Protect yourself and others from influenza!
Summary of Influenza 2016-17

Canada

- The National Microbiology Laboratory (NML) characterized 2,307 influenza viruses [1628 A(H3N2), 59 A(H1N1) and 620 influenza B].

- Influenza A (H3N2): Majority of viruses were antigenically similar to A/Hong Kong/4801/2014, a component of the 2016-17 Northern Hemisphere's trivalent and quadrivalent vaccine.
Summary of Influenza 2016-17

- **Influenza A (H1N1):** viruses were antigenically similar to A/California/7/2009, the A(H1N1) component of the 2016-17 vaccine.

- **Influenza B:** 80% of influenza B viruses were antigenically similar to the vaccine strain B/Phuket/3073/2013, while 20% were similar to B/Brisbane/60/2008 vaccine strain, both of which were components of the 2016-17 quadrivalent influenza vaccine.

- **Source:** [Fluwatch - June 18 – July 22, 2017 (Weeks 25 - 29)](https://www.flu.gov/)

Protect yourself and others from influenza!
Summary of Influenza 2016-17 Saskatchewan

- There was a good match between circulating A(H1N1), A(H3N2) and B influenza viruses and the influenza vaccine for the 2016/17 influenza season.

- The 2016-17 influenza season followed a slightly different timeline, with most regions experiencing peak influenza activity in late December and early January. This is different than the year before when the peak activity was in February and early March.

Protect yourself and others from influenza!
Summary of Influenza 2016-17

Saskatchewan Weekly Influenza Surveillance Report as of April 2017

- Lab confirmed influenza cases: 1901 (3118)
- Long term care outbreaks: 70 (35)
- ICU admissions: 20 (53)
- Deaths: 4 (17)

(2015 stats)

Protect yourself and others from influenza!
Summary of Influenza 2016-17

Saskatoon Health Region

- Lab confirmed influenza cases* – 661
- Number of deaths^ – 3
- Number of hospitalizations – 115
- Number of ED visits for ILI – 274
- Number of ICU admissions – 6

**NACI 2016-17** It should be noted that the incidence of influenza is often underreported since the illness may be confused with other viral illnesses and many people with influenza do not seek medical care or have viral diagnostic testing done.

*to Aug 17, 2017 (note: influenza season is from Sept 1 to Aug 31)
^incomplete

Protect yourself and others from influenza!
Working Together

Saskatoon Health Region’s influenza vaccine coverage for 2016/17 ...  

27%  

(in 2015/16 it was 28%)

Protect yourself and others from influenza!
44% of seniors did not receive influenza immunization.

Protect yourself and others from influenza!
Protect yourself and others from influenza!
Protect yourself and others from influenza!

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health Services</td>
<td>46091</td>
<td>53182</td>
<td>61476</td>
<td>46,818</td>
<td>34,888</td>
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<tr>
<td>Physicians</td>
<td>15468</td>
<td>20722</td>
<td>25291</td>
<td>19893</td>
<td>15,927</td>
</tr>
<tr>
<td>People Strategies</td>
<td>6646</td>
<td>7996</td>
<td>11640</td>
<td>8132</td>
<td>7,565</td>
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<tr>
<td>Third party nursing services</td>
<td>5566</td>
<td>6224</td>
<td>3300</td>
<td>2700</td>
<td>2900</td>
</tr>
<tr>
<td>Long Term Care</td>
<td>1976</td>
<td>1881</td>
<td>1796</td>
<td>1599</td>
<td>1625</td>
</tr>
<tr>
<td>Pharmacies</td>
<td></td>
<td></td>
<td></td>
<td>20295</td>
<td>34,511</td>
</tr>
<tr>
<td></td>
<td>75747</td>
<td>90005</td>
<td>10350</td>
<td>99,437</td>
<td>97,416</td>
</tr>
<tr>
<td>Coverage %</td>
<td>23.4</td>
<td>26.8</td>
<td>29.9</td>
<td>28.42097</td>
<td>27.0</td>
</tr>
</tbody>
</table>
Protect yourself and others from influenza!

**SHR Staff Influenza Vaccine Coverage**

- PPH – 61.9% of staff immunized
- SHR – 60.5% of total staff immunized
- Saskatchewan’s Immunize or Mask policy was not in effect for the 2016-17 influenza season.
- Very effective in 2014-15, as 93% of staff and physicians were vaccinated.
- Decreased immunization coverage from 2015/16 (64%)
- We must strive to do better!
Protect yourself and others from influenza!
Protect yourself and others from influenza!

Influenza Update 2017-2018

Part I. National (NACI) and Provincial Directives

Part II. Scientific and Clinical Issues

- Reactions – common and uncommon
- Contraindications & precautions to immunizing
- Vaccine Administration
  - Informed consent
  - Vaccine preparation
  - Administration techniques
  - Adverse Events Following Immunization

Part III. Operational Details

- Documentation
- Vaccine Management
Part I. NACI Highlights

An Advisory Committee Statement (ACS) National Advisory Committee on Immunization (NACI)

Canadian Immunization Guide Chapter on Influenza and Statement on Seasonal Influenza Vaccine for 2017–2018

Please note this electronic copy is not confidential and may be shared. December 2018

Protecting and empowering Canadians to improve their health

Protect yourself and others from influenza!
Influenza occurs globally with an estimated attack rate of 5-10% in adults and 20-30% in children.
Infection can lead to severe secondary complications such as viral pneumonia, secondary bacterial pneumonia and worsening of underlying medical conditions.
Influenza and pneumonia are ranked among the top 10 leading causes of death in Canada.
In Canada an average of 12,200 hospitalizations and 3,500 deaths are related to influenza.

Protect yourself and others from influenza!
NACI Highlights

- Influenza vaccine is recommended for everyone 6 months of age and older

- High risk groups and health care workers (HCWs) remain a priority (Appendix A)

- Pregnant women have increased risk of hospitalization with length of gestation

Protect yourself and others from influenza!
NACI Highlights

- Timing rules around administration with other vaccines remain the same as 2016/17.
  - All influenza vaccines may be given at the same time as or at any time before or after the administration of other live or inactivated vaccines.

- Annual vaccination is required as the body’s immune response from vaccination diminishes within a year.

Protect yourself and others from influenza!
Province Directives

2017 – 2018
SEASONAL INFLUENZA PROGRAM

Information for Public and Community Health Providers in Regional Health Authorities and First Nations Jurisdictions

Protect yourself and others from influenza!
Provincial Directives

Influenza Program Dates

- Monday October 23, 2017 to Saturday March 31, 2018

Two provincially funded quadrivalent vaccines:

- Fluzone®
- Flulaval® Tetra
Who Can Get a Free Flu Shot?

✓ All Saskatchewan residents 6 months and older are eligible to get free influenza vaccine (‘flu shot’).

✓ Influenza vaccine is highly recommended for people who have a high risk of becoming seriously ill with influenza including:
  • People with chronic health conditions, such as:
    ➢ lung and/or heart disease
    ➢ asthma
    ➢ diabetes mellitus (types 1 and 2)
    ➢ neurological conditions
    ➢ cancer
    ➢ kidney disease
    ➢ children on long term aspirin therapy
  • Adults 65 years of age and older
  • Pregnant women in all trimesters
  • People with severe obesity
  • Residents of a nursing home or other care facility
  • Children age 6 months up to 5 years old

✓ People who should be immunized to protect those at high risk of getting influenza include:
  • Healthcare workers and volunteers
  • Household and close contacts of persons who are at risk of getting seriously ill with influenza
  • Household and close contacts of babies younger than 6 months
  • Members of households expecting babies
  • Individuals providing regular child care to children up to 5 years old, either in or out of the home
  • People who work with poultry or hogs
  • Health science students (human and animal health)

NOTE:
  • The Ministry of Health does not reimburse the cost of privately purchased vaccines.

HELP PREVENT THE SPREAD OF INFLUENZA

✓ Get a flu shot every year.
✓ Wash your hands often with soap and water or use an alcohol-based hand sanitizer.
✓ Cough and sneeze into your sleeve and use tissues only once.
✓ Stay home if you are ill.
✓ Clean all surfaces regularly.
### Wallet Card

**Record of Influenza Immunization**

<table>
<thead>
<tr>
<th>Name: ____________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immunization Date: ________________</td>
</tr>
<tr>
<td>Vaccine type: TIV QIV LAIV</td>
</tr>
<tr>
<td>Date of 2nd Dose for Child: * __________</td>
</tr>
<tr>
<td>HCW: Yes  No  Provider initials: _____</td>
</tr>
</tbody>
</table>

*NOTE: 2 doses are required for children younger than 9 years old who are getting immunized with influenza vaccine for the first time.*

- Dose #2 appointment date: ______ YY/MM/DD
- For more information about Saskatchewan’s immunization programs, go to: [www.saskatchewan.ca/immunize](http://www.saskatchewan.ca/immunize)
- Pneumococcal 23 immunization date: YY/MM/DD

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All clients should be provided with a Ministry wallet card as record of their influenza immunization.
Influenza Documentation

- Public Health will document the influenza doses administered by PPH to anyone born since 2000 (up to and including 17 years of age).

- 6 months up to and including 8 years of age must be entered into Panorama, regardless of who administered the vaccine.

- Children 9 - 17 immunized by non-public health providers do not need to be entered into Panorama.
Part II. Clinical Issues

Protect yourself and others from influenza!
What is Influenza?

- A highly infectious respiratory infection caused primarily by influenza A and B viruses.
- Referred to as seasonal influenza as illness generally occurs in the fall and winter months in the northern hemisphere.

Protect yourself and others from influenza!
Influenza Symptoms

**Influenza**

- Protect yourself and others from **influenza**!
Influenza Communicability

- It is unclear exactly how long influenza virus survives on surfaces, but numerous studies indicate that the virus deposited on surfaces is “likely to survive up to a few hours, though rarely more than 9 hours, on the vast majority of surfaces”. (Greatorex et al, 2011)
- Adults can transmit influenza virus from the day before symptom onset to ~ 5 days after symptoms begin.
- Children and those with weakened immune systems can transmit influenza to others for 10 days or more.
- Incubation: 1-3 days.

Protect yourself and others from influenza!
Protect yourself and others from influenza!

Influenza Virus

Influenza A viruses
- Hemagglutinin (H1, H2, H3)
- Neuraminidase (N1, N2)
- H1N1 and H3N2 have been the most common since 1977

Influenza B viruses
- B/Yamagata
- B/Victoria

Due to antigenic drift, a new vaccine formulation is considered each year. Due to waning immunity, re-immunization is needed for optimal protection even when vaccine strains remain the same.
Notes on Influenza A

- Can cause significant disease
- Infects humans and other animal species
- Causes widespread human disease

Protect yourself and others from influenza!
Notes on Influenza B

Influenza B circulation:
usually follows Influenza A.

- Typically peaks in the spring and tends to be unpredictable (there have been seasons with minimal circulation and seasons with high circulation).
- Limited to humans
- Generally causes milder illness
- Individuals infected are more likely to be <20 years of age.
- QIV covers both lineages – a definite advantage for the pediatric population.
Strains change each year

- Influenza viruses change continually and new strains may not be recognized by the body’s immune system
- Most years the vaccine is updated to align with the circulating influenza strains
- The World Health Organization (WHO) makes recommendations in February of each year on the composition of influenza virus vaccines
- Annual immunization is recommended to protect against the changing influenza viruses

Protect yourself and others from influenza!
Influenza: Get the *(antigenic)* drift?

Click on image for explanation of the ever-changing nature of influenza viruses and the importance of annual vaccination.
Vaccine Development

- Two Influenza “A” viruses and one (trivalent) or two (quadrivalent) Influenza “B” viruses are chosen each year based on characteristics of the current circulating influenza virus strains.
- A new vaccine is reformulated each year and each lot is tested to ensure the vaccine is safe and effective.

Protect yourself and others from influenza!
Vaccine Development

- There are currently seven trivalent inactivated vaccines (TIV) licensed in Canada
- There are currently three quadrivalent vaccines licensed for use in Canada
  - Two are quadrivalent inactivated vaccines (QIV)
  - One is a live attenuated influenza vaccines (QLAIV)

- Saskatchewan will be using two inactivated QIV products for this years publicly funded influenza program

Protect yourself and others from influenza!
2017-18 Influenza vaccine strains

- A/Michigan/45/2015 (H1N1)pdm09-like virus;
- A/Hong Kong/4801/2014 (H3N2)-like virus;
- B/Brisbane/60/2008-like virus (Victoria lineage);
- B/Phuket/3073/2013-like virus (Yamagata lineage).

To learn more about how vaccines are made click here.

Protect yourself and others from influenza!
Protect yourself and others from influenza!
How does QIV work?

- Immunity is created through both humoral and cell mediated responses

- IgG antibodies are produced as well as an increase in cytotoxic T lymphocytes

- Humoral antibodies, which correlate with vaccine protection are generally achieved in 2 weeks and immunity usually lasts a year

Protect yourself and others from influenza!
Vaccine Efficacy

Vaccine efficacy is the estimate of how well the vaccine works at preventing infection under ideal circumstances, as exist in a clinical trial.

Protect yourself and others from influenza!
Vaccine Efficacy

Against lab confirmed influenza in healthy:

- Children = 59-82%
- Adults = 62%
- Elderly
  - ~ half of that of healthy adults

Protect yourself and others from influenza!
Vaccine Efficacy in High Risk Adults

- Reduces the number of physician visits, hospitalizations and deaths in high risk adults 18-64.

- Although vaccine efficacy may be lower in high risk vs healthy adult populations, immunized individuals are still more likely to be protected than those who are unvaccinated.
Vaccine Efficacy in the Elderly

- Vaccine efficacy is ~ half of that in healthy adults.
- Vaccination decreases the incidence of:
  - Pneumonia
  - Hospitalization – including hospitalizations for cardiac disease and stroke
  - Deaths
- Vaccination also reduces exacerbations of COPD.

Influenza and pneumonia are the third leading cause of catastrophic disability in the elderly.

Protect yourself and others from influenza!
Influenza & Children

- Healthy children < 5 years of age have an increased risk of flu-associated hospitalization compared with healthy older children and young adults.

- Hospitalization is most frequent in children 0-23 months old, with rates similar to or greater than those of persons ≥ 65 years of age.

Protect yourself and others from influenza!
Influenza & Children

- Influenza vaccines are considered interchangeable for children requiring 2 doses.
- Children < 9 who have previously received one or more doses of an influenza vaccine only require one dose per season thereafter.
- Influenza vaccine will be available until April 30, 2018 to allow children who received their first dose on or prior to the March 31st program end-date to receive their second dose.
Adults ≥ 65 years

- Fluzone ® High Dose vaccine has been approved in Canada for adults ≥ 65 years of age.
- Inactivated TIV vaccine containing 4 times the HA per strain in each dose.
- NACI concludes there is evidence that this vaccine should provide superior protection compared to standard dose vaccine.
- Not available as a publicly funded vaccine.

Protect yourself and others from influenza!
Adults ≥ 65 years

- Seniors represent 16.6% of Canada’s population.
- Accounted for the greatest proportion of hospitalizations and deaths in the 2016-17 influenza season.
- 75-80% of seniors have at least one chronic condition that puts them at high risk for influenza and its complications.
- Lower immune response to infections and respond poorer to vaccines than younger adults.

Protect yourself and others from influenza!
Protect yourself and others from influenza!

FLUZONE®

- For those ≥ 6 months of age.
- **Clinically** relevant other ingredients: formaldehyde, Triton X-100.
- Latex free.
- Antibiotic free.
- Non-adjuvanted
- 5 mL multi-dose vials contain thimerosal.
- Post puncture is up to the expiry date indicated on the vial.
- Appearance: clear to slightly opalescent in colour.
For those ≥ 6 months of age.
- **Clinically** relevant other ingredients: *formaldehyde*.
- Latex free.
- Antibiotic free.
- Non-adjuvanted
- 5 mL multi-dose vials contain thimerosal.
- The vial should be discarded within 28 days post-puncture.
- Appearance: opalescent translucent to off-white suspension, that may sediment slightly.

Protect yourself and others from *influenza*!
# Vaccine Summary

<table>
<thead>
<tr>
<th></th>
<th>Injectable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(FluLaval Tetra®, Fluzone®)</td>
</tr>
<tr>
<td><strong>Dosage /Route</strong></td>
<td>0.5 mL IM</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>≥ 6 mos</td>
</tr>
<tr>
<td><strong>Site</strong></td>
<td></td>
</tr>
<tr>
<td>Anterolateral thigh</td>
<td>&lt; 12 mos</td>
</tr>
<tr>
<td>Deltoid</td>
<td>≥ 12 mos</td>
</tr>
<tr>
<td><strong># Doses</strong></td>
<td></td>
</tr>
<tr>
<td>Children 6 mos to 8 years</td>
<td>1 or 2*</td>
</tr>
<tr>
<td>≥ 9 years</td>
<td>1 dose</td>
</tr>
<tr>
<td><strong>Co-administration with other vaccines</strong></td>
<td>No restrictions</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>None</td>
</tr>
</tbody>
</table>
Injectable Product Similarities

- All contain **egg protein (ovalbumin)** in trace amounts.
- All contain **formaldehyde**.
- All are **latex free**.
- All are **non-adjuvanted**.
- All multidose vials contain thimerosal (as preservative).
- All ages receive **0.5 mL** dose.
- All are administered **intramuscular (IM)**.
Thimerosal

- A preservative used in vaccines since the 1930’s to stop the growth of bacteria and fungi in multi-dose vials.
- Made of thiosalicylic acid and mercury.
- Mercury is a naturally occurring element in the earth’s crust, air, soil, and water that we are all exposed to.
- The type of mercury contained in thimerosal is an organic form called ethylmercury.

Protect yourself and others from influenza!
Thimerosal

- **Ethylmercury** quickly leaves the body through stool.
- This is different than **methylmercury** which enters the body through consumption of contaminated fish (sword, tuna, king mackerel and shark) and **phenylmercury** used as a fungicide in agriculture.
- Methylmercury and phenylmercury have been shown to cause neurotoxicity as they cross the blood brain barrier and placenta.

Protect yourself and others from influenza!
Thimerosal

- In Canada with exception of influenza, thimerosal has not been used in any childhood vaccines since 2001.
- It was not removed because of safety concerns, but rather because of public concerns.
- Some still question the link between thimerosal and autism and other developmental disorders.
- Reported reactions to thimerosal include: allergic contact and immediate hypersensitivity (IgE mediated) reactions.
Thimerosal

- There is no causal relationship between thimerosal containing vaccines and autism. (2004, Institute of Medicine, Immunization Safety Review Committee)

- No legitimate reason to avoid thimerosal containing products for children or older individuals, including pregnant women. (National Advisory Committee on Immunization, NACI)

Protect yourself and others from influenza!
Thimerosal

- Thimerosal free vaccine is available for those who self-identify as having a diagnosed thimerosal allergy.
Reactions to Influenza Vaccine

- Most will have no side effects.
- Reactions that do occur are usually mild to moderate and may last for 1 to 4 days.
- Common reactions indicate that the immune system is responding.
- Reactions may be:
  - Local
  - Systemic
  - Rare

Protect yourself and others from influenza!
Local Reactions - IM

May include:

- Soreness
- Swelling
- Redness
- Warmth
- Temporary limited movement of the immunized limb

Protect yourself and others from influenza!
### Systemic Reactions - IM

**May include:**

<table>
<thead>
<tr>
<th>May include</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache</td>
<td>Myalgia`</td>
</tr>
<tr>
<td>Malaise</td>
<td>Fatigue</td>
</tr>
<tr>
<td>Fever</td>
<td>Sweating</td>
</tr>
<tr>
<td>Chills</td>
<td>Arthralgia</td>
</tr>
<tr>
<td>Irritability</td>
<td>Loss of appetite</td>
</tr>
</tbody>
</table>

Healthy adults receiving TIV show no increase in the frequency of fever or other systemic symptoms compared with those receiving placebo.

Protect yourself and others from *influenza*!
Rare Side Effects

➢ Guillain-Barre Syndrome (GBS)

➢ Oculo-respiratory Syndrome (ORS)

➢ Anaphylactic Reaction ~ 1 per million doses
Guillain-Barré Syndrome

- Is a form of paralysis.
- Is usually temporary.
- Most have full or near complete recovery.
- May be triggered by common infections including influenza.
- Associated with 1976 “swine flu” vaccine but no such association with any other influenza vaccine has been found.
- May be associated with influenza vaccine in ~ 1 per million recipients.
- Click here for more on GBS.

Protect yourself and others from influenza!
Oculo-respiratory Syndrome (ORS)

- Mostly reported during 2000-2001 season.
- Definition: client experiences the following symptoms within 24 hours of influenza immunization:

  - Bilateral Red Eyes
  - Respiratory Symptoms
  - Facial Swelling

Plus one or more with or without

Protect yourself and others from influenza!
Oculo-respiratory Syndrome

Bilateral Red Eyes
Without Lower Respiratory Symptoms
(cough, sore throat, hoarseness)
Safe to immunize

Bilateral Red Eyes
With Lower Respiratory Symptoms
(wheezing, chest tightness, difficulty breathing)
Consult MHO

Protect yourself and others from influenza!
Anaphylaxis

- A potentially life-threatening allergic reaction.
- Although rare (~ 1/million doses), it must be anticipated with every client.
- A sudden release of histamine and other inflammatory chemical mediators results in a rapid onset of cardinal clinical features involving the dermatologic, respiratory, cardiovascular and gastrointestinal systems.
- Pre-screening for severe allergies to vaccine ingredients can prevent episodes.

Protect yourself and others from influenza!
Anaphylaxis

Signs and symptoms of anaphylaxis develop rapidly and involve at least two body systems (e.g. the skin, respiratory, circulatory or gastrointestinal systems).

The cardinal features of anaphylaxis are:

- Sudden skin or mucosal symptoms and signs
- Sudden respiratory symptoms and signs
- Sudden reduced blood pressure or symptoms of end organ dysfunction
- Sudden gastrointestinal symptoms

Protect yourself and others from influenza!
Anaphylaxis Management

1. Assess circulation, airway, breathing, mental status, skin, and body weight.

Promptly and simultaneously perform steps 2, 3 and 4.

2. Call for help

3. Inject epinephrine IM in the mid-anterolateral aspect of the thigh, 0.01mg/kg. Record time of dose and repeat q 5 minutes if needed.

4. Position client on back or a position of comfort if respiratory distress &/or vomiting. Elevate lower extremities. Client must not stand or sit suddenly.

5. When indicated at any time, perform CPR beginning with chest compressions.
**Epinephrine Dosage**

<table>
<thead>
<tr>
<th>Age</th>
<th>Weight kg (Lb)</th>
<th>Injectable (1mg/mL; Intramuscular Dose)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 6 months*</td>
<td>2 – 5 kg</td>
<td>0.05 mL</td>
</tr>
<tr>
<td>7 – 24 months*</td>
<td>5.5 – 10 kg</td>
<td>0.1 mL</td>
</tr>
<tr>
<td>25 – 36 months*</td>
<td>10.5 – 15 kg</td>
<td>0.15 mL</td>
</tr>
<tr>
<td>37 – 59 months*</td>
<td>15.5 – 20 kg</td>
<td>0.2 mL</td>
</tr>
<tr>
<td>5 – 7 years</td>
<td>20.5 – 25 kg</td>
<td>0.25 mL</td>
</tr>
<tr>
<td>8 – 10 years</td>
<td>25.5 – 35 kg</td>
<td>0.3 mL</td>
</tr>
<tr>
<td>11 – 12 years</td>
<td>35.5 – 45 kg</td>
<td>0.4 mL</td>
</tr>
<tr>
<td>13 years and older</td>
<td>Greater than or equal to 45.5 kg (Greater than or equal to 100 Lb)</td>
<td>0.5 mL</td>
</tr>
</tbody>
</table>

* Dosing by weight (0.01 mg/kg) is preferred when body weight is known.
If weight is unknown or is not readily available, then dosing by age is appropriate practice.
- Recommended route: IM (if required can be given through clothing)
- Preferred site: vastus lateralis in unimmunized leg or minimum 2.5 cm from vaccine injection site
- Different limb is preferred for each dose.
- Upper age limit: Ex. 0-6 months includes children who have not yet turned 7 months (ex. 6 mo 27d)
**Anaphylaxis Treatment Worksheet**

DC-92

---

Protect yourself and others from influenza!
Anaphylaxis

- Advise **all** clients to wait on-site for 15 minutes following immunization.

- Be able to distinguish between:
  - **Anaphylaxis**,  
  - Fainting (aka: syncope or vasovagal reaction) and  
  - Anxiety or panic attacks → next slide.
<table>
<thead>
<tr>
<th></th>
<th>ANAPHYLAXIS</th>
<th>FAINTING</th>
<th>ANXIETY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ONSET</strong></td>
<td>Usually within 15 - 30 minutes after injection</td>
<td>Sudden, occurs before, during or shortly after immunization, recovery within 1 - 2 minutes</td>
<td>Sudden, occurs before, during or shortly after immunization, recovery within 1 - 2 minutes</td>
</tr>
<tr>
<td><strong>SKIN</strong></td>
<td>Warm, flushed, blotchy areas, progressing to pallor and clamminess, pruritis and urticaria, tingling and swelling in mouth, tongue and face</td>
<td>Pallor, diaphoresis, cold and clammy</td>
<td>Pallor, diaphoresis, cold and clammy</td>
</tr>
<tr>
<td><strong>BREATHING</strong></td>
<td>Sneezing, coughing, wheezing, laboured breathing, hoarseness and difficulty swallowing due to swelling</td>
<td>Slow or normal rate, shallow, irregular or laboured</td>
<td>Hyperventilation</td>
</tr>
<tr>
<td><strong>PULSE</strong></td>
<td>Rapid and weak</td>
<td>Slow, steady</td>
<td>Rapid</td>
</tr>
<tr>
<td><strong>BLOOD PRESSURE</strong></td>
<td>Decreased systolic and diastolic; hypotension can progress to cause shock</td>
<td>Decreased systolic and diastolic</td>
<td>Normal or elevated systolic</td>
</tr>
<tr>
<td><strong>SYMPTOMS &amp; BEHAVIOUR</strong></td>
<td>Uneasiness, restlessness, agitation, not all signs. symptoms will be exhibited in each person, usually one body system dominates</td>
<td>Fearful; light-headedness, dizziness, numbness and weakness, sometimes accompanied by brief clonic seizure activity</td>
<td>Fearful, light-headedness; dizziness, numbness and weakness, tingling around lips and spasms in the hands and feet associated with hyperventilation</td>
</tr>
<tr>
<td><strong>GASTRO-INTESTINAL</strong></td>
<td>Nausea and vomiting; abdominal pain, loose stools</td>
<td>Nausea</td>
<td>Nausea</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td>Loss of consciousness</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Contraindications to injectable influenza vaccine

- Infants < 6 months of age.
- Anaphylaxis to a previous dose.
- Anaphylaxis to any component of the vaccine, except egg.
- Serious acute illness.
- Guillain-Barré Syndrome (GBS) within 6 weeks of a previous influenza vaccine dose.
What is an AEFI?

- Any untoward medical occurrence in a vaccinee which follows immunization.

- But… a temporal association is not proof of a causal relationship.

- Just because B follows A, doesn’t mean A caused B.
Who should report an AEFI?

- All vaccine providers
  - professional responsibility
- Any HCW caring for patients who may have had an AEFI

Protect yourself and others from influenza!
When should an AEFI be reported?

- ASAP to the event.
- Severe reactions within 24 hours.
- Remind the client/parent to contact you asap if a serious reaction occurs.

Protect yourself and others from influenza!
Where to report

- Refer to IM 70-15 Adverse Event following Immunization.
- Compete and submit the AEFI to Immunization Clinician.
- The Medical Health Officer makes recommendations and forwards all adverse reactions that meet reporting criteria to Saskatchewan Ministry of Health.

Protect yourself and others from influenza!
5.0 APPENDICES

Appendix 11.1: Summary of AEFI Reporting Criteria

The length of time between vaccine administration and onset of symptoms is an important consideration in causality assessment. Temporal criteria listed below are approximate timelines of which an applicable AEFI could occur.

<table>
<thead>
<tr>
<th>AEFI</th>
<th>Reporting Criteria</th>
<th>Vaccines (temporal criteria)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>----------------------------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td><strong>LOCAL REACTION AT INJECTION SITE</strong></td>
<td>----------------------------------------------------------------------------------------------------------</td>
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</tbody>
</table>
| Minor reactions                   | • Redness or swelling or pain extends past the nearest joint AND/OR  
• Redness or swelling or pain persists for 10 days or more                                                                                                          | 0-48 hours                  |
| Major reactions: (e.g., Arthus reaction) | • Onset within 48 hours of immunization AND  
• Swelling extends past the nearest joint                                                                                                                             | 0-48 hours                  |
| Infected abscess                  | • Physician diagnosed AND  
• Material from the abscess is purulent (positive gram stain or culture) OR  
• Signs of localized inflammation (erythema, pain to touch, warmth) AND  
• Evidence of improvement with antimicrobial therapy                                                                                                                   | 0-7 days                    |
| Sterile abscess                   | • Persists for more than 1 month, is more than 2.5 cm in diameter and/or drainage is evident AND  
• Material from the mass is non-purulent AND  
• Absence of localized inflammation OR  
• Failure to improve on antimicrobial therapy                                                                                                                        | 0-7 days                    |
| Nodule                            | • Is more than 2.5 cm in diameter  
• Persists for more than 1 month                                                                                                                                                                                                  | 0-7 days                    |
| Cellulitis                        | • Physician diagnosed AND  
• Characterized by at least 3 local signs or symptoms: pain or tenderness to touch, erythema, induration or swelling, warmth to touch                                                                                       | 0-7 days                    |
| **SYSTEMIC EVENTS**               |                                                                ----------------------------------------------------------------------------------------------------------|                             |
| Fever                             | • Fever that occurs in conjunction with another reportable event                                                                                                                                                                  | 0-72 hours                  |
| Rash                              | • Generalized rash for which urgent medical attention is sought and believed to be related to vaccination                                                                                                                        | 0-7 days                    |

Protect yourself and others from influenza!
Protect yourself and others from influenza!

Information and definitions are provided to assist the reporter in completing the AEFI.
AEFI Documentation

Healthcare provider is informed of possible AEFI by patient and/or directly observes AEFI in patient and reviews AEFI user guide to assess reportable criteria.

If event is reportable: healthcare provider completes AEFI Report Form sections 3; 4a; 4b if applicable; 5; 6; 7a; 7b; 7c; 7d; 8, 9a &/or 9b &/or 9c &/or 9d as applicable; and 10.

Healthcare provider (makes copy of report for self and) submits completed AEFI report form to the RHA that the vaccine was given in or to the FNJ that client identifies with (e.g., band member).

Upon receiving the AEFI form from the RHA/FNJ Medical Health Officer’s Recommendations for Further Immunization (section 11 of AEFI) the healthcare provider contacts the patient and informs them of the recommendations. The RHA/FNJ (that has access to Panorama) must enter a client warning on the client’s Panorama client record (until the AEFI module is supported in the future) as per Panorama bulletin 0024 Where Do I Document?

Healthcare provider who initiated AEFI report form informs client regarding the MHO’s recommendations and refers patient to Public Health if they have further questions.

RHA/FNJ submits completed AEFI report and forwards only reportable AEFIs to the Ministry of Health.

Protect yourself and others from influenza!
Why Report AEFI\textsubscript{s}

- Safety
- Identify rare or previously unknown events
- Monitor frequency and severity of known adverse reactions
- Allows for corrective action
- Guides decision r/t future immunizations for the client
- Public confidence – real or perceived risks

Protect yourself and others from \textit{influenza}!
Directing Calls

- The number of external immunizers is growing as is the volume of phone calls from the public reporting AEFIs or expressing immunization concerns.

- In order to counsel appropriately, please first establish where the vaccine was administered:
  - **If PPH** – proceed as usual, referring to SIM Chapter 11 Appendix 11.1 and Panorama Bulletin 0024 for documentation instructions.
  - **Health care workers** immunized through OH&S should be referred back to their occupational health site.
  - **For non-PPH administered vaccines** (i.e., physician, NP, pharmacy*) – direct the caller to contact the administering clinic/pharmacy for advice or to report an AEFI.

- Administrator of the vaccine completes the AEFI report.

- * If appropriate, the Pharmacy Association of Saskatchewan contact number 306-359-7277 can also be shared.

Protect yourself and others from influenza!
Protect yourself and others from influenza!

Vaccine Administration

- Informed Consent
- Preparing to Administer
- Administration Techniques
- Documentation
- Vaccine Management
Informed Consent

Use DC-282 & fact sheet to:

- **Identify** client.
- **Assess for** contraindications.
- **Review fact sheet**
  - Confirm that client has read
  - Highlight potential side effects
  - Instruct re: serious side effects, anaphylaxis and 15 minute wait.
- **Confirm consent**
  - Check for signature (parent/guardian for dependents)
  - Answer any additional questions, ensure client understanding
  - Verify that client is ready to proceed.

Protect yourself and others from influenza!
DC-282a for use with all adults over 18 years of age

Protect yourself and others from influenza!
Protect yourself and others from influenza!

DC-282b for use with those age 6 months to 17 years
2017-2018 Influenza Vaccine

What is influenza?
• Influenza is caused by a virus that spreads easily by coughing, sneezing and direct contact with nose and throat secretions.
• It can result in hospitalization and death, especially in very young children, the elderly and those who have underlying health conditions.
• Symptoms include sudden onset of fever, cough, chills, muscle aches, a headache and a runny nose.
• Infected people can spread the virus to others before they show any symptoms.

How can I prevent getting or spreading influenza?
• You cannot get influenza from the influenza vaccine ("the flu shot").
• Get immunized every year to protect yourself and those around you.
• Stay home when you feel sick.
• Wash your hands often with soap and water.
• Use an alcohol-based hand sanitizer gel to clean your hands if soap and water are unavailable.
• Cough and sneeze into your sleeve or a tissue (throw tissue away after use and wash your hands).
• Clean and disinfect all surfaces regularly.

Who can get free flu shot?
• Everyone 6 months of age and older.

It is highly recommended for:
• Persons with a chronic health condition including but not limited to:
  - lung and/or heart disease
  - asthma
  - diabetes mellitus (types 1 and 2)
  - neurological conditions
  - cancer
  - kidney disease
  - severe obesity
  - children on long term aspirin therapy
• Adults 55 years of age and older.
• Pregnant women in all trimesters.
• Residents of a long-term care facility.
• Children from 6 months up to and including 59 months of age (under 5 years old).

NOTE: Children younger than 9 years of age need 2 doses 4 weeks apart if they have not had a flu shot in the past.

Groups recommended to get immunized to protect those at high-risk include:
• Health care workers and volunteers.
• Household and close contacts of persons who are at risk of getting seriously ill with influenza.
• Household and close contacts of babies younger than 6 months of age.
• Members of households: expecting babies.
• Individuals providing regular childcare to children younger than 5 years old, either in or out of the home.
• Persons who work with poultry or hogs.
• Health sciences students (human and animal).

Who should not get the vaccine?
• A mild illness, with or without a fever, is not a reason to avoid immunization.
• Persons who have a cortisone illness, with or without a fever, should delay immunizations.
• Babies younger than 6 months old cannot get the vaccine.
• People who had a life-threatening reaction to a previous dose of any influenza vaccine, or any components of the vaccine.
• People who developed a neurological disorder called Guillain-Barré Syndrome (GBS) within 6 weeks of a previous influenza immunization.

How soon will my child/be protected after getting the vaccine?
• Effectiveness varies depending on the age and the immune response of the person being immunized, and the match between the vaccine viral strains and the influenza viral strains circulating in the community.
• Protection (antibodies) develops within 2-5 weeks after immunization in most healthy children and adults.

Acetaminophen (Tylenol, Tempra) may be given for fever or soreness. ASA (Aspirin) must NOT be given to anyone younger than 18 years old because of the risk of Reye syndrome.

saskatchewan.ca
HealthLine 811
Government of Saskatchewan
Protect yourself and others from **influenza**!

**DC-197**

Use at point of service appointments where influenza will be documented at time of administration.

---

### Pre-Screening Immunization Questions

<table>
<thead>
<tr>
<th>For the person being immunized:</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sick today?</td>
<td></td>
<td></td>
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<tr>
<td>2. Any life threatening allergy?</td>
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<td></td>
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<tr>
<td>3. Any serious reaction to a vaccine in the past?</td>
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<tr>
<td>4. Any health conditions that require regular visits to a doctor? Example: intussusception, long-term aspirin treatment or bleeding disorder.</td>
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<tr>
<td>5. Received any vaccines in the past 6 weeks?</td>
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<td></td>
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<tr>
<td>7. Has, or may have, a weakened immune system from medicine or medical treatment. Examples: taking steroids such as prednisone; anticancer drugs; drugs to treat rheumatoid arthritis, Crohn’s disease, psoriasis or post-transplant medications; or had radiation treatment.</td>
<td></td>
<td></td>
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<tr>
<td>8. Received blood or blood products in the past year?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Taking or will be taking antiviral drugs active against herpes viruses such as acyclovir, valacyclovir, famciclovir?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Received any vaccines in another community, First Nation community, doctor’s office, pharmacy, travel clinic, Emergency Department or another country?</td>
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<td></td>
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<tr>
<td>11. For infants less than 1 year of age: Did the mother take monoclonal antibody medications during the pregnancy? Ex: Humira, Remicade, Rituxan.</td>
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<tr>
<td>12. For females of child-bearing age only: Possibility of pregnancy?</td>
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<tr>
<td>13. Would you like the vaccine information sheets in another language? If yes, what language:</td>
<td></td>
<td></td>
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</tbody>
</table>

Please review all information sheets **before** seeing the nurse.

---

### For Office Use Only

<table>
<thead>
<tr>
<th>Arrival Time:</th>
<th>AM/PM</th>
<th>CHC Foot Sheet(s) given:</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time client seen by call nurse:</td>
<td>AM/PM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Additional time needed:</td>
<td>Yes</td>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**Consent grant entered on form?**

- [ ] Yes
- [ ] No

**Additional comments:**

---

**DC-197** March 2017 © 2011, Saskatchewan Health Region

**Saskatchewan Health Region**

---

**Population and Public Health**
Preparing to Administer

Protect yourself and others from influenza!
Seriously though...
CLEAN HANDS SAVE LIVES

THE 4 MOMENTS FOR HAND HYGIENE protect staff, clients and families:

- Before initial contact with the individual or the environment
- Before any procedure
- After body fluid exposure
- After final contact with the individual or the environment

Protect yourself and others from influenza!
Check out these great videos!

**GERMS**

**WASH YOUR HANDS**

A How-To Video

Protect yourself and others from influenza!
Protect yourself and others from influenza!
Administration Practices

- Administer vaccine directly from the fridge or cooler.
- **Do not warm** to room temperature prior to administration.
- **Protect** from light.
- **Visually inspect** (for discoloration or extraneous particulate matter).
- **Do not administer** vaccine beyond expiry date.
- **Date** FluLaval multi-dose vials once opened.
- **Shake** multi-dose vials before giving or withdrawing doses.
- **Cleanse stopper** of multi-dose vial with alcohol pad and allow to **dry**.
- **Do not pre-draw** vaccines (no stability data in syringe).
- **Do not combine** partial doses from different vaccine vials to make a full dose.

Protect yourself and others from influenza!
Administration practices

- This is not acceptable practice.

- Refer to Saskatchewan Immunization Manual Chapter 8.
Intramuscular (IM) Injections

- Ensure good visualization of the injection site area and avoid tight clothing above the injection site.
- Have clients lie down if prone to fainting or particularly anxious.
- Encourage deltoid relaxation by having client seated with elbow bent and forearm resting on lap or the arm of the chair.
- Swab the injection site with alcohol and allow to dry (this avoids a burning sensation when the needle is inserted).
- Secure injection site using an appropriate restraint/stabilization technique.
- When multiple injections are to be given – it is preferable to administer in different limbs, or if not possible, then separate by at least 2 cm.
- Do not massage site.
IM Injections

6-12 months of age - Vastus Lateralis
- middle third of anterior thigh.
- slightly lateral to the midline.
- this site can be used for adults when necessary.

≥ 12 months of age - Deltoid
- mid-portion of deltoid muscle mass.

Protect yourself and others from influenza!
Mastectomy Clients

Single Mastectomy
- Flu vaccine only:
  - Give IM in arm opposite to mastectomy
- Flu and Pneumococcal Vaccine:
  - Give both vaccines in arm opposite to mastectomy
    (space injections a minimum of 1” apart)

Double Mastectomy
- Flu vaccine only:
  - Give IM in Vastus Lateralis
- Flu and Pneumococcal Vaccine:
  - Give both vaccines IM in Vastus Lateralis
    (space injections a minimum of 1” apart)
IM Injections

Give in the central and thickest portion of the deltoid—above the level of the armpit and below the acromion.

**Needle size**
- 22–25 gauge
- 1–1½" needle (depending on muscle mass)

**Needle insertion**
- Use a needle long enough to reach deep into the muscle.
- Insert the needle at a 90° angle to the skin with a quick thrust.
- Separate two injections given in the same deltoid muscle by a minimum of 1".

Protect yourself and others from influenza!
Protect yourself and others from influenza!
Positioning & Stabilization

Have parent hold the child on parent’s lap.

1. One of the child’s arms embraces the parent’s back and is held under the parent’s arm.

2. The other arm is controlled by the parent’s arm and hand. For infants, the parent can control both arms with one hand.

3. Both legs are anchored with the child’s feet held firmly between the parent’s thighs, and controlled by the parent’s other arm.

Protect yourself and others from influenza!
Positioning and Stabilization

Deltoid Site

Infants 12 months and older

Infants 18 months old and older ("The pretzel hold")

Protect yourself and others from influenza!
Positioning and Stabilization

Hold the child on parent’s lap or have the child stand in front of the seated parent.

1. Parent's arms embrace the child during the process.

2. Both legs are firmly between parent's legs.
Positioning and Stabilization

Positioning a child in the straddle position

Positioning an older child in the cuddle position

Protect yourself and others from influenza!
Part III. Documentation/Vaccine Management

DC-282 a&b

➢ Ensure SHR employee number is entered.
➢ Risk Factor: check one box only.
➢ Complete the applicable vaccine-specific section:
  ➢ Influenza
  ➢ Pneumococcal
  ➢ Tdap

Panorama

➢ Entry to be done by PPH (Nurse A/Paramedic’s and NPs do not have access to Panorama)

Protect yourself and others from influenza!
Documentation & Children

- Panorama look up will not occur until the 4th week of the influenza campaign on November 20, 2017
- If second dose required: Indicate return date on wallet card and provide a copy of the DC-168 information tear sheet to parent/guardian.

Protect yourself and others from influenza!
- Reminder handout for parents to have child immunized 4 weeks later with second dose.

- Reminder for client to call PPH and check on need for Pneumo-23.
Vaccine Management

“Cold chain” refers to the process used to maintain optimal conditions during the transport, storage, and handling of vaccines, starting at the manufacturer and ending with the administration of the vaccine to the client.
Vaccine Management

- Administer vaccine directly from the fridge or cooler.
- **Do not warm** to room temperature prior to administration.
- **Protect** from light.
- **Do not freeze** or use if vaccine has been frozen.
- **Visually inspect** *(for discoloration or extraneous particulate matter)*.
- **Do not administer** vaccine beyond expiry date.

Protect yourself and others from influenza!
Protect yourself and others from influenza!

**Packing a hard sided cooler**

- Fridge gel pack
- Insulating layer (bubble wrap)
- Vaccine
- Insulating layer (bubble wrap)
- Ice packs on the bottom

Healthiest people ~ Healthiest communities ~ Exceptional service
Vaccine Management

WHEN A COLD CHAIN BREAK IS SUSPECTED, quarantine products under cold chain conditions and immediately consult PPHS.

- A cold chain interruption (break) is any circumstance where a biological product is exposed to temperatures outside of the 2°C - 8°C range.
- Label bag containing quarantined product as “Cold Chain Break - DO NOT USE” and return to fridge.
- Report to PPHS at 655-4760 or 655-4149 asap
- Do not discard vaccine until the Ministry of Health determines the product integrity.
Protect yourself and others from influenza!

COLD CHAIN BREAK REPORT

Please refer to the link below for further instructions on submitting Cold Chain Break reports.


Date Break Occurred: (yyyy-mm-dd)  Date of Report: (yyyy-mm-dd)  Reporter Name: 

Telephone Number:  Fax Number:  Reporter Email Address: (optional)

Location of Break (RHA or FNJ / City / Town)  Facility Name:

Facility Type:  
- Public Health
- Physician Office
- LTC
- Acute Care
- Employee Health
- Other__________________

Type of cold chain break:  
- Temperature excursion (cooler than 2.0°C and/or warmer than 8.0°C)
- Light Exposure

1. Are products now quarantined, labeled do not use, and stored on cold chain?  
   - Yes  
   - No (attach explanation)

   - Vaccine returned to storage between 2°C and 8°C on date _________ and time _________

2. Fridge temperature when break identified: __________ °C on date _________ and time _________
   
   - Max. temp recorded during break interval __________ °C
   - Min. temp recorded during break interval __________ °C
   
   - Time out of cold chain (if different from above) __________ (Provide evidence in description or attachments, e.g. Chart tracing)

3. Last temperature record before the break __________ °C on date _________ and time _________

Temperature log submitted?  
- Yes  
- No  
If No, why not? ________________

Description of Break: 

Refrigerator Type:  
- Lab Vaccine Fridge
- Domestic Fridge
- Bar Fridge
- Other__________________

Thermometer/Monitor Type (Not Brand Name):  
- Digital Min/Max
- Chart Recorder
- TT4
- Warm/Cold Mark
- No Monitor
- Other__________
- Unmonitored fridge

Cause of cold chain break:  
- Human Error
- Thermometer Malfunction
- Power Outage
- Refrigerator Malfunction
- Transportation
- Other__________________

Resolution plan details:

If Transportation Involved:
- Type (e.g. car/courier) ________________ Time delivery received: ________________
- Transportation between: Provincial Vaccine Depot to RHA/FNJ  
  - Public Health to community  
  - SDCL to wholesaler

Have any affected products been administered to clients?  
- No  
- Yes  
If yes: Has MHO been notified?  
- No  
- Yes  
Clearly identify these products using a separate page if necessary.

Vaccine Brand or Abbreviation  Manufacturer  Count (R of Doses)  Lot Number  Expiry date  Open multidose vial?  Previous cold chain break?  

<table>
<thead>
<tr>
<th>Vaccine Brand or Abbreviation</th>
<th>Manufacturer</th>
<th>Count (R of Doses)</th>
<th>Lot Number</th>
<th>Expiry date</th>
<th>Open multidose vial?</th>
<th>Previous cold chain break?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>No</td>
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</table>

Ministry of Health reviewer: ___________  Date: ___________

Total cost of wastage: $______________
Cleaning/Disinfecting of Equipment

Coolers, ice packs, clipboards, pens, computer keyboards:

- Clean/disinfect at end of each clinic day
- Use SHR supplied cleaner/disinfectant wipe (Accel Prevention or Percept RTU)
- Rub (friction) in three directions (front to back, side to side, across)
- Ensure all surfaces become wet (not sopping for keyboards)
- Allow to air dry

Protect yourself and others from influenza!
Cleaning/Disinfecting Coolers

Use the following order:

• Inside cooler, inside cooler lid, outside cooler and cooler handle

Large coolers will require using 2 wipes for adequate cleaning/disinfecting wet time

Protect yourself and others from influenza!
Pneumococcal Disease

Pneumococcal disease is a serious disease that kills more people in the United States each year than all other vaccine-preventable diseases combined.
Pneumococcal Disease

- Pneumococcal disease is caused by the bacterium *Streptococcus pneumoniae*. There are more than 90 subtypes.

- Invasive pneumococcal disease (IPD) is most common in the very young, the elderly and persons at high risk (i.e., those with functional or anatomic asplenia; congenital or acquired immunodeficiency).

Protect yourself and others from influenza!
Streptococcus Pneumoniae

Causes 3 major invasive diseases:

Pneumonia
- Most common.

Bacteremia
- Occurs in up to 30% with pneumococcal pneumonia.
- CFR ~ 20% (60% in elderly).

Meningitis
- Pneumococci cause almost 20% of bacterial meningitis.

Protect yourself and others from influenza!
Pneumococcal Vaccine

Pneumovax 23 is an inactivated polysaccharide vaccine.

Vaccine Efficacy:
- 50-80% against IPD.

Eligibility: One dose only
- Everyone ≥ 65 yrs of age (or 64 if turning 65 within flu season).
- Residents of long term care facilities.
- Anyone ≥ 2 yrs of age at risk of IPD.

Re-immunization:
- Once only for those at high risk of IPD.
- No second doses will be provided at mass clinics.
- Provide Fact sheet and refer to PPH using DC-168

Protect yourself and others from influenza!
Pneumococcal Vaccine (Pneumovax 23)

Administration:
- Can be given at the same time as flu vaccine.
- Use different limbs if possible.

Route:
- IM deltoid or
- SC lateral aspect of upper arm.

Dosage:
- 1 dose (0.5mL) adults and children ≥ 2 yrs of age.

Side Effects:
- Redness, swelling and soreness at injection site (SC>IM).
- Occasionally low grade fever or headache.

Protect yourself and others from influenza!
Subcutaneous Injections

Give in fatty tissue over the triceps

**Needle size:**
- 23-25 gauge
- 5/8” needle

**Needle insertion:**
- Pinch up on the tissue to prevent injection into the muscle
- Insert needle at a 45° angle to the skin
- Separate 2 injections in same area of fatty tissue by a minimum of 1”

Protect yourself and others from influenza!
Pneumovax 23

Verify dose by:

➢ Checking Panorama/health card prior to administering

➢ Checking client’s health card for the orange “pneumo” sticker

Protect yourself and others from influenza!
Protect yourself and others from influenza!

Pneumovax 23 Offered at Mass PPH sites only

Document dose:

- Into Panorama within 24 hours.

- Record year vaccine was administered on orange “pneumo” sticker and place on client’s HSN card.
Pertussis
(Whooping Cough)

- AKA the “100-day cough”.
- Is a common and often unrecognized cause of cough persisting for over 2 weeks in adolescents and adults.
- While most diseases are passed from children to adults, pertussis is often transmitted in the opposite direction, from adults to children.
- Pertussis immunity (after vaccine or disease) wanes.

Protect yourself and others from influenza!
Protect yourself and others from influenza!
Cocooning Strategy

Goal:
- protect newborns & babies.

How:
- Immunize those who come in contact with, and could expose, infants and young children at risk or too young to receive pertussis vaccine.
- Moms are vaccinated postnatally while in hospital.
- Healthcare workers who work with infants should contact OH&S.
Tetanus, diphtheria, pertussis (Tdap) vaccine

Tdap is an inactivated toxoid vaccine with adjuvant.

- Refer to Fact sheet

- Vaccine Efficacy:
  - 93-100% show protective levels for at least 5 years.

- Eligibility:
  - All adults 18 years and older are eligible to receive one dose of Tdap to replace a routine Td reinforcement dose.
  - Check Panorama prior to administering.

Protect yourself and others from influenza!
Tdap

Administer:
- Concomitantly with other vaccines at different injection sites using separate needles and syringes.

Route & Dosage:
- IM deltoid / 0.5 mL

Side Effects:
- Local: Redness, tenderness, swelling, induration, pain.
- Systemic: Fatigue, headache, mild fever, dizziness.

Document:
- Enter into Panorama within 24 hours.
- Records the month and year that Tdap vaccine was given on the bright pink ‘Tdap’ sticker and place back of the client’s HSN card.
Appendix A: NACI Priority Groups

- People at high risk of influenza related complications
  - Persons with chronic health conditions
  - Residents of long term care homes
  - 6-59 month olds
  - All pregnant woman
  - Indigenous peoples

Protect yourself and others from influenza!
NACI Priority Groups

- People capable of transmitting influenza to those at high risk
  - HCWs
  - Household contacts of individuals at high risk for influenza complications
  - Persons providing regular childcare

- Others
  - Persons who provide essential service
  - Persons involved in culling operations with poultry infected with avian influenza

Protect yourself and others from influenza!
Appendix A: High Risk Clients

Groups for whom influenza vaccination is particularly recommended

Publicly funded influenza vaccines may be administered to people who are six months of age and older who do not have vaccine contraindications. In particular, the following people are highly recommended to receive the influenza vaccine to reduce the incidence and burden of influenza disease and related health complications:

- All health care workers (HCWs), health care students, emergency response workers, visitors and volunteers who, through their activities, are capable of transmitting influenza to those at high-risk of influenza complications in independent practices, facilities, residences and community settings.
  - For the purposes of this statement, HCWs include any person, paid or unpaid, who provides direct or indirect health services, works, volunteers or trains in a health care setting.
- Adults (including pregnant women) and children ≥6 months with a chronic health condition including but not limited to:
  - Cardiac or pulmonary disorders (including bronchopulmonary dysplasia, cystic fibrosis & asthma);
  - Diabetes mellitus and other metabolic diseases;
  - Cancer and other immune-compromising conditions (due to underlying disease, therapy or both);
  - Renal disease;
  - Anemia or hemoglobinopathies;
  - Neurologic or neurodevelopmental conditions (includes neuromuscular, neurovascular, neurodegenerative, neurodevelopmental disorders and seizure disorders (and for children include febrile seizures and isolated developmental delay) but excludes migraine and psychiatric conditions without neurological conditions.
  - Morbid obesity (adult BMI ≥ 40, child BMI assessed as ≥ 95th percentile adjusted for sex and age).
- Children and adolescents with the following conditions:
  - Those undergoing treatment for long periods with acetylsalicylic acid, because of the potential increase of Reye syndrome associated with influenza.
- People of any age who are residents of nursing homes, long-term care facilities and other chronic care facilities.
- People ≥ 65 years of age.
- All children six to 59 months of age (younger than five years).
- Indigenous peoples.
- Visitors to health care facilities and other patient care locations.
- Household and close contacts of individuals at high-risk of influenza-related complications whether or not the individual at high-risk has been immunized.
- Household and close contacts of infants less than six months of age.
- Members of households who are 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.
- People who provide essential community services (e.g., provincial corrections staff who have direct contact with inmates).
- People in direct contact during culling operations with poultry infected with avian influenza.
- People working with live or dead poultry or swine.
- Health sciences students (human and animal health).
- Travellers - Influenza occurs year-round in the tropics. In temperate northern and southern countries, influenza activity peaks generally during the winter season (November to March in the Northern Hemisphere and April to October in the Southern Hemisphere).
Appendix A: Pregnant Women


Protect yourself and others from influenza!
Pregnant Women

- Influenza vaccine is recommended for all pregnant women, at any stage of pregnancy due to:
  - Risk of influenza –associated morbidity
  - Evidence of adverse neonatal outcomes associated with maternal respiratory hospitalization or influenza during pregnancy
  - Evidence vaccination protects newborns from influenza related hospitalizations
  - Evidence that infants born during influenza season are less likely to be premature, SGA or LBW

Protect yourself and others from influenza!
Appendix A – Health Care Workers (HCWs)

- Staff who are vaccinated are less likely to transmit illness.
- **Staff shed virus and are infectious for 24 hours before they are symptomatic.**
- Studies in nurses show that about a quarter of them will be infected in a given year and the vast majority will continue to work.

Protect yourself and others from influenza!
Appendix A – HCWs

- Includes any person, paid or unpaid, who provides services, works, volunteers or trains in a health care setting.

- Transmission between infected HCWs and their vulnerable patients results in significant morbidity and mortality.

- HCWs who have direct client contact should consider it their responsibility to provide the highest standard of care, which includes influenza immunization.

- In the absence of contraindications, refusal of HCWs who have direct client contact to be immunized against influenza implies failure in their duty of care to patients.

Protect yourself and others from influenza!
protect yourself and others from influenza!
FluWatch: Is Canada's surveillance system - monitoring the spread of flu.

FluWatch reports information for health professionals on flu viruses circulating in Canada.

Flu line

- (306)655-4FLU or (306) 655-4358


- Booking appointments will begin Oct. 30 for appointments that start the following week

Protect yourself and others from influenza!
Flu Website

- www.4flu.ca
- Clinic locations
- Pharmacy and physician locations offering influenza vaccine
- Health professional information
- Influenza fact sheet

Protect yourself and others from influenza!
Acknowledgements

Alberta Health Services, Communicable Disease Control, Province-wide Immunization. Influenza Immunization Orientation PowerPoint Presentation 2017-2018

BCCDC InFLUenza Immunization Course for Health Professionals.
References

National Advisory Committee on Immunization (NACI) Statement on Seasonal Influenza Vaccine for 2016-17

The Saskatchewan Immunization Manual
https://www.ehealthsask.ca/services/manuals/Pages/SIM.aspx

Protect yourself and others from influenza!
References


References

Professional Guidelines:

- The SRNA *Guidelines for Immunization Administration and Immunization Programs*, is currently under review. Please contact a nursing advisor for information.


References

- Fluzone®

- FluLaval Tetra®
  https://ca.gsk.com/media/590283/flulaval-tetra.pdf
The End