Influenza A H1N1 “Swine Flu” Update: Pandemic Influenza Planning for the Long-Term Healthcare Workplace

Current as of August 2009

Georgia Tech OSHA Consultation Program

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<td>5-20% US population infected. &gt;200,000 hospitalized 36,000 die</td>
<td>348 human cases, 216 deaths (Jan. 2008) 436 human cases, 262 deaths (July 1 2009)</td>
<td>US: 43,771 confirmed cases, 353 deaths World: 134,503 cases, 816 deaths (July 30 2009)</td>
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Symptoms and Signs of H1N1

- Suspected to be transmitted from large droplets (travels <6 ft)
- Contact with contaminated surfaces is another possible source of transmission
- Similar to the symptoms of regular human flu:
  - Fever (90%), cough (84%), sore throat (61%), body aches, headache, chills, or fatigue.
  - Some reports of diarrhea (26%) or vomiting (24%).
  - May cause a worsening of underlying chronic medical conditions.
Confirmed and Probable cases of H1N1
Pandemic (H1N1) 2009,
Number of laboratory confirmed cases as reported to WHO

Status as of 06 July 2009
09:00 GMT

Cumulative deaths
- 1 - 10
- 11 - 50
- 51 - 100
- 101 and more

Cumulative cases
- 1 - 10
- 11 - 50
- 51 - 500
- 501 and more

Total: 94,512 cases
429 deaths
Chinese Taipei has reported 61 confirmed cases of pandemic (H1N1) 2009 with 0 deaths. Cases from Chinese Taipei are included in the cumulative totals.

Data Source: World Health Organization
Map Production: Public Health Information and Geographic Information Systems (GIS)
World Health Organization
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Map produced: 06 July 2009 09:00 GMT
Current Epidemiologic Status: H1N1

• “The gallimaufry virus” – a hodgepodge stew that’s been brewing:
  • Part Avian, part human, part swine virus
  • Sloppy virus that doesn’t proofread it’s mistakes
  • Mix it all up in the belly of a pig

• Scientists are closely monitoring genetic changes/shifts to project future mutations
  • Special attention is being given to the Southern Hemisphere that is now experiencing winter
  • Provide clues what will happen in the fall

Image from CDC
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<td>&gt;200,000 hospitalized</td>
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<td>36,000 die</td>
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<td>(July 30 2009)</td>
<td>8,300 to 500,000 deaths in US; 700K to 40 million worldwide</td>
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Is a Pandemic Vaccine Available?

- A vaccine to protect people from pandemic flu is not available now (~ 6-8 months after start)

- Potentially available mid-October 2009

  - Likely first recipients: Pregnant women; household contacts/caregivers of children < 6 months age; healthcare workers; young individuals (6 mo-24 yrs); those with underlying health conditions

- ~159 million doses

- The best protection is to practice healthy hygiene to stay well now and during a flu pandemic

Department of Health and Human Services announced May 22, 2009:
Approximately $1 billion will be used for clinical studies to take place over the summer to develop an H1N1 vaccine. Will be used for pre-pandemic influenza stockpile.

Contact [www.hhs.gov](http://www.hhs.gov) for most up to date information.
Current Status

• Where are we now?
• What preparation has been done so far?
  • Federal level
  • State level
• What available tools do we need to understand to prepare better at the local level?
Confirmed & Reported Current Status

- **As of 1 July 2009**
  - H5N1 (Influenza Type A – “bird”)
  - Bird to human (non-sustained)
  - 15 countries
  - 436 cases
    - 41 cases for 2009
  - 262 deaths
    - 12 deaths for 2009
  - ~60% case fatality

- **As of 30 July 2009**
  - H1N1 (Influenza A – “swine”)
  - Human to human (sustained)
  - Global
  - 134,503 cases
  - 816 deaths
  - <1% case fatality

“unprecedented speed”

Compare to case fatality rate of 1918 Pandemic: ~4%
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<th>WHO Phases</th>
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<td><strong>0</strong> New domestic animal outbreak in at-risk count…</td>
<td>Inter-pandemic phase</td>
</tr>
<tr>
<td></td>
<td>Low risk of human cases</td>
</tr>
<tr>
<td></td>
<td>Higher risk of human cases</td>
</tr>
<tr>
<td><strong>1</strong> Suspected human outbreak overseas</td>
<td>Pandemic Alert</td>
</tr>
<tr>
<td></td>
<td>No or very limited human-to-human transmission</td>
</tr>
<tr>
<td><strong>2</strong> Confirmed human outbreak overseas</td>
<td>New virus causes human cases</td>
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<td>Evidence of increased human-to-human transmission</td>
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<td><strong>3</strong> Widespread outbreaks overseas</td>
<td>New virus causes human cases</td>
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<td><strong>4</strong> First human case in North America</td>
<td>Pandemic</td>
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<td>Efficient and sustained human-to-human transmission</td>
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<td><strong>5</strong> Spread throughout U.S.</td>
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Recommendations for the Pandemic Period

If an influenza pandemic begins in the United States or another country:

• **State and local responsibilities:**
  - Implement enhanced surveillance to detection first cases
  - Enhance all influenza surveillance components
  - Communicate surveillance data needs

For more information: http://www.hhs.gov/pandemicflu/plan/pdf/S01.pdf
Recommendations for the Pandemic Period

• HHS responsibilities:
  • Provide technical support
  • Update case definitions and guidance for laboratory testing and enhanced surveillance
  • Assist state and local health departments
  • Analyze influenza surveillance data

For more information: http://www.hhs.gov/pandemicflu/plan/pdf/S01.pdf
Monitoring for Influenza

• Assign responsibility for monitoring developments with the national and state public health advisories.

• Develop a plan to monitor for pandemic influenza in the population served.

• Develop a system to report unusual cases of influenza-like illness and deaths to local health authorities.

For more information: http://www.hhs.gov/pandemicflu/plan/pdf/S01.pdf

China’s approach: thermal
Source: www.chinaview.cn
(April 28, 2009
Xinhua/AFP Photo)
Surveillance

16 July 2009 (WHO) & 24 July 2009 (CDC):
Discontinued reporting of individual confirmed and probable cases

• WHO:
  • Sustained community transmission = testing and confirmation of every individual case extremely difficult
  • Strategy:
    • Severe or fatal clusters
    • Hospitalization
    • Change in transmission pattern
    • Newly affected countries

• CDC:
  • Strategy (weekly):
    • Hospitalizations
    • Deaths
    • Use of Traditional Flu Surveillance System to track H1N1 and seasonal flu activity and trends
    • Specimen testing
    • Physician network
    • Hospitalizations
OSHA Surveillance Recommendations for Healthcare Providers

- Keep records of and monitor:
  - Who cares for sick patients that have influenza
  - Absenteeism
  - Which employees:
    - Show signs of disease
    - Become ill
    - Recover
  - Encourage self-reporting of symptoms by employees
  - Educate employees about transmission
  - Remove employees with increased risk of complications
What Should I Do?

• Most Likely: Resolve at home

• Remain home 24 hours after fever-free (100°) – without reducers

• More stringent guidelines and longer periods of exclusion – for example, until complete resolution of all symptoms – may be considered for people returning to a setting where high numbers of high-risk people may be exposed (including nursing homes). (http://www.cdc.gov/h1n1flu/guidelines_infection_control.htm)

• Guidance is same even if using anti-viral meds
1. Investments in pandemic planning and stockpiling antiviral medications paid off.
2. Public health departments did not have enough resources to carry out plans.
3. Response plans must be adaptable and science-driven.
4. Providing clear, straightforward information to the public -- from the president on down to local officials -- was essential for allaying fears, building trust, and acting to contain the spread of the virus.
5. School closings have major ramifications for students, parents and employers.
6. Sick leave and policies for limiting mass gatherings were also problematic.
7. Communication between the public health system and health providers was not well coordinated, with many private clinicians not receiving guidance on a timely basis.
8. The World Health Organization pandemic alert phases caused confusion.
9. International coordination was more complicated than expected.
KEY RESOURCES

- [www.flu.gov](http://www.flu.gov)
- [www.cdc.gov/h1n1flu](http://www.cdc.gov/h1n1flu)
- [www.flu.gov/plan/individual/index.html](http://www.flu.gov/plan/individual/index.html)
  (family readiness checklist; multiple languages available)
- [www.cdc.h1n1flu/espanol](http://www.cdc.h1n1flu/espanol) (multiple resources in Spanish)
- [www.osha.gov/Pulibcations/OSHA_pandemic_health.pdf](http://www.osha.gov/Pulibcations/OSHA_pandemic_health.pdf)
- [www.accessdata.fda.gov/scripts/h1n1flu/#Mask](http://www.accessdata.fda.gov/scripts/h1n1flu/#Mask)
  (FDA listing of fraudulent products, claims, websites)
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