

Pandemic Influenza H1N1 2009



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BC Centre for Disease Control
AN AGENCY OF THE PROVINCIAL HEALTH SERVICES AUTHORITY



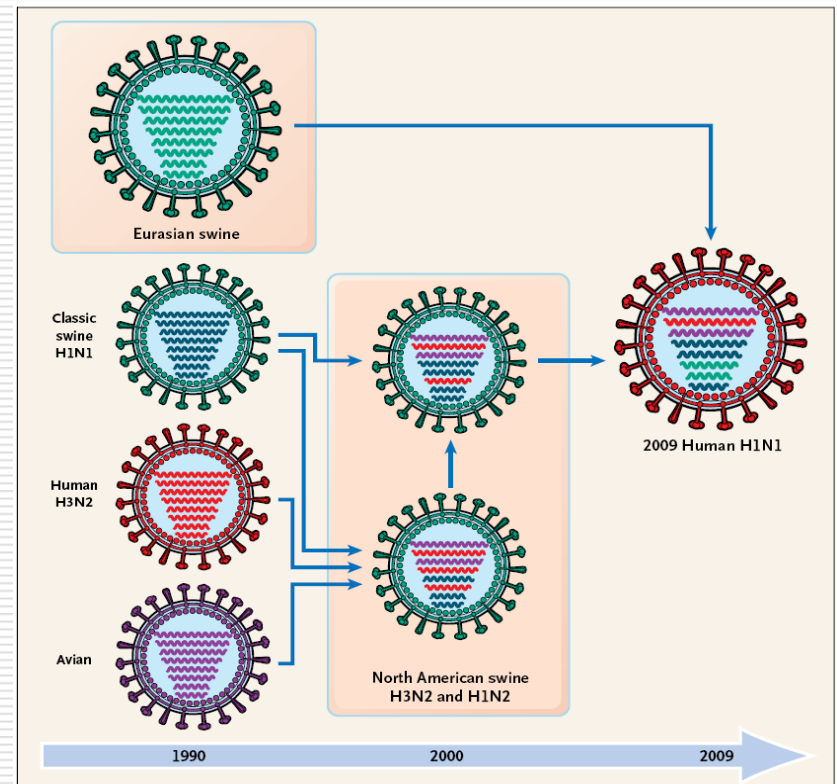
History Timeline

Fall 2008	New swine strain evolved
February 2009	Strain crossed over to humans in central Mexico
March 2009	Increased flu severity in young adults noted in Mexico
April 15-17	Identification of novel influenza virus in California
April 17	PHAC's National Microbiology Lab (NML) informed by Mexican Health Authorities of SRI clusters occurring in Mexico, and laboratory support was requested
April 22-25	Same strain identified in specimens from MX
April 2009	New pandemic strain recognized with continental spread
April 25-26	First cases in BC and NS
April 30	WHO raises its pandemic alert to Phase 5
June 11	WHO raises its pandemic alert to Phase 6
July 14	First H1N1 confirmed death in BC



What is pandemic H1N1 (formerly known as Swine)?

- ❑ An influenza A H1N1 virus
- ❑ Made up of a complex reassortment of genes from human, swine, and avian influenza
- ❑ Similar viruses have been transmitted sporadically from swine to human in isolated cases
- ❑ pH1N1 differs by having adapted for person-to-person transmission



Pandemic H1N1 Transmission



- No swine contact necessary
- Transmitted from person to person by respiratory droplets from coughing and sneezing
- May be transmitted indirectly through contact with contaminated surfaces and then inoculation of mucous membranes
- May be transmitted through contact with other bodily fluids (e.g. diarrheal stool)
- Not transmitted through eating or preparing pork

Contagiousness

- Pandemic influenza H1N1 is believed to be shed for ~7days
 - Longer than seasonal influenza, consistent with the lack of preexisting immunity
- Infected people may be contagious for 1day before & up to 7 days after onset of symptoms
- Children may be contagious for longer periods
- The incubation period is also believed to be within 7 days (1-7 days)

Signs and Symptoms

Influenza-like illness (ILI):

- Fever (94%)
- Cough (92%)
- Sore throat (66%)
- Myalgia
- Headache
- Malaise

- Fever not always prominent
- GI symptoms are common, especially in children:
 - Vomiting (25%)
 - Diarrhea (25%)

Severity

- When the outbreak was initially identified, mortality in Mexico appeared to be elevated
- Canadian and American cases reported to date have been relatively mild with similar mortality to seasonal flu (0.1%)
- As with seasonal flu, this virus can cause a range of complications including serious illness or death, esp. in high risk groups

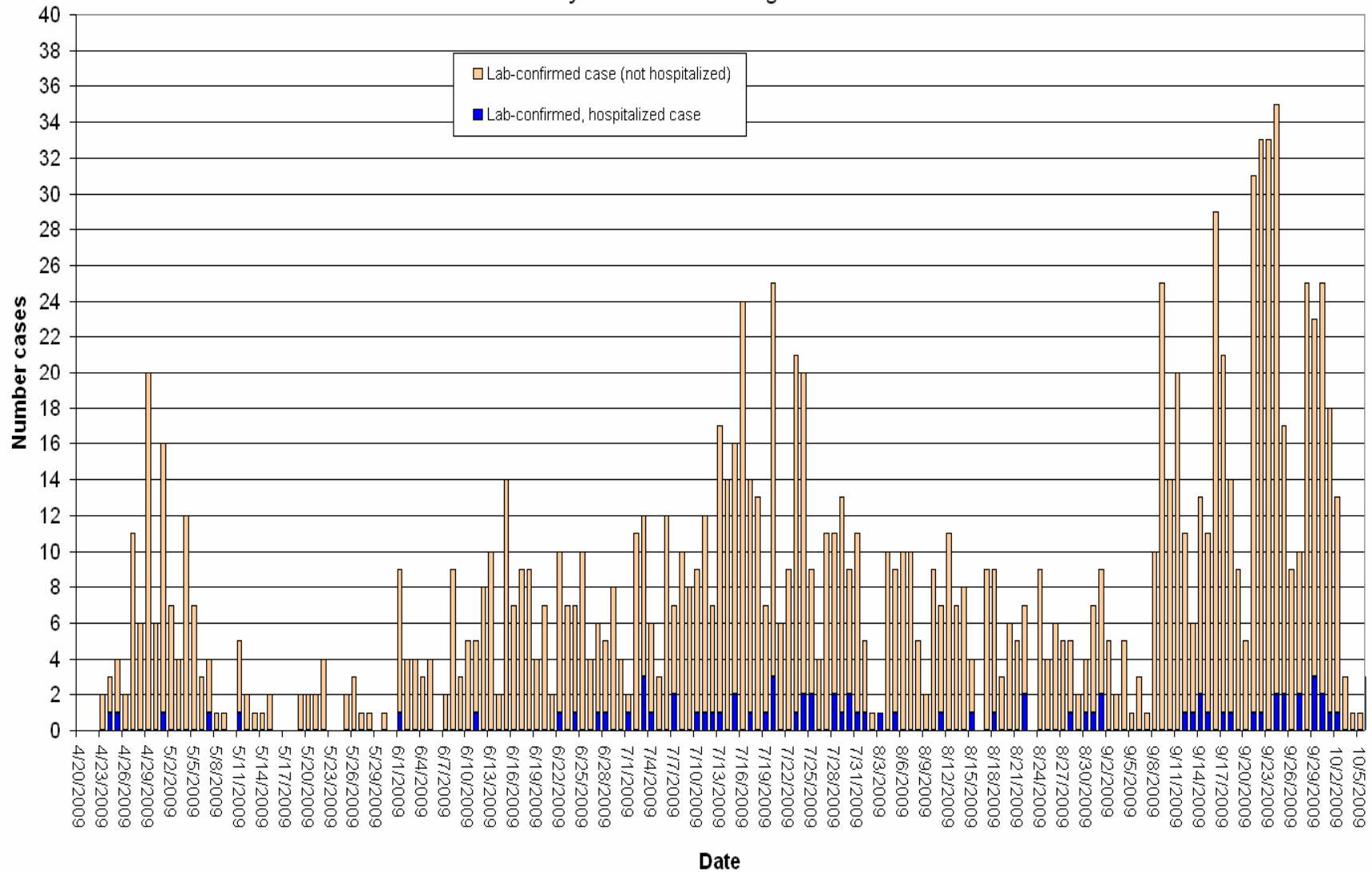
Pandemic H1N1 paradox

- ❑ Majority of people have a short-lived (unpleasant) illness that resolves without need for medical care
 - ❑ Children higher rate of hospitalization but not ICU care
 - ❑ Adults (median age 40) do end up in ICU at higher rate
 - ❑ Half with underlying illness
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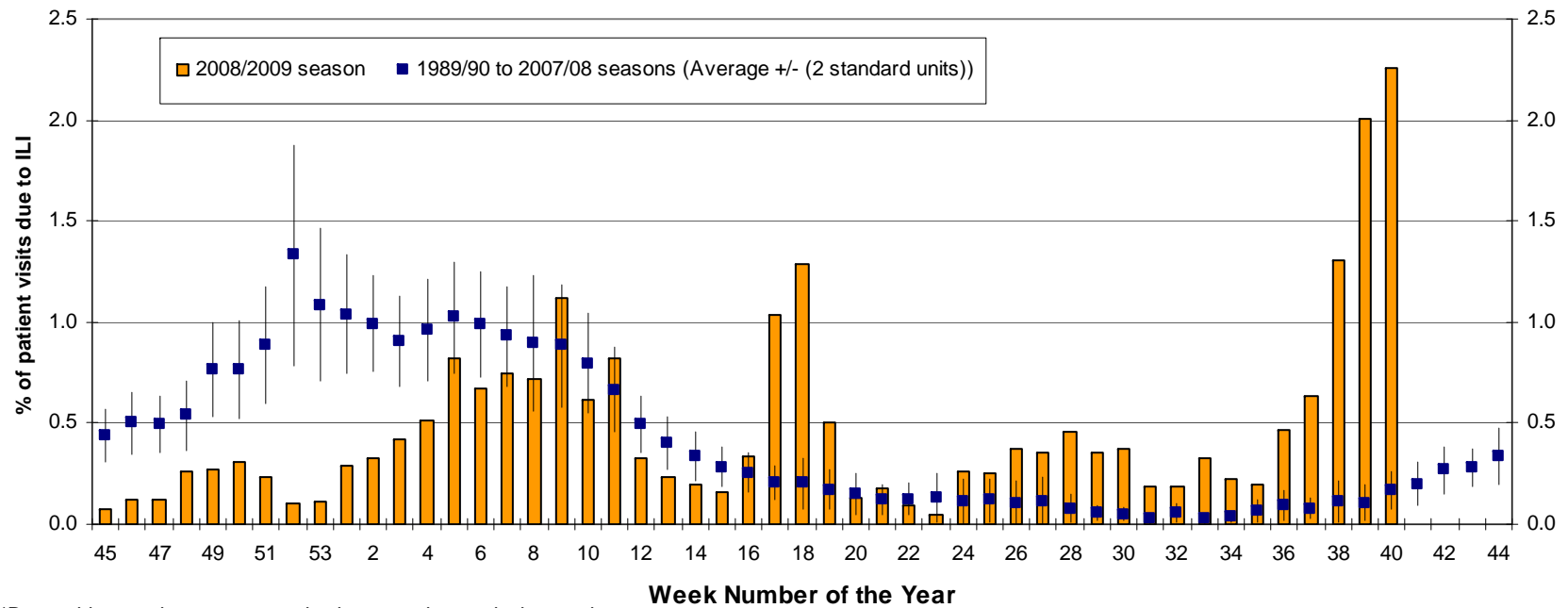
Pandemic H1N1*, BC Cases by Collection Date (as of October 13, 2009)

N = 1351 (including 78 hospitalized cases)

* formerly known as swine-origin influenza virus



**Percentage of Patient Visits due to Influenza Like Illness (ILI) per Week
Compared to Average Percentage of ILI Visits for the Past 19 Seasons
Sentinel Physicians, British Columbia, 2008-2009**



**Data subject to change as reporting becomes increasingly complete

Public Health Measures in the Community

- Self isolation of ill people
 - Respiratory and hand hygiene
 - NOT widespread closures of schools, businesses, gatherings
 - NOT use of masks by well people
 - Use of masks by ill people maybe
 - Public communication
 - Enhanced environmental cleaning
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When to end isolation?

- Return to work/school issues:
 - Summer camps
 - Schools/day cares
 - Universities
 - Businesses
 - When symptoms have resolved and able to fully participate in daily activities
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Anti-virals

- Human seasonal influenza
 - H1N1 (human) resistant to tamiflu
 - H3N2 resistant to amantadine
 - Pandemic H1N1
 - resistant to amantadine
 - susceptible to Oseltamivir (Tamiflu®) & Zanamivir (Relenza®)
 - evolution to resistance easy (27 known cases)
 - Stockpile: 1M treatment courses in BC, mainly tamiflu
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Antiviral Questions

- How to get early treatment to those most likely to benefit
 - 'Influenza plans' for high risk people
 - NACI risk groups (e.g. asthma, diabetes, I/C)
 - Children up to 5 years
 - Obesity and FN status (outside of remote communities)
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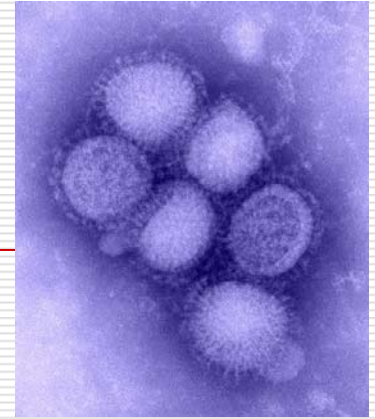
Influenza Vaccine



- Two vaccines:
 - Seasonal influenza vaccine (trivalent: A/H1N1, A/H3N2,B)
 - Pandemic H1N1 vaccine
 - Focus on pandemic vaccine for most (especially people under 65 and anyone with risk factors)
 - Seasonal vaccine for over 65 y.o. and for other risk groups along with or after the pandemic vaccine
 - Also recommend pneumococcal vaccination
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Other issues for businesses

- ❑ Reducing gatherings by use of e-mail, teleconferences etc.- no evidence this works but is reasonable if many people ill
 - ❑ Regular commercial cleaning products work well for influenza
 - ❑ Increase frequency of cleaning of high touch areas (phones, tables, railings etc)
 - ❑ Natural ventilation/increased air exchanges
 - ❑ May want to increase availability of ABHR in some areas (i.e. cafeteria)
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Thank You



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Any Questions?
