

North Bay Parry Sound District

Health Unit



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NORTH BAY PARRY SOUND DISTRICT HEALTH UNIT **INFLUENZA SUMMARY: 2016/17 SEASON**

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Executive Summary

This report summarizes the 2016/17 influenza season in the North Bay Parry Sound District Health Unit (NBPSDHU) region. Surveillance for the 2016/17 influenza season began on September 1, 2016 and ended on August 31, 2017.

Laboratory Confirmed Influenza Cases

During the 2016/17 influenza season, 178 laboratory-confirmed influenza cases were reported within the Health Unit region. The age-standardized rate for lab-confirmed influenza cases in the Health Unit region was significantly higher by about 41% compared to the Ontario rate in 2016/17. The Health Unit region had the third highest reported incidence rate for influenza among all 36 Ontario public health unit regions in 2016/17 (Public Health Ontario, 2017).

The majority of cases were of type influenza A (89.9%), and the rest were of type influenza B (10.1%). One hundred and thirty-nine cases (78.1%) were of subtype influenza A H3. In Ontario, the dominating circulating subtype in 2016/17 was H3N2, representing 98.9% of influenza A cases with a subtype reported (Public Health Ontario, 2017).

Over half of the cases in the Health Unit region were seniors aged 65 years or older (59.6%) and 10.7% of cases were children aged 1 to 4 years old. Over half of the cases aged 65 years or older were hospitalized (58.5%). The higher proportion of seniors affected in Ontario overall reflects the greater impact the H3N2 subtype has on this age group (Public Health Ontario, 2017).

Influenza Activity

In the Health Unit region, peak activity during the 2016/17 season occurred during weeks 2 & 3 (January 10 to 23, 2017), when about 18.0% of seasonal cases occurred. This timeframe approximately matches the timeframe for peak activity of influenza A in the province of between weeks 52 and 1 (Public Health Ontario, 2017). Localized activity began in early January and stretched into late May.

Respiratory Outbreaks

Thirty-two confirmed respiratory outbreaks occurred during the 2016/17 season, nine more than the 2015/16 season (23 outbreaks). Most outbreaks were due to influenza A (40.6%) or rhinovirus (25.0%). The majority of outbreaks (90.6%) took place in long-term care homes.

Syndromic Surveillance

Respiratory related emergency department (ED) visits made by residents of the Health Unit region peaked in late December 2017, about one week prior to the peak of confirmed influenza cases. Emergency department visit levels remained high until the beginning of April 2016. The number of respiratory-related ED visits remained high through to the middle of March.

Seasonal influenza vaccination

The health unit administered 1,290 seasonal influenza vaccines through vaccination clinics. Of those, 69% were administered to individuals classified as belonging to high priority populations. Of the high priority group, 33% were adults aged 65 years and older, and 31% were children aged 6 months to less than five years. The health unit distributed 39,991 seasonal influenza vaccines to nursing agencies, general practitioners, pharmacies, and other health care provider agencies for administration to the public.

In the 2016/17 season, a median of 74% of staff in long-term care homes and 70% of staff in hospitals within the Health Unit region were immunized with the seasonal influenza vaccine.

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1.0 Introduction

1.1 Influenza

The influenza season occurs annually, usually with activity rising through fall and peaking in winter (National Advisory Committee on Immunization, 2016). The incidence of influenza is known to fluctuate from year to year due to the virulence of circulating strains and the susceptibility of the population. Factors such as vaccine coverage, vaccine match and antigenic changes to the virus affect the susceptibility of the population (National Advisory Committee on Immunization, 2014).

Those most susceptible to serious complications, hospitalization and even death are adults and children with underlying health conditions, residents of nursing homes and other chronic care facilities, individuals 65 years of age and older, children 6 to 59 months of age, pregnant women, and Aboriginal Peoples (National Advisory Committee on Immunization, 2016). It should be noted that the incidence of influenza is often underreported. Details of national and local influenza surveillance activities are outlined in Appendix A.

1.2 Data Sources and Definitions

Data presented within this report was extracted from several sources. Data sources, as well as relevant notes or symbols are noted as footnotes below their corresponding tables and graphs. Definitions for relevant terms are provided in the left hand column.

The influenza case data presented for the Health Unit region within this report was extracted from the integrated Public Health Information System (iPHIS) and the Acute Care Enhanced Surveillance (ACES) application. iPHIS is a provincial client health record and reporting system which provides secure access to client records of individuals diagnosed with a reportable disease. Influenza activity levels for Northeastern public health units and all of Ontario were extracted from Public Health Ontario Query database.

ACES monitors emergency and inpatient records from over 70% of Ontario's acute care hospitals, serving as a real-time epidemiological syndromic surveillance system for disease outbreak and other potential health risks.

Surveillance week number presents influenza case numbers and rates throughout the influenza season. Week numbers correspond with the calendar year, whereby week 1 is the first week in January, and week 52 is the last week in December. This method allows comparison of data across multiple years. Where week numbers have been referenced in the text, the week start date has been included in brackets as an added time reference.

As per direction received from Public Health Ontario, in the 2016/17 influenza season, only a proportion of laboratory confirmed cases were followed up by the Health Unit. As a result, details of the disease, including vaccination status and antiviral use are not presented in this report.

1.3 Statistical Significance

A statistic interpreted as 'significantly different' from another is an estimate found to be statistically meaningful, in such a way that the difference between two estimates is unlikely due to chance and represents a real difference. Error bars noted in figures within this report illustrate 95% confidence intervals. If there is no overlap in range, the difference can be described as statistically significant.

Crude rates were age-standardized using the Direct Method and standard 2011 Canadian population. Confidence intervals (95%) were calculated for age-standardized rates based on the gamma distribution (Fay and Feuer, 1997; Tiwari et al., 2006) in STATA IC/14.2 (2014) for the North Bay Parry Sound District Health Unit (NBPSDHU) region, Northeastern public health units, and Ontario.

2.0 Influenza Cases & Strain Identification

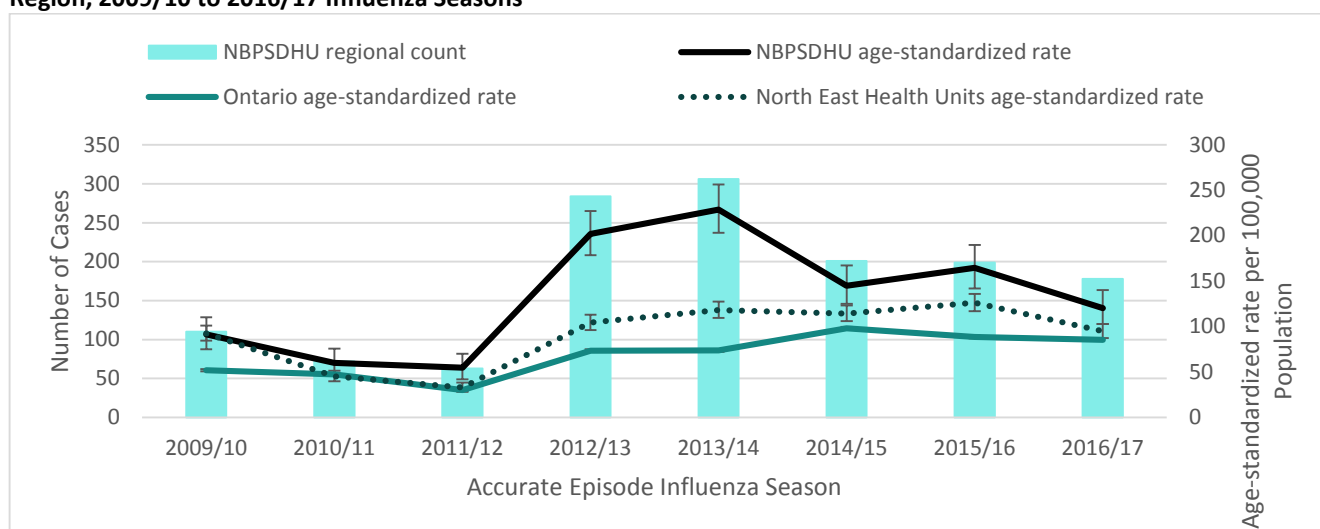
2.1 Influenza Cases

From September 1, 2016 to August 31, 2017 (i.e., the 2016/17 influenza season), 178 cases of lab-confirmed influenza were identified in the North Bay Parry Sound District Health Unit (NBPSDHU) region (Figure 1; Table 1).

The age-standardized rate (ASR) of lab-confirmed influenza cases has been significantly higher than the Ontario rate for all seasons since 2009/10. In 2016/17, the ASR within the Health Unit region was 41% higher than the Ontario rate, and significantly higher (by about 27%) than the ASR for all health units in Northeastern Ontario.

The number of confirmed influenza cases peaked on weeks 2 and 3 (January 10 to 23, 2017), accounting for 18.0% of seasonal cases (Figure 2).

Figure 1. Number of Laboratory Confirmed Influenza Cases & Age-Standardized Rates by 100,000 Population, by Health Region, 2009/10 to 2016/17 Influenza Seasons



Note: Northern health units include Timiskaming Health Unit, North Bay Parry Sound District Health Unit, Algoma Public Health, Sudbury and District Health Unit, & Porcupine Health Unit.

Data sources: 1) 2009-2016 population: Statistics Canada 2009-2016, Ontario Ministry of Health and Long-Term Care, IntelliHEALTH Ontario, Extracted Date: 11/03/2017. 2) NBPSDHU, Northeastern health units & Ontario 2009/10 – 2016/17 season confirmed influenza counts: Public Health Ontario. Query: Ontario & Northeastern health units: Counts by Age and Gender. Toronto, ON: Ontario Agency for Health Protection and Promotion 2017 Sept 20 [cited 2017 Dec 28] Available from: <http://www.publichealthontario.ca/en/DataAndAnalytics/Query/Pages/default.aspx>

Table 1. Number of Laboratory Confirmed Influenza Cases & Age-Standardized Rates by 100,000 Population (95% CI), by Health Region, 2009/10 to 2016/17 Influenza Seasons

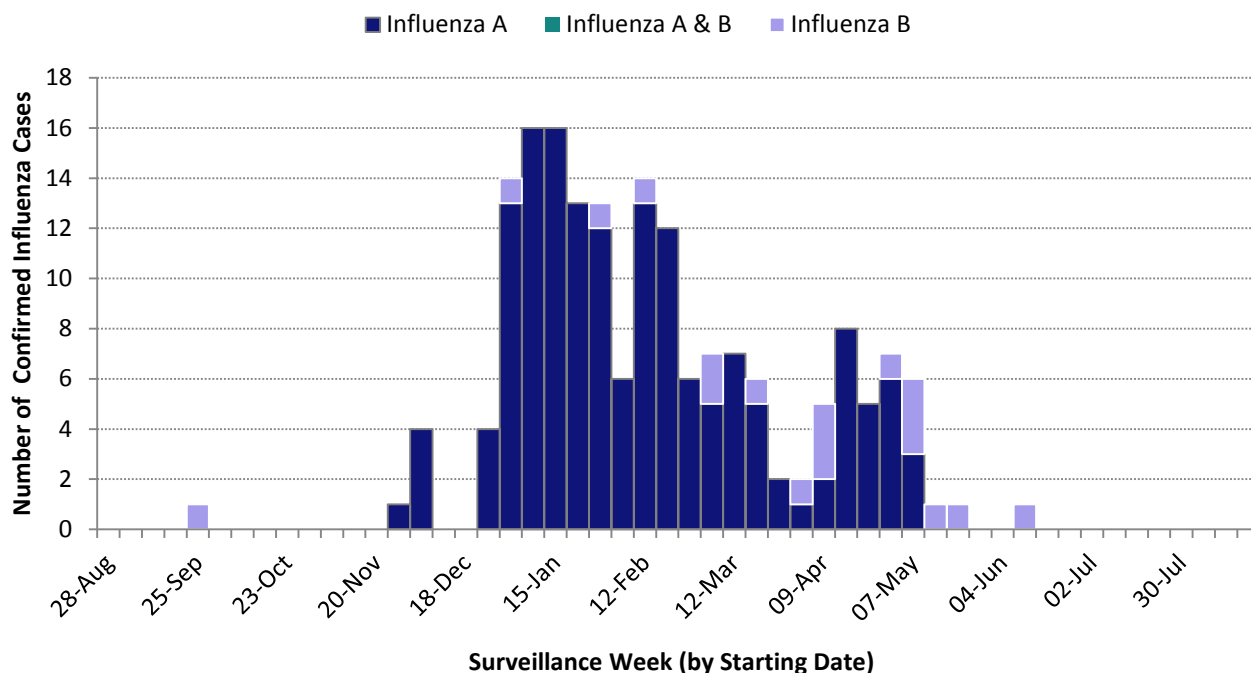
Influenza Season	Number of Confirmed Cases in the NBPSDHU Region	Age-Standardized Rate (95% CI) in the NBPSDHU Region	Age-Standardized Rate (95% CI) among all Northeastern Ontario Health Unit Regions	Age-Standardized Rate (95% CI) in Ontario
2009/10	110	91.4 (75.0, 110.4)	52 (50.8, 53.3)	84.7 (101.1, 7.9)
2010/11	72	60.1 (46.9, 75.9)	47.5 (46.3, 48.7)	40.0 (51.3, 5.4)
2011/12	63	54.9 (42.0, 70.3)	30.2 (29.2, 31.1)	28.4 (38.3, 4.7)

Influenza Season	Number of Confirmed Cases in the NBPSDHU Region	Age-Standardized Rate (95% CI) in the NBPSDHU Region	Age-Standardized Rate (95% CI) among all Northeastern Ontario Health Unit Regions	Age-Standardized Rate (95% CI) in Ontario
2012/13	284	201.9 (178.8, 227.3)	73.6 (72.1, 75.1)	96.3 (113.1, 8.1)
2013/14	306	228.7 (203.3, 256.5)	73.8 (72.4, 75.3)	109.5 (127.7, 8.8)
2014/15	201	145.0 (125.2, 167.2)	98.1 (96.5, 99.8)	106.1 (123.4, 8.4)
2015/16	199	164.8 (142.1, 189.9)	88.5 (86.9, 90.1)	117.0 (136, 9.3)
2016/17	178	120.3 (102.7, 140.2)	85.5 (84.0, 87.0)	87.4 (103.0, 7.5)

Note: Northern health units include Timiskaming Health Unit, North Bay Parry Sound District Health Unit, Algoma Public Health, Sudbury and District Health Unit, & Porcupine Health Unit.

Data sources: 1) 2009-2016 population: Statistics Canada 2009-2016, Ontario Ministry of Health and Long-Term Care, IntelliHEALTH Ontario, Extracted Date: 11/03/2017. 2) NBPSDHU, Northeastern health units & Ontario 2009/10 – 2016/17 season confirmed influenza counts: Public Health Ontario. Query: Ontario & Northeastern health units: Counts by Age and Gender. Toronto, ON: Ontario Agency for Health Protection and Promotion 2017 Sept 20 [cited 2017 Dec 28] Available from: <http://www.publichealthontario.ca/en/DataAnalytics/Query/Pages/default.aspx>

Figure 2. Number of Laboratory Confirmed Influenza Cases, by Type & Surveillance Week, NBPSDHU Region, 2016/17 Influenza Season



Note: Accurate episode date was used to determine surveillance week.

Data Source: North Bay Parry Sound District Health unit, Communicable Disease Control Program internal data. 2016/17 Influenza Season.

2.2 Types, Subtypes, & Strains

Of all confirmed cases of influenza within the Health Unit region, 160 (89.9%) were of type influenza A, and 18 (10.1%) were of type influenza B. Of the influenza A cases, 139 cases (78.1%) were of subtype influenza A H3. One of every five cases in the Health Unit region (21.3%) did not have a subtype (Influenza A) or lineage/strain (Influenza B) identified.

About 81.6% of cases in North Eastern Ontario were of type influenza A, with 61.0% of cases being subtype influenza A H3, and 20.0% of type influenza A with no subtype available. Similarly, 87.3% of Ontario cases were of type influenza A, with almost half (48.3%) of cases being of subtype influenza A H3 and 38.4% of type influenza A with no subtype available (Public Health Ontario, 2017).

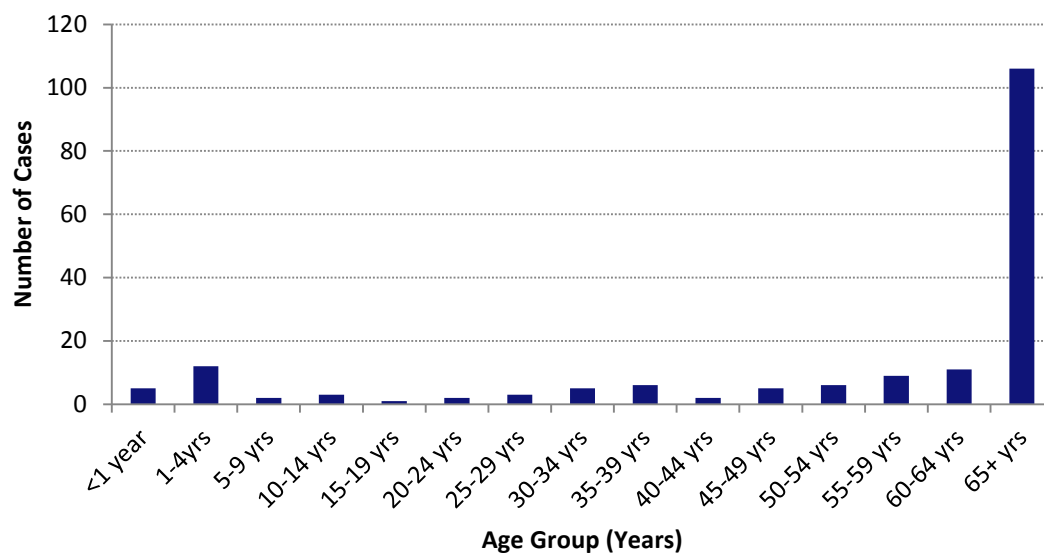
Of the Ontario influenza A isolates characterized by the National Microbiology Laboratory, all of the influenza A(H3N2) viruses were antigenically similar to the A/Hong Kong/4801/2014 strain, which is the influenza A(H3N2) component of the 2016-17 Northern Hemisphere seasonal influenza vaccine (Public Health Ontario, 2017).

3.0 Confirmed Case Characteristics and Outcomes

3.1 Age and Gender

In 2016/17, over half of the cases in the Health Unit region were seniors aged 65 years or older (59.6%; 106 cases), and 10.7% of cases were children aged 1 to 4 years (Figure 3; Table 2). An approximately equal percentage of cases were male (51.1%) versus female (48.9%). In Ontario, the highest incidence rates of influenza A were reported among adults aged 90 years or older, with rates increasing with age for those 45 years and older (Public Health Ontario, 2017).

Figure 3. Number of Laboratory Confirmed Influenza Cases, by Age Group, NBPSDHU Region, 2016/17 Influenza Season



Data Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, Date extracted: 10/16/2017

Table 2. Number of Laboratory Confirmed Influenza Cases, by Age Group, NBPSDHU Region, 2016/17 Influenza Season

Age Group (Years)	Number of Confirmed Influenza Cases
Less than 1 year	5
1 – 4	12
5- 9	2
10 - 14	3
15 - 19	1
20 - 24	2
25 - 29	3
30 - 34	5
35 - 39	6
40 - 44	2
45 - 49	5
50 - 54	6
55- 59	9
60 - 64	11
65 years or older	106

Data Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, Date extracted: 10/16/2017

3.2 Hospitalizations

Overall, half of reported confirmed influenza cases (50.0%) in the Health Unit region were hospitalized, although the hospitalization status was unknown for 20.8% of cases (Figure 4). Over half of cases aged 65 years or older were hospitalized (58.5%). In Ontario, the highest hospitalization rate occurred among adults aged 65 years or older (Public Health Ontario, 2017).

3.3 Deaths

Nine deaths occurred among the 178 confirmed cases reported in the Health Unit region during the 2016/17 influenza season, with influenza being an antecedent cause for seven cases (77.8%), and influenza being the immediate cause for two cases (22.2%).

DEFINITIONS

Influenza Activity Level

Influenza activity is categorized into one of the following four levels:

No activity: No laboratory confirmed cases of influenza reported and no ongoing laboratory-confirmed institutional influenza outbreaks (Public Health Ontario, 2016)

Sporadic: At least one laboratory-confirmed case of influenza with no ongoing laboratory-confirmed institutional influenza outbreaks (Public Health Ontario, 2016)

Localized: At least one ongoing laboratory-confirmed influenza outbreak in an institution (Public Health Ontario, 2016)

Widespread: Multiple ongoing laboratory confirmed influenza outbreaks in institutions separated by some geographic distance, in other words, non-adjacent areas (Public Health Ontario, 2016)

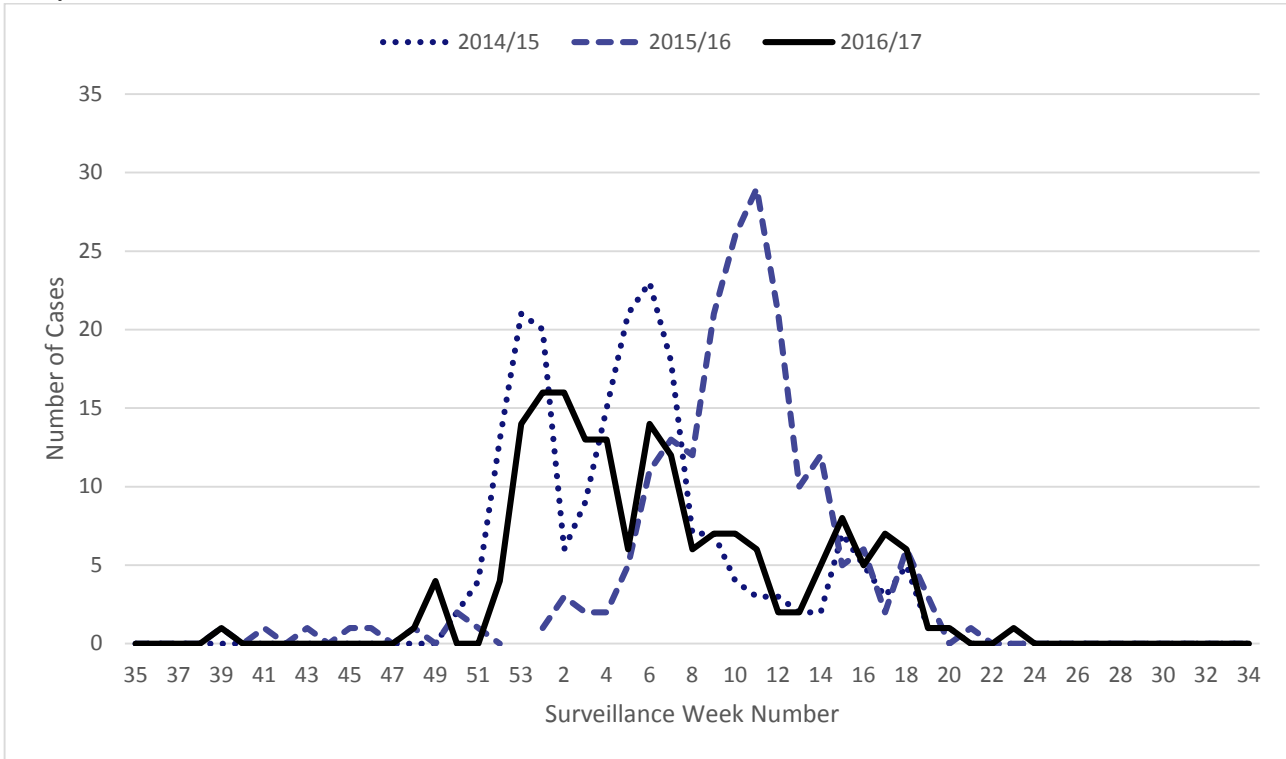
4.0 Influenza Activity Level

Influenza activity was assessed and reported weekly by Public Health Ontario within the weekly Ontario Respiratory Pathogen Bulletin (see definitions). Weekly activity levels are based on laboratory-confirmed cases of influenza and confirmed institutional influenza outbreaks. Non-influenza influenza-like-illness outbreaks are reported but do not contribute to determining the influenza activity level.

Influenza activity peaked earlier in the 2016/17 season (early January), earlier in the year compared to the previous season (peak in early March), but similar to the 2014/15 season (Figure 4).

The 2016/17 influenza season had more weeks of localized activity (19 weeks) compared to the previous season (four weeks; Figure 5). Sporadic activity began during week 47 (November 20, 2016) and increased to localized activity during week 52 (December 25, 2016). Activity remained localized until approximately the middle of May 2017.

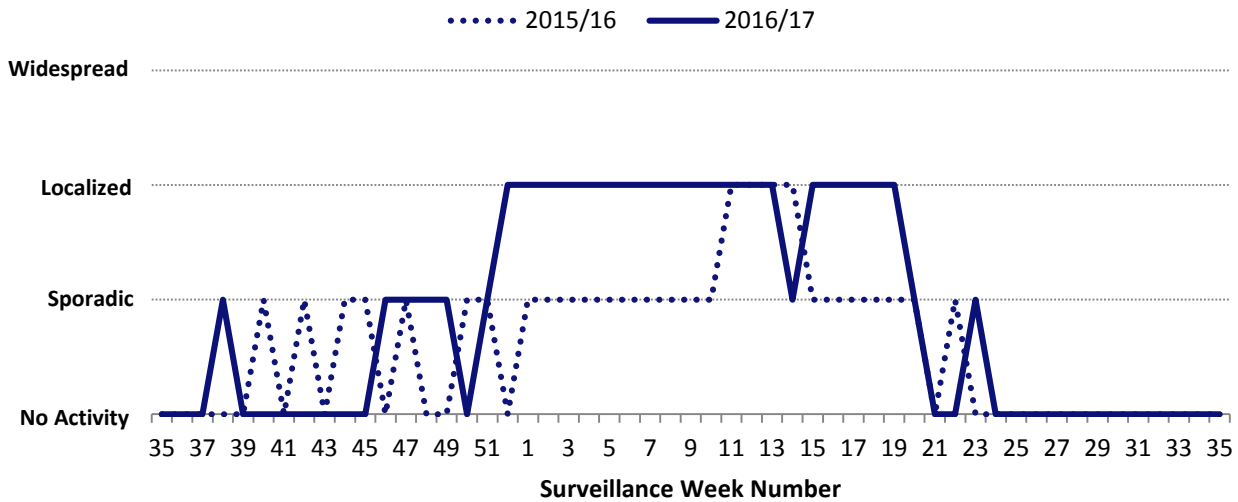
Figure 4. Number of Confirmed Influenza Cases, by Surveillance Week, NBPSDHU Region, 2014/15, 2015/16, and 2016/17 Influenza Seasons



Note: The surveillance week number for when each case occurred is determined by the episode accurate date.

Data Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, Date extracted: 10/16/2017.

Figure 5. Influenza Activity Levels, by Surveillance Week, NBPSDHU, 2015/16 and 2016/17 Influenza Seasons



Data Source: North Bay Parry Sound District Health Unit, Communicable Disease Control Program internal data. 2015/16 & 2016/17 Influenza Seasons.

DEFINITIONS

Institutional respiratory outbreak in a long-term care home

Two cases of acute respiratory illness within 48 hours, at least one of which must be laboratory-confirmed;

OR

Three cases of acute respiratory illness (laboratory confirmation not necessary) occurring within 48 hours in a geographic area (e.g., unit, floor);

OR

More than two units having a case of acute respiratory illness within 48 hours (Ontario Ministry of Health and Long-Term Care, 2015)

Institutional respiratory outbreak in a hospital

Two or more cases of nosocomially acquired acute respiratory infections occurring within 48 hours in a geographic area (e.g., unit, floor) (Ontario Ministry of Health and Long-Term Care, 2015)

Outbreak duration

The number of days from the onset of illness in the first case until the outbreak was declared over.

5.0 Respiratory Infection & Influenza Outbreaks

Public health units are required to report all respiratory infection outbreaks in institutions and outbreaks of reportable respiratory diseases in the community to Public Health Ontario.

During the 2016/17 influenza season, 32 confirmed respiratory outbreaks were reported, with influenza A as the most common cause of outbreaks (40.6%) followed by rhinovirus (25.0%; Table 3). In the 2015/16 season, the most common cause of outbreaks was coronavirus. Most of the 2016/17 outbreaks (90.6%) occurred within long-term care homes, and three (9.4%) occurred in other settings (Table 4).

In the 2016/17 season, the highest number of outbreaks (six outbreaks) occurred in January and February 2016, coinciding with the peak in influenza activity during early January (Figure 6; Table 5). The median duration for influenza A outbreaks during the 2016/17 season was 18 days (range: 9 to 33 days).

Table 3. Number (Percentage) of Respiratory Outbreaks by Agent, NBPSDHU Region, 2015/16 & 2016/17 Influenza Seasons

Respiratory Agent	Number of Outbreaks (%) in 2015/16 (n=23)	Number of Outbreaks (%) in 2016/17 (n=32)
Influenza A	2 (8.7%)	13 (40.6%)
Rhinovirus	4 (17.4%)	8 (25.0%)
Coronavirus	5 (21.7%)	3 (9.4%)
Parainfluenza	1 (4.3%)	3 (9.4%)
Metapneumovirus	2 (8.7%)	2 (6.3%)
Bordatella pertussis	1 (4.3%)	1 (3.1%)
Respiratory syncytial virus	2 (8.7%)	1 (3.1%)
Influenza B	1 (4.3%)	0 (0.0%)
Adenovirus	1 (4.3%)	0 (0.0%)
Respiratory infection, unspecified	4 (17.4%)	1 (3.1%)

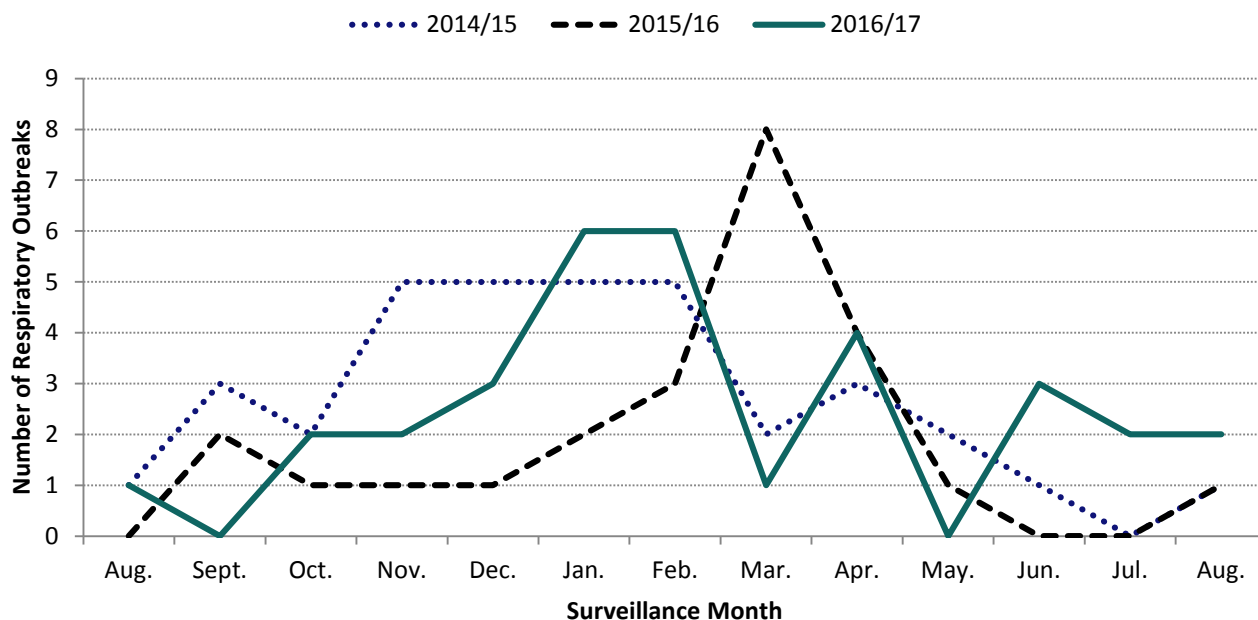
Data Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, Date extracted: 10/19/2017.

Table 4. Number (Percentage) of Respiratory Outbreaks by Institution, NBPSDHU Region, 2015/16 & 2016/17 Influenza Seasons

Type of Institution/Setting	Number of Outbreaks (%) in 2015/16 (n=23)	Number of Outbreaks (%) in 2016/17 (n=32)
Long-Term Care Home	20 (87.0%)	29 (90.6%)
Hospital	1 (95.7%)	2 (6.3%)
Community	1 (4.3%)	1 (3.1%)
Other	1 (4.3%)	0 (0.0%)

Data Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, Date extracted: 10/19/2017.

Figure 6. Number of Confirmed Respiratory Infection Outbreaks, by Surveillance Month, NBPSDHU Region, 2014/15, 2015/16, & 2016/17 Influenza Seasons



Note: The surveillance month of the outbreak is classified by the date of onset of the index case.

Data Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted 10/19/2017.

Table 5. Number of Confirmed Respiratory Infection Outbreaks, by Surveillance Month, NBPSDHU Region, 2014/15, 2015/16, & 2016/17 Influenza Seasons

Month	2014/15 Influenza Season	2015/16 Influenza Season	2016/17 Influenza Season
August	1	0	1
September	3	2	0
October	2	1	2
November	5	1	2
December	5	1	3
January	5	2	6
February	5	3	6
March	2	8	1
April	3	4	4
May	2	1	0
June	1	0	3
July	0	0	2
August	1	1	2

Note: The surveillance month of the outbreak is classified by the date of onset of the index case.

Data Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted 10/19/2017

6.0 Syndromic Surveillance

6.1 School Absenteeism

Absenteeism is monitored as an indicator for the acquisition and transmission of influenza-like illness (ILI) for both the school and the community. Absenteeism rates reflect all-cause absenteeism and are not necessarily due to ILI. The Health Unit requests schools with absentee rates that are 10% or greater of the total school population (student and staff) report their increase in absenteeism to the health unit by telephone throughout the school year. Once reported, the absentee rate is monitored daily until it falls below the normal absentee rate at the school, or below a rate of 5%. High absenteeism is passively reported to public health by schools, therefore this data may not include all instances of high absenteeism.

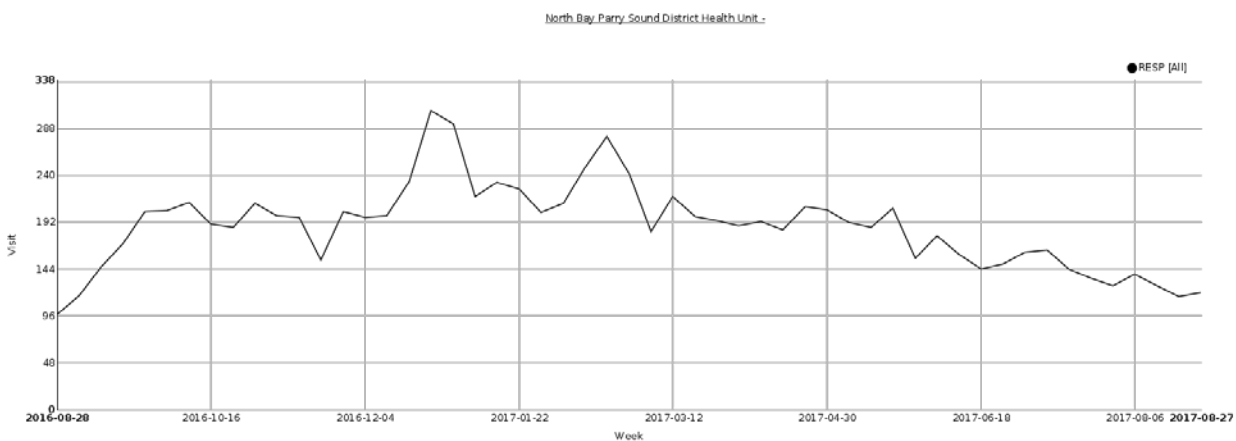
In the 2016/17 season, three instances of high absenteeism were reported in January 2017, at three out of 76 schools. All three schools had absentees report symptoms consistent with a respiratory illness.

6.2 Emergency Department Visits

Illustrated in Figure 6 are the weekly number of respiratory related emergency department (ED) visits made by individuals residing within the Health Unit region to hospitals participating in the Acute Care Enhanced Surveillance System (ACES). Respiratory related visits include visits for respiratory infection, influenza-like illness (fever, myalgia, and undifferentiated flu), croup-IPV, bronchiolitis, respiratory syncytial virus (RSV), and pneumonia. Participating hospitals within the Health Unit region include the North Bay Regional Health Centre, West Nipissing General Hospital, and Mattawa Hospital.

The weekly number of respiratory related ED visits by regional residents peaked in the end of December a week prior to the week influenza cases reached the highest peak. Emergency department visit levels remained high through to the middle of March (Figure 7).

Figure 7. Number of Respiratory Related ED Visits by NBPSDHU Region Residents to Hospitals Participating in ACES, by Week, 2016/17 Influenza Season



Data Source: Acute Care Enhanced Surveillance System (ACES), date extracted: 9/14/2017.

DEFINITIONS

High Priority Individuals

Individuals were categorized as high priority if they met one or more of the following criteria:

- Residents (of any age) of long-term care homes and other chronic care facilities;
- Individuals aged 65 years of age or older;
- All children aged 6 to 59 months of age;
- Pregnant women;
- Individuals with certain chronic medical conditions (of any age);
- Aboriginal Peoples
- Individuals capable of transmitting influenza to those of high risk (e.g. health care and other care providers, household contacts of people at high risk of influenza complications);
- Individuals who provide essential community services; or
- Individuals in direct contact during culling operations involving poultry infected with avian influenza or swine workers (National Advisory Committee on Immunization, 2016).

7.0 Vaccination Coverage

7.1 Background

Public health is required by the Ontario Public Health Standards to provide provincially funded immunization programs to any eligible person in the health unit region, including: board of health-based clinics; school-based clinics, community-based clinics; and, outreach clinics to priority populations. Subsequently, the Health Unit administers seasonal influenza vaccinations throughout the influenza season to the general population, as well as those classified as high priority.

7.2 Vaccinations Administered by the Health Unit

During the 2016/17 influenza season, the Health Unit administered 1,290 seasonal influenza vaccines. The Health Unit administered most vaccines through in-house clinics (89% or 1,143 seasonal influenza vaccines) and the rest (11% or 147 seasonal vaccines) through community clinics.

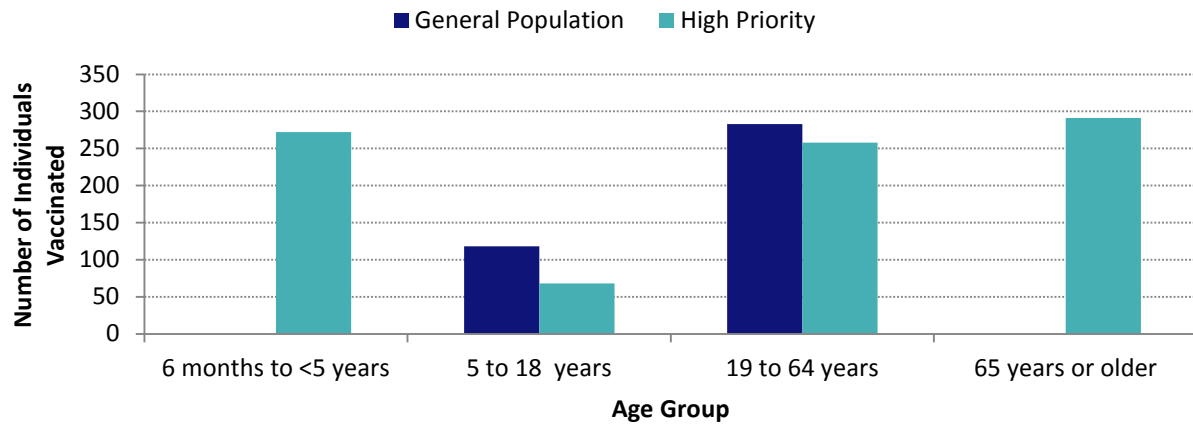
The majority of vaccinations administered were to high priority individuals (69%). Of the high priority group, 33% were older adults aged 65 years or older and 31% were children aged 6 months to less than 5 years (Figure 8; Table 6). The percentage of vaccines administered by gender was approximately equal for most age groups, except for the 19 to 64 age group where 63% of vaccines were administered to females (Figure 9; Table 7). The number of seasonal influenza vaccines administered by the Health Unit to individuals of either the general population or high risk population were the lowest in the past seven influenza seasons since 2010/11 (see Figure 10; Tables 8 & 9).

7.3 Vaccines Provided to Community Partners

The Health Unit provides vaccines to community health centers, long-term care facilities, retirement homes, hospitals, general practitioners, nursing agencies, pharmacies, and other health practitioners.

In the 2016/17 season, the Health Unit distributed 39,991 seasonal influenza vaccines to be administered through external health care agencies (e.g., pharmacies, doctors' offices).

Figure 8. Number of Individuals Vaccinated for Seasonal Influenza through NBPSDHU Vaccination Clinics, by Age Group & Priority Classification, 2016/17 Influenza Season



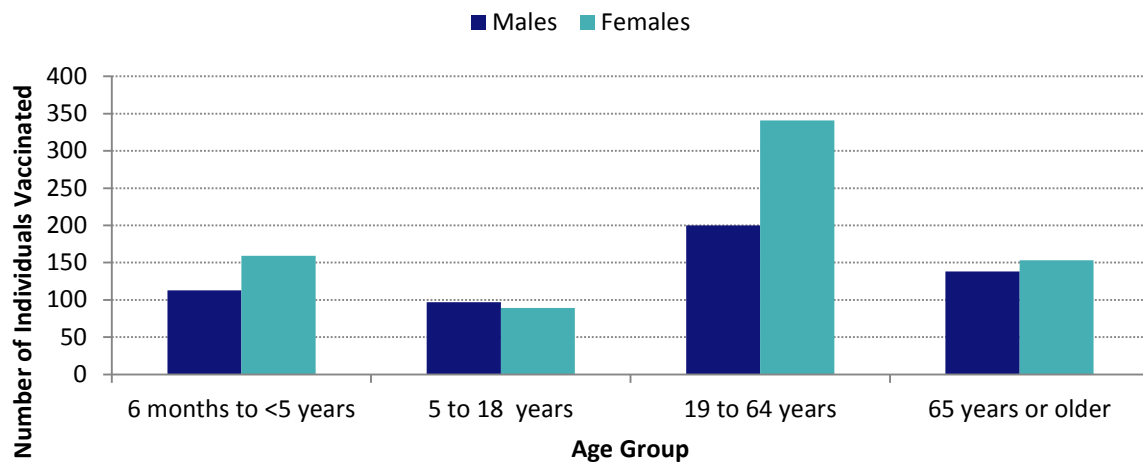
Note: All persons aged 6 months to less than 5 years, or 65 years or older are high priority populations for seasonal influenza immunization.
 Data Source: North Bay Parry Sound District Health Unit, Vaccine Preventable Diseases Internal Data. 2016/17 Influenza Season.

Table 6. Number of Individuals Vaccinated for Seasonal Influenza through NBPSDHU Vaccination Clinics, by Age Group & Priority Classification, 2016/17 Influenza Season

Age Group	General Population	High Priority Population
6 months to less than 5 years	N/A	272
5 to 18 years	118	68
19 to 64 years	283	258
65 years or older	N/A	291

Note: All persons aged 6 months to less than 5 years, or 65 years or older are high priority populations for seasonal influenza immunization.
 Data Source: North Bay Parry Sound District Health Unit, Vaccine Preventable Diseases Internal Data. 2016/17 Influenza Season.

Figure 9. Number of Individuals Vaccinated for Seasonal Influenza through NBPSDHU Vaccination Clinics, by Age Group & Gender, 2016/17 Influenza Season



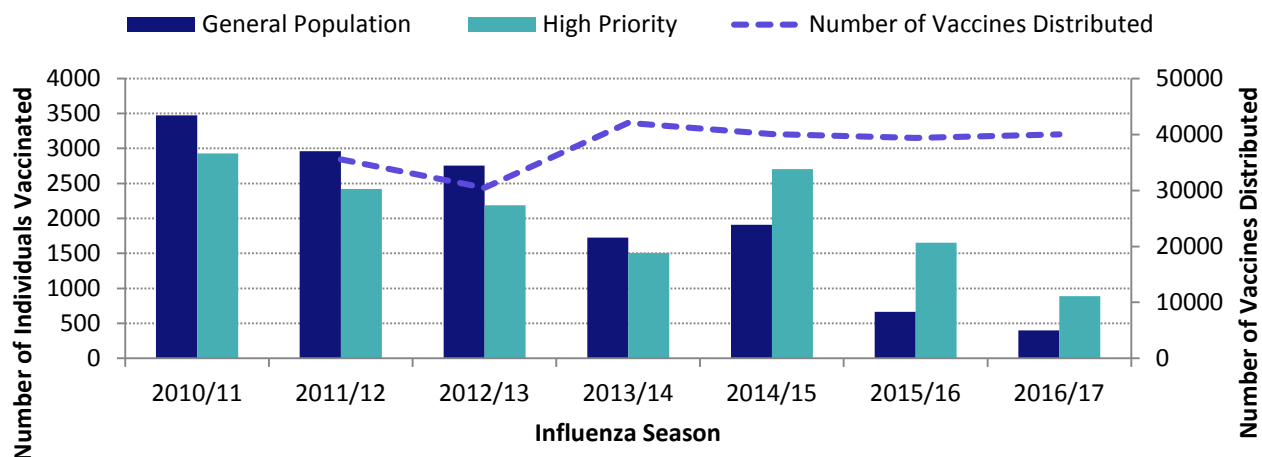
Data Source: North Bay Parry Sound District Health Unit, Vaccine Preventable Diseases Internal Data. 2016/17 Influenza Season.

Table 7. Number of Individuals Vaccinated for Seasonal Influenza through NBPSDHU Vaccination Clinics, by Age Group & Gender, 2016/17 Influenza Season

Age Group	Males	Females
6 months to less than 5 years	113	159
5 to 18 years	97	89
19 to 64 years	200	341
65 years or older	138	153

Data Source: North Bay Parry Sound District Health Unit, Vaccine Preventable Diseases Internal Data. 2016/17 Influenza Season.

Figure 10. Number of Individuals Vaccinated for Seasonal Influenza through NBPSDHU Vaccination Clinics by Priority Group & The Number of Seasonal Influenza Vaccines Distributed by the NBPSDHU to External Health Agencies, 2010/11 to 2016/17 Influenza Seasons



Data Source: North Bay Parry Sound District Health Unit, Vaccine Preventable Diseases internal data. 2010/11 to 2016/17 Influenza Seasons.

Note: Scheduled vaccination data was not available prior to the 2013/14 influenza season

External health agencies include community health centers, long-term care facilities, retirement homes, hospitals, general practitioners, nursing agencies, pharmacies, and other health practitioners.

Table 8. Number of Individuals Vaccinated for Seasonal Influenza through NBPSDHU Vaccination Clinics by Priority Group, 2010/11 to 2016/17 Influenza Seasons

Influenza Season	Number of Individuals in the General Population Vaccinated for Seasonal Influenza	Number of Individuals in High Priority Populations Vaccinated for Seasonal Influenza
2010/11	3,474	2,929
2011/12	2,960	2,423
2012/13	2,757	2,186
2013/14	1,724	1,508
2014/15	1,909	2,704
2015/16	665	1,652
2016/17	401	889

Data Source: North Bay Parry Sound District Health Unit, Vaccine Preventable Diseases internal data. 2010/11 to 2016/17 Influenza Seasons.

Note: Scheduled vaccination data was not available prior to the 2013/14 influenza season

Table 9. Number of Seasonal Influenza Vaccines Distributed by the NBPSDHU to External Health Agencies, 2010/11 to 2016/17 Influenza Seasons

Influenza Season	Number of Vaccines Distributed to External Agencies
2010/11	-
2011/12	35,550
2012/13	30,460
2013/14	42,095
2014/15	40,075
2015/16	39,400
2016/17	39,991

Data Source: North Bay Parry Sound District Health Unit, Vaccine Preventable Diseases internal data. 2010/11 to 2016/17 Influenza Seasons. External health agencies include community health centers, long-term care facilities, retirement homes, hospitals, general practitioners, nursing agencies, pharmacies, and other health practitioners.

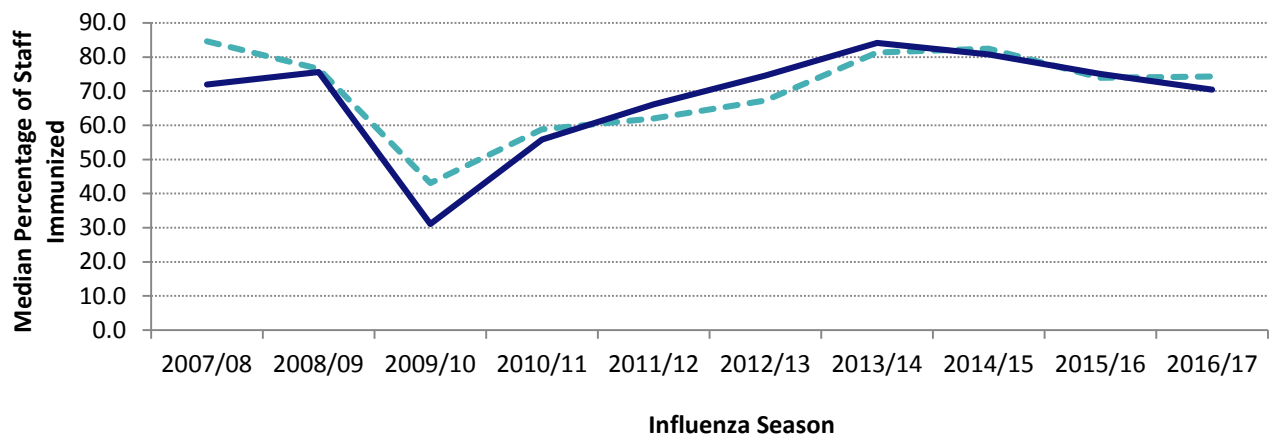
7.4 Facility / Institutional Vaccination Coverage

During the 2016/17 influenza season, a median of 74.3% of staff at long-term care homes (LTCHs) in the Health Unit region received the seasonal influenza immunization, comparable to a median of 72.1% of Ontario LTCH staff (Figure 11). In the Health Unit region, a median of 70.4% of hospital staff were immunized in the 2016/17 season compared to a median of 53.1% of staff in Ontario.

The median percentage of staff immunized at either facility type has increased from a low of 31.1% (hospitals) and 43.1% (long-term care homes) to a peak of 84.1% (hospitals) in 2013/14 and 82.4% (long-term care homes) in 2014/15.

In 2009/10, the pH1N1 vaccine was offered as a separate vaccine from the seasonal influenza vaccine, and consequently uptake for the seasonal influenza vaccine was low.

Figure 11. Median Percentage of Staff Immunized with the Seasonal Influenza Vaccine, by Facility Type, NBPSDHU Region, 2006/07 to 2016/17 Influenza Seasons



Data source: NBPSDHU Internal Access Database, Communicable Disease Program internal data. 2007/08, 2008/09, 2009/10, 2010/11, 2011/12, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17 Influenza Seasons.

Table 10. Median Percentage of Staff Immunized with the Seasonal Influenza Vaccine, by Facility Type, NBPSDHU Region, 2007/08 to 2016/17 Influenza Seasons

Influenza Season	Median Percentage of Staff Immunized at Long-Term Care Homes	Median Percentage of Staff Immunized at Hospitals
2007/08	84.6	71.9
2008/09	76.5	75.6
2009/10	43.1	31.1
2010/11	58.8	55.8
2011/12	62.0	66.1
2012/13	67.3	74.6
2013/14	81.3	84.1
2014/15	82.4	80.8
2015/16	73.9	75.0
2016/17	74.3	70.4

Data source: NBPSDHU Internal Access Database, Communicable Disease Program internal data. 2007/08, 2008/09, 2009/10, 2010/11, 2011/12, 2012/13, 2013/14, 2014/15, 2015/16, 2016/17 Influenza Seasons.

7.5 Adverse Events Following Immunization (AEFI)

Two adverse events following immunization (AEFI) with the seasonal influenza vaccine were reported to the Health Unit during the 2016/17 season. During the 2015/16 season, two AEFI related to seasonal influenza vaccination were reported.

8.0 References

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