External Providers

Noon Hour Session
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!
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%)
SHR Influenza vaccine coverage

44% of seniors did not receive influenza immunization.

Protect yourself and others from influenza!
Flu immunization coverage, Saskatoon Health Region, Five Year Trend

Protect yourself and others from influenza!
Influenza doses by service providers, Saskatoon Health Region, 2012/13 – 2016/17

<table>
<thead>
<tr>
<th>Service Provider</th>
<th>2012/13</th>
<th>2013/14</th>
<th>2014/15</th>
<th>2015/16</th>
<th>2016/17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Health Services</td>
<td>46,091</td>
<td>53,182</td>
<td>61,476</td>
<td>46,818</td>
<td>34,888</td>
</tr>
<tr>
<td>Physicians</td>
<td>15,468</td>
<td>20,722</td>
<td>25,291</td>
<td>19,893</td>
<td>15,927</td>
</tr>
<tr>
<td>People Strategies</td>
<td>6,646</td>
<td>7,996</td>
<td>11,640</td>
<td>8,132</td>
<td>7,565</td>
</tr>
<tr>
<td>Third party nursing services</td>
<td>5,566</td>
<td>6,224</td>
<td>3,300</td>
<td>2,700</td>
<td>2,900</td>
</tr>
<tr>
<td>Long Term Care</td>
<td>1,976</td>
<td>1,881</td>
<td>1,796</td>
<td>1,599</td>
<td>1,625</td>
</tr>
<tr>
<td>Pharmacies</td>
<td>20,295</td>
<td></td>
<td>34,511</td>
<td></td>
<td></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 Influenza vaccine coverage

- PPH – 61.9% of staff immunized
- SHR – 60.5% of total staff immunized
- Saskatchewan’s Immunize or Mask policy was in effect for the 2014-15 influenza season.
- Very effective, as 95% 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!
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

Protect yourself and others from influenza!
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 2016

Protecting and Empowering Canadians to Improve Their Health

Protect yourself and others from influenza!
NACI Highlights

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

Protect yourself and others from influenza!
Provincial 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)

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.

NOTE:

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

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
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.
Part II. Clinical Issues

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.
Influenza Symptoms

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.
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 that of healthy adults
  - Immunization still an important source of protection

Protect yourself and others from influenza!
Vaccine Efficacy

- Protective antibodies are achieved within 2 weeks (may be some protection before that time).

- Immunity wanes within a year.

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

- Reduces 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.

Protect yourself and others from influenza!
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!

**Adults ≥ 65 years**

- Seniors represent 16.5% of Canada’s population.
- Accounted for the greatest proportion of hospitalizations and deaths in the 2015-16 influenza season.
- 74% 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.
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 publically funded vaccine.
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.

Source: Creative Commons
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.

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.

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

FluLaval Tetra®

- 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.
# Vaccine Summary

<table>
<thead>
<tr>
<th></th>
<th>Injectable (FluLaval Tetra®, Fluzone®)</th>
</tr>
</thead>
<tbody>
<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>Anterolateral thigh &lt; 12 mos</td>
</tr>
<tr>
<td></td>
<td>Deltoid ≥ 12 mos</td>
</tr>
<tr>
<td><strong># Doses</strong></td>
<td>Children 6 mos to 8 years = 1 or 2*</td>
</tr>
<tr>
<td></td>
<td>≥ 9 years = 1 dose</td>
</tr>
<tr>
<td><strong>Co-administration with other vaccines</strong></td>
<td>No restrictions **</td>
</tr>
<tr>
<td><strong>Antibiotics</strong></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)**.

Protect yourself and others from **influenza**!
Thimerosal

- Multi-dose vials contain a preservative called thimerosal (ethyl-mercury)
- Ethyl-mercury is different than methyl-mercury
  - Methyl mercury is a known neurotoxin in high concentrations or after prolonged exposure
- Ethyl-mercury is eliminated quickly from the body
- Studies have found there is no association between immunization with thimerosal-containing vaccines and neurodevelopmental outcomes including, autism-spectrum disorders

Protect yourself and others from influenza!
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)
Thimerosal

- Thimerosal free vaccine is available for those who self-identify as having a diagnosed thimerosal allergy.
  - Children’s Hospital of Philadelphia vaccine Education Centre http://media.chop.edu/data/files/pdfs/vaccine-education-center-thimerosal.pdf

Protect yourself and others from influenza!
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
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:

- Headache
- Myalgia
- Malaise
- Fatigue
- Fever
- Sweating
- Chills
- Arthralgia
- Irritability
- Loss of appetite

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**

- Plus one or more

**Respiratory Symptoms**

- With or without

**Facial Swelling**

Protect yourself and others from *influenza*!
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
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**
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

**EPINEPHrine Dosages According to Age and Weight**

<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 (4 – 11 Lb))</td>
<td>0.05 mL</td>
</tr>
<tr>
<td>7 – 24 months*</td>
<td>5.5 – 10 kg (12 – 22 Lb)</td>
<td>0.1 mL</td>
</tr>
<tr>
<td>25 – 36 months*</td>
<td>10.5 – 15 kg (23 – 33 Lb)</td>
<td>0.15 mL</td>
</tr>
<tr>
<td>37 – 59 months*</td>
<td>15.5 – 20 kg (34 – 44 Lb)</td>
<td>0.2 mL</td>
</tr>
<tr>
<td>5 – 7 years</td>
<td>20.5 – 25 kg (45 – 55 Lb)</td>
<td>0.25 mL</td>
</tr>
<tr>
<td>8 – 10 years</td>
<td>25.5 – 35 kg (56 – 77 Lb)</td>
<td>0.3 mL</td>
</tr>
<tr>
<td>11 – 12 years</td>
<td>35.5 – 45 kg (78 – 99 Lb)</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

- 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>

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

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.
Vaccine Administration

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

Protect yourself and others from influenza!
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!
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 the flu shot?
- Everyone 6 months of age and older.

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 serious 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 2-3 weeks after immunization in most healthy children and adults.

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

Check out these great videos!

GERMS

WASH YOUR HANDS

A How-To Video

GERMS MAKE YOU SICK

1. Wet hands
2. Soap
3. Scrub palm to palm
4. Palm to back
5. Thumbs
6. Between fingers
7. Knuckles to palm
8. Fingertips
9. Rinse
10. Dry
11. Use towel to turn off tap and open door

...remember to scrub for 15 full seconds, then rinse.

CLEAN HANDS STOP GERMS

WASH YOUR HANDS

www.germsmart.ca
GERMS MAKE YOU SICK
SANITIZE YOUR HANDS

1. Apply hand sanitizer
2. Scrub palm to palm
3. Palm to back
4. Thumbs
5. Between fingers
6. Knuckles to palm
7. Fingertips

...remember to scrub for 15 full seconds.

CLEAN HANDS STOP GERMS
WASH YOUR HANDS

www.germsmart.ca

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.
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)
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.

Protect yourself and others from influenza!
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!
### 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>
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<tr>
<td><strong>LOCAL REACTION AT INJECTION SITE</strong></td>
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<td>Inactivated</td>
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</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 | 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 | 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 | 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 | 0-7 days |
| Nodule                    | - Is more than 2.5 cm in diameter  
- Persists for more than 1 month                                                                                                                                | 0-7 days | 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 | 0-7 days |
| **SYSTEMIC EVENTS**       |                                                                                                                                                                                                                           | Inactivated | Live attenuated |
| Fever                     | - Fever that occurs in conjunction with another reportable event                                                                                                  | 0-72 hours | 0-42 days |
| Rash                      | - Generalized rash for which urgent medical attention is sought and believed to be related to                                                                                                                              | 0-7 days | 5-26 days |

Protect yourself and others from influenza!
Where to report

- Compete and submit the AEFI to PPH Immunization Clinician.
- The Medical Health Officer
  - makes recommendations and
  - forwards all adverse reactions that meet reporting criteria to Saskatchewan Ministry of Health.
Information and definitions are provided to assist the reporter in completing the AEFI.

Protect yourself and others from influenza!
Why Report AEFIs

- 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
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.

Protect yourself and others from influenza!
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).
**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!
Part III. Operational Details/Documentation

Protect yourself and others from influenza!
Influenza Usage & Wastage stats

In 2016-17:

Physicians were given 25,095 doses of vaccine

19,229 doses were documented

3,635 doses were reported as wastage

2,231 doses are undocumented either as given or wastage

Protect yourself and others from influenza!
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.
Protect yourself and others from influenza!
All clients should be provided with a Ministry wallet card as record of their influenza immunization.
Influenza Immunization 2017-2018 by Physician Office

<table>
<thead>
<tr>
<th>Date Given (yyyy-mm-dd)</th>
<th>Client Name</th>
<th>Health Services Number</th>
<th>Date of Birth (yyyy-mm-dd)</th>
<th>Influenza Vaccine Given Dose 0.5 ml</th>
<th>Lot #</th>
<th>Site</th>
<th>RA</th>
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<th>RL</th>
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<td>65 years and older</td>
<td>6 mos to 8 years</td>
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<td>9 years to 17 years</td>
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Choose only one risk factor that applies

VM-4a (Phys) 09/2017
©2010, Saskatoon Health Region

Fax every Monday to 306-655-4711 - Attn: Vaccine Management

Protect yourself and others from influenza!
Resident Profile Summary
Long Term Care Homes

This form only needs to be completed once and faxed to Vaccine Management 306-655-4711 prior to picking up vaccine on October 23, 2017.

Facility Name: ____________________________

LTC home Address:

______________________________________

______________________________________

______________________________________

Resident Profile completed as of October 23, 2017:

- Total # of Residents in LTC home < 65 years old: _____________
- Total # of Residents in LTC home 65+ years old: _____________

Fax this form by October 23, 2017 to Vaccine Management 306-655-4711

Protect yourself and others from influenza!
Influenza Vaccine Request:
Long Term Care Homes (LTC)

**LTC Home Information**

<table>
<thead>
<tr>
<th>LTC Name &amp; Address:</th>
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<tbody>
<tr>
<td>Primary Contact:</td>
<td>Phone:</td>
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<td>Email:</td>
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<td>Back Up Contact:</td>
<td>Phone:</td>
<td>Fax #:</td>
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<td>Email:</td>
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**Fax your order by October 3rd, 2017**

Pick up first order on Friday, October 20, 2017 12:00 pm - 4:00 pm or Monday, October 23, 2017 7:30 am - 12:00 pm

For subsequent orders and documentation:
- Fax vaccine order (VM-5b LTC) and documentation (VM-6) every Monday starting October 30th, 2017. If no vaccine is required, still fax both forms with only the "# of doses on hand (mandatory)" filled out on VM-5b LTC.
- Vaccine pick-up every Thursday starting November 9, 2017.
- # of doses on hand is a mandatory field to complete in order to ratify vaccine. If not completed, the form will be faxed back to the office.
- Vaccine pick-up every Thursday starting November 9, 2017.
- If Public Health is unable to ratify your influenza vaccine documented versus influenza given, your office will be called and vaccine will be withheld until documentation is complete.
- Please make copies of this order sheet for future orders.
- We will not phone to advise that your order is ready.
- Due to the high volume of phone calls, we are not able to accept orders by phone. Faxed only.
- Prepare for multi-dose units (10 doses per vial) when ordering supplies.

<table>
<thead>
<tr>
<th>Date Ordered</th>
<th># of doses on Hand (mandatory)</th>
<th># of Doses (Flucelvax Tetra® / FLUZONE®)</th>
<th>Multi-dose vial</th>
<th>Office Use Only</th>
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<td># of doses</td>
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Public Health—North East Office / Vaccine Management
108 – 407 Ludlow Street  Saskatoon, SK  S7K 1P3
Fax: 306-655-4711  ATTN: Office Supervisor Vaccine Management
Office Hours: 8:00 a.m. – 4:30 p.m., Monday-Friday

VM-5b (LTC)
09/2017
©2011, Saskatoon Health Region

Protect yourself and others from influenza!
Influenza Immunization Summary
For Residents in Long Term Care Homes

Facility Name: ____________________________________________________

<table>
<thead>
<tr>
<th>Date of immunization</th>
<th>Totals for Residents Immunized</th>
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<tr>
<td></td>
<td>&lt; 65 yrs old (Risk #21)</td>
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<td>65 + yrs old (Risk #1)</td>
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</table>

Fax this form every Monday to Vaccine Management 306-655-4711

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

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Lot #</th>
<th>Expiry date</th>
<th># of doses wasted</th>
<th>Expired open</th>
<th>Expired-unopened (&quot;non returnable&quot;)</th>
<th>** Drawn up &amp; not given</th>
<th>Defective (also report on Problem Report)</th>
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*Non-returnable*: Include vaccine that is now expired & had been in previous cold chain

**Includes**: wastage due to aspirated blood, client refused, etc.

Fax Monthly to:
306-655-4711

Report submitted by: ___________________________ Phone #: ___________________________

Date: ___________________________ Fax #: ___________________________

Population and Public Health
North East-International Travel Centre
108 – 407 Ludlow Street
Saskatoon SK S7S 1P8
Protect yourself and others from influenza!
Protect yourself and others from **influenza**!

---

**Vaccine Refrigerator Temperature Log**

- Vaccines must be maintained at a temperature between 2°C and 8°C. Immediately contact Public Health Services at 306-655-4149 if vaccines have been exposed to temperatures outside the acceptable range. Do not use these vaccines until further notice. (Response usually within 24 hours)
- Current, minimum and maximum temperature readings must be taken twice a day (first thing in the morning and at the end of the day).
- Fax the completed form each month to 306-655-4711.

<table>
<thead>
<tr>
<th>Day</th>
<th>Full Name of Clinic</th>
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<th>Month/Year</th>
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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.

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

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

Acknowledgements

Alberta Health Services, Communicable Disease Control, Province-wide Immunization. Influenza Immunization Orientation PowerPoint Presentation 2016-2017

BCCDC InFLUenza Immunization Course for Health Professionals.
Protect yourself and others from influenza!

References

National Advisory Committee on Immunization (NACI) Statement on Seasonal Influenza Vaccine for 2017-18

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®
  http://ca.gsk.com/media/590283/flulaval-tetra.pdf
The End

Protect yourself and others from influenza!