Anaphylaxis

Associated Power Plans:
ED: EDP Anaphylaxis CPG; Inpt: Anaphylaxis CPG

Children's Mercy KANSAS CITY | Evidence Based Practice

QR code for mobile view

Abbreviations (lab & radiology excluded):
CR: Cardiorespiratory
Epi: Epinephrine
ED: Emergency Department
IM: Intramuscular
LOC: Level of Care
Pts: Patients

Pts >3 months old with suspected anaphylaxis
For Oncology Pts with Infusion Reaction refer to specific CPM

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Rapid Assessment
Consider activating emergency response and/or arranging transfer to higher level of care if needed

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1. Give Epi IM mid-outer thigh
   a. IM Epi Dosing
      <7.5 kg: 0.01 mg/kg *(if wt based dose not available, use lowest dose auto injector)*
      7.5 - <30 kg: 0.15 mg *(if not available, use 0.3mg)*
      ≥ 30 kg: 0.3 mg
2. Place patient in supine position, if tolerated, and avoid sudden changes in position (i.e. standing, ambulating)
3. Provide supplemental O_2 if respiratory or cardiovascular symptoms
4. Place CR monitor
5. Obtain vital signs including blood pressure q 5-15 min
6. Consider placing IV & give 20 ml/kg NS fluid bolus

*When to obtain tryptase

Steroids and antihistamines are not routinely indicated

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Re-evaluate within 5 min of IM Epi

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Anaphylaxis resolved?

Yes → If indicated treat secondary symptoms

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High risk patients?

- No → Monitor 1-2 hours after anaphylaxis has resolved
- Yes → Monitor 4 hours after anaphylaxis has resolved

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Discharge criteria met?

- No → Continue supportive management and assessment of disposition
- Yes → Anaphylaxis Education (Complete education with parents during observation period)

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- Prescribe Epi auto-injector
- Discharge with PCP follow-up
- Consider referral to Allergy Clinic

No →

- Repeat IM Epi q 5 min
- Start Epi drip after 3rd IM Epi or continue IM if drip not feasible
- Continue fluid resuscitation
- Consider racemic Epi for stridor due to laryngeal edema
- If pt on beta-blocker, consider glucagon
- Consider alternative diagnosis or continued exposure

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If not already started, Activate emergency response for your setting while arranging early transfer to higher LOC

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Continue supportive management and assessment of disposition

Anaphylaxis Criteria

1. Sudden onset of illness with involvement of skin, mucosa, or both (i.e. hives, itching, flushing, swollen lips/tongue/uvula)
   a. Plus at least one of the following:
      i. Sudden respiratory symptoms
      ii. Sudden reduced blood pressure or end-organ dysfunction (hypotonia, syncope, incontinence, mottling)

OR

2. Two or more of the following after exposure
   a. Sudden skin or mucosal changes
   b. Sudden respiratory symptoms (dyspnea, cough, stridor, hypoxemia)
   c. Sudden reduced blood pressure
   d. Sudden GI symptoms

OR

3. Reduced blood pressure or symptoms after known exposure
   a. Age specific low systolic blood pressure or > 30% decrease in systolic blood pressure from baseline

Interventions that do **NOT** treat **anaphylaxis** or prevent biphasic reaction, but may help control ***secondary symptoms***:

- Antihistamines for urticaria
  - cetirizine (preferred) **OR**
  - diphenhydramine
- Albuterol for wheezing
- Glucocorticoids for wheezing with known asthma (Asthma CPG)

High Risk for Severe Anaphylaxis or Biphasic Reaction

- > 1 Epi dose
- Hypotension during event
- History of biphasic reaction
- History of severe asthma
- Delayed onset of symptoms from exposure (>1 hour or unknown)
- Delay in receiving Epi > 1 hour from onset

Discharge Criteria

- Tolerating PO
- Vital signs stable
- No symptom progression (hives may persist)
- Family has access to care
- For pts with asthma ensure they have asthma medication

ICU Criteria

- Signs and symptoms of anaphylaxis or shock persist after 2 doses of Epi

Outside Transfers

- Consider ED vs PICU (Direct admission to the floor is NOT recommended.)
- Transfer by local EMS or CMH transport (NOT private vehicle)

Anaphylaxis Education

- Epi auto-injector training
- Anaphylaxis Action Plan

Contact: EvidenceBasedPractice @cmh.edu

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For additional information, link to synopsis

This care process model/clinical practice guideline is meant as a guide for the healthcare provider, does not establish a standard of care, and is not a substitute for medical judgment which should be applied based upon the individual circumstances and clinical condition of the patient.