	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	9002.17
	PROGRAM DOCUMENT: **Pediatric** **Allergic Reaction / Anaphylaxis**	Initial Date:	04/25/95
		Last Approval Date:	11/14/19
		Effective Date:	07/01/21
		Next Review Date:	03/01/23

EMS Medical Director

EMS Administrator

Purpose:

A. To ~~serve as~~ establish treatment standards in treating pediatric patients with signs and symptoms of allergic reaction and/or anaphylaxis.

Authority:

A. California Health and Safety Code, Division 2.5
B. California Code of Regulations, Title 22, Division 9

Definitions:

A. ~~ALLERGIC REACTION~~ Allergic Reaction**:** A local response to an antigen involving skin (rash, hives, edema, nasal congestion, watery eyes, etc.) with normal vital signs.
B. ~~ANAPHYLAXIS~~ Anaphylaxis: A systemic response to an antigen involving two (2) or more organ systems OR any involvement of the upper and/or lower respiratory systems OR any derangement of vital signs.
C. High Risk Allergic Reaction: Allergic reaction with a history of anaphylaxis, or significant exposure with worsening symptoms. High-risk allergic reactions should be monitored closely for deterioration, and treated as Anaphylaxis for any worsening symptoms.

Notes:

A. Any involvement of the respiratory system (wheezing, stridor), or oral/facial edema, will be treated as anaphylaxis. Remember that allergic reactions may deteriorate into anaphylaxis-reassess often and be prepared to treat for anaphylaxis.

Protocol:

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ALLERGIC REACTION:

1. Supplemental O2 as necessary to maintain SpO_2 ~~SpO2~~ ≥ 94%. Use lowest concentration and flow rate of O2 as possible. Consider Noninvasive Ventilation.
2. Airway adjuncts as needed.
3. Remove sting/injection mechanism.

ANAPHYLAXIS:

1. Administer Epinephrine auto-injector if needed:
    - 15-30kg Epinephrine Auto Injector 0.15 mg IM. No repeat. Record time of injection
    - > 30kg Epinephrine Auto Injector 0.3 mg IM. No repeat. Record time of injection.
2. Transport and begin therapy simultaneously.

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ALLERGIC REACTION:

1. Consider **Diphenhydramine:**
    - 1 mg/kg Per Oral (PO), IV/IO/IM to a maximum of 50 mg.
2. Consider vascular access.
3. Cardiac monitoring
4. Reassess

ANAPHYLAXIS:

1. **Epinephrine**: 0.01 mg/kg of 1:1,000, Intramuscular (IM) to a maximum of 0.3 mg.
    - Repeat every 15 min. to a maximum of three (3) doses, until a minimal Systolic Blood Pressure (SBP), for patient's age, is reached or improvement of symptoms
2. Establish vascular access. If hypotensive, give 20 ml/kg bolus of NS, reassess after each bolus. Monitor and reassess.
3. Cardiac Monitoring
4. **Diphenhydramine**: 1 mg/kg IV, IO or IM, to a maximum of 50 mg.
5. **Albuterol**: 2.5 mg (3 ml unit dose) Hand Held Nebulizer (HHN) for wheezing. Reassess after first treatment, may be repeated as needed based on reassessment.

If no signs of improvement and patient in extremis (stridor, persistent hypotension, etc.) administer:

1. **Epinephrine:** 0.01 mg/ml (10mcg/ml) – 0.5-2 ml every (5-20 mcg) IV/IO every 2-5 minutes, for stridor and hypotension. Titrate to a minimal systolic blood pressure (SBP), for patient's age, improvement of symptoms, or a total of 0.3 mg is given.
   NOTE: Monitor SBP while administering/titrating.

Cross Reference: PD# 8837 - Pediatric Airway Management
PD# 8829 – Noninvasive Ventilation (NIV)