



<b>POLICY AND PROCEDURE</b>	
SUBJECT/TITLE:	Emergency Medical Protocol for Anaphylactic Reactions in Children/Teens and Adults
APPLICABILITY:	Public Health Nurses
CONTACT PERSON & DIVISION:	Amanda Morningstar, MSN, APRN, FNP-C; Nursing Division
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**A. PURPOSE**

The intent of this document is to detail the emergency medical protocol for the treatment of anaphylactic reactions in children, teens, and adults who are under the care of the public health nurses at Canton City Public Health (CCPH). This protocol shall be utilized during all on-site clinics, as well as at any off-site clinics.

**B. POLICY**

Anaphylactic reactions can be caused by a number of different triggers, including various foods, insect bites/stings, and pharmacologic agents. CCPH nurses administer vaccinations to children and adults, and also administer both oral and intramuscular antibiotics to patients. All of these agents have the potential to cause an anaphylactic reaction. This policy must be in place in order to provide the proper emergency treatment to the patient when necessary, prior to the arrival of emergency medical personnel.

**C. BACKGROUND**

N/A

**D. GLOSSARY OF TERMS**

Anaphylactic Reaction- a serious, generalized allergic or hypersensitivity reaction that is rapid in onset and potentially fatal. Clinical presentation and severity can vary among patients and in the same patient from one anaphylactic episode to another.

**E. PROCEDURES**

1. Identify if the patient is having an anaphylactic reaction based on the sudden or gradual onset of one or more of the following signs/symptoms:
  - a. Skin: itching, erythema (redness), urticaria (hives), angioedema (swelling of lips, face, tongue, or throat)
  - b. Oral and Nasal Mucosa: itching, edema (swelling)
  - c. Conjunctivae: itching, edema (swelling), erythema (redness)
  - d. Respiratory Tract: hoarseness, throat itching, throat tightness, stridor, cough, dyspnea (shortness of breath/difficulty breathing), chest tightness, bronchospasm (wheezing), cyanosis
  - e. Cardiovascular: tachycardia, chest pain, hypotension, weak pulse, dizziness, collapse, incontinence, shock
  - f. Gastrointestinal Tract: nausea, crampy abdominal pain, persistent vomiting, diarrhea
  - g. Central Nervous System: behavioral changes (infants), sense of doom, headache, altered mental status, confusion, tunnel vision



2. Treatment and Monitoring:

- a. If symptoms are localized (i.e. itching and swelling confined to injection site where vaccination was given), observe patient closely for the development of generalized symptoms.
- b. If symptoms are generalized, activate the emergency medical system (call 911) and notify the Medical Director/Advanced Practice Nurse Practitioner/Director of Nursing. This should be done by a second person, while the primary nurse assesses the airway, breathing, circulation, and level of consciousness of the patient. The second person should also bring an AED to the patient.
- c. Administer aqueous epinephrine 1:1000 dilution (i.e., 1 mg/ml) intramuscularly or subcutaneously; the standard dose is 0.01 mg/kg body weight, up to 0.3 mg maximum single dose in children and 0.5 mg maximum single dose in adolescents and adults (see chart below).
- d. In addition, for anaphylaxis, administer diphenhydramine either orally or by intramuscular injection. The standard dose is 1 mg/kg body weight, up to 30 mg maximum dose in children (through age 10) and 100 mg maximum dose in adolescents and adults (see chart below).
- e. Monitor the patient closely until EMS arrives. Perform cardiopulmonary resuscitation (CPR) if necessary, and maintain airway. Keep patient in supine position (flat on back) unless he or she is having difficulty breathing. If breathing is difficult, patient’s head may be elevated, provided blood pressure is adequate to prevent loss of consciousness. If blood pressure is low, elevate legs. Monitor blood pressure and pulse every 5 minutes.
- f. If EMS has not arrived and symptoms are still present, repeat dose of epinephrine every 5-15 minutes for up to 3 doses, depending on patient’s response.
- g. Record all vital signs, medications administered to the patient (including the time, dosage, response, and the name of the medical personnel who administered the medication), and any other relevant clinical information.
- h. Notify the patient’s primary care physician.

<b>Suggested Dosing of Epinephrine and Diphenhydramine</b>				
Age Group Dose	Weight in kg	Weight in lbs	Epinephrine Dose 1 mg/mL injectable (1:1000)	Diphenhydramine (Benadryl) 12.5 mg/5 mL liquid; 25 and 50 mg capsules; 50 mg/ml injectable
1–6 mos	4 – 7 kg	9 – 15 lbs	0.05 mg (0.05ml)	5 mg
7–18 mos	7–11 kg	15 – 24 lbs	0.1mg (0.1ml)	10 mg
19 – 36 mos	11 – 14 kg	24 – 31 lbs	0.15 mg (0.15 ml)	15 mg
37 – 48 mos	14 – 17 kg	31 – 37 lbs	0.15 mg (0.15 ml)	20 mg
49 – 59 mos	17 – 19 kg	37 – 42 lbs	0.2 mg (0.2 ml)	
5 – 7 yrs	19 – 23 kg	42 – 51 lbs	0.2 mg (0.2 ml)	30 mg
8 – 10 yrs	23 – 35 kg	51 – 77 lbs	0.3 mg (0.3 ml)	
11 – 12 yrs	35 – 45 kg	77 – 99 lbs	0.4 mg (0.4 ml)	40 mg
13 yrs & older	45+ kg	99+ lbs	0.5 mg (0.5 ml)	50 – 100 mg



**F. CITATIONS & REFERENCES**

Cheng, A. (2011). Emergency treatment of anaphylaxis in infants and children. *Paediatrics & Child Health, 16(1)*, 35-40. Retrieved May 21, 2018, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3043023/>

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**G. CONTRIBUTORS**

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**H. APPENDICIES & ATTACHMENTS**

N/A

**I. REFERENCE FORMS**

N/A

**J. REVISION & REVIEW HISTORY**

Revision Date	Review Date	Author	Notes

**K. APPROVAL**

This document has been approved in accordance with the “800-001-P Standards for Writing and Approving PPSOGFs” procedure as of the effective date listed above.