



Northern Inter-Tribal Health Authority

**DIRECTIVE FOR A CLIENT POPULATION
REGISTERED NURSE SPECIALTY PRACTICE**

MANAGEMENT OF ANAPHYLAXIS

Updated May 24, 2023

MANAGEMENT OF ANAPHYLAXIS

DIRECTIVE FOR CLIENT POPULATION


This Medical Directive and RN Clinical Protocol provide the authority and direction for RNs working within the NITHA Partnership to:

- Provide anaphylaxis management under the direction of the Medical Health Officer (MHO)
- This RN Clinical Protocol is based on the principle that the appropriate medical directives, policies and resources are readily available in the employment setting
- This directive is consistent with the overarching policy
- Immunization and anaphylaxis initial exams should be completed by all RN's within the NITHA jurisdictions on initial hire, and annual recertification thereafter.
- All Nurses are encouraged to attend the Annual NITHA Anaphylaxis education in-service for review and updated clinical information

The NITHA Directive for Anaphylaxis applies to all age groups and applies to all clients that may present with signs and symptoms of an anaphylaxis reaction from any of the following:

- Immunization administration
- Medication administration
- Exposure of an allergen in their environment
- Food Allergen
- Idiopathic allergens

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BACKGROUND

- Registered nurses must take all measures to prevent adverse events such as anaphylaxis by assessing clients for allergies and other contradictions prior to performing nursing care and/or administering medications

OBJECTIVE

- To minimize the occurrence of anaphylaxis through appropriate screening per client history and current paper or electronic charting to note any contraindications, warnings and noted allergies.
- To recognize early signs of anaphylaxis and appropriately treat individuals who may present with anaphylactic reactions.
- To ensure prompt and appropriate action is taken in the event that an anaphylactic reaction occurs.

ASSESSMENT

The RN should assess for the following signs and symptoms if anaphylaxis is suspected:

- Sudden or gradual onset of general itching, erythema (redness), or urticaria (hives);
- Progressive, painless swelling of face, mouth, and tongue (angioedema);
- Severe bronchospasm;
- Shock;
- Abdominal cramping; or
- Cardiovascular collapse
- Refer to the Saskatchewan Immunization Manual (SIM) Chapter 12 “Anaphylaxis Management”

NURSING DIAGNOSIS AND THERAPEUTIC ACTIONS

Potential for compromised biological systems related to allergen exposure.

INTENDED AND UNINTENDED OUTCOMES

Intended outcomes:

- The individual’s health and safety is preserved.
- The RN has the competency to implement management of anaphylaxis and incident documentation.
- The anaphylactic reaction is slowed or averted.
- The client does not sustain permanent injury or death from anaphylaxis.

Unintended outcomes:

- For immunization related anaphylactic reactions, refer to SIM Chapter 11 Adverse Events Following Immunization (AEFI) for any adverse events following an immunization.
 - Refer to Appendix 11.7 for the Saskatchewan Adverse Events Following Immunization Report User Guide. This document is there to assist with the completion AEFI reports with specific attention to sectional details required for submission. This user guide has been posted at the following link: (Retrieved May 25, 2023, from: <https://www.ehealthsask.ca/services/manuals/documents/sk%20AEFI%20user%20guide.pdf>)

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COMMUNICATION



With Emergency Medical Services (EMS) or Physician on-call to:

- Alert that an anaphylactic reaction has occurred to request assistance.
- Provide all relevant information that may be known about the individual (may include documentation as appropriate), including the steps taken during anaphylaxis management.

With the Individual to:

- Assess symptoms and reaction of the client; efficacy of anaphylaxis management and resuscitation efforts.
- Offer therapeutic communication during and after the event as appropriate.
- Informed client care during and after the event, as appropriate
- Should include any MHO recommendation (if vaccine related) or physician recommendations and follow-up (if non-vaccine related).

With the 2nd Level Nursing Supervisor to:

- Inform of the anaphylactic reaction as soon as possible after the event.
- Submit employer-specific incident or occurrence reporting forms as applicable.

With the NITHA Medical Health Officer and Public Health Nurse if the anaphylaxis is a result of vaccine administration.

- As per public health policy, any anaphylaxis related to immunization MUST be reported using a Public Health Agency of Canada "Report of Adverse Events Following Immunization form" (<https://www.canada.ca/content/dam/phac-aspc/documents/services/immunization/ae-fi-form-october-2021-eng.pdf>)
- This reporting should be submitted within 1 business day of the event

DOCUMENTATION

- Details regarding the anaphylactic reaction, including nursing actions and medication administration, should be clearly documented and added to the client's record.
- The RN should follow organizational policy for completing additional forms and documentation as required.
- Where applicable, refer to the Panorama policies and procedures regarding the documentation of risk factors, exemptions, and other special considerations.
- All Adverse Event Following Immunization (AEFI) reports, including the MHO's recommendations, must be uploaded into a client's Panorama profile
- All Anaphylaxis Worksheets must be uploaded into a client's Panorama Profile for vaccine related anaphylaxis

CLINICAL MANAGEMENT OF ANAPHYLAXIS

Step 1: Identification of Anaphylaxis

<i>Identification of acute anaphylaxis includes any 2 of the following Systems</i>	
System	Clinical Signs
Skin	Hives, swelling (face, lips, tongue), itching, warmth, redness, drooling in children
Respiratory	Coughing, wheezing, shortness of breath, chest tightness, trouble swallowing, hoarse voice, hay fever- like symptoms
Cardiovascular	Weak pulse, dizziness, lightheadness, hypotension
Gastrointestinal	Nausea, pain or cramps, vomiting, diarrhea
<p>OR</p> <p>Acute onset of signs of shock following potential exposure to a known or suspected allergen - hypotension, bronchospasm, wheezing, stridor, laboured breathing, coughing, difficulty swallowing, even in the absence of typical integumentary features</p> <p>NOTE: If only skin is involved this is NOT considered anaphylaxis, but is considered an allergic reaction</p> <p>ALERT: DO NOT delay administration of Epinephrine to initiate Emergency Medical Services (EMS).</p> <p>*Stop or remove the causative agent, if applicable.</p>	

Step 2: Position

Place client in the recumbent position and elevate lower extremities if tolerable. Exceptions to the supine position:

- If respiratory symptoms elevate head and chest
- If vomiting or unconscious, place lying on their side
- If pregnant, place semi-recumbent on left side

As a precaution, do not sit or stand individuals suddenly. Sudden changes of position may lower the blood pressure and worsen their condition.

Step 3: Administer Epinephrine 1:1000 solution (1mg/mL)

There are NO contraindications to Epinephrine

Determine appropriate dose of Epinephrine as per the chart in the medical directive. For pediatric clients, determine appropriate dose of Epinephrine is based on weight (preferred). If weight is not known, determine dose based on Broselow tape (if available) or client age.

Epinephrine may be repeated intramuscularly every 5 minutes for continued, worsening or progression of signs and symptoms to a maximum of 3 doses.

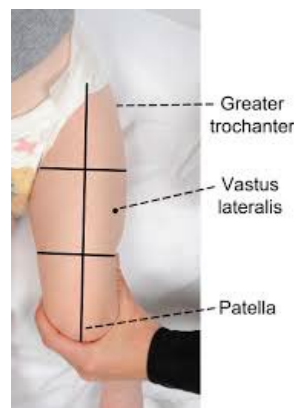
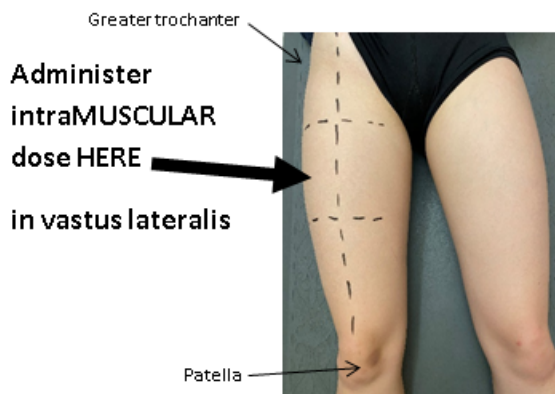
Table 4: Appropriate EPINEPHrine Dosages According to Age and Weight

Age	Weight kg.	Weight lb.	Dose	Dosage
0 – 6 months*	2 – 5.4 kg	4–11 lb.	0.05 mg	0.05 mL IM
7 - 24 months*	5.5 – 10.4 kg	12–22 lb.	0.1 mg	0.10 mL IM
25 - 36 months*	10.5 – 15.4 Kg	23-33 lb.	0.15 mg	0.15 mL IM
37 - 59 months*	15.5 – 20.4 kg	34–44 lb.	0.2 mg	0.20 mL IM
5 - 7 years	20.5 – 25.4 kg	45–55 lb.	0.25 mg	0.25 mL IM
8-10 years	25.5 – 35.4 kg	56–77 lb.	0.3 mg	0.30 mL IM
11-12 years	35.5–45.4 kg	78–99 lb.	0.4 mg	0.40 mL IM
≥ 13 years	≥ 45.5 kg	≥ 100 lb.	0.5 mg	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.

Saskatchewan Immunization Manual, Chapter 12

ALERT: Give Epinephrine intramuscular route ONLY



NOTE: Alternate the vastus lateralis muscles preferably for each dose to maximize drug absorption. Ensure IM injections are spaced at least 2.5 cm from each other in the utilized muscle.

Step 4: Direct someone to call 911 or Ambulance; do not leave client unattended

ALERT: if patient becomes unresponsive at any time, initiate Basic Life Support interventions. Ensure EMS has been activated.

Step 5: Assess and Monitor:

- Do not leave client unattended
- Continuous monitoring of pulse, LOC, respiratory rate and effort and ABCs. If other monitoring equipment is available, it should be used for client monitoring. Ex. B/P machine, Pulse Oximeter.
- Repeat vital signs every 3-5 minutes, with chest auscultation
- Update physician accordingly

Adjunctive Therapy: In the treatment of anaphylaxis, intramuscular diphenhydramine is considered adjunct second-line therapy to Epinephrine, and must never be administered alone in the treatment of anaphylaxis

DO NOT give the oral Diphenhydramine HcL, as the IM route is indicated.

DiphenhydrAMINE would only be administered if the following parameters have been met:

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- I. 3 doses of EPINEPHrine have been administered; and
- II. Client is stable; and
- III. Experiencing severe skin rash or itching that is causing great discomfort or distress; and
- IV. Transportation to an acute care facility takes 30 minutes or more.

Table 6: DiphenhydrAMINE Hydrochloride Dosages for Age by IM Administration

Age	Weight kg.	Weight lb.	Dose	Dosage
0 – 6 months*	2 – 5.4 kg	4–11 lb.	*Dose/dosage should be determined by weight (1 mg/kg) when weight is known.	
7 - 24 months*	5.5 – 10.4 kg	12–22 lb.		
25 - 36 months	10.5 – 15.4 kg	23-33 lb.	15 mg	0.3 mL
37 - 59 months	15.5 – 20.4 kg	34–44 lb.	20 mg	0.4 mL
5 - 7 years	20.5 – 25.4 kg	45–55 lb.	25 mg	0.5 mL
8-10 years	25.5 – 35.4 kg	56–77 lb.	35 mg	0.7 mL
11-12 years	35.5–45.4 kg	78–99 lb.	45 mg	0.9 mL
≥ 13 years	≥ 45.5 kg	≥ 100 lb.	50 mg	1 mL

Saskatchewan Immunization Manual, Chapter 12

- Administer Diphenhydramine Hydrochloride intramuscularly x1 dose only after giving at least the 1st dose of Epinephrine AND only if:
 - Symptoms are not controlled OR
 - To maintain symptom control if client cannot be transferred to an acute care facility within 30 minutes

Step 6: Transfer to hospital via EMS :

Report of medical assessment and management

- Situation- what occurred including signs and symptoms observed
- Background- include patient medical history, why they were in your care today
- Assessment- include signs and symptoms observed, treatment(s) provided, indication for transition of care
- Notification to NOK regarding transition of care was completed.
- Provide copy of documentation

Step 7: Document

- Inform nurse manager/ Supervisor and complete internal Confidential Occurrence Report to submit to Nursing Supervisor per local protocol.
- Complete Anaphylaxis Management Record
- Record in panorama under Comments/Create warnings. Chart incident in child's chart
- Enter contraindications in panorama if deemed to be anaphylaxis by MHO. Make note of an anaphylactic reaction in red pen in the client's hard copy record.
- Document event in Panorama if vaccine related
- Attach treatment worksheet to Panorama if vaccine related
- Complete AEFI report form and send to NITHA Public Health Nurse and Medical Health Officer (within 1 day) when vaccine related

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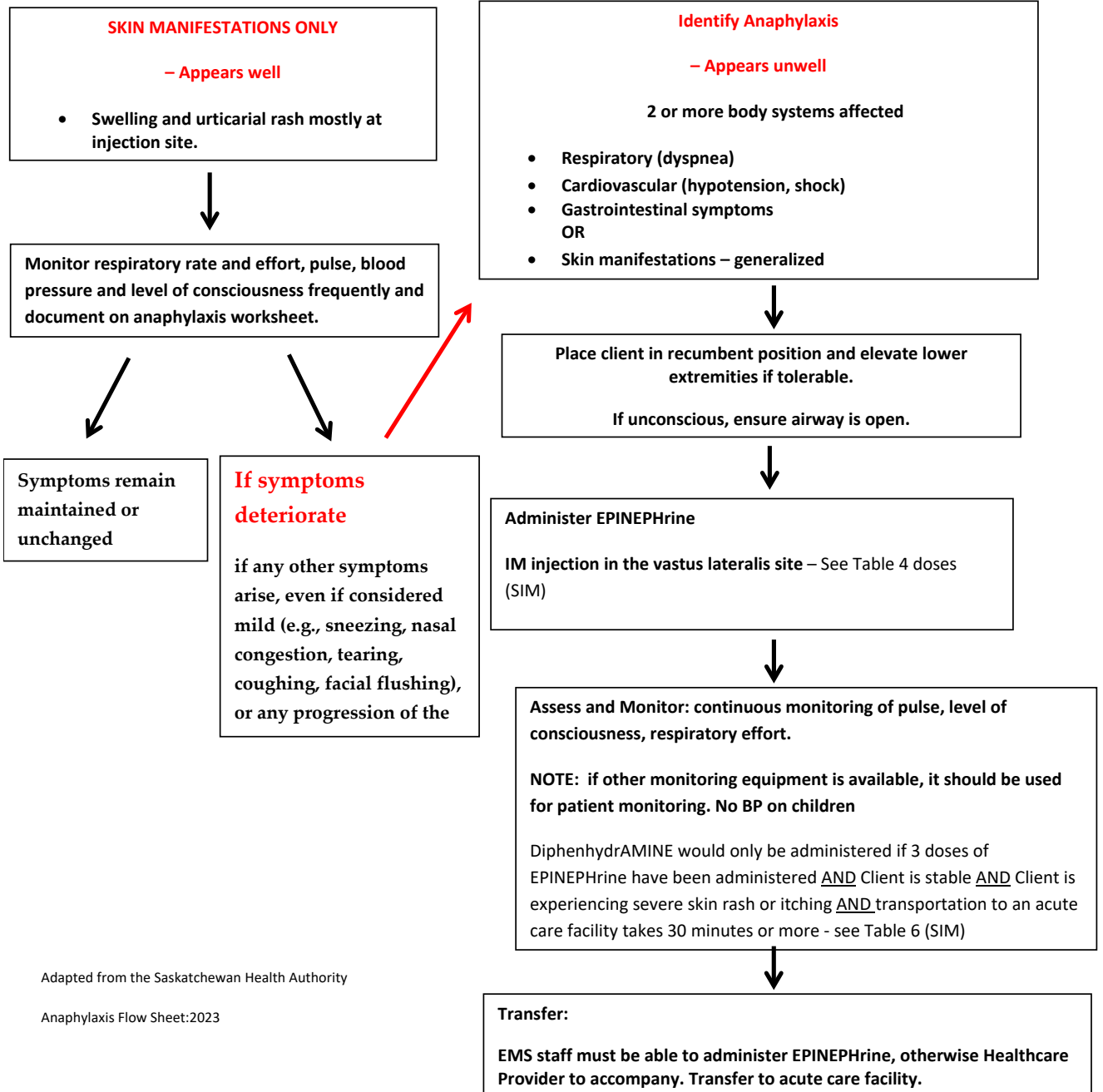
ANAPHYLACTIC KITS: ESSENTIAL SUPPLIES

Epinephrine (1:1000) 1mg/ml (3 vials)	1
Diphenhydramine Hydrochloride (Benadryl) 50 mg/ml (1 vial)	
Syringe 1 mL (4)	
Needles: 25-27 G, 1 inch (2) and 25-27 G, 1 ½ inch (4)	
Alcohol swabs and cotton balls	
Pocket Mask (adult and infant/child)	
Stethoscope/ Adult BP Cuff and sphygmomanometer	
Anaphylaxis worksheet and pen	
Access to phone in case of an emergency	
Reference Poster or reference card for the recommended doses of Epinephrine and Diphenhydramine Hydrochloride	

NOTE:

1. Ensure that the anaphylaxis kits are checked monthly and prior to each immunization clinic.
2. Clinics may also include corticosteroid and ranitidine but a prescriber order is required from a Physician or NP prior to administration of either medication

Anaphylaxis – Identification and Initial Management in Community



Adapted from the Saskatchewan Health Authority

Anaphylaxis Flow Sheet:2023

REFERENCES

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