

## PANDEMIC INFLUENZA IMMUNIZATION CERTIFICATION

1. Influenza viruses can change in two different ways. Explain the difference between “Drift” and “Shift” and describe what happens to produce a pandemic situation.

Answer(s): Drift is a gradual, minor change, happens to both A & B viruses  
Shift is a reassortment of genes, sudden change, (e.g. pandemic – bird flu virus mixing with human flu virus creating a new strain and if replicated, explosive spread ) happens only in influenza A viruses.

2. Of the following statements regarding the pandemic vaccine initiative, circle which are correct.
  - a) provide the public, as rapidly as possible, with a safe and effective vaccine program
  - b) slow the spread of pandemic influenza
  - c) reduce illness and death associated with pandemic influenza in health care workers, front line workers and high risk persons
  - d) immunize 80% of health care workers
  - e) reduce pressure on the health care system during the pandemic influenza season

Answer(s): a,b,c,d,e

3. If vaccine supply is adequate, the entire population will be immunized. In the event of a vaccine shortage, who are the vaccine priority groups during a pandemic?

Answer(s):

Group 1: Healthcare workers, paramedics/ambulance attendants and public health workers. This includes acute care hospitals, long term care facilities/nursing homes, private physician’s offices, home care and other community care facilities, public health offices, ambulance and paramedic services, pharmacies and laboratories

Group 2: Essential service providers such as police, fire-fighters, the armed forces, key emergency response and decision makers, utility workers, funeral service/mortuary personnel, people who are unemployed in the public transportation and the transportation of essential goods (such as food)

Group 3: Persons at high-risk of severe or fatal outcomes following influenza infection such as the following: adults and children with chronic cardiac or pulmonary disorders (including bronchopulmonary dysplasia, cystic fibrosis and asthma) severe enough to require regular medical follow-up or hospital care; people of any age who are residents of nursing homes and other chronic care facilities;

people  $\geq$  65 years of age; children 6-23 months of age (flu vaccine not recommended for those  $<$  6 months); adults and children with chronic conditions, such as diabetes mellitus and other metabolic diseases, cancer, anemia and hemoglobinopathy; children and adults (aged 6 months to 18 years) with conditions treated for long periods with acetylsalicylic acid.

Group 4: Healthy Adults

Group 5: Children 24 months to 18 years of age

4. Of the following statements regarding influenza, circle which are correct.

- a) spreads from person to person when an infected persons coughs, sneezes or talks and the virus is sent airborne
- b) can also be spread by indirect and droplet contact
- c) fever is usually rare but can be high in infants and small children; headache, tiredness and weakness is mild; runny nose, sneezing and sore throat occurs often with a mild hacking cough
- d) fever usually lasting 3-4 days; sudden onset of headache, tiredness & weakness lasting 2 or more weeks; sudden onset of extreme exhaustion which can be severe; mod to severe cough, sometimes sore throat, sneezing and runny nose
- e) fever in people 65 years and older may not be present
- f) other symptoms in the elderly may include a change in behaviour, chest congestion and a decrease in appetite

Answer(s): a,b,d,e,f

5. Which of the following statements regarding influenza are true/false?

T/F The incubation period for influenza virus is 1-3 days

T/F The flu vaccine doesn't work because people still get the flu

T/F Those who are pregnant and/or breastfeeding should not have a flu shot

T/F You can get influenza from the influenza vaccine

T/F The flu virus can live on hard surfaces for 24-48 hours and your hands for 5 minutes

Answer(s): T,F,F,F,T

6. List the **antigenic** components of the flu vaccine used during the pandemic influenza season?

Answer(s): Unknown

7. List the other **compositional elements** of the flu vaccine used during the pandemic influenza season?

Answer(s): Unknown

8. Of the following statements regarding Standard Precautions, circle which are correct.

- a) gloves are required when administering flu vaccine
- b) wash hands well or use a sanitizer between clients
- c) to prevent accidental needle stick injury, do not recap needles
- d) without putting the used needle and syringe down, immediately discard uncapped needle and attached syringe into a hard sided, labelled sharps container
- e) do not empty used needles and syringes from one sharps container to another

Answer(s): b,c,d,e,

7. List the steps would you take if you sustained a percutaneous (needlestick) injury?

Answer(s): Allow the wound to bleed freely, cleanse area/puncture site with warm water & soap. Go directly to Emergency Department for risk assessment (preferably within 2 hours) Report incident immediately to supervisor.

8. Individuals who administer vaccines should screen every client for contraindications and precautions. A **contraindication** is a condition in a recipient that greatly increases the chance of a serious adverse reaction. A **precaution** is a condition in a recipient that may increase the chance of a serious adverse reaction, or that **may** compromise the ability of the vaccine to produce immunity. Place an '**C**' to indicate a **contraindication** or a '**P**' to indicate a **precaution** to the influenza vaccine.

- P infants less than 6 months of age
- C history of anaphylactic reaction to a previous dose of any type of influenza vaccine
- C history of anaphylactic reaction to eggs
- C history of anaphylactic reaction to any component of influenza vaccine
- P moderate to severe acute illness with or without a fever
- P history of severe ORS, for example, wheeze, chest tightness/discomfort, difficulty breathing

9. What are the common questions that should be asked before administering the **flu vaccine**:

Answer(s): What is your current state of health?

Do you have a history of an anaphylactic reaction to any substance?

Do you have a history of an anaphylactic reaction to eggs?

Have you previously experienced an adverse event following receipt of the same vaccine.

If an infant presents, ask the parent how old he/she is?

Always review of the risks of contracting disease and its sequelae if not immunized

10. Vaccines are intended to produce active immunity to specific antigens. An adverse reaction is an untoward effect caused by a vaccine that is extraneous to the vaccines primary purpose of production of immunity.

Vaccine adverse reactions fall into three categories - local, systemic and allergic. List some of the common reactions of the **flu vaccine** under each category:

LOCAL	SYSTEMIC	ALLERGIC
pain and redness at the injection site	loss of appetite	swelling of mouth and throat
swelling at the injection site	myalgia & malaise	hives at injection site
	headache	difficulty breathing
	fever	agitation, restlessness, tingling of lips

Review the form that you would use to report adverse vaccine events and describe what temporal criteria means.

Temporal criteria – is a timely relationship of the onset of the event, relative to the administration of the vaccine product, however, the event could have been due to an equally likely cause (e.g. headache)

Attach adverse event form

12. Vaccine recipients should be advised to remain under supervision for at least 15 minutes after immunization, regardless of whether or not they have had the particular vaccine previously.
13. Your 65-year-old client has just received a flu shot. She states that her lips are tingling, her tongue feels thick and she has a hoarse cough. Which of the following statements are true/false?
  - T/F She could be experiencing an anaphylactic reaction
  - T/F You should position her lying flat with legs elevated
  - T/F If epinephrine is administered; it should be given intramuscularly in all cases
  - T/F The correct dose of epinephrine for those (14 years +) is 0.5mls of epinephrine 1:000 IM or SC into an uninjected limb or at least 2.5 cm away from the immunization site
  - T/F Repeat epinephrine at 10-15 minute intervals if breathing becomes more laboured or level of unconsciousness decreases
  - T/F Call 911 or Ambulance after instituting all above measures

14. List the steps involved in drawing up a dose of flu vaccine?

- Check vial for correct product and expiry date
- Wash hands or cleanse with sanitizer
- Remove plastic cap on vial and clean the rubber stopper with 70% isopropyl alcohol
- Swirl vial to ensure contents are well mixed
- Place needle on syringe (tightly) and remove needle cap
- Pull back plunger to draw up appropriate amount of air into the syringe
- Insert needle through rubber stopper of vial and inject all of the air into the vial
- Hold vial upside down and pull back plunger on syringe to draw up appropriate dosage into the syringe
- Remove needle from vial and expel any air bubbles from syringe
- Recap the syringe
- Replace the date multi-dose vial back into the insulate cooler

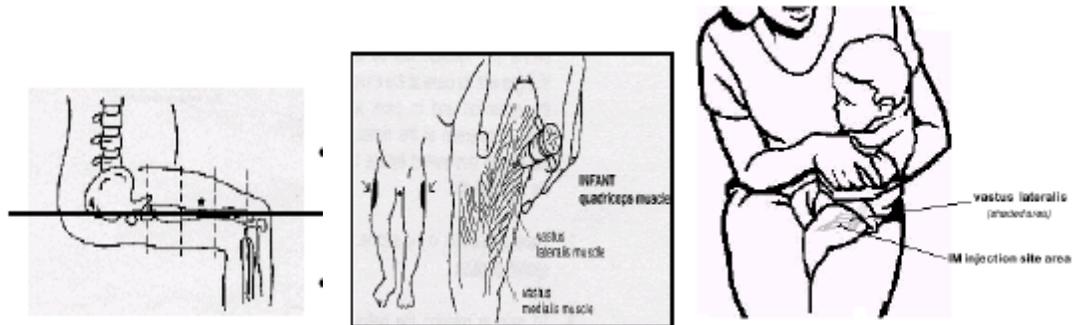
15. For the specific age groups listed below, describe the administration route, injection site, dosage, needle size and length:

	Route	Site	Dosage	Needle Size & Length
Infants 6-35 months	IM	Vastus Lateralis Muscle <18months  Deltoid > 18 months	0.25 ml*  *2 doses required unless previously immunized	25 gauge 7/8" - 1"
Children 3-8 years	IM	Deltoid Muscle	0.5ml*  *2 doses required unless previously immunized	25 gauge 7/8" - 1"
Children ≥ 9 years and Adults	IM	Deltoid Muscle	0.5ml	25 gauge 1" 25 gauge 1" -1 ½"

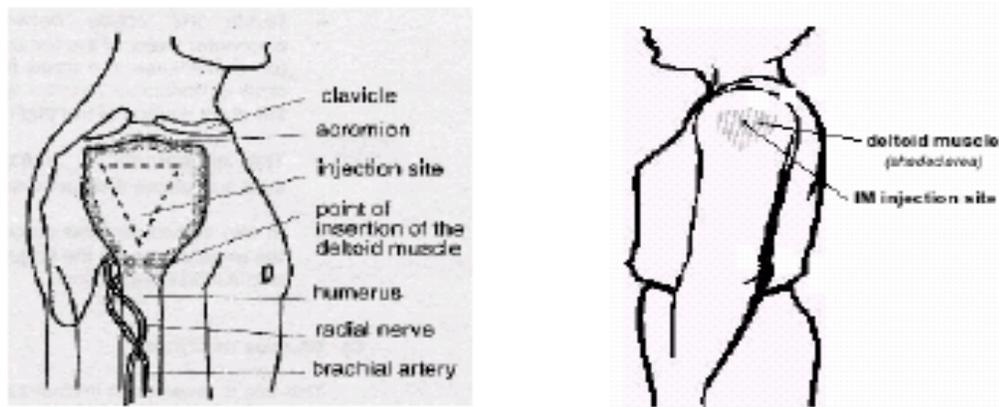
When immunizing, what is the best position for the following groups:

- An infant – "cuddle" or semi-recumbent position on the parent's lap.
- A child - sit sideways on the lap of the parent/caregiver. The injection arm should be held close to the infant's body while the other arm is tucked behind the parent's/caregiver's back.
- An older child or adult - seated with their elbow bent and their forearm resting on the arm of a chair and internally rotated.

16. a) Looking at the pictures below, how would you define the vastus lateralis site? Divide the space between the trochanter major of the femur and the top of the knee into three parts; draw a horizontal median line along the outer surface of the thigh. The injection site is in the middle third, just above the horizontal line.



- b) Looking at the pictures below, how would you define the deltoid site? Define the site by drawing a triangle with its base at the lower edge of the acromion and its peak above the insertion of the deltoid muscle. The injection site is in the center of the triangle.



17. Once you have land marked the appropriate site, list the steps on how to give an intramuscular injection?

- Cleanse the site with 70% isopropyl alcohol
- Insert the needle quickly at 90° angle into the muscle
- If client's muscle mass is small, grasp the body of muscle between thumb and fingers before and during the injection'
- Slowly pull back on plunger to aspirate. If blood appears in the syringe, withdraw the needle and, discard entire needle and syringe into sharps container
- Repeat the 'drawing up a dose of vaccine' procedure and insert the needle quickly at 90° angle into muscle. If no blood appears in the syringe after aspirating, slowly inject the dose of flu vaccine.
- Remove the needle in one swift motion and immediately apply pressure for 30 seconds. Do not massage the injection site. Discard used needle and syringe into sharps container.

18. a) What information should you provide to the client prior to administering flu vaccine?

Answer: Pandemic Influenza Vaccine Fact Sheet & a consent form

b) What information should you record after administering a flu shot during a pandemic?

Answer: dose, site, route, expiry date, lot number

Also, provide a copy of vaccine information to the client, inform them when to return for next dose, instruct on expected side effects and comfort measures (e.g. Tylenol), Call the adverse events hotline if symptoms do not resolve in 2-3 days.

A template for record keeping under consideration by the PH Agency of Canada's Centre for Emergency Preparedness and Response.

19. The term '**cold chain**' refers to a system of (please circle the correct statement(s))

- a) distribution for vaccines
- b) ensuring that vaccines arrive at their final destination with immunogenic properties intact
- c) storage of vaccines
- d) maintaining the temperature of vaccines between +2 to +8° Celsius
- e) all of the above

20. Which of the following statements regarding vaccine storage are accurate? (please circle the correct statement(s))

- a.) food, beverages and laboratory specimens can be stored in the fridge/hard-sided cooler along with vaccines
- b.) once the multidose vial is punctured, may print date of opening on label and use within 60 days providing good technique and cold chain maintained
- c.) vaccine can be placed in the fridge door in addition to central shelves
- d.) when using hard-sided cooler, always place vaccines on ice packs wrapped in paper/bubble packing
- e.) temperature within the fridge/insulated cooler must be maintained between 0° C and 8° C

21. Which of the following statements are correct regarding exposures of vaccines to temperatures outside of the recommended range:

- a) Use the vaccine if it has been exposed for less than 1 hour
- b) Contact the appropriate manufacturer to get the vaccine replaced
- c) Discard the exposed vaccine into an appropriate container
- d) Consult with the Clinic Director re: safety to use

Answer: d

## PANDEMIC INFLUENZA IMMUNIZATION SKILLS CHECKLIST

Health Region: \_\_\_\_\_ Date of Completion: \_\_\_\_\_  
(YYYY/MM/DD)

Name & Signature of Practice Evaluator: \_\_\_\_\_

Name & Signature of Vaccine Provider: \_\_\_\_\_

### Clinic Setup:

- Demonstrates appropriate knowledge of protocol for the management of anaphylaxis, and describes emergency plan to manage anaphylactic event
- Ensures anaphylaxis kit is complete and accessible
- Sets up supplies and equipment to promote proper body mechanics and OHS standards
- Stores and handles vaccine to maintain cold chain

### Performs appropriate client assessment prior to immunization:

- health status
- adverse event history

### Obtains informed consent:

- Refers to appropriate Health File(s)
- Describes the nature and purpose of the vaccine(s)
- Discusses benefits and risks of receiving the vaccine
- Reviews contraindications, precautions, and adverse events related to vaccine(s) to be administered
- Discusses risks associated with not having the vaccine
- Provides aftercare instructions
- Ensures client has opportunity to ask questions

### Prepares vaccine correctly:

- Cleanses hands
- Maintains sterile/aseptic technique
- Selects correct vaccine, checks expiry date, and dosage
- Selects appropriate syringe and needle size
- Draws up vaccine correctly

### Demonstrates correct vaccine administration:

- Instructs parent to position and hold child appropriately
- Accurate intramuscular injection technique and site location
- Safely handles and disposes of syringe
- Assists parent to comfort child as needed

### Documentation:

- Documents contraindications and reported adverse events
- Documents vaccines given on personal record and agency record
- Documents declined vaccines



PANDEMIC INFLUENZA IMMUNIZATION CERTIFICATION

*is hereby granted to:*

*for Competence in Written and Clinical Performance*



**Certifier:**  
**Granted on:**