

INFLUENZA IN MANITOBA – 2009/2010 SEASON

Wednesday, July 1, 2010

The following report details influenza activity in Manitoba from the start of the 2009/2010 flu season (July 1 to June 30). The Public Health Surveillance Unit of Manitoba Health received its first laboratory-confirmed positive case of influenza for the season during the week of July 1-4, 2009 (a case of Influenza A Pandemic H1N1). The first laboratory-confirmed positive case of seasonal Influenza A occurred during the week of July 12-18, 2009. This flu season, there have been **1887** lab-confirmed cases of Influenza A, of which **1868** were lab-confirmed cases of Influenza A Pandemic H1N1 (pH1N1), and **0** lab-confirmed cases of Influenza B in Manitoba.

SUMMARY OF 2009/2010 INFLUENZA SEASON

With the exception of the Influenza A pH1N1 virus, Manitoba has observed very little Influenza B and seasonal Influenza A activity in 2009/2010. There were 4.5 times fewer seasonal Influenza A cases in 2009/2010 compared to 2008/2009 (n = 19 and n = 86, respectively). There were no Influenza B cases reported in 2009/2010 compared to 38 in 2008/2009. There were far fewer lab-confirmed Influenza A outbreaks reported in 2009/2010 (n = 1) than in 2008/2009 (n = 14). There were no lab-confirmed Influenza B outbreaks reported in 2009/2010, which is comparable to 2008/2009 (n = 1).

The Influenza A H1N1 pandemic has greatly increased the typical number of influenza cases reported in a given season. Inclusive of pH1N1, the total number Influenza A cases reported in November 2009 was **1410**, which is roughly 15 times greater than the highest monthly total previously recorded in Manitoba since 2002/2003 that was not due to pH1N1 (96 cases in November, 2003). The number of pH1N1 cases reported peaked during the week of November 8-14th, when there were **449** cases reported in Manitoba. Subsequently, there was an observed decline in the number of pH1N1 cases reported. In terms of the burden of disease by age group, typically, case counts for seasonal Influenza A (excluding pH1N1) tend to be highest among the oldest age groups. However, this season the highest proportion of seasonal Influenza A cases was among **5-19 year-olds (36.8%)**. The small number of cases this season may have skewed the more commonly observed age distribution of seasonal Influenza A cases. A similar age distribution was observed among cases of Influenza A pH1N1 with the greatest proportion of cases observed among **5-19 year-olds (39.7%)**, followed by **30-59 year-olds (27.3%)**. Finally, it is also interesting to note that, excluding pH1N1, there were cases of seasonal Influenza A reported in July (n = 2) 2009, a trend that is not typical of other influenza seasons in Manitoba.

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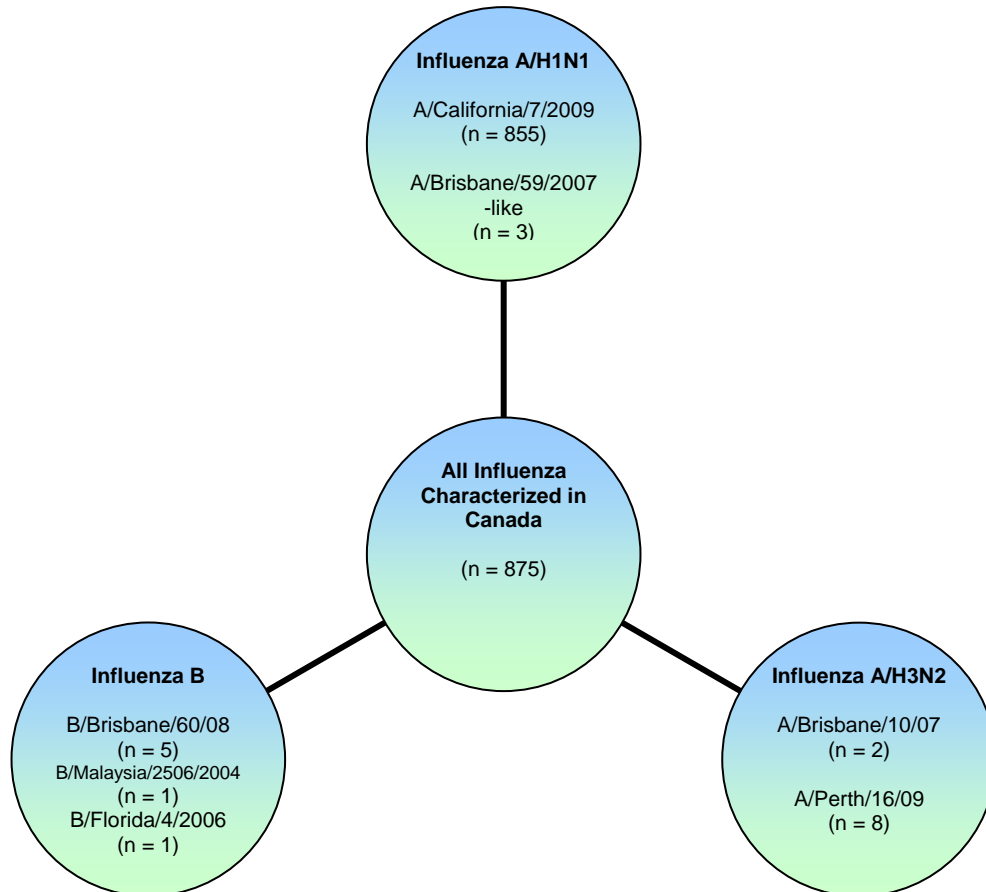
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STRAIN CHARACTERIZATION COMPLETED ON INFLUENZA ISOLATES

From September 1, 2009 to August 28, 2010, National Microbiology Laboratory (NML) reports that it has antigenically characterized **875** influenza viruses that were received from Canadian provincial and hospital laboratories: **858** influenza A/H1N1, **10** influenza A/H3N2, and **7** seasonal influenza B viruses.

Figure 1. Influenza Viruses Characterized in Canada by National Microbiology Laboratory, 2009/2010 (September 1, 2009 – August 28, 2010)



LABORATORY-CONFIRMED INFLUENZA

- Reports of culture isolations and enzyme immunoassay (EIA) detections from Cadham Provincial Laboratory (CPL) are forwarded to the Public Health Surveillance (PHS) Unit weekly. The number of positive cultures is an underestimate of the total number of cases, since not all persons with influenza seek medical attention, and of those that do, not all are cultured for the virus. While EIA detections and culture isolations comprise the largest number of reports from CPL, seroconversions are similarly forwarded to the PHS Unit weekly. Information contained within this update is based on positive lab reports received at the PHS Unit as of **July 26, 2010** (data of data extraction). This includes specimen dates to the end of June, 2010.
- The specimen date (acute specimen date for seroconversions) is used to:
 - (a) extract cases; and,
 - (b) assign cases to the appropriate week/month

Seasonal Influenza A (Excluding Pandemic H1N1)

- There have been **19** cases of seasonal Influenza A (excludes pH1N1) reported this season in Manitoba.
- Refer to **Table 1** for a summary of cases by Regional Health Authority (RHA) and week of specimen collection.
- Refer to **Figure 3 and 4** for an illustration of the summary of cases by specimen collection date.
- Refer to **Table 4 and Figure 5** for a summary of cases by age group.
- Refer to **Figure 8** for a summary of cases by RHA.
- Refer to **Figure 11** for an illustration of the number of lab-confirmed cases by month and year in Manitoba, 2002/2003 to 2009/2010.

Influenza A Pandemic H1N1

- There have been **1868** cases of Influenza A pH1N1 reported this season in Manitoba.
- Refer to **Table 2** for a summary of cases by Regional Health Authority (RHA) and week of specimen collection.
- Refer to **Figure 4** for an illustration of the summary of cases by specimen collection date.
- Refer to **Table 4 and Figure 6** for a summary of cases by age group.
- Refer to **Figure 9** for a summary of cases by RHA.

Influenza B

- There have been **0** cases of Influenza B reported this season in Manitoba.
- Refer to **Figure 12** for an illustration of the number of lab-confirmed cases by month and year in Manitoba, 2002/2003 to 2009/2010.

SUSPECTED/CONFIRMED REPORTS OF INFLUENZA OUTBREAKS

- Reports of suspected/confirmed influenza outbreaks are directed to the PHS Unit by:
 - (a) a phone call/email from public health staff within a RHA; or
 - (b) a phone call/email from CPL advising of the assignment of an outbreak code; or
 - (c) completion and submission of an outbreak form
- As of **July 26, 2010** there has been **1** lab-confirmed outbreak of Influenza A pH1N1 (a school in Parkland RHA) and **0** lab-confirmed outbreaks of Seasonal Influenza A and Influenza B reported to the PHS Unit for the 2009/2010 flu season. It is likely that this number is under representative of the true number of Influenza outbreaks, as many do not get a lab-confirmed diagnosis and many likely did not get reported to Manitoba Health due to resource capacity limitations during the pandemic.

NATIONAL FLU WATCH PROGRAM

- Manitoba Health participates in the National Flu Watch Program co-ordinated by the Public Health Agency of Canada and the College of Family Physicians of Canada. In addition to lab-confirmation of influenza, this program relies on weekly reports of influenza-like illness (ILI) as reported by 19 sentinel physicians reflecting 8 health authorities: Winnipeg, Brandon, North Eastman, South Eastman, Interlake, Central, Parkland, and Burntwood. The Public Health Epidemiology Unit receives *weekly* reports from the Public Health Agency of Canada presenting the provincial ILI rate and the specific data for each of the participating sentinel physicians.
- For the **2009/2010** season, ILI in the general population is defined as:
Acute onset of respiratory illness with fever and cough and with one or more of the following - sore throat, arthralgia, myalgia, or prostration which could be due to influenza virus. In children under 5, gastrointestinal symptoms may also be present. In patients under 5 or 65 and older, fever may not be prominent.
- Refer to **Figure 13** for an illustration of the ILI rate as it relates to the number of lab-confirmed cases of influenza.

INFLUENZA-RELATED HOSPITALIZATIONS AND ICU ADMISSIONS

- This influenza season, there were **179 (9.6%)** confirmed Influenza A pH1N1-related hospitalizations and **27 (1.4%)** intensive care unit (ICU) admissions in Manitoba. Excluding confirmed pH1N1 cases, there were **2** confirmed seasonal Influenza A-related hospitalizations and **1** ICU admission in Manitoba this season.
- Refer to **Figure 10** for an illustration of the number confirmed Influenza A-related hospitalizations and ICU admissions as it relates to the week of specimen collection.

INFLUENZA-RELATED DEATHS

- Reporting of influenza-related deaths is likely incomplete. Reports are based on notification by:
 - (a) Chief Medical Examiner;
 - (b) Medical Officers of Health in the Regional Health Authorities
 - (c) Infection Control Practitioners in long term care facilities
- There have been **4** suspected influenza-related deaths reported as individual cases this season in Manitoba, all of which were associated with the Influenza A pH1N1 virus.
- There has been no outbreak-related influenza deaths confirmed or suspected attributable to an outbreak reported this season.

Table 1. Number of Cases of Influenza A (Excluding pH1N1) by Regional Health Authority and Week of Specimen Collection, Manitoba, 2009/2010

Week	26 ^a	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5-26 ^b	Total			
RHA	01/07-04/07	05/07-11/07	12/07-18/07	19/07-25/07	26/07-01/08	02/08-08/08	09/08-15/08	16/08-22/08	23/08-29/08	30/08-05/09	06/09-12/09	13/09-19/09	20/09-26/09	27/09-03/10	04/10-10/10	11/10-17/10	18/10-24/10	25/10-31/10	01/11-07/11	08/11-14/11	15/11-21/11	22/11-28/11	29/11-05/12	06/12-12/12	13/12-19/12	20/12-26/12	27/12-02/01	03/01-09/01	10/01-16/01	17/01-23/01	24/01-30/01	31/01-30/06				
Winnipeg	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	9	
Brandon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
North Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
South Eastman	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Interlake	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Central	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Assiniboine	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Parkland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Burntwood/Churchill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANITOBA	0^b	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3	3	4	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	19	

^a Includes cases from July 1-4 only – partial week.

^b Weeks 5-26 have been compressed as there were no cases reported during this time period. Week 26 includes cases from June 27-30 only – partial week.

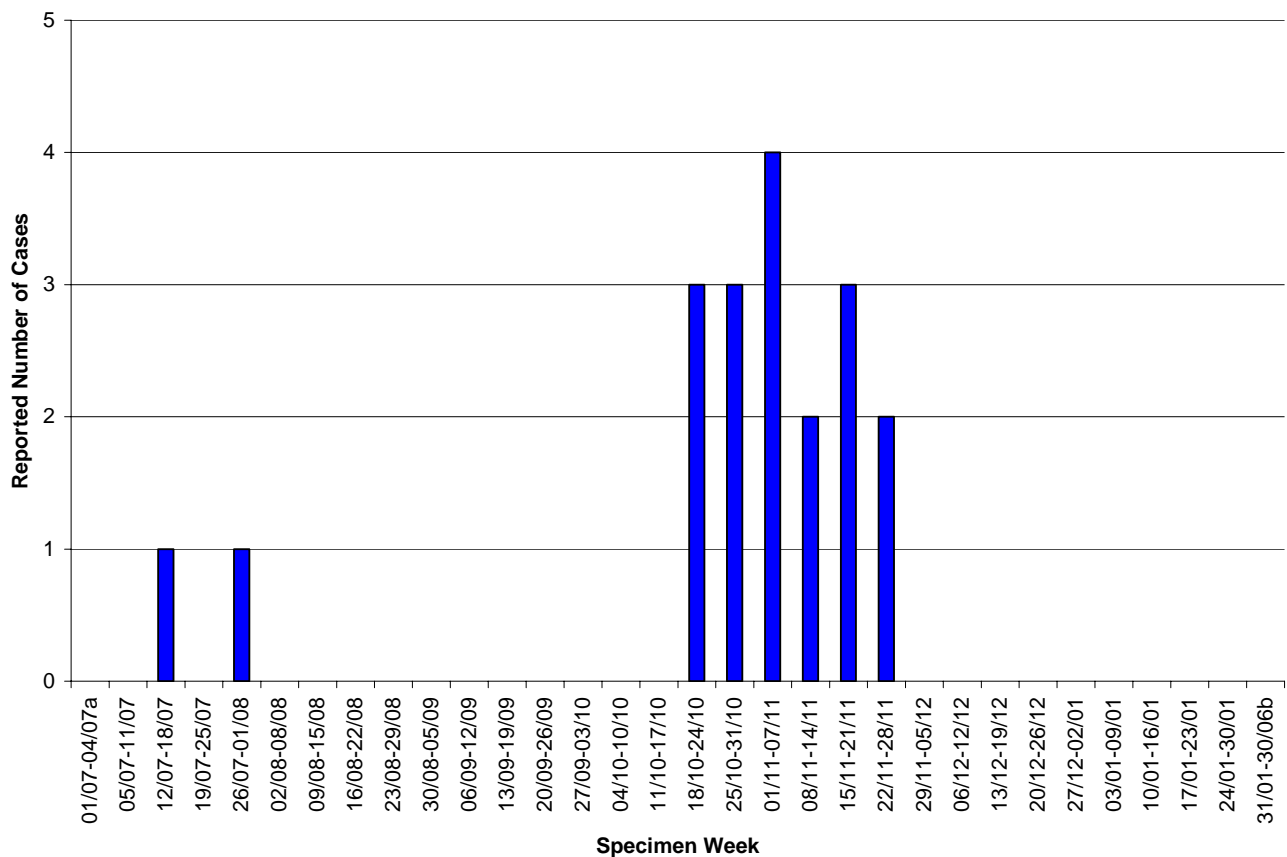
Table 2. Number of Cases of Influenza A pH1N1 Only by Regional Health Authority and Week of Specimen Collection, Manitoba, 2009/2010

Week	26 ^a	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5-26 ^b	Total		
RHA	01/07-04/07	05/07-11/07	12/07-18/07	19/07-25/07	26/07-01/08	02/08-08/08	09/08-15/08	16/08-22/08	23/08-29/08	30/08-05/09	06/09-12/09	13/09-19/09	20/09-26/09	27/09-03/10	04/10-10/10	11/10-17/10	18/10-24/10	25/10-31/10	01/11-07/11	08/11-14/11	15/11-21/11	22/11-28/11	29/11-05/12	06/12-12/12	13/12-19/12	20/12-26/12	27/12-02/01	03/01-09/01	10/01-16/01	17/01-23/01	24/01-30/01	31/01-30/06			
Winnipeg	8	10	4	1	3	2	1	0	2	0	1	0	0	1	5	6	28	104	155	155	148	43	24	17	14	6	3	1	0	0	0	0	0	0	742
Brandon	2	2	0	3	2	2	0	0	1	0	0	0	0	0	0	0	1	7	23	26	31	4	1	2	0	2	0	0	0	0	0	0	0	0	109
North Eastman	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	20	14	28	3	5	2	0	2	0	0	0	0	0	0	0	0	80
South Eastman	0	1	1	0	1	1	0	0	0	0	0	0	0	0	0	0	1	22	46	39	34	8	1	2	0	0	0	0	0	0	0	0	0	0	157
Interlake	2	1	1	1	0	0	0	0	0	0	0	0	0	0	2	1	2	9	36	30	42	13	11	2	0	1	0	0	0	0	0	0	0	0	154
Central	0	2	2	0	0	1	1	0	1	0	0	0	0	0	0	4	7	37	65	71	61	13	7	3	1	0	0	0	0	0	0	0	0	0	276
Assiniboine	2	1	1	1	3	0	0	0	1	0	0	0	0	0	1	2	4	12	42	76	57	5	2	0	2	0	0	0	0	0	0	0	0	0	212
Parkland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	6	17	21	3	3	0	0	1	0	0	0	0	0	1	0	55	
Norman	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	4	8	3	0	2	0	0	0	0	0	0	0	0	0	0	0	23
Burntwood/Churchill	6	7	3	1	0	0	0	0	0	0	0	0	0	0	0	1	0	9	7	13	7	1	0	3	1	1	0	0	0	0	0	0	0	0	55
MANITOBA	22	24	12	7	10	6	2	0	5	0	1	0	0	1	8	14	44	211	404	449	432	93	56	31	18	13	3	1	0	0	0	1	0	1868	

^a Includes cases from July 1-4 only – partial week.

^b Weeks 5-26 have been compressed as there were no cases reported during this time period. Week 26 includes cases from June 27-30 only – partial week.

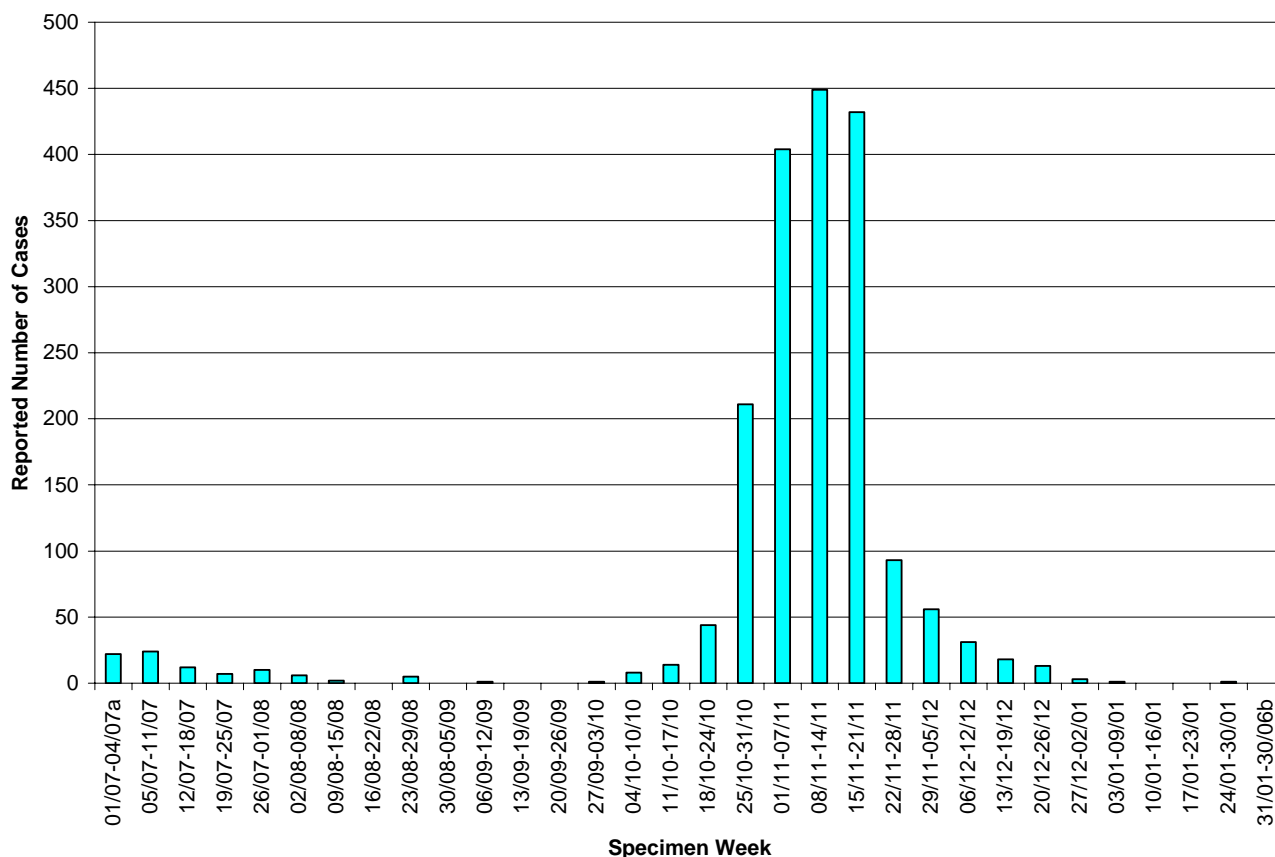
Figure 2. Summary of Seasonal Influenza A (Excludes pH1N1) Cases by Specimen Collection Date, Manitoba, 2009/2010



^a Includes cases between July 1-4 only – partial week.

^b The weeks between 31/01 – 30/06 have been compressed as there were no cases reported during this time period.

Figure 3. Summary of Influenza A Pandemic H1N1 Cases by Specimen Collection Date, Manitoba, 2009/2010



^a Includes cases between July 1-4 only – partial week.

^b The weeks between 31/01 – 30/06 have been compressed as there were no cases reported during this time period.

Table 3. Number of Cases of Influenza A (Seasonal and pH1N1) by Age Group, Manitoba, 2009/2010

Age Group	Seasonal Influenza A (Excludes pH1N1)		Influenza A pH1N1 Only	
	# of cases	% of total	# of cases	% of total
<1 yr	0	0.0%	40	2.1%
1-4 yrs	1	5.3%	153	8.2%
5-9 yrs	3	15.8%	257	13.8%
10-14 yrs	2	10.5%	254	13.6%
15-19 yrs	2	10.5%	231	12.4%
20-24 yrs	3	15.8%	210	11.2%
25-29 yrs	3	15.8%	158	8.5%
30-39 yrs	2	10.5%	201	10.8%
40-49 yrs	1	5.3%	183	9.8%
50-59 yrs	2	10.5%	126	6.7%
60-69 yrs	0	0.0%	40	2.1%
70-79 yrs	0	0.0%	12	0.6%
>79 yrs	0	0.0%	3	0.2%
Missing	0	0.0%	0	0.0%
TOTAL	19	100.0%	1868	100.0%

Figure 4. Age Distribution of Seasonal Influenza A (Excludes pH1N1) Cases, Manitoba, 2009/2010

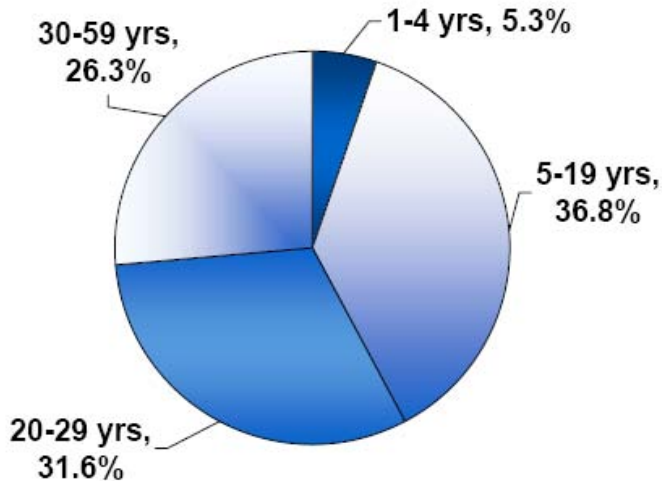


Figure 5. Age Distribution of Influenza A pH1N1 Cases, Manitoba, 2009/2010

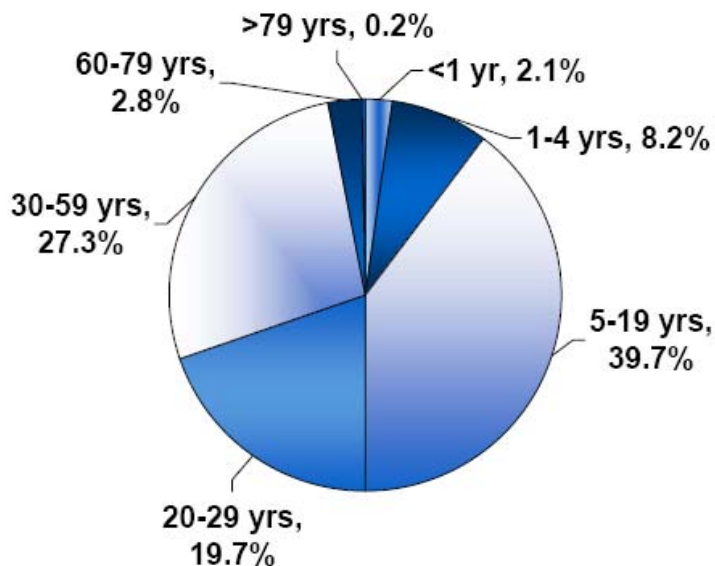
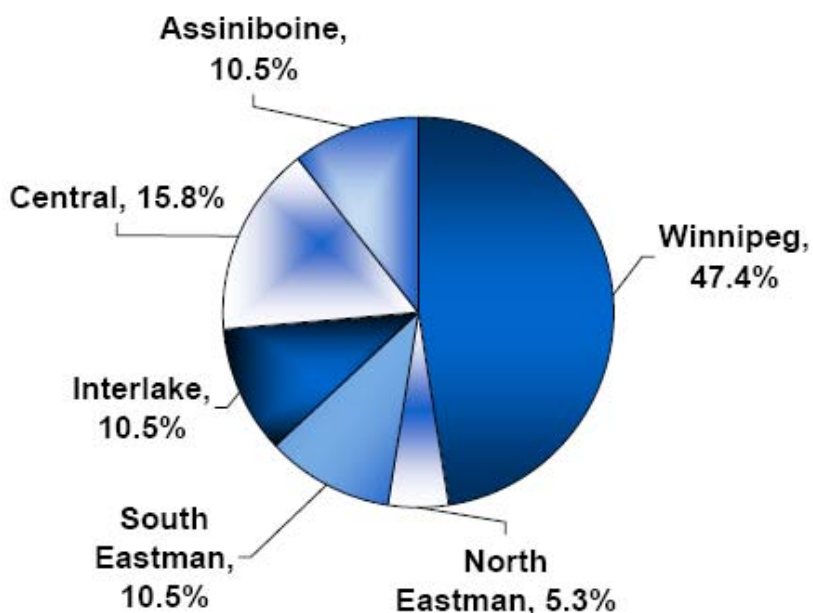


Figure 6. Distribution of Seasonal Influenza A (Excludes pH1N1) by Regional Health Authority, Manitoba, 2009/2010*



* There were no cases in Brandon, Parkland, Norman, and Burntwood/Churchill RHAs.

Figure 7. Distribution of Influenza A pH1N1 by Regional Health Authority, Manitoba, 2009/2010

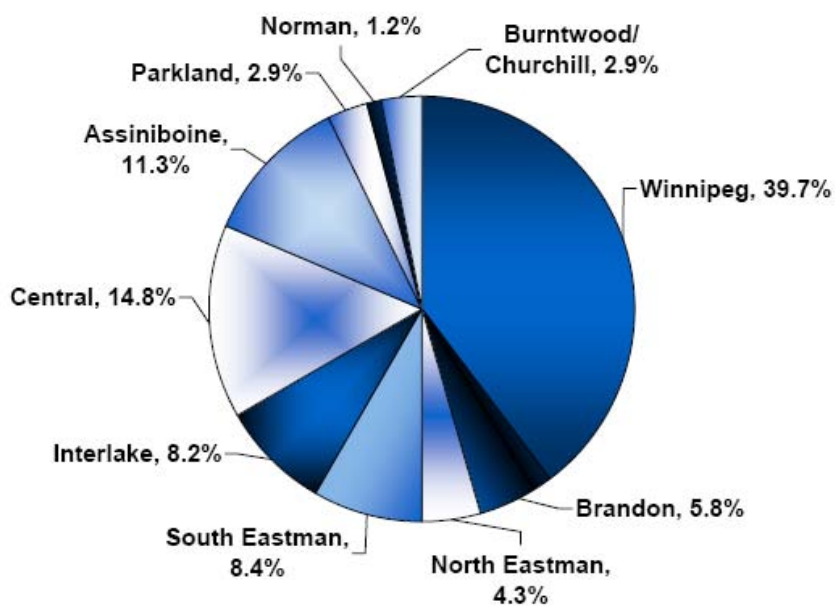


Figure 8. Seasonal Influenza A (Excludes pH1N1): Number of Laboratory-Confirmed Cases, 2002/2003-2009/2010

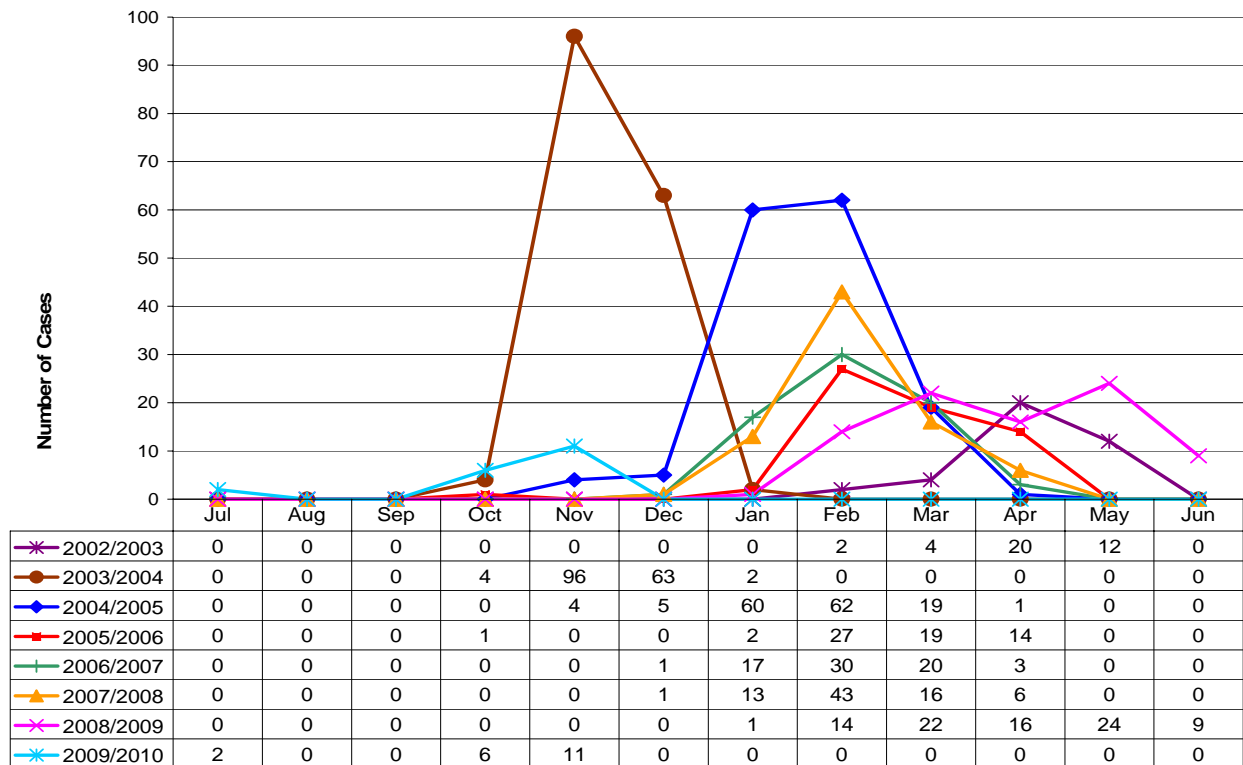


Figure 9. Influenza B: Number of Laboratory-Confirmed Cases, 2002/2003-2009/2010

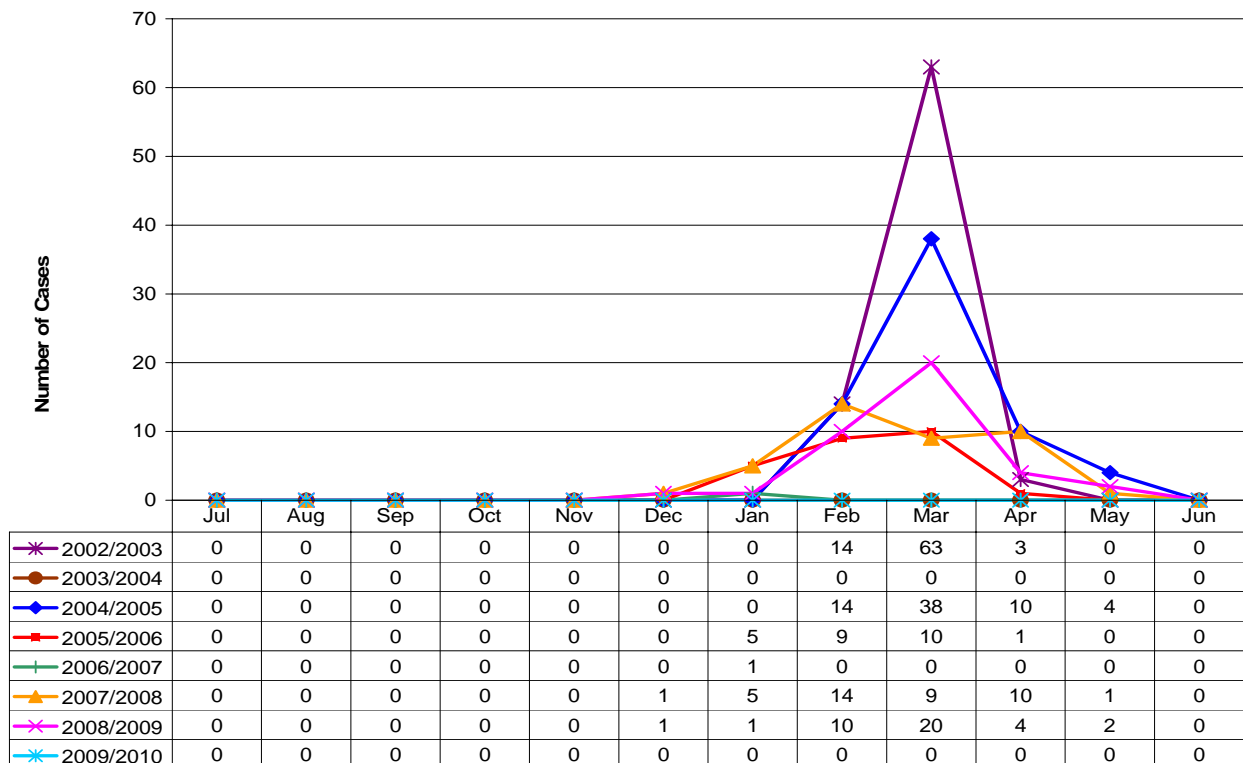
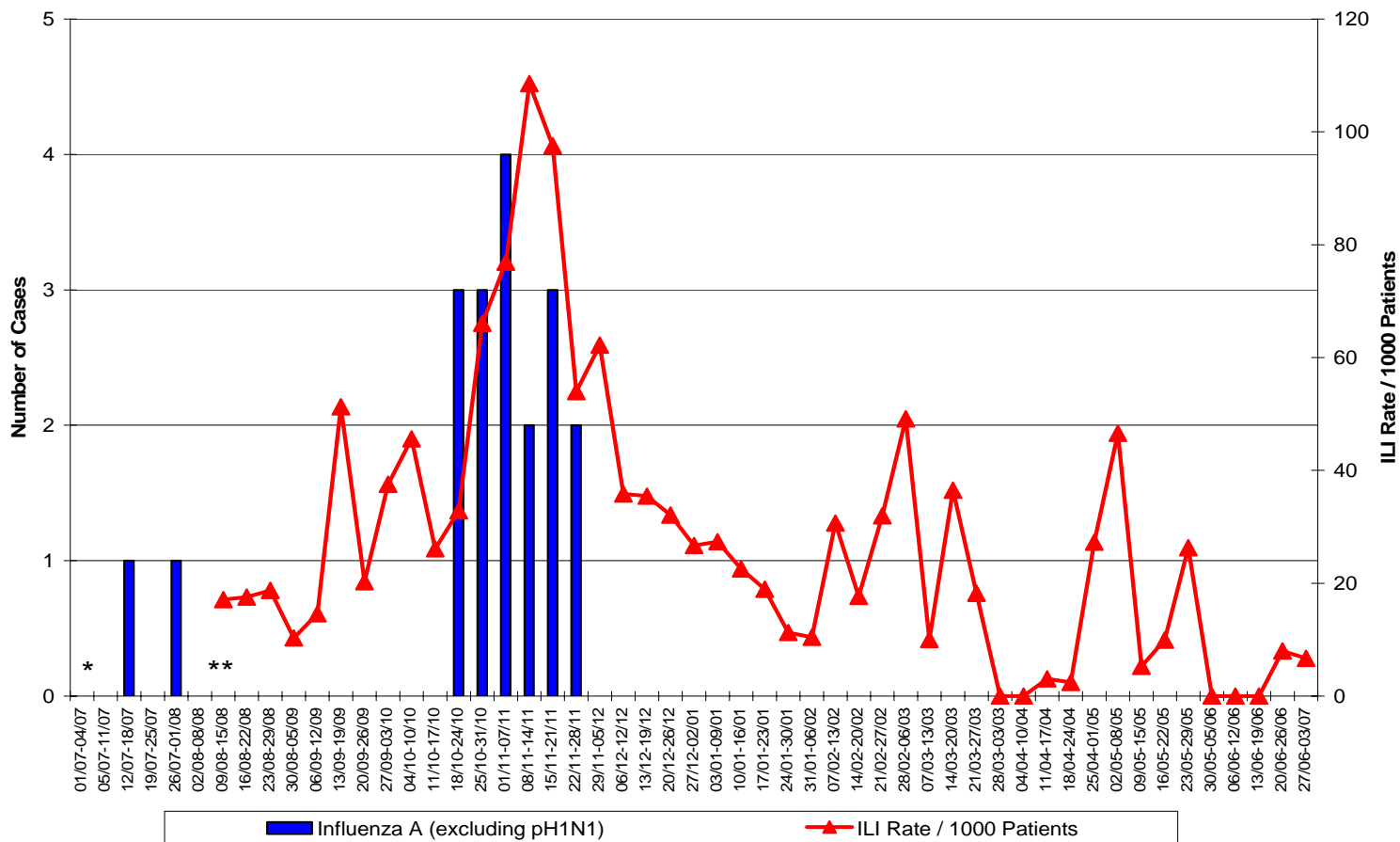
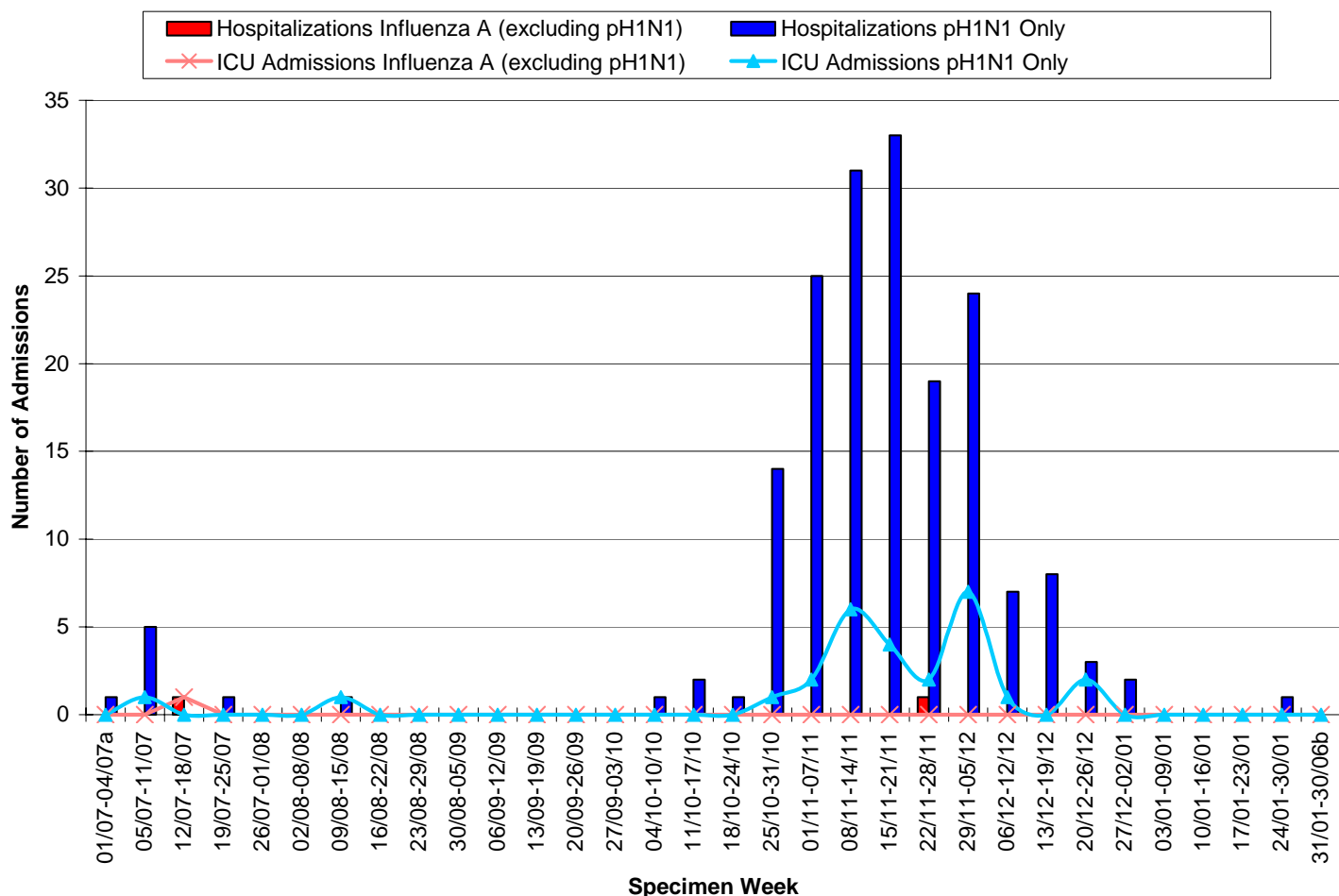


Figure 10. Influenza-Like-Illness (ILI) Rate* and Number of Seasonal Influenza A (Excludes pH1N1) Cases by Week of Specimen Collection, 2009/2010



* Includes cases reported between 01/07-04/07, partial week.
 ** No ILI rate data available prior to 09/08-15/08.

Figure 11. Number of Confirmed Influenza A-Related Hospitalizations and ICU Admissions by Specimen Collection Date, Manitoba, 2009/2010



^a Includes cases between July 1-4 only – partial week.

^b The weeks between 31/01 – 30/06 have been compressed as there were no cases reported during this time period.

For other Surveillance and Epidemiology reports, please view the Manitoba Health Internet Website:

<http://www.gov.mb.ca/health/publichealth/surveillance/reports.html>

For national surveillance data, refer to:

<http://www.phac-aspc.gc.ca/fluwatch/index-eng.php>