# Clinical Services

Influenza Coverage in WDG

2016-2017 Season

| **Area of Focus** *(check all that apply)* | |
|---|---|
| Strategic Plan Direction/Goal | ☒ |
| Ontario Public Health Standard, 2008 (OPHS) | ☒ |

Manager: Rosalyn LaRochelle

Director: Rita Sethi

Division: Community Health and Wellness

PublicHealth
WELLINGTON-DUFFERIN-GUELPH
*Stay Well.*

## Summary of Strategic Plan Goal and Operational Plan Objective(s):

| | |
|---|---|
| **Strategic Direction:** | Building Healthy Communities - We will work with communities to support the health and well-being of everyone. |
| **Strategic Goal(s):** | We will promote healthy environments that support physical and mental health and well-being. |
| **Program Operational Objective:** | To facilitate the distribution and administration of the flu vaccine for the 2016-2017 year |
| **Is this a new initiative or update of existing initiative?** | Existing Initiative/Program Update |

## Summary of OPHS Program Requirement(s): *If report is not linked to a specific OPHS program, select or insert N/A.*

| | | |
|---|---|---|
| **OPHS Program:** | Infectious Diseases Prevention and Control | |
| | Vaccine Preventable Diseases | |
| **Goal:** | To reduce or eliminate the burden of vaccine preventable diseases. | |
| **Strategy:** | Disease Prevention | |
| | Assessment and Surveillance | |
| **Requirement(s):** | The Board of Health shall promote and provide provincially funded immunization programs to any eligible person in the health unit, including:<br>• Board of health based clinics<br>• Community-based clinics<br>• Outreach clinics to priority populations | |
| **Accountability Indicator(s):** | N/A | |
| **Has a performance variance or discrepancy been identified?** | **Yes** ☐ | **No** ☒ |

# Highlights:

**Background**

Under the Universal Influenza Immunization Program (UIIP), Wellington-Dufferin Guelph Public Health (WDGPH) is required to implement an annual campaign to promote influenza immunization in Wellington-Dufferin-Guelph (WDG). Special efforts are made to insure that high-risk groups are immunized early in the season (see Appendix A for high risk groups). WDGPH is also required to report information regarding vaccine distribution and immunization rates among institutional healthcare workers (HCW) to the Ministry of Health and Long Term Care (MOHLTC). The MOHLTC launched the UUIP for 2016/2017 in mid-October 2016.

**Changes to the UIIP for the 2016/2017 Influenza Campaign**

Every February, the World Health Organization (WHO) recommends a formulation of the influenza vaccine based on the circulating strains from the previous season.[1] For the 2016/2017 flu season, WHO recommended the following vaccine composition:

- an A/California/7/2009 (H1N1)pdm09-like virus;
- an A/Hong Kong/4801/2014 (H3N2)-like virus;
- a B/Brisbane/60/2008-like virus.

The WHO also recommended that quadrivalent vaccines containing two influenza B viruses contain the three listed above, as well as a B/Phuket/3073/2013-like virus.[1]

The National Advisory Committee on Immunization (NACI) provides the Public Health Agency of Canada with recommendations for annual influenza immunizations.[2] For the 2016/2017 influenza season, NACI recommended the following changes:

- Removal of the preferential recommendation for the use of Quadrivalent live attenuated vaccine (Flumist) for children who are 2 to under 6;
- Fluzone High-Dose inactive trivalent has been approved for use with adults 65 or older; and
- Adults with neurologic and neurodevelopment conditions are now included among the groups for whom influenza vaccination is particularly recommended.[2]

**Influenza Vaccine Distribution in WDG**

The MOHLTC has distributed the following influenza vaccines this year:[3]

**Table 1. Influenza vaccines for 2015-2016**

| Product | Vaccine Formulation | Eligibility |
|---|---|---|
| Fluviral | (TIV) | 18 and older* |
| Influvac | (TIV) | 18 years and older |
| Fluad | (TIV-adjuvanted) | 65 years and older who reside in a LTCH |
| Fluzone | (QIV) | 6 months through 17 years |
| Flumist | (Q-LAIV) | 2 through 17 years |

* Officially approved anyone over 6 months of age, however, TIVs are primarily targeted at those 18 and older

As of March 20, 2017, WDGPH had distributed 77,944 doses of influenza vaccine to healthcare providers. Similar to previous years, the majority of doses were distributed to physicians' offices (49%) and pharmacies (33%). In 2012, pharmacies were accepted into the UIIP and allowed to administer influenza vaccinations. Since that first year, the number of pharmacies in WDG approved to administer immunizations has risen from 7 to 61. Over the last several years, WDGPH has noted annual increases in vaccine distributions to pharmacies and decreases in attendance at WDGPH influenza immunization clinics. Table 2 details this below.

**Table 2. Vaccine doses distributed to/given by pharmacies and WDGPH**

| Community Partner | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017* |
|---|---|---|---|---|
| Pharmacies | 19500 | 26330 | 24203 | 26060 |
| WDGPH | 4961 | 3280 | 2659 | 2276 |

*Includes doses distributed/given as of March 4th, 2017.

The increase in pharmacies providing influenza immunizations led WDGPH to decrease the number of community clinics offered. WDGPH held 6 influenza immunization clinics, with 2 each in Fergus, Orangeville and Guelph. In each area, one clinic took place at an accessible community location and the other was held at the local WDGPH office. Influenza immunizations were also available through appointments at clinical services. Walk-in clients were immunized, if clinical services staff were available, but clients were encouraged to book appointments in advance.

**Healthcare Provider Immunization Rates**

NACI considered influenza immunization of healthcare (HCW) workers to be an essential standard of of care for providers.[2] Hospitals and long-term care facilities (LTCs) are required to report HCW immunization rates to WDGPH by December 15th every year.

Reported influenza immunization rates for health care workers for WDG in 2016/2017 were as follows:

- Long-term care facilities (LTCs)- 84.1%
- Hospitals- 46.1%
- Retirement homes- 63.1%

These rates are similar to those reported for WDG during the 2015/2016 flu season.

Each year, the Ontario Respiratory Pathogen Bulletin (ORPB) publishes influenza immunization coverage for HCWs in Ontario hospitals and LTCs.[4] Rather than calculating the rate for all HCWs, the ORPB publishes rates as the median influenza coverage rate among hospitals and LTCs in the province. Unlike the HCW immunization rates reported above, Table 3 compares the *median* influenza immunization coverage rates for HCWs in LTCs and hospitals in WDG and Ontario.

**Table 4. Median influenza immunization rates among HCW at LTCs and Hospitals within WDG and Ontario**

| Facility Type | Geography | 2013/2014 | 2014/2015 | 2015/2016 | 2016/2017 |
|---|---|---|---|---|---|
| LTCs | WDG | 84.6% | 84.6% | 85.4% | 90.1% |
| | Ontario | 78.0% | 75.7% | 72.6% | NA |
| Hospitals | WDG | 64.6% | 61.5% | 53.0% | 47.8% |
| | Ontario | 55.4% | 60.5% | 53.0% | NA |

Note: The median influenza immunization rates for Ontario LTCs and hospitals will not be available until May, 2017.

The median rate of influenza immunization among healthcare workers at LTCs in WDG has been consistently higher than the median rate for Ontario LTC staff overall. The median rate of influenza immunization among hospital staff in WDG has been higher than or equal to the provincial median.

**Influenza Surveillance**

The following information is up-to-date as of March 11, 2017.

In WDG, 192 laboratory-confirmed influenza cases have been documented.[5] The majority were identified as Influenza A strains (96%). Influenza immunization status was known for 59 cases, 38 of these case were immunized while 21 were not. There have been 24 confirmed institutional influenza outbreaks reported; 23 of which were Influenza A outbreaks while 1 was an Influenza A+B outbreak.[5]

Circulating strains of influenza in Ontario and Canada display antigenic matches to the influenza A and B strains that were included in the 2016/2017 influenza vaccine for the Northern Hemisphere.[6] 314 influenza A (H3N2) viruses were found to be antigenically similar to the A/Hong Kong/4801/2014. 835 influenza A (H3N2) viruses could not be antigenically characterized, but sequence analysis of hemagglutinin genes suggest that all 835 of these viruses were part of the same genetic group as A/Hong Kong/4801/2014. All 28 of the influenza A (H1N1) viruses characterized were antigenically similar to the A/California/7/2009 strain included in in this year's vaccine as the H1N1 component.[6] Of 112 influenza B viruses characterized in Canada 40 were antigenically similar to B/Brisbane/60/2008, which was the influenza B strain included in all

trivalent vaccines. 72 were antigenically similar to B/Phuket/3073/2013-like, which was included as the second Influenza B component in quadrivalent vaccine.[6]

Although circulating strains of Influenza A and B are genetically similar to those included in the 2016/2017 vaccine, the percentage of immunized cases has been much higher during the 2016/2017 season than during the 2015/2016 season (64% vs. 22%).

## Related Board or WDGPH reports:

1. Wellington-Dufferin-Guelph Board of Health Report BH.01.MAR0216.R05 - Influenza Coverage in WDG, 2015-2016 Season [Internet]. 2016 March 2. [cited 2017 March 20] Available from https://www.wdgpublichealth.ca/board-health/board-health-meetings/march-2-2016-agenda/influenza-coverage-wdg-2015-2016-season.

## References


1. World Health Organization. Recommended composition of influenza virus vaccines for use in the 2016-2017 northern hemisphere influenza season [Internet]. 2016 February 25 [Cited 2017 March 20]. Available from: http://www.who.int/influenza/vaccines/virus/recommendations/2016_17_north/en/

2. National Advisory Committee on Immunization (NACI): Canadian immunization guide chapter on i0nfluenza and statement on seasonal influenza vaccine for 2016-2017 [Internet]. 2016 May [cited 2017 March 20]. Available from: http://www.phac-aspc.gc.ca/naci-ccni/assets/pdf/flu-2016-2017-grippe-eng.pdf

3. Ministry of Health and Long-Term Care. Universal influenza immunization program (UIIP) [Internet]. [Cited 2017 March 20]. Available from: http://www.health.gov.on.ca/en/pro/programs/publichealth/flu/uiip/

4. Public Health Ontario. Ontario Respiratory Pathogen Bulletin (ORPB) 2015-2016: surveillance week 16 [Internet]. [Cited 2017 March 20]. Available from: http://www.publichealthontario.ca/en/DataAndAnalytics/Documents/Ontario_Respiratory_Pathogen_Bulletin_-_Week_16.pdf

5. Wellington-Dufferin-Guelph Public Health. Weekly influenza surveillance report: Wellington and Dufferin counties and city of Guelph, 2016-2017 influenza season. 2016 March 20.

6. Public Health Ontario. Ontario Respiratory Pathogen Bulletin (ORPB) 2016-2017: surveillance week 10 [Internet]. [Cited 2017 March 23]. Available from: http://www.publichealthontario.ca/en/DataAndAnalytics//Documents/Ontario_Respiratory_Pathogen_Bulletin_-_Week_10_2017.pdf

# Appendix A

According to the 2016/2017 NACI statement, influenza immunization is particularly recommended for the following groups:

**People at high risk of influenza-related complications or hospitalization**

- All pregnant women.
- Adults and children with the following chronic health conditions:
    - cardiac or pulmonary disorders (including bronchopulmonary dysplasia, cystic fibrosis and asthma);
    - diabetes mellitus and other metabolic diseases;
    - cancer, immune compromising conditions (due to underlying disease, therapy or both);
    - renal disease;
    - anemia or hemoglobinopathy;
    - neurologic or neurodevelopment conditions;
    - morbid obesity (BMI ≥40);
    - children and adolescents (age 6 months to 18 years) undergoing treatment for long periods with acetylsalicylic acid, because of the potential increase of Reye's syndrome associated with influenza.
- People of any age who are residents of nursing homes and other chronic care facilities.
- People ≥65 years of age.
- All children 6 to 59 months of age.
- Aboriginal Peoples.

**People capable of transmitting influenza to those at high risk**

- Health care and other care providers in facilities and community settings who, through their activities, are capable of transmitting influenza to those at high risk of influenza complications.
- Household contacts (adults and children) of individuals at high risk of influenza-related complications (whether or not the individual at high risk has been immunized):
    - household contacts of individuals at high risk, as listed in the section above;
    - household contacts of infants <6 months of age as these infants are at high risk of complications from influenza but cannot receive influenza vaccine;
    - members of a household expecting a newborn during the influenza season.
- Those providing regular child care to children ≤59 months of age, whether in or out of the home.
- Those who provide services within closed or relatively closed settings to persons at high risk (e.g., crew on a ship).

**Others**

• People who provide essential community services.
• People in direct contact during culling operations with poultry infected with avian influenza.