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

(WEEK ENDING SEPTEMBER 18, 2009)

GOVERNMENT UPDATES

CENTRE FOR DISEASE CONTROL (CDC)

September 18, 2009: CDC H1N1 Flu Surveillance Update.

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

Weekly Flu View Map and Surveillance Report for Week Ending September 12, 2009.

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

Map includes both seasonal flu and H1N1 flu activity. During week 36 (September 6-12, 2009), influenza activity increased in the US, however the proportion of outpatient visits for ILI was above the national baseline.

Updated Interim Recommendations for Obstetric Health Care Providers Related to Use of Antiviral Medications in the Treatment and Prevention of Influenza for 2009-2010 Season (September 17, 2009).

http://www.cdc.gov/H1N1flu/pregnancy/antiviral_messages.htm

Planning for 2009 H1N1 Influenza: A preparedness guide for Small Business (September 16, 2009).

<http://www.cdc.gov/H1N1flu/business/guidance/smallbiz.htm>

Small businesses play a key role in protecting employees' health and safety as well as limiting the impact to the economy and society during an influenza pandemic. Advance planning for pandemic influenza, a novel infectious disease that could occur in varying levels of severity, is critical.

PUBLIC HEALTH AGENCY OF CANADA (PHAC)

FluWatch Week 36 (September 6 - 12, 2009)

http://www.phac-aspc.gc.ca/fluwatch/09-10/w35_09/pdf/fw2009-35-eng.pdf

The overall influenza activity remains similar to the previous week; the national ILI consultation rate is within range of expected level at this time of the year. The peak period of pH1N1 occurred in the first three weeks of June.

Prevention and management of cases of ILI that may be due to pH1N1 influenza virus on cruise ships (September 15, 2009).

<http://www.phac-aspc.gc.ca/alert-alerte/h1n1/hp-ps/cs-pc-eng.php>

This document has been developed by the Public Health Agency of Canada to provide guidance to cruise ship operators, medical staff and crew calling on ports in Canada on the prevention and management of influenza-like illness (ILI) that may be due to

pandemic (H1N1) 2009 influenza virus in passengers or crew.

Guidance on H1N1 Vaccine Sequencing (September 16, 2009)

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

This document provides guidance for some individuals or groups who may be at higher risk of severe illness or hospitalization due to socio-economic and lifestyle conditions, access to health care, and elevated risk of exposure to the H1N1 flu virus. Consideration will be given to targeting these individuals for immunization as our understanding of the virus evolves

News Release: Government of Canada Issues Guidance of H1N1 Influenza Vaccine Sequencing (September 16, 2009).

http://www.phac-aspc.gc.ca/media/nr-rp/2009/2009_0916-eng.php.

Deaths Associated with Influenza A (H1N1) as of September 17, 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.

ONTARIO- MOHLTC

Ontario Influenza Bulletin 2008-2009 Season, Surveillance Week 36 (September 6-12, 2009).

http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu_08/bulletins/flu_bul_01_20090918.pdf

Influenza activity in Ontario is similar compared to the previous week. Many of the measures indicate that influenza activity in week 36 were similar or slightly lower to activity in week 35.

WORLD HEALTH ORGANIZATION (WHO)

Situation Update 66, September 18, 2009:

http://www.who.int/csr/don/2009_09_18/en/index.html

In temperate regions of the northern hemisphere, there are wide geographical variations in the level of influenza activity being reported. In North America, the US is reporting increases in ILI activity above the seasonal baseline, most notably in the southern, southeastern, and parts of the northeastern US. In Canada, influenza activities remain low. In Europe and Central Asia influenza activity remains low overall, except in France, which is reporting increases in ILI activity (for week 37) above the seasonal epidemic threshold.

Pandemic vaccine donations for the developing world (September 18, 2009).

http://www.who.int/mediacentre/news/statements/2009/pandemic_vaccine_donations_20090918/en/index.html

WHO applauds and welcomes the announcement of donations of pandemic vaccine made today by the United States of America, in concert with Australia, Brazil, France, Italy, New Zealand, Norway, Switzerland, and the United Kingdom.

EUROPEAN CENTRE FOR DISEASE PREVENTION & CONTROL (ECDC)

September 18, 2009: ECDC situation report (daily surveillance report).

http://ecdc.europa.eu/en/healthtopics/Documents/090918_Influenza_AH1N1_Situation_Report_1700hrs.pdf

HEALTH/SURVEILLANCE BULLETINS:

Southern Hemisphere

In regions of the Americas and Asia, influenza transmission remains active. Geographically regional to widespread influenza activity continues to be reported throughout much of South and Southeast Asia, with increasing trends in respiratory diseases being reported in India and Bangladesh. Geographically regional to widespread influenza activity continues to be reported for the tropical regions of Central and South America without a consistent pattern in the trend of respiratory diseases (continued increases are being reported in Bolivia and Venezuela).

In the southern hemisphere, influenza activity continues to decrease or has returned to the seasonal baseline in most countries. In Australia, later affected areas are also now reporting declining levels of ILI. In South Africa, influenza activity appears to have recently passed over the second peak (the first peak was due to seasonal influenza A (H3N2) and second peak was due to pandemic (H1N1) 2009). *Source: WHO as of September 18.*

Australia

Australia Influenza Surveillance Summary Report, No. 18, 2009, reporting period: September 5 - 11 2009.

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

Overall, the current national influenza activity continues to decrease. Most jurisdictions have reported that pandemic H1N1 2009 activity has peaked and is decreasing. ILI presentations to the ED are decreasing across all reporting systems this reporting period. Absenteeism rate increased in the last week and are similar to those seen at the same time in 2007.

The number of people with confirmed H1N1 requiring hospitalization continues to decrease. As of September 11, a total of 94 new people were hospitalized, with a total of 4642 people who are hospitalized since the beginning of the pandemic. Highest hospitalization rate occurred in young children less than 5 years of age. 5% of the hospitalized cases have been reported as pregnant, which reinforces the fact that pregnancy particularly in the second and third trimesters is a risk factor for hospitalization with pH1N1. Indigenous Australians are approximately 8 times more likely than non-Indigenous Australians to be hospitalized for Pandemic (H1N1) 2009, representing 15% of all hospitalizations.

Australia, New South Wales: Weekly Summary (as of September 16, 2009)

http://www.emergency.health.nsw.gov.au/swineflu/resources/pdf/case_statistics_170909.pdf

New Zealand

Situation Update in New Zealand as of September 16, 2009 see link:

<http://www.moh.govt.nz/moh.nsf/indexmh/influenza-a-h1n1-update-151-160909>

New Zealand: Weekly 37 Summary (September 7-13, 2009)

http://www.surv.esr.cri.nz/PDF_surveillance/Virology/FluWeekRpt/2009/FluWeekRpt200937.pdf

There has been a decrease in consultations for ILI through sentinel surveillance in week 37. However, the weekly ILI consultation rate is still higher than previous years for the same week. So far, the highest ILI consultation rates have been reported among children and teenagers aged 0 to 19 years.

CENTER FOR INFECTIOUS DISEASE RESEARCH AND POLICY (CIDRAP)

September 17: UK sees signs of 2nd pandemic wave. British health officials said today that surveillance data show a slight increase in pandemic H1N1 cases, which might herald the start of a second wave of infections. Suspected outbreaks have been reported at six schools, though there are no closure plans. Scottish officials also reported a rise in novel flu cases.

<http://www.telegraph.co.uk/health/swine-flu/6202318/Swine-flu-second-wave-on-way-as-number-of-cases-in-England-rises.html>

JOURNALS SCANNED:

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

AMERICAN JOURNAL OF INFECTION CONTROL (NEW THIS WEEK)

1) Stockpile of personal protective equipment in hospital settings: Preparedness for influenza pandemics (*Mayuko Hashikura and Junko Kizu, September 11, 2009*)

http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6W9M-4X6M98S-1&_user=7390936&_rdoc=1&_fmt=&_orig=search&_sort=d&_docanchor=&_view=c&_acct=C000071363&_version=1&_urlVersion=0&_userid=7390936&md5=e20ce585e3555cd35b36f6183d67c7d5

This paper proposes a personal protective equipment (PPE) calculation system to help hospitals to decide their PPE stockpile. The researchers examined influenza guidelines from a number of countries and research papers on protective devices and infectious disease. The PPE calculation system included factors such as the influenza pandemic period, risk classification by health care workers (HCW) type, and the type and number of PPE for HCW per day. The study concluded that 4 sets of PPE (N95 respirators, double gloves, gowns, and goggles) per day should be prepared for HCWs in a high-risk group. Furthermore, 2 sets of appropriate PPE, depending on the risk level, are required for medium- and low-risk groups. In addition, 2 surgical masks are required for every worker and inpatient and 1 for each outpatient. The study recommends that PPE stockpile should be prepared to cover at least an 8-week pandemic.

AMERICAN JOURNAL OF PUBLIC HEALTH

- Nothing new on H1N1 this week.

BRITISH MEDICAL JOURNAL

1) Swine flu vaccine is a "thousandfold" safer than the infection, say experts (*Oliver Ellis, September 16, 2009*)

http://www.bmj.com/cgi/content/full/339/sep16_2/b3802

Experts this week down-played the risk of adverse reactions from the forthcoming swine flu vaccine, saying that even in the worse case scenario people would be in a "thousandfold better off" having the vaccination than the disease. Concerns among experts have been raised that the vaccine may carry a risk of causing Guillain-Barre Syndrome. New surveillance procedures have been put in place by regulatory bodies and drug manufacturers to evaluate safety, not just passive reporting of events, but also a more active monitoring of adverse events.

2) Clinical Review. Recommendations for the administration of influenza vaccine in children allergic to egg (*M Erlewyn-Lajeunesse, N Brathwaite, J S A Lucas, J O Warner, September 15, 2009*)

http://www.bmj.com/cgi/content/full/339/sep15_3/b3680

This article reviews the literature on the safety of flu vaccines and provides guidelines for the administration of these vaccines to children with egg allergy. The authors recommend that all individuals with egg allergy should be immunized with mammalian culture based on flu vaccine. If this is not available, the authors recommend using virosomal vaccine for seasonal flu as this has the lowest egg content of any vaccine based on hens' egg and has clinical data to support its use.

Although egg-free flu vaccines are expected to be available for this season, the provision of sufficient amounts of this vaccine cannot be guaranteed at this time, and a practical strategy for the safe immunisation of children with egg allergy is required.

3) GPs are to be paid £5.25 a shot for swine flu vaccination (*Zosia Kmietowicz, September 15, 2009*)

http://www.bmj.com/cgi/content/full/339/sep15_3/b3815

GPs in England are to be paid £5.25 for every dose of swine flu vaccine they administer, once it is licensed, under a deal agreed between the BMA and the Department of Health. In total, GPs stand to earn an extra £47m between them, or about £1424 each, if they vaccinate all the nine million people in England identified as being at risk. This article

describes the incentivize practices to achieve the highest possible uptake of the vaccination for these most at-risk patients.

CANADIAN MEDICAL ASSOCIATION JOURNAL (CMAJ)

1) Swine flu breaks out on Vancouver Island (*September 17, 2009*)
http://www.cmaj.ca/earlyreleases/17sept09_swine_flu_vancouver.shtml

Tofino, BC, family physician Dr. John Armstrong says he has treated “dozens” of people infected with the virus, while the outbreak is such that the province’s public health lab in Vancouver recently instructed him to stop sending swabs, having confirmed that all of the samples he had already forwarded were, in fact, positive for the H1N1 virus. Armstrong states that it is important that Tamiflu be “prepositioned” and readily available to those infected with the virus.

CLINICAL INFECTIOUS DISEASES

- Nothing new on H1N1 this week.

EMERGING INFECTIOUS DISEASES

1) Influenza (H1N1) 2009 Outbreak and School Closure, Osaka Prefecture, Japan (*R. Kawaguchi et al., October 2009*)
<http://www.cdc.gov/eid/content/15/10/pdfs/09-1029.pdf>

This report describes the Osaka governments’ implementation of school closures as a public health measure to mitigate the spread of pH1N1. The prefectural-wide school closure strategy may have had an impact on not only the reduction of virus transmission and elimination of successive large outbreaks, but also may have fostered greater public awareness about the need for preventive measures.

EUROSURVEILLANCE

1) Sub-optimal hand sanitiser usage in a hospital entrance during an influenza pandemic, New Zealand, August 2009 (*R Murray et al., September 18, 2009*)
<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19331>

An observational study was undertaken to examine hand hygiene behaviours by people passing a hand sanitiser station in the foyer of a public hospital in New Zealand in August 2009. Of the 2,941 subjects observed, 449 (18.0%, 95% confidence interval: 16.6, 19.6) used the hand sanitiser. The results from this study indicate sub-optimal response to the health promotion initiatives in the setting of a pandemic. These findings suggest the need for more effective health promotion of hand hygiene and also the need to provide baseline measurements for future evaluation of hygiene practices.

2) Economic consequences to society of pandemic H1N1 influenza 2009 – preliminary results for Sweden (*L Brouwers et al., September 18, 2009*)
<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19333>

This study aimed to develop a model to allow for simulation of the spread of infection in a population in a realistic manner, and examine the effects of applying different policy strategies. Experiments using a microsimulation platform show that vaccination against pandemic H1N1 influenza is highly cost-effective. Swedish society may reduce the costs of pandemic by about SEK 2.5 billion (approximately EUR 250 million) if at least 60 per cent of the population is vaccinated, even if costs related to death cases are excluded.

The cost reduction primarily results from reduced absenteeism. These results are preliminary and based on comprehensive assumptions about the infectiousness and morbidity of the pandemic, which are uncertain in the current situation.

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

-Nothing new on H1N1 this week

JOURNAL OF INFECTIOUS DISEASES

-Nothing new on H1N1 this week

LANCET

1) Efficacy and economic assessment of conventional ventilatory support versus extracorporeal membrane oxygenation for severe adult respiratory failure (CESAR): a multicentre randomised controlled trial (*Giles J. Peek et al., September 16, 2009*)
[http://www.lancet.com/journals/lancet/article/PIIS0140-6736\(09\)61069-2/fulltext](http://www.lancet.com/journals/lancet/article/PIIS0140-6736(09)61069-2/fulltext)

This study investigated the safety, clinical efficacy, and cost-effectiveness of extracorporeal membrane oxygenation (ECMO) compared with conventional ventilation support. This study randomly assigned 180 adults in a 1:1 ratio to receive continued conventional management or referral to consideration for treatment by ECMO. Eligible patients aged 18-65 years and had severe but potentially reversible respiratory failure. We recommend transferring of adult patients with severe but potentially reversible respiratory failure, whose Murray score exceeds 3.0 or who have a pH of less than 7.20 on optimum conventional management, to a centre with an ECMO-based management protocol to significantly improve survival without severe disability.

MMWR

1) Update: Influenza Activity -United States, April-August 2009 (*September 18, 2009*)
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5836a6.htm?s_cid=mm5836a6_x

Pandemic H1N1 influenza activity peaked in the United States during May and June and declined during July and early August. From mid-April to August 30, a total of 9,079 hospitalizations and 593 deaths associated with laboratory-confirmed 2009 pandemic influenza A (H1N1) virus infections were reported to CDC. Of 1,372 pandemic H1N1 viruses tested for antiviral resistance at CDC, 1,364 (99.4%) have been susceptible to oseltamivir. All eight pandemic H1N1 viruses found to be resistant to oseltamivir were obtained from persons taking oseltamivir for treatment or prophylaxis at the time of specimen collection. Data from the 122 Cities Mortality Reporting System indicate that the proportion of deaths attributed to pneumonia and influenza did not exceed the epidemic threshold for 2 or more consecutive weeks at any time during April-August. However, 47 pediatric deaths associated with laboratory-confirmed pandemic H1N1 influenza occurred during April 2--August 29.

NATURE

- Nothing new on H1N1 this week

NEW ENGLAND JOURNAL OF MEDICINE

1) Poverty, Wealth, and Access to Pandemic Influenza Vaccines (*T. Yamada, September 17, 2009*)

<http://content.nejm.org/cgi/content/full/361/12/1129?query=TOC>

Only a few countries in the world have plants for manufacturing influenza vaccine, and three companies — GlaxoSmithKline, Sanofi-Aventis, and Novartis — account for most of the world's manufacturing capacity. The number of doses of vaccine against H1N1 influenza that could be produced with the existing capacity is very large, but the sobering truth is that even if production were switched over completely from seasonal influenza vaccine to pandemic influenza vaccine, there would not be nearly enough for everyone in the world. The size of the gap in potential supply depends greatly on the dose that is required, and it may be possible to reduce the necessary dose by as much as 75% with the use of an adjuvant. The challenging problem is that much, if not most, of the manufacturing capacity is already spoken for through purchasing contracts held by many of the world's wealthy countries.

PLoS ONE

1) EpiCollect : linking smartphones to web applications for epidemiology, ecology and community data collection (*David M. Aanensen et al., September 17, 2009*)

<http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0006968>

In this paper the authors describe a generic framework, consisting of mobile phone software, EpiCollect, and a web application located within www.spatialepidemiology.net. Data collected by multiple field workers can be submitted by phone, together with GPS data, to a common web database and can be displayed and analyzed, along with previously collected data, using Google Maps (or Google Earth). Similarly, data from the web database can be requested and displayed on the mobile phone, again using Google Maps. Data collection frameworks utilizing mobile phones with data submission to and from central databases are widely applicable and can give a field worker similar display and analysis tools on their mobile phone that they would have if viewing the data in their laboratory via the web. The authors demonstrate their utility for epidemiological data collection and display, and briefly discuss their application in ecological and community data collection.

PLoS CURRENTS

- Nothing new on H1N1 this week

SCIENCE

- Nothing new on H1N1 this week