



Weekly Local Influenza Surveillance Bulletin

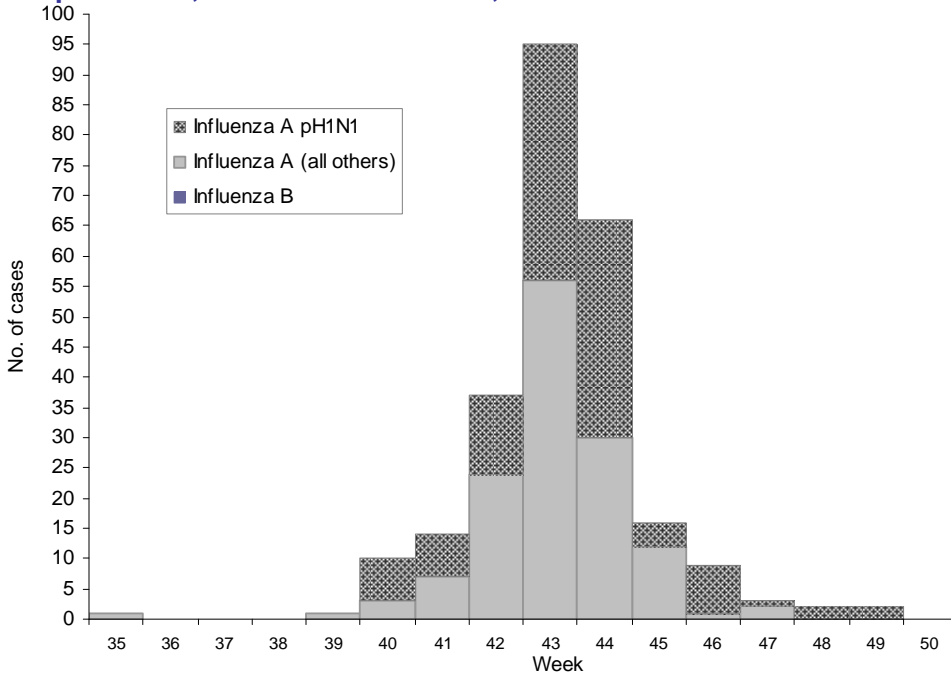
Released December 23, 2009

Region of Waterloo

PUBLIC HEALTH

Influenza Activity: September 1, 2009 to December 19, 2009 (Week 35-50)

Figure 1: Number of laboratory confirmed cases of influenza by week and type, Waterloo Region, September 1, 2009 to December 19, 2009³

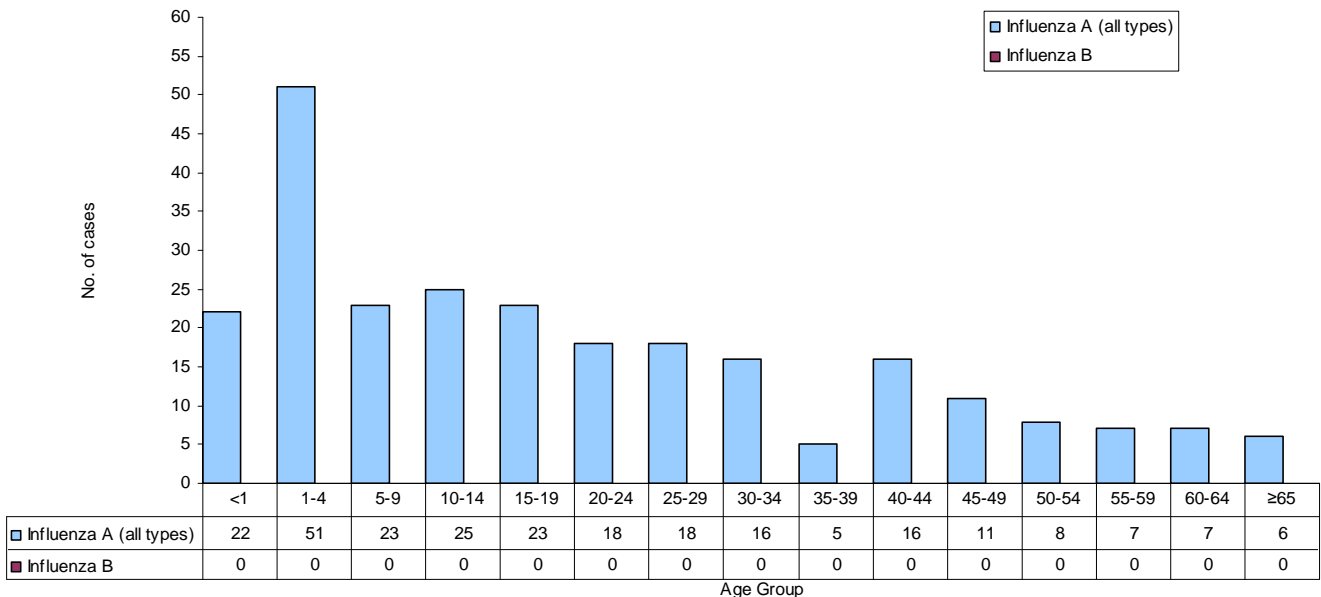


Influenza A – Total	256
pH1N1	119
H3	0
H3N2	1
Other (non-pH1N1)	0
Not sub-typed ¹	136
Influenza B	0
Total	256

	No activity
✓	Sporadic
	Localized
	Widespread

Updated: 23-Dec-09

Figure 2: Number of laboratory confirmed cases of influenza by age and type, Waterloo Region, September 1, 2009 to December 19, 2009

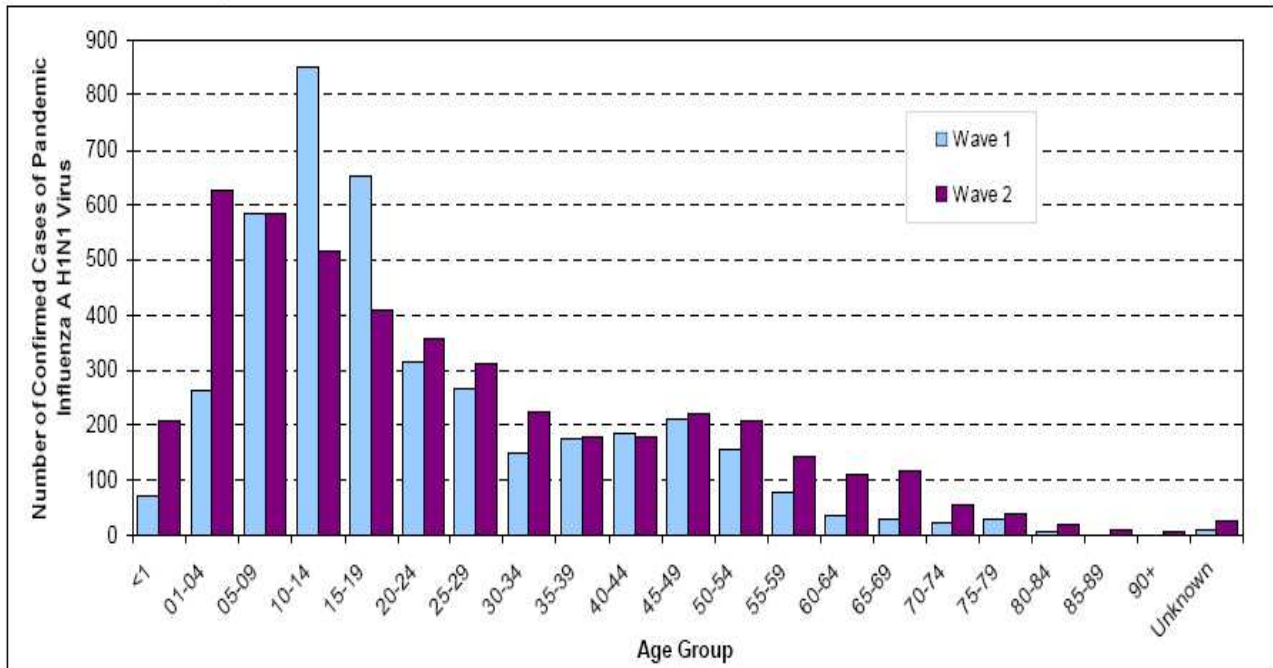


¹ Not sub-typed includes all Influenza A cases that had a sub-type of "blank", "untypeable" or "not-subtyped".

² For definitions of influenza activity levels: <http://www.phac-aspc.gc.ca/fluwatch/09-10/def09-10-eng.php>

³ Note: In Ontario, the onset date of symptoms for the first confirmed case of Influenza A pH1N1 virus was April 11, 2009. The weeks refer to FluWatch weeks, which are established by the Public Health Agency of Canada.

Figure 3: Laboratory confirmed cases of pandemic H1N1 in Ontario by age group and wave, April 13, 2009 to December 12, 2009



SOURCE: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted [09/12/2009].

Figure 4: Number of laboratory confirmed cases of influenza A by week, Waterloo Region, 2005-2009

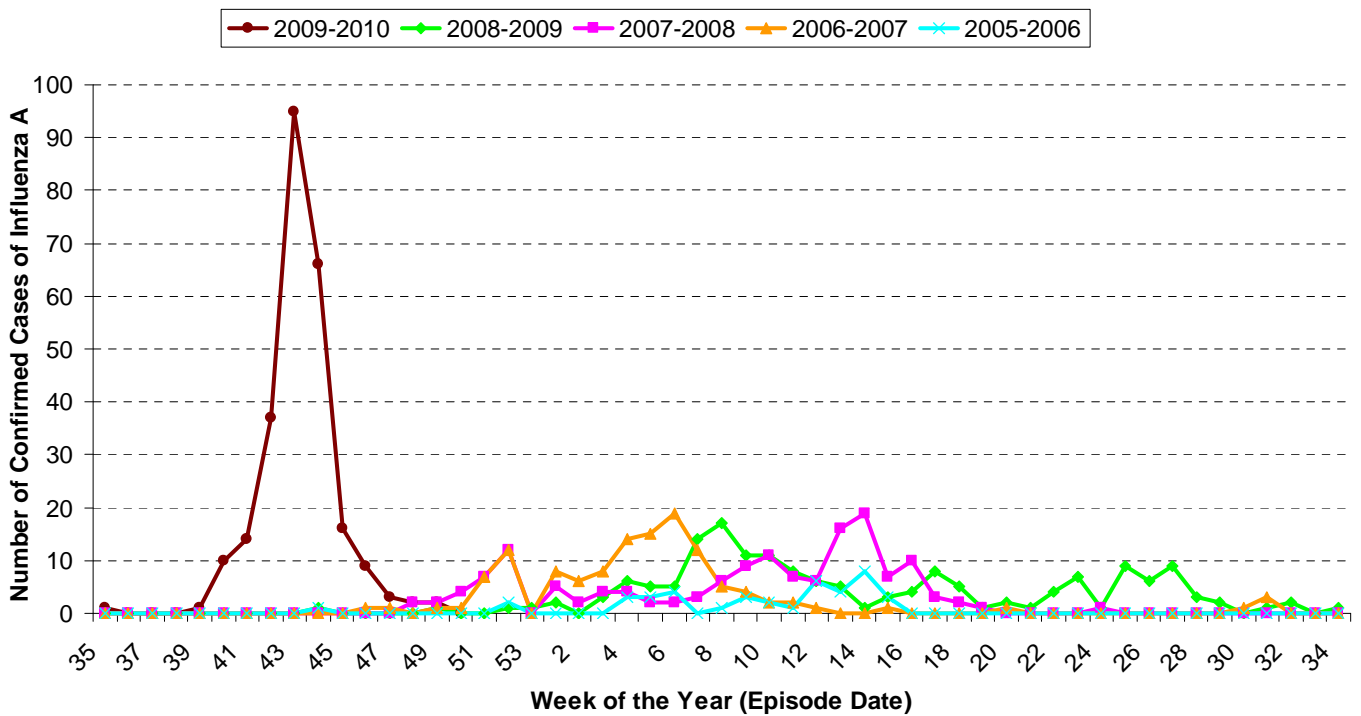


Table 1: Pandemic H1N1 indicators, Waterloo Region and Ontario, Sept. 1, 2009 - Dec. 19, 2009

Indicator	Waterloo Region*	Ontario*
Laboratory confirmed H1N1 cases	119	4601
Number of H1N1 hospitalizations	25	1375
Population-based hospitalization rate	5.0 per 100,000 residents	10.6 per 100,000 Ontarians
Number of deaths	3	93
Population-based mortality rate	0.60 per 100,000 residents	0.72 per 100,000 Ontarians
Age of laboratory confirmed H1N1 cases [^]	<1 – 74 years	<1 – 90+ years
Age of hospitalized cases	Range: <1 – 74 years Median age: 13 years Average age: 25 years	Range: 0 – 89 years Median age: 25 years Average age: 30 years
Age of fatal cases	Range: >35 years	Range: 0 – 95 years Median age: 55 years Average age: 53 years

* Waterloo Region data is current as of December 19, 2009, while Ontario data is current as of December 12, 2009, except for hospitalizations and deaths, which are current as of December 16, 2009

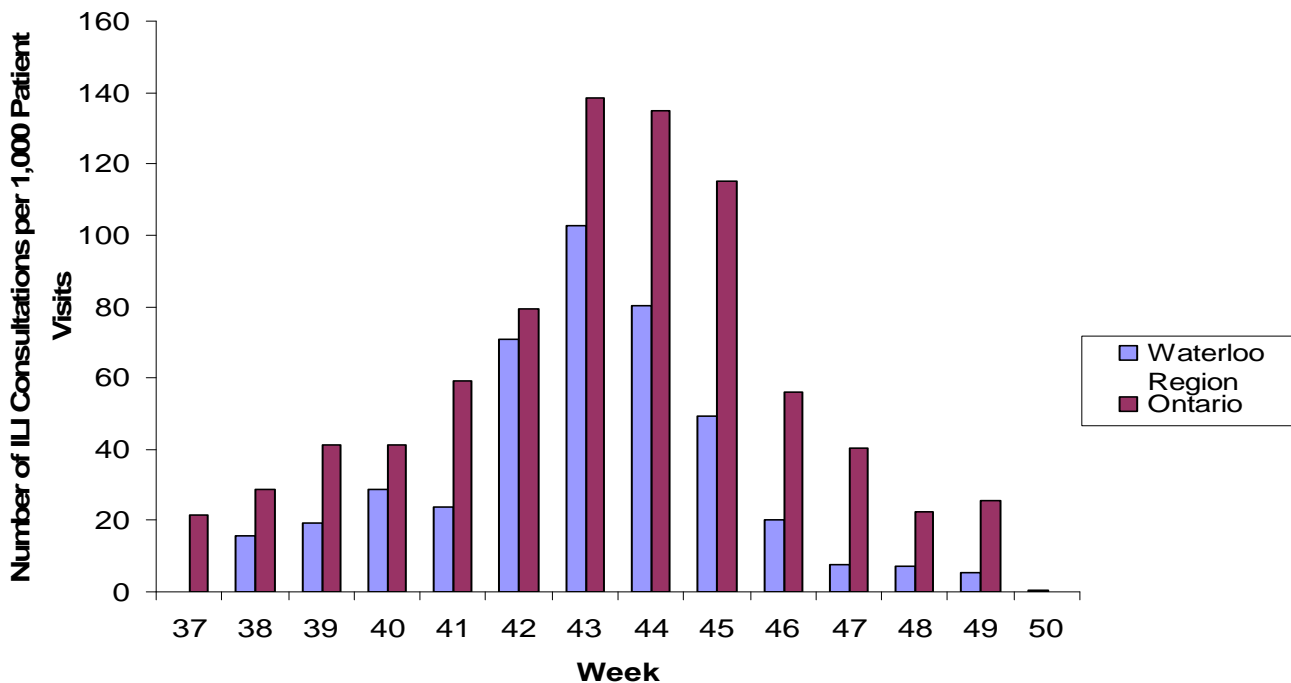
[^] Ontario data reflects all cases from Week 14-49 (April 5, 2009 to December 12, 2009).

Proxy Indicators for Influenza Surveillance

Influenza-Like-Illness

The number of Influenza-Like Illness (ILI)⁴ visits is a useful indicator of the level of community transmission of pH1N1 and the resulting burden on primary care practices. Transmission patterns suggest that pH1N1 is more prevalent in the younger age groups (5 – 19 years). As such, we are tracking the ILI consultation rate at post-secondary institutions⁵ health services in Waterloo Region as well as in select primary care practices⁶.

Figure 5: Influenza-Like-Illness (ILI) consultations per 1,000 patient visits, Waterloo and Ontario, September 13 – December 19, 2009



⁴ Case definition for ILI is: 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.

⁵ Post-secondary institutions include Conestoga College, Wilfred Laurier University, and University of Waterloo

⁶ Data from an additional primary care practice was included during week 43.

Hospital-Based Data

The Ministry of Health and Long Term Care (MOHLTC) is tracking the number of Emergency Room visits and the number of hospital-based deaths as useful indicators of the level of community transmission of pH1N1 and the resulting burden on hospitals. The figures below include aggregated data from all three acute care hospitals within the Region of Waterloo: Cambridge Memorial Hospital, Grand River Hospital, and St. Mary's General Hospital.

Figure 6: Total all-cause Emergency Room (ER) visits by week, Waterloo Region, September 6 – December 19, 2009

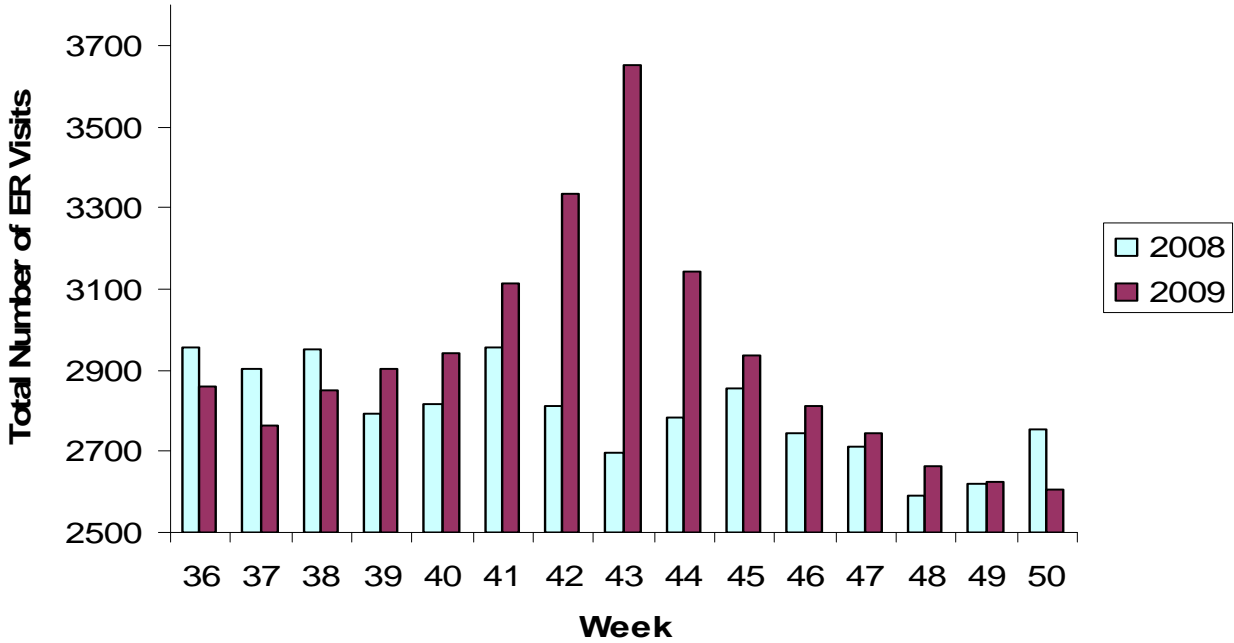
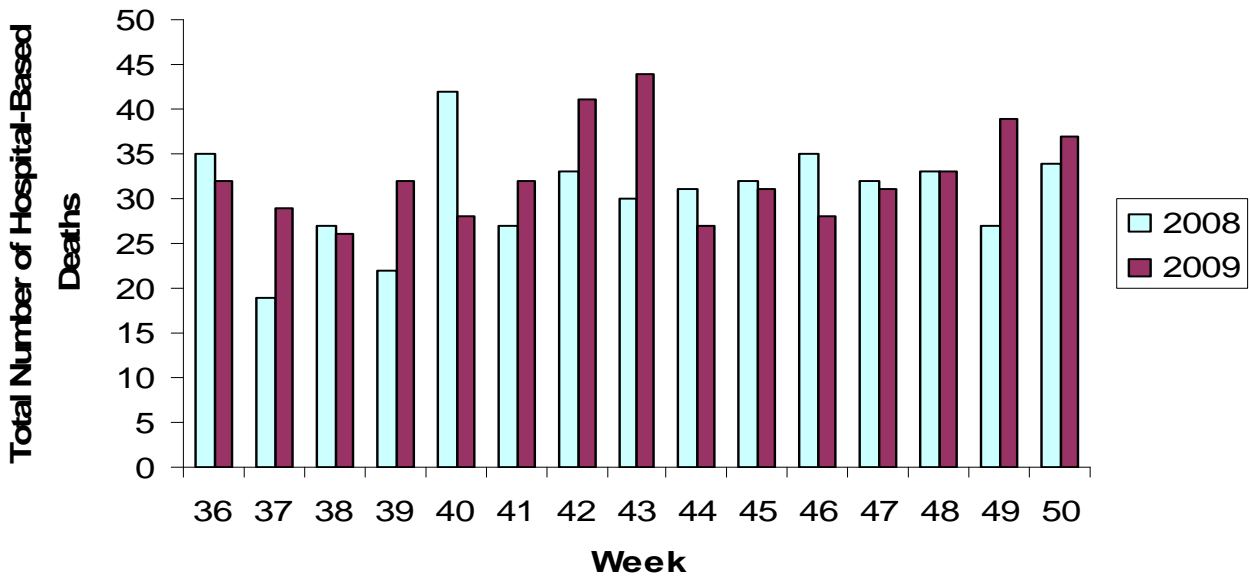


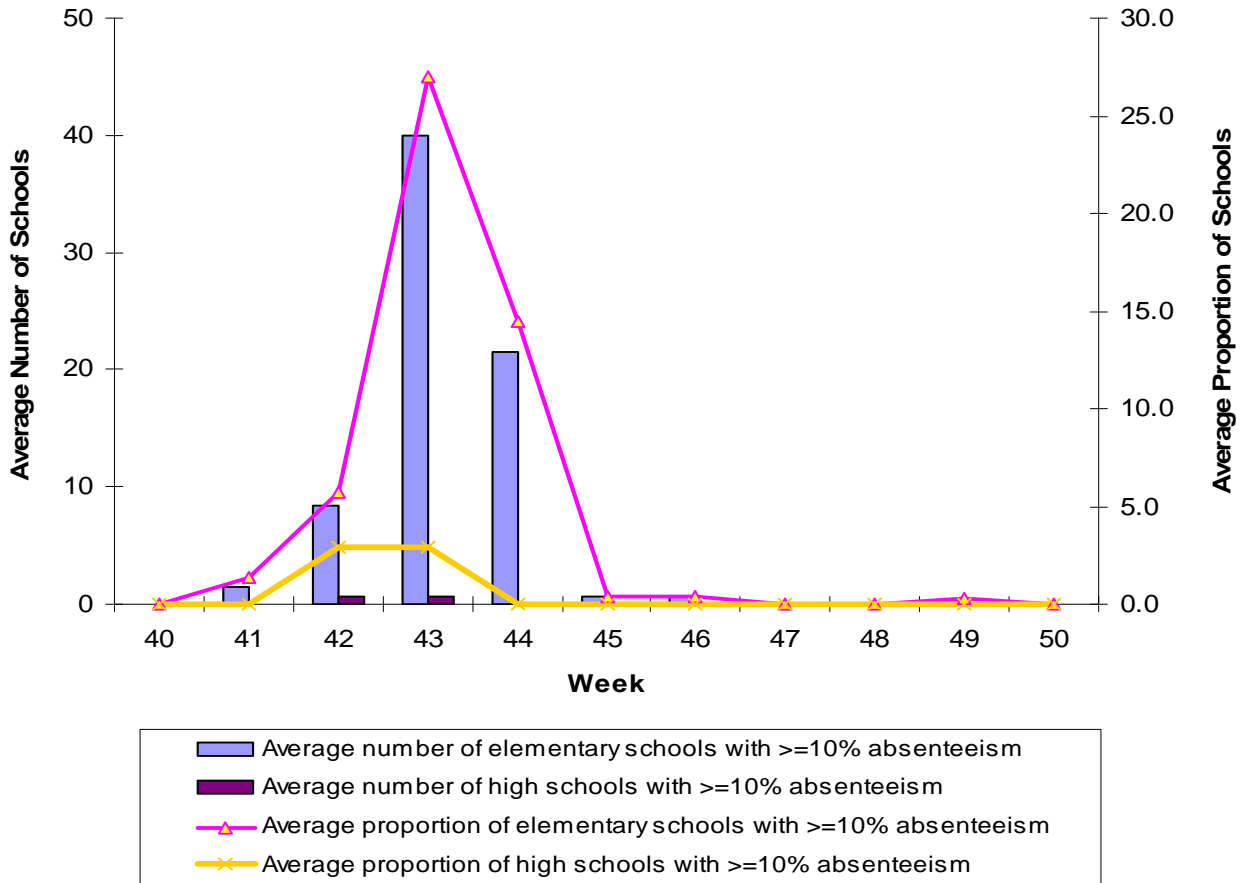
Figure 7: Total all-cause hospital-based mortality by week, Waterloo Region, September 6 – December 19, 2009



School Absenteeism

Since pH1N1 is more prevalent in the younger age groups, monitoring school absenteeism rates is a useful indicator of the level of community transmission of the virus. An absenteeism rate of 10% or greater has been identified as a threshold by the MOHLTC to signify higher than expected levels of school absenteeism. The figure below shows the average number and average proportion of schools in the Region of Waterloo that meet this threshold, by week and type of school (elementary or secondary).

Figure 8: Average number and average proportion of schools reporting $\geq 10\%$ absenteeism (all-cause) by week and type of school, Waterloo Region, October 6 – December 19, 2009



For provincial and national influenza information, please visit the following websites:

MINISTRY OF HEALTH AND LONG-TERM CARE (MOHLTC)

The latest Ontario Influenza Bulletin can be viewed at the following site:

http://www.health.gov.on.ca/english/providers/program/pubhealth/flu/flu_08/flubul_mn.html

The latest information on Influenza A pH1N1 virus in Ontario can be viewed at the following site:

http://www.health.gov.on.ca/english/public/updates/archives/hu_09/provider/default.html

HEALTH CANADA

The latest Health Canada FluWatch can be viewed at the following site:

<http://www.phac-aspc.gc.ca/fluwatch/08-09/index-eng.php>