THIS CHAPTER MEETS THE FOLLOWING IMMUNIZATION COMPETENCIES FOR HEALTH PROFESSIONAL (PHAC, 2008): http://www.phac-aspc.gc.ca/im/pdf/ichp-cips-eng.pdf

#9: Adverse Events Following Immunization

- Competency: Anticipates, identifies, and manages adverse events following immunization, as appropriate to the practice setting.

#10: Documentation

- Competency: Documents information relevant to each immunization encounter in accordance with national guidelines for immunization practices and jurisdictional health information processes.

1.0 ANAPHYLAXIS

"Anaphylaxis is an exaggerated response to an allergen. It is a potentially life-threatening event that requires vigilance on the part of the healthcare practitioner who needs to recognize the condition quickly and initiate early treatment" (Linton and Watson, 2010, p. 35).

1.1 Description

Anaphylaxis is set apart from simple allergic reactions by the simultaneous involvement of the cardiovascular system and loss of intravascular volume, as well as respiratory obstruction. The incidence of anaphylaxis ranges from 0.4 to 1.8 reports per 1,000,000 doses of vaccines distributed in Canada (CIG, 2006, p. 80). It is a rare complication of immunization but it should be anticipated in every vaccinee. Pre-immunization screening must include questions about possible allergy to any components in the biological(s). Refer to Table 1.

Table 1: Causes of Anaphylaxis

- Drugs including vaccines (rare), antibiotics, non-steroidal anti-inflammatories, contrast media, anesthetic agents, muscle relaxants, aspirin, vitamin K, and opiates
- Blood products (e.g., immunoglobulins, packed cells) and plasma expanders
- Foods (e.g., eggs, peanuts, shellfish)
- Insect bites and stings

(Adapted from Linton and Watson, 2010)

Anaphylactic reactions are mediated by IgE antibody and result when the biological interacts with specific IgE on the surface of mast cells or basophils. This triggers the release of biologically active mediators (e.g., histamine), which can result in potentially fatal anaphylaxis within minutes to hours later after exposure. Within 10 minutes, increased vascular permeability allows transfer of as much as 50% of the intravascular fluid into the extravascular space. As a result, hemodynamic collapse might occur rapidly with little or no cutaneous or respiratory manifestations.

Anaphylaxis usually begins a few minutes after injection and is usually evident within 30 minutes; shorter intervals to onset foretell more severe reactions. It may involve multiple body systems and progress to unconsciousness only as a late event in severe cases. As 20% of anaphylaxis episodes follow a biphasic course with recurrence of the reaction 2 to 9 hours after resolution, a physician may determine that hospitalization is recommended for monitoring. The presentation of the second phasic reaction may be as pronounced as that of the initial anaphylactic episode.

1.2 Presentation

Changes develop over several minutes and usually involve at least two body systems (e.g., affecting the skin, respiration, circulation, GI system). Unconsciousness is rarely the sole manifestation of anaphylaxis and occurs only as a late event in severe cases.

Anaphylaxis occurs as part of a continuum. Even when there are mild symptoms initially there is the potential for progression to a severe and even irreversible outcome. Fatalities during anaphylaxis usually result from delayed administration of epinephrine and from severe respiratory complications, cardiovascular complications, or both. **There is no contraindication to epinephrine administration in anaphylaxis.**

Urticaria and angioedema are the most common manifestations of potential anaphylaxis. Urticaria (hives) is raised, often itchy, wheals on the surface of the skin. Angioedema is a swelling similar to urticaria, but the swelling is beneath the skin rather than on the surface. The swelling usually occurs around the eyes and lips, but may also be found on the hands, feet, and neck and in the throat.

Features of early or mild anaphylaxis may include swelling and hives at injection site, sneezing, nasal congestion, tearing, coughing, and facial flushing. These symptoms are generally associated with minimal dysfunction**. In general, the sooner the onset, the more rapid and severe the anaphylactic reaction**

Table 2: Cardinal Signs and Symptoms of Anaphylaxis According to Clinical Progression and Severity of Attack

Clinical Progression	Signs and Symptoms	Severity of Attack
Mild, early warning signs	Itching of the skin, rash and swelling around injection site, dizziness, general feeling of warmth	**Mild**
	Painless swelling in part of the body (face or mouth), flushing, itching skin, nasal congestion, sneezing, tears	**Mild to moderate**
	Hoarseness, feeling sick, vomiting, swelling in the throat, difficulty breathing, abdominal pain	**Moderate to severe**
Life-threatening symptoms	Wheezing, difficulty breathing (stridor), circulatory collapse, low blood pressure, irregular, weak pulse	**Severe**

(Adapted from Nova Scotia Immunization Manual, Vaccine-Related Emergencies, undated.)

2.0 ANAPHYLACTIC REACTION VERSUS FAINTING OR ANXIETY

Anaphylaxis must be distinguished from fainting (vasovagal syncope), anxiety, and breath-holding spells which are more common and benign reactions. The lack of hives, a slow, steady pulse rate, and cool pale skin distinguishes a vasovagal episode from anaphylaxis. Refer to Table 3: *Anaphylaxis versus Fainting and Anxiety.*

2.1 Fainting (Syncope)

- Fainting is fairly common, mild reaction to immunization;
- The greatest risk for someone who faints is injury from a fall;
- Usually brief warning symptoms may include: nausea, light-headedness, diaphoresis, and pallor. A typical finding is low blood pressure and a slow, steady pulse;
- It is sometimes observed before immunization, but usually occurs a few seconds to a few minutes after an injection;
- Recovery of consciousness occurs within a minute or two, but clients may remain pale, diaphoretic and mildly hypotensive for several more minutes. **If unconsciousness persists for more than 2-3 minutes, call 9-1-1 and proceed as per emergency treatment for anaphylaxis. Unconsciousness may reflect hypoxia;**
- **Prior to immunization, ask clients about history of fainting with previous immunizations**. Consider the following measures to lower stress in those awaiting immunization:
  - Seat every client prior to immunization;
  - Maintain a comfortably cool room temperature and if possible, plenty of fresh air;
  - Avoid long line ups in mass immunization clinics;
  - Prepare vaccine(s) out of view of recipients;
  - Provide privacy during vaccination;
  - If client is anxious and pale or if syncope occurs: have them lie down with legs elevated for at least 10 minutes, reassure, and apply cold wet cloth to face;
  - If a person was lying down, have them sit up for a few minutes before standing; and
  - At all times the client should be reassured. Monitor the client closely until they have recovered. The client may remain pale and/or diaphoretic.

2.2 Anxiety

- People experiencing an anxiety reaction may appear fearful, pale and diaphoretic, hyperventilate, and complain of light-headedness, dizziness, numbness, and tingling of the face and extremities;
- Hyperventilation (rapid shallow breathing that lowers the level of carbon dioxide in a person's blood) is usually evident. If an individual appears anxious, it may be helpful to have them re-breathe into a paper bag until symptoms subside. If hyperventilation occurs, have the client breathe slowly into a small paper bag and re-breath the air in the bag about 10 times. Set the bag aside and breathe slowly for a few minutes (1 breath every 5 seconds). Use bag every few minutes as necessary and monitor patient.

- Breath-holding spells occur in some young children when they are upset, crying hard, and reacting to injection pain. Some spells end with resumption of crying, but others end with a brief period of unconsciousness during which breathing resumes. No treatment is required beyond reassurance of the child and parents.

Table 3: Anaphylaxis versus Fainting and Anxiety [1]

	ANAPHYLAXIS	FAINTING	ANXIETY
ONSET	Usually within 15 - 30 minutes after injection	Sudden, occurs before, during or shortly after immunization, recovery within 1 - 2 minutes	Sudden, occurs before, during or shortly after immunization, recovery within 1 - 2 minutes
SKIN	Warm, flushed, blotchy areas, progressing to pallor and clamminess, pruritis and urticaria, tingling and swelling in mouth, tongue and face	Pallor, diaphoresis, cold and clammy	Pallor, diaphoresis, cold and clammy
BREATHING	Sneezing, coughing, wheezing, laboured breathing, hoarseness and difficulty swallowing due to swelling	Slow or normal rate, shallow, irregular or laboured	Hyperventilation
PULSE	Rapid and weak	Slow, steady	Rapid
BLOOD PRESSURE	Decreased systolic and diastolic; hypotension can progress to cause shock	Decreased systolic and diastolic	Normal or elevated systolic
SYMPTOMS & BEHAVIOUR	Uneasiness, restlessness, agitation, not all signs. symptoms will be exhibited in each person, usually one body system dominates	Fearful; light-headedness, dizziness, numbness and weakness, sometimes accompanied by brief clonic seizure activity	Fearful, light-headedness; dizziness, numbness and weakness, tingling around lips and spasms in the hands and feet associated with hyperventilation
GASTRO-INTESTINAL	Nausea and vomiting; abdominal pain, loose stools	Nausea	Nausea
OTHER	Loss of consciousness		

(Adapted from BCCDC Immunization Manual, Section V, 2009; and Nova Scotia Immunization Manual, Vaccine-Related Emergencies, undated).

[1] (Refer to CIG, 2006, p. 80)

3.0 SUPERVISION OF VACCINEE POST-IMMUNIZATION

Advise recipients of any biological product (e.g., vaccine, immune globulin, TB skin test) to remain under supervision for at least 15 minutes after immunization; regardless of whether or not they have had the particular product previously. It is recommended that this information for clients be posted in all offices of immunization providers. **Thirty (30) minutes is a safer duration when the person has had a prior allergic reaction to the biological product or a component of the biological product. If an individual has such a history, future immunization should be administered in accordance with MHO recommendations.**

Where vaccinees choose not to remain under supervision after immunization, they (or their parent/guardian) should be informed of the signs and symptoms of anaphylaxis and instructed to obtain immediate medical attention should symptoms occur.

4.0 ADMINISTRATION OF EPINEPHRINE (Adrenalin)

In the event of anaphylaxis, the prompt administration of epinephrine is the most important treatment measure.

- Refer to CIG *Part 2 Vaccine Safety: Early vaccine reactions including anaphylaxis* (http://www.phac-aspc.gc.ca/publicat/cig-gci/p02-03-eng.php) or agency specific policy. Health care providers are strongly advised to familiarize themselves with this information before immunizing.
- Intramuscular (IM) is the recommended route for the administration of epinephrine and the thigh (vastus lateralis) is the preferred site for its administration;
  - IM epinephrine injection in the vastus lateralis site provides rapider absorption and higher plasma levels than intramuscular deltoid injections or injections administered at any subcutaneous site; and
  - A different limb is preferred for each dose to maximize drug absorption.
- Repeat epinephrine at 5-minute intervals twice as needed (e.g., if breathing becomes more laboured or level of consciousness decreases);
  - **Note:** Administer a maximum of three doses of epinephrine.
- If required during anaphylaxis, IM epinephrine can be given through clothing.

4.1 Action of Epinephrine:

- Acts on beta adrenergic receptors found in the skeletal muscle vasculature and counteracts histamine-induced vasodilation;
- Increases heart rate and cardiac contractility to increase oxygenated blood flow to vital organs;
- Acts on smooth muscles of bronchial tree thereby reducing bronchospasm;
- Suppresses body's immune response (slows down histamine cascade);
- **The anaphylactic state in clients receiving beta adrenergic antagonist therapy (for elevated blood pressure) will be more resistant to epinephrine therapy;** and
- Side effects of epinephrine pose little danger but can add to the person's distress by causing palpitations, tachycardia, flushing, and headache. Cardiac dysrhythmias can occur in older adults but are rare in otherwise healthy children.

4.2 Epinephrine Dosages

- Calculations that are based on actual body weight are preferred when a client's weight is known.

Table 4: Appropriate Epinephrine Dosages According to Age and Weight

Age	Weight kg.	Weight lb.	EPINEPHRINE
0 – 6 months*	2 – 5 kg	4–11 lb.	0.05 mL IM
7 - 24 months*	5.5 - 10 kg	12–22 lb.	0.10 mL IM
25 - 36 months*	10.5 - 15 Kg	23-33 lb.	0.15 mL IM
37 - 59 months*	15.5 – 20 kg	34–44 lb.	0.20 mL IM
5 - 7 years	20.5 – 25 kg	45–55 lb.	0.25 mL IM
8-10 years	25.5 – 35 kg	56–77 lb.	0.30 mL IM
11-12 years	35.5–45 kg	78–99 lb.	0.40 mL IM
≥ 13 years	≥ 45.5 kg	≥ 100 lb.	0.50 mL IM
*** Dosing by weight (0.01 mg/kg) is preferred if body weight is known. If weight is unknown or is not readily available, then dosing by age is appropriate practice.**			

Table 5: Aqueous Epinephrine (Adrenalin) 1:1000

Composition	Each 1 mL dose of aqueous epinephrine 1:1000 contains 1 mg of epinephrine hydrochloride dissolved in an isotonic sodium chloride solution.
Supply	1 mL ampoule of clear liquid.
Storage	• Keep in the manufacturer's box at room temperature of 15–30°C • Avoid exposure to light • Do not refrigerate • Do not freeze • Do not use after expiration date • Do not administer this product if it has a pinkish or darker than slightly yellow color or contains a precipitate
Indications	Severe immediate hypersensitivity reaction to biological products.
Contraindications	There is no contraindication in the event of anaphylaxis.

5.0 ADMINISTRATION OF DIPHENHYDRAMINE HYDROCHLORIDE (BENADRYL®)

For treatment of anaphylaxis, intramuscular diphenhydramine hydrochloride is considered adjunct second-line therapy to epinephrine, and should never be administered alone in the treatment of anaphylaxis.

- **IM administration of diphenhydramine hydrochloride is recommended during anaphylaxis because it provides rapider absorption and higher plasma levels than oral administration.**
- Diphenhydramine hydrochloride can be given at any time interval either after the initial or repeat doses of epinephrine, as indicated by the person's condition.
- IM diphenhydramine hydrochloride may be given in the limb that epinephrine and/or vaccine was given, as long as adequate spacing (minimum 2.5 to 5 cm) is used between injection sites.

5.1 Non-Anaphylactic Allergic Reactions

- Allergic reactions constitute a spectrum, the extreme end of which is anaphylaxis, but milder forms may involve both the dermatologic/mucosal (e.g., urticaria, pruritis, rhinitis) and/or the respiratory systems (e.g., upper airway swelling, respiratory distress).
- Oral diphenhydramine hydrochloride treatment is suitable for conscious patient that exhibit (non-anaphylactic) allergic reactions following immunization.
-

5.2 Injection Site Reactions

- A mild local reaction resolving by itself within a few minutes does not require special observation. If swelling and hives occur at the injection site(s):
  - Keep client under **direct observation for at least 30 minutes** to ensure the reaction remains localized; and
  - Observe for any deterioration in condition.
- If hives or swelling disappears, or there is no evidence of any progression to other parts of the body or any other symptoms within the 30-minute observation period, no further observation is necessary. Release the client from observation. Oral Benadryl (diphenhydramine) may be given under MHO order as per regional guidelines.
- **If any other symptoms arise**, even if considered mild (e.g., sneezing, nasal congestion, tearing, coughing, facial flushing) or if there is evidence of any progression of the hives or swelling to other parts of the body, **administer epinephrine as per regional guidelines.**
- Apply ice for comfort to site.

Table 6: Diphenhydramine Hydrochloride Dosages for Age and Route of Administration
Note: Be familiar with concentration of liquid products available (e.g., elixir solutions).

Age	Weight kg.	Weight lb.	IM Dose (mg)	50 mg/mL IM⌘ (or IV)	12.5 mg/5 mL syrup PO	Tablets (PO)	
						25 mg	50 mg
0 – 6 months*	2 – 5 kg	4 – 11 lb.	*Dosage should be determined by weight (1 mg/kg) when weight is known				
7 – 24 months*	5.5 – 10 kg	12 – 22 lb.					
25 – 36 months	10.5 – 15 Kg	23 – 33 lb.	15 mg	0.3 mL	6 mL		
37 – 59 months	15.5 – 20 kg	34 – 44 lb.	20 mg	0.4 mL	8 mL		
5 – 7 years	20.5 – 25 kg	44 – 55 lb.	25 mg	0.5 mL	10 mL	1	1/2
8 – 10 years	25.5 – 35 kg	56 – 77 lb.	35 mg	0.7 mL	14 mL		
11 – 12 years	35.5 – 45 kg	78 – 99 lb.	45 mg	0.9 mL	18 mL		
≥ 13 years	≥ 45.5 kg	≥ 100 lb.	50 mg	1 mL	20 mL	2	1

* Diphenhydramine is generally not recommended for infants under 12 months of age, and should be used with caution between 12-23 months because it may cause drowsiness or paradoxical excitement.
⌘ **IM route is recommended by the Ministry of Health.**

6.0 DOCUMENTATION

It is important to accurately document the event on the Appendix 12.2: *Anaphylaxis Treatment Worksheet:*

- The names of all vaccine products administered:
  - the lot number;
  - route of administration; and
  - injection site for each product.
- The time the reaction was observed;
- The reaction signs and symptoms, the client's condition;
- Steps taken, the drugs administered, dose route, time;
- Time when intervention stopped if applicable;
- Condition of client upon leaving the premises; and
- Time of transfer to hospital

Afterwards, Refer to SIM, Chapter 11, *Adverse Events Following Immunization*. Complete the Adverse Event Following Immunization report form (available at: http://www.phac-aspc.gc.ca/im/aefi-form-eng.php **) and immediately forward to the regional MHO.**

7.0 MAINTENANCE OF EPINEPHRINE VIALS AND OTHER EMERGENCY SUPPLIES

- **ALWAYS ENSURE A FULLY CHARGED CELL PHONE OR LAND LINE IS AVAILABLE FOR USE IN CASE OF AN EMERGENCY;**
- Check epinephrine vials and other emergency supplies prior to each immunization clinic and replace if outdated;
- Protect epinephrine and diphenhydramine hydrochloride from light and open vial(s) only when ready to use;
- **Do not pre-load a syringe with epinephrine in anticipation of a reaction.** Epinephrine rapidly deteriorates and loses potency when exposed to oxygen; and
- Also recommended:
  - stethoscope;
  - sphygmomanometer with child and adult-size cuffs;
  - child and adult sized pocket masks; and
  - digital timer.

7.1 Suggested Epinephrine Kit Contents:

- A copy of the anaphylaxis procedures and doses recommended of epinephrine and diphenhydramine for weight and age;
- 2 – 1 cc syringes and 2 needles (25 – 27 gauge, 1" needle);
- 1 – 1 cc syringe and 1 needle (25 – 27 gauge, 1 ½" needle);
- 2 – 1 cc syringes and 2 needles (25 – 27 gauge, 5/8”) for SC route ;
- Extra needles (1” and 5/8”);
- 2-4 ampoules of epinephrine 1:1,000 (within expiration time frame);
- 2 vials of diphenhydramine hydrochloride 50 mg/ml (within expiration time frame); pills or oral solutions are optional;
- Alcohol swabs;
- Cotton balls/pads/swabs; and
- Pens/paper.

8.0 REFERENCES

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9.0 APPENDICES

Appendix 12.1: Recommended Emergency Treatment of Anaphylaxis

A) IMMEDIATELY UPON SIGNS AND SYMPTOMS OF ANAPHYLAXIS

1. Give epinephrine (1:1,000) IM into an unimmunized thigh (all ages) or arm (if client is ≥12 months). It can be given into the same muscle as vaccine was given as long as adequate spacing is used (2.5 cm) between sites.

Age	Weight kg.	Weight lb.	EPINEPHRINE
0 – 6 months*	2 – 5 kg	4 – 11 lb.	0.05 mL IM
7 – 24 months*	5.5 – 10 kg	12 – 22 lb.	0.10 mL IM
25 – 36 months*	10.5 – 15 Kg	23 – 33 lb.	0.15 mL IM
37 – 59 months*	15.5 – 20 kg	34 – 44 lb.	0.20 mL IM
5 – 7 years	20.5 – 25 kg	44 – 55 lb.	0.25 mL IM
8 – 10 years	25.5 – 35 kg	56 – 77 lb.	0.30 mL IM
11 – 12 years	35.5 – 45 kg	78 – 99 lb.	0.4 mL IM
≥ 13 years	≥ 45.5 kg	≥ 100 lb.	0.50 mL IM
*** Dosing by weight (0.01 mg/kg) is preferred if body weight is known. If weight is unknown or is not readily available, then dosing by age is appropriate practice.**			

2. Call 9-1-1 or Ambulance; do not leave client unattended.
3. Position client in recumbent position and elevate legs, as tolerated symptomatically.
4. Monitor respiratory effort, pulse, blood pressure and level of consciousness frequently and document on anaphylaxis worksheet.

AGE	Systolic Pressure (mm Hg)	Diastolic Pressure(mm Hg)
Infant (6 months)	87 –105	53 – 66
Toddler (2 Yr)	95 – 105	53 – 66
School Age (7 Yr)	97 – 112	57 – 71
Adolescent (15 Yr)	112 – 128	66 – 80

B) IF PERSON'S BREATHING MORE LABOURED OR LEVEL OF CONSCIOUSNESS DECREASES:

1. Repeat epinephrine doses at 5 minute intervals apart for a total of 3 doses. Alternate IM sites if possible.
2. Alternate right and left IM thigh or arm sites for repeat doses of epinephrine.
3. Elevate head and chest slightly.
4. If airway is impaired use head tilt, chin lift or jaw thrust. If vomiting is likely, turn person to side lying (recovery) position.

C) IF SYMPTOMS ARE NOT CONTROLLED or TO MAINTAIN SYMPTOM CONTROL IF CLIENT CANNOT BE TRANSFERRED TO ACUTE CARE FACILITY WITHIN 30 MINUTES:

1. Administer diphenhydramine hydrochloride IM as per Section 5.0, *Administration of Diphenhydramine Hydrochloride.*

Age	Weight kg.	Weight lb.	IM Dose (mg)	50 mg/mL IM⌘ (or IV)	12.5 mg/5 mL syrup PO	Tablets (PO)	
						25 mg	50 mg
0 – 6 months*	2 – 5 kg	4 – 11 lb.	***Dosage should be determined by weight (1 mg/kg) when weight is known**				
7 – 24 months*	5.5 – 10 kg	12 – 22 lb.					
25 – 36 months	10.5 – 15 Kg	23 – 33 lb.	15 mg	0.3 mL	6 mL		
37 – 59 months	15.5 – 20 kg	34 – 44 lb.	20 mg	0.4 mL	8 mL		
5 – 7 years	20.5 – 25 kg	44 – 55 lb.	25 mg	0.5 mL	10 mL	1	1/2
8 – 10 years	25.5 – 35 kg	56 – 77 lb.	35 mg	0.7 mL	14 mL		
11 – 12 years	35.5 – 45 kg	78 – 99 lb.	45 mg	0.9 mL	18 mL		
≥ 13 years	≥ 45.5 kg	≥ 100 lb.	50 mg	1 mL	20 mL	2	1

* Diphenhydramine is generally not recommended for infants under 12 months of age, and should be used with caution between 12-23 months because it may cause drowsiness or paradoxical excitement.

⌘ **IM route is recommended by the Ministry of Health.**

Appendix 12.2: Anaphylaxis Treatment Worksheet

Client Name:_____ PHN: _____
Surname/Given Name
Birthdate: _____ Telephone ( ) _____
Parent/Guardian: _____ yyyy/mm/dd

Immunization(s) given:	Dose:	Route:	Site:	Provider signature:
1)	1)	1)	1)	1)
2)	2)	2)	2)	2)
3)	3)	3)	3)	3)
4)	4)	4)	4)	4)
5)	5)	5)	5)	5)

Date:_____
yyyy/mm/dd

Approx. time given:
_____

Reaction onset time:
_____

REACTION DETAILS (Transfer to AEFI report form)

Skin/mucosal
❑ Urticaria ❑ Erythema ❑ Pruritis ❑ Prickling sensation ❑ Tingling sensation
❑ Rash
Angioedema: ❑ Tongue ❑ Throat ❑ Uvula ❑ Larynx ❑ Lip ❑ Eyelids ❑ Face ❑ Limbs
❑ Injection site
Eyes: ❑ Itchy ❑ Red unilateral ❑ Red bilateral ❑ Tearing

Cardiovascular
❑ Measured hypotension ❑ Decreased central pulse volume ❑ Capillary refill time > 3 sec
❑ Tachycardia ❑ Decreased or loss of consciousness ❑ Dizziness ❑ Syncope

Respiratory
❑ Sneezing ❑ Rhinorrhea ❑ Hoarse voice ❑ Sensation of throat closure ❑ Stridor
❑Dry cough ❑ Tachypnea ❑ Wheezing ❑ Indrawing/retractions ❑ Grunting
❑ Cyanosis ❑ Sore throat ❑ Difficulty swallowing ❑ Difficulty breathing ❑ Chest tightness

Gastrointestinal
❑ Diarrhea ❑ Abdominal pain ❑ Nausea ❑ Vomiting

OTHER (describe):

Time: ____ BP ____ Pulse ____ Resp ____	**Epi dose #1:** Lot#	Route:	Site:	Provider signature:
Time: ____ BP ____ Pulse ____ Resp ____	**Epi dose #2:** Lot#	Route:	Site:	Provider signature:
Time: ____ BP ____ Pulse ____ Resp ____	**Epi dose #3:** Lot#	Route:	Site:	Provider signature:
Time: ____ BP ____ Pulse ____ Resp ____	**Diphenhydramine HCL dose #1:** Lot#	Route:	Site:	Provider signature:

Attended by paramedics: ❑ Y ❑ N Transfer to hosp: ❑ Y ❑ N Time of transfer to hosp: _____
Released to care of family: ❑ Y ❑ N Released to care of GP: ❑ Y ❑ N

Name(s) of Recorder(s): _____ Signature(s): _____
_____ _____

Date: _____
yyyy/mm/dd

Notes:

Appendix 12.3: Regional/Jurisdictional Anaphylaxis Policy (Insert)