



Medical Directive

Emergency Treatment of Anaphylaxis/Severe Allergic Reactions to Allergy Injections, Vaccines, or Injectable Medications

Assigned Number: 007

Activation Date: July 1, 2011

Review due by: December 2026

Approval Signature & Date

Medical Director:

Date Reviewed: April 15, 2025

Clinical Services Director:

Date Reviewed: April 15, 2025

Order and/or Delegated Procedure:

Appendix Attached: ☐ Yes ☒ No

Administration of epinephrine for treatment of Anaphylaxis/Severe Allergic Reactions caused by allergy injections, vaccines, or injectable medications.

Recipient Patients:

Appendix Attached: ☐ Yes ☒ No

All active patients (attached or unattached) served by Thames Valley Family Health Team affiliated physicians and nurse practitioners, as identified on the Authorizer Approval Form.

Authorized Implementers:

Appendix Attached: ☐ Yes ☒ No

Thames Valley Family Health Team Registered Nurses/ Registered Practical Nurses (RN/RPN)*

The implementer must complete educational requirements for this medical directive, including review of the education package and medical directive and successful completion of any quizzes. If additional orientation or shadowing is needed, the implementer must make arrangements for this with their clinical supervisor. Once all of the above has been completed, they are required to sign the Implementer Performance Readiness Form electronically, via Citation Canada, indicating they have the knowledge, skill and judgment to safely enact the medical directive.



Indications:	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>The patient is exhibiting signs of Anaphylaxis or Severe Allergic Reaction within minutes to hours of receiving allergy injections, vaccines, or injectable medications.</p> <p><u>Early or mild anaphylaxis:</u></p> <ul style="list-style-type: none">• Swelling and hives at injection site• Sneezing, nasal congestion• Tearing• Coughing• Facial flushing <p><u>Moderate to severe anaphylaxis:</u></p> <ul style="list-style-type: none">• Swelling of upper airway (hoarseness, stridor)• Hypotension (lightheadedness, syncope)• Bronchospasm (chest tightness, wheezing) <p><u>General Symptoms of anaphylaxis include:</u></p> <p>Skin or mucosal tissue involvement:</p> <ul style="list-style-type: none">• itching, urticaria (hives)• angioedema (progressive, painless swelling of face/mouth)• skin flushing <p>Respiratory compromise:</p> <ul style="list-style-type: none">• Sneezing• Coughing• Wheezing, shortness of breath• Hoarseness, stridor, laryngeal edema• Cyanosis (late sign) <p>Persistent gastrointestinal symptoms:</p> <ul style="list-style-type: none">• Nausea• Vomiting• Dysphagia• Abdominal cramping• Diarrhea <p>Reduced blood pressure (see next page) or symptoms of end-organ dysfunction:</p> <ul style="list-style-type: none">• Headache• Hypotonia• Lightheadedness/dizziness, syncope• Incontinence• Reduced level of consciousness	



*Reduced blood pressure is defined by either:

- a) 30% decrease in systolic blood pressure minutes to hours after immunization or allergy injection

OR

- b) low systolic blood pressure defined by the following:

1-12 months	Systolic BP <75
1-5 years	Systolic BP <80
6-12 years	Systolic BP <85
13 years+ (adults)	Systolic BP <95

(<https://emedicine.medscape.com/article/2172054-overview#a4>)

Table 2: Signs and symptoms of anaphylaxis

System	Signs and symptoms
General/CNS	Fussiness, irritability, drowsiness, lethargy, reduced level of consciousness, somnolence
Skin	Urticaria, pruritus, angioedema, flushing
Upper airway	Stridor, hoarseness, oropharyngeal or laryngeal edema, uvular edema, swollen lips/tongue, sneezing, rhinorrhea, upper airway obstruction
Lower airway	Coughing, dyspnea, bronchospasm, tachypnea, respiratory arrest
Cardiovascular	Tachycardia, hypotension, dizziness, syncope, arrhythmias, diaphoresis, pallor, cyanosis, cardiac arrest
Gastrointestinal	Nausea, vomiting, diarrhea, abdominal pain
<i>CNS Central nervous system</i>	

Adapted from: [Anaphylaxis and other acute reactions following vaccination: Canadian Immunization Guide - Canada.ca](#)

Contraindications:

Appendix Attached: ☐ Yes ☒ No

The patient has a documented allergy to epinephrine.

Consent:

Appendix Attached: ☐ Yes ☒ No

Informed verbal consent is obtained from the patient/substitute decision maker (if possible), per [TVFHT: Informed Consent of Patient Healthcare Procedure](#), prior to the implementation of care.



**Guidelines for Implementing the Order/
Procedure:**

Appendix Attached: ☒ Yes ☐ No

Appendix 1: [Distinguishing Features of Anaphylaxis](#)

Appendix 2: [Dosage of IM Epinephrine chart](#)

THIS IS A MEDICAL EMERGENCY! Rapid intervention is crucial. DO NOT LEAVE PATIENT UNATTENDED

Steps 1, 2, 3 and 4 should be done promptly and simultaneously (see Appendix 1 for quick reference guide):

1. **Direct someone to call 911** and notify a physician or nurse practitioner if able.
2. **Assess:** airway, breathing, circulation, mental status, skin, and body weight (mass).
 - airway: look specifically at lips, tongue and throat for swelling; if appropriate, ask individual to say his/her name to assess glottic/peri-glottic swelling
3. **Place** the patient supine and elevate lower extremities. Fatality can occur within seconds if the patient stands or sits suddenly, due to empty vena cava/empty ventricle syndrome. Exceptions to the supine position:
 - if in respiratory distress, place in a position of comfort (elevate head and chest)
 - if vomiting or unconscious, place lying on his/her side
 - if pregnant, place lying on their left side
4. **Inject EPINEPHRINE:**
 - Dose: see Appendix 2 for dosing guide.
 - Route: INTRAMUSCULAR (IM) in the mid-anterolateral aspect of the thigh.
 - If possible, avoid injecting epinephrine into the same muscle used for immunization. If both legs have been used, administer epinephrine at least 2.5 cm away from the injection site.
 - In emergencies, epinephrine can be given through clothing.
 - Repeat Epinephrine IM Q5 minutes PRN x 2 doses (to a maximum of 3 total doses) for ongoing signs and symptoms of anaphylaxis. Alternate legs for multiple doses.
 - Record the time of each dose.
5. **Stabilize** patient: perform CPR if necessary
 - Administer oxygen for hypoxia (if available) with goal of SpO₂ ≥92%
6. **Monitor** vital signs (every 5 minutes)
7. **Transfer by EMS** to hospital for observation. All patients receiving emergency epinephrine must be transported to hospital immediately for evaluation and observation.

Adapted from: [Anaphylaxis and other acute reactions following vaccination: Canadian Immunization Guide - Canada.ca](#)—updated March 2021 and BC Centre for Disease Control: [Communicable Disease Control Manual. Chapter 2: Immunization. Part 3 - Management of Anaphylaxis in a Non-Hospital Setting.](#) –Feb 2019



Documentation and Communication:	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none">• The implementer will follow the documentation standards set by their governing college.• In the patient's medical record, documentation must be completed on the TVFHT documentation template provided for this directive.• Information regarding implementation of the directive and the patient's response will be documented in the patient's medical record, in accordance with standard documentation practice.	
Review and Quality Monitoring Guidelines:	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>The directive remains in effect until amended. It will be reviewed biennially or under the following circumstances:</p> <ol style="list-style-type: none">1. The Medical Director identifies a need for change2. Issues arise related to the directive's use--the team must promptly communicate concerns to their clinical supervisor, Medical Directives Coordinator, or Clinical Director3. New information becomes available between scheduled reviews, particularly if it affects outcomes <p>The Medical Directives Committee will then review the concerns in consultation with at least one implementer and the Medical Director, as needed, before making necessary changes.</p>	
Approving Authorizer(s):	Appendix Attached: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Thames Valley Family Health Team Authorizer Approval Form signed in Citation Canada.	



Appendix 1



RAPID ONSET OF SYMPTOMS
(within **minutes** up to **4 hours**) which include:



SKIN

- urticaria • pruritus • angioedema • flushing



RESPIRATORY

- cough • wheeze • dyspnea
• bronchospasm • distress



GASTROINTESTINAL

- nausea • vomiting
• diarrhea • severe abdominal pain



CARDIOVASCULAR

- tachycardia • hypotension • syncope
• dizziness • arrhythmias



CENTRAL NERVOUS SYSTEM

- irritability • sense of doom
• reduced level of consciousness

If you suspect anaphylaxis, a rapid response is critical.

Steps **1** **2** **3** **4** should be done promptly and simultaneously.

- 1** Direct someone to call **911** (where available) or emergency medical services
- 2** **Assess** airway, breathing, circulation
- 3** Place the individual on their **back** and **elevate lower extremities**
- 4** Inject **EPINEPHRINE** intramuscularly into mid-anterolateral thigh
(refer to epinephrine dosage table)
- 5** Repeat **every 5 minutes** if not improving

Source: Public Health Agency of Canada. Anaphylaxis and other acute reactions following immunization: Canadian Immunization Guide: Part 2—Vaccine Safety Ottawa (ON): PHAC; 2020.

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Appendix 2

Dosage of intramuscular EPINEPHrine 1:1000 (1 mg/mL) solution, by age or weight

Weight is the preferred basis for dosage but if unknown, use age as a guide.

Age Use weight if available	Weight (kg)	EPINEPHrine dose (1 mg/mL) ampoule/vial		EPINEPHrine autoinjector dose Use only if measured dose by weight is unavailable
		mg or mg/kg/dose	Volume 1 mg/mL (mL)	
Birth to less 5 kg	Less than 5 kg	0.01 mg/kg/ dose or 0.1 mg	0.01 mL/kg/ dose or 0.1 mL	N/A
Greater than 5 kg and less than 2 years	5–10	0.1 mg	0.1 mL	0.15 mg
2 to less than 4 years	11–15	0.15 mg	0.15 mL	
4 to less than 7 years	16–20	0.2 mg	0.2 mL	
	21–25	0.25 mg	0.25 mL	0.3 mg
7 to less than 10 years	26–30	0.3 mg	0.3 mL	
	31–35	0.35 mg	0.35 mL	
10 to 12 years	36–40	0.4 mg	0.4 mL	
	41–45	0.45 mg	0.45 mL	
Older than 12 years	46 and above	0.5 mg	0.5 mL	0.5 mg

Source: Public Health Agency of Canada. Anaphylaxis and other acute reactions following immunization: Canadian Immunization Guide: Part 2 – Vaccine Safety. Ottawa (ON): PHAC; 2020. Table 4 Dosage of intramuscular EPINEPHrine 1:1000 (1 mg/mL) solution, by age or weight.