



Interlake–Eastern
Regional Health Authority

SEASONAL INFLUENZA REVIEW – IERHA ACUTE & LTC

A decorative graphic on the left side of the slide, featuring several blue circles of varying sizes arranged in a cluster, with the largest circle at the top left and smaller ones below and to the right.

IERHA Immunization Program
September 2017

Let's talk about Flu....



WHAT IS INFLUENZA?

- Viral infection affecting the nose, throat, bronchi and +/- the lungs.



- Infection lasts ~ a week - sudden onset of high fever, aching muscles, headache, severe malaise, non-productive cough, sore throat.
- Transmitted via droplets
- Spreads rapidly in seasonal epidemics.



WHAT'S THE BIG DEAL, ANYWAY?

- Because flu is a contagious respiratory illness, its spread can cause mild to severe illness – host factors include age, underlying conditions and exposure.
- Serious outcomes of flu can result in hospitalization or death.
- Older people, young children, and people with certain health conditions are at high risk for serious flu complications.
 - Immunosenescence (gradual deterioration of the immune system over time) in older adults
 - Immune naivety in children



WHAT'S THE BIG DEAL...CONT'D

- Presentation for clinical flu symptoms differs by age group:
 - In children – fever, headache, cough, nasal congestion
 - In adults – cough, fever, headache, sore throat, stuffy nose
 - In elderly – malaise, cough
- In Canada, it is estimated that an average of 12,000 hospitalizations and ~ 3500 deaths are related to influenza.
- The best way to prevent the flu is by getting vaccinated each year.

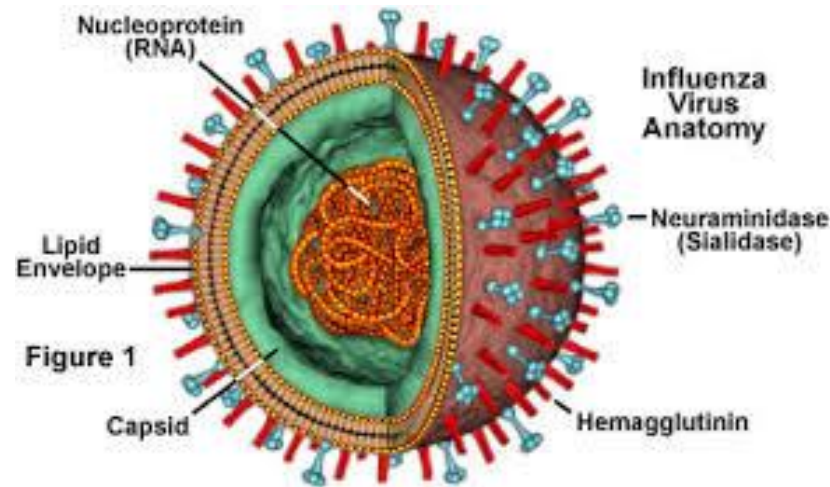


SEASONAL INFLUENZA

- Influenza season typically November – April
- Development of an immune response requires ~ 2 weeks after vaccination.
- Vaccine antibodies persist for ~ 6 months
- Scientists monitor global spread of flu and decide which flu strains will likely cause the most illness during flu season.
- Need for annual flu shot as vaccine strains can change from year to year.



2017-18 FLU VACCINE COMPOSITION



- As per the WHO, all quadrivalent flu vaccines for the 2017-18 in the northern hemisphere contain:
- **A/Michigan/45/2015 (H1N1)pdm09-like virus**
- **A/Hong Kong/4801/2014(H3N2)-like virus**
- **B/Brisbane/60/2008-like virus**
- **B/Phuket/3073/2013-like virus**



FLU VIRUSES ARE ALWAYS CHANGING

- When the vaccine matches the circulating flu virus(es), the vaccine can be as high as 85% effective.
- But effectiveness decreases as age increases and in people who are immunocompromised.
- About 22% of Manitoba residents are immunized with the flu vaccine annually.
- Vaccines generally are safe and effective.
- Because the flu virus is constantly changing, the challenge is to improve the flu vaccine.
- Currently, the flu vaccine is still our best defense against getting/transmitting the flu!



WHO IS ELIGIBLE?

- **All Manitobans** including those at highest risk:
 - Seniors ≥ 65 years of age
 - All children ≥ 6 months of age
 - PCH residents
 - Anyone with chronic health issues
 - Health care workers and First Responders
 - Pregnant women
 - Morbidly obese people
 - Indigenous people
 - Household contacts of those listed above



VACCINE CHARACTERISTICS FOR 2017/18:

	Fluzone® Sanofi Pasteur	Flulaval® Tetra GSK	Fluzone HD® Sanofi Pasteur
Vaccine Preparation	QIV	QIV	TIV
Vaccine Type	Inactivated– split unit	Inactivated– split virus	Inactivated– split virus
Route of admin	IM	IM	IM
Authorized age for use	≥ 6 months	≥ 6 months	≥ 65 years of age in PCH
Adjuvant	No	No	No
Format available Multi-dose vial = MDV Pre-filled syringe = PFS	10 dose MDV and PFS – packages of 10	10 dose MDV	PFS – packages of 10
Post puncture shelf life for multi-dose	Until expiry date	28 days from puncture	Until expiry date
Thimerosal	Yes – MDV No – PFS	Yes	No
Antibiotics	None	None	None
Contains Latex	No	No	No
Okay in Pregnancy	Yes	Yes	No

CONTRAINDICATIONS TO FLU VACCINE

- History of anaphylaxis to a previous flu vaccination
- History of anaphylaxis to any vaccine component
- History of Guillain-Barre syndrome within 6 weeks of a previous flu vaccination
- Infants < 6 months of age

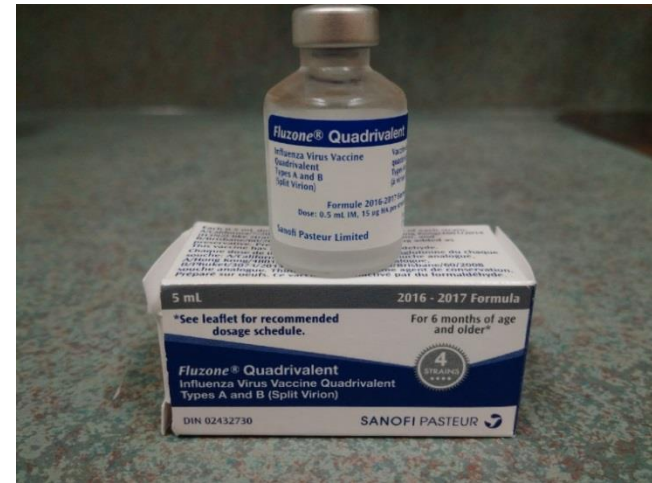


EGG ALLERGIC INDIVIDUALS & FLU VACCINE

- NACI has concluded that **egg allergic individuals without other contraindications to the vaccine may be vaccinated against influenza using inactivated QIV or LAIV** without prior influenza vaccine skin test and with the full dose. The vaccine may be given in any setting where vaccines are routinely administered. The waiting period post immunization would be as recommended in the CIG. (NACI Statement 2017-2018).
- CIG states – “vaccine recipients should be kept under observation for at least 15 minutes when there is a specific concern about possible vaccine allergy; 30 minutes is a safer interval since the majority of cases of anaphylaxis will occur within 30 minutes following vaccine administration.”

FLUZONE® QUADRIVALENT (MDV)

- Quadrivalent Vaccine
- Prepared in eggs
- Other ingredients - thimerosal, sucrose, formaldehyde, triton X-100
- 10 dose vial
- Once punctured, good till expiry date
- Administered IM



FLUZONE® (PFS)

- Quadrivalent Vaccine
- Prepared in eggs
- Thimerosal free
- Single dose syringe
- Other ingredients - formaldehyde, triton X-100, sucrose
- Administered IM



FLULAVAL® TETRA QUADRIVALENT

- Quadrivalent Vaccine
- Prepared in eggs
- Other ingredients - sodium deoxycholate, ethanol, formaldehyde, sucrose, α -tocopheryl hydrogen succinate, polysorbate 80, thimerosal
- 10 dose vial
- Once punctured, good for 28 days
- Administered IM



FLUZONE® HIGH DOSE (PFS)

- Trivalent Vaccine – does not contain B/Phuket/3073 strain
- Prepared in eggs
- Thimerosal free
- No antibiotics
- Other ingredients - formaldehyde, triton X-100, sucrose
- **Indicated for PCH residents ≥65 years of age only**




FLUZONE® HIGH DOSE CONT'D...

- Single dose syringe (latex free)
- Administered IM
- Fluzone® HD contains 4x the amount of antigens compared to standard dose flu vaccine.
- Influenza infection in adults ≥ 65 years of age is associated with significant morbidity and mortality
- Seniors are less responsive to standard dose of influenza vaccine compared to younger adults below 65 years of age.
- Literature suggests the relative efficacy of Fluzone® High-Dose was 24% more effective in preventing flu compared to standard dose TIV in adults 65 years and older (NACI Influenza Statement 2017-18)



CONTRAINDICATIONS & SIDE EFFECTS TO FLU VACCINE

- Flu vaccine is contraindicated for individuals with allergies to any component of flu vaccine (other than egg protein)
 - Common local side effects include soreness, redness and swelling at the injection-site
 - Common systemic side effects include sore muscles, headache, fatigue
 - Fluzone® HD has been observed to produce a higher rate of some local (pain, redness, swelling) & systemic reactions (malaise, myalgia, fever) than standard dose TIV. Most systemic reactions were mild and resolved within three days.
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IM TECHNIQUES - GOOD REMINDERS ...

○ Land marking

- **TARGET ZONE** for deltoid IMI is **4 cm** below the acromion (for safety of axillary nerve) – nurses should know what 4 cm is for them.

○ Depth of injection

- Deltoid intramuscular injection requires penetration into the deltoid muscle layer by 5 mm or more to ensure that the injection would be into the muscle mass
- Chose proper needle length to achieve correct depth – do not use the ‘one size fits all’ approach.
- Important that vaccine is administered as intended to ensure effective immune response.



DOCUMENTATION

- Document patient/resident flu shots on the 'Influenza Vaccine Screening form' **OR** Immunization Inputting form'
- Documents are forwarded to Panorama inputting clerk (fax 204-785-7743) for entry into provincial immunization electronic record.
- Questions? Email/call Melody Hawryluk – Public Health Immunization Coordinator (204-467-4782)



RESOURCES TO ACCESS

- IERHA website under Immunizations you can find the online Immunization competencies, Product Monographs, Vaccine Reference Guide. To proceed straight to link:

<http://www.ierha.ca/default.aspx?cid=6208&lang=1>

- Manitoba Health Website
- NACI statement for 2017-18
- Flu season Flu vaccine Q & A for HCP's



REFERENCES

- Davidson, K. M. & Rourke, L. Teaching best-evidence: Deltoid intramuscular injection technique. *Journal of Nursing Education & Practice*, 2013; 3(7) 120-128
- Manitoba Health Communicable Disease Control
- Public Health Agency of Canada. Canadian Immunization Guide. Chapter on Influenza and Statement on Seasonal Influenza Vaccine for 2017–2018
- Vaccine product monographs



