

Yukon Influenza Surveillance Report
Influenza Season: 2009-2010
Summary Report
FluWatch Weeks 5-8 (January 31 - February 27, 2010)

****All data are provisional and subject to change as information is received.*

Prepared by: Yukon Communicable Disease Control
Report Written: March 5, 2010
Disseminated: March 8, 2010

Report Highlights

This surveillance report produced by YCDC summarizes influenza activity in the Yukon for the 2009-2010 season, during weeks 5-8 (January 31 - February 27, 2010). Please note that FluWatch reports are produced one week behind the current date.

2009-2010 FluWatch Weeks Calendar: <http://www.phac-aspc.gc.ca/fluwatch/09-10/09-10cal-eng.php>

During weeks 5-8, surveillance indicators continue to demonstrate low to no levels of influenza activity. The level of activity is within the expected range for this time of year. Included in this report is the proportion of the population that has received pH1N1 vaccination since the campaign began October 26, 2009.

Pandemic H1N1 (pH1N1) Severe Outcomes

Hospitalizations

There have been no hospitalizations since week 46 (Nov 15 - Nov 21, 2009). Since October 20th, there have been 15 pH1N1 Yukon residents admitted to hospital. Among hospitalized cases 12 of the 15 had at least one risk factor for influenza complications. 3 out of 15 hospitalized cases have been admitted to ICU.

Deaths

There have been no deaths reported since week 46 (Nov 15 - Nov 21). Yukon has had three deaths where pH1N1 was detected; pH1N1 played a direct role in the death in two of the three individuals. The first death occurred during week 44, in a female child with underlying health conditions. The second death occurred during week 46 in an adult female, underlying health conditions were not present. A third death was announced December 9th, 2009. The death occurred in an infant who died early November, however, pH1N1 infection is thought to be coincidental and not a contributing factor in the death. A complete coroner's investigation is pending. Link to Yukon Health and Social Services Release: http://www.hss.gov.yk.ca/news/id_213/

FluWatch Reporting

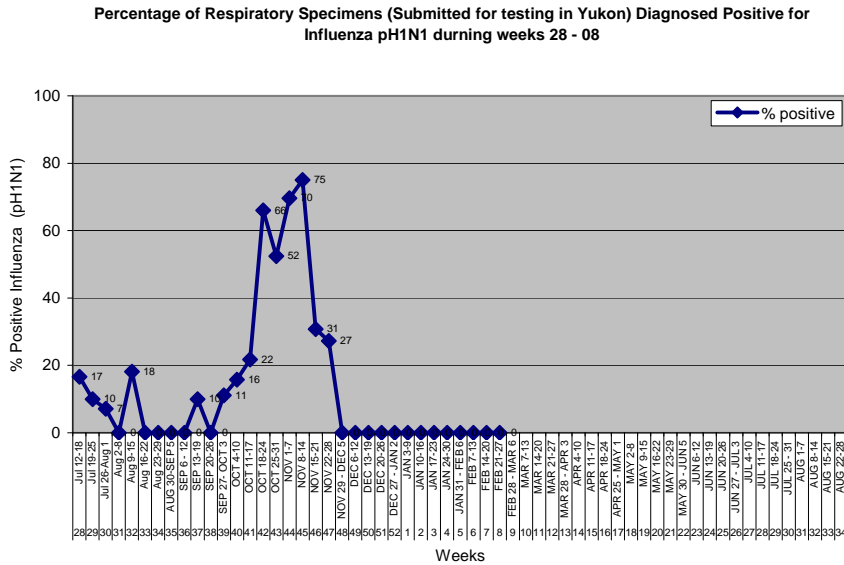
Based on FluWatch activity level definitions, Yukon has reported the following activity levels:

FluWatch activity level definition <http://www.phac-aspc.gc.ca/fluwatch/09-10/def09-10-eng.php>

Weeks 5-8	No activity: no laboratory-confirmed influenza detections during the past four weeks, however, sporadically occurring ILI may be reported
------------------	---

Laboratory Reports

Since week 47 none of the submitted respiratory specimens have tested positive for influenza. Percentage of respiratory specimens testing positive for influenza A was highest during week 45, when percent positivity was 75%. Since week 45, percent positivity has continued to decline. *Please note data collection is ongoing.*



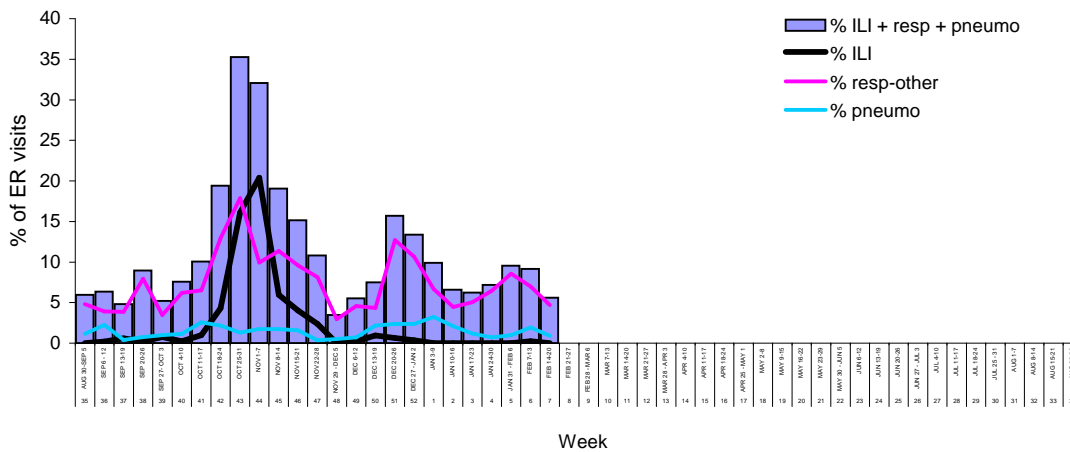
Communities with Laboratory Confirmed pH1N1

Cumulative laboratory information indicates that since April, 2009 Whitehorse and 9 out of 13 surrounding communities have had confirmed pH1N1 case reports.

Whitehorse General Hospital Emergency Visits

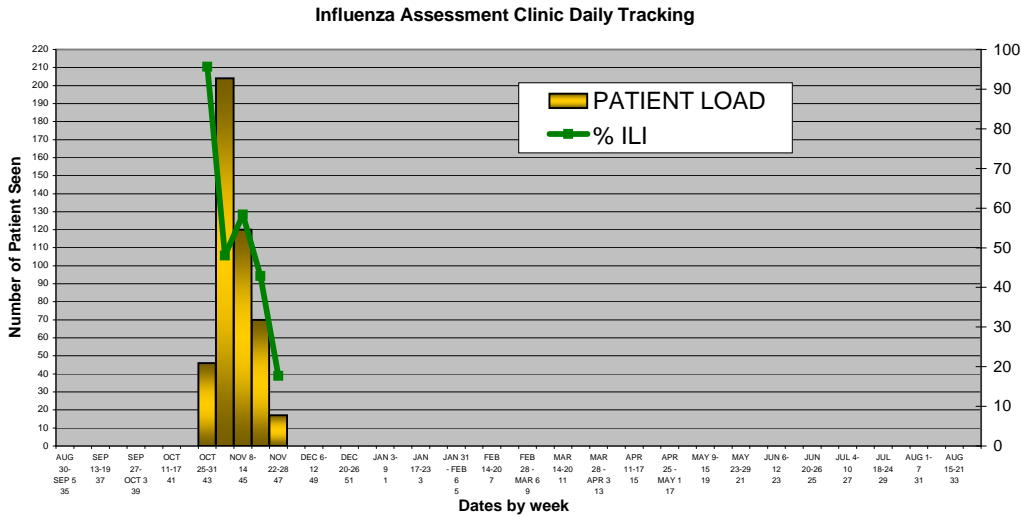
During weeks 5-8 the proportion of presentations to the WGH emergency department for respiratory symptoms identified as ILI has remained low.

Percent of WGH ER visits with influenza-like illness (ILI), other respiratory symptoms, or pneumonia by week



Influenza Assessment Clinic

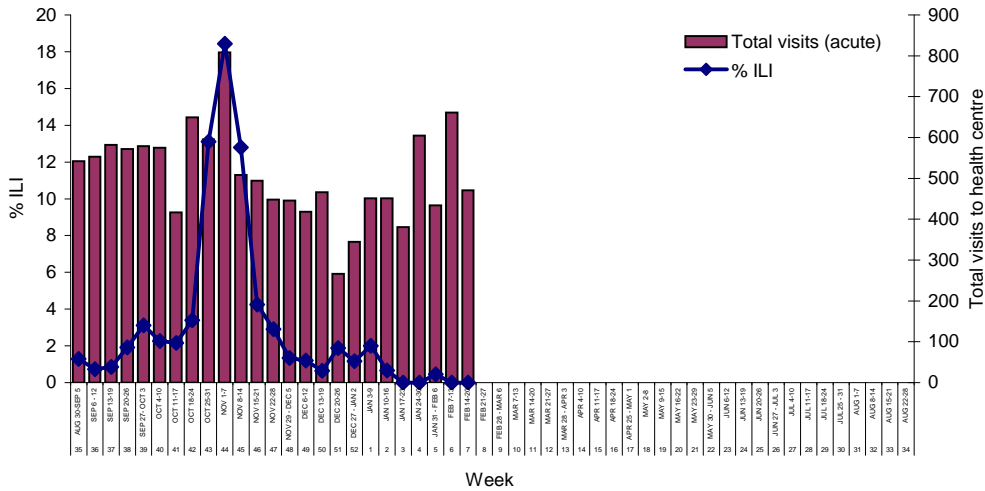
This downtown Whitehorse clinic opened its doors on October 30th, 2009. The following graph depicts patient volume from October 30th to November 27, 2009. The clinic's last day of operation was November 27th, 2009.



Community Health Centres

Influenza-related visits to Community Health Centres (rural Yukon) increased substantially during weeks 42-44 while decreasing activity was seen from week 45 on. From week 48 on, the proportion of ILI related visits have returned to similar levels experienced in week 42 and earlier.

Percentage with ILI, visits to community health centres by week



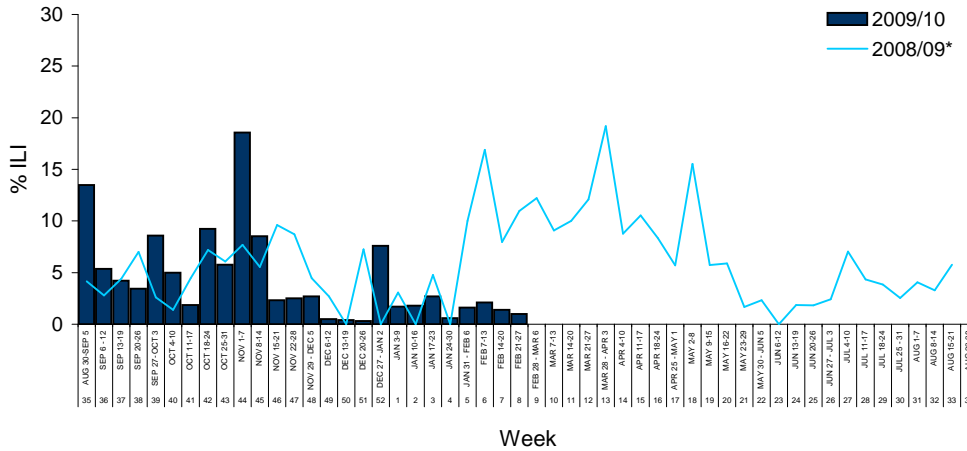
*Data provided from Community Nursing

Sentinel physicians/sites

The percentage of patients presenting to sentinel physicians or sites with ILI during weeks 5-8 was between 2.1% (week 6) and 1.0% (week 8).

During the 2008/09 season, an average of five sentinel reports were received each week. A new recruitment of sentinel physicians and sites occurred in July 2009. There are presently 18 sentinel physicians/sites across the territory; between 55 to 72% of sentinels reported during weeks 5-8. Yukon's sentinel surveillance system is comprised of all Community Health Centres and participating physicians. (FluWatch Sentinel Surveillance Information <http://www.phac-aspc.gc.ca/fluwatch/sent-eng.php>)

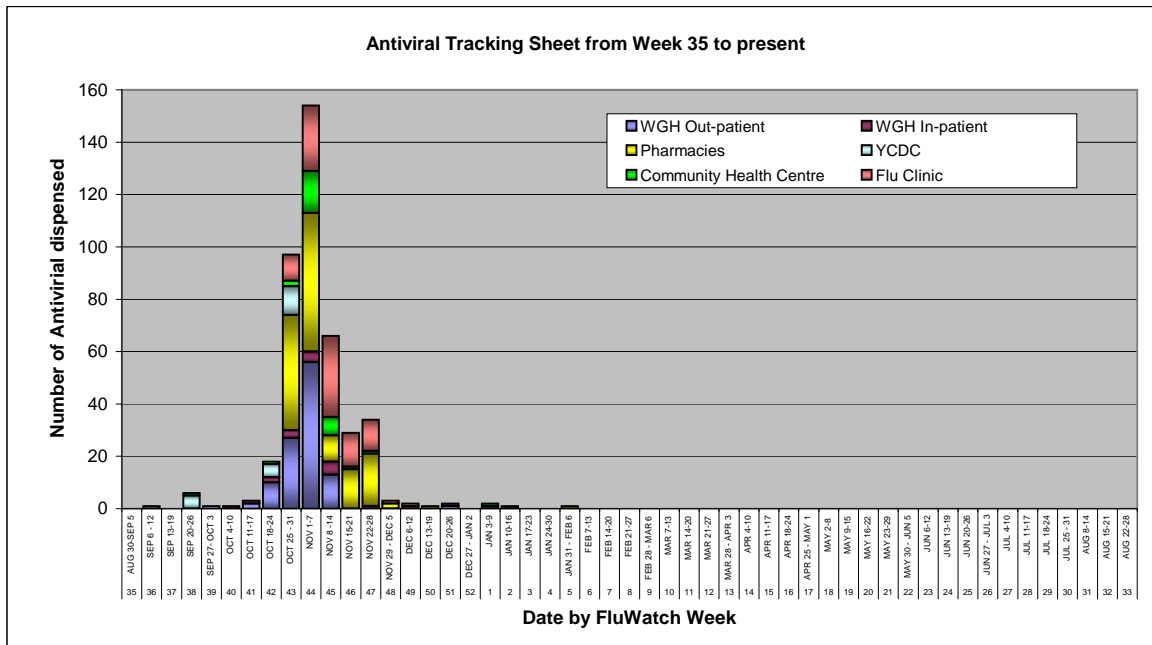
Percentage with ILI, visits to sentinels by week



*2008/09 weeks are slightly different than those shown (following the Sun-Sat weekly pattern).

Antiviral Prescriptions/Dispensing

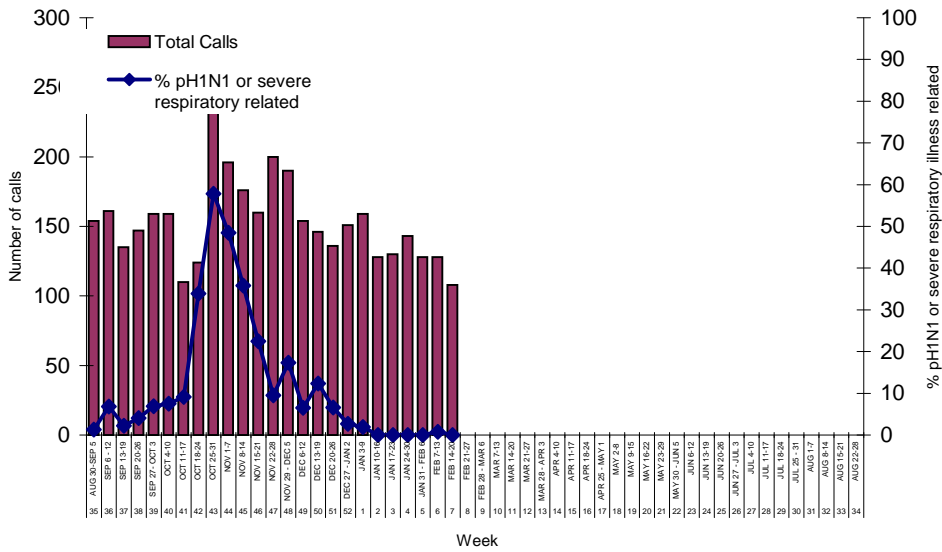
Antiviral prescriptions have decreased since week 45. During weeks 5-8 there were sporadic distributions seen. Please note data collection is ongoing.



HealthLink 811

The percentage of calls related to Influenza A pH1N1 or severe respiratory illness have remained decreased during weeks 5-8.

Number of calls and percentage related to pH1N1 or severe respiratory illness by week



Calls related to pH1N1 or severe respiratory illness by type of call

Week ending	Nov 7	Nov 14	Nov 21	Nov 28	Dec 5	Dec 12	Dec 19	Dec 26	Jan 2	Jan 9	Jan 16	Jan 23	Jan 30	Feb 6	Feb 13	Feb 20
Week	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7
Triage	58.9	47.6	58.3	17.1	36.4	80.0	61.1	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Education	40.0	42.9	25.0	74.3	33.3	10.0	27.8	22.2	50.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0
Wayfinding	1.1	9.5	16.7	8.6	30.3	10.0	11.1	11.1	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Triage = caller requesting information on symptom management/guidance; Education = caller requesting information about an illness or condition; Wayfinding = caller looking for contact or service directions

Outbreaks

No facility outbreaks have been reported since week 43 (Oct 25 - 31, 2009). On October 29th, 2009 (during week 43) YCDC was notified of an influenza outbreak within the Whitehorse Correctional facility. The outbreak was contained to fewer than 10 residents who developed symptoms during their stay at the facility or who exhibited symptoms of influenza upon admission. Causative organism of the outbreak was identified as pH1N1. This outbreak was declared over on November 16th, 2009.

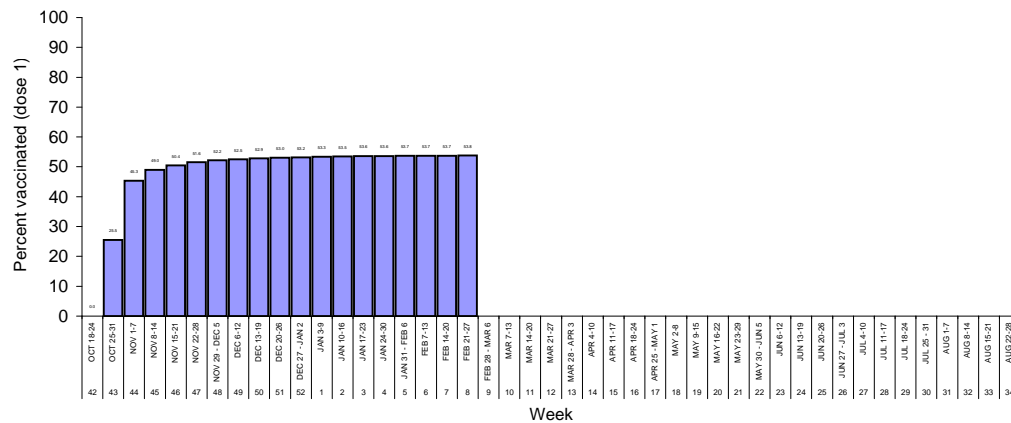
Schools

There have been no reports of high absenteeism in schools since week 45 (Nov 8 - 14, 2009).

Immunization

The percentage of the population vaccinated with one dose against influenza A pH1N1 reached 53.8% in week 8. The age groups with the highest proportions vaccinated (dose 1) are those 6 months to 4 years and those 65 year or older. Vaccine administration is ongoing.

Proportion of population vaccinated, dose 1, by week in the Yukon Territory



Proportion of population vaccinated, dose 1, by age group by January 30, 2010

Age group	% Vaccinated
6 mo - 4 years	70.3
5-18 years	56.3
19-29 years	36.5
30-39 years	51.8
40-64 years	55.6
65+ years	68.9
TOTAL	53.8

*Data provided by the Community Nursing Vaccination Program.

Adverse Events Following Immunization

Of 18,317 doses administered from October 26 to March 05, 2010, 35 adverse events following immunization have been reported. The types of reports include both local and allergic reactions. None of the events fit the criteria for serious adverse events, and none required hospitalization.

BRITISH COLUMBIA INFLUENZA SURVEILLANCE BULLETIN 2009-10: Number 20, Week 07
February 14-20, 2010

FluWatch

During week 6 (February 7-13), influenza activity in Canada remained low. The sentinel ILI consultation rate was 11 per 1000 patient visits, which is well below the expected range for this time of year. Less than one percent of respiratory specimens tested nationally were positive for influenza, compared to 27% positivity for RSV. Of the 6 influenza detections reported nationally, 3 were pH1N1 (NS and ON), 1 was seasonal H1N1 virus (ON), and 2 were non-subtyped influenza A viruses.

National Microbiology Laboratory

Between September 1, 2009 and February 19, 2010, 803 influenza isolates (793 pandemic H1N1 and 10 seasonal influenza) were collected from provincial and hospital labs and characterized at the National Microbiology Laboratory (NML):

793 A/California/07/2009 (H1N1)-like§ from BC, AB, SK, MB, ON, QC, NB, NS, PEI, & NT;

2 A/Brisbane/59/2007 (H1N1)-like† from AB & QC;

1 A/Brisbane/10/2007 (H3N2) -like† from BC;

6 A/Perth/16/2009 (H3N2)-like¶ from AB & QC;

1 B/Brisbane/60/2008 (Victoria lineage)-like† from ON.

§ A/California/07/2009 (H1N1) is the variant reference virus (pH1N1) selected by WHO for the pandemic influenza A/H1N1 vaccine

† indicates a strain match to the 2009-10 northern hemisphere trivalent influenza vaccine

- 7 -

¶ indicates a strain match to the recommended H3N2 component of the 2010-11 northern hemisphere trivalent influenza vaccine

Antiviral Resistance

Drug susceptibility testing at the NML between September 1, 2009 and February 18, 2010 indicated that 99% (995/1007) of pH1N1 isolates were sensitive to oseltamivir. All influenza B isolates (n=1) and influenza A/H3N2 isolates (n=9) tested were sensitive to oseltamivir, and the 4 seasonal A/H1N1 isolates tested were oseltamivir-resistant. All pH1N1 (n=985), seasonal H1N1 (n=2), A/H3N2 (n=9), and influenza B (n=1) isolates were sensitive to zanamivir. All pH1N1 (n=1056) and A/H3N2 (n=17) isolates were resistant to amantadine. Two seasonal H1N1 isolates were sensitive to amantadine, and one was resistant. Global surveillance has shown that circulating pH1N1 viruses are resistant to amantadine but remain sensitive to zanamivir and oseltamivir, although sporadic cases of oseltamivir resistance have been observed worldwide.

INTERNATIONAL

During week 6 (February 7-13), influenza activity remained low in the United States (www.cdc.gov/flu/weekly/). Four percent (129/3656) of respiratory specimens tested in reference laboratories were positive for influenza. All (53/53) subtyped influenza A viruses were pH1N1. Influenza B was detected in 4 specimens. The proportion of sentinel physician visits due to ILI remained low (2.1%) and below the national baseline.

In Europe, nearly all countries reported low-level influenza activity for the week of February 8-14. Seven percent of sentinel laboratory samples were positive for influenza, a further decrease from the previous week. Of 46 sentinel influenza detections across Europe from February 8-14, 2 were influenza B, 44 were influenza A, and 100% of the sub-typed influenza A viruses were pH1N1. (www.eiss.org)

Globally, 93% (785/844) of the influenza detections reported to WHO from January 31 – February 6, 2010 were influenza A, and of those sub-typed, 97% (651/673) were pH1N1. However, influenza B activity has been increasing in recent weeks in China, as shown in the graph below. Of the influenza B viruses which were further characterized in 1

- 8 -

Data source: FluNet World Health Organization, <http://gamapserver.who.int/GlobalAtlas/home.asp>

Data Accessed: February 24, 2010

On February 18, the WHO announced the recommended strain components for the 2010-11 Northern Hemisphere trivalent influenza vaccine: A/California/7/2009 (H1N1)-like virus

A/Perth/16/2009 (H3N2)-like virus

B/Brisbane/60/2008 (Victoria lineage)-like virus

A/California/7/2009 (H1N1) is the recommended component for pandemic H1N1 vaccines produced and administered in 2009-10. The recommended H3N2 virus has changed from the previous year's vaccine (A/Brisbane/10/2007), while the recommended B virus remains unchanged (B/Brisbane/60/2008). For further details, see: www.who.int/csr/disease/influenza/recommendations2010_11north/en/index.html

Pandemic H1N1 Influenza Web Sites

Yukon H&SS www.hss.gov.yk.ca/
PHAC: www.phac-aspc.gc.ca/alert-alerte/swine_200904-eng.php
BCCDC: www.bccdc.ca/dis-cond/a-z/h/HumanSwineFlu/default.htm
www.health.gov.bc.ca/pandemic/response/index.html
US CDC: www.cdc.gov/swineflu/index.htm
WHO: www.who.int/csr/disease/swineflu/en/index.html

Acronyms

ILI: Influenza-Like Illness
pH1N1: Pandemic H1N1 influenza or swine origin influenza
WHO: World Health Organization



Yukon Communicable Disease Control
#4 Hospital Road
Whitehorse Yukon T
Y1A 3H8
Phone: (876) 667-8323 Fax: (876) 667-8349