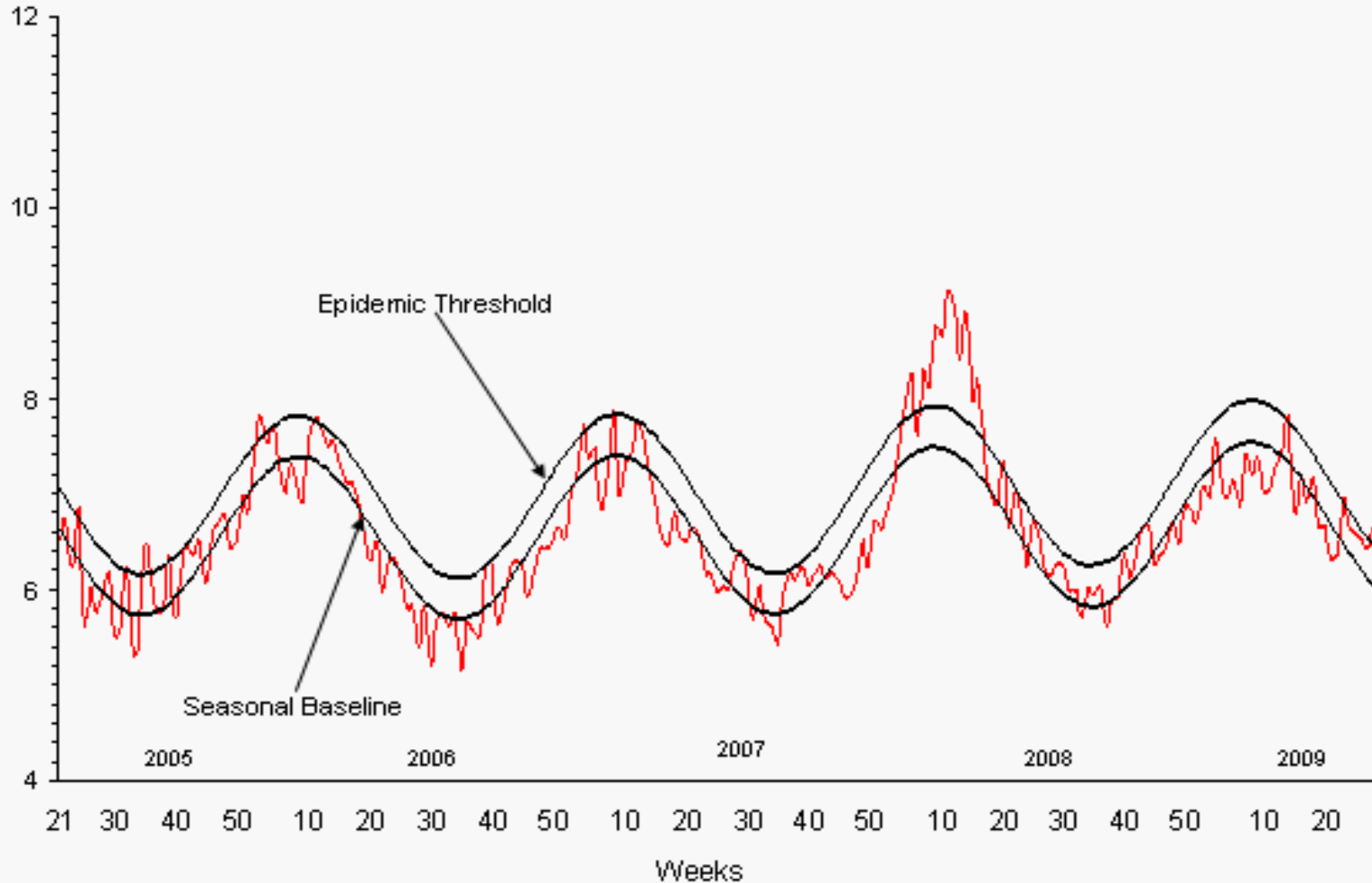
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Epidemiology/Surveillance
Pneumonia and Influenza Mortality for 122 U.S. Cities
Week Ending 07/25/2009

novel.2009-H1N1 - 31 JUL 2009

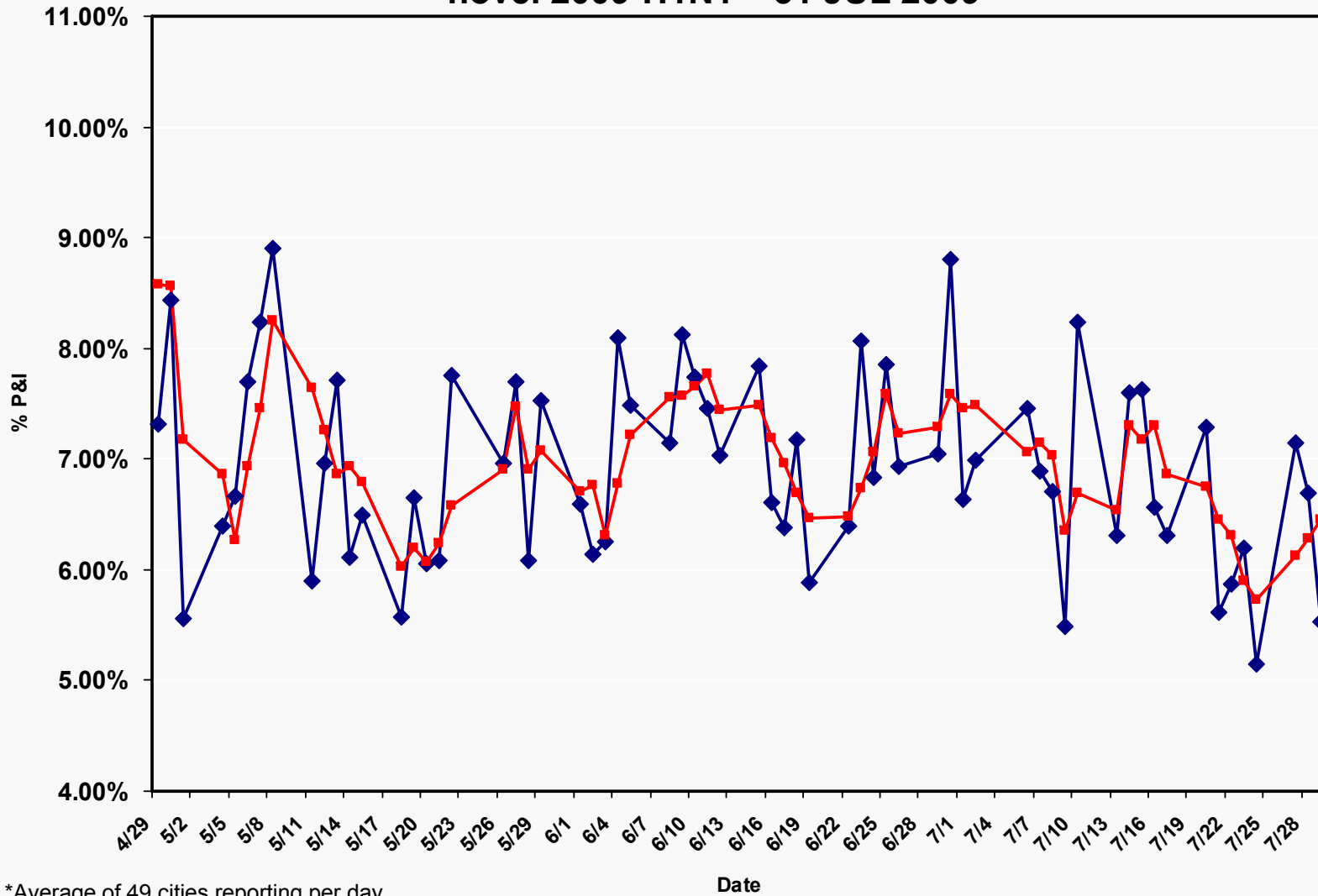


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Epidemiology/Surveillance
Percentage of Deaths Due to Pneumonia and Influenza
Reported by 122 Cities* Mortality Reporting System, by day**
novel 2009-H1N1 – 31 JUL 2009



*Average of 49 cities reporting per day

**Weekend & Holiday data excluded

◆ % P&I ■ Three Day Moving Average

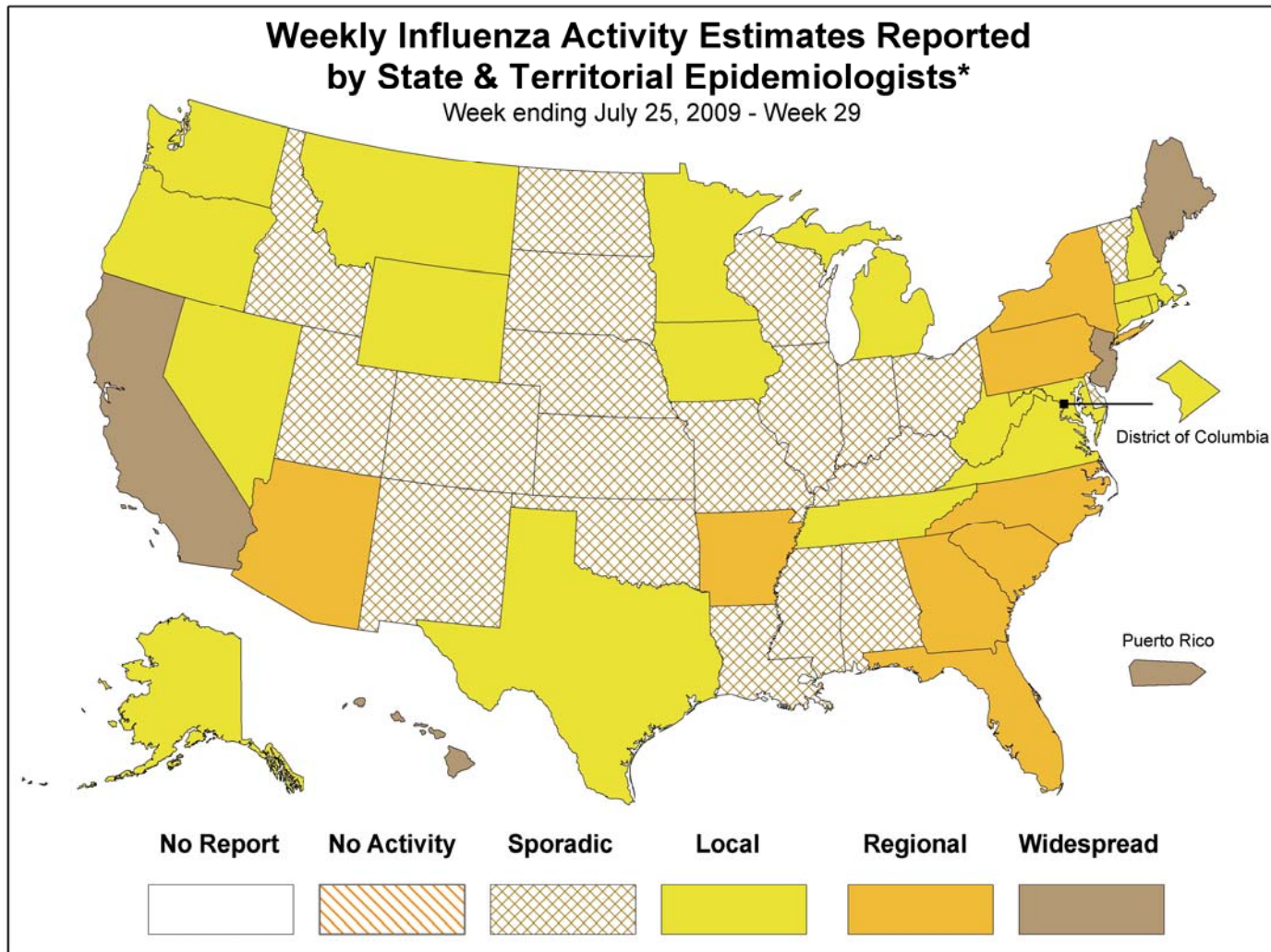
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Epidemiology/Surveillance

Weekly Influenza Activity Reported by SLTT's novel 2009-H1N1 – 31 JUL 2009



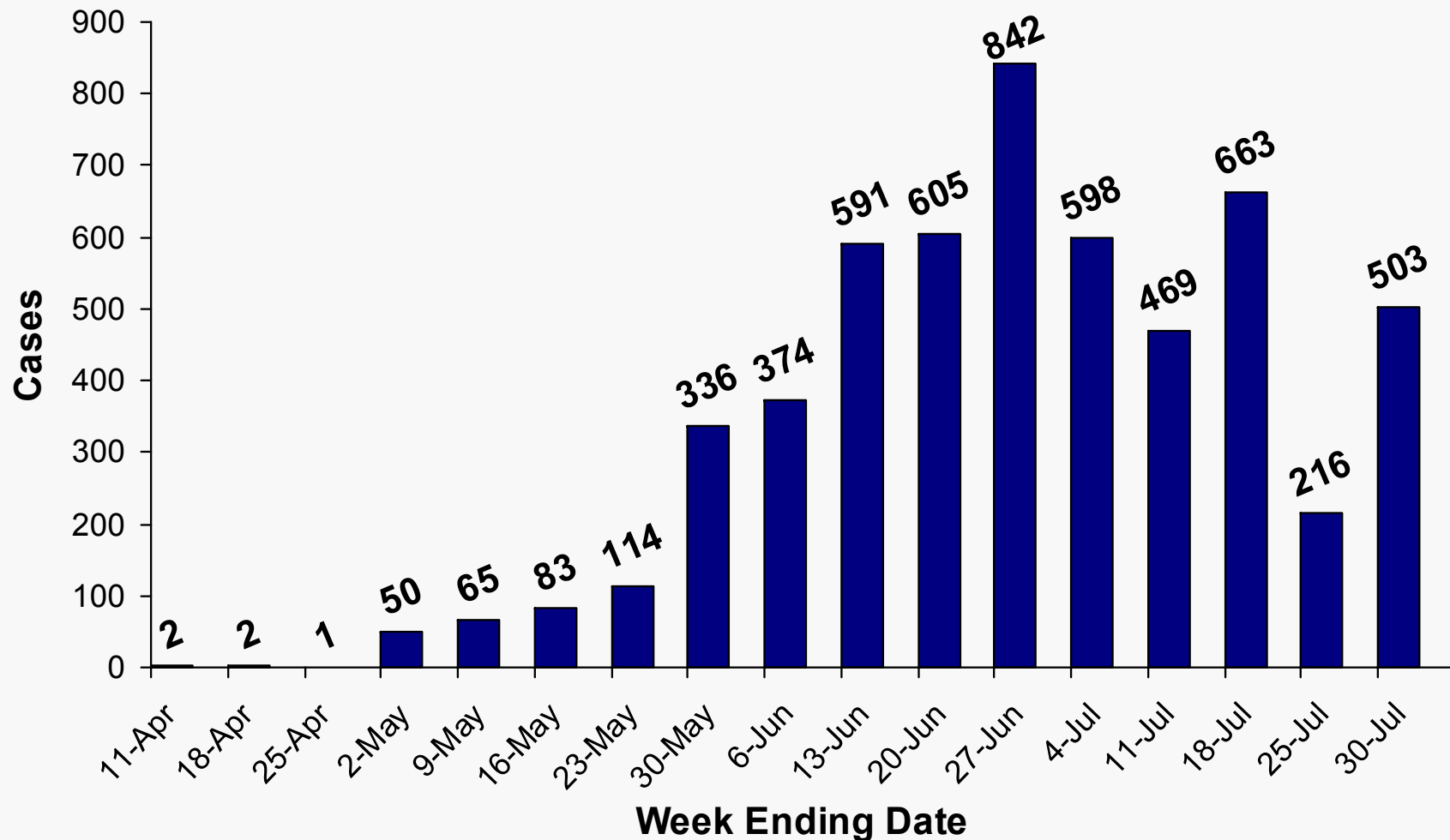
* This map indicates geographic spread & does not measure the severity of influenza activity

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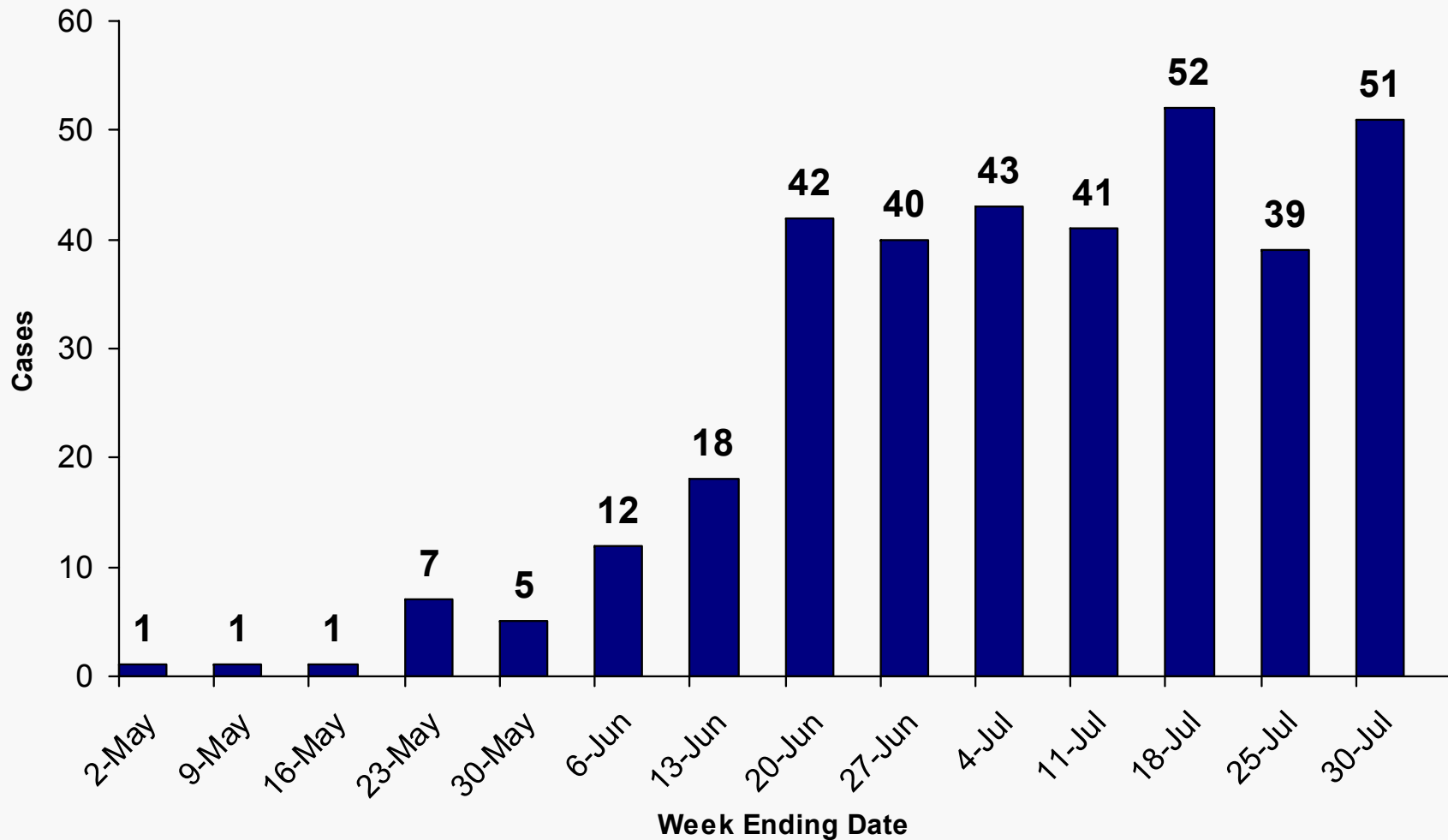
Epidemiology/Surveillance Hospitalizations by Report Date novel 2009-H1N1 – 30 JUL 2009 (n=5,514) (Weekly*)



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



Epidemiology/Surveillance Deaths by Report Date novel 2009-H1N1 – 30 JUL 2009 (n=353) (Weekly*)



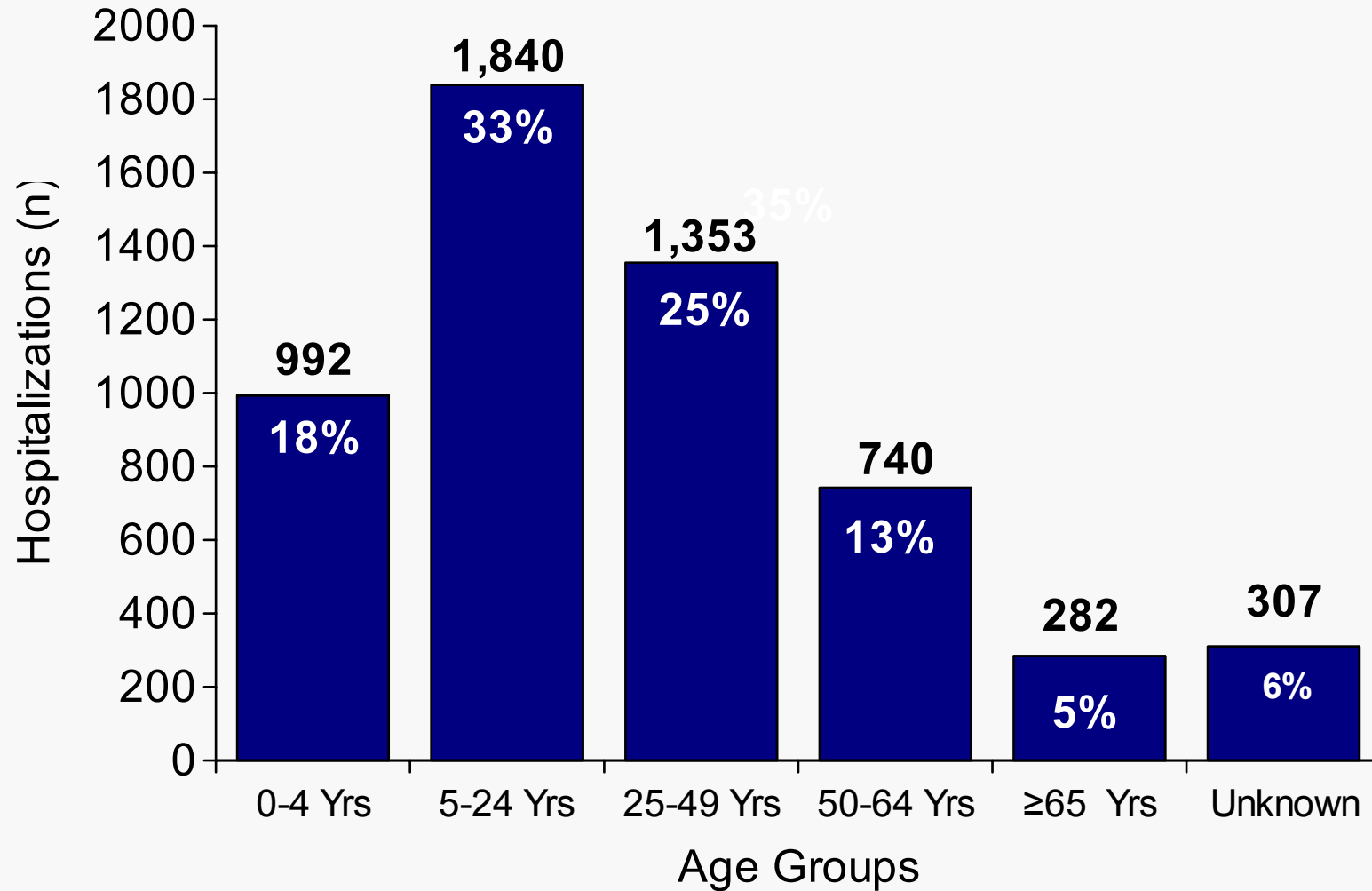
*Data for week ending 30 July 2009 include reports submitted between 1:00 AM EDT 6/25/2009 and 11:00 AM.



Epidemiology/Surveillance Hospitalizations by Age Group novel 2009-H1N1 – 30 JUL 2009 (n=5,514)



Percentages Represent Proportion of Total Hospitalizations

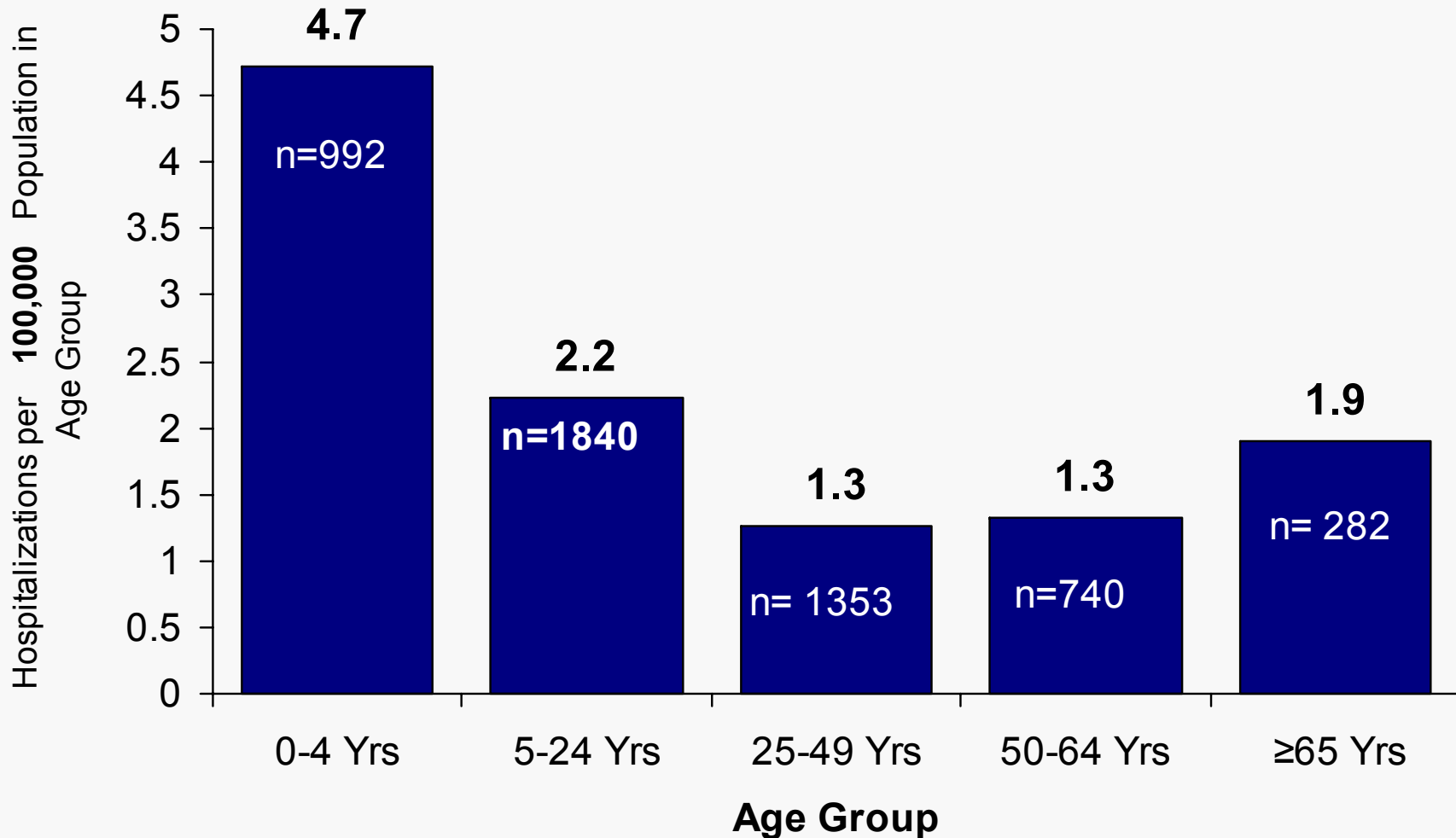




Epidemiology/Surveillance

Hospitalization Rate per 100,000 Population by Age Group (n=5,207*)

novel 2009-H1N1 – 30 JUL 2009



*Hospitalizations with unknown ages are not included (n=307)

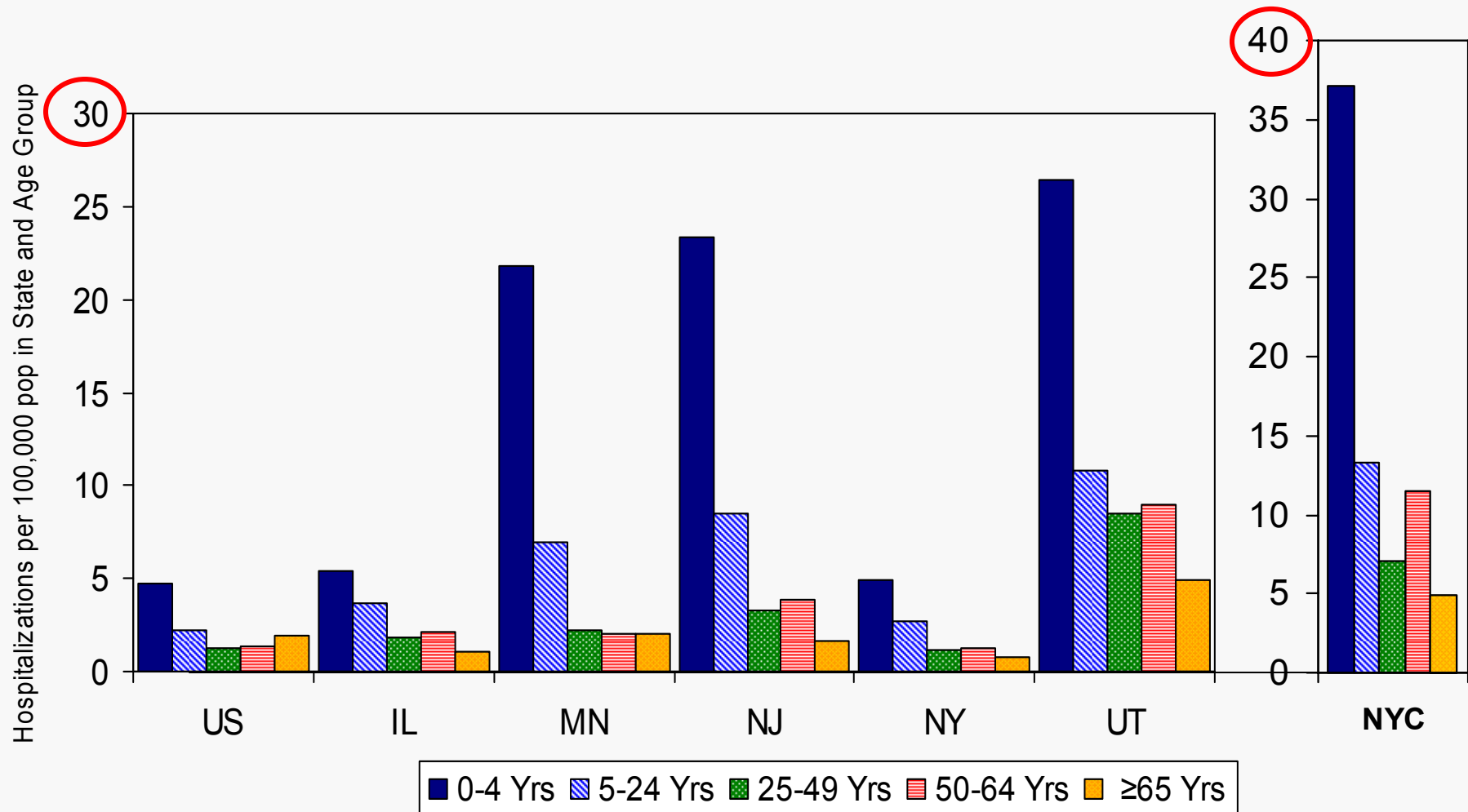
*Rate / 100,000 by Single Year Age Groups: Denominator source: 2008 Census Estimates, U.S. Census Bureau at:
<http://www.census.gov/popest/national/asrh/files/NC-EST2007-ALLDATA-R-File24.csv>



Epidemiology/Surveillance

Incidence* of Hospitalization by Age Group and Selected Sites

novel 2009-H1N1 – 30 JUL 2009



*Denominator: U.S. Census population estimates for July 2008 for all states, 2007 American Community Survey for NYC
Hospitalizations with unknown ages are not included



Epidemiology/Surveillance
Seasonal Influenza Hospitalization Rates by Age
Emerging Infections Program (EIP) sites
as of 25 JUN 2009 (report date 31 JUL 2009)

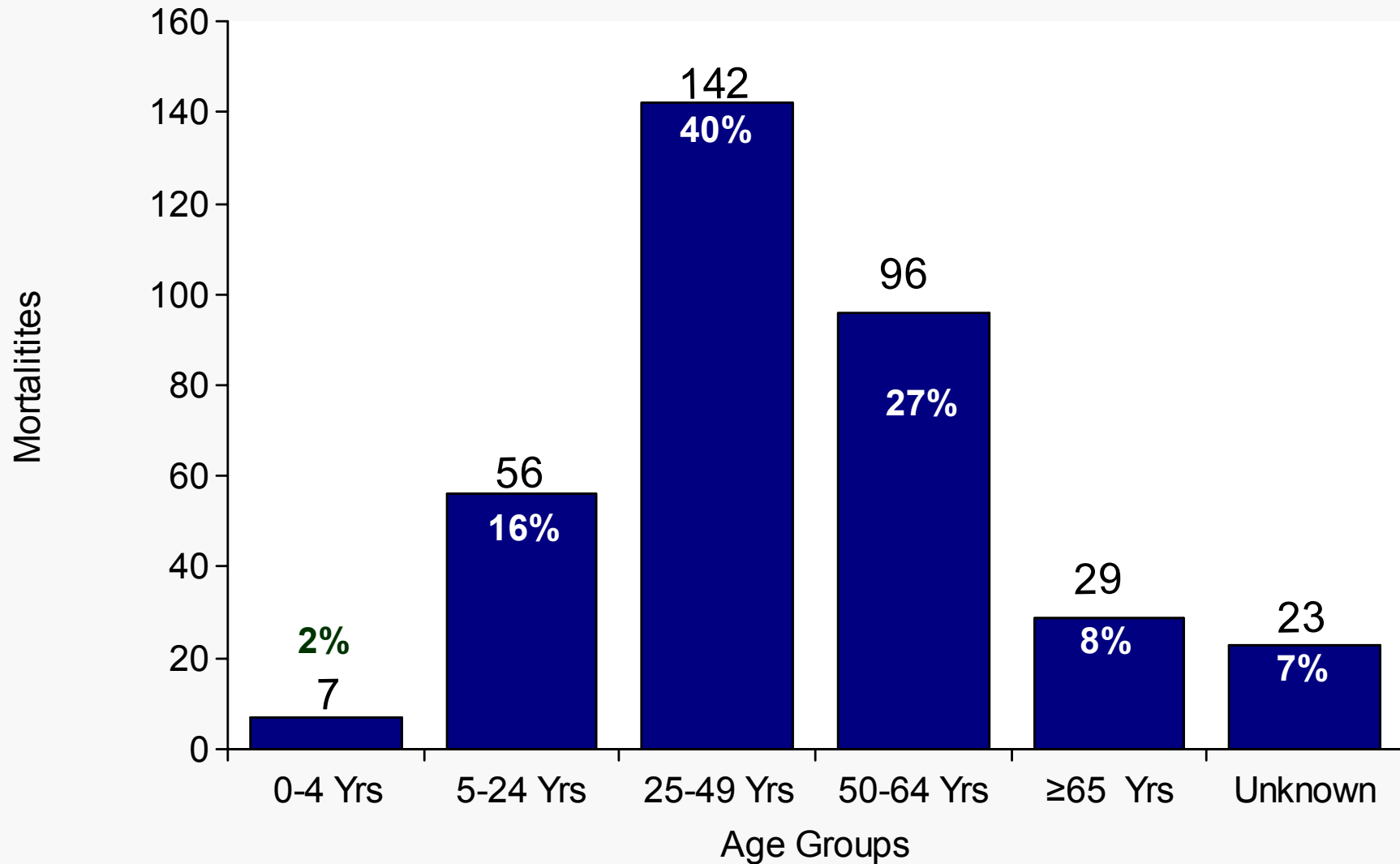




Epidemiology/Surveillance

Deaths by Age Group

novel 2009-H1N1 – 30 JUL 2009 (n=353)





**Epidemiology/Surveillance
Deaths Reported to CDC by States
novel 2009-H1N1 – 16 JULY 2009**



- **Limited data available on 192/262 (73%) deaths reported July 16 in 28 states**
- **97 Female (51%), 94 Male (49%)**
- **Race/Ethnicity (N=119)**
 - **52 (44%) NH White**
 - **42 (35%) Hispanic**
 - **18 (15%) NH Black**
 - **4 (3%) NH Asian or Pacific Islander**
 - **1 (1%) American Indian or Alaska Native**
 - **0 (0%) Multi-race**
 - **2 (2%) Hindu or noted only as “Other”**
- **Median time from illness onset to death**
 - **10 days (range 1 - 59 days)**



Epidemiology/Surveillance
Deaths Reported to CDC by States
novel 2009-H1N1 – 16 JULY 2009



- n=190
- Median age 42 years (range 2 months-84 years)

Age Groups	Hospitalized No. (%)
0-23 months	6 (3%)
2-4 Yrs	0 (0%)
5-9 Yrs	12 (6%)
10-17 Yrs	12 (6%)
18-29 Yrs	27 (14%)
30-49 Yrs	71 (37%)
50-64 Yrs	48 (25%)
≥65 Yrs	14 (7%)

83% adults



**Epidemiology/Surveillance
Deaths Reported to CDC by States
novel 2009-H1N1 – 16 JULY 2009**



- PMH data available for 175 fatal cases
- 117/175 (67%) persons with severe underlying conditions
- 151/175 (86%) persons with any underlying condition (includes obesity)

Condition	Percent Deceased Cases with Condition	
	Age <18 (N=29)	Age ≥18 (N=146)
Asthma	1 (3%)	26 (18%)
Pulmonary disease	8 (28%)	34 (23%)
Diabetes	0 (0%)	32 (22%)
Chronic cardiovascular disease	5 (17%)	31 (21%)
Neurocognitive disorder	10 (34%)	9 (6%)
Neuromuscular disorder	7 (24%)	6 (4%)
Pregnant	(0%)	11 (8%)
Seizure disorder	6 (21%)	3 (2%)
Renal Disease	0 (0%)	20 (14%)
Immunosuppressive Disorder	1 (3%)	16 (11%)
Other ULC (hepatic, cancer, immunosuppressed, metabolic disorders)	2 (7%)	28 (19%)
Morbid obesity	(0%)	13 (9%)
Obesity	3 (10%)	65 (45%)

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Epidemiology/Surveillance novel 2009-H1N1 Hospitalizations Reported to CDC Underlying Conditions as of **06 JULY 2009**



Condition	Prevalence, General US Population	Prevalence, hospitalized H1N1 patients (268)	Prevalence among deaths (160)
Asthma or COPD	8% (asthma) 4% (COPD)	32%	14% (asthma) 25% (COPD)
Diabetes	6%	15%	18%
Immunocompromised		13%	9%
Chronic cardiovascular disease*	7%	14%	19%
Current Smoker	18%	10%	ND
Chronic Renal Disease Stage III and IV	8%	9%	12%**
Neurocognitive disorder		7%	11%
Neuromuscular disorder	0.03%	7%	8%
Pregnant	1%	6%	6%
Seizure disorder	1%	6%	6%
Cancer	4%	3%	10%
Obesity	27%	8%?	41% Morbid 8%

*Excludes hypertension

**Non-specific renal disease noted in medical history