

**Northern Inter-Tribal Health Authority**

**MANAGEMENT OF ANAPHYLAXIS  
BY REGISTERED NURSES**

**Medical Directive and RN Clinical Protocol  
without a client specific order**



**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

Approved by: NITHA Community Health Specialty Practice Working Group

Authorized by: \_\_\_\_\_



Dr Nnamdi Ndubuka, MHO NITHA

Date approved: 2023/Jan/31 Date for review: \_\_\_\_\_

**HIGH ALERT**

- Anaphylaxis is a serious, potentially life-threatening allergic reaction to foreign allergens. (e.g., bee sting, pollen, medication, food, latex).
- Quick recognition and treatment of anaphylaxis is vital and can be life-saving.
- In the event that anaphylaxis occurs:
  - The prompt administration of epinephrine is the most important treatment measure.
  - Emergency Medical Services (EMS) must be contacted by calling 911.
- Anaphylaxis kits must be:
  - Verified routinely and on hand where anaphylaxis reasonable anticipated to occur (e.g., immunization clinic, antibiotic administration).
  - Checked monthly and restocked as needed to replace expired or missing items.
- Refer to the tables included at the end of this Medical Directive and RN Clinical Protocol for the medication dosages for managing anaphylaxis.
- Refer to the Clinical Procedure document "*Anaphylaxis-identification and Initial Management in Community*" for the steps in managing anaphylaxis.

**RN EDUCATION / CERTIFICATION / QUALIFICATION**

Registered Nurses must:

- have current licensure with the College of Registered Nurses of Saskatchewan (CRNS);
- be certified to implement anaphylaxis management as per organizational policies and procedures;
- be recertified annually (exam component and education) for anaphylaxis;
- review this Medical Directive and RN Clinical Protocol annually;
- review the Saskatchewan Immunization Manual (SIM) Chapter 12 *Anaphylaxis Management* and the Canadian Immunization Guide (CIG) Part 2 *Anaphylaxis and other Acute Reactions following Vaccination* annually;
- review the Clinical Procedure *Anaphylaxis: Identification and Initial Management in Community*;
- have current CPR-C certification.

**DEFINITIONS**

- "Registered Nurses working within the NITHA partnership" refer to RNs working in community health and home care roles under the jurisdiction of the NITHA MHO.
- RNs can implement anaphylaxis management in accordance with the RN Specialty Practice criteria as defined by the Saskatchewan Registered Nurses Association (SRNA, 2020).

**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.
- Clients may present with signs and symptoms of an anaphylaxis reaction following immunization, antibiotic administration or exposure of an allergen in their home environment.

**OBJECTIVE**

- To minimize the occurrence of anaphylaxis through appropriate screening.
- To recognize and appropriately treat individuals who may present with anaphylactic reactions.
- To ensure prompt, appropriate action is taken in the event an anaphylactic reaction occurs.

**ASSESSMENT**

- All clients should be assessed for allergies and/or a history of allergic reactions.
- 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
- See tables for EPINEPHrine and diphenhydrAMINE
- See 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:**
  - Any adverse events following medication administration and/or nursing treatment during anaphylaxis management.
  - 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:

<https://www.ehealthsask.ca/services/Manuals/Documents/SK%20AEFI%20User%20Guide.pdf>

- Refer to SIM Chapter 12 *Anaphylaxis Management* regarding anaphylaxis following an immunization.
- Refer to the Anaphylaxis – Identification and Initial Management in Community clinical procedure document.

Please note: Consultation with Nurse Manager, NITHA Public Health Nurse and MHO is required for all unintended outcomes.

## COMMUNICATION

- **With Emergency Medical Services (EMS) 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 measures 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.

- **With the 2<sup>nd</sup> 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.
- Please note: 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/aefi-form-october-2021-eng.pdf>)
- This reporting should be submitted within 1 business day of the event.

## CLIENT EDUCATION

- Should occur during and after the event as appropriate.
- Should include any MHO recommendation, if applicable.

## 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

## REFERENCES

Government of Saskatchewan Ministry of Health. (2016). *Anaphylaxis management in a clinic or community setting by public health nurses post-administration of publicly funded biological products*. Regina, SK: Ministry of Health Specialty Practice Task Group on Immunization and Anaphylaxis.

Government of Saskatchewan. (Evergreen). *Saskatchewan Immunization Manual*. Regina, SK: author. Retrieved from <https://www.ehealthsask.ca/services/manuals/Pages/SIM.aspx>

Immunization Action Coalition. *Medical management of vaccine reactions in adult patients*.

NANDA Nursing Diagnoses 2015- 2017.

Public Health Agency of Canada (Evergreen Edition). *Canadian immunization guide*. Ottawa, ON: author. Retrieved from: <https://www.canda.ca/en/public-health/services/canadian-immunization-guide.html>.

Saskatchewan Registered Nurses Association. (2020). *Registered Nurse Specialty Practices Guideline*. Regina, SK: author. Retrieved from <https://www.crns.ca/wp-content/uploads/2020/06/RNSP-Guidelines-2020.pdf>

Epinephrine (1:1000) 1mg/ml (3 vials)  
 Diphenhydramine Hydrochloride 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

### Anaphylaxis kits must be maintained with essential supplies:

Sites may also include corticosteroid and ranitidine but a prescriber order is required from a Physician or NP prior to administration of either medication

### PROCEDURE

#### 1. Identify severe allergic reaction or potential anaphylaxis.

**ALERT:** Persons experiencing **anaphylaxis** will rapidly develop signs and symptoms that involve at least two body systems (skin, respiratory, circulatory or gastrointestinal). Cardinal features of anaphylaxis include:

Acute onset of illness of **ANY TWO** of the following systems:

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

OR

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.

NOTE: *If only skin is involved this is not considered **anaphylaxis**, but is considered an **allergic reaction***

**ALERT: DO NOT** delay administration of Epinephrine to initiate Emergency Medical Services (EMS).

\*Stop or remove the causative agent, if applicable.

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.

**ALERT: Do not sit or stand individuals suddenly.** Sudden changes of position may lower the blood pressure and worsen their condition.

3. **Administer Epinephrine.**

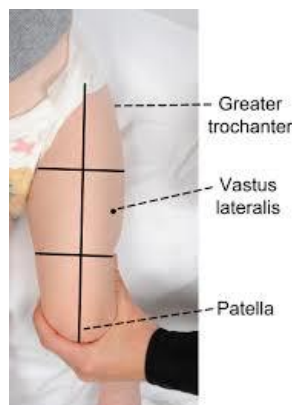
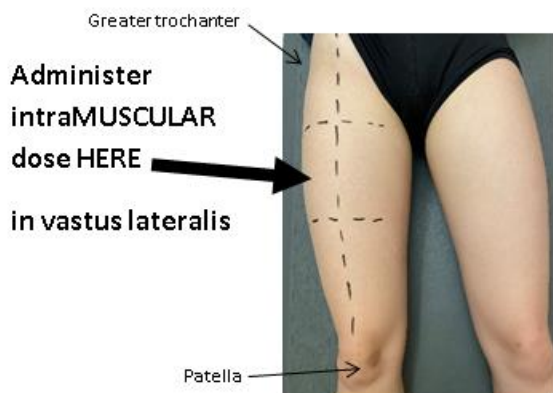
Determine appropriate dose of Epinephrine as per the Medical Directive and RN Clinical Protocol for Initial Management of Anaphylaxis.

NOTE: Determine appropriate dose of Epinephrine as per the chart in the medical directive. NOTE: 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.

**Alert:** There is no contraindication to Epinephrine

- Administer first dose Epinephrine into the anterolateral thigh.

**ALERT:** Use 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.



4. Call for assistance per EMS or 911 and Practitioner as soon as possible for further consult.  
**ALERT:** If patient becomes unresponsive at any time, initiate Basic Life Support interventions. Ensure EMS has been activated.

5. Monitor the pulse, level of consciousness and respiratory effort continuously. Continual assessment of ABCs  
Repeat vital signs every 3-5 minutes, with chest auscultation  
Update Physician accordingly
6. Epinephrine may be repeated intramuscularly every 5 minutes for continued, worsening or progression of signs and symptoms to a maximum of 3 doses.
7. According to the medical directive, administer Diphenhydramine Hydrochloride intramuscularly x 1 dose only after giving at least the 1st dose of Epinephrine AND only if:
  - o symptoms are not controlled OR
  - o to maintain symptom control if client cannot be transferred to an acute care facility within 30 minutes.

NOTE: \*\*\*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 Hcl Injectable should only be administered if:**

- i. **3 doses of Epinephrine have been administered; AND**
- ii. **Client is stable; AND**
- iii. **Client is 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**



7.

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 are 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

8) Documentation

Anaphylaxis Treatment Worksheet

Document event in Panorama if Vaccine related

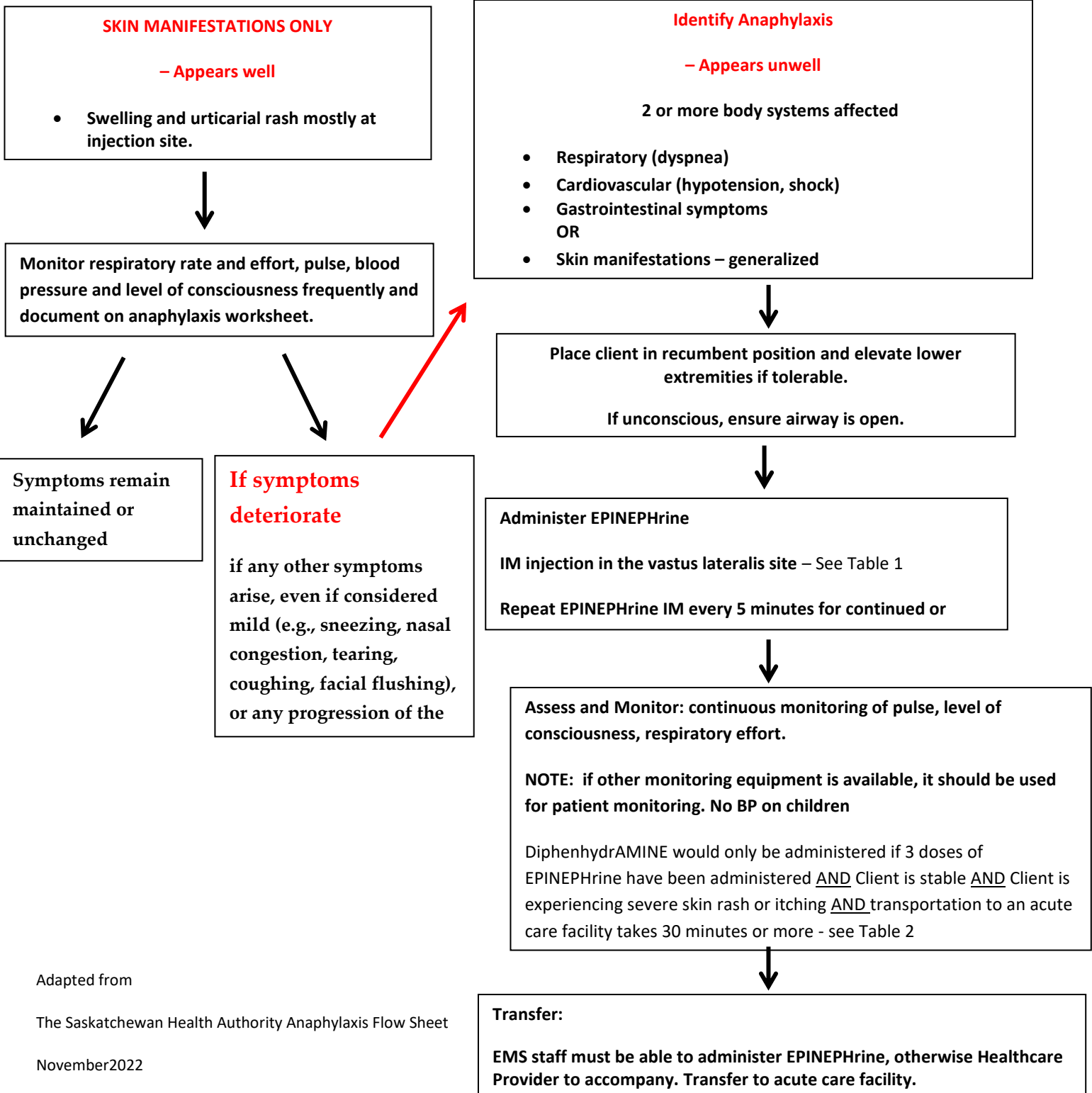
Attach treatment worksheet to Panorama if vaccine related

Complete incident/occurrence reporting per local process to Physician or NITHA MHO if Vaccine related

Complete the Report of Adverse Event Following Immunization, if the anaphylactic reaction was related to administration of an immunization.

Public Health Agency of Canada Reporting Adverse Event Following Immunization Form

**Anaphylaxis – Identification and Initial Management in Community**



Adapted from  
The Saskatchewan Health Authority Anaphylaxis Flow Sheet  
November 2022

**EPINEPHrine**

1:1000 solution (1mg/mL)

Age	Weight (kg)	Weight (lbs)	Dose (0.01mg/kg body weight)	Dosage (1mg/mL)
0-6 months*	2-5.4 kg	4-11 lbs	0.05 mg	<b>0.05 mL IM</b>
7-24 months*	5.5-10.4 kg	12-22 lbs	0.10 mg	<b>0.10 mL IM</b>
25-36 months*	10.5-15.4 kg	23-33 lbs	0.15 mg	<b>0.15 mL IM</b>
37-59 months*	15.5-20.4 kg	34-44 lbs	0.2 mg	<b>0.20 mL IM</b>
5-7 years	20.5-25.4 kg	45-55 lbs	0.25 mg	<b>0.25 mL IM</b>
8-10 years	25.5- 35.4 kg	56-77 lbs	0.3 mg	<b>0.30 mL IM</b>
11-12 years	35.5-45.4 kg	78-99 lbs	0.4 mg	<b>0.40 mL IM</b>
13 years and up	45.5 kg and up	100 lbs and up	0.5 mg	<b>0.50 mL IM</b>

\* 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

Adapted from the Saskatchewan Immunization Manual, Chapter 12 Table 4; Retrieved February 2022

**DiphenhydrAMINE Hydrochloride**

(50mg/mL)

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

Adapted from the Saskatchewan Immunization Manual, Chapter 12 Table 6; Retrieved February 20