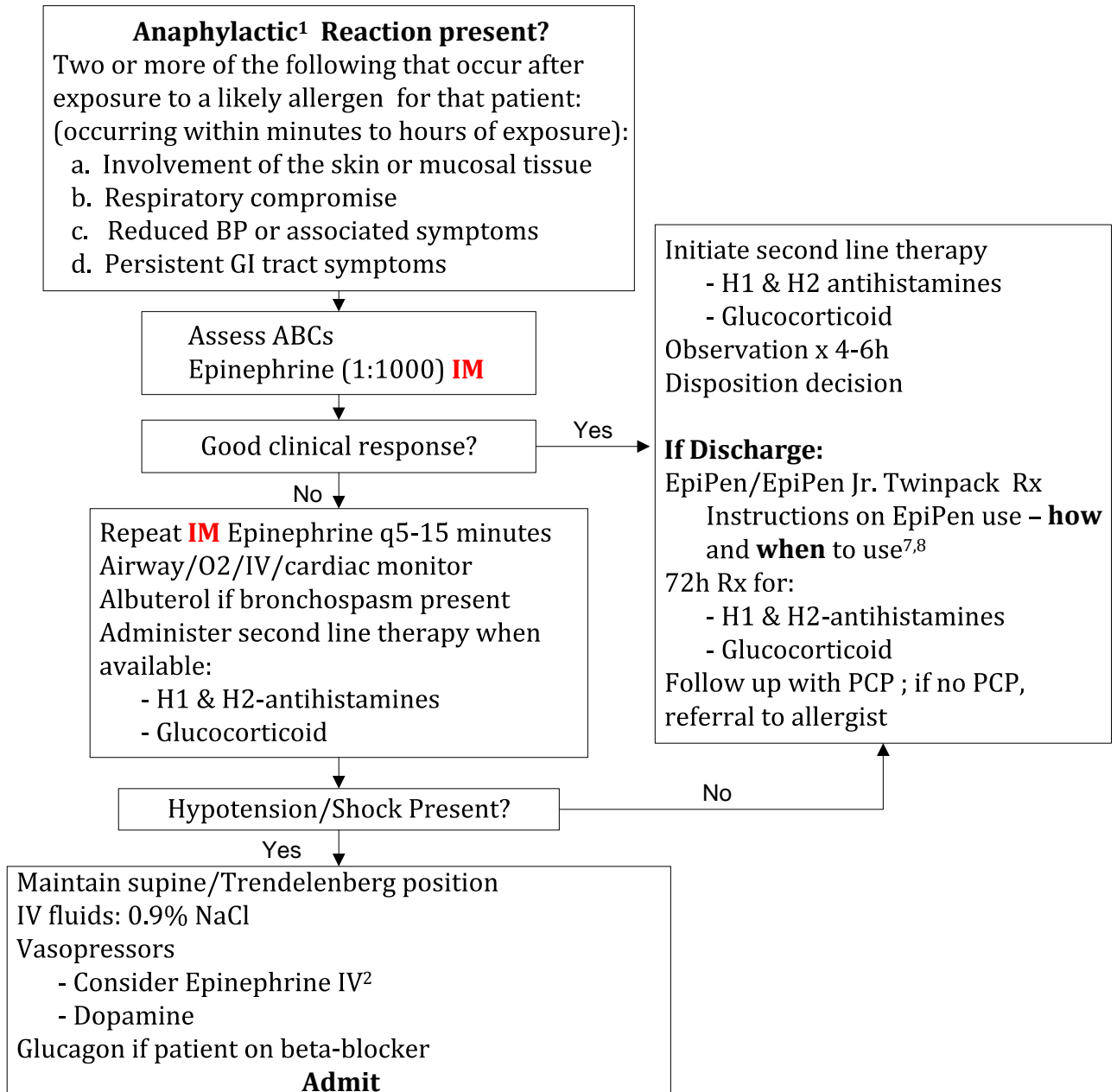


Diagnosis and Management of Anaphylaxis



Epinephrine (1:1000) IM: 0.01 mg/kg per dose

Adult max per dose: 0.5 mg

Child³ max per dose: 0.5 mg

Epinephrine (1:10,000 to 1:100,000 dilution²) IV (Never give 1:1000 IV)

***Should only be considered during cardiac arrest or to profoundly hypotensive patients who have failed to respond to IV volume replacement and several IM doses of epinephrine.

Adult²: 1 - 10 mcg/min

Child⁵: 0.1 - 10 mcg/min

Albuterol: 2.5-5 mg in 3mL NaCl

0.9% NaCl²

Adult: 1-2 L @ 5-10 mL/kg in 5 min

Child: 30 mL/kg in first hour

Glucagon: given IV over 5 minutes (follow with 5-15 mcg/min infusion)

Adult: 1-5 mg

Child: 20-30 mcg/kg; max dose 1mg

Drug Doses

H1-antihistamine: Diphenhydramine q6h

Adult: 1-2 mg/kg ; max per dose 50 mg IV

Child: 1-2 mg/kg; max per dose 50 mg IV

H2-antihistamine: q6h

Adult: **Ranitidine** 50 mg IV or **Cimetidine**

4mg/kg IV; max per dose 300 mg

Child: **Ranitidine** 1 mg/kg; max dose 50 mg IV

Glucocorticoid: Methylprednisolone/Prednisone

Given q6h IV or bid PO

Adult: 1-2 mg/kg/d

Child: 1-2 mg/kg/d

This guideline was ratified by the emergency department faculty at Maine Medical Center in December 2010. It reflects our expert opinion and is not necessarily applicable to all institutions. It is intended to be a reference for clinicians caring for patients and is not intended to replace providers' clinical judgment.

Produced by Kate Drummond Zimmerman, DO, FACEP

Diagnosis and Management of Anaphylaxis

Definition of Anaphylactic Reaction¹:

Anaphylactic Reaction present (should capture more than 95% of cases of anaphylaxis):

Must fulfill **one** of the following criteria (occurring within minutes to hours of exposure):

1. Acute onset of an illness with involvement of the skin, mucosal tissue, or both (80% of cases). AND AT LEAST 1 OF THE FOLLOWING:
 - a. Respiratory compromise
 - b. Reduced BP or associated symptoms of end-organ dysfunction
2. Two or more of the following that occur rapidly after exposure to a likely allergen for that patient:
 - a. Involvement of the skin or mucosal tissue (may be absent in 20% of children with food or insect sting allergy)
 - b. Respiratory compromise
 - c. Reduced BP or associated symptoms
 - d. Persistent GI tract symptoms
3. Reduced BP after exposure to known allergen for that patient:
 - a. Infants and children: low systolic BP or greater than 30% decrease in systolic BP
 - b. Adults: systolic BP less than 90 mmHg or greater than 30% decrease from that person's baseline.

***IM Epinephrine (1:1000) Doses in Children ³	
Age	
Greater than 12 years	0.5 mg
	0.3 mg if child is small or prepubertal
6-12 years	0.3 mg (EpiPen)
Less than 6 years	0.15 mg (EpiPen Jr.)

References & Recommended Readings:

1. Sampson, HA et al. Second symposium on the definition and management of anaphylaxis: summary report – Second National Institute of Allergy and Infectious Disease/Food Allergy and Anaphylaxis Network Symposium. *J Allergy Clin Immunol* 2006; 117: 391-7.
2. Lieberman, P et al. The diagnosis and management of anaphylaxis: an updated practice parameter. *J Allergy Clin Immunol.* 2005; 115(3): S483-523.
3. Tse, Y et al. Emergency management of anaphylaxis in children and young people: new guidance from the Resuscitation Council (UK). *Arch Dis Child Educ Pract Ed.* 2009; 94: 97-101.
4. Simons, FER et al. Anaphylaxis: recent advances in assessment and treatment. *J Allergy Clin Immunol.* 2009; 124(4): 625-636.
5. Liberman, D et al. Management of anaphylaxis in children. *Pediatric Emergency Care.* 2008; 24(12): 861-869.
6. Soar, J et al. Emergency treatment of anaphylactic reactions – Guidelines for healthcare providers. *Resuscitation.* 2008; 77: 157-169.
7. Davis, J. Self-injectable epinephrine for allergic emergencies. *Journal of Emergency Medicine.* 2009; 37(1): 57-62.
8. <http://www.epipen.com/> (has instructional videos on how to administer the EpiPen)