



## Director's Update Brief novel 2009-H1N1

**Friday** 

17 JUL 2009 0815 EDT Day 90

Week of State Planning for the Fall



#### **Key Events**



#### novel 2009-H1N1 - 17 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 1:00pm 16 JUL 2009; next update 24 JUL 2009)

US TOTALS	CASES	HOSPS	DEATHS
CASES	40,617	4,795	262
SLTTs AFFECTED	55	48	28

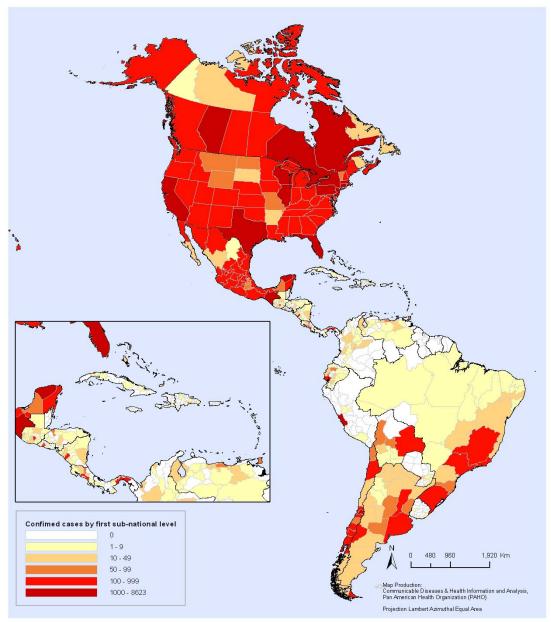
- Majority of states only testing hospitalized cases
- Anticipate discontinuation of reporting of total cases next week



# International Confirmed Novel 2009-H1N1, PAHO Region



#### Influenza A (H1N1). Region of the Americas. 15 July 2009 (23 h GMT; 18 h EST)





## International novel 2009-H1N1 – 17 JUL 2009



#### **Southern Hemisphere "Pulse Check"**

### To date any evidence of ...

#### Change in epidemiology

- Different age distribution of cases or severe cases from US? NO
- Different profile of pre-existing conditions from US? NO

#### Change in virus characteristics?

- Different virus strain associated with severe cases? NO
- Community spread of oseltamivir-resistant novel 2009-H1N1? NO

#### **Change in timing?**

• Earlier start to influenza season following novel 2009-H1N1 introduction? Mixed evidence

#### Change in health care impact?

- Increase in hospitalizations following novel 2009-H1N1 introduction? Limited evidence
- Increase in proportion of hospitalized cases in ICU? Limited evidence

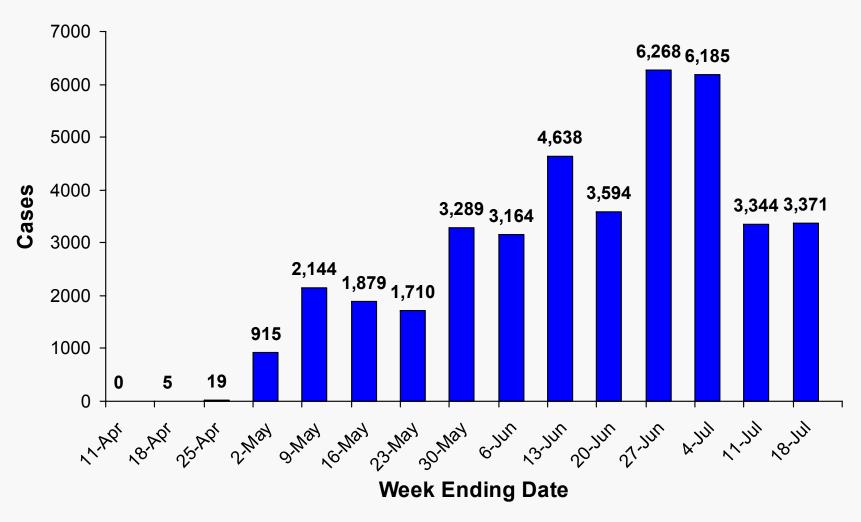
#### **Change in transmission?**

HH and community attack rates > seasonal influenza? ?



## Epidemiology/Surveillance novel 2009-H1N1 Cases by Report Date As of 16 JULY 2009 (n=40,617) (Weekly\*)





\*Data for week ending 4 July 2009 include reports submitted by 7/9/09 11:00 AM. Dates not available for 92 cases.



## Epidemiology/Surveillance WHO Changes Reporting Requirements for novel 2009-H1N1 novel 2009-H1N1 – 17 JUL 2009



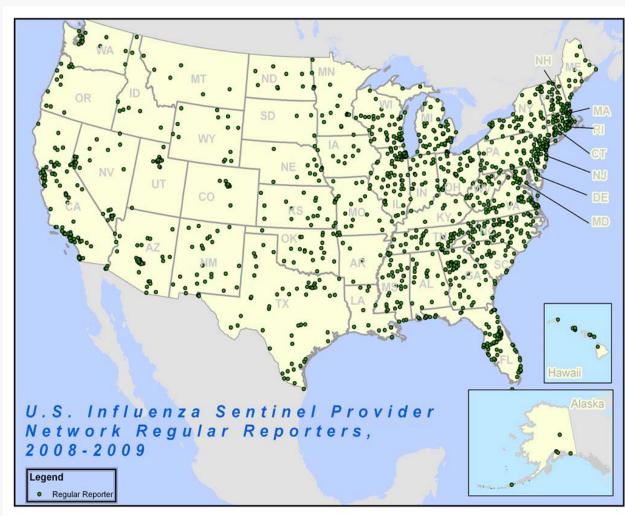
- For countries already experiencing community-wide transmission
  - Focus of surveillance activities will shift to reporting against the established indicators for the monitoring of seasonal influenza activity
  - No longer required to submit regular reports of individual laboratoryconfirmed cases and deaths to WHO
- US will no longer will report cases to PAHO
- Should US stop surveillance for case counts?
  - IHR requirements have ceased
  - CSTE working group says states want to stop
- Proposal
  - Planned discontinuation of aggregate case reporting in US next week
  - Continue aggregate weekly reporting of hospitalizations and deaths



## Epidemiology/Surveillance Location of Sites for ILI Outpatient Surveillance (ILINet) novel 2009-H1N1 – 17 JUL 2009



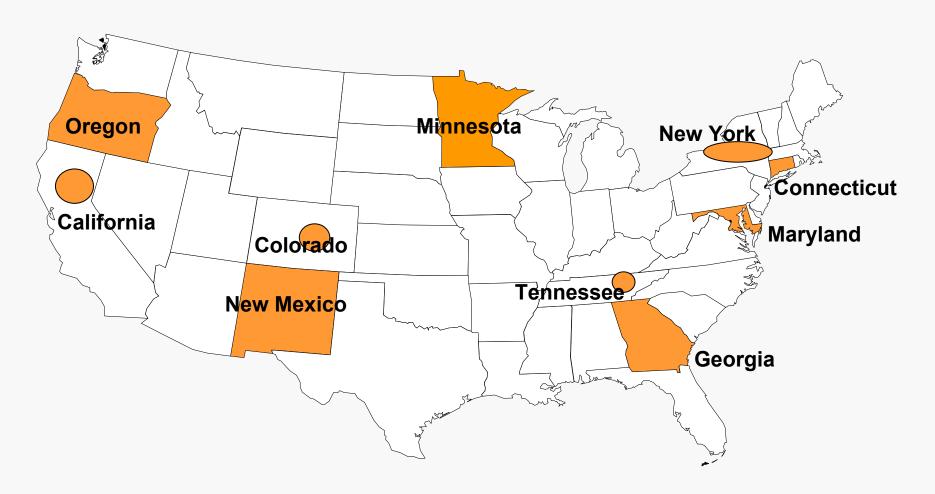
- Tracks outpatient visits for ILI
- >2,400 primary health care providers enrolled
- Approx 20 million visits per year
- Weekly reports
  - # patient visits for any reason
  - # patients, by age group, with ILI





## Epidemiology/Surveillance Emerging Infections Program 40 million population (13% of US population)



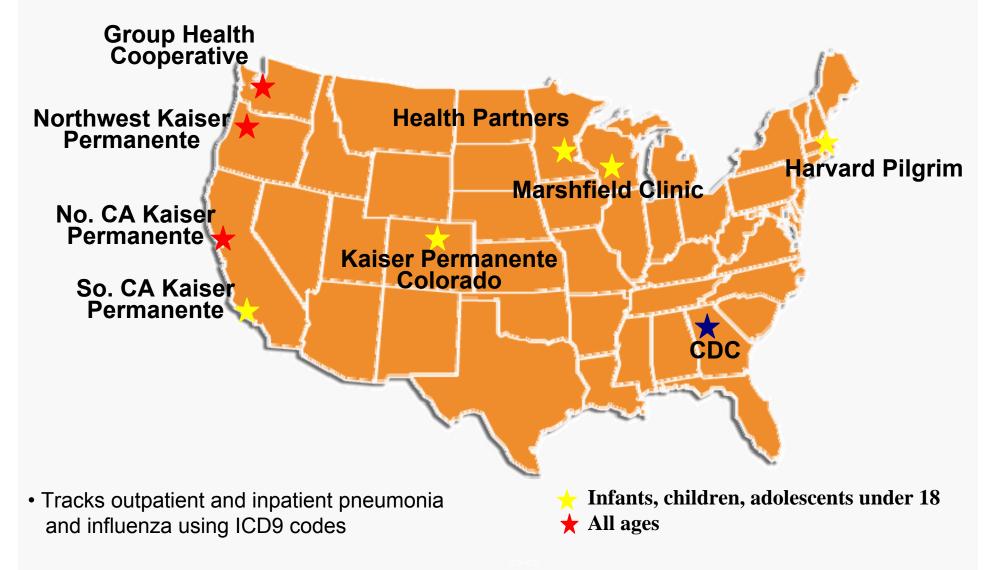


• Tracks laboratory-confirmed influenza hospitalizations



## Epidemiology/Surveillance Location of Sites for HMO Surveillance (VSD) 8.25 million population, 2.7% of US population

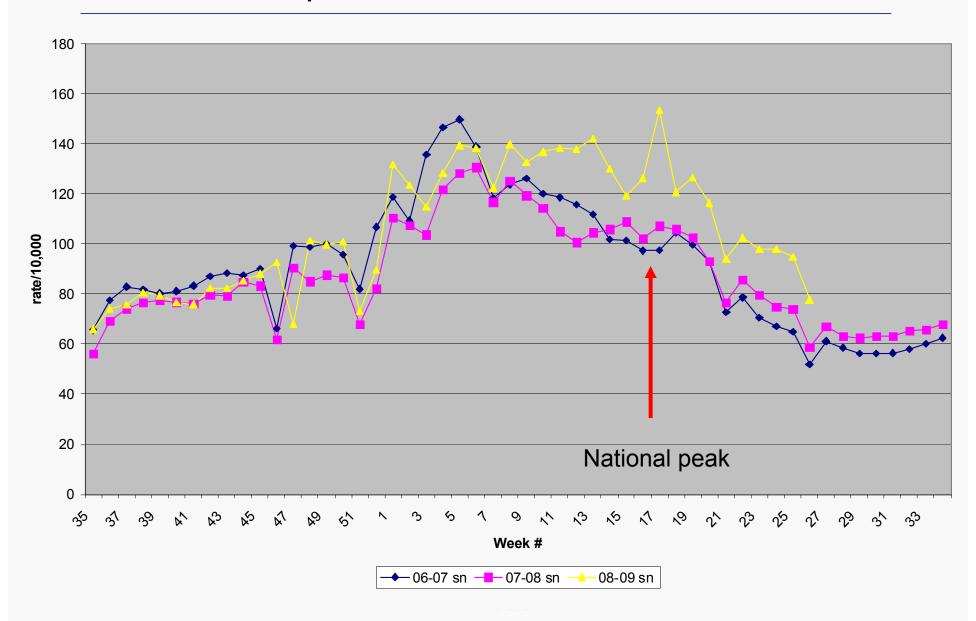






## Epidemiology/Surveillance novel 2009-H1N1 – 17 JUL 2009 P&I outpatient rate for Northern California Kaiser

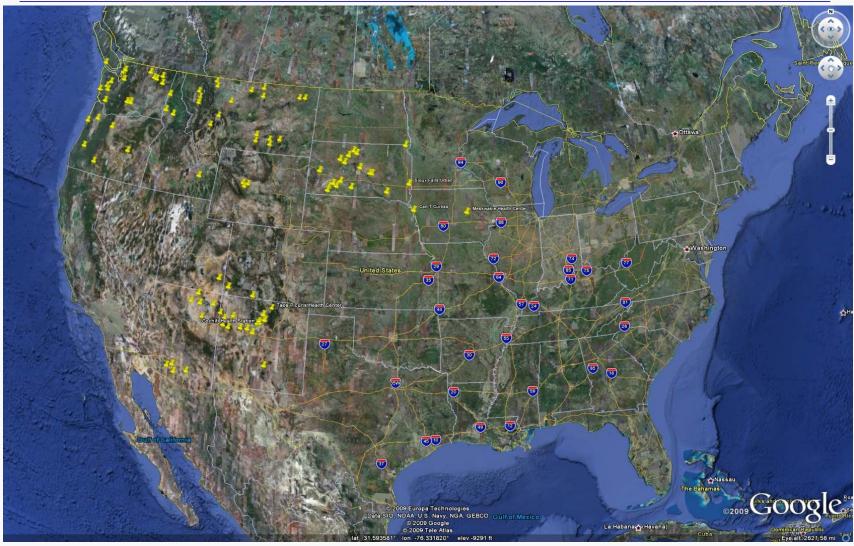






## Epidemiology/Surveillance Location of Sites for Indian Health Service Syndromic Surveillance (2 million population)



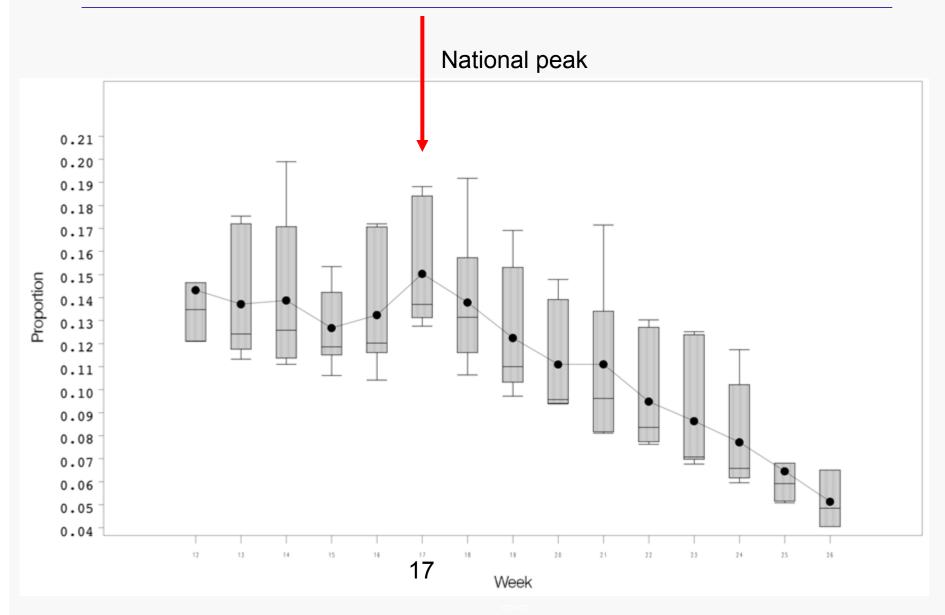


• Tracks outpatient and inpatient pneumonia and influenza using ICD9 codes



## Epidemiology/Surveillance Indian Health Service Syndromic Surveillance novel 2009-H1N1 – 17 JUL 2009

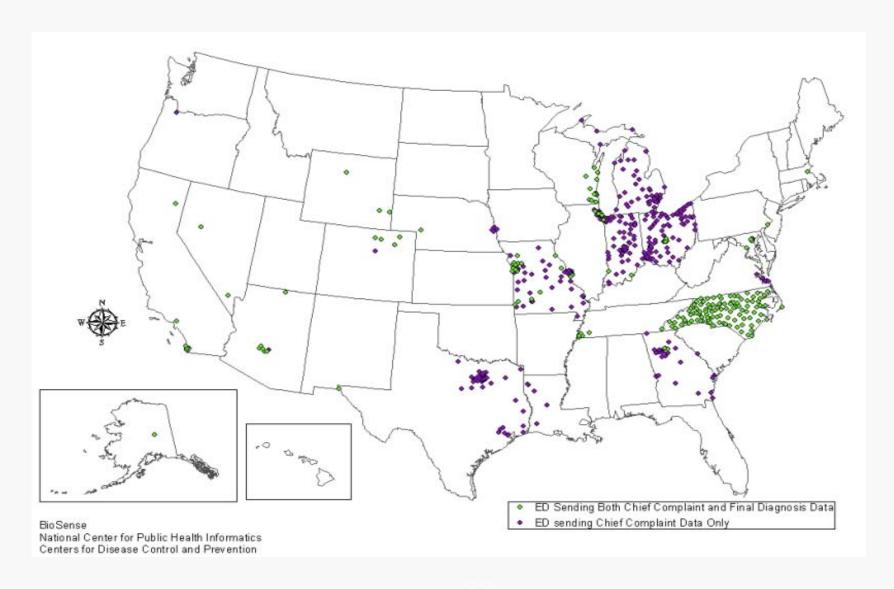






# Epidemiology/Surveillance Syndromic Surveillance of Emergency Departments (ED) Reporting Chief Complaint (N≈565) and Final Diagnosis Data (N≈210), BioSense

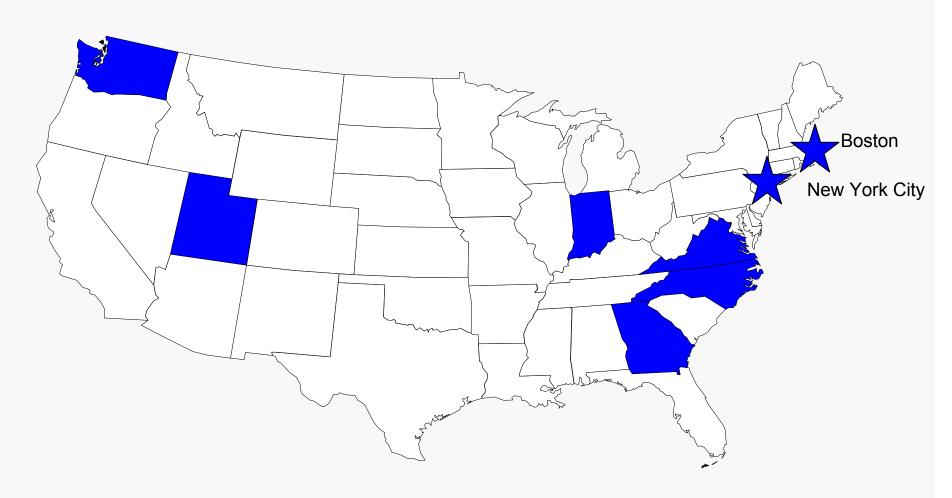






## Epidemiology/Surveillance Location of Sites for Syndromic ER Surveillance (DiSTRIBuTE) novel 2009-H1N1 – 17 JUL 2009





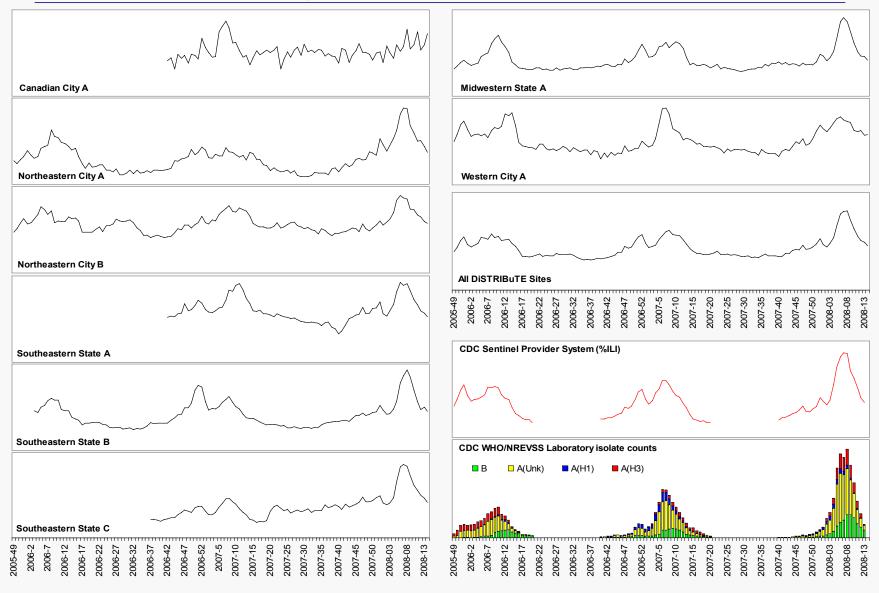
• Tracks chief complaints and ICD9 codes in Emergency Room visits



#### **Epidemiology/Surveillance**



## DiSTRIBuTE Visualizations - Week 2008-14 (ending Saturday, April 5, 2008) Time-series depict respiratory, fever and influenza-like syndrome ED visits by jurisdiction as percent of total





#### Laboratory



#### novel 2009-H1N1- 17 JUL 2009

## Genetic and Antigenic Analysis of S. Hemisphere Virus Isolates

- Hemagglutination Inhibition assay shows no change in antigenicity from those isolated in the N. Hemisphere: All crossreact with the A/California/07/2009 vaccine strain.
- All isolates from Southern Hemisphere as of today are Oseltamivir <u>sensitive</u> in functional assay



## Laboratory



#### novel 2009-H1N1- 17 JUL 2009

### **Seasonal H3N2 Viruses**

- Increased proportion of H3N2 virus isolates are testing as very low reactors to vaccine strain
  - Reactivity up to 32-fold down vs. A/Brisbane/10/2007
  - Two-way reduction in reactivity by HI assay



#### **Vaccine**



#### novel 2009-H1N1- 17 JUL 2009

#### Transition to centralized distribution

- Costs
- Operational capabilities
- Benefits/risks

## Public engagement meetings

- Purpose (public feedback to inform decisions on implementation)
- Timeline (4-5 Saturdays in August, report in late Aug/early Sep)
- Number of meetings (10)
- Locations (one in each HHS region)



#### **Division of Global Migration and Quarantine**



#### novel 2009-H1N1 - 17 JUL 2009

## Port Preparedness Planning

- Contingency plans for conducting entry screening at 19 ports of entry in progress
  - Deadline for completion of contingency plans is August 1
- HHS acquiring 100 surge staff to support 20 quarantine stations
  - Commitment to provide surge staff for 1 year
  - Estimated duration of surge support activation is 4 weeks
  - Surge staff requested to report for duty within 24 hours
  - List of surge staff generated through NDMS and will include 5 local staff for each quarantine station
  - Projected completion of surge list is July 17
  - Identified surge staff will have PHA-type skills set (nurses, EMTs, etc.)

#### Port surveillance

- 595 ILI cases reported in QARS since June 1, 2009:
  - 35 air travelers
  - 5 land travelers
  - 555 maritime travelers



#### **Community Measures Task Force (CMTF)**



#### novel 2009-H1N1 - 17 JUL 2009

- Isolation guidance revision drafted and discussions have begun with NACCHO, ASTHO, CSTE, and Education partners
  - "Individuals with influenza-like illness should remain at home until at least 24 hours after they are free of fever or feverishness without the use of fever-reducing medications (approx 5 days)"
    - Wording being refined
  - Webinar being organized as part of consultative process, scheduled for July 30 (NACCHO, State School Health Directors)
- CSTE/CDC Community Measure Workgroup (research) formed
- MMWR describing spring school closure in clearance process (Dept Education)



#### **Healthcare Delivery – Infection Control**



#### novel 2009-H1N1 - 17 JUL 2009

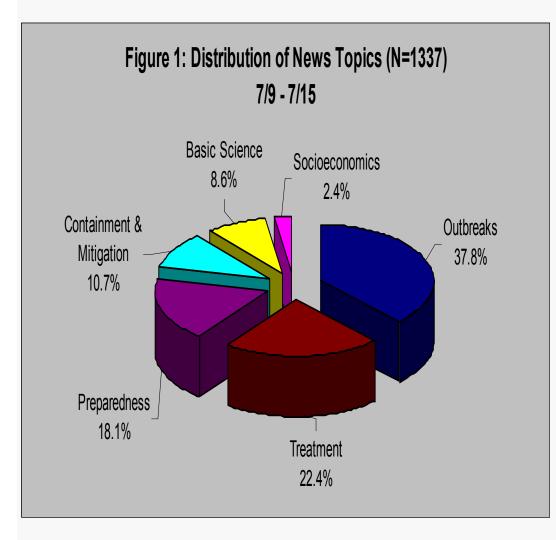
- Home Care Guidance: Physician Directions to Patient/Parent posted to the CDC Website under "Guidance for Patients" and under "Patient Information and Education"
- This small guide provides recommendations on:
  - Taking medications
  - When to seek emergency care
  - Home Care recommendations



#### **Joint Information Center (JIC)**



#### novel 2009-H1N1 - 17 JUL 2009



#### **Outbreak News**

- 67 Air Force Cadets
- UNC campers
- Puerto Rico 1st death
- 9 Deaths total in FL
- UK deaths double

#### **Treatment news:**

- Vaccine priority groups changing
- U.S. Govt: Shots may begin 10/09
- WHO: No licensed vaccine until 12/09

### **Preparedness:**

- Obama warns of swine flu Fall return
- State funding



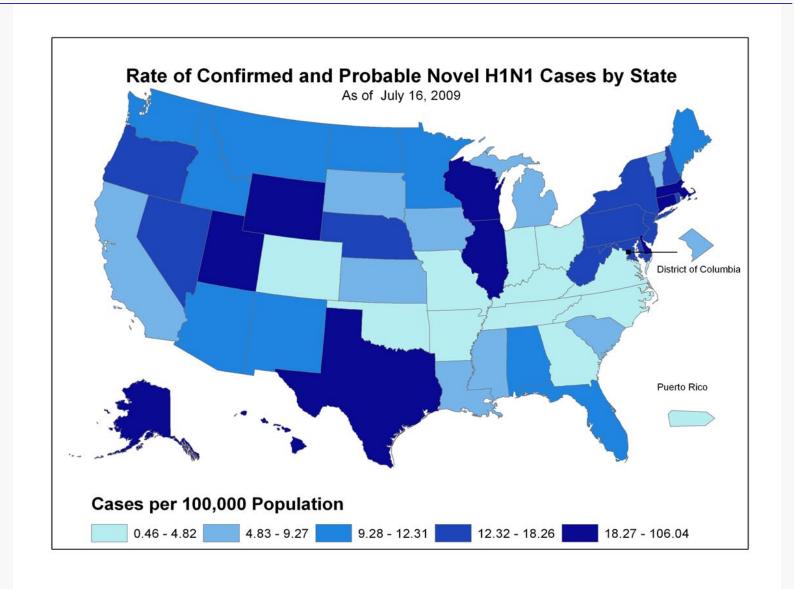


## **Supporting Documentation**



## novel 2009-H1N1 Cases by State Rate / 100,000 State Population as of 16 July 2009

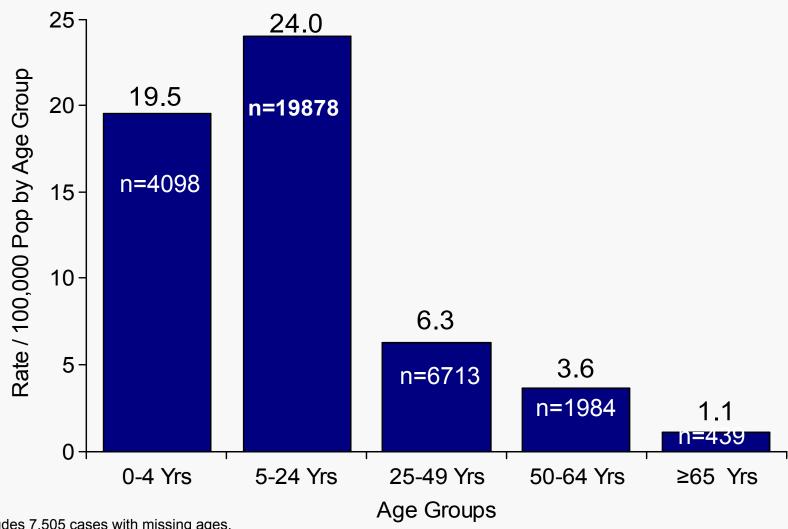






## **Epidemiology/Surveillance** novel 2009-H1N1 Cases Rate per 100,000 Population by Age Group as of 16 JULY 2009 (n=33,112\*)





\*Excludes 7,505 cases with missing ages.

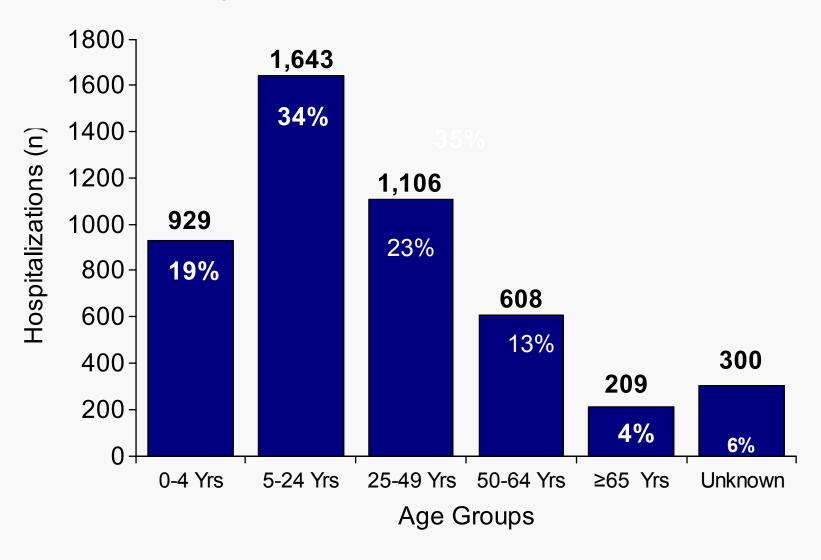
Rate / 100,000 by Single Year Age Groups: Denominator source: 2008 Census Estimates, U.S. Census Bureau at: http://www.census.gov/popest/national/asrh/files/NC-EST2007-ALLDATA-R-File24.csv



## Epidemiology/Surveillance novel 2009-H1N1 Hospitalizations by Age Group Data reported as of 16 JULY 2009 (n=4,795)



#### **Percentages Represent Proportion of Total Hospitalizations**

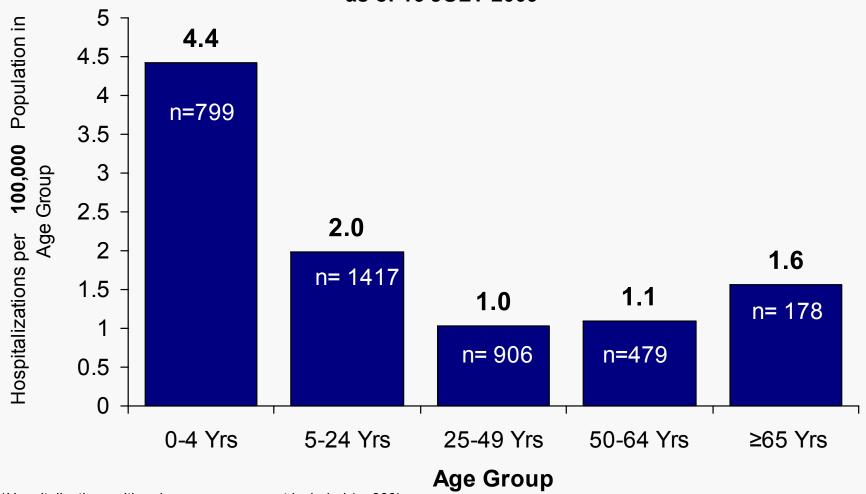




## Epidemiology/Surveillance novel 2009-H1N1







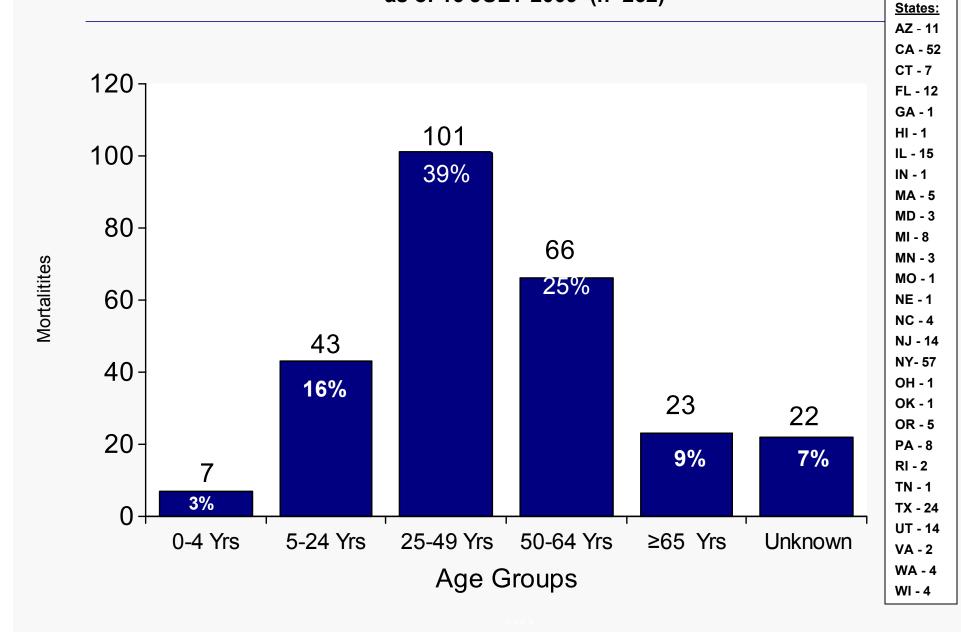
<sup>\*</sup>Hospitalizations with unknown ages are not included (n=300)

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



## Epidemiology/Surveillance novel 2009-H1N1 Deaths by Age Group as of 16 JULY 2009 (n=262)

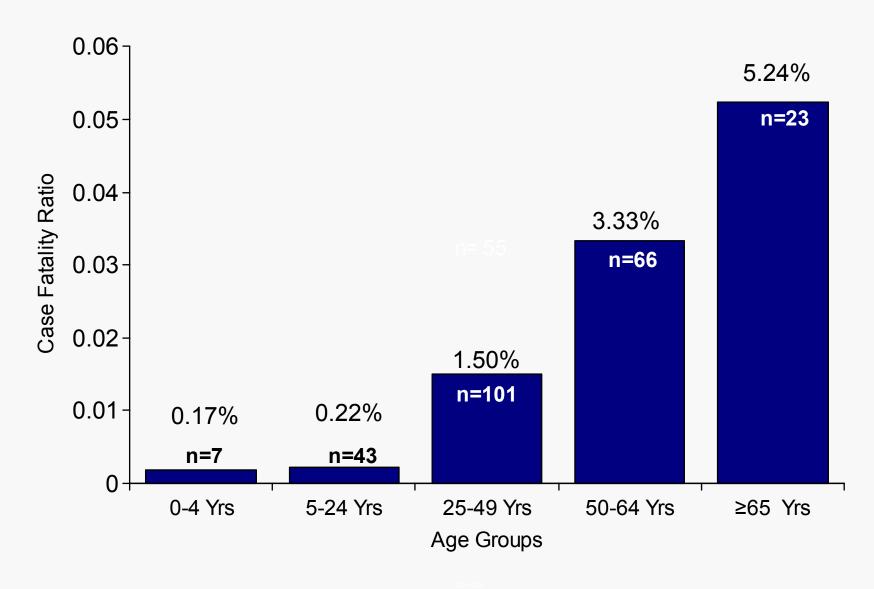






## Epidemiology/Surveillance novel 2009-H1N1 Case Fatality Ratio by Age Group as of 16 JULY 2009 (n=262)







### Epidemiology/Surveillance novel 2009-H1N1 Deaths Reported to CDC by States as of 16 JULY 2009



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

	Percent Deceased Cases with Condition	
Condition	Age <18 (N=29)	Age <u>≥</u> 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%)



## Epidemiology/Surveillance novel 2009-H1N1 - 16 JUL 2009 Surveillance Systems



## WHO/NREVSS Collaborating Laboratories

- Seasonal A (H3), and B viruses co-circulated with Novel H1N1 viruses
- No seasonal A (H1) viruses were reported during week 27
- % of specimens testing positive for influenza decreased

## ILINet (week ending 11 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 below the epidemic threshold
- % deaths due to pneumonia and influenza decreased slightly

## Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists – state reporting:

Widespread: 9 statesRegional: PR + 12 states

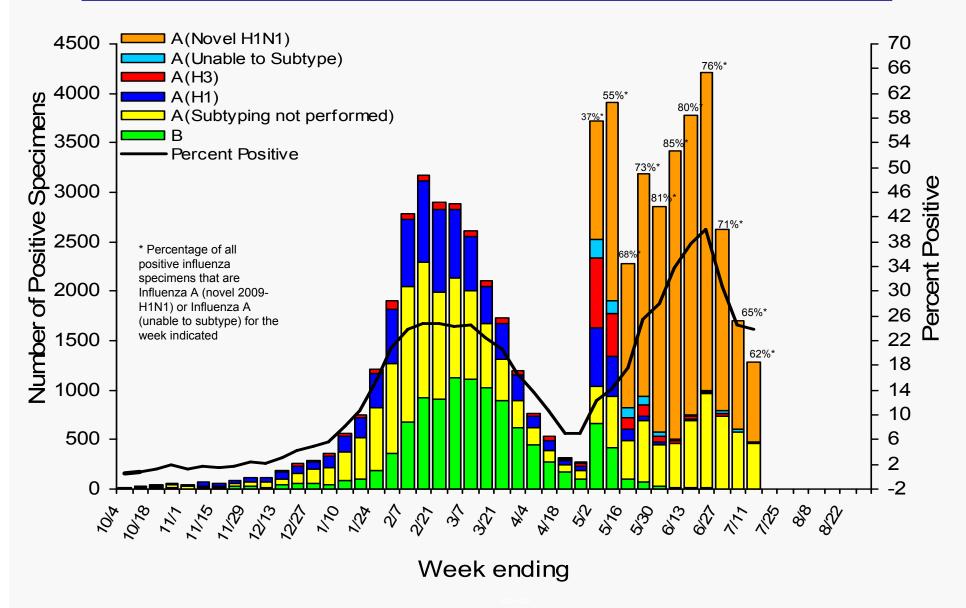
Local: DC + 12 statesSporadic: 16 states

No Report: 1 state



## Epidemiology/Surveillance novel 2009-H1N1 – 16 JUL 2009 U.S. WHO/NREVSS Collaborating Laboratories Summary, 2008-09







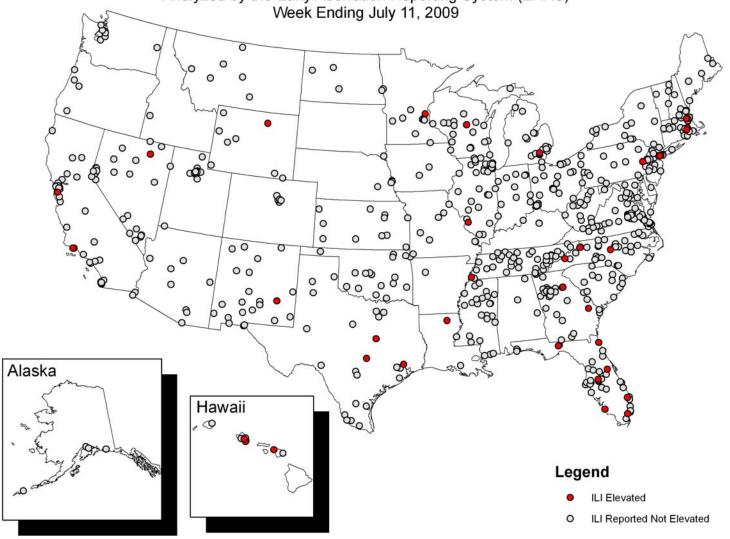
## **Epidemiology/Surveillance**



#### novel 2009-H1N1 - 16 JUL 2009

Influenza-like Illness (ILI) Reported from U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)

Analyzed by the Early Aberration Reporting System (EARS)



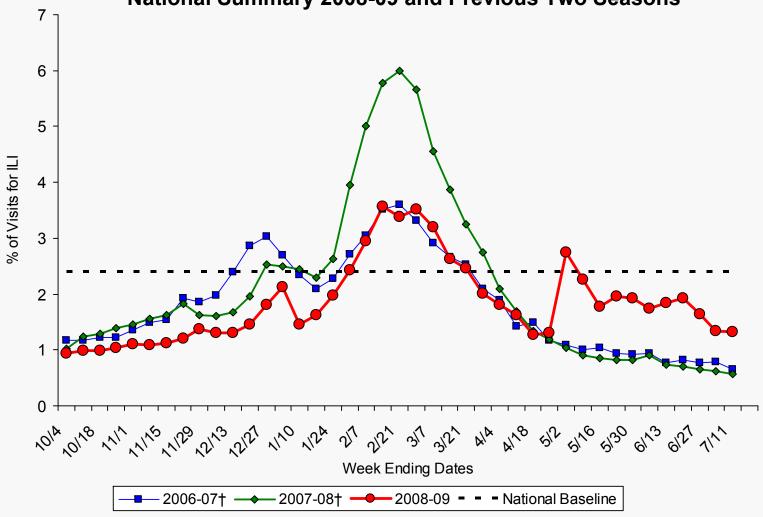


#### Epidemiology/Surveillance novel 2009-H1N1 – 16 JUL 2009 EDT



### 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



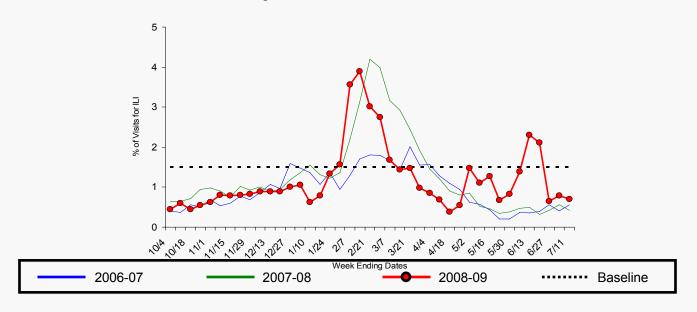
† There was no week 53 during the 2006-07 and 2007-08 seasons, therefore the week 53 data point for those seasons is an average of weeks 52 and 1.



## Epidemiology/Surveillance novel 2009-H1N1 – 16 JUL 2009 Current Influenza Surveillance – *ILINet Regions I-III*

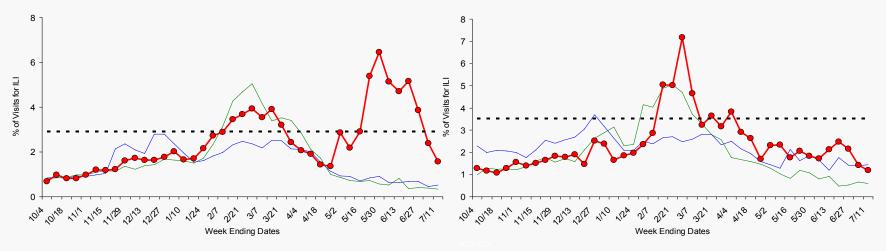






Region II - NJ, NY

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

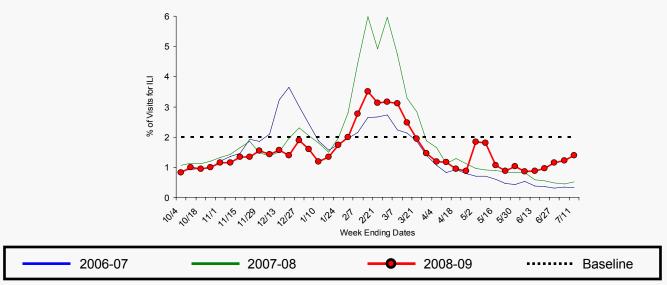




## Epidemiology/Surveillance novel 2009-H1N1 – 16 JUL 2009 Current Influenza Surveillance – *ILINet Regions IV-VI*

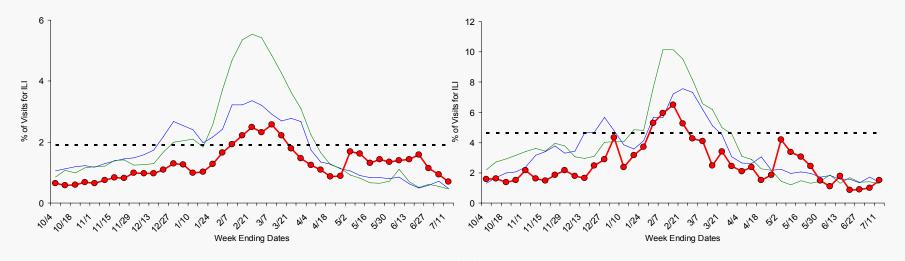


Region IV - AL, FL, GA, KY, MS, NC, SC, TN



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

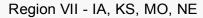
Region VI - AR, LA, NM, OK, TX



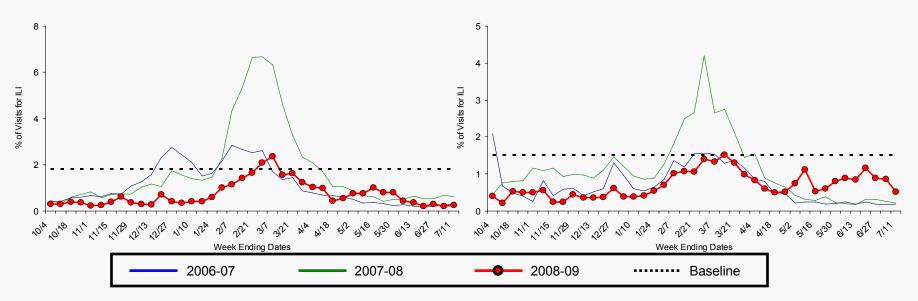


## Epidemiology/Surveillance novel 2009-H1N1 – 16 JUL 2009 Current Influenza Surveillance – *ILINet Regions VII-X*





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



Region IX - AZ, CA, HI, NV

Region X - AK, ID, OR, WA

