SAN FRANCISCO EMERGENCY MEDICAL SERVICES AGENCY

Effective: 01/01/11 **Protocol: P-040**
Supersedes: 09/01/06

PEDIATRIC ALLERGIC REACTION

INFORMATION NEEDED

History of exposure to common allergens (bee stings, seafood, nuts, medications), prior allergic reactions

OBJECTIVE FINDINGS

MILD TO MODERATE

- Wheezing, mild bronchospasm
- Respiratory distress, retractions
- Itching, rash, hives
- Nausea, weakness, anxiety
- Normotensive for age, tachycardia, SaO_2 > 95%

BLS Treatment	ALS Treatment
• Perform Field Primary Survey, ensure ABC's, oxygenation, ventilation, BVM . • High flow oxygen by mask if mild to moderate distress. BVM for decreased tidal volume or decreased LOC. • Pulse oximetry is encouraged. • Position of comfort. • Routine Medical Care.	• Cardiac monitor. • IV or IO of NS (as able). • **Albuterol** 2.5 mg/3 ml NS in a nebulizer: Pt. < 5 kg = 1 ml* Pt. 5 - 20 kg = 2 ml* Pt. > 20 kg = 3 ml *Add 1-2 ml NS to a give total volume of 3 ml in nebulizer. • Repeat prn. May be given continuously. • If patient is unable to use nebulizer, consider **Epinephrine** (1:1000) 0.01 mg/kg SQ. Repeat in 5 min if allergic reaction is severe. PRN x 1 to max single dose 0.3 mg. See PRECAUTIONS AND COMMENTS. • **Diphenhydramine** 1 mg/kg IM, IV or IO; max dosage 25 mg.

OBJECTIVE FINDINGS

SEVERE = ANAPHYLAXIS

- Abnormal appearance (agitation, restlessness, somnolence).
- Signs of diminished perfusion including weak brachial pulse, delayed capillary refill, pale or cool skin.
- Respiratory failure (grunting, flaring, severe retractions).
- Stridor.
- Bradycardia.
- SaO_2 < 95% on RA.

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SEVERE = ANAPHYLAXIS (continued)

BLS Treatment	ALS Treatment
• Perform Field Primary Survey, ensure ABC's, oxygenation, ventilation, BVM. • High flow oxygen by mask if mild to moderate distress, BVM for decreased tidal volume or decreased LOC. • Pulse oximetry if available. • Shock position prn . • Routine Medical Care.	• Cardiac monitor. • IV of NS (as able). • **Epinephrine** (see PRECAUTIONS AND COMMENTS): ○ INTRAVENOUS: **Epinephrine** (1: 10,000) 0.01 mg/kg IVP or IO max single dose 0.1mg-- dilute with NS to volume of 10 ml, may repeat x1 in 5 min. as level of distress indicates. ○ Manage airway according to the AIRWAY MANAGEMENT PROTOCOL (P-004). ○ SUBCUTANEOUS: If no IV access **Epinephrine** (1:1000) 0.01 mg/kg SQ, repeat in 5 min. x 1 prn, max single dose 0.3 mg. *For wheezing:* • **Albuterol** 2.5 mg/3 ml NS in a nebulizer Pt. < 5 kg = 1 ml* Pt. 5 - 20 kg = 2 ml* Pt. > 20 kg = 3 ml *Add 1-2 ml NS to a give total volume of 3 ml in nebulizer. • Repeat prn. Give continuously for severe wheezing. *For shock:* • Fluid challenge, 20 ml/kg IV or IO of NS, reassess and repeat prn to 60 ml/kg. • **Diphenhydramine** 1 mg/kg IM, IV or IO, max dose 50 mg.

DOCUMENTATION

Rash.
Respiratory status (effort, lung sounds.)
If respiratory distress present, **Albuterol**, **Epinephrine** or **Diphenhydramine** given as indicated.

PRECAUTIONS AND COMMENTS

- Use length-based tape to double check drug dose.
- Ensure proper concentration and dosage of **Epinephrine** for route of administration; utilize with caution and only in severe allergic reactions.
- Intravenous **Epinephrine** must be diluted with NS to volume of 10 ml to avoid

cardiovascular side effects such as coronary vasoconstriction and life threatening dysrhythmias (i.e. ventricular fibrillation).

- Ensure airway patency, oxygenation and ventilation. If tidal volume is decreased or decreased level of consciousness, consider use of BVM early. Manage airway according to the Airway Management Protocol (P-004).
- ✦ Edema of any of the soft structures of the upper airway can severely compromise the pediatric patient's airway. Manage airway according to the Airway Management Protocol (P-004).