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

– 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)

<table>
<thead>
<tr>
<th>US TOTALS</th>
<th>CASES</th>
<th>HOSPS</th>
<th>DEATHS</th>
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</thead>
<tbody>
<tr>
<td>CASES</td>
<td>43,771</td>
<td>5,011</td>
<td>302</td>
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<tr>
<td>SLTTs</td>
<td>55</td>
<td>47</td>
<td>28</td>
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<td>AFFECTED</td>
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As of July 22, media have reported 148,579 novel (H1N1) 2009 confirmed cases, including 938 deaths, in 162 countries (from GDD)
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 a 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
• 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.
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.
• 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

Percentage of Visits for Influenza-like Illness (ILI) Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet), By State

Week 28

% ILI

- No Report
- ILI Increasing
- ILI Decreasing

New York City
District of Columbia
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

Week 0-4 5-24 25-64 65 and Older

Internal Use Only (FIUO)---For Official Use Only (FOUO)
Epidemiology/Surveillance
novel 2009-H1N1 – 24 JUL 2009
Virus Weather Map
• 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
• 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
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
## Update on Communication Planning

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

Internal Use Only (FIUO)—For Official Use Only (FOUO)
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.

Week Ending Date

Cases

2 2 1 50 65 83 114 336 374 591 605 842 598 469 663 216


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

Percentages represent proportion of total cases

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Cases</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-4 Yrs</td>
<td>4,816</td>
<td>11%</td>
</tr>
<tr>
<td>5-24 Yrs</td>
<td>22,080</td>
<td>50%</td>
</tr>
<tr>
<td>25-49 Yrs</td>
<td>7,434</td>
<td>17%</td>
</tr>
<tr>
<td>50-64 Yrs</td>
<td>2,187</td>
<td>5%</td>
</tr>
<tr>
<td>≥65 Yrs</td>
<td>513</td>
<td>1%</td>
</tr>
<tr>
<td>Unknown</td>
<td>6,741</td>
<td>15%</td>
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Internal Use Only (FIUO)—For Official Use Only (FOUO)
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:
Epidemiology/Surveillance
Hospitalizations by Age Group
novel 2009-H1N1 – 24 JUL 2009 (n=5,011)

Percentages Represent Proportion of Total Hospitalizations

<table>
<thead>
<tr>
<th>Age Groups</th>
<th>Hospitalizations (n)</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>0-4 Yrs</td>
<td>953</td>
<td>19%</td>
</tr>
<tr>
<td>5-24 Yrs</td>
<td>1,718</td>
<td>34%</td>
</tr>
<tr>
<td>25-49 Yrs</td>
<td>1,184</td>
<td>24%</td>
</tr>
<tr>
<td>50-64 Yrs</td>
<td>658</td>
<td>14%</td>
</tr>
<tr>
<td>≥65 Yrs</td>
<td>225</td>
<td>4%</td>
</tr>
<tr>
<td>Unknown</td>
<td>273</td>
<td>5%</td>
</tr>
</tbody>
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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:

Internal Use Only (FIUO)---For Official Use Only (FOUO)
Epidemiology/Surveillance
Deaths by Age Group
novel 2009-H1N1 – 24 JUL 2009 (n=302)
Epidemiology/Surveillance
novel H1N1 Cases by State - Rate / 100,000 State Population
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

* Percentage of all positive influenza specimens that are Influenza A (Pandemic H1N1) or Influenza A (unable to subtype) for the week indicated.
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

Influenza % Positive by Season (for Week 28 – ending 7/18/09):
  05-06: 0.77%
  06-07: 1.92%
  07-08: 0.47%
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

[Graph showing percentage of visits for ILI from 2006-07† to 2008-09 and National Baseline]
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

2006-07 2007-08 2008-09 Baseline

% of Visits for ILI
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

Week Ending Dates
% of Visits for ILI

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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

Week Ending Dates

% of Visits for ILI

2006-07 2007-08 2008-09 Baseline

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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)
Epidemiology/Surveillance
Weekly Influenza Activity SLTTs
novel 2009-H1N1 – 24 JUL 2009

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending July 18, 2009 - Week 28

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

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