



**Director's Update Brief**  
**novel 2009-H1N1**

**Friday**

**24 JUL 2009 1100 EDT**

**Day 98**

**Week of Explaining the Burden of Disease and  
Aligning Resources**



## Key Events



### novel 2009-H1N1 – 24 JUL 2009

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- 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 23 July 2009; next update 30 July 2009**)

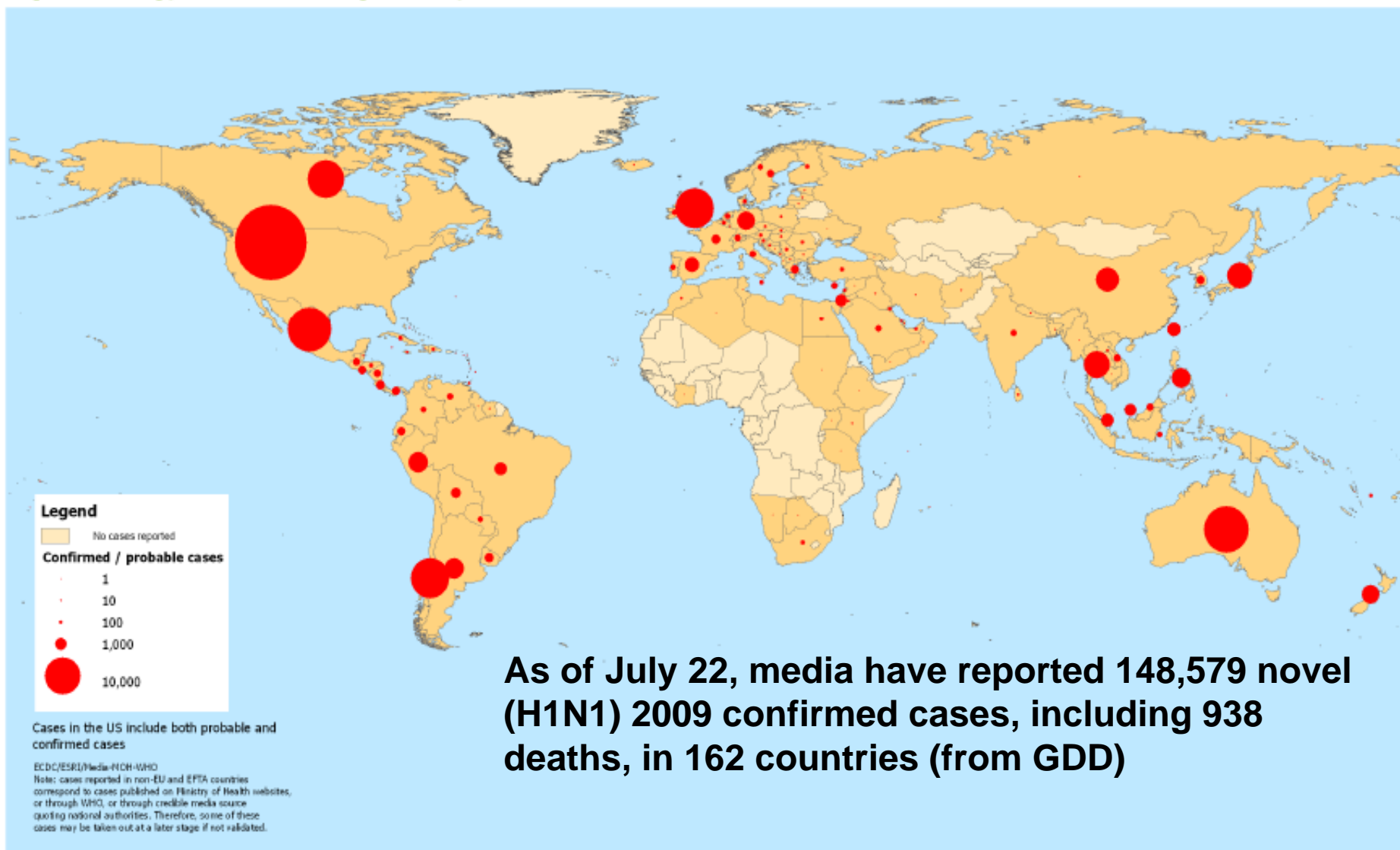
US TOTALS	CASES	HOSPS	DEATHS
CASES	43,771	5,011	302
SLTTs AFFECTED	55	47	28



# International novel 2009-H1N1 – 24 JUL 2009 Cumulative Number of Confirmed Cases



Reported cumulative number of confirmed cases of influenza A(H1N1)v  
by country, as of 23 July 2009, 17:00 hours CEST





International  
novel 2009-H1N1 – 24 JUL 2009



People will notice that more severe cases are being reported

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**On July 21, the WHO reported that the global death toll rose from 439 to more than 700, a 40% leap from early July.**

- New deaths/severe cases in Chile, Australia, Argentina, UK, Mexico
- **Challenge 1:** *We need to communicate the extent to which this is an extension of a global surge in total cases*
  - people are not “seeing” the denominator now
- **Challenge 2:** *We need to communicate that it is likely that CFPs in some places may be impacted by prioritized testing of severe cases*
  - there are invalid comparisons of CFPs across countries
- **Challenge 3:** *Perhaps we should also communicate that numbers of deaths in different countries should be adjusted for the size of the population at risk*

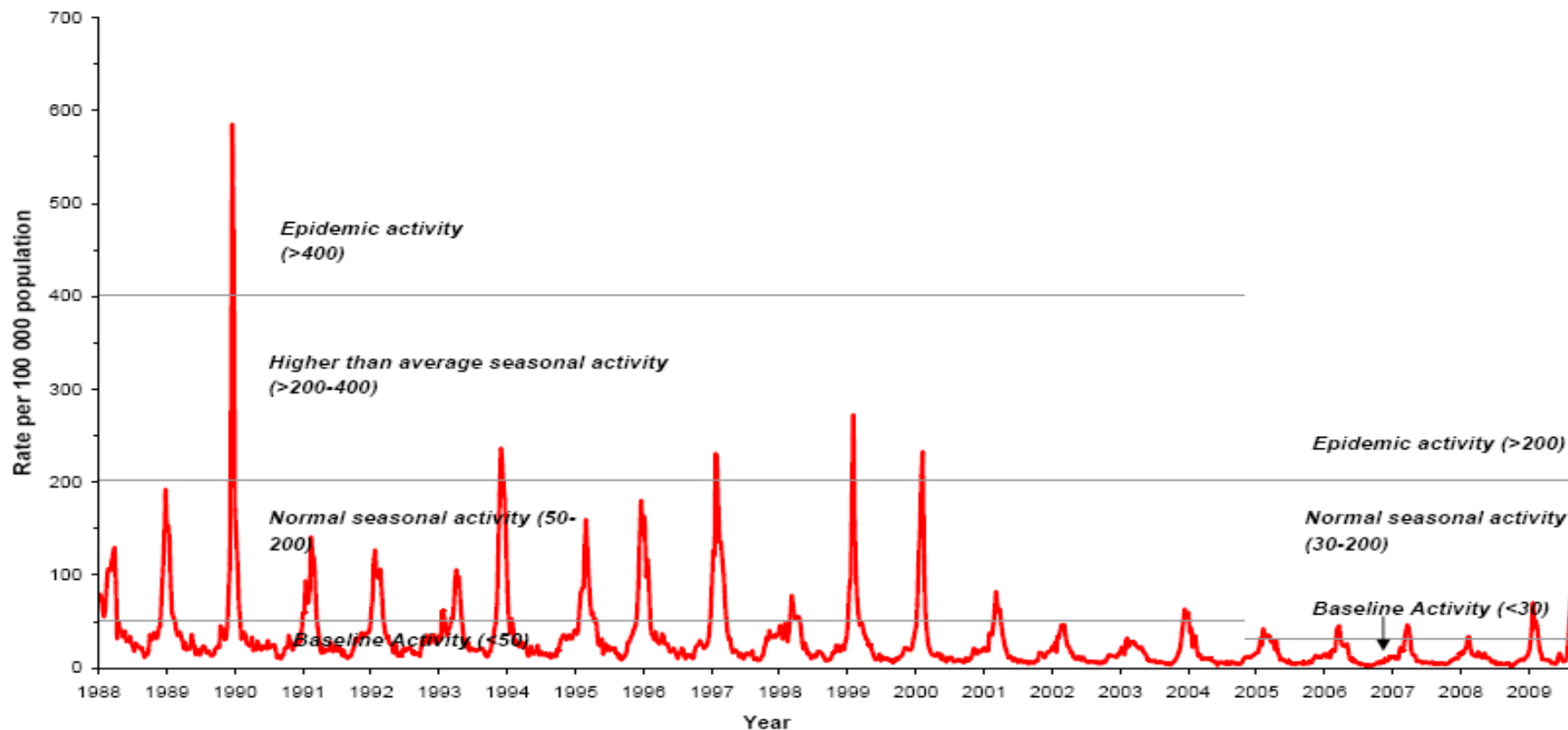


International  
novel 2009- H1N1 – 24J UL 2009  
Global Surge in Influenza Cases –UK



- **Week 29: GP consultation rates for ILI continued to increase in all GP sentinel schemes across the UK. Rates above the baseline threshold for normal seasonal flu activity in England and Wales and higher than observed at the peak of the 08/09 winter.**

RCGP weekly consultation rate for influenza-like illness (ILI), England, showing revised thresholds for describing levels of influenza activity\*.



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**International  
novel 2009- H1N1 – 24 JUL 2009  
Summary (From 7/21 SITREP)**

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- **To date, all novel influenza A (H1N1) viruses have been found to be antigenically similar to the California/07/2009 vaccine strain.**
- **CDC communicates on a daily basis with its international field staff, the WHO, MOH partners, and deployed field teams in Argentina, Chile, South Africa, Kenya and Australia.**
- **Differences in testing and surveillance practices have led to variation in the observed proportion of severe cases of all confirmed cases in different countries.**
- **Ongoing field investigations in Chile and Argentina, and regular communications with health officials in Australia suggest that the descriptive epidemiology and clinical characteristics of persons with novel H1N1 infections in the southern hemisphere remains similar to what has been observed in the United States.**
- **CDC continues to carefully follow this evolving situation.**



**Epidemiology/Surveillance**  
**novel 2009-H1N1 – 24 JUL 2009**  
**Communications for Web Posting**

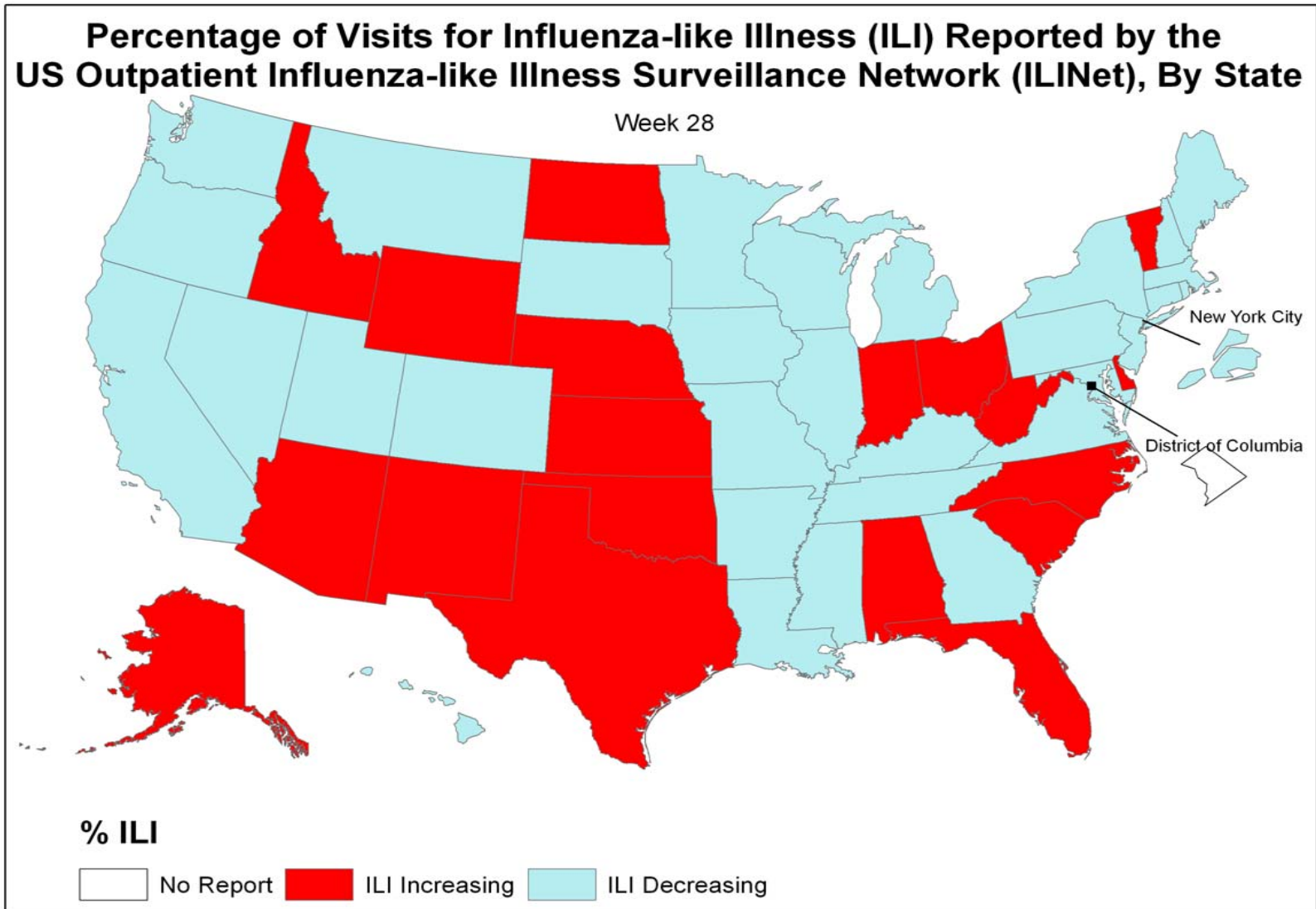
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- **Reminder – last week for case counts on cdc.gov**
  - **Q&A to explain transition**
  
- **Novel H1N1 Facts and Figures** *New and coming soon*
  - **Descriptive epidemiology slides with text**
  - **Surveillance data with interpretations**
    - **Presented as map showing activity by state**
    - **Weekly updates**



# Epidemiology/Surveillance novel 2009-H1N1 – 24 JUL 2009 ILI Weather Map



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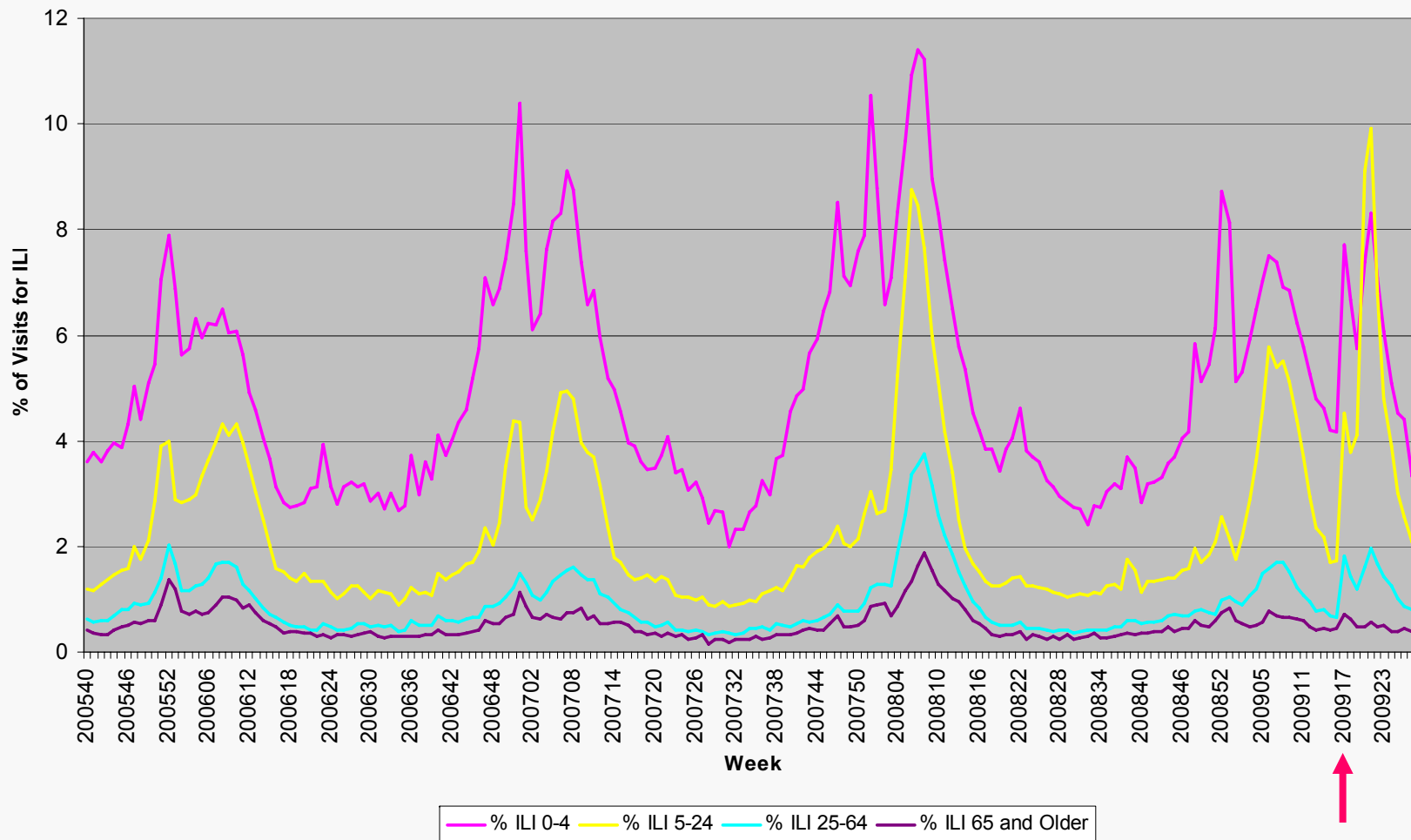




# Epidemiology/Surveillance novel 2009-H1N1 – 24 JUL 2009 ILI by Age Group



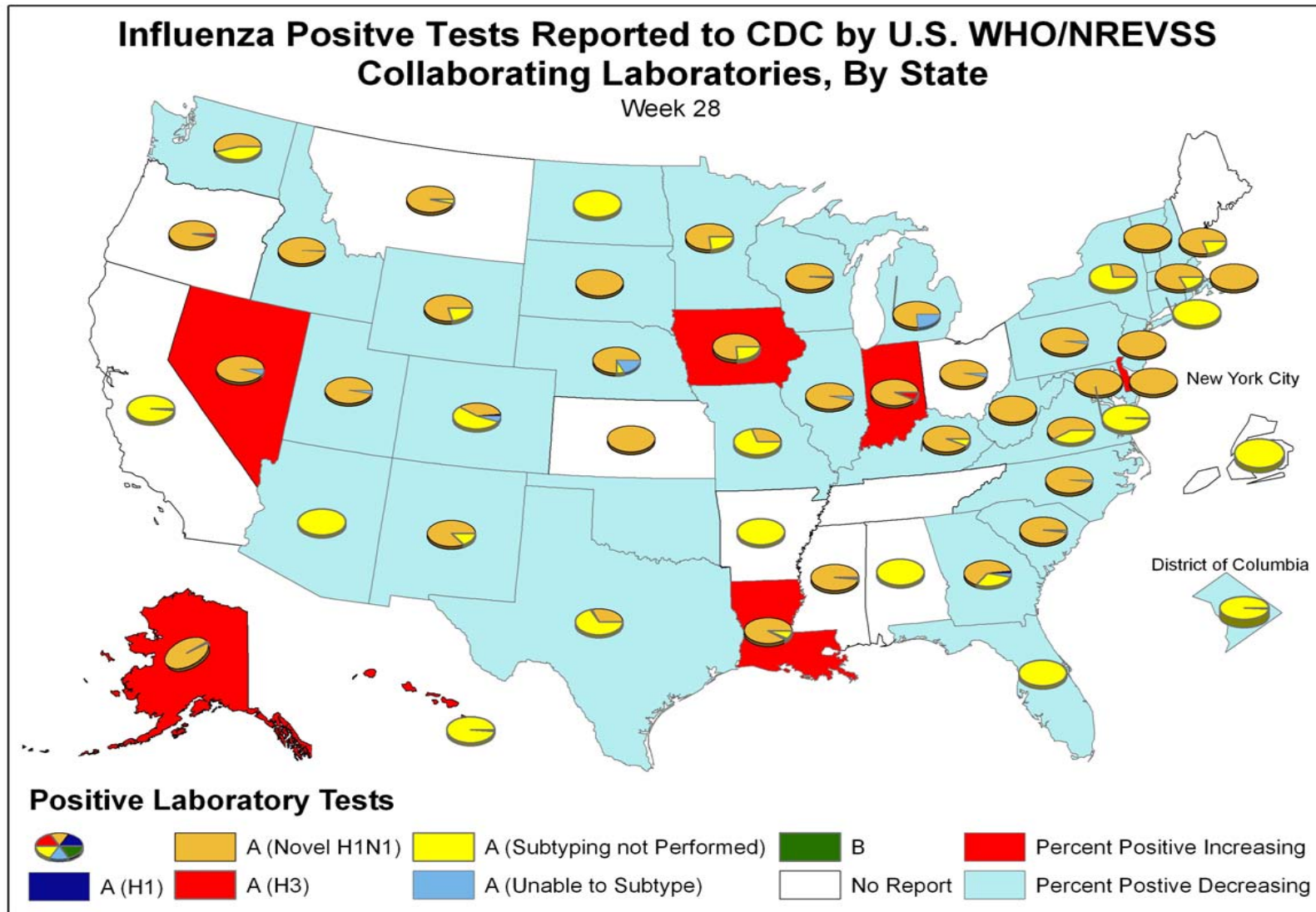
## Percentage of Visits for Influenza-like Illness (ILI) Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet), National Summary 2008-09 and Previous Three Seasons, By Age



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# Epidemiology/Surveillance novel 2009-H1N1 – 24 JUL 2009 Virus Weather Map



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**Laboratory  
Influenza Serological Studies  
novel 2009-H1N1 –24 July 2009**



- **Used serological methods to investigate the extent of pre-existing cross-reactive antibody to novel 2009-H1N1 virus in different age groups as a result of prior influenza vaccination and/or infection**
  - **Individuals < 30 years of age have little or no serum antibody that cross-react with the novel 2009-H1N1 virus and are serologically “naïve”**
  - **A proportion of adults >60 years of age have pre-existing cross-reactive antibody to novel 2009-H1N1 virus**
  - **Seasonal influenza vaccination, either adjuvanted or non-adjuvanted, provides little, if any, boost to the cross-reactive novel 2009-H1N1 antibody response in any age group**
  - **Individuals who likely were exposed to a 1918-like H1N1 virus exhibited high titers of antibody that cross-react with novel 2009-H1N1 virus**
  - **In a proportion of US lab-confirmed cases where age was available:**
    - **79% of cases were in individuals aged < 30 years**
    - **~2% of cases were in individuals aged > 60 years**



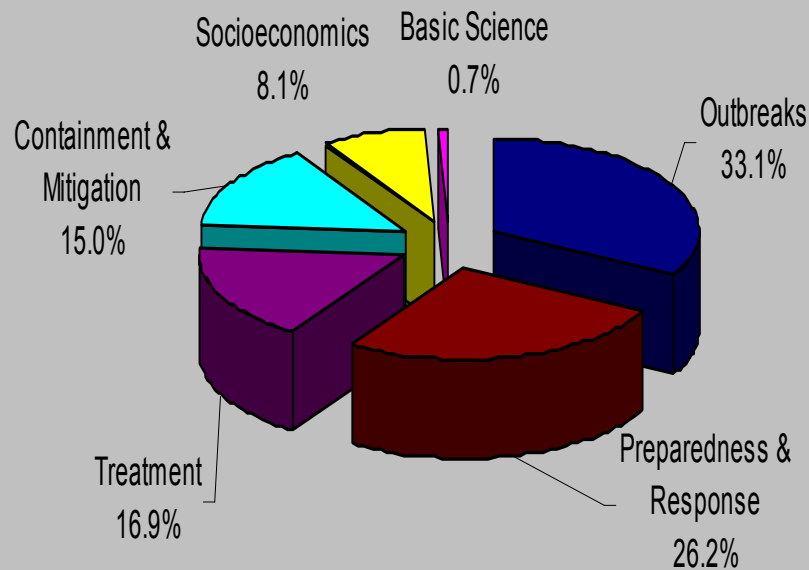
**Laboratory  
Influenza Serological Studies  
novel 2009-H1N1 –24 July 2009**



- **Studies of serologic response in laboratory confirmed cases is ongoing**
  - **Needed to better understand specificity of response to novel 2009-H1N1 virus in individuals of different ages**
  - **Analysis of paired sera is optimal to demonstrate a rise in titer**
  - **Single sera collected in many sero-epidemiologic investigations provide a particular challenge in determining whether a positive titer is specific for novel 2009-H1N1 virus and indicative of recent infection**
    - **Develop a testing algorithm to rule out positivity due to cross-reactive antibody resulting from prior infection/vaccination**
- **Ongoing expansion of laboratory capacity to handle  $\geq 10,000$  samples**

Figure 1: Distribution of News Topics (N=1384)

7/16 - 7/22



1) Outbreaks:  
Widespread coverage  
updated case counts  
first deaths  
high-profile cases

2) Preparedness  
•Govt plans for the upcoming flu season

3) Treatment  
•Progress of vaccine  
•Distribution plans



**Communication Summary (JIC)  
novel 2009-H1N1 – 24 JUL 2009  
Update on Communication Planning**



<b>Vaccine Campaign</b>	<b>Strategy Session 7/23-24</b>	<b>Kristine Sheedy NCIRD</b>
<b>Immunization Safety Emergency Plan</b>	<b>--Draft Plan Complete --Message Development &amp; Testing</b>	<b>Abigail Tumpey ISO</b>
<b>Traveler's Health Plan</b>	<b>--Communication Locations Identified --Key messages drafted</b>	<b>Gabby Benenson Division of Global Migration &amp; Quarantine</b>
<b>Community Mitigation Plan</b>	<b>--Guidance being drafted --Back to school tool kit pending</b>	<b>Community Mitigation Task Force</b>
<b>Flu Prevention Plan</b>	<b>Key messages cleared "Take 3 to Fight Flu"</b>	<b>Erin Burns Influenza Division</b>
<b>Media Relations Activities</b>	<b>7/24 Briefing Seasonal flu 7/30 Briefing planned --MMWR (Rapid Tests) --ACIP Meeting F/U</b>	<b>DMR</b>

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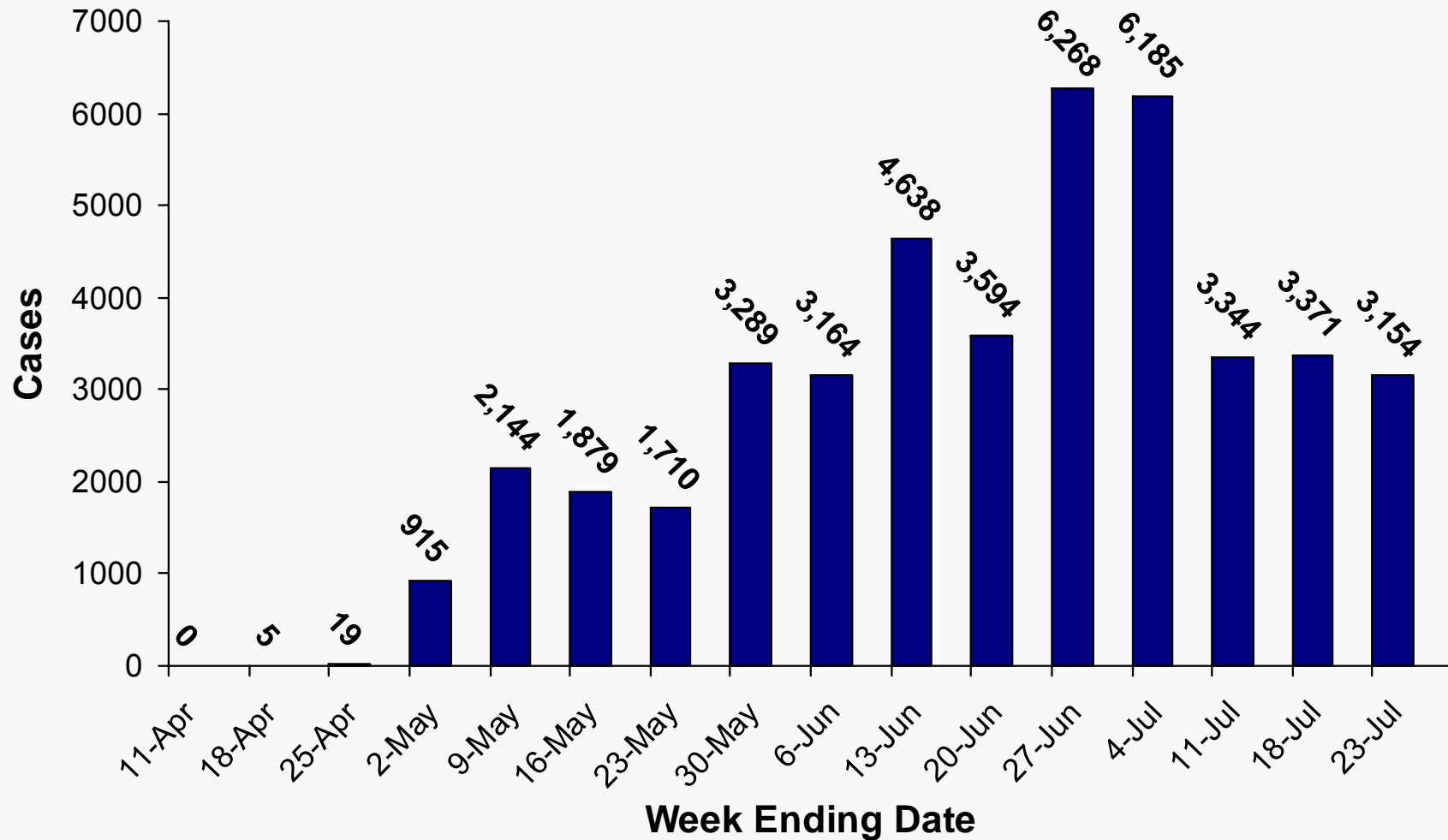
## **Supporting Documentation**



# Epidemiology/Surveillance

## Cases by Report Date

novel 2009-H1N1 – 24 JUL 2009 (n=43,771) (Weekly\*)



\*Data for week ending 4 July 2009 include reports submitted by 7/9/09 11:00 AM.

Dates not available for 92 cases.

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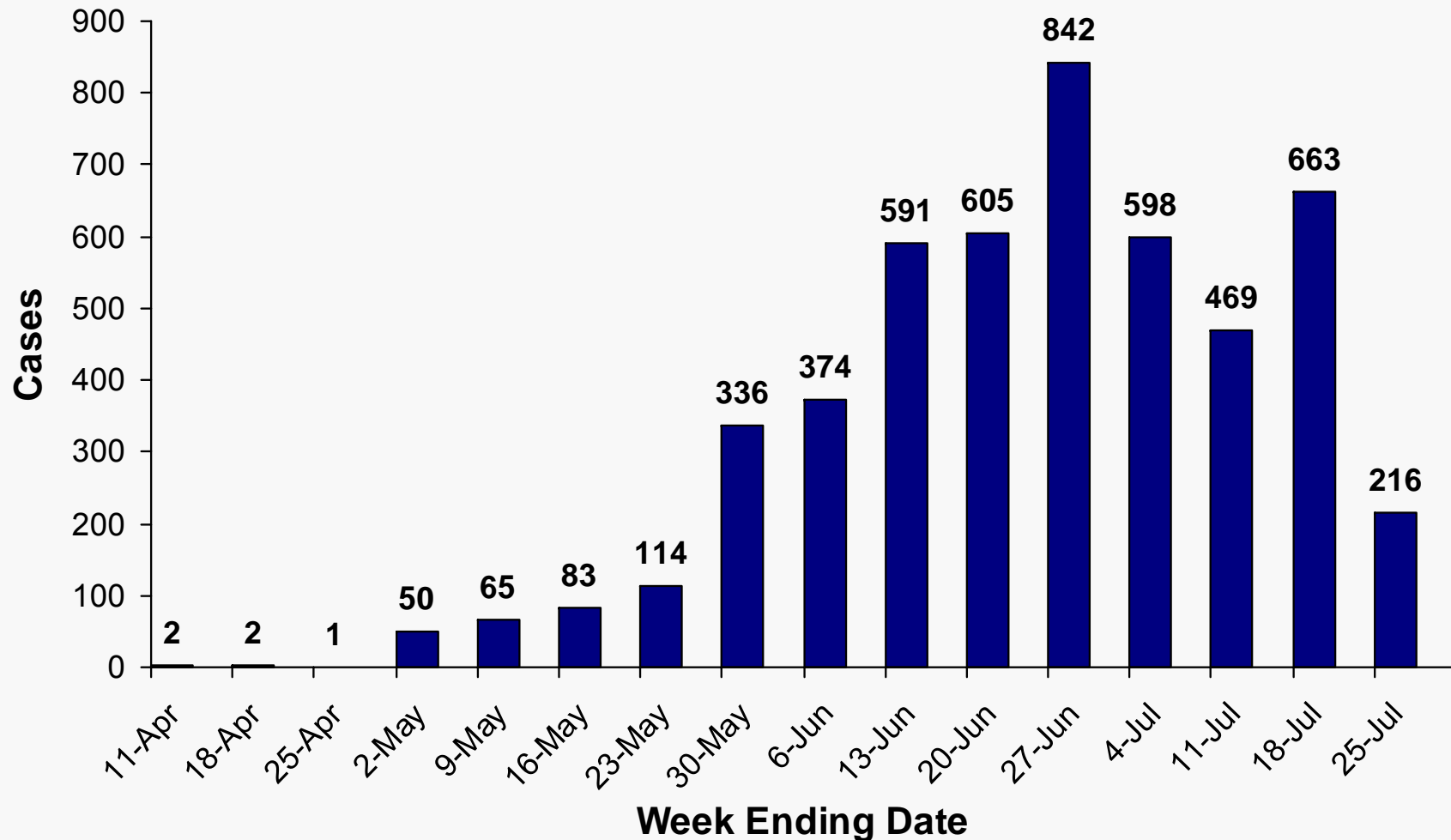




# Epidemiology/Surveillance

## Hospitalizations by Report Date

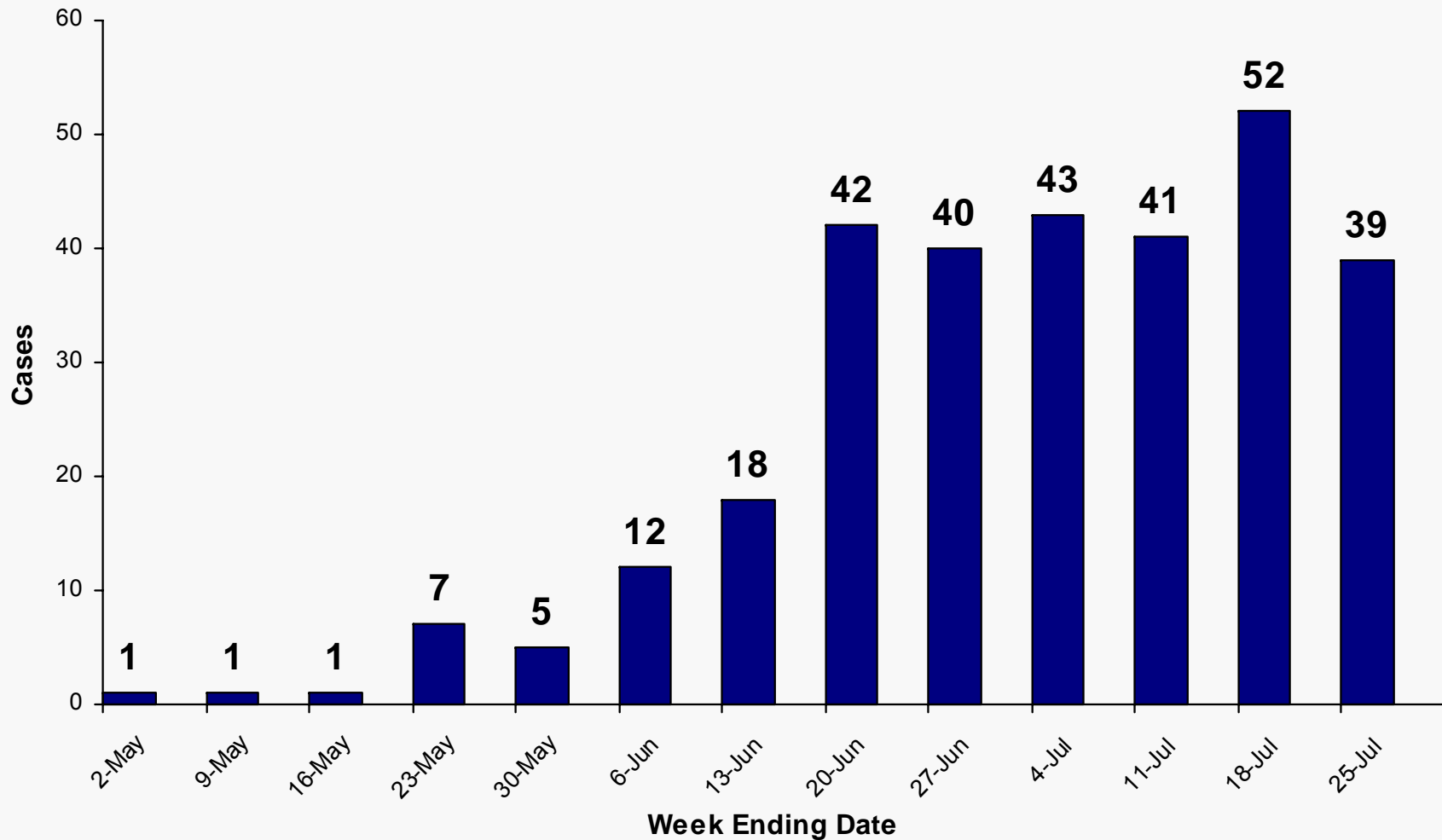
### novel 2009-H1N1 – 24 JUL 2009 (n=5,011) (Weekly\*)



\*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 – 24 JUL 2009 (n=302) (Weekly\*)

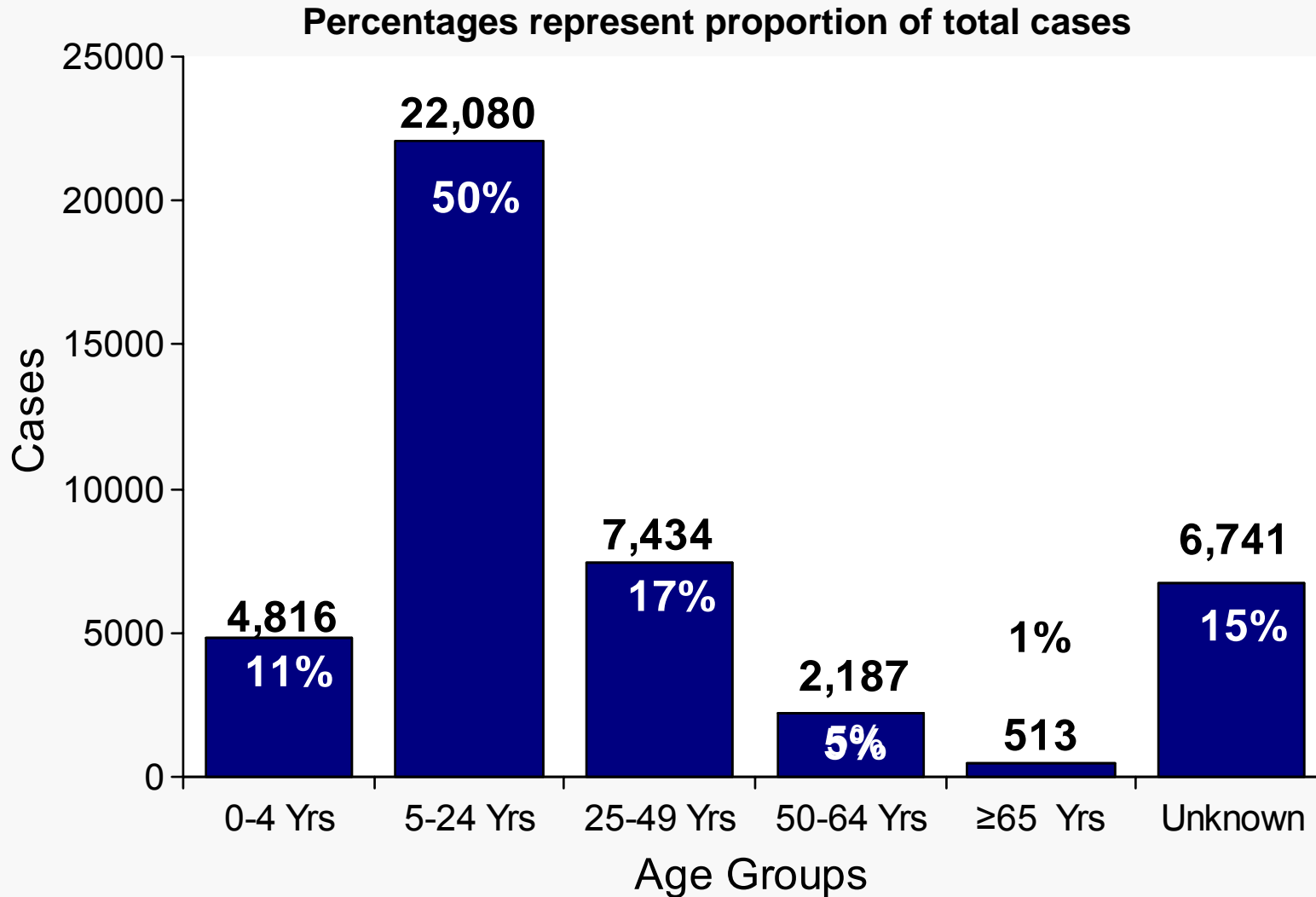


\*Data for week ending 25 July 2009 include reports submitted between 1:00 AM EDT 6/25/2009 and 11:00 AM.

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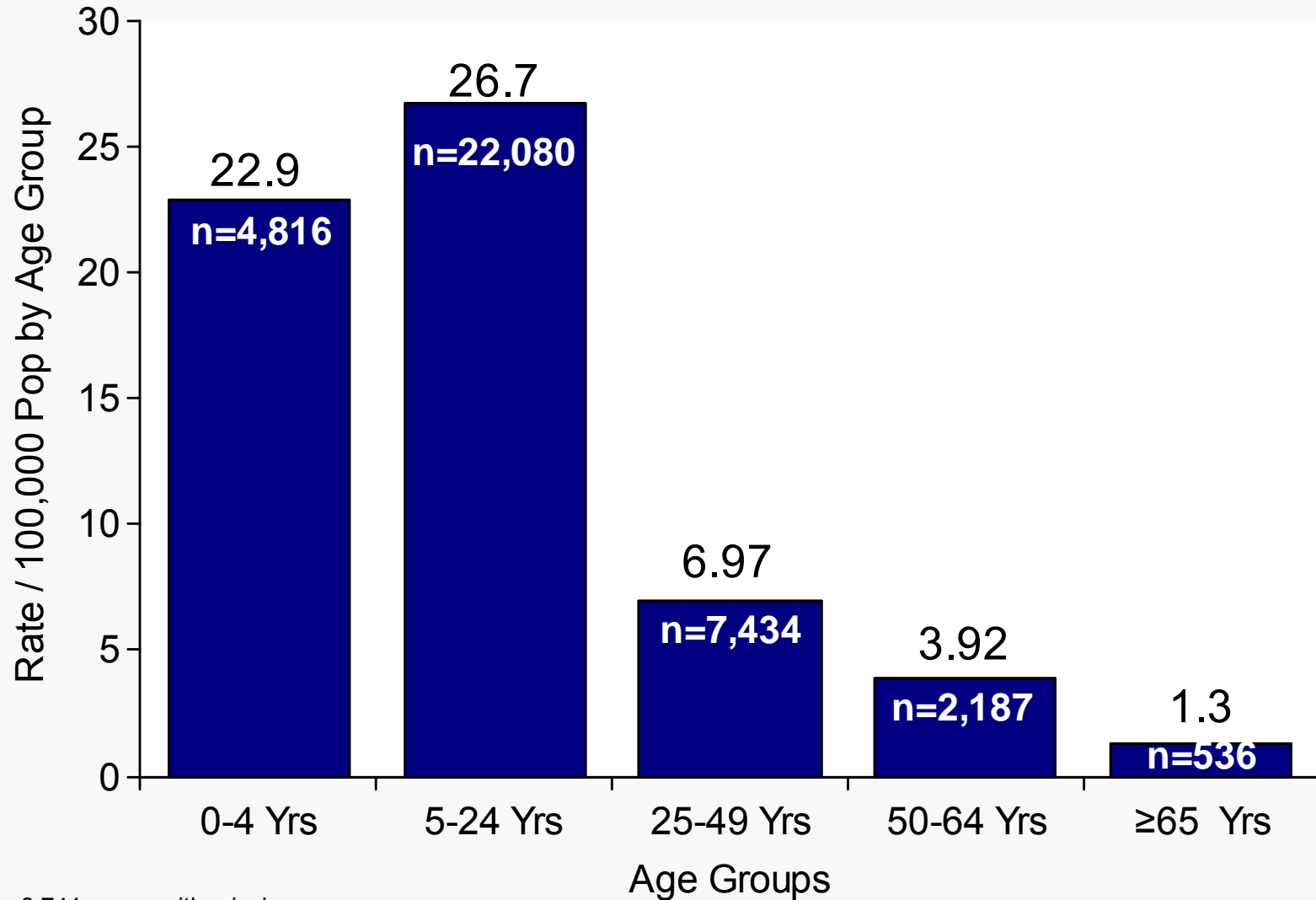
# Epidemiology/Surveillance Cases by Age Group novel 2009-H1N1 – 24 JUL 2009 (n=43,771)



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## Epidemiology/Surveillance Rate per 100,000 Population by Age Group novel 2009-H1N1 – 24 JUL 2009 (n=37,030\*)



\*Excludes 6,741 cases with missing ages.

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>

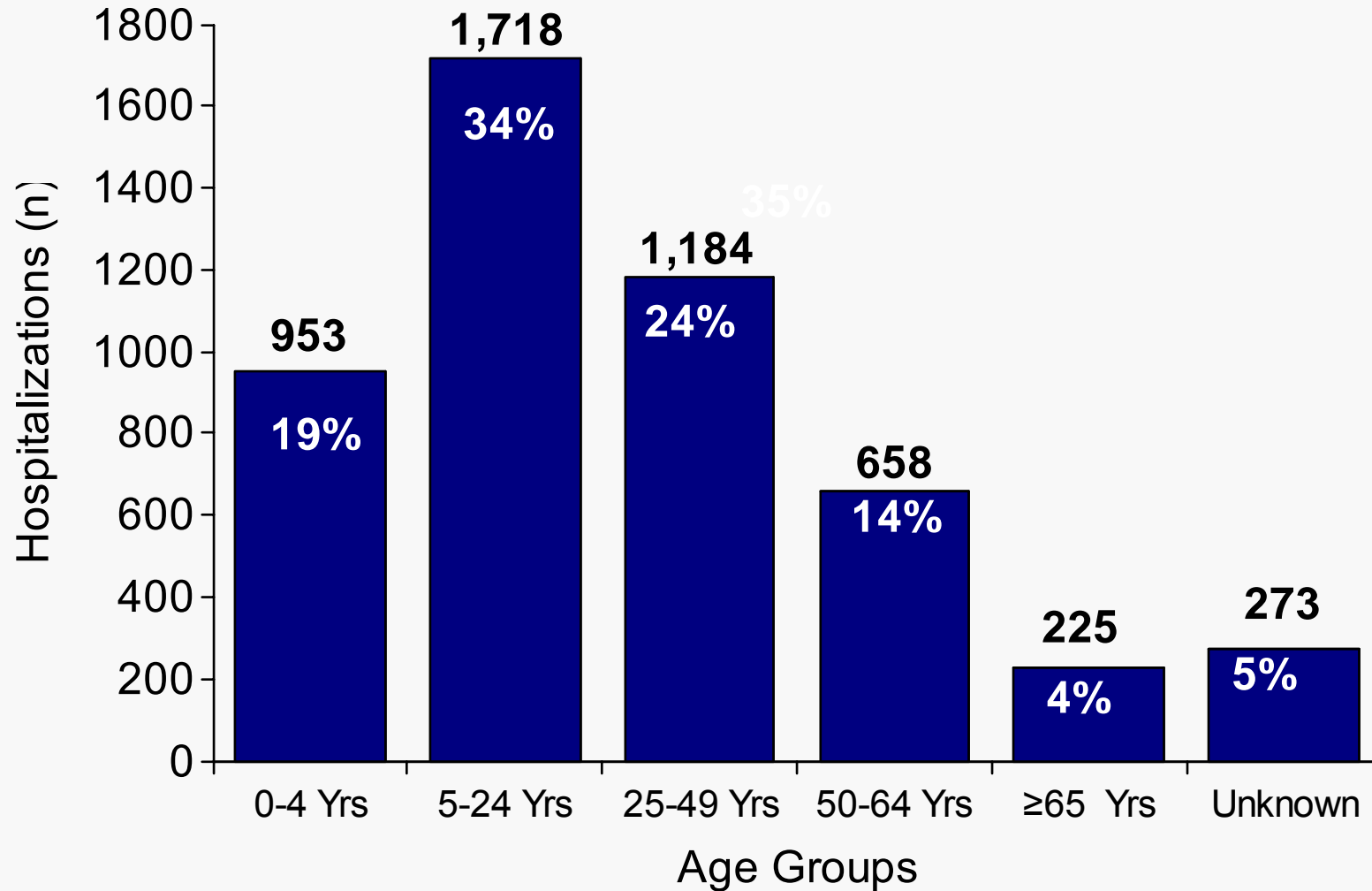
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# Epidemiology/Surveillance Hospitalizations by Age Group novel 2009-H1N1 – 24 JUL 2009 (n=5,011)



Percentages Represent Proportion of Total Hospitalizations



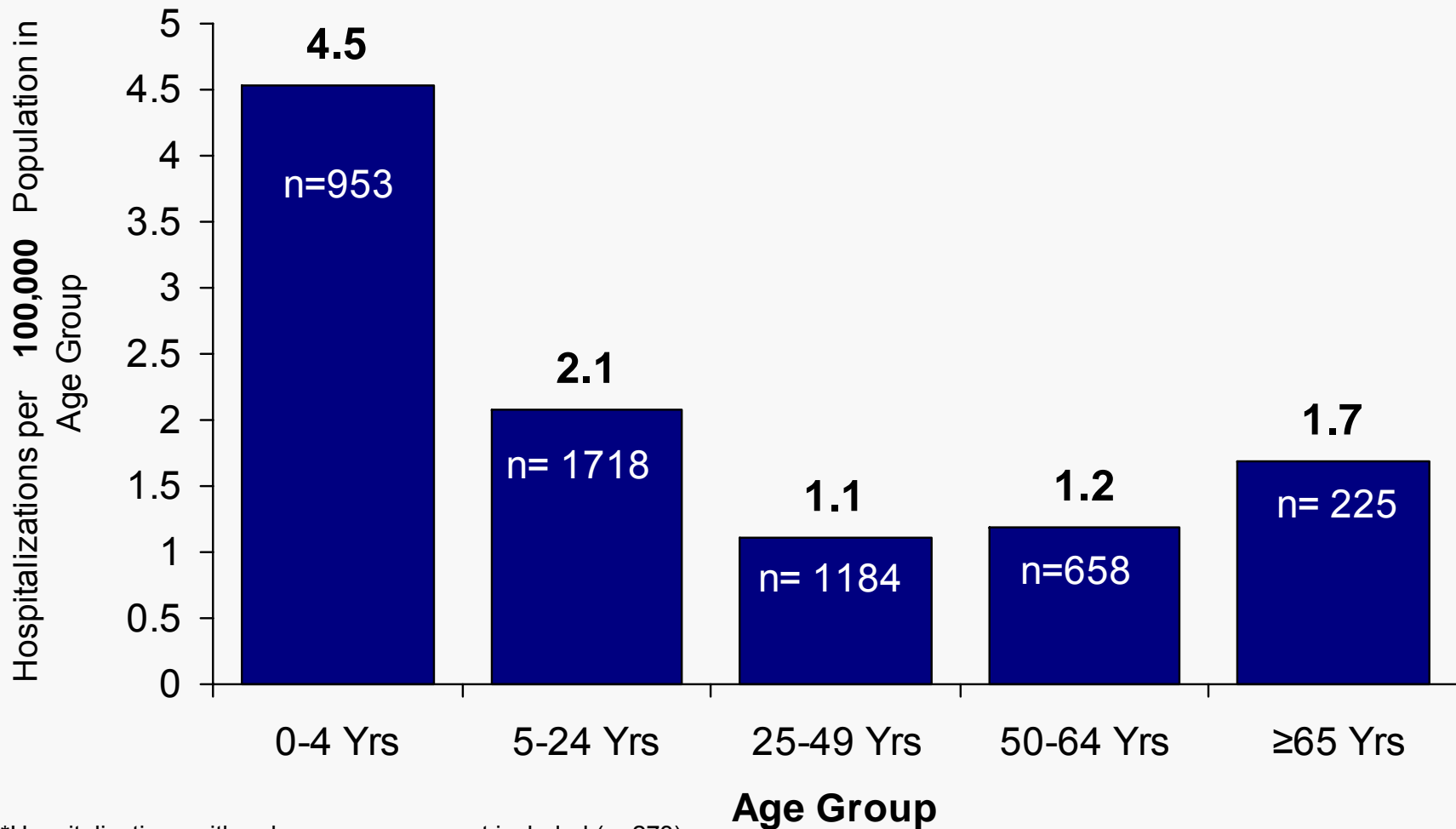
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# Epidemiology/Surveillance

## Hospitalization Rate per 100,000 Population by Age Group (n=4,738\*)

### novel 2009-H1N1 – 24 JUL 2009



\*Hospitalizations with unknown ages are not included (n=273)

\*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>

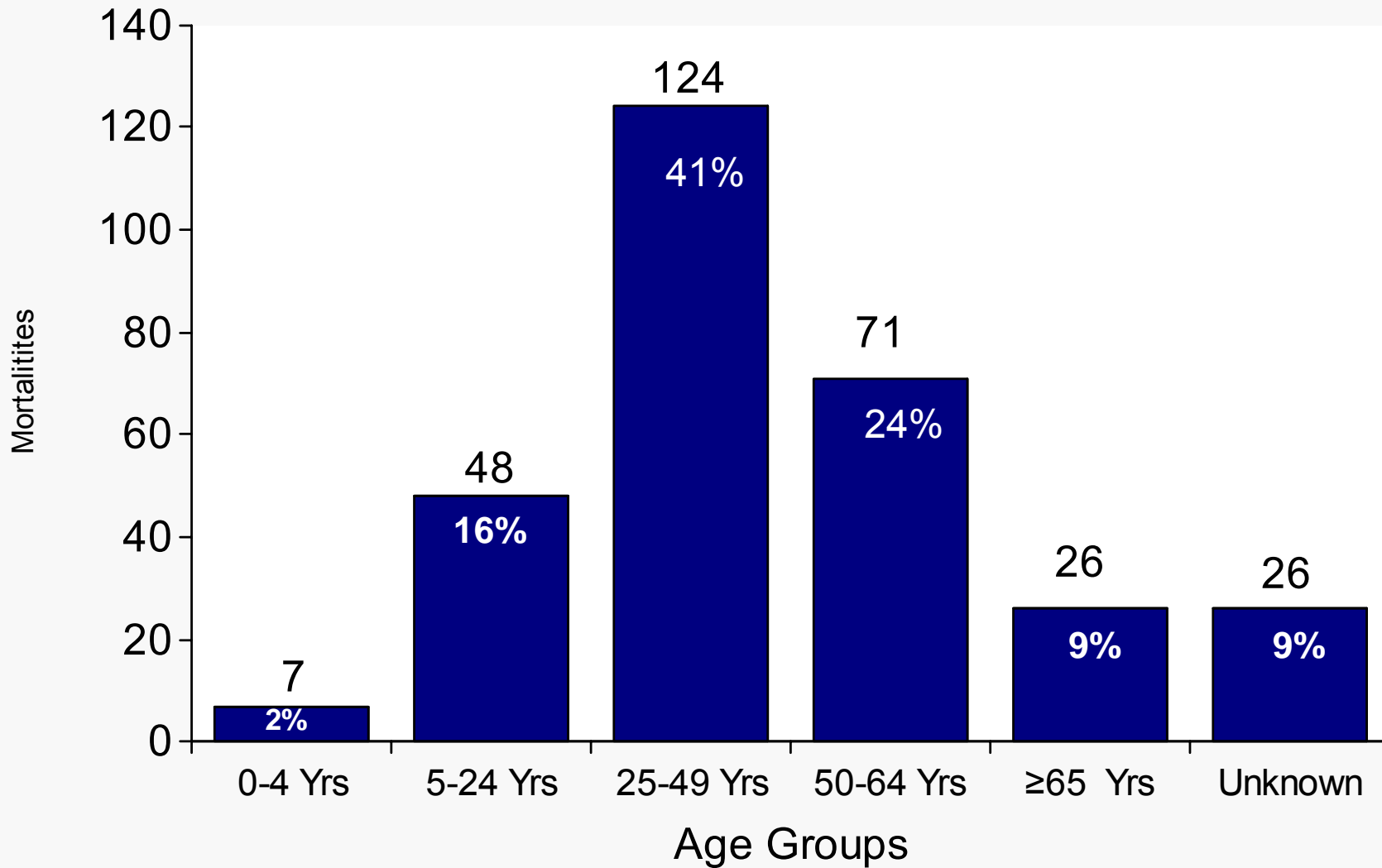
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# Epidemiology/Surveillance

## Deaths by Age Group

novel 2009-H1N1 – 24 JUL 2009 (n=302)



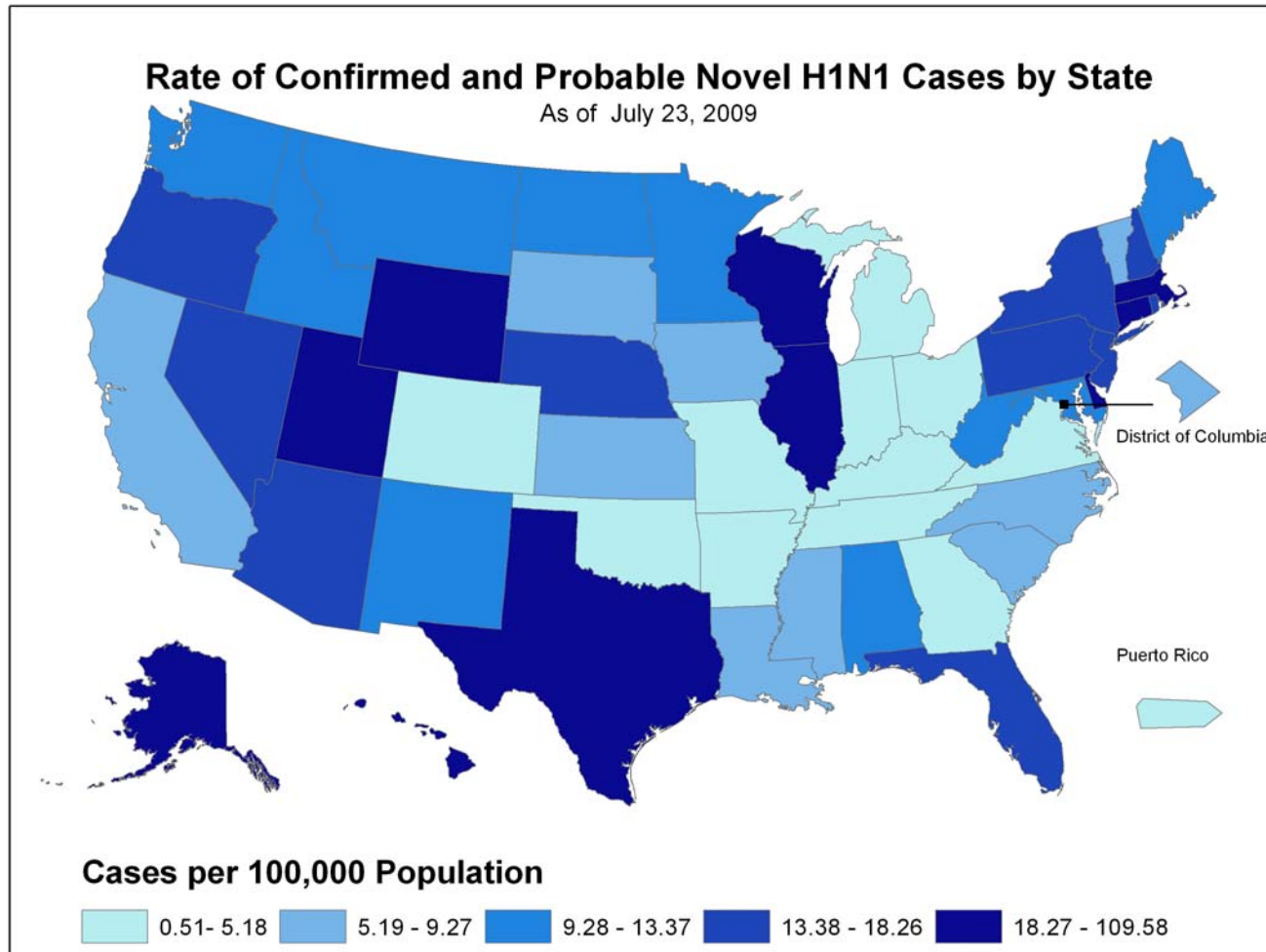
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# Epidemiology/Surveillance

## novel H1N1 Cases by State - Rate / 100,000 State Population

24 JUL 2009



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Epidemiology/Surveillance  
Surveillance Systems  
novel 2009-H1N1 – 24 JUL 2009



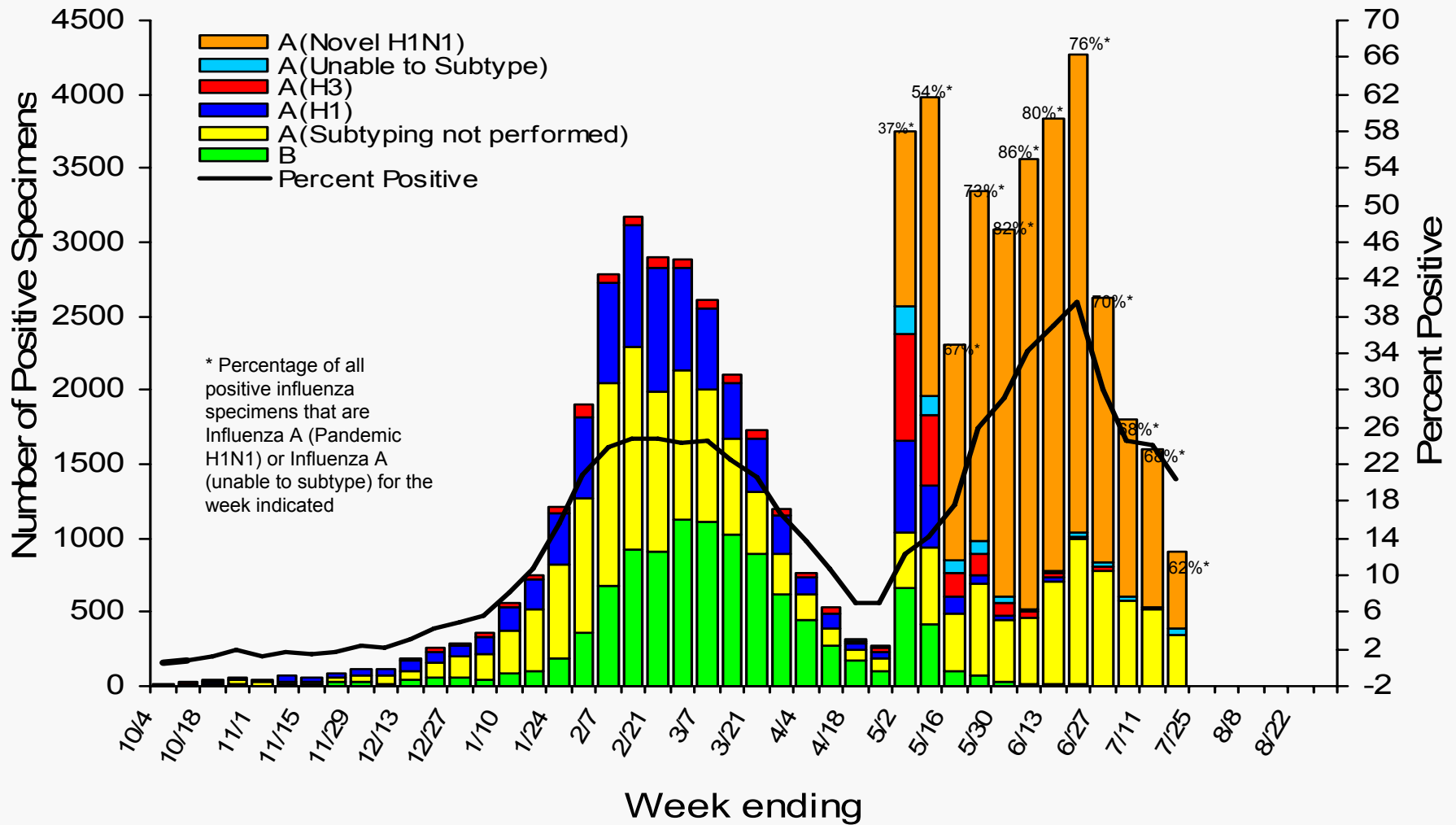
- ***WHO/NREVSS Collaborating Laboratories***
  - Seasonal A (H1), A (H3), and B viruses co-circulated with Novel H1N1 viruses
  - % of specimens testing positive for influenza decreased
- ***ILINet (week ending 18 July)***
  - % of ILI outpatient visits is below the national baseline
  - Overall, the % of outpatient visits for ILI decreased slightly
- ***122 Cities Mortality Reporting System (graph)***
  - % pneumonia and influenza deaths was slightly above the epidemic threshold
  - % deaths due to pneumonia and influenza increased slightly
- ***Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists – state reporting:***
  - Widespread: 7 states
  - Local: DC + 13 states
  - Regional: PR + 13 states
  - Sporadic: 17 states



# Epidemiology/Surveillance

## U.S. WHO/NREVSS Collaborating Laboratories Summary, 2008-09

### novel 2009-H1N1 – 24 JUL 2009



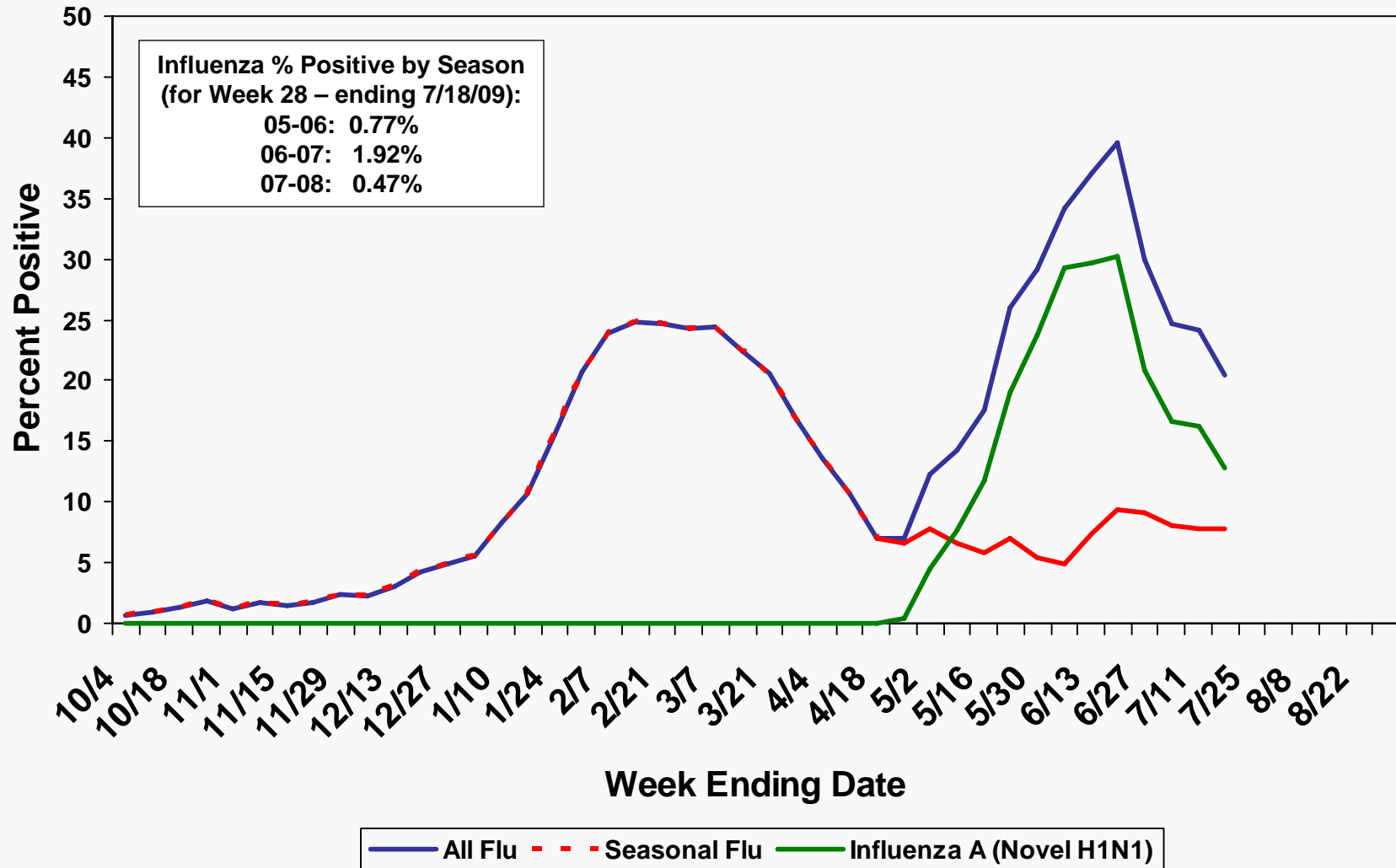
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## Epidemiology/Surveillance



# Percent of Specimens Positive for Influenza Reported by WHO and NREVSS Labs: Novel Influenza A(H1N1) vs. Seasonal Influenza, by Week novel 2009-H1N1 – 24 JUL 2009



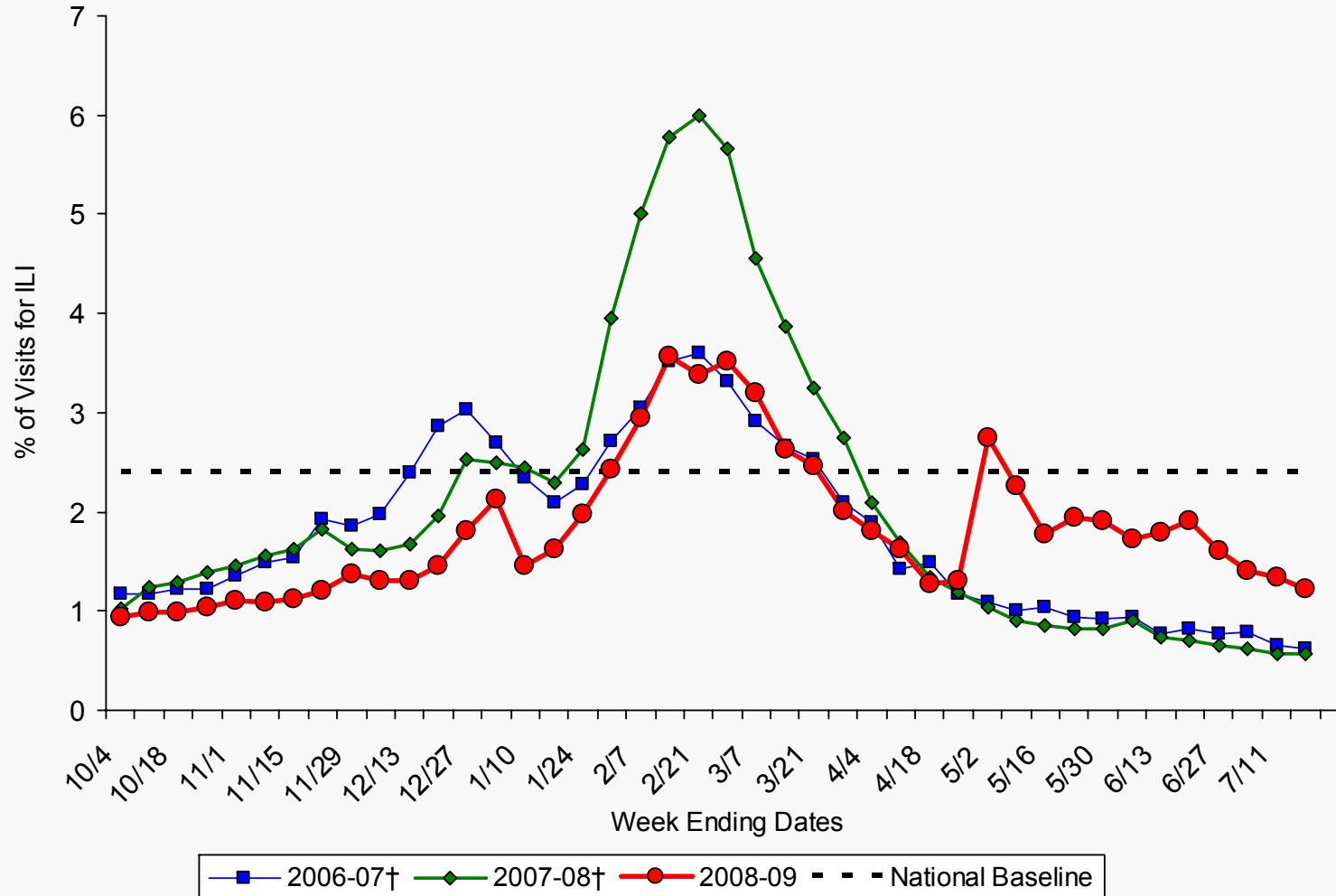
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# Epidemiology/Surveillance

## 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 – 24 JUL 2009



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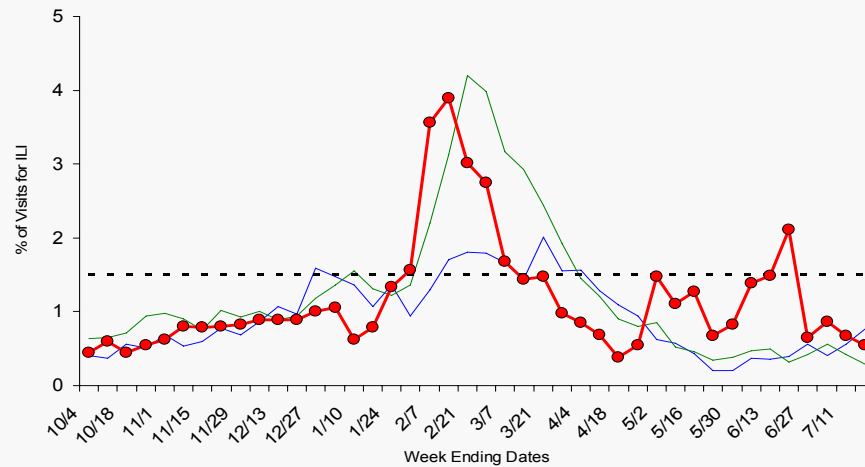
# Epidemiology/Surveillance

## Current Influenza Surveillance – ILINet Regions I-III novel 2009-H1N1

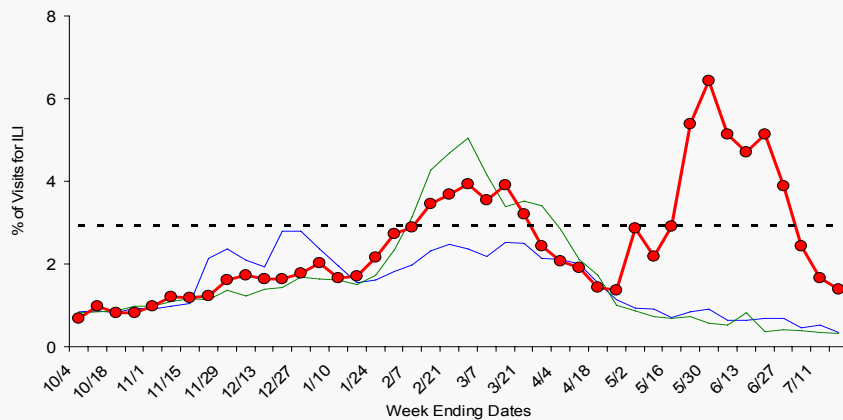
### 24 JUL 2009



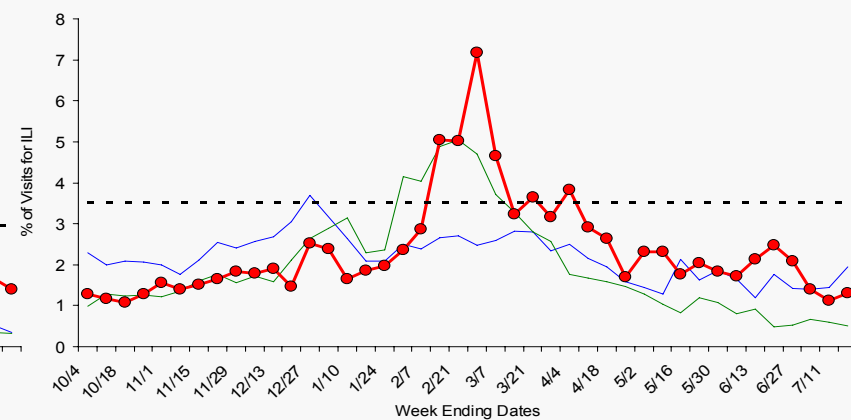
Region I - CT, ME, MA, NH, RI, VT



Region II - NJ, NY



Region III - DE, DC, MD, PA, VA, WV



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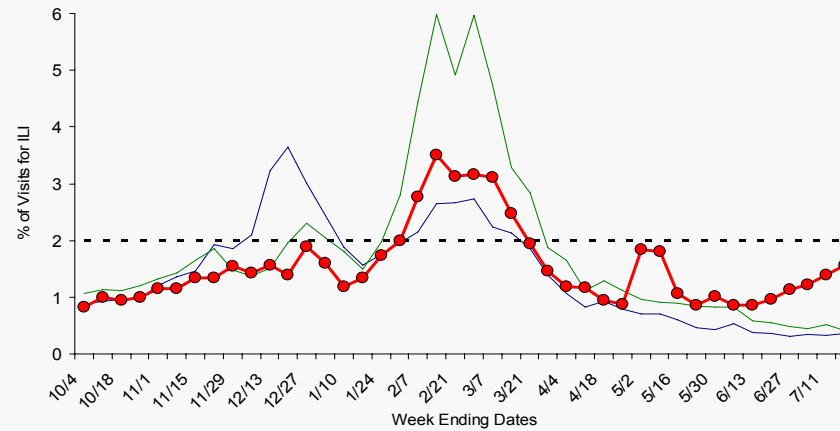
# Epidemiology/Surveillance

## Current Influenza Surveillance – ILINet Regions IV-VI novel 2009-H1N1

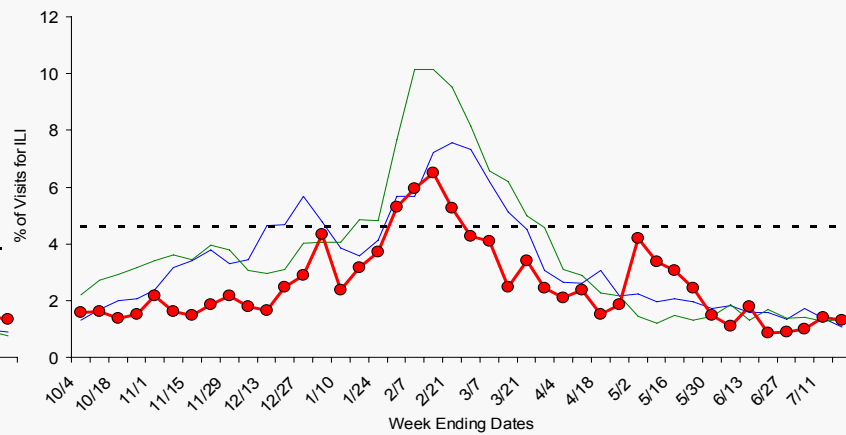
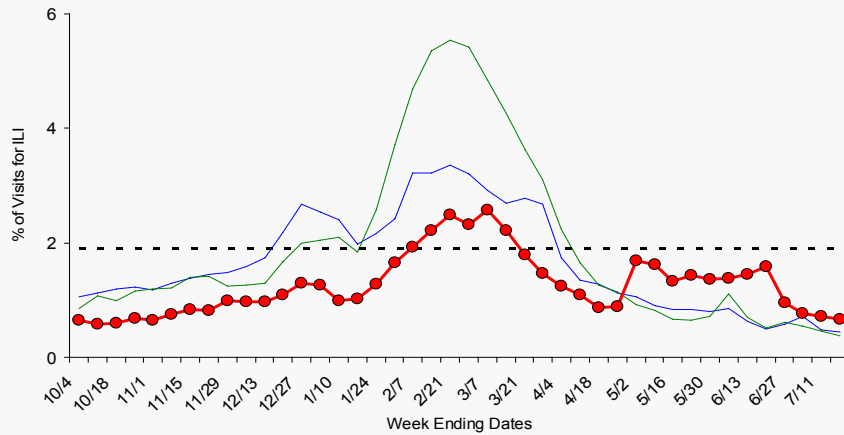
### 24 JUL 2009



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



Region V - IL, IN, MI, MN, OH, WI      Region VI - AR, LA, NM, OK, TX



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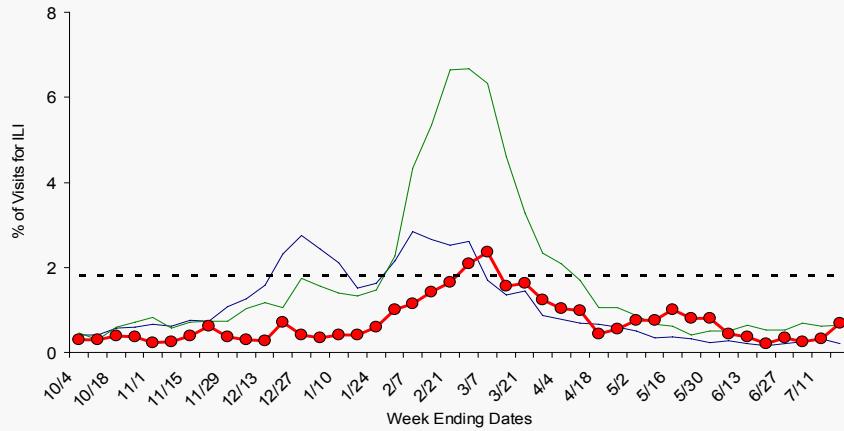
# Epidemiology/Surveillance

## Current Influenza Surveillance – ILINet Regions VII-X

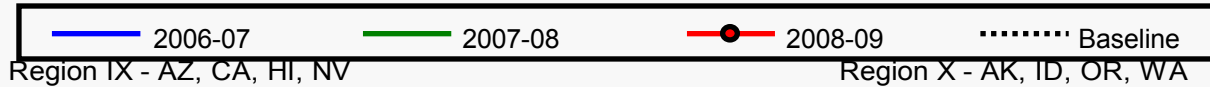
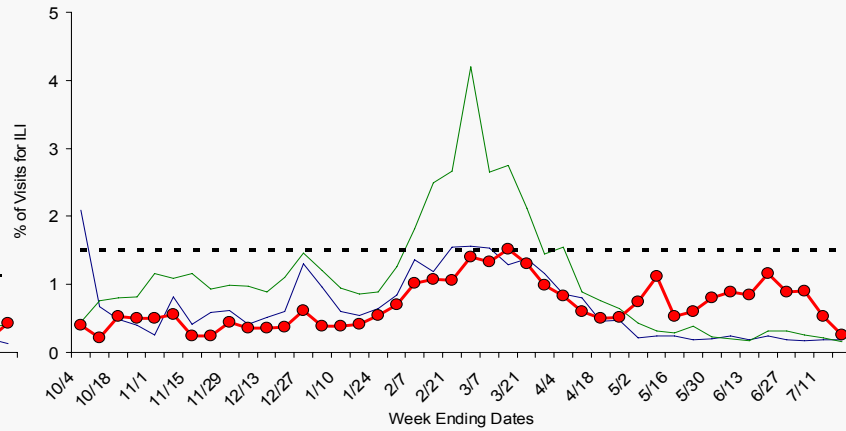
### novel 2009-H1N1 – 24 JUL 2009



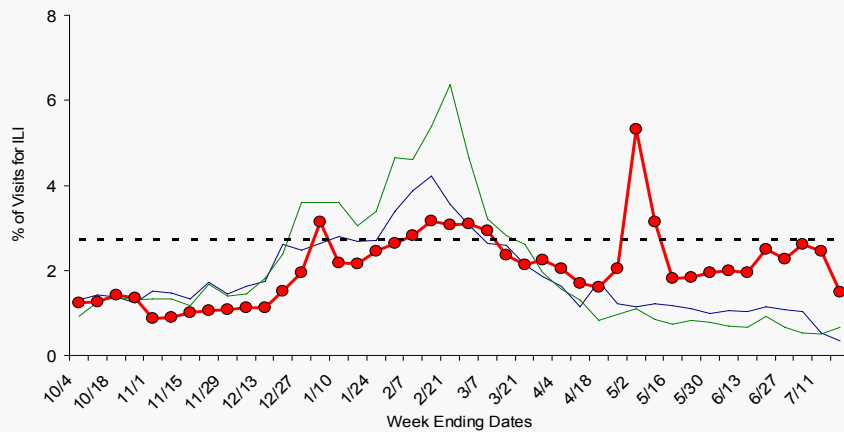
Region VII - IA, KS, MO, NE



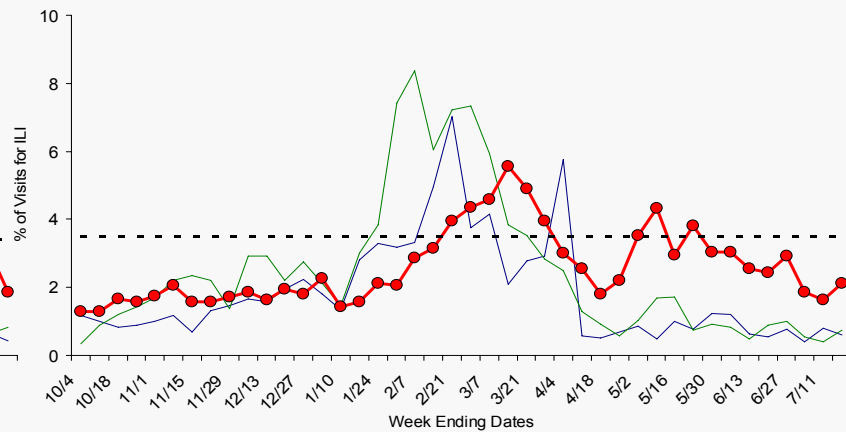
Region VIII - CO, MT, ND, SD, UT, WY



Region IX - AZ, CA, HI, NV



Region X - AK, ID, OR, WA

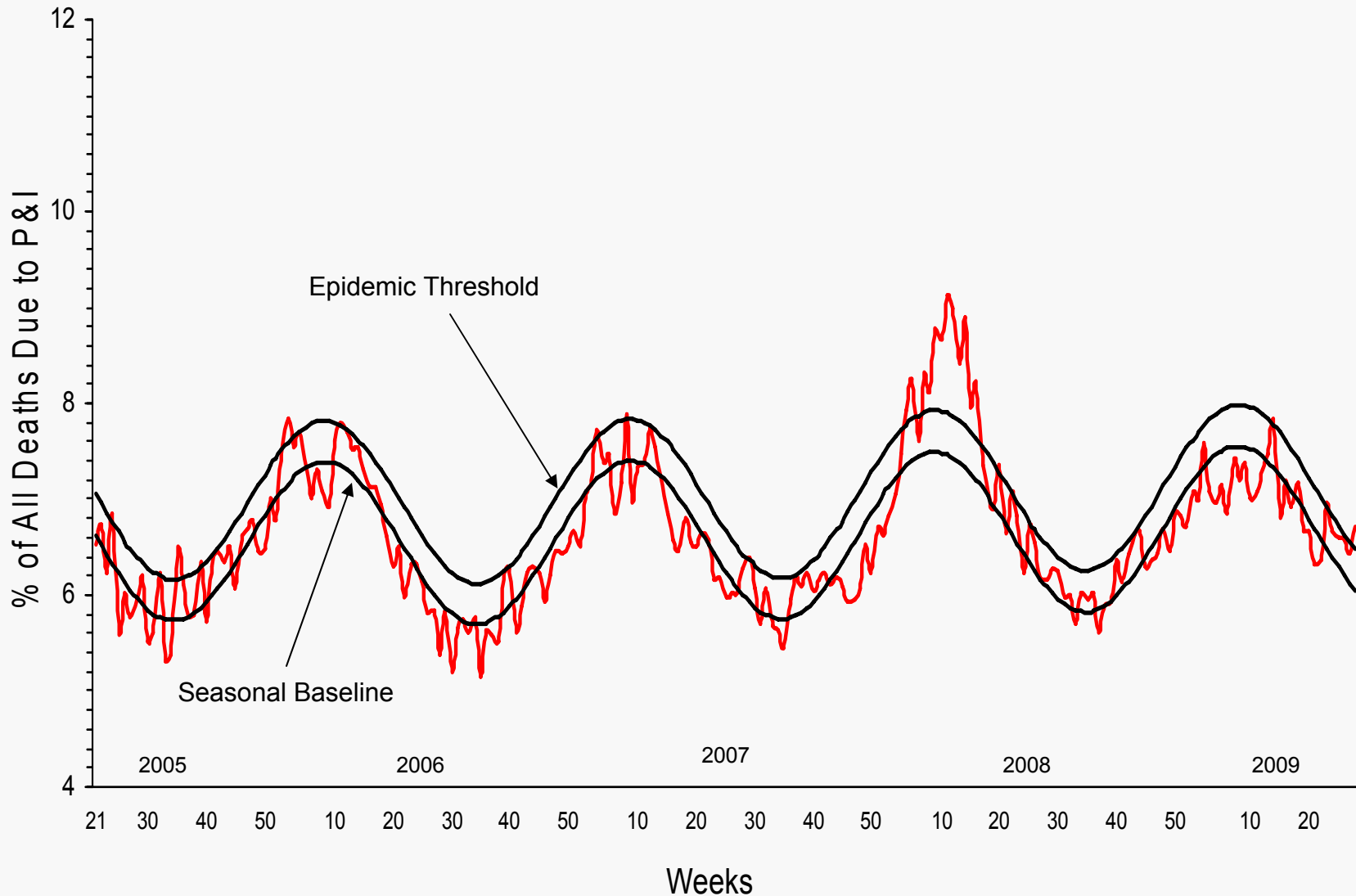


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**Epidemiology/Surveillance**  
***Pneumonia and Influenza Mortality for 122 U.S. Cities***  
**Week Ending 07/18/2009**

**novel 2009-H1N1 – (report date 24 JUL 2009)**



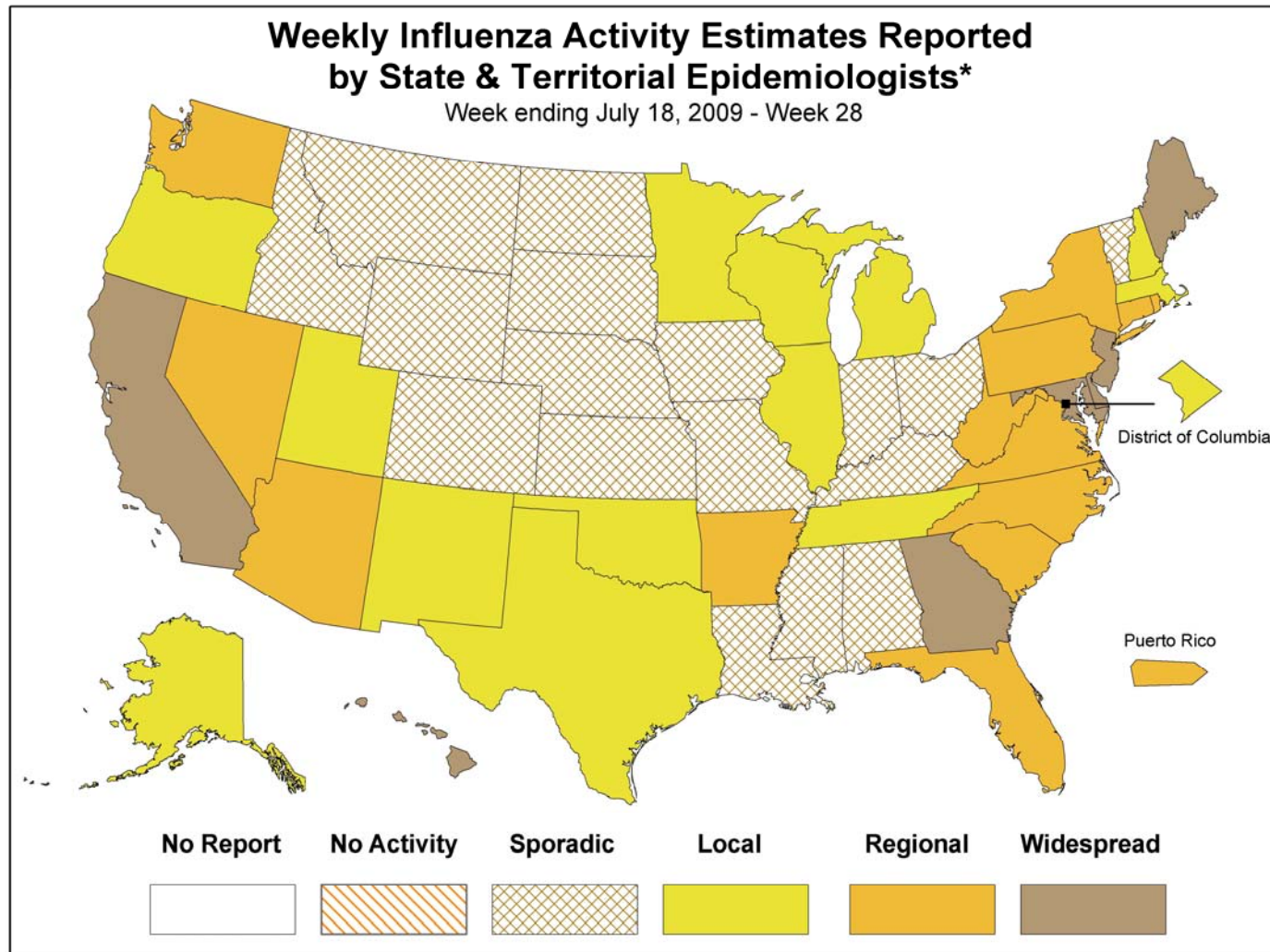
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# Epidemiology/Surveillance

## Weekly Influenza Activity SLTTs

### novel 2009-H1N1 – 24 JUL 2009



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

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