

**WEEKLY SYNTHESIS OF SURVEILLANCE INFORMATION, LITERATURE &  
GOVERNMENT UPDATES****(WEEK ENDING NOVEMBER 20, 2009)****GOVERNMENT UPDATES****CENTRE FOR DISEASE CONTROL (CDC)****November 20, 2009: CDC H1N1 Flu Surveillance Update.**<http://www.cdc.gov/h1n1flu/update.htm>**Weekly Flu View Map and Surveillance Report for Week Ending November 14, 2009.**<http://www.cdc.gov/flu/weekly/>

Map includes both seasonal flu and H1N1 flu activity. During week 45 (November 8-14, 2009), influenza activity decreased slightly in the US, however the proportion of outpatient visits for ILI was above the national baseline.

**H1N1: State, local, tribal and territorial health officials (November 19, 2009)**<http://www.cdc.gov/h1n1flu/statelocal/>**Updated Guidance for the Use of CSL™ 2009 H1N1 Monovalent Vaccine (November 19, 2009)**[http://www.cdc.gov/H1N1flu/vaccination/csl\\_guidance.html](http://www.cdc.gov/H1N1flu/vaccination/csl_guidance.html)**H1N1 influenza Vaccine- Dose spacing for children 6 months through 9 years of age (November 20, 2009)**[http://www.cdc.gov/h1n1flu/vaccination/pdf/Dose\\_Spacing\\_for\\_Children\\_6\\_months\\_to\\_9\\_years\\_111909\\_v1\\_3.pdf](http://www.cdc.gov/h1n1flu/vaccination/pdf/Dose_Spacing_for_Children_6_months_to_9_years_111909_v1_3.pdf)**H1N1 influenza Vaccine- Administration with Seasonal Influenza and other Vaccines (November 20, 2009)**[http://www.cdc.gov/h1n1flu/vaccination/pdf/Administration\\_with\\_Seasonal\\_Influenza\\_and\\_Other\\_Vaccines\\_111909\\_v1.3.pdf](http://www.cdc.gov/h1n1flu/vaccination/pdf/Administration_with_Seasonal_Influenza_and_Other_Vaccines_111909_v1.3.pdf)**H1N1 influenza Vaccine- Dose spacing and administration with seasonal influenza and other vaccines (November, 20 2009)**[http://www.cdc.gov/h1n1flu/vaccination/pdf/Dose\\_Spacing\\_Seasonal\\_and\\_Other\\_Vaccines\\_111909\\_v1\\_3.pdf](http://www.cdc.gov/h1n1flu/vaccination/pdf/Dose_Spacing_Seasonal_and_Other_Vaccines_111909_v1_3.pdf)**PUBLIC HEALTH AGENCY OF CANADA (PHAC)****FluWatch Week 45 (November 8-14, 2009)**[http://www.phac-aspc.gc.ca/fluwatch/09-10/w45\\_09/index-eng.php](http://www.phac-aspc.gc.ca/fluwatch/09-10/w45_09/index-eng.php)

Nationally, the activity level reported this week remained similar to the previous week. While the number of hospitalizations and deaths still increased, the proportion of positive influenza tests was comparable and the national ILI consultation rate and the number of influenza outbreaks reported decrease.

### **Deaths Associated with Influenza A (H1N1) as of November 19, 2009**

<http://www.phac-aspc.gc.ca/alert-alerte/h1n1/surveillance-eng.php>

The Public Health Agency of Canada (PHAC) is committed to sharing information about the impact of the H1N1 flu virus in Canada. Every Tuesday and Thursday at 4 p.m., the Agency will issue national updates on H1N1-associated deaths. In addition, PHAC will issue special reports on any unusual cases or clusters.

### **Weekly Distribution of the H1N1 Vaccine (November 22, 2009)**

<http://www.phac-aspc.gc.ca/alert-alerte/h1n1/vacc/dist-eng.php>

### **Recommended Safe Work Practices for Flight Catering Operators and their Staff (November 17, 2009)**

[http://www.phac-aspc.gc.ca/alert-alerte/h1n1/guidance\\_lignesdirectrices/airsecrec-eng.php](http://www.phac-aspc.gc.ca/alert-alerte/h1n1/guidance_lignesdirectrices/airsecrec-eng.php)

### **Recommended disinfection procedures for conveyance (aircraft, passenger trains, ferries, buses and cruise ships) and Terminal (airport, cruise ship, bus, ferry and train) operators and their staff (November 17, 2009)**

[http://www.phac-aspc.gc.ca/alert-alerte/h1n1/guidance\\_lignesdirectrices/convey-trans-eng.php](http://www.phac-aspc.gc.ca/alert-alerte/h1n1/guidance_lignesdirectrices/convey-trans-eng.php)

### **Public Health Guidance for the Prevention and Management of ILI including pH1N1 virus, related to Communal Living Settings (November 19, 2009)**

[http://www.phac-aspc.gc.ca/alert-alerte/h1n1/guidance\\_lignesdirectrices/commun-eng.php](http://www.phac-aspc.gc.ca/alert-alerte/h1n1/guidance_lignesdirectrices/commun-eng.php)

### **Guidance on the Use of the H1N1 flu Vaccines (November 20, 2009)**

<http://www.phac-aspc.gc.ca/alert-alerte/h1n1/vacc/monovacc/index-eng.php>

## **ONTARIO**

### **Ontario Influenza Bulletin 2009-2010, Surveillance Week 45 (November 8-14, 2009)**

[http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu\\_09/bulletins/flu\\_bul\\_01\\_20091120.pdf](http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu_09/bulletins/flu_bul_01_20091120.pdf)

Overall, influenza activity in Ontario is lower compared to the previous week. All of the measures indicate that influenza activity is lower in week 45 to week 44.

### **Frequently asked questions for health care providers (November 20, 2009)**

[http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/ambul\\_faq\\_20091120.pdf](http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/ambul_faq_20091120.pdf)

### **H1N1 Flu Virus- Signage for Ambulatory Settings (November 16, 2009)**

[http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/stop\\_signs\\_lang.aspx](http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/stop_signs_lang.aspx)

### **Ontarians have not been given any of batch A80CA0074 of H1N1 Flu vaccine (November 19, 2009)**

[http://www.health.gov.on.ca/en/ccom/flu/update\\_november\\_20\\_en.pdf](http://www.health.gov.on.ca/en/ccom/flu/update_november_20_en.pdf)

### **Kingston, Frontenac and Lennox & Addington (KFL&A): Regional Syndromic Surveillance Influenza Report (November 11-17, 2009)**

<http://www.quesst.ca/report/Syndromic%20Surveillance%20Weekly%20Flu%20Report%2020091118.pdf>

## **BC CENTER FOR DISEASE CONTROL (BC CDC):**

### **BC CDC: H1N1 flu virus update (November 17, 2009)**

<http://www.bccdc.ca/resourcematerials/newsandalerts/healthalerts/2009HealthAlerts/H1N1FluVirusHumanSwineFlu.htm>

### **Weekly BC Pandemic H1N1 Surveillance Update as of November 16, 2009:**

<http://www.bccdc.ca/dis-cond/DiseaseStatsReports/influSurveillanceReports.htm>

## **WORLD HEALTH ORGANIZATION (WHO)**

### **Global Situation Update 75, November 20, 2009**

[http://www.who.int/csr/don/2009\\_11\\_20a/en/index.html](http://www.who.int/csr/don/2009_11_20a/en/index.html)

The situation remains similar since the last update. In the northern hemisphere, the early arriving winter influenza season continues to intensify across parts of North America and much of Europe. However, there are early signs of a peak in disease activity in some areas of the northern hemisphere. In the United States, influenza transmission remains active and geographically widespread, although disease activity appears to have recently peaked in most areas except in the northeastern United States. In Canada, influenza transmission continues to intensify without a clear peak in activity; the ILI consultation rate, which has been highest among children aged 5-19, continues to significantly exceed mean rates observed over the past 12 influenza seasons.

### **Weekly Epidemiological Record on pandemic (H1N1) 2009 Ontario, Canada (November 20, 2009)**

<http://www.who.int/wer/2009/wer8447/en/index.html>

### **Public health significance of virus mutation detected in Norway (November 20, 2009)**

[http://www.who.int/csr/disease/swineflu/notes/briefing\\_20091120/en/index.html](http://www.who.int/csr/disease/swineflu/notes/briefing_20091120/en/index.html)

### **Safety of Pandemic Vaccines (November 19, 2009)**

[http://www.who.int/csr/disease/swineflu/notes/briefing\\_20091119/en/index.html](http://www.who.int/csr/disease/swineflu/notes/briefing_20091119/en/index.html)

## **EUROPEAN CENTRE FOR DISEASE PREVENTION & CONTROL (ECDC)**

### **November 20, 2009: ECDC Daily Update, Pandemic (H1N1) 2009**

[http://ecdc.europa.eu/en/healthtopics/Documents/091120\\_Influenza\\_AH1N1\\_Situation\\_Report\\_0900hrs.pdf](http://ecdc.europa.eu/en/healthtopics/Documents/091120_Influenza_AH1N1_Situation_Report_0900hrs.pdf)

### **ECDC Weekly Influenza surveillance overview (November 20, 2009)**

[http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC\\_DispForm.aspx?ID=463](http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC_DispForm.aspx?ID=463)

### **ECDC Protocols for case-control studies to measure influenza vaccine effectiveness in the EU and EEA Member States (November 17, 2009)**

[http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC\\_DispForm.aspx?ID=432](http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC_DispForm.aspx?ID=432)

### **ECDC Protocols for cohort database studies to measure influenza vaccine effectiveness in the EU and EEA member states (November 2009)**

[http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC\\_DispForm.aspx?ID=431](http://ecdc.europa.eu/en/publications/Publications/Forms/ECDC_DispForm.aspx?ID=431)

## **HEALTH/SURVEILLANCE BULLETINS:**

### Australia

**Australia Influenza Surveillance Summary Report, No. 27, 2009, reporting period: November 7-13 2009 (November 13, 2009)**

<http://www.healthemergency.gov.au/internet/healthemergency/publishing.nsf/Content/ozflucurrent.htm>

### **CENTER FOR INFECTIOUS DISEASE RESEARCH AND POLICY (CIDRAP)**

**Clusters of resistant H1N1 cases reported in UK and US (November 20, 2009)**

<http://www.cidrap.umn.edu/cidrap/content/influenza/swineflu/news/nov2009resistance.html>

**Study spotlights asthma risk in kids (November 19, 2009)**

<http://www.cmaj.ca/cgi/content/abstract/cmaj.091724v1>

**Analysis reveals two genetic clusters of H1N1 viruses (November 19, 2009)**

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19409>

**Novartis Vaccine may protect with half the dose (November 17, 2009)**

<http://www.novartis.com/newsroom/media-releases/en/2009/1355458.shtml>

**Study: H1N1 doesn't readily infect poultry (November 16, 2009)**

<http://www.cdc.gov/eid/content/15/12/pdfs/09-1060.pdf>

## **JOURNALS SCANNED:**

- American Journal of Public Health
- British Medical Journal
- Canadian Medical Association Journal
- Clinical Infectious Diseases
- Emerging Infectious Diseases
- Eurosurveillance
- Journal of Infectious Diseases
- Lancet
- MMWR
- Nature
- New England Journal of Medicine
- PLoS One
- PLoS Currents
- Science
- Virology Journal (*new this week*)

### **AMERICAN JOURNAL OF PUBLIC HEALTH**

- Nothing new on H1N1 this week

## **BRITISH MEDICAL JOURNAL**

1) WHO recommends early antiviral treatment for at risk groups with suspected swine flu (John Zarocostas, November 13, 2009)

[http://www.bmj.com/cgi/content/full/339/nov13\\_2/b4831?utm\\_source=feedburner&utm](http://www.bmj.com/cgi/content/full/339/nov13_2/b4831?utm_source=feedburner&utm)

### **Abstract:**

People in groups at high risk of complications—such as pregnant women, children under 2 years old, and people with underlying medical conditions—and who are suspected of having swine flu should be treated promptly with antiviral drugs, the World Health Organization said on 12 November. The updated clinical management guidelines were announced amid an upsurge in cases of pandemic flu in some countries in Europe and Asia. Previously, WHO guidance focused on how to treat severe cases and limited use of antivirals because of poor access to the drugs in some regions. But experience of the virus has taught doctors the importance of early treatment to prevent progression of severe diseases, said Nikki Shindo, a WHO specialist in the clinical aspects of flu.

2) Deaths from swine flu in UK rise, while cases fall / Andrew Cole (November 13, 2009)

[http://www.bmj.com/cgi/content/full/339/nov13\\_2/b4832?utm\\_source=feedburner&utm](http://www.bmj.com/cgi/content/full/339/nov13_2/b4832?utm_source=feedburner&utm)

### **Abstract:**

Sir Liam Donaldson said that 28 people with swine flu died in the week to 9 November. The cumulative total of deaths across the UK is now 182: 124 in England, 33 in Scotland, 14 in Wales, and 11 in Northern Ireland. In contrast to the patterns seen with seasonal flu, 60% of the deaths from swine flu that have been fully investigated have been in people under the age of 45 and only 19% in people aged over 65.

3) The economy-wide impact of pandemic influenza on the UK: a computable general equilibrium modelling experiment (Richard D Smith et al., November 19, 2009)

[http://www.bmj.com/cgi/content/full/339/nov19\\_1/b4571?utm\\_source=feedburner&utm](http://www.bmj.com/cgi/content/full/339/nov19_1/b4571?utm_source=feedburner&utm)

### **Abstract:**

A computable general equilibrium model of the UK economy was specified for various combinations of mortality and morbidity from pandemic influenza, vaccine efficacy, school closures, and prophylactic absenteeism using published data. The costs related to illness alone ranged between 0.5% and 1.0% of gross domestic product (£8.4bn to £16.8bn) for low fatality scenarios, 3.3% and 4.3% (£55.5bn to £72.3bn) for high fatality scenarios, and larger still for an extreme pandemic. School closure increases the economic impact, particularly for mild pandemics. If widespread behavioural change takes place and there is large scale prophylactic absence from work, the economic impact would be notably increased with few health benefits. Vaccination with a pre-pandemic vaccine could save 0.13% to 2.3% of gross domestic product (£2.2bn to £38.6bn); a single dose of a matched vaccine could save 0.3% to 4.3% (£5.0bn to £72.3bn); and two doses of a matched vaccine could limit the overall economic impact to about 1% of gross domestic product for all disease scenarios.

4) Andrew Rouse and Tom Marshall: Informed consent, the doctor and H1N1 immunisation (Juliet Walker, November 17, 2009)

<http://blogs.bmj.com/bmj/2009/11/17/andrew-rouse-and-tom-marshall-informed-consent->

### **Abstract:**

How does a doctor obtain informed consent for H1N1 immunisation consistent with General Medical Council guidance? The Department of Health's guidance does not provide sufficient information for this. This is our attempt to rectify this omission, providing information required for informed consent consistent with good professional practice. We outline the main principles of General Medical Council on the responsibilities of doctors in seeking informed consent into practical guidance.

## **CANADIAN MEDICAL ASSOCIATION JOURNAL**

1) Alberta obtains standby ventilators from federal stockpile (Laura Eggertson, November 11, 2009)  
<http://www.cmaj.ca/earlyreleases/11nov09-alberta-obtains-standby-ventilators.shtml>

### **Abstract:**

Canada's provinces are starting to tap the federal stockpile of reserve ventilators as they struggle to cope with the strain being placed on intensive care units by pandemic (H1N1) 2009.

## **CLINICAL INFECTIOUS DISEASES**

1) Clinical Effectiveness of Oseltamivir and Zanamivir for Treatment of Influenza A Virus Subtype H1N1 with the H274Y Mutation: A Japanese, Multicenter Study of the 2007–2008 and 2008–2009 Influenza Seasons (Naoki Kawai, et al., November 13, 2009)  
<http://www.journals.uchicago.edu/doi/pdf/10.1086/648424>

### **Abstract:**

Influenza A virus subtype H1N1 with the H274Y mutation spread worldwide during the period 2008–2009. Fever lasted significantly longer after oseltamivir therapy than after zanamivir therapy for H1N1 during the period 2008–2009. The effectiveness of oseltamivir in treating H1N1 infection has reduced significantly.

2) Notes from the Field: Outbreak of 2009 Pandemic Influenza A (H1N1) Virus at a Large Public University in Delaware, April–May 2009 (A. Danielle Iuliano, et al., November 12, 2009)  
<http://www.journals.uchicago.edu/doi/pdf/10.1086/649555>

### **Abstract:**

We investigated the first reported university outbreak of 2009 pandemic influenza A (pH1N1) virus infection. The health system was overwhelmed with a rapid increase in visits and 24 confirmed cases. Travel to Mexico and participation in “Greek Week” were associated with virus spread on campus.

3) Economic Value of Seasonal and Pandemic Influenza Vaccination during Pregnancy (Richard H. Beigi, et al., November 11, 2009)  
<http://www.journals.uchicago.edu/doi/pdf/10.1086/649013>

### **Abstract:**

Maternal influenza immunization is a cost-effective intervention against both seasonal and pandemic influenza. This finding justifies ongoing efforts to maximize maternal immunization among this vulnerable patient population.

4) Oseltamivir Resistance: What Does It Mean Clinically? (Stephen G. Baum, November 13, 2009)  
<http://www.journals.uchicago.edu/doi/pdf/10.1086/648425>

### **Abstract:**

Resistance to oseltamivir has emerged in many countries during the past few years. In Japan, resistance rates have skyrocketed from 3% during the 2008–2009 influenza season to 98%–100% during the 2008–2009 season.

## **EMERGING INFECTIOUS DISEASES**

1) Susceptibility of Poultry to Pandemic (H1N1) 2009 Virus (Swayne DE et al., November 16, 2009)  
<http://www.cdc.gov/eid/content/15/12/pdfs/09-1060.pdf>

Abstract:

Pandemic (H1N1) 2009 virus is unlikely to produce sustained outbreaks in poultry unless the virus mutates or reassorts with existing avian influenza viruses. Since the submission of this report, the virus has been detected in 2 turkey flocks in Chile ([www.oie.int/wahis/public.php?page=single\\_report&pop=1&reportid=8404](http://www.oie.int/wahis/public.php?page=single_report&pop=1&reportid=8404)). Currently, only limited data are available, and it is unknown if pandemic (H1N1) 2009 has changed and acquired the ability to infect and transmit in turkeys or if the 2 cases are isolated events without epidemic potential in turkeys.

**EUROSURVEILLANCE**

1) Differentiation of two distinct clusters among currently circulating influenza A(H1N1)v viruses, March-September 2009 (S R Fereidouni et al., November 19, 2009)

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19409>

Abstract:

Analysis of all complete genome sequences of the pandemic influenza A(H1N1)v virus available as of 10 September 2009 revealed that two closely related but distinct clusters were circulating in most of the affected countries at the same time. The characteristic differences are located in genes encoding the two surface proteins - haemagglutinin and neuraminidase - and four internal proteins – the polymerase PB2 subunit, nucleoprotein, matrix protein M1 and the non-structural protein NS1. Phylogenetic inference was demonstrated by neighbour joining, maximum likelihood and Bayesian trees analyses of the involved genes and by tree construction of concatenated sequences.

2) Oseltamivir-resistant influenza A(H1N1) viruses detected in Europe during season 2007-8 had epidemiologic and clinical characteristics similar to co-circulating susceptible A(H1N1) viruses (B C Ciancio et al., November 19, 2009)

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19412>

Abstract:

During the 2007-08 influenza season, high levels of oseltamivir resistance were detected among influenza A(H1N1) viruses in a number of European countries. We used surveillance data to describe influenza A(H1N1) cases for whom antiviral resistance testing was performed. We pooled data from national studies to identify possible risk factors for infection with a resistant virus and to ascertain whether such infections led to influenza illness of different severity. Information on demographic and clinical variables was obtained from patients or their physicians. Odds ratios for infection with an oseltamivir resistant virus and relative risks for developing certain clinical outcomes were computed and adjusted through multivariable analysis. Overall, 727 (24.3%) of 2,992 tested influenza A(H1N1) viruses from 22 of 30 European countries were oseltamivir-resistant. Levels of resistance ranged from 1% in Italy to 67% in Norway. Five countries provided detailed case-based data on 373 oseltamivir resistant and 796 susceptible cases. By multivariable analysis, none of the analysed factors was significantly associated with an increased risk of infection with an oseltamivir-resistant virus. Similarly, infection with an oseltamivir-resistant virus was not significantly associated with a different risk of pneumonia, hospitalisation or any clinical complication. The large-scale emergence of oseltamivir-resistant viruses in Europe calls for a review of guidelines for influenza treatment.

**JOURNAL OF INFECTIOUS DISEASES**

-Nothing new on H1N1 this week

**LANCET**

-Nothing new on H1N1 this week

## **MMWR**

-Nothing new on H1N1 this week

## **NATURE**

-Nothing new on H1N1 this week

## **NEW ENGLAND JOURNAL OF MEDICINE**

1) Rapid-Test Sensitivity for Novel Swine-Origin Influenza A (H1N1) Virus in Humans (Christopher C. Blyth, Jonathan R. Iredell, and Dominic E. Dwyer, November 18, 2009)

<http://content.nejm.org/cgi/content/full/NEJMc0909049?query=TOC>

### **Abstract:**

We found that the antigen tests had poor sensitivity to the virus when used in a subgroup of 21 patients in the Australian intensive care cohort with severe 2009 influenza A (H1N1) virus infection and acute lung injury that required mechanical ventilation.<sup>2</sup> In these patients, rapid antigen tests (QuickVue A+B, Quidel) were performed on swabs from the nose and throat, and influenza type-specific immunofluorescent antigen assays (Chemicon, Millipore) were performed on bronchoscopic specimens. In all 21 patients, RT-PCR testing (AusDiagnostics), performed on specimens from both the upper and lower respiratory tracts, had been used to confirm infection with the virus.

2) Antiviral Treatment for Patients Hospitalized with 2009 Pandemic Influenza A (H1N1) (Tim Uyeki, November 18, 2009)

<http://h1n1.nejm.org/?p=1188&query=TOC>

### **Abstract:**

Controlled trials conducted among outpatients with uncomplicated seasonal influenza reported a reduction of approximately 1 day in the duration of illness and reduced severity when antiviral treatment was initiated within 48 hours of illness onset, as compared with placebo. However, evidence from observational studies supports the benefit of neuraminidase inhibitors (oseltamivir or zanamivir) in reducing complications, including deaths, among hospitalized patients with 2009 pandemic influenza A (H1N1).

## **PLOS ONE**

1) Evolutionary Trends of A(H1N1) Influenza Virus Hemagglutinin Since 1918 (Jun Shen, Jianpeng Ma, Qinghua Wang, November 17, 2009)

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0007789>

### **Abstract:**

As the primary immunity-eliciting antigen, hemagglutinin (HA) is the major agent for host-driven antigenic drift in A(H3N2) virus. However, whether and how the evolution of HA is influenced by existing immunity is poorly understood for A(H1N1). Here, by analyzing hundreds of A(H1N1) HA sequences since 1918, we show the first evidence that host selections are indeed present in A(H1N1) HAs. Among a subgroup of human A(H1N1) HAs between 1918~2008, we found strong diversifying (positive) selection at HA<sub>1</sub> 156 and 190. We also analyzed the evolutionary trends at HA<sub>1</sub> 190 and 225 that are critical determinants for receptor-binding specificity of A(H1N1) HA. Different A(H1N1) viruses appeared to favor one of these two sites in host-driven antigenic drift: epidemic A(H1N1) HAs favor HA<sub>1</sub> 190 while the 1918 pandemic and swine HAs favor HA<sub>1</sub> 225. Thus, our results highlight the urgency to understand the interplay between antigenic drift and receptor binding in HA evolution, and provide molecular signatures for monitoring future antigenically drifted 2009 pandemic and seasonal A(H1N1) influenza viruses.

## **PLOS CURRENTS**

1) Knol: The Early Transmission Dynamics of H1N1pdm Influenza in the United Kingdom (Asra Ghani et al., November 20, 2009)

<http://knol.google.com/k/azra-ghani/the-early-transmission-dynamics-of/51duu>

### **Abstract:**

We analyzed data on all laboratory-confirmed cases of H1N1pdm influenza in the UK to 10th June 2009 to estimate epidemiological characteristics. We estimated a mean incubation period of 2.05 days and serial interval of 2.5 days with infectivity peaking close to onset of symptoms.

Transmission was initially sporadic but increased from mid-May in England and from early June in Scotland. We estimated 37% of transmission occurred in schools, 24% in households, 28% through travel abroad and the remainder in the wider community. Children under 16 were more susceptible to infection in the household (adjusted OR 5.80, 95% CI 2.99-11.82). Treatment with oseltamivir plus widespread use of prophylaxis significantly reduced transmission (estimated reduction 16%).

Households not receiving oseltamivir within 3 days of symptom onset in the index case had significantly increased secondary attack rates (adjusted OR 3.42, 95% CI 1.51-8.55).

2) Knol: Estimate of Novel Influenza A/H1N1 cases in Mexico at the early stage of the pandemic with a spatially structured epidemic model (Vittoria Colizza et al., November 18, 2009)

<http://knol.google.com/k/estimate-of-novel-influenza-a-h1n1-cases-in-mexico-at-the-e>

### **Abstract:**

Reliable figures for the actual number of cases is the key to the estimate of parameters such as the mortality, morbidity or hospitalization rates that are on their turn crucial in the policy making process. A paramount example of this issue is provided by the worries caused by the early estimate of the fatality rate of the current H1N1 pandemic from the Mexican data. As it turned out later, this number was inflated because the confirmed cases of infections were grossly underestimated in Mexico.

## **SCIENCE**

- Nothing new on H1N1 this week

## **VIROLOGY JOURNAL** *(new this week)*

1) Evidence for a novel gene associated with human influenza A viruses. (Clifford, M. Twigg J. and Upton C., November 16, 2009)

<http://www.virologyj.com/content/6/1/198>

### **Abstract:**

We hypothesize that the genomic strand of segment 8 of encodes a novel influenza A virus protein. The persistence and conservation of this genomic strand ORF for almost a century in human influenza A viruses provides strong evidence that it is translated into a polypeptide that enhances viral fitness in the human host. This has important consequences for the interpretation of experiments that utilize mutations in the NS1 and NEP genes of segment 8 and also for the consideration of events that may alter the spread and/or pathogenesis of swine and avian influenza A viruses in the human population.