Community Paramedicine Program



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Emergency Medical Services **Del Toronto**

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I GUIDELINES FOR SCHEDULING/STAFFING

A. Supervisor's Report of Injury/Accident (SRIA) Forms

If a work-related injury occurs at a Flu Immunization Clinic, the Community Paramedicine Program (CPP) **Superintendent will be contacted (416-338-0473)** during office hours in order for a Supervisor's Report of Injury/Accident Form to be completed right away. If the injury occurs after 16:00 hours, contact the Duty Officers (416-392-1836) to complete the SRIA Form. Leave a telephone message for the CPP Supervisor so they can follow up on their next business day.

B. Staff Safety Procedures

CPP Supervisors will have an up-to-date list of staff attending each clinic.

- A minimum of two staff will attend the Community Paramedicine Program Immunization Clinics.
- Staff will have access to a cell phone at each clinic if a telephone is not available.
- During evening clinics, staff will escort each to and from the clinic locations to the CPP vehicle(s) and to their cars or public transit after the clinic has finished.
- CPP staff can ask staff working at the facility where the clinic is being held to accompany them to their car/public transit if applicable.
- The supplies will be returned to the CPP office and/or the CPP storage room at the end of each clinic.
- All unused vaccine will be promptly returned to the fridge at the end of each clinic.
- If a vaccine-related incident occurs at a clinic, staff will leave a voice mail message with the **CPP Superintendent** (416-338-0473) with the details of the incident, and document the incident on the **"Patient Contact Report"** form. This form will then be attached to the Client's Consent form.
- The CPP Supervisor will be informed of all incidents involving staff safety.

C. Community Flu Clinic Schedule

- 1. Minimum staffing for a clinic is two Community Paramedicine Program Paramedics.
- 2. One Community Paramedicine Program Paramedic will act as the Clinical Coordinator during the clinic.
- 3. The CPP Superintendent or designate will contact the site at least one week prior to the clinic to finalise space, equipment and set-up of the designated clinic's area.
- 4. The duties of transporting vaccine and supplies will be shared among all staff members.

All paramedic staff are expected to remain at the clinic site until all eligible clients have received their vaccines and supplies have been packed. Please note that emergency equipment/supplies are to remain available until all clients have left the clinic. (15 minutes must have elapsed since last vaccine was administered).

II SETTING UP CLINICS

A. Preparation for the Flu Clinic

- 1. The keys for the Community Paramedicine Program Storage room are located in the lock box beside inside the Community Paramedicine Office area.
- 2. Paramedics will check all emergency equipment/supplies as per protocol.
- 3. Paramedics will arrive at clinic one half-hour before clinic begins for set-up.
- 4. Arrange appropriate space for clinic
- 5. Ascertain that a telephone is readily available for emergencies. A cell phone is available for sites where there is no phone.

B. Transportation to the Clinic Site

The Community Paramedicine Program has the CPP van and two other EMS vehicles for clinic use. The keys for these vehicles are located in the locked key cabinet inside the CPP office next to the lunch fridge, as well; keys for the Community Paramedicine Storage room are located there too. Please note: Only the keys attached to the key fob will start the motor of the CPP van. Fill up the vehicles with gasoline as you would an ambulance as required.

C. Setting up the Clinic Site

a) **<u>Required Equipment</u>**

- Alcohol wipes for cleaning tops of vials and client's arms
- Sharps disposal containers
- 3cc syringes with 25g 1" sterile needles (Vanish Point)
- Non-latex medical gloves (personal issue)
- Thermometer
- Cotton fluffs
- White "examination table" paper for covering clinic surfaces
- Paper bags for disposal of fluffs, swabs, etc.
- Alcohol-based Waterless hand cleanser
- Masking tape
- Garbage bags
- Biohazard bags
- Clipboards
- Pens
- Supply of vaccine/Blue lunch pails/Ice packs/Blue pads

b) <u>Required Documentation</u>

- Consent forms Adult and Pediatric
- Patient Contact Report forms
- Prepared sheet with location of Clinic written on it for easy reference
- 15 minute wait signs

- Clinic site surveys
- "Let's Beat the Flu" fact sheet
- Deferral forms
- Influenza 2010 Medical Directive (for paramedic's referral)
- c) Upon arrival at the site, the Clinic Coordinator will liase with the Administrative Office and advise them of her/his presence and purpose for being there.
- d) Prepare Clinic site, post "15 minute wait" signs, and have emergency equipment/supplies available and easily accessible.
- e) A telephone must be easily accessible in case of emergency. The telephone is not always in the area where the clinic is being held. Be sure you know the location of the nearest telephone. A cell phone is available for sites where a telephone is not available. Have the following information filled in on the **prepared sheet** and easily accessible in case of an emergency:
 - The name and address of clinic location (e.g. Toronto Council Fire,439 Dundas St. E.)
 - The telephone number of the clinic
 - The closest entrance to the clinic site
- 6. Set up Clinic tables with supplies needed for that Clinic according to number of clients expected. Prepare the vaccine after everything else is set up, and only the amount that can be used within the time frame required, in order to reduce vaccine wastage and to maintain potency of the vaccine.

III FLU VACCINE INFORMATION

Product Information

The following influenza vaccines administered by Aventis Pasteur Ltd, VAXIGRIPTM and Shire Biologics, FLUVIRAL TM S/F, will be distributed through the publicly-funded program for use in individuals equal to or greater than six (6) months of age. The two vaccines are similar but not identical as shown in the chart below:

For complete vaccine information refer to product monograph located with this manual.

	VAXIGRIP ^{TM*}	FLUVIRAL TM **	
Туре	Split-virus	Split-virus	
	Inactivated Influenza Vaccine	Inactivated influenza Vaccine	
Strains of	A/California/7/2009 (H1N1)-like virus	A/California/7/2009 (H1N1)-like	
influenza virus	A/Perth/16/2009 (H3N2)-like virus	virus	
	B/Brisbane/60/2008 – like virus	A/Perth/16/2009 (H3N2)-like virus	
		B/Brisbane/60/2008 – like virus	
Indication	Adults and infants 6 months of age and	Adults and infants 6 months of age	
	older who do not have any	and older who do not have any	
	contraindications	contraindications	
Dose	Ages 6-35 months 0.25 ml	Ages 6-35 months 0.25 ml	
36 months and older 0.5 ml		36 months and older 0.5 ml	
	VAXIGRIP	FLUVIRAL TM S/F	
Preservative	0.0002% Thimerosal	0.01% Thimerosal	

Route	Intramuscular	Intramuscular
Storage	Between $+2^{\circ}C$ and $+8^{\circ}C$. (Freezing destroys the vaccine.)	Between $+2^{\circ}$ C and $+8^{\circ}$ C. (Freezing destroys the vaccine.)
Supplied	5-ml multi-dose vial	5-ml multi-dose vial (single-dose prefilled syringes)
Pre-loading of syringes	No pre-loading. Paramedic may fill up to a maximum of 20 syringes per immunizing paramedic and place them in blue lunch pails with ice packs until administered.	No pre-loading (of vaccine in 5-ml vial). Paramedic may fill up to a maximum of 20 syringes per immunizing paramedic and place them in blue lunch pails with ice packs until administered.

* Vaxigrip® (Sanofi Pasteur) is authorized for use in adults and children 6 months of age or older. It is available in single-dose ampoules or pre-filled syringes and in five-mL multidose vials. The multidose presentation contains thimerosal as a preservative. Vaxigrip®contains trace amounts of neomycin.

** Fluviral® (GlaxoSmithKline) is authorized for use in adults and children 6 months of age or older. It is available in five-mL, multidose vials and contains thimerosal as a preservative. Antibiotics are not used in the manufacture of Fluviral®.

B. Vaccine Storage and Handling Guidelines for Flu Immunization Clinics

- Remove vaccines from blue lunch pails only for withdrawal of the required dose(s).
- Mark the date on all multi-dose vials of vaccines when first opened.
- Refer to package insert to determine how long a multi-dose vial can be used after the first dose is withdrawn. Once opened VAXIGRIPTM lasts up to 7 days. Once opened, FLUVIRAL TM S/F lasts up to 28 days.
- Store all vaccines between $+2^{\circ}C$ and $+8^{\circ}C$.
- Use blue lunch pails and ice packs when transporting vaccines.

To avoid freezing, **do not place vaccine directly on an ice pack**, provide a barrier between the vaccine and the ice packs.

Check expiry dates on the vaccine vial. Vaccines expire at the end of the month listed e.g., expiry *Oct/2011* means *October 31, 2011*).

C. Transportation of Vaccine

Vaccines are packed in their boxes in blue lunch pails with three ice packs on the bottom. The staff responsible for the vaccine will only bring the amount needed for that clinic day with a small surplus. At the end of the clinic, all opened and unopened vials of vaccine are returned to the Community Paramedicine storage room vaccine refrigerator. Opened vials are

to be clearly marked with the date, time and initial of the person who opened it the first time. These vials are to be picked up and used first on the next clinic day.

*N.B. – Do not put vaccines or emergency supplies (e.g. epinephrine) in the trunk of the vehicles as they will be at risk of freezing. Protect both vaccines and emergency supplies from freezing. Vaccines are to be returned to the fridge. Unused needles/syringes are to be stored with the clinic kits in the CPP office. Filled sharps containers are to be brought to the materials maintenance bay at HQ for disposal.

D. Giving Vaccines Simultaneously or in Close Proximity

The flu vaccine can be given simultaneously (in a different site) or in close proximity to other vaccines, as the flu vaccine is inactivated and will not affect the antibody response of another vaccine, including Hepatitis B, MMR, dT Polio. It will also not affect the results of a Tuberculin skin test as long as the flu vaccine is given on the same day as the TST or six weeks before the TST is to be administered. See product monograph.

IV FLU VACCINE PREPARATION

A. Vaccine Loading Area/Vaccine Protocol/Withdrawal and Dosage

- Wash hands prior to assembling equipment.
- Place clean sheets of "examination-table" paper on all tables where vaccine is to be administered. This area is not used for eating or for other non-clinic related activities to maintain a clean area for immunizing.

1. Equipment Needed for Vaccine Administration

- Alcohol wipes for cleaning tops of vials and client's arms
- Sharps disposal containers
- Vanish Point 25 g 1" sterile needles for administration (in 3ml syringe)
- Non-latex medical gloves (personal issue)
- Cotton fluffs/Band-aids
- White "examination table" paper for covering clinic surfaces
- Paper bags for disposal of fluffs, swabs, etc.
- Waterless hand cleanser
- Supply of vaccine/Blue lunch pails

2. Loading Syringes

- Check the vaccine vial for the vaccine's overall appearance, lot #, expiry date, dosage and route of administration.
- All Paramedics loading and dosing with the vaccine must communicate with each other to prevent wastage by ensuring that excess vaccine is not loaded into syringes.

3. Filled Syringes

- Discard unused filled syringes in the sharps containers after each clinic. Record the number of vials taken and the number of vials returned each day on the designated form.
- In order to ensure good aseptic technique and avoid needle-stick injuries, please do not pre-open syringe packages and do not carry pre-filled syringes to the next clinic.
- Wastage is to be avoided by careful planning.

- 4. Partially Used Open Vials at the end of the Clinic:
 - Vials that have been punctured and are not finished during the clinic day are to be dated and initialled by the paramedic.
 - If FLUVIRALTM S/F, partially filled vials can be used up to 28 days after opening. If VAXIGRIPTM, partially filled vials can be used up to 7 days after opening. Please pay attention to the date opened. (The Thimerosal in the VAXIGRIPTM, which is a preservative, makes up less content of the vaccine)

V CONSENT POLICY

Staff must ensure that anyone immunized at a Community Paramedicine Program Flu Clinic gives informed consent. Consent Forms will be located with the rest of the equipment for the clinics in the clinic kits located in the CPP office. Extra forms will be stored in the Community Paramedicine Program Storage room in the former 16 Station.

- 1. To assist the client/parent/guardian in giving an informed consent, information is given to the client/parent/guardian, which includes the potential risks, benefits and consequences of the immunization or absence of immunization (i.e. risk of disease). This information is included with the Consent Form that all parents/guardians and clients receive prior to immunization.
- 2 Informed consent will be in written form on the Community Paramedicine Program Consent Form.
- 3 Each client must have a valid consent before receiving an immunization.
- 4. If the paramedic determines that the client is not able to give informed consent, the immunization is deferred.
- 5. Any person who cannot write his or her own name and chooses to use an "X" can do so. The use of an "X" must be witnessed and noted on the consent. The witness may be a nonmember or member of Toronto EMS.
- 6. Consents signed in pencil will be accepted.
- 7. Consents should be dated and signed in the correct place. A consent that is signed but not dated can be dated and initialled.

8. Hand Written Consents will not be accepted.

For Infants older than 6 months up to 14 Years:

Consent from a parent/guardian must be obtained for all infants older than 6 months of age up to 14 years of age. Children less than 9 years of age with no previous history of vaccination will require two inoculations (typically 4 (four) weeks apart) in order to be fully vaccinated, and will be referred to a Toronto Public Health Catch-Up clinic. See Catch-up clinic information forms for dates and times of these clinics.

***N.B.** – **If** a parent/guardian consents to having the child immunized but the child refuses and cannot be calmed by reasonable means, then the immunization should be deferred.

VI ASSESSMENT OF CLIENT PRIOR TO VACCINE ADMINISTRATION

Fill out a **"Deferred Influenza Vaccination"** form if the client is unable to receive the vaccine for these or any other reasons.

Questions prior to administration	Response
Do you have a fever? *check using supplied thermometers if fever is suspected Have you ever had a reaction to a vaccine?	 Paramedic Action IF YES, DO NOT GIVE. Record current temp. On deferral form. Advise to return to a clinic or see a family MD when symptoms have resolved. If sore arm, slight fever Vaccine may be given. If very ill, difficulty breathing, rash, swelling of face/mouth, low blood pressure, shock or severe sore arm of > 3 days duration. DO NOT GIVE – may refer to family MD for further assessment.
Are you taking any medication? *If individual is on Coumadin – advise them that it can increase the incidence of bleeding because it is an invasive procedure, and therefore the Paramedic may need to apply more pressure on the site post-administration	 If yes, Record name of medication and reason for taking. If taking medications for a neurological condition i.e. Seizure disorder Ask when was their last seizure? If last seizure within past 3 months – no vaccine DO NOT GIVE – refer client to family MD. If taking Warfarin (Coumadin) or Theophylline – may administer vaccine to client. ADVISE - That the flu vaccine may raise the amount of these medications in their blood. That they should be careful that they take their medication in the recommended dose and at a consistent time each day. The client to watch for symptoms of toxicity i.e. easy bruising and jitters. If the client reports a history of Guillain-Barré Syndrome DO NOT GIVE, Refer to Family MD.
Are you allergic to eggs?	If the "allergy" is serious (e.g. itchy, rash, swelling) • DO NOT GIVE.
Are you allergic to Thimerosal (a mercury- containing compound)? (e.g.contact lens sol'n)	If yes, DO NOT GIVE.
Are you allergic to Neomycin (a.k.a Mycifradine/Myciguent/NeoTab, an antibiotic)?	If yes, • DO NOT GIVE VAXIGRIPTM FLUVIRAL TM S/F may be given, if available.

Are you allergic to pork gelatin?	If yes
	• DO NOT GIVE FLUVIRAL TM S/F. Vaxigrip may be given, if available.
	Note: Some vegetarians won't want to take
	FLUVIRAL TM S/F as gelatin is an animal product.

Note on Pregnant Clients:

If a client advises the Paramedic that she is pregnant and asks about the safety of the flu vaccine, advise the client of the following points:

- There is no evidence that the flu vaccine is harmful when given during pregnancy.
- We know that having the flu during pregnancy is harmful.
- The American College of Obstetricians & Gynaecologists is recommending vaccination of pregnant women in the second and third trimesters.

VII VACCINE ADMINISTRATION

For Infants aged 6 months to 35 months

For our purposes, we will define an infant as a child aged 6 months to 18 months of age inclusive. The day of birth is counted as Day 0, regardless of gestational age (i.e. prematurity/postmaturity) at birth.

Procedure:

- 1. Ask the parent/guardian to hold the infant in a lying position or in a sitting position on their lap.
- 2. Ensure the syringe is filled with the proper dosage of vaccine: Refer to Vaccine Information for dosage chart.
- 3. Use a Vanish Point 1 inch 25 gauge needle.
 *N.B. Using longer needles (1 inch) rather than shorter needles (5/8 inch) for intramuscular injections has been shown to decrease redness and swelling at the site. Reference: Pediatric Annals 27/6/June 1998, p. 376.
- 4. Identify the site for injection:
- In infants less than 1 year of age the anterolateral area of the thigh (vastus lateralis) muscle is preferred as it is the largest muscle.
- In children more than 1 year of age the deltoid muscle of the upper arm is the preferred site, especially once the child is walking. In children who are walking, injections into the anterolateral area of the thigh result in increased complaints of limping due to muscle pain.
- If the Paramedic assesses inadequate muscle mass at the deltoid site, the anterolateral area of the thigh may be used.
- 5. Ask parent/guardian which leg/arm he/she prefers we use and expose the limb.
- 6. Landmark injection site on the vastus lateralis muscle of the quadriceps group. Refer to diagram:

- The muscle is in the anterolateral aspect of the thigh (see diagram).
- The preferred injection site is within the middle third of length of the muscle. It is established by dividing the area between the greater trochanter (of the hip) and the lateral femoral condyle (of the knee) into thirds, and selecting a point within the middle third.
- Assess the muscle mass for adequate muscle tissue.
- Assess skin surface for bruising etc. and other contraindications to receiving the vaccine.
- If the vastus lateralis site is unsuitable (insufficient muscle mass, anatomic abnormality, infection, bruising), consider the deltoid site if adequate muscle mass exists, or defer immunization. For landmarking of the deltoid, see procedure for older children and adults.
 - a) Cleanse the site with an alcohol swab by using a circular motion from the inner aspect to the outer aspect and allow to dry.
 - b) Remove cap from needle by pulling it straight off. Ensure all air is removed from the syringe.
 - c) With 2 fingers stretch taut the skin overlying the muscle. If bunching the muscle is necessary, ensure that it is muscle being bunched, and not merely adipose tissue on top of the muscle.
- 7. Hold the syringe in the dominant hand between the thumb and the forefinger and quickly pierce the skin at a 90° angle with a quick thrust, inserting the needle into the muscle mass. Using a quick motion will lessen the infant's discomfort.
- 8. Aspirate by slowly pulling back on the plunger to determine if the needle is in a blood vessel while maintaining aseptic technique. If blood appears in the syringe, remove the needle and syringe and discard the syringe/contents into the sharps container. Select a new site. Repeat the procedure using a new pre-loaded syringe.
- 9. If blood does not appear, inject the contents slowly and steadily, holding the syringe steady.
- 10. Remove the needle quickly, pulling along the line of insertion and supporting tissue with the other hand.
- 11. Ask the parent/guardian to hold a band-aid on the injection site.
- 12. **Do not recap the needle.** Discard needle and attached syringe immediately into the sharps container located at your dosing station.
- 13. Observe the injection site for bleeding, and use additional pressure if necessary. Ask the parent/guardian to hold the band-aid on the injection site.
- 14. Observe the infant for any immediate signs of distress or altered mental status.
- 15. Record the name of the vaccine given, the date and time given, the dose, route, site (R or L Vastus Lateralis muscle) manufacturer and lot #along with your signature.
- 16. While observing the infant, document the same information on the Flu Fact Sheet attached to the Consent Form and give to the parent/guardian. For children who require a second dose of vaccine in 4 weeks, advise the parent/guardian regarding upcoming Toronto Public Health's Catch-Up Clinics.
- 17. Advise the parent/guardian of the need to wait for 15 minutes before leaving. Direct the

parent/guardian over to the after care area; escort if appropriate.

18. In situations where an infant receives more than one needle puncture during dosing (e.g. blood drawn back, baby/child moves, or bent needle), follow the procedure as per older child and adult in #26, next section.



Fig. A1-1 The vastus lateralis is the primary site for intramuscular injections in the thigh.

Grasp thigh as shown to stabilize extremity and concentrate muscle mass.





Landmark for Intramuscular Injection in Deltoid Muscle

For Infants Over 35 months of Age and Adults

- 1. Ask the client or parent/guardian of the child, or the child him/herself which arm he/she prefers to use for vaccination and to roll up the sleeve.
- 2. Ensure the syringe is filled with proper dosage of vaccine. Refer to the Consent Form (and Medical Directive) for the dosage chart.
- Use a 1 inch 25 gauge needle.
 Note: This needle length is recommended in order to avoid sterile abscess in subcutaneous tissue. There is no risk of abscess if the injection is too deep.

Reference: Canadian Immunization Guide, 5th edition, 1998, p.33

- 4. Assist and encourage the client to assume a comfortable position and to relax their arm. Never use force in giving an injection. If the client is frightened and upset and cannot be reasonably calmed, do not proceed. The client must be seated to receive the vaccine. Young children may sit on their parent/guardian's lap in order to assist in securing the site and in comforting the child. If there is concern regarding fainting, the client may sit or lie to receive the vaccine. If the client is dressed in such a way that the deltoid area of the arm is inaccessible, the client may be asked to remove his/her arm from the sleeve in order to have complete access to the upper arm. If the client needs to remove his/her clothing, ensure that privacy is maintained.
- 5. Landmark injection site in the deltoid muscle. Refer to diagram:
- 6. Locate the densest part of the muscle.
- 7. Muscle is in the lateral aspect of the upper arm.
- 8. Palpate the lower edge of acromial process and the midpoint of the lateral aspect of the arm that is in line with the axilla.
- 9. Find the knobby top of the arm (acromion process). A triangle within the boundaries indicates the deltoid muscle about 5 cm (2") below the acromial process. This site is two to three fingerbreadths down from the acromion process on the outer aspect of the arm. The essential danger in this area is that of harming the radial nerve.
- 10. Assess the muscle mass for adequate muscle tissue.
- 11. Assess the skin surface for bruising, etc. and other contraindications to receiving the vaccine. The site should be anatomically safe; that is, an area should be chosen where the danger of hitting a nerve or blood vessel is minimal. The tissues in the area should be free of bruising or soreness. There should be no abrasions on the skin, no swollen skin, and areas with hardened tissue (such as scar tissue) should be avoided.
- 12. After selecting the injection site, gently tap it to stimulate the nerve endings and minimize pain when the needle is inserted.
- 13. Cleanse the site with an alcohol swab by using a circular motion from the inner aspect to the outer aspect and allow to dry.
- 14. Remove the cap from the needle by pulling straight off. Ensure all air is removed from the syringe.

15. With 2 fingers stretch taut the skin overlying the muscle.

***N.B.** – This differs from a SQ injection in which you pinch up on SQ tissue to prevent injection into muscle.

- 16. Hold the syringe in the dominant hand between the thumb and the forefinger and quickly pierce the skin at a 90° angle into densest portion of deltoid muscle above armpit and below acromion, with a quick thrust inserting the needle into the muscle mass. Using a quick motion will lessen the client's discomfort. Keep in mind that this is a small site.
- 17. Release the skin. Hold on to the syringe so that it will not move. While maintaining aseptic technique, aspirate by slowly pulling back on the plunger to determine if the needle is in a blood vessel. If blood appears in the syringe, remove the needle and syringe and discard it into the sharps container. If the client is agreeable, select a new site and repeat using a new pre-loaded syringe.
- 18. If blood does not appear, inject the contents at a moderate rate and steadily, holding the syringe steady. Be sure to inject all the Paramedicine in the syringe.
- 19. Remove needle quickly, pulling along the line of insertion and supporting the tissue with the nondominant hand. Check the area for any redness, bleeding or bruising.
- 20. Apply a band-aid. Ask the client to hold the band-aid on the injection site for about 5 minutes.
- 21. **Do not recap.** Discard the needle and attached syringe immediately into the sharps container located close to your work area immediately.
- 22. Observe the injection site for bleeding, and use additional pressure if necessary. Ask the client or parent/guardian to hold the band-aid on the injection site.
- 23. Observe the client for any immediate signs of distress or syncope.
- 24. Record the name of the vaccine given, the date and time given, the dose, route, site (R or L deltoid), manufacturer, and lot # along with your signature.
- 25. Direct the client or if necessary, escort the client to the after care area where he/she is instructed to sit down and wait for 15 minutes before leaving.
- 26. In situations where a client receives more than one needle puncture during dosing (e.g. blood drawn back, client moves or a bent needle), the Paramedic must indicate the date and **DNS** (double needle stick) on the consent form and initial it. The Paramedic will inform the client and parent/guardian of the incident.

VIII POST VACCINE ADMINISTRATION CARE

1. After Care

- Clients will be encouraged to stay for 15 minutes after their immunization. Signs will be posted in reception and after care area.
- Paramedics are responsible for observing clients at all times. One Paramedic may be assigned this duty in larger clinics.

- The Clinic Coordinator is responsible for taking charge of the situation and taking appropriate action, including the administration of epinephrine, in the case of anaphylaxis, if needed. Clients who need special attention are instructed to lie down. They must be observed, and the incident must be recorded on the "Patient Contact Report" form. Forms will be available in the Community Paramedicine Program Storage room with the consent forms.
- Clients can be offered the "Influenza Immunization Survey" to fill out while they are waiting.

2. At least two Paramedics must stay in the clinic for 15 minutes after the last client has been dosed.

IX UNUSUAL INCIDENT/ADVERSE EVENT FOR COMMUNITY CLINICS

A certain proportion of immunizations will cause a reaction. The severity varies from redness and soreness to anaphylactic shock. Most reactions are mild. If there is some redness and mild pain within 48 hrs, this can be considered normal and nothing further need be done.

A. Identification and Management of Immediate Minor Reactions/Incident.

1. The Paramedic Clinic Coordinator reports verbally and/or leaves a message for the CPP Supervisor (416-338-2151) and ensures the CPP Supervisor receives a copy of the Patient Contact Report form within 24 hours of the clinic for any of the following incidents:

Clients experiencing any of the following symptoms:

- Mild headache
- Nausea
- Dizziness
- Fainting with quick recovery usually due to apprehension

Vaccine Administration Problems/Errors:

- Administration error including any of the following: incorrect vaccine, incorrect dosage, incorrect route, vaccine given without consent, incorrect client given vaccine and any other vaccine administration errors.
- Vaccine given when contraindications present.
- See information on specific vaccine
- **Injuries to client**, e.g client falls, needle stick injury.
- 2. The paramedic completes a Patient Contact Report with a clear description of the incident, the client's reactions and interventions for all the incidents noted in **#1**. Attach form to the consent and give it to the CPP Supervisor. Note on the consent form that a Patient Contact Report form has been completed. If the client is not experiencing a medical emergency, the client should remain at the clinic under supervision until their condition has improved.
- 3. The Clinic Coordinator will give the documents to the CPP Supervisor, who will then forward the information to the Vaccine Preventable Disease (VPD) Program of Toronto Public Health.

B. Identification and Management of Other Serious Reactions:

- 1. **The Clinic Coordinator will first call 9-1-1**, and give whatever emergency medical services are required that are within their scope of practice using the emergency medical equipment provided. Paramedics who are on modified duties will **not** provide patient care that could put him/her at risk of aggravating his/her injury.
- 2. The Paramedic Clinic Coordinator will then complete a Patient Contact Report, notify and/or leave a voice mail for the CPP Supervisor as soon as possible by telephone, for the following instances:
 - Generalized reactions (collapse, convulsions).
 - Severe local reactions at the injection site.
 - Anaphylactic reaction (see following Section C).
 - Any situation involving a client that in the Paramedic's professional judgement may need immediate attention.
- 3. All Patient Contact Report forms for events noted in 1 a), b) or c) are forwarded to the CPP Supervisor who will pass them on to the VPD Program.
- 4. A <u>General Reaction</u> may include any of the following:
 - Weak, lightheaded, perspiration.
 - Pallor, sweating, nausea; may be followed by loss of consciousness.
 - Fainting which is sometimes accompanied by clonic seizure activity.
 - Itchiness, progressive often starting at injection site, coughing, sneezing.
 - Severe headache

The client may change from normal to an unconscious state within seconds. This is in contrast to anaphylaxis in which changes develop over several minutes and usually involve multiple body systems (skin, respiratory, circulatory,) and may progress to unconsciousness only as a late event in severe cases. Unconsciousness is rarely the sole manifestation of anaphylaxis.

5. Management of a General Reaction

The aftercare Paramedic notifies the Paramedic Clinic Coordinator immediately of any clients with symptoms of a general reaction as described above, and will begin care of the patient.

- Call 9-1-1 if the client's condition develops into a medical emergency.
- If the Paramedic assesses that the client needs assistance to return home, advise the client of your assessment and attempt to assist the client to contact an adult friend or family member to accompany him /her home.

- The Paramedic Clinic Coordinator completes a Patient Contact Report form with a clear description of the incident, client's reactions and Paramedic interventions.
- Notify the CPP Supervisor verbally and/or leave a message of the incident by telephone (416-338-2151) as soon as possible. The CPP Supervisor will notify the Manager of the VPD Program (416-338-2071).
- Attach the Patient Contact Report form to the client's consent form and drop it off in the CPP Storage room at the end of the day.
- Write a note on the consent form that a Patient Contact Report form was completed.

C. Identification and Management of Anaphylaxis

1. Anaphylaxis usually begins several minutes after injection or may evolve gradually. It is usually evident within 15 minutes of vaccine administration.

2. Initial Symptoms include several of the following:

- Sneezing
- Coughing
- Itching
- "Pins and needles" sensation of the skin
- Flushing
- Facial or other edema
- Watery eyes, runny nose
- Hives
- Anxiety
- Difficulty breathing or swallowing
- Hypotension progressing to shock and collapse
- Cardiovascular collapse without respiratory symptoms

3. Management of Anaphylaxis

The early recognition and speedy treatment of anaphylaxis is of prime importance. If the onset of anaphylaxis is suspected, **call 9-1-1 and begin treatment as per protocol immediately.** The Medical Directive for Acute Anaphylaxis is indicated for any client who has a confirmed or suspected history of exposure to a probable allergen and demonstrates signs and symptoms of a severe life threatening anaphylactic reaction.

MUST BE CLINICALLY ACTIVE?

The Medical Directive for Acute Anaphylaxis allows the use of Epinephrine (1:1000) SC, 0.01 mg/kg (0.01 ml/kg) to a maximum of 0.3 ml using a 1 ml syringe with the provided needle (either 25 or 28 gauge). Administer the maximum dose of Epinephrine to clients \geq 30 kg. SC Epinephrine administration will not exceed two (2) doses. As per current Medical Directives the maximum number of doses given by the paramedic is two (2) independent of any doses delivered to the patient prior to the arrival of the paramedic.

A different limb is preferred for each dose to maximize drug absorption.

As per current Medical Directives, if the patient is <10 kg or has a history of ischemic heart disease the BHP should be contacted before a second dose of Epinephrine is administered. If every attempt to contact the BHP has failed and the patient is not improving a second dose may be given. However the paramedic should continue to attempt to contact the BHP.

REFERENCE: Canadian Immunization Guide, 5th. Edition 1998. Toronto Emergency Medical Services Paramedic Guide, Spring 2009

There are no contraindications for the use of Epinephrine in the treatment of a lifethreatening allergic reaction.

EPINEPHRINE DRUG CALCULATIONS

The following chart describes the dosage for pediatric Epinephrine based on the formula:

Age	Weight kg	100 Unit/1 cc	Ml
	(2 x age) + 10	Syringe	
0-6 M		05 Units	0.05
6-12 M		10 Units	0.10
1	12	10 Units	0.10
2	14	15 Units	0.15
3	16	15 Units	0.15
4	18	20 Units	0.20
5	20	20 Units	0.20
6	22	20 Units	0.20
7	24	25 Units	0.25
8	26	25 Units	0.25
9	28	30 Units	0.30
10	30	30 Units	0.30

(age x 2) + 10 kg] x 0.01, rounded to closest 0.05 ml

VACCINE-ASSOCIATED ADVERSE EVENTS – Revised Nov 9, 2000

Authority:

The Ministry of Health and Long-Term Care requires physicians to report vaccine-associated adverse events to the local Medical Officer of Health, who is responsible for notifying the Ministry within seven days of receiving a reportable event that occurs in the health unit. (Health Protection and Promotion Act, R.S.O. 1990 c.h.7, s38).

Documentation and Reporting Process:

Reports are received and processed by staff of the Vaccine Preventable Disease Program. The health unit reports "Reportable Events" to the Ministry of Health and Long-Term Care.

X OTHER DOCUMENTATION

Forms have been put into the clinic kits located in the CPP office. Extra forms will be available in the Community Paramedicine Program Storage room. Please inform the CPP Supervisor if supplies of forms are running low.

Deferred Influenza Immunization Form: (See Appendix A)

Certain clients will not be able to receive an influenza vaccination due to age, medical history, or the Paramedic not being able to guarantee the client's safety in receiving the vaccine (i.e. potential adverse reaction.) In these circumstances, the Paramedic should do the following:

- a) Carefully explain to the client why the vaccination cannot be given at the clinic.
- b) Check the "vaccination deferred" box on the consent form, and the reason for the deferral.

c) Fill out the Deferred Influenza Immunization Form and give it to the client for them to take to their family practitioner.

Influenza Immunization Vaccination Clinic Survey: (See Appendix B)

This survey is for the staff member responsible for setting up and running the clinic at each clinic location. It is to give the Community Paramedicine Program a better idea of how well we are meeting the needs of our target population. Please leave the survey with the staff member at the clinic for them to mail back to the Community Paramedicine Program.

Level II/III Influenza Vaccine Medical Directive: (See Appendix C)

This Medical Directive details the indications, contraindications and procedure for the administration of the 2010 influenza vaccine

Adult Consent Form: (See Appendix D)

This consent form is for each adult who consents to the influenza vaccine to read, understand and sign. They are printed on white paper.

Pediatric Consent Form: (See Appendix E)

This consent form is for all the individuals less than 15 years of age who may receive the influenza vaccine. They are printed on yellow paper.

Please Wait for 15 Minutes Sign: (See Appendix F)

This sign is to remind clients that once immunized, they should wait 15 minutes before leaving the clinic, in order for our staff to observe and monitor them, as a precaution.

Sharing of Consent Forms with TPH:

At the end of each clinic consents must be separated into 'adult' and 'children' piles, placed in a <u>sealed</u> envelop and the envelops placed in the CPP superintendents office area to pick up the next business day.

Community Paramedicine Program List:

The Ministry of Health and Long-Term Care requires us to fill out a "Vaccine Utilization Report Form" after every clinic. This form will then be faxed back to the Ministry of Health and a copy kept for our records as a summary of the clinic. Please fill out the form and give it to the CPP Supervisor for faxing. This document will be located with the other forms in the Community Paramedicine Program Storage room.

XI POST CLINIC

1. Ensure that the area used for the clinic is left tidy. Dispose of all used supplies properly. Put used fluffs in a brown paper bag and dispose in regular garbage. The green garbage bag is to be tied off at the end of the clinic. All used needles, syringes and bloody swabs are put in the sharps container. Filled sharps containers are taped shut, marked as **FULL** and disposed of in the biohazard bin in the materials maintenance area of the garage at HQ. Sharps containers will not be filled more than two-thirds due to the possibility of needlestick injuries: refer to Biomedical Waste.

- 2. The clinic is over when all eligible clients who are present have received vaccine and the supplies have been packed up for return to the CPP storage room. Fifteen (15) minutes must have elapsed since the last vaccine was administered. Emergency supplies are not put away until all clients have left the clinic area.
- 3. The blue lunch pails, needles/syringes and clinic kits are to be returned to the CPP office by the designated staff. Vaccines must be removed from the vaccine bag and put in the designated refrigerator. Ice packs are put in the freezer compartment of the refrigerator.
- 4. The consent forms and any Patient Contact Report forms should be separated between children and adult forms, alphabetised and put into an envelope and left in the CPP office for the CPP Supervisor to pick up the next business day.
- 5. The completed "**Influenza Immunization Survey**" forms should be attached together and put in the above envelope.

XII ROLES OF CLINIC STAFF FOR COMMUNITY FLU CLINICS

ALL STAFF

- 1. Assists with set-up and clean up of the clinic area.
- 2. Rotates the duties of returning vaccine and other supplies as listed in #10 below to the CPP office storage area at the end of the clinic.
- 3. Rotates the duties of restocking the clinic kits from the CPP storage room
- 4. Rotates dosing/aftercare roles in a flexible manner.
- 5. Cooperates with team members to ensure safe and smooth clinic operation.
- 6. Assists in an emergency as needed.

PARAMEDIC CLINIC CO-ORDINATOR

- 1. Coordinates the operation of the clinic including ensuring adequate supplies are transported to the clinic.
- 2. Coordinates the clinic staff roles in order to ensure a smooth clinic flow and rotation of dosing and aftercare roles among the Paramedics.
- 3. Works with the team to ensure adequate clinic coverage for break times.
- 4. Identifies self to agency staff and ensures that other team members are aware of clinic procedures and their assigned role either dosing or aftercare.
- 5. Works at the reception area to assist clients to complete their consent and responds to questions from clients.
- 6. Coordinates the emergency response:
 - Ensures that the emergency equipment/supplies are in working order.
 - Checks the expiry date of Epinephrine.

- 7. Ensures the return of vaccine, filled sharps containers, consents and other supplies to the appropriate areas in HQ as listed above at the end of the clinic.
- 8. Notifies the CPP Supervisor when necessary.

IMMUNIZING PARAMEDIC

- 1. Loads up to a maximum of 20 syringes per Immunizing Paramedic and places them in the blue vaccine bag (lunch pails) with ice packs.
- 2. Obtains informed consent from the client and assesses for contraindications as per assessment guide. Fills in deferral forms as necessary.
- 3. Administers the injection to clients 6 months of age or older with assistance from other clinic staff/parent to secure the site if necessary. Do not use force to restrain a client.
- 4. Completes documentation on the consent form after the administration of vaccine, including the Paramedic's signature and date/time administered.
- 5. Gives the client the 'Beat the Flu' Fact Sheet with the date of immunization.
- 6. Sends the client to the recovery area. (If necessary, accompany the client).
- 7. Assists in an emergency, if required.
- 8. Communicates and consults with the Clinical Coordinator as necessary.

RECOVERY/AFTERCARE PARAMEDIC (if applicable)

- 1. Observes vaccinated clients for 15 minutes post injection.
- 2. If in the Recovery Paramedic's judgement, the client requires further assessment, the Paramedic Clinic Coordinator should be notified and emergency care should be provided as soon as possible.
- 3. Requests the assistance of Paramedic Clinic Coordinator if the client experiences an adverse reaction to the vaccine.
- 4. Disposes of cotton fluffs that the client holds on the injection site in a brown paper bag and then in regular garbage unless blood soaked. Blood soaked cotton fluffs are disposed of in the sharps container.
- 5. Assists with client flow.

XIII USE OF PROTECTIVE GLOVES IN IMMUNIZATION CLINICS

The wearing of protective gloves is mandatory for staff who are immunizing in the Community **Paramedicine Immunization Clinics**. The wearing of protective gloves has been shown to reduce the volume of blood from a needle stick injury by at least 50% when the needle passes through a glove.

Procedure:

- 1. Staff must wear protective gloves during the immunization of clients in clinics as this provides additional protection in the event of a needle stick injury.
- 2. It is not necessary to wear protective gloves during the loading of syringes (unless loading and administering are done immediately in sequence).
- 3. After removing used gloves and prior to putting on a clean pair of gloves, the staff member will wash their hands for 10 to 15 seconds with soap and water and then dry their hands; or use the alcohol-based hand cleanser provided.
- 4. The staff will remove the old gloves and dispose and put on a new pair (after thoroughly washing and drying hands) in the following instances:
 - a) If using sanitary facilities,
 - b) If having lunch,
 - c) If leaving the clinic site for any reason,
 - d) If gloves become soiled for any reason including handling blood or body fluids.
- 5. All gloves are disposed of in the regular garbage unless contaminated by blood and/or body fluids.
- 6. Gloves contaminated by blood and/or body fluids will be disposed of in the biohazard container.

BIO-MEDICAL WASTE

All used needles and other waste material used in the clinics are to be considered contaminated and should be discarded with care. Used needles must never be recapped and must be placed in a puncture proof container after use.

Procedure:

- 1. Alcohol swabs used to disinfect skin and/or protect injection site will be put in a paper bag. The paper bag can be put in a place, which is convenient for the Immunizing Paramedic, e.g. attached by a tape to the table.
- 2. At the end of the clinic, the bags are taped closed and discarded into the general waste at the clinic site.
- 3. Used needles and syringes should be discarded into designated puncture proof containers.
- 4. Each Paramedic will have his/her own sharps container.
- 5. Never attempt to empty one container into another.
- 6. Use containers until $2/3^{rd}s$ full.

- 7. Secure the container lid when $2/3^{rd}$ s full.
- 8. When transporting partially filled containers between clinics, lids will be secured.
- 9. Containers ready to be discarded will be clearly labelled as <u>FULL</u> for proper biohazard disposal and taken to the biohazard collection area in the materials maintenance area in the garage at HQ.

APPENDIX A – Deferred Influenza Immunization Form

Please take this form to a physician for follow-up regarding your influenza vaccination

PLEASE PRINT CLEARLY
Last Name: First Name:
Sex: M / F Ontario Health Card # Date of Birth: //// / /////////////////////////////
Address:
Phone: () Clinic Location:
Dear Physician:
On this date,, this patient was not vaccinated at our clinic for the following reason:
Presented to clinic with febrile illness (Tympanic temperature:°C)
Has a history of Guillain-Barré Syndrome
Has an active neurologic disorder ()
Has not been seizure-free for a minimum of 3 months prior to vaccination
Has previously had a reaction to a vaccine where hypersensitivity has not been ruled out
Other reason as noted ()
We have deferred the vaccination and have requested that the patient book an appointment with you to discuss the matter further. Thank you.
Paramedic Name:
Paramedic Signature:
Community Paramedicine Program Toronto Emergency Medical Services

4330 Dufferin St. Toronto, ON. M3H 5R9

APPENDIX B - Influenza Immunization Clinic Survey

Name:_____ ClinicLocation:_____ 1) Do you feel that the clinic met the needs of your clients? Yes No Comments: 2) Was the interaction between the paramedics and your clients positive? Yes No Comments:_____ 3) Was the interaction between the paramedics and your staff positive? Yes No Comments: 4) Do you feel this clinic made it easier for your clients to obtain a 'flu vaccine'? Yes No Comments:_____ 5) Would you use Toronto EMS to provide this service, or a similar service again? Yes No Comments:_____ Comments:_____ Thank you. Please return surveys to: Community Paramedicine Program

Toronto Emergency Medical Services 4330 Dufferin St. Toronto, ON. M3H 5R9 **APPENDIX C– Medical Directive**

APPENDIX D– Influenza Immunization Adult Consent Form

Last Name:First Name:					
Last Name:	Firs	t IName:			
Address:	Postal Code:	Phone No.:			
Gender: M / F Date of Birth: / / Ontario Health Card #					
Clinic Location:	Staff	member:[] He	alth Care Provider: []		
1. Do you have a fever too	lay?	Yes []	No []		
2. Do you have a history of	of Guillain Barre Syndrome?	Yes []	No []		
3. Do you have an active r	neurological disorder?	Yes []	No []		
4. Have you had a seizure	in the past 3 months?	Yes []	No []		
5. Have you ever had a re	action to a vaccine?	Yes []	No []		
6. Did you have red eyes, wheezing or chest tightness					
within 2-24 hours after	getting your flu shot?	Yes []	No []		
7. Did you get medical att	ention for these symptoms?	Yes []	No []		
8. Are you taking any me	dication?	Yes []	No []		
9. Are you allergic to	(a) Eggs?	Yes []	No []		
	(b) Thimerosal ?	Yes []			
	(c) Neomycin? (Vaxigrip) (d) Colotin? (Eluviral)	Yes []	No [] No []		
	(d) Gelatin? (Fluviral)	Yes []	No []		

Information about the flu vaccine has been explained to me by Toronto EMS staff. I understand the expected benefits and the material risks and side effects of the flu vaccine and the likely consequences of not receiving the flu vaccine. I have been informed of the importance of immediately reporting to a physician any adverse reaction to the vaccine. I have also received responses to my requests for additional information relating to the flu vaccine. I consent to receiving the flu vaccine.

Signature:

Date:_

FOR CLINIC USE ONLY

Vaccine:	Route: IM	Dosage: 0.5 ml		
Right Deltoid / Left Deltoid	Lot # :	Date: Time:		
Loading Paramedic:		Dosing Paramedic:		
Vaccination Deferred []	Reason:			
The personal information on this form is collected under the City of Toronto Act, 1997 (No. 2), the Health Protection and Promotion Act, R.S.O. 1990, cH.7, <u>s.4 and 5 and the Health Cards and Numbers Control Act. 1991, S.O., 1991, c.1. The information is collected for the purpose of maintaining an Immunization</u> record of this adult and to take appropriate action to prevent certain vaccine preventable diseases. If you have questions about this collection please contact Immunization Infoline, 850 Coxwell Ave, Toronto, M4C 5R1, Tel # 416-392-1250.				

APPENDIX E- Influenza Immunization Consent Form for Children Younger Than 15 Years

Last Name:	First N	ame:	
Address:	Postal Code:	Phone No.:	
Gender: M / F Date	of Birth:/_/Ontario Health C	Card #	
Clinic Location:			
1. Does your child	have a fever today?	Yes []	No []
2. Has your child e	ver had a reaction to a vaccine?	Yes []	No []
3. Does your child	have a history of Guillain Barre Syndrom	e? Yes []	No []
4. Has your child h	ave an active neurological disorder?	Yes []	No []
5. Has your child h	ad a seizure in the past 3 months?	Yes []	No []
6. Did your child h If no, proceed to	ave a flu shot before today? <i>question #7</i> .	Yes []	No []
	uild have red eyes, wheezing or thin 2 to 24 hours after getting the flu shot	Yes []	No []
6b. If yes, did you get	medical attention for these symptoms?	Yes []	No []
7. Is your child tak	ing any medication?	Yes []	No []
8. Is your child allo	ergic to (a) eggs? (b) thimerosal? (c) neomycin?	Yes [] Yes [] Yes []	No [] No [] No []

Information about the flu vaccine has been explained to me by Toronto EMS staff. I understand the expected benefits and the material risks and side effects to my child of the flu vaccine and the likely consequences of my child not receiving the flu vaccine. I have been informed of the importance of immediately reporting to a physician any adverse reaction to the vaccine by my child. I have also received responses to my requests for additional information relating to the flu vaccine.

I consent to my child ______ receiving the flu vaccine.

Signature of Parent/Guardian: _____ Date: _____

	FOR CLINIC USE ONLY	Clinic Location	1:			
Vaccine:		Lot # :		Date:		Time:
Right arm	/ Left arm Rig	ht leg / Left leg	Route: IM	Dosage:	6 – 35 months 36 months or older	0.25 ml 0.5 ml
Loading Pa	aramedic:			Dosing I	Paramedic:	
Vaccine Deferred [] Reason:						
The personal information on this form is collected under the City of Toronto Act, 1997 (No. 2), the Health Protection and Promotion Act, R.S.O. 1990, cH.7, s.4 and 5 and the Health Cards and Numbers Control Act. 1991, S.O., 1991, c.1. The information is collected for the purpose of maintaining an Immunization record of this child and to take appropriate action to prevent certain vaccine preventable diseases. If you have questions about this collection please contact Immunization Infoline, 850 Coxwell Ave. Toronto, M4C 5R1, Tel # 416-392-1250.						

APPENDIX F- Please Wait Sign

For your own safety, please wait for <u>15 minutes</u> after your vaccination.

Thank you from the paramedics of Toronto EMS!



XIV Contact Info:

If you have any questions or concerns, please contact:

Adam Thurston Toronto EMS Community Paramedicine Coordinator Office: (416) 338-0473 Cell – 647-654-9077 E-mail: <u>athurst@toronto.ca</u>

Medical Support:

Dr. Martin Friedberg Medical Consultant Toronto Emergency Medical Services Office: (416) 392-2192

Enjoy the Clinics!