

**WEEKLY SYNTHESIS OF SURVEILLANCE INFORMATION, LITERATURE &  
GOVERNMENT UPDATES**

**(WEEK ENDING NOVEMBER 13, 2009)**

**GOVERNMENT UPDATES**

**CENTRE FOR DISEASE CONTROL (CDC)**

**November 13, 2009: CDC H1N1 Flu Surveillance Update.**

<http://www.cdc.gov/h1n1flu/update.htm>

**Weekly Flu View Map and Surveillance Report for Week Ending November 07, 2009.**

<http://www.cdc.gov/flu/weekly/>

Map includes both seasonal flu and H1N1 flu activity. During week 44 (November 1-7, 2009), influenza activity increased in the US, however the proportion of outpatient visits for ILI was above the national baseline.

**H1N1: Resources for Tribal and Territorial Health Officials (November 16, 2009)**

<http://www.cdc.gov/h1n1flu/statelocal/tribalandterritorial.htm>

**2009 H1N1 Flu information for people with disability and their caregivers or personal assistants (November 16, 2009)**

<http://www.cdc.gov/h1n1flu/disabilities/>

**Interim Infection Control Guidance on 2009 H1N1 Influenza for Personnel at Blood and Plasma Collection Facilities (November 12, 2009)**

[http://www.cdc.gov/h1n1flu/guidance/blood\\_facilities.htm](http://www.cdc.gov/h1n1flu/guidance/blood_facilities.htm)

**2009 H1N1 and People with Diabetes (November 12, 2009)**

<http://www.cdc.gov/h1n1flu/diabetes/>

**Interim Guidance: Considerations Regarding 2009 H1N1 Influenza in Intrapartum and Postpartum Hospital Settings (November 10, 2009)**

<http://www.cdc.gov/h1n1flu/guidance/obstetric.htm>

**PUBLIC HEALTH AGENCY OF CANADA (PHAC)**

**FluWatch Week 44 (November 1-7, 2009)**

[http://www.phac-aspc.gc.ca/fluwatch/09-10/w44\\_09/index-eng.php](http://www.phac-aspc.gc.ca/fluwatch/09-10/w44_09/index-eng.php)

Nationally, there was a considerable increase in the influenza activity level reported this week with a proportion of positive influenza tests of more than 38%, the national ILI consultation rate of almost 100 per 1,000 patient visits, 25 regions reporting widespread activity and over 750 influenza outbreaks reported. This increased activity occurred in almost all provinces and territories.

### **Deaths Associated with Influenza A (H1N1) as of November 12, 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 15, 2009)**

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

### **Health Canada Approves a Canadian Unadjuvanted H1N1 Flu Vaccine (November 13, 2009)**

[http://www.hc-sc.gc.ca/ahc-asc/media/nr-cp/\\_2009/2009\\_185-eng.php](http://www.hc-sc.gc.ca/ahc-asc/media/nr-cp/_2009/2009_185-eng.php)

### **Update: H1N1 Flu Vaccine: One Dose Recommendations Changes for children 3-9 years (November 13, 2009)**

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

## **ONTARIO**

### **Ontario Influenza Bulletin 2009-2010, Surveillance Week 44 (November 1-7, 2009)**

[http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu\\_09/bulletins/flu\\_bul\\_01\\_20091113.pdf](http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu_09/bulletins/flu_bul_01_20091113.pdf)

Overall, influenza activity in Ontario during week 44, 2009, was similar compared to week 43. All of the measures indicate that influenza activity is similar in week 44 compared to week 43. This is the first week that the overall assessment has not increased since week 38.

### **MOHLTC IHN: pH1N1 Access to Supplies & Equipment (November 12, 2009)**

[http://www.health.gov.on.ca/english/providers/program/emu/health\\_notices/ihn\\_20091112.pdf](http://www.health.gov.on.ca/english/providers/program/emu/health_notices/ihn_20091112.pdf)

### **MOHLTC IHN: pH1N1 Information for Health Care providers (November 4, 2009)**

[http://www.health.gov.on.ca/english/providers/program/emu/health\\_notices/ihn\\_20091113.pdf](http://www.health.gov.on.ca/english/providers/program/emu/health_notices/ihn_20091113.pdf)

### **Ontario to Offer H1N1 Vaccine to children 13 and under and Seniors with Underlying Health Conditions (November 13, 2009)**

<http://news.ontario.ca/mohltc/en/2009/11/ontario-to-offer-h1n1-vaccine-to-children-13-and-under-and-seniors-with-underlying-health-conditions.html>

### **Flu Assessment Centres Updated (November 13 2009)**

[http://www.health.gov.on.ca/en/ccom/flu/h1n1/public/assess\\_clinics.aspx](http://www.health.gov.on.ca/en/ccom/flu/h1n1/public/assess_clinics.aspx)

### **Ontario Expands H1N1 Vaccination Program (November 10, 2009)**

<http://www.news.ontario.ca/mohltc/en/2009/11/ontario-expands-h1n1-vaccination-program.html>

### **MOHLTC: Ambulatory Care Settings Guidance Document (Version 2, Nov 13, 2009)**

[http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/ambulatory\\_guidance.pdf](http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/ambulatory_guidance.pdf)

### **MOHLTC: Emergency Departments Guidance Document (Version 2 Nov 13, 2009)**

[http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/emergency\\_guidance.pdf](http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/emergency_guidance.pdf)

**MOHLTC: Pre-Hospital Settings Guidance Document (Version 2, Nov 13, 2009)**

[http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/prehospital\\_guidance.pdf](http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/prehospital_guidance.pdf)

**MOHLTC: Long-Term Care Setting Guidance Document (Version 2, Nov13, 2009)**

[http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/ltc\\_guidance.pdf](http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/ltc_guidance.pdf)

**MOHLTC: Pharmacies Guidance Document (Version 2, Nov 13, 2009)**

[http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/pharmacies\\_guidance.pdf](http://www.health.gov.on.ca/en/ccom/flu/h1n1/pro/docs/pharmacies_guidance.pdf)

**Kingston, Frontenac and Lennox & Addington (KFL&A): Regional Syndromic Surveillance Influenza Report (November 4-10, 2009)**

<http://www.quesst.ca/report/Syndromic%20Surveillance%20Weekly%20Flu%20Report%2020091111.pdf>

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

**BC CDC: H1N1 flu virus update (November 10, 2009)**

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

**Weekly BC Pandemic H1N1 Surveillance Update as of November 7, 2009:**

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

**WORLD HEALTH ORGANIZATION (WHO)**

**Global Situation Update<sup>74</sup>, November 13, 2009**

[http://www.who.int/csr/don/2009\\_11\\_13/en/index.html](http://www.who.int/csr/don/2009_11_13/en/index.html)

The winter influenza season, which began unusually early across much of the Northern Hemisphere, shows early signs of peaking in parts of North America but is intensifying across much of Europe and Central and Eastern Asia. Canada reported sharp increases in rates of ILI, detections of pandemic H1N1 virus, and school outbreaks over the past three weeks as pandemic activity continues to spread west to east. In the US, influenza transmission remains geographically widespread and intense but largely unchanged since the previous reporting week; rates of hospitalizations among persons aged 0-4 years, 5-17 years, and 18-49 years have now exceeded those seen during recent previous influenza seasons. Disease activity may have peaked in the earlier affected southern and south eastern parts of the United States. In Mexico, influenza activity remains geographically widespread with a significant wave of cases reported since early September, most notably from central and southern Mexico.

**Interim planning considerations for mass gatherings in the context of pandemic (H1N1) 2009 influenza (November 2009)**

[http://www.who.int/csr/resources/publications/swineflu/cp002\\_2009-0511\\_planning\\_considerations\\_for\\_mass\\_gatherings.pdf](http://www.who.int/csr/resources/publications/swineflu/cp002_2009-0511_planning_considerations_for_mass_gatherings.pdf)

**Weekly Epidemiological Record on pandemic (H1N1) 2009 (Nov 13, 2009)**

<http://www.who.int/wer/2009/wer8446/en/index.html>

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

**November 13, 2009: ECDC Daily Update, Pandemic (H1N1) 2009**

[http://ecdc.europa.eu/en/healthtopics/Documents/091113\\_Influenza\\_AH1N1\\_Situation\\_Report\\_0900hrs.pdf](http://ecdc.europa.eu/en/healthtopics/Documents/091113_Influenza_AH1N1_Situation_Report_0900hrs.pdf)

**ECDC Weekly Influenza surveillance overview (November 16, 2009)**

[http://ecdc.europa.eu/en/healthtopics/Documents/091116\\_Influenza\\_A\(H1N1\)\\_Weekly\\_Executive\\_Update.pdf](http://ecdc.europa.eu/en/healthtopics/Documents/091116_Influenza_A(H1N1)_Weekly_Executive_Update.pdf)

## **HEALTH/SURVEILLANCE BULLETINS:**

Australia

**Australia Influenza Surveillance Summary Report, No. 24, 2009, reporting period: October 17-23 2009 (October 23, 2009)**

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

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

**Research Study Profiles Aussi Hospital Cases (Nov 16, 2009)**

[http://www.mja.com.au/public/issues/192\\_02\\_180110/den10902\\_fm.html](http://www.mja.com.au/public/issues/192_02_180110/den10902_fm.html)

**Disparity between H1N1 and seasonal flu deaths explored (Nov 15, 2009)**

[http://chealth.canoe.ca/channel\\_health\\_news\\_details.asp?channel\\_id=1020&relation\\_id=71452&news\\_channel\\_id=1020&news\\_id=29487](http://chealth.canoe.ca/channel_health_news_details.asp?channel_id=1020&relation_id=71452&news_channel_id=1020&news_id=29487)

**Public Buy-in crucial in H1N1 response (Nov 15 2009)**

<http://www.informaworld.com/smpp/content~content=a916397252~db=all>

**CDC urges pneumococcal vaccine for risk groups (Nov 10, 2009)**

<http://www.cdc.gov/h1n1flu/vaccination/provider/lettertoprovider.htm/?rss>

**GBS reported in a boy who received H1N1 vaccine (Nov 11, 2009)**

[http://www.msnbc.msn.com/id/33845867/ns/health-cold\\_and\\_flu](http://www.msnbc.msn.com/id/33845867/ns/health-cold_and_flu)

**Hispanics in Texas hit hard by H1N1**

<http://www.chron.com/disp/story.mpl/hotstories/6718072.html>

## **JOURNALS SCANNED:**

- American Journal of Public Health
- British Medical Journal
- Canadian Medical Association Journal
- Clinical Infectious Diseases
- Emerging Infectious Diseases
- Eurosurveillance
- Journal of the American Medical Association JAMA (added this week)

- Journal of Infectious Diseases
- MMWR
- Nature
- New England Journal of Medicine
- PLoS One
- PLoS Currents
- Science

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

- Nothing new on H1N1 this week

### **BRITISH MEDICAL JOURNAL**

1) Reassure pregnant women over swine flu vaccine, health officials urge (Jacqui Wise, November 9, 2009)

[http://www.bmj.com/cgi/content/full/339/nov09\\_1/b4642](http://www.bmj.com/cgi/content/full/339/nov09_1/b4642)

#### Abstract:

The department has developed a question and answer sheet to support GPs in their consultations with pregnant women who may be anxious about the new vaccine

2) New pandemic flu guidelines: don't forget your oximeter (Tom Nolan, November 13, 2009)

<http://blogs.bmj.com/bmj/2009/11/12/tom-nolan-new-pandemic-flu-guidelines-dont->

#### Abstract:

[New guidelines](#) on the management of pandemic H1N1 influenza were published recently by the Department of Health.

### **CANADIAN MEDICAL ASSOCIATION JOURNAL**

1) Management of acute asthma in adults in the emergency department: assisted ventilation (Hodder Rick et al., November 9, 2009)

<http://www.cmaj.ca/cgi/rapidpdf/cmaj.080073v1?ijkey=2569914ce1a4ef7cfddb8ad12543>

#### Abstract:

Noninvasive ventilation should be used only for selected patients with acute asthma, only in an acute care area and only by experienced personnel. A modified rapid-sequence technique should be used for intubation in acute asthma. Deep sedation, with doses of opioids sufficient to depress the respiratory drive and occasional use of pharmacologic paralysis, is recommended during the initial period of invasive mechanical ventilation for acute asthma. The initial ventilator set-up for acute asthma should minimize the risk of worsening dynamic hyperinflation. Initial controlled mechanical hypoventilation allowing "permissive" hypercapnia is recommended for acute, potentially fatal asthma requiring mechanical ventilation.

### **CLINICAL INFECTIOUS DISEASES**

-Nothing new on H1N1 this week

### **EMERGING INFECTIOUS DISEASES**

1) [letter] Preexisting immunity to pandemic H1N1 2009 (Z Xing and Carol J. Cardona, November 15, 2009)

<http://www.cdc.gov/eid/content/15/11/1847.htm>

Abstract:

We found that repeated exposure to seasonal influenza viruses or vaccination may have resulted in partial cell-mediated or humoral immunity to influenza virus (H5N1). The same type of immunity may have happened in persons exposed to pandemic (H1N1) 2009 virus as well.

2) [letter] Serologic survey of pandemic (H1N1) 2009 virus, Guangxi province, China (H. Chen et al., November 15, 2009)

<http://www.cdc.gov/eid/content/15/11/1849.htm>

Abstract:

We hypothesize that the absence of neutralizing antibodies in our control group, all of whom had been vaccinated 3 times, suggests that prolonged and repeated vaccination is required for partial immunity to CA04 or that older vaccines may confer some degree of protection. If these serologic differences are indicative of increased susceptibility, we would expect higher infection attack rates in largely unvaccinated populations than in vaccinated populations in countries such as China.

3) [letter] Antiviral drugs for treatment of patients infected with pandemic (H1N1) 2009 virus (D.M. Hartley et al., November 15, 2009)

<http://www.cdc.gov/eid/content/15/11/1851.htm>

Abstract:

Appropriate use of antiviral chemotherapy is complex. Identifying the groups at high risk for serious illness for drug therapy and appropriate antiviral therapy in situations of co-circulation of seasonal and pandemic (H1N1) viruses with various susceptibility patterns needs elucidation. Without clear evidence-based guidance, a global public health disaster could occur if pandemic (H1N1) 2009 reemerges later this year with higher virulence or widespread antiviral drug resistance.

**EUROSURVEILLANCE**

1) A simple mathematical approach to deciding the dosage of vaccine against pandemic H1N1 influenza (H Nishiura, K Iwata, November 12, 2009)

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19396>

Abstract:

Results from early clinical trials have shown that a single dose of pandemic H1N1 influenza vaccine may generate sufficient antibody response, but the relevance of this fact to public health decision making has yet to be clarified. The present study compares the risk of clinical attack (i.e. clinical attack rate) between one- and two-dose vaccination schemes. If the efficacies do not greatly vary between one- and two-dose schemes, one-dose vaccination may well be supported. Nevertheless, two-dose vaccination is shown to result in less morbidity if the vaccine efficacies are greatly diminished by reducing the dose. As long as the detailed efficacy estimates rest on theoretical assumptions, single-dose vaccination may only be sufficiently justified in a specific setting where the number of vaccines is extremely limited.

2) Pandemic influenza A(H1N1)v: Human to pig transmission in Norway? (M Hofshagen et al., November 12, 2009)

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19406>

Abstract:

In Norway there is an ongoing outbreak in pigs of infections with pandemic influenza A(H1N1)v virus. The first herd was confirmed positive on 10 October 2009. As of 26 October, a total of 23 herds have been diagnosed as positive. The majority of the herds seem to have been infected by humans. Sequence analysis of pig viruses from the index farm shows that they are identical or virtually identical to human viruses from the same geographical region.

3) Assessing the impact of the 2009 H1N1 influenza pandemic on reporting of other threats through the Early Warning and Response System (Cox, P Guglielmetti, D Coulombier, November 12, 2009)

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19397>

Abstract:

Since the start of 2009 H1N1 influenza pandemic, a notable surge in messages communicated through the Early Warning and Response System (EWRS) for the prevention and control of communicable diseases in the European Union has been recorded. In order to measure the impact of this increase on the reporting of other events, we compared the messages posted in the EWRS since April 2009 with those posted in the previous years (2004-2008). The analysis revealed that a ten-fold increase in messages was recorded during the pandemic period, from April to September 2009, and that the reporting of other threats dropped to a significantly low rate. These results suggest an important impact on the notification process of events in case of a situation requiring extensive mobilisation of public health resources. It emphasises the importance keeping an appropriate balancing of resources during sustained emergencies, in particular in view of a possible second wave of pandemic influenza cases, to ensure prompt detection and reporting of potential concomitant emerging threats.

**JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION** (added this week)

1) Prone Positioning in Patients With Moderate and Severe Acute Respiratory Distress Syndrome: A Randomized Controlled Trial (Paolo Taccone et al., November 10, 2009)

<http://jama.ama-assn.org/cgi/content/full/302/18/1977>

Abstract:

Post hoc analysis of a previous trial has suggested that prone positioning may improve survival in patients with severe hypoxemia and with acute respiratory distress syndrome (ARDS). Data from this study indicate that prone positioning does not provide significant survival benefit in patients with ARDS or in subgroups of patients with moderate and severe hypoxemia.

2) [Report on previous MMWR] Performance of Rapid Influenza Diagnostic Tests During Two School Outbreaks of 2009 Pandemic Influenza A (H1N1) Virus Infection-Connecticut, 2009

<http://jama.ama-assn.org/cgi/content/full/302/18/1962>

Abstract:

This report summarizes the findings from the performance assessment, which indicated that, compared with rRT-PCR, the sensitivity of the RIDT for detecting infection in patients with 2009 pandemic influenza A (H1N1) was 47%, and the specificity was 86%.

3) [Report on previous MMWR] Receipt of Influenza Vaccine During Pregnancy Among Women With Live Births—Georgia and Rhode Island, 2004-2007

<http://jama.ama-assn.org/cgi/content/full/302/18/1964>

Abstract:

CDC analyzed data from the Pregnancy Risk Assessment and Monitoring System (PRAMS) from Georgia and Rhode Island, the two states that collected this information on the PRAMS survey. This report summarizes the results, which showed that in Georgia, the prevalence of influenza vaccination during the woman's most recent pregnancy increased from 10.4% in 2004 to 15.5% in 2006. In Rhode Island, vaccination prevalence increased from 21.9% in 2004 to 33.4% in 2007.

**JOURNAL OF INFECTIOUS DISEASES**

1) Reassortment between Amantadine-resistant and -sensitive H1N1 influenza A viruses generated an Amantadine-sensitive virus during the 2007-2008 season (Yuki Furuse, et al., December 1, 2009)

<http://www.journals.uchicago.edu/doi/pdf/10.1086/647989>

Abstract:

Here, we show that cocirculation of amantadine-resistant and -sensitive strains led to the genesis of amantadine-sensitive reassortant virus during the 2007–2008 season. Thereafter, the reassortant virus predominated. This contrasts with the trend for the H3N2 virus, in which the amantadine-resistant reassortant virus became predominant. The results suggest that it is necessary to monitor genome dynamics to understand the evolution and mechanism of the emergence and spread of antiviral resistance among influenza A viruses.

2) Efficient transmission of swine-adapted but not wholly avian influenza viruses among pigs and from pigs to ferrets (Annabel de Vleeschauwer et al., December 1, 2009)

<http://www.journals.uchicago.edu/doi/pdf/10.1086/648475>

Abstract:

Pigs are considered to be intermediate hosts for the transmission of avian influenza viruses (AIVs) between birds and humans, but the transmissibility of AIVs among pigs and from pigs to other mammals remains largely unexplored. Our data indicate that swine-adapted influenza viruses spread readily among pigs and from pigs to other susceptible mammals and support the notion that AIVs undergo genetic adaptation to efficiently cross the species barrier. Our transmission models hold potential to study the factors that lead to the generation of pandemic influenza viruses.

**MORBIDITY AND MORTALITY REPORT (MMWR)**

1) Effectiveness of 2008-09 Trivalent Influenza Vaccine Against 2009 Pandemic Influenza A (H1N1) - United States, May-June 2009

[http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5844a5.htm?s\\_cid=mm5844a5\\_x](http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5844a5.htm?s_cid=mm5844a5_x)

Abstract:

To complement the serologic studies and evaluate the effectiveness of 2008--09 trivalent seasonal influenza vaccine against laboratory-confirmed pandemic influenza A (H1N1) illness, CDC used available data to conduct a case-cohort analysis.

**NEW ENGLAND JOURNAL OF MEDICINE**

1) [Letter] Emergence of Oseltamivir-Resistant Pandemic H1N1 Virus during Prophylaxis (Mariana Baz et al., November 12, 2009)

<http://content.nejm.org/cgi/content/full/NEJMc0910060v1>

Abstract:

Our results indicate that the same neuraminidase mutation (H275Y) is associated with oseltamivir resistance not only in seasonal H1N1 and avian H5N1 viruses but now also in 2009 pandemic H1N1 strains. We hypothesize that the presence of subtherapeutic levels of oseltamivir at a time when viral replication had already begun was an important factor that led to the emergence of the resistant virus in the father of our index patient. Other oseltamivir-resistant strains of 2009 H1N1 virus detected during postexposure prophylaxis have been reported to the World Health Organization.

2) Critical Care Services and 2009 H1N1 Influenza in Australia and New Zealand (The ANZIC Influenza Investigators, November 12, 2009)

<http://content.nejm.org/cgi/content/full/361/20/1925>

Abstract:

The 2009 H1N1 virus had a substantial effect on ICUs during the winter in Australia and New Zealand. Our data can assist planning for the treatment of patients during the winter in the Northern Hemisphere.

3) Hospitalized Patients with 2009 H1N1 Influenza in the United States, April-June 2009 (Seema Jain et al., November 12, 2009)

<http://content.nejm.org/cgi/content/full/361/20/1935>

Abstract:

We describe the clinical characteristics of patients who were hospitalized with 2009 H1N1 influenza in the United States from April 2009 to mid-June 2009. During the evaluation period, 2009 H1N1 influenza caused severe illness requiring hospitalization, including pneumonia and death. Nearly three quarters of the patients had one or more underlying medical conditions. Few severe illnesses were reported among persons 65 years of age or older. Patients seemed to benefit from antiviral therapy.

4) Cross-Reactive Antibody Responses to the 2009 Pandemic H1N1 Influenza Virus (Kathy Hancock, et al., November 12, 2009)

<http://content.nejm.org/cgi/content/full/361/20/1945>

Abstract:

To assess the level of preexisting immunity in humans and to evaluate seasonal vaccine strategies, we measured the antibody response to the pandemic virus resulting from previous influenza infection or vaccination in different age groups. Vaccination with recent seasonal nonadjuvanted or adjuvanted influenza vaccines induced little or no cross-reactive antibody response to 2009 H1N1 in any age group. Persons under the age of 30 years had little evidence of cross-reactive antibodies to the pandemic virus. However, a proportion of older adults had preexisting cross-reactive antibodies.

5) Preparing for 2009 H1N1 Influenza (Richard P. Wenzel, M.D., and Michael B. Edmond, November 12, 2009)

<http://content.nejm.org/cgi/content/full/361/20/1991>

Abstract:

In this issue of the *Journal*, two studies shed light on the clinical characteristics of patients who have been hospitalized with 2009 H1N1 influenza and on the resources that have been needed in ICUs to manage the pandemic.

6) [Letter] Older Age and a Reduced Likelihood of 2009 H1N1 Virus Infection (D. Fisman, R. Savage, J. Gubbay, C. Achonu, H. Akwar, D. J. Farrell, N. S. Crowcroft, P. Jackson., November 12, 2009)

<http://content.nejm.org/cgi/content/full/361/20/2000>

**Abstract:**

Among persons who were at risk for infection with 2009 H1N1 virus, being born before 1957 was associated with a lower infection risk. The reduced number of infections was not simply a reflection of decreased testing in this group. The mechanism for this association is unclear but is compatible with the reported age-related increase in the prevalence of neutralizing antibody titers against the 2009 H1N1 virus and may reflect some immunity to infection as a result of exposure to similar viruses in early life. Maximally effective host immune responses to influenza may be generated by early-life infections. These findings are consistent with the high frequency of outbreaks of 2009 H1N1 influenza in schools and the decreased frequency of outbreaks in long-term care facilities that have been associated with this pandemic virus to date.

7) [Letter] Pathological Changes Associated with the 2009 H1N1 Virus (M. Virgilia Soto-Abraham et al., November 12, 2009)

<http://content.nejm.org/cgi/content/full/361/20/2001>

**Abstract:**

Between April 23, 2009, and May 15, 2009, we performed 15 autopsies on deceased patients in whom probable influenza had been diagnosed either clinically or macroscopically. ... These observations may represent an early stage of an acute pulmonary lesion that had not yet transitioned from the exudative phase to the proliferative phase.

**PLoS ONE**

1) Incidence, seasonality and mortality associated with influenza pneumonia in Thailand: 2005-2008 (Simmerman, James Mark et al.)

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0007776>

**Abstract:**

Data on the incidence, seasonality and mortality associated with influenza in subtropical low and middle income countries are limited. Prospective data from multiple years are needed to develop vaccine policy and treatment guidelines, and improve pandemic preparedness.

**PLoS CURRENTS**

1) [Knol] Optimizing tactics for use of the U.S. antiviral strategic national stockpile for pandemic (H1N1) influenza, 2009 (Dimitrova, Nedialko et al., November 7, 2009)

<http://knol.google.com/k/optimizing-tactics-for-use-of-the-u-s-antiviral-strategic-national-stockpile?collectionId=28qm4w0q65e4w.1&position=2#>

**Abstract:**

Public health agencies across the globe are working to mitigate the impact of the 2009 pandemic caused by swine-origin influenza A (H1N1) virus. Prior to the large-scale distribution of an effective vaccine, the primary modes of control have included careful surveillance, social distancing and hygiene measures, strategic school closures, other community measures, and the prudent use of antiviral medications to prevent infection (prophylaxis) or reduce the severity and duration of symptoms (treatment). Here, we use mathematical models to determine the optimal geo-temporal tactics for distributing the U.S. strategic national stockpile of antivirals for treatment of infected cases during the early stages of a pandemic, prior to the wide availability of vaccines.

2) [Knol] Public preparedness guidance for a severe influenza pandemic in different countries: a qualitative assessment and critical overview (Wladimir J. Alonzo & Cynthia Schuck Paim, November 10, 2009)

<http://knol.google.com/k/public-preparedness-guidance-for-a-severe-influenza-pandemic-in-different?collectionId=28qm4w0q65e4w.1&position=1#>

**Abstract:**

During a severe influenza pandemic individuals and families can, by following well-directed and scientifically-based measures, not only benefit themselves but also play an effective role in reducing transmission rates and the burden on public services. Such guidelines should be provided as clearly and comprehensively as possible by official sources. Here we examine the official recommendations issued by 10 countries to prepare their citizens for a severe pandemic. We have found the presence of hazardous guidelines – as the advice to personally visit a health center at the earliest symptoms – and shortage of practical advices for home isolation, business preparation and treatment to be widespread. Our review shows that, while many positive recommendations were provided, the set of recommendations issued by most countries was not comprehensive enough for severe influenza scenarios. This is a situation that needs revision.

**SCIENCE**

1) Sick of Swine Flu? Here Comes H3N2 (Jon Cohen With reporting by Martin Enserink., November 5, 2009)

<http://blogs.sciencemag.org/scienceinsider/2009/11/sick-of-swine-f.html>

**Abstract:**

The H3N2 strain is one of three in the seasonal influenza vaccines. But if the H3N2 strain in circulation differs substantially from the one used to make the vaccine, the vaccine may offer less protection, and more people will get sick than usual. “For the current H3N2, we don't have such studies, so I can't tell you right now the degree the current seasonal vaccine will protect against the H3N2 virus,” Fukuda says.

However, some early indicators from China suggest that the main H3N2 in circulation there may be a mismatch with the vaccine strain.