



Section V – Management of Anaphylaxis in a Non-Hospital Setting

February 2009

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1.0 ANAPHYLAXIS

1.1 Description

Anaphylaxis is a potentially life-threatening IgE-mediated reaction that results from the sudden systemic release of allergenic mediators (e.g., histamine, leukotrienes, prostaglandins, tryptase) from mast cells and basophils. 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.

While anaphylaxis is extremely rare, every immunization carries an associated risk of producing an anaphylactic reaction. The estimated annual reported rate of anaphylaxis ranges from 0.4 to 1.8 reports per 1,000,000 doses of vaccines distributed in Canada.

The more rapidly anaphylaxis occurs after exposure to an offending stimulus, the more likely the reaction is to be severe and potentially life-threatening.

Anaphylaxis often produces signs and symptoms within minutes of exposure to an offending stimulus. Most instances begin within 30 minutes after an injection of vaccine, but some reactions might develop later.

As 20% of anaphylaxis episodes follow a biphasic course with recurrence of the reaction after a 2 to 9 hour asymptomatic period, hospitalization or a long period of observation 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 (affecting the skin, respiration, circulation). 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 anaphylaxis. Urticaria (hives) are 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 swellings are called welts. The welts usually occur around the eyes and lips. They 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.

Features of moderate to severe anaphylaxis include obstructive swelling of the upper airway, hypotension, and marked bronchospasm (constriction of the air passages of the lung by spasmodic contraction of the bronchial muscles).

Table 1: Frequency of occurrence of signs and symptoms of anaphylaxis	
Signs and symptoms	Approximate frequency
Cutaneous	90%
• Generalized urticaria (hives)and/or angioedema (welts)	85 – 90%
• Flushing	45 – 55%
• Pruritus (itchiness) with or without rash	2 – 5%
Respiratory	40 – 60 %
• Upper airway angioedema	50 – 60%
• Dyspnea (difficulty breathing), wheeze	45 – 50%
• Rhinitis (nasal congestion)	15 – 20%
Dizziness, syncope (fainting), hypotension	30 – 35%
Abdominal	
• Nausea, vomiting, diarrhea, cramping pain	25 – 30%
Miscellaneous	
• Headache	5 – 8%
• Substernal (chest) pain	4 – 6%
• Seizure	1- 2%
From: The diagnosis and management of anaphylaxis: an updated parameter. (2005). Journal of Allergy and Clinical Immunology, 115, S483-523.	

1.3 Assessment

Assess:

- Level of consciousness (impairment might reflect hypoxia)
- Upper and lower airways [observe for hoarse cry/voice, stridor (a high-pitched noisy sound occurring during inhalation or exhalation), cough, wheezing, or shortness of breath]
- Respiratory rate
- Pulse rate (assess for rapid, weak pulse). Examine for pallor or cyanosis around perioral area
- Skin (observe for facial flushing, itching, hives or welts)
- Gastrointestinal system (nausea, vomiting, or diarrhea)
- Injection site(s). Observe for redness, swelling, or hives.



Record full details of the assessment. The “Worksheet for Emergency Treatment of Anaphylaxis” may be used to record the signs and symptoms. See SECTION [11.0 WORKSHEET FOR EMERGENCY TREATMENT OF ANAPHYLAXIS](#)

In general, the sooner the onset, the more rapid and severe the anaphylactic reaction.

1.4 Action of epinephrine

Action of epinephrine:

- Counteracts the 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).

Intramuscular epinephrine injections into the thigh (vastus lateralis) have been reported to provide more rapid absorption and higher plasma epinephrine levels in both children and adults than intramuscular or subcutaneous injections administered into the arm. Therefore, intramuscular (IM) is the preferred route for the administration of epinephrine and the thigh is the preferred site for its administration.

When epinephrine is administered intramuscularly, it acts on beta adrenergic receptors found in the skeletal muscle vasculature causing vasodilation. Thus, when IM immunization is given and epinephrine is indicated, it should not be administered into the same muscle mass as the vaccine was administered. The epinephrine will produce vasodilation locally at the site, increase vascular permeability, and may increase absorption of the offending antigen.

Side effects of excessive doses 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.

2.0 ANAPHYLAXIS VERSUS FAINTING, ANXIETY, ALLERGIC REACTION, OR INJECTION SITE REACTION

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.

2.1 Fainting

During fainting, the individual suddenly becomes pale, loses consciousness and collapses to the ground. Fainting is sometimes accompanied by brief clonic seizure activity (i.e., rhythmic jerking of the limbs), but this generally requires no specific treatment or investigation.

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 911/ambulance and proceed as per emergency treatment for anaphylaxis.** Unconsciousness may reflect hypoxia.

Prior to immunization, ask client about history of fainting with previous immunizations.

To reduce the likelihood of fainting (and the possibility of injuries), 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: have them lie down with legs elevated, reassure, and apply cold wet cloth to face.

If person was lying down, have them sit for a few minutes before standing.

2.2 Anxiety/pain reaction

People experiencing an anxiety reaction may appear fearful, pale and diaphoretic and complain of lightheadedness, dizziness and numbness, as well as tingling of the face and extremities. Hyperventilation is usually evident.

If an individual appears anxious, it may be helpful to have them rebreathe into a paper bag until symptoms subside.

Breath-holding spells occur in some young children when they are upset, crying hard, and reacting to injection pain. The child is suddenly silent but obviously agitated. Facial flushing and perioral cyanosis deepens as breath-holding continues. Some spells end with resumption of crying, but others end with a brief period of unconsciousness during which breathing resumes. Occasionally, the breath holding spell may be accompanied by brief clonic seizure activity. Similar spells may have been observed in other circumstances. No treatment is required beyond reassurance of the child and parents.

Section 2.3 outlines the key differences between anaphylaxis, fainting, and an anxiety reaction.



2.3 Anaphylaxis versus fainting and anxiety

	ANAPHYLAXIS	FAINTING	ANXIETY
DEFINITION	An acute systemic and potentially fatal allergic reaction to a foreign substance. IgE-mediated antibody induces histamine release from tissue mast cells.	A temporary unconsciousness caused by diminished blood supply to the brain due to painful stimuli or emotional reaction.	A protective physiological state recognized as fear, apprehension, or worry.
ONSET	Usually slower, most instances begin within 30 minutes after immunization.	Sudden, occurs before, during, or shortly after immunization; recovery occurs within 1-2 minutes	Sudden, occurs before, during, or shortly after immunization; recovery occurs within 1-2 minutes
SKIN	<ul style="list-style-type: none"> - flushed, red blotchy areas (not necessarily itchy) - itchy, generalized hive-like rash - tingling sensation often first felt about the face and mouth - progressive, painless swelling about the face, mouth, & tongue 	<ul style="list-style-type: none"> - pale - excessive perspiration - cold, clammy 	<ul style="list-style-type: none"> - pale - excessive perspiration - cold, clammy
BREATHING	<ul style="list-style-type: none"> - sneezing, coughing, wheezing, laboured breathing - upper airway swelling (indicated by hoarseness and/or difficulty swallowing) possibly causing airway obstruction 	<ul style="list-style-type: none"> - normal or shallow, irregular, laboured 	<ul style="list-style-type: none"> - rapid and shallow (hyperventilation)
PULSE	<ul style="list-style-type: none"> - rapid, weak 	<ul style="list-style-type: none"> - slow, steady 	<ul style="list-style-type: none"> - rapid
BLOOD PRESSURE	<ul style="list-style-type: none"> - decreased systolic and diastolic 	<ul style="list-style-type: none"> - decreased systolic and diastolic 	<ul style="list-style-type: none"> - normal or elevated systolic
SYMPTOMS & BEHAVIORS	<ul style="list-style-type: none"> - uneasiness, restlessness, agitation - hypotension, which generally develops later and can progress to cause shock and collapse - not all signs/symptoms will be exhibited in each person; usually one body system predominates. 	<ul style="list-style-type: none"> - fearfulness - light-headedness - dizziness - numbness, weakness - sometimes accompanied by brief clonic seizure activity 	<ul style="list-style-type: none"> - fearfulness - light-headedness - dizziness - numbness, weakness - tingling around lips and spasm in the hands and feet associated with hyperventilation - hyperventilation
GASTRO-INTESTINAL	<ul style="list-style-type: none"> - nausea and vomiting - abdominal pain, diarrhea 	<ul style="list-style-type: none"> - nausea 	<ul style="list-style-type: none"> - nausea
OTHER SYMPTOMS	<ul style="list-style-type: none"> - loss of consciousness - progression of injection site reaction beyond hives and swelling 		

2.4 Allergic reaction

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). 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.

2.5 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
- Observe for any deterioration in condition
- If hives or swelling disappear, 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.
- **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**
- There is little risk to the unnecessary use of epinephrine, whereas delay in its administration (when required) may result in difficulty to treat anaphylaxis and in death
- Apply ice for comfort.

3.0 SUPERVISION OF VACCINEE POST-IMMUNIZATION

Advise recipients of any biological product (i.e., 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. **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 an allergic history, immunization should occur in an emergency room setting according to Health Authority guidelines.** See Communicable Disease Control Manual, Chapter 2, Section IX: Vaccine Associated Adverse Events available at:

http://www.bccdc.ca/NR/rdonlyres/74D83EE6-B735-48C5-8F8B-300A55E1E4C9/0/CD_Manual_Chap2_SectionIX_AdverseEvents.pdf.

The risk of fainting is the more common reason to keep vaccinees under observation.

Routine supervision should ensure that vaccinees remain within a short distance of the vaccinator with the instruction that they ask someone to obtain the nurse for them immediately for assessment if they feel unwell.

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

Call 911 or ambulance.

Administer epinephrine IM immediately. The most important step in the management of anaphylaxis is the immediate administration of aqueous epinephrine 1:1,000. Failure to use epinephrine promptly is more dangerous than its improper use. See [SECTION 10.0 EMERGENCY TREATMENT OF ANAPHYLAXIS](#).

IM injection of epinephrine into the thigh is the preferred route for administration.

DO NOT inject epinephrine into the same muscle mass (e.g., thigh) as the vaccine was administered.

If child is <12 months of age and has received an IM vaccine in each thigh, give epinephrine SC into the upper outer triceps area of the infant's arm(s).

If the thigh cannot be used in a child \geq 12 months of age or an adult (e.g., client has received IM injections in both thighs), give epinephrine IM into the deltoid muscle(s).

If both arms and both legs have been used for IM immunizations, administer epinephrine SC into the upper outer triceps area of the arm(s), or into the fatty area of the anterolateral thigh.

Injection of epinephrine can be made through clothing, if necessary.

Repeat epinephrine at 5-minute intervals twice as needed (i.e., if breathing becomes more laboured or level of consciousness decreases). Note: Administer a maximum of three doses of epinephrine.

Alternate right and left thigh or arm sites for repeat doses of epinephrine (to maximize absorption of epinephrine).

Note: An epinephrine self-injector (Epipen® or Twinject™) can also be used in the situation when the immunization provider is not present and if the layperson who administers the self-injector is knowledgeable about proper use. The regular preparations contain 0.3 mL of epinephrine 1:1000 and can be used for individuals over 6 years of age.



If a vaccinee or their parent/guardian refuses the administration of epinephrine when it is indicated, inform them of the risk and immediately call 911 or an ambulance to arrange for transfer to an acute care facility. The administration of diphenhydramine hydrochloride (Benadryl[®]) is not appropriate in this situation. Diphenhydramine hydrochloride is considered second-line therapy to epinephrine and should never be administered alone in the treatment of anaphylaxis.

5.0 ADMINISTRATION OF DIPHENHYDRAMINE HYDROCHLORIDE (BENADRYL[®])

Give **one** dose of diphenhydramine hydrochloride (Benadryl[®]) (IM) as an **adjunct** to epinephrine when the person is not responding well to epinephrine, or to maintain symptom control in those who have responded (as epinephrine is a short-acting agent). Its use is recommended when transfer to an acute care facility cannot be done within 30 minutes. **Its use is considered second-line therapy to epinephrine and should never be administered alone in the treatment of anaphylaxis.**

The approximate doses for injection (50 mg/mL solution) are outlined in [SECTION 10 – EMERGENCY TREATMENT OF ANAPHYLAXIS](#). Note: Benadryl[®] is painful when given IM.

When administering diphenhydramine hydrochloride IM, preferably administer at a different site to that in which epinephrine was given. However, if necessary, give diphenhydramine hydrochloride in the same thigh as that in which epinephrine was given.

Diphenhydramine hydrochloride can be given into the same muscle mass as the vaccine was given.

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.



6.0 OTHER CONSIDERATIONS

Position client in the recumbent position and elevate legs, as tolerated symptomatically. This slows progression of circulatory compromise, if present, by preventing orthostatic hypotension and helping to shunt effective circulation from the periphery to the head, heart, and kidneys.

Monitor pulse, respiratory effort, and level of consciousness to guide medication use:

- If person experiences respiratory difficulty: elevate head and chest slightly.
- If airway is impaired: improve position by using head tilt, chin lift, or jaw thrust.
- If vomiting is likely: turn person to side lying position.

Refer to Table 2 for pulse and respiratory rates.

Age	Heart (pulse) rate per minute, Upper Limit	Respiratory rate per minute, Upper Limit
0-1 mo	180	60
2-12 mo	160	50
12-24 mo	140	40
2-6 y	120	30
6-12 y	110	20
>12 y (adult)	100	20

From: Emergency Medicine: A comprehensive study guide. 6th edition. (2004). McGraw Hill.

7.0 CLIENT TRANSPORT

Arrange for rapid transport by emergency vehicle to an emergency department. Since 20% of anaphylaxis episodes follow a biphasic course with recurrence of the reaction after a 2 – 9 hour asymptomatic period, hospitalization or a long period of observation is recommended for monitoring.



8.0 RECORD

Record administration of epinephrine and diphenhydramine hydrochloride. The “Worksheet for Emergency Treatment of Anaphylaxis” may be used as an interim record. Do **not** send this form to BCCDC. See [SECTION 11.0 WORKSHEET FOR EMERGENCY TREATMENT OF ANAPHYLAXIS](#)

Report the case of anaphylaxis under the iPHIS “Adverse Events Tab” (or in PARIS). Record the signs and symptoms in the comments field.

The HLTH 2319 “Report of Adverse Event (Reaction) Following Immunization” may be used for data collection before entry to iPHIS.

Await the MHO review and recommendation regarding subsequent immunization with the associated biological product(s).

If the reaction is deemed to have been an allergic reaction and not anaphylaxis, the associated biological product(s) can be administered in the future.

If the reaction is deemed to have been anaphylactic, the associated biological product(s) cannot be administered in the future. Except in the case of Rabies post-exposure vaccine, the history of anaphylaxis is a contraindication to the administration of the associated biological product(s).

Record this contraindication in the client’s personal and electronic immunization record.

Discuss with the client the MHO recommendation regarding subsequent immunization.

When two or more cases of anaphylaxis occur in association with the same lot of vaccine(s) within a week in a health unit, or when requested to do so by BCCDC, complete “Enhanced Surveillance for Clusters of Suspected Anaphylaxis Following Vaccination” available at <http://www.bccdc.ca/dis-cond/CDSurveillanceForms/default.htm#heading8>.



9.0 MAINTENANCE OF EPINEPHRINE VIALS AND OTHER EMERGENCY SUPPLIES

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.

Suggested epinephrine kit contents:

- BCCDC guidelines for the management of anaphylaxis: Sections 2.3, 10.0 and 11.0
- 3 - 1 cc syringes and needles (25 – 27 gauge, 1" needle)
- 1 - 1cc syringe and needle (25 – 27 gauge, 1 ½" needle)
- 2 - 3 cc syringes and needles (25 – 27 gauge, 1" and 1 ½" needles)
- 2 – 1cc syringes and needles (25 – 27 gauge, 5/8") for SC route
- extra needles
- 4 ampules of epinephrine 1:1,000 (within expiration time frame)
- 2 vials of diphenhydramine hydrochloride 50mg/ml (within expiration time frame)
- alcohol swabs
- pens/paper



10.0 EMERGENCY TREATMENT OF ANAPHYLAXIS IMMEDIATELY

- Call 9-1-1 or Ambulance
- Give epinephrine (1:1,000) **IM** into an unimmunized thigh.
- If both thighs were used for immunization:
 - give epinephrine **IM** into deltoid if client is \geq 12 months old
 - give epinephrine **SC** into upper outer triceps area of the arm(s) if client is < 12 mos old
- If both thighs and both arms were used for IM immunizations, give epinephrine **SC** into upper outer triceps area of the arm(s) or into the fatty area of the anterolateral thigh.
- DO NOT give epinephrine into the same muscle mass as vaccine was given.

Dose: 0.01ml/kg to maximum of 0.5ml OR:	
AGE	EPINEPHRINE
2 – 6 months	0.07 ml
7 – 12 months	0.10 ml
13 months – 4 years	0.15 ml
5 years	0.20 ml
6 – 9 years	0.30 ml
10 – 13 years	0.40 ml
\geq 14 years	0.50 ml

- Position client in recumbent position and elevate legs, as tolerated symptomatically
- Monitor respiratory effort, pulse, and level of consciousness

IF PERSON'S BREATHING MORE LABORED OR LEVEL OF CONSCIOUSNESS DECREASES

- Repeat epinephrine twice at 5 minute intervals, as needed (max. 3 doses)
- Alternate right and left thigh or arm sites for repeat doses of epinephrine
- Elevate head and chest slightly
- If airway is impaired use head tilt, chin lift or jaw thrust
- If vomiting is likely, turn person to side lying position

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

- Give **one dose** of diphenhydramine hydrochloride 50 mg/ml IM **preferably** at a different site to that in which epinephrine was given. If necessary, use same thigh as the one in which epinephrine was given. Can also be given into same muscle mass as vaccine was given.
- Can give at any time interval, either after the initial or repeat doses of epinephrine.

AGE	Diphenhydramine hydrochloride
< 2 years	0.25 ml
2 – 4 years	0.50 ml
5 – 11 years	0.50-1.00ml
\geq 12	1.00ml



11.0 WORKSHEET FOR EMERGENCY TREATMENT OF ANAPHYLAXIS

Client Name: _____ PHN: _____ Surname/Given Name Parent/Guardian: _____ Birthdate: _____ Telephone: (____) _____ yyyy/mm/dd																									
Immunization(s) given: 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ _____ Date: _____ (yyyy/mm/dd) Approx. Time Given: _____ Onset of Reaction: _____	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">Dose:</th> <th style="width:15%;">Route:</th> <th style="width:15%;">Site:</th> <th style="width:55%;">Signature of provider:</th> </tr> </thead> <tbody> <tr><td>1 _____</td><td>1 _____</td><td>1 _____</td><td>1 _____</td></tr> <tr><td>2 _____</td><td>2 _____</td><td>2 _____</td><td>2 _____</td></tr> <tr><td>3 _____</td><td>3 _____</td><td>3 _____</td><td>3 _____</td></tr> <tr><td>4 _____</td><td>4 _____</td><td>4 _____</td><td>4 _____</td></tr> <tr><td>5 _____</td><td>5 _____</td><td>5 _____</td><td>5 _____</td></tr> </tbody> </table> <p>Details of Reaction (record in Adverse Events comments field in iPHIS)</p> <input type="checkbox"/> decreased level of consciousness <input type="checkbox"/> hives: <input type="checkbox"/> generalized or <input type="checkbox"/> localized at injection site / <input type="checkbox"/> welts <input type="checkbox"/> flushing <input type="checkbox"/> itchiness: <input type="checkbox"/> with rash or <input type="checkbox"/> without rash / <input type="checkbox"/> red and itchy eyes <input type="checkbox"/> wheeze <input type="checkbox"/> rapid respiratory rate <input type="checkbox"/> difficulty breathing <input type="checkbox"/> hoarse voice <input type="checkbox"/> sensation of throat closure <input type="checkbox"/> cyanosis <input type="checkbox"/> grunting <input type="checkbox"/> upper airway swelling (lip, tongue, etc.) / dry cough <input type="checkbox"/> tearing <input type="checkbox"/> sneezing <input type="checkbox"/> runny nose <input type="checkbox"/> ↑ use of accessory respiratory muscles <input type="checkbox"/> tingling or prickle sensation: <input type="checkbox"/> generalized or <input type="checkbox"/> around the mouth or in hands/feet <input type="checkbox"/> nausea <input type="checkbox"/> vomiting <input type="checkbox"/> diarrhea <input type="checkbox"/> abdominal pain <input type="checkbox"/> dizziness <input type="checkbox"/> syncope <input type="checkbox"/> swelling at injection site(s) <input type="checkbox"/> OTHER (describe): _____	Dose:	Route:	Site:	Signature of provider:	1 _____	1 _____	1 _____	1 _____	2 _____	2 _____	2 _____	2 _____	3 _____	3 _____	3 _____	3 _____	4 _____	4 _____	4 _____	4 _____	5 _____	5 _____	5 _____	5 _____
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Attended by paramedics: <input type="checkbox"/> y <input type="checkbox"/> n Transfer to hosp: <input type="checkbox"/> y <input type="checkbox"/> n Time of transfer to hosp: _____ Released to care of family: <input type="checkbox"/> y <input type="checkbox"/> n Released to care of GP: <input type="checkbox"/> y <input type="checkbox"/> n																									
Name(s) of Recorder(s): _____ Signature(s): _____ _____ Date: _____ yyyy/mm/dd																									



12.0 ENHANCED SURVEILLANCE FOR CLUSTERS OF SUSPECTED ANAPHYLAXIS FOLLOWING VACCINATION

This form should be completed by public health staff for each case in a cluster of suspected anaphylaxis following administration of vaccine. Please submit the initial copy this form by email or fax to Dr. Monika Naus, Director Immunization Programs, BC Centre for Disease Control, at: monika.naus@bccdc.ca or fax 604 707-2516. **Please also complete an iPHIS report on this adverse event.** Updated reports and other supporting documentation can be submitted as information becomes available.

Client Information

Last name: _____ First Name: _____

Date of Birth: ____/____/____ Sex: Male Female PHN: _____ iPHIS ID: _____
YYYY / MM / DD

Vaccine Information

Vaccine(s) Given	Manufacturer	Lot Number	Dose Number

Vaccine administered by:

Contact information:

Initial post-reaction management coordinated by:

Contact information:

Client History

- Asthmatic under regular medical treatment: Yes No *If yes, give details of severity/medications.*
- Eczema: Yes No
- History of allergies to any vaccine component(s): Yes No *If yes, give details of components/reaction.*
- History of allergies in immediate family: Yes No *If yes, list and give details.*
- History of anaphylaxis in client: Yes No *If yes, give details of reaction.*
- History of anaphylaxis in family: Yes No *If yes, give details of reaction/relationship.*
- Prior severe reactions to any vaccines: Yes No *If yes, give details of reaction/vaccine(s).*
- Current medications: Yes No *If yes, list.*
- Recent or concurrent infections: Yes No *If yes, give details of infection.*
- Recent or concurrent non-infectious illness or medical condition(s): Yes No *If yes, give details of illness/condition.*

Details:



Client's past immunization history: (list below unless recorded in iPHIS)

Event Description

Vital signs (if recorded):

BP: _____ Pulse: _____ Resp: _____ Temp: _____

When were vital signs taken in relation to the time of the reaction and treatment?

Dermatologic or mucosal (tick all that apply):

- Generalized erythema Red and itchy eyes
- Angioedema, localized or generalized
- Urticaria (hives) *If yes* → generalized or localized at injection site
- Generalized pruritus *If yes* → with skin rash or without skin rash
- Tingling or prickle sensation *If yes* → generalized or around the mouth or in hands/feet

Cardiovascular (tick all that apply):

- Measured hypotension Reduced peripheral circulation (at least 2 of the following):
- Uncompensated shock (at least 3 of the following): Tachycardia
- Tachycardia Capillary refill time >3 seconds without hypotension
- Capillary refill time >3 seconds Decreased level of consciousness
- Reduced central pulse volume
- Decreased level of consciousness

Respiratory (tick all that apply):

- Bilateral wheeze (bronchospasm) Persistent dry cough
- Stridor Hoarse voice
- Upper airway swelling (lip, tongue, throat, uvula, larynx) Difficulty breathing (without wheeze or stridor)
- Respiratory distress (at least 2 of the following): Sensation of throat closure
- Tachypnoea Sneezing, rhinorrhea
- Increased use of accessory respiratory muscles
- Cyanosis
- Grunting

Gastrointestinal (tick all that apply): Diarrhea Nausea Abdominal pain Vomiting

Hospitalization: In emergency only Admitted to hospital overnight → Number of nights: _____

Additional Comments: Please attach any other information that has not been captured on this form or entered in the iPHIS "AE Comment" text field that is felt by the clinician to be significant.



13.0 REFERENCES

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