Anaphylaxis v6.6: ED Higher Initial Clinical Concern

Approval & Citation | Summary of Version Changes | Explanation of Evidence Ratings

Inclusion Criteria
≥ 3 months with suspected anaphylaxis

Exclusion Criteria
- Blood transfusion reactions that are not anaphylaxis
- Symptoms clearly attributable to other causes

High clinical concern for anaphylaxis?

NO → Go to Lower Clinical Concern

YES ↓

- **Give epinephrine 0.01mg/kg IM (max 0.3mg)** in lateral thigh
- Repeat every 5 min as needed (can give more frequently if symptoms are severe)

↓

- Place on monitors, vitals every 5 minutes
- Place patient supine if tolerated
- Avoid sudden changes in position, especially to standing
- Administer O2 until O2 Sat is known, and to keep O2 saturation > 90%

↓

- If MAP <5th %ile → place IV and administer N/S 20 cc/kg
- If bronchospasm → place IV and give albuterol 20 mg / hr or 8 puffs

↓

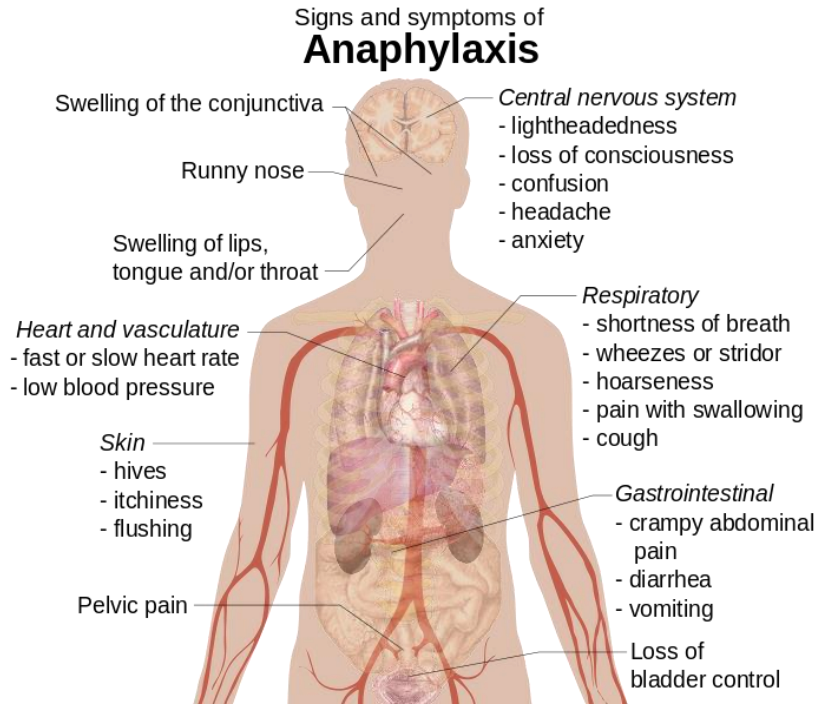
Observe for 5-10 mins
Continue monitoring with vitals every 5 minutes

↓

Has patient improved?

YES → Go to Mild

NO → Go to Moderate - Severe



Symptoms Suggestive of Anaphylaxis

Mild Symptoms:
- Generalized erythema, hives, angioedema

Moderate Symptoms:
- Chest or throat tightness
- Dyspnea, stridor, wheeze
- Nausea, vomiting, abdominal pain
- Dizziness (presyncope), diaphoresis

Severe Symptoms:
- Cyanosis, saturation <= 92%
- Hypotension, collapse
- Confusion, LOC
- Incontinence

Risk Factors for Anaphylaxis
- Possible exposure to know allergen
- Home anaphylaxis management plan

Adapted from Brown, 2004

Historical factors that increase risk and warrant a lower threshold for epinephrine:
- prior anaphylaxis involving respiratory distress
- hypoxia
- hypotension
- neurologic compromise

From Wang 2017

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For questions concerning this pathway, contact: anaphylaxis@seattlechildrens.org

Last Updated: December 2023
Next Expected Review: August 2022

Anaphylaxis v6.6: ED Lower Initial Clinical Concern

Approval & Citation | Summary of Version Changes | Explanation of Evidence Ratings

Inclusion Criteria
≥ 3 months with suspected anaphylaxis

Exclusion Criteria
- Blood transfusion reactions that are not anaphylaxis
- Symptoms clearly attributable to other causes

Lower clinical concern for anaphylaxis?

YES

Use the Anaphylaxis Score Assisting Providers (ASAP)

Score 1-4

Rapid symptom progression or epinephrine indicated per patient action plan?

NO

Go to Mild

YES

Score ≥5

Epinephrine is likely indicated. Huddle with team to discuss

- **Give epinephrine 0.01mg/kg IM (max 0.3mg)** in lateral thigh
- Repeat every 5 mins as needed (can give more frequently if symptoms are severe)

Has patient improved?

YES

Go to Mild

NO

Go to Moderate - Severe

Symptoms Suggestive of Anaphylaxis

Mild Symptoms:
- Generalized erythema, hives, angioedema

Moderate Symptoms:
- Chest or throat tightness
- Dyspnea, stridor, wheeze
- Nausea, vomiting, abdominal pain
- Dizziness (presyncope), diaphoresis

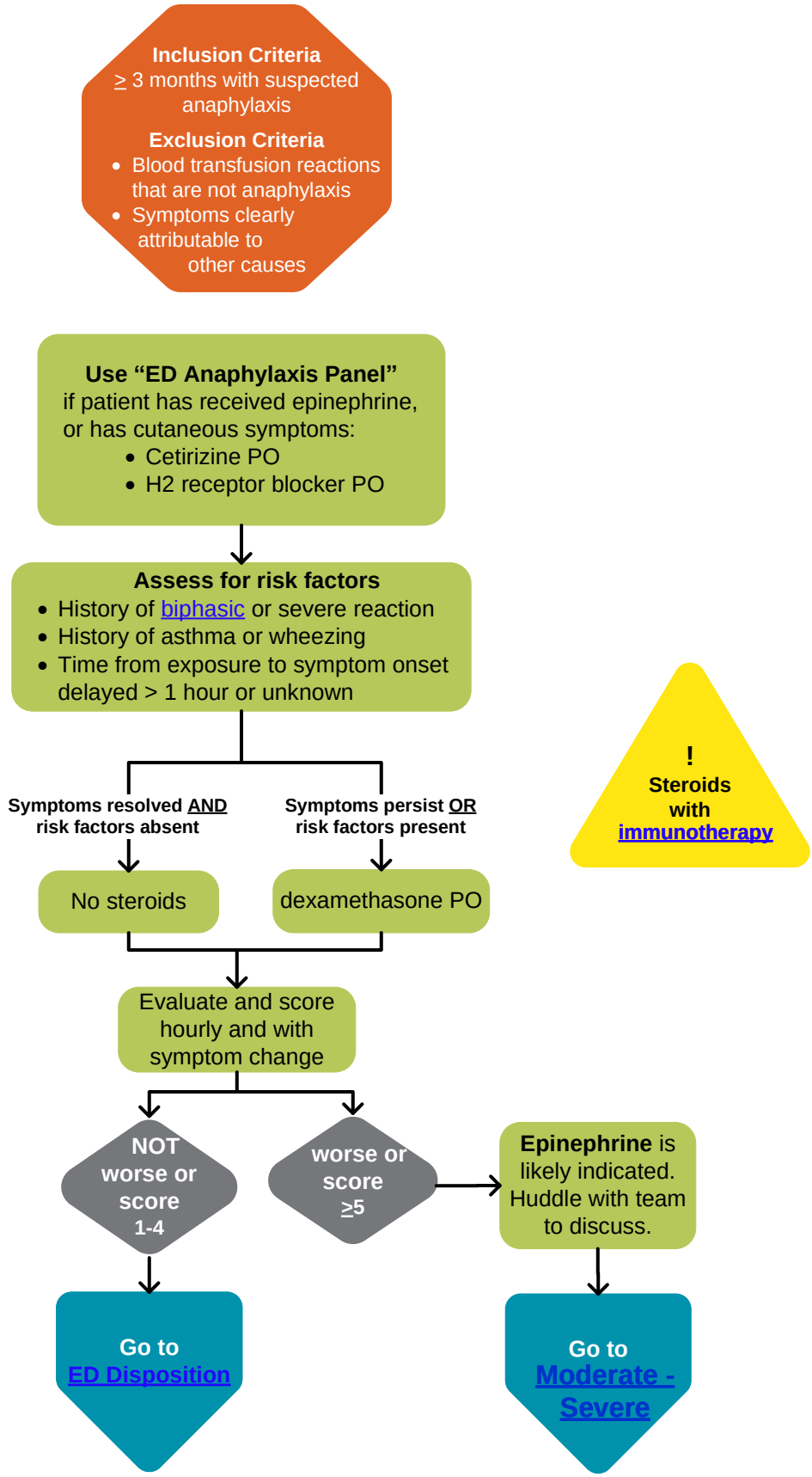
Severe Symptoms:
- Cyanosis, saturation <= 92%
- Hypotension, collapse
- Confusion, LOC
- Incontinence

Risk Factors for Anaphylaxis
- Possible exposure to know allergen
- Home anaphylaxis management plan

Adapted from Brown, 2004

Anaphylaxis v6.6: ED Management – Mild

Resolved after epinephrine or no epinephrine given



Anaphylaxis v6.6: ED Management – Moderate/Severe

Approval & Citation | Summary of Version Changes | Explanation of Evidence Ratings

Epinephrine given

Inclusion Criteria
≥ 3 months with suspected anaphylaxis

Exclusion Criteria
- Blood transfusion reactions that are not anaphylaxis
- Symptoms clearly attributable to other causes

Epinephrine has been given & observed for 5-10 mins

YES

Score patient using **ASAP**

Improved or score 1-4

Go to Mild

NOT improved or score ≥5

Give epinephrine 0.01mg/kg IM (max 0.3mg) in lateral thigh

Use "ED Anaphylaxis Panel"
- Place IV (if not already done)
- Cetirizine PO (unless unable to tolerate PO, then diphenhydramine IV)
- H2 Blocker IV
- MethylPrednisolone IV

!
Steroids with immunotherapy

Observe for 5-10 min
-continue monitoring, vitals every 5 minutes

Improved or score 1-4

Go to ED Disposition

NOT improved or score ≥5

- Consider **epinephrine 0.01mg/kg IM (max 0.3mg)** in lateral thigh
- Repeat every 5 min as needed (can give more frequently if symptoms are severe)
- Start epinephrine drip after 3rd IM dose
- PICU consult, admit to PICU

For questions concerning this pathway, contact: anaphylaxis@seattlechildrens.org

Last Updated: December 2023
Next Expected Review: August 2022

Anaphylaxis v6.6: ED Disposition

Approval & Citation | Summary of Version Changes | Explanation of Evidence Ratings

Urgent Care Transfer Recommendations

Transfer patients who have received IM Epinephrine to the Emergency Department

- Patients should be transported by ALS (or an ambulance crew who is able to give IM epienphrine)
- Patients who have low BP or require more than one dose of epinephrine, consider calling 911 (or Code Blue)
- Patient requiring observation after 1 hour- transfer to ED

!

If not improving, consider alternate diagnoses

Patient received epinephrine?

NO

- Observe for 1 hour if symptoms are stable, or 1 hour after any symptom progression.
- If anaphylaxis high risk by history: observe for 4 hours from either exposure or any symptom progression.

High risk by history:

- History of anaphylaxis
- History of life-threatening allergies (versus environmental)
- Two systems involved at any point

YES

Meets admission Criteria?

NO

Assessment

Observe for 4 hours from the latest of: exposure, epinephrine administration, or any worsening of symptoms

Observe for 3 hours "**LIKE A ROSE**" patients meeting all these criteria :

- ASAP – max 2, points for exposure only
- No hypotension or syncope during event
- No wheeze, stridor or resp distress during event
- No URI symptoms even if baseline
- No sleepiness even if late in day
- No history of biphasic reactions
- Reaction to a food, not a medication or a sting
- Parents comfortable with early discharge
- Epinephrine auto-injector in hand

Discharge Criteria

- Score 1-4, no symptom progression during observation period
- Teaching completed
- Tolerating PO intake

Discharge Instructions

- Provide handout: Food Allergy and Anaphylaxis (PE 3772)
- **Rx epinephrine auto-injector** and provide **training**
- **RASH Hx,** discharge with
  - Cetirizine prn
  - H2 receptor blocker PRN x3 days
- **No RASH Hx,** discharge with no meds
- Recommend allergist referral
- F/U PCP within 3 days

YES: Acute Care

Acute Care Admit Criteria

- Persistent symptoms beyond rash or score ≥ 5 after 2 epinephrine
- Persistent wheeze or bronchospasm after 1 epinephrine
- Biphasic reaction

YES: PICU

PICU Criteria

- Persistent MAP <5% ile
- Altered mental status after 1 epinephrine
- ≥ 3 doses of epinephrine given with persistent symptoms beyond rash/ angioedema
- Persistent cardiovascular compromise
- Persistent respiratory distress
- Continuous albuterol for > 1 hour

For questions concerning this pathway, contact: anaphylaxis@seattlechildrens.org

Last Updated: December 2023
Next Expected Review: August 2022

Anaphylaxis v6.6: Inpatient Continued Management

Approval & Citation | Summary of Version Changes | Explanation of Evidence Ratings

Inclusion Criteria
≥ 3 months with suspected anaphylaxis

Exclusion Criteria
- Blood transfusion reactions that are not anaphylaxis
- Symptoms clearly attributable to other causes

Use "Anaphylaxis for Inpatient" Panel

Patients to receive adjunctive medications below:
- Prednisone/prednisolone daily
- If persistent cutaneous symptoms:
  - Cetirizine PRN
  - H2 receptor blocker

PRN medications:
- Epinephrine 0.01mg/kg IM (max 0.3mg) in lateral thigh for anaphylaxis
- Albuterol 8 puffs for bronchospasm
- Ondansetron for nausea or vomiting

Symptoms Suggestive of Anaphylaxis

Mild Symptoms:
- Generalized erythema, hives, angioedema

Moderate Symptoms:
- Chest or throat tightness
- Dyspnea, stridor, wheeze
- Nausea, vomiting, abdominal pain
- Dizziness (presyncope), diaphoresis

Severe Symptoms:
- Cyanosis, saturation <= 92%
- Hypotension, collapse
- Confusion, LOC
- Incontinence

!

If persistent wheezing without other anaphylaxis symptoms, evaluate for treatment of asthma (off pathway)

Be prepared for epinephrine administration – have acute anaphylaxis kit readily available **(Omnicell)**

Anaphylaxis Score Assisting Providers
- Consider using as a supplemental aid to help in the recognition of anaphylaxis

>4 hours since IM epinephrine

YES

NO

0- 4 hours after epinephrine or symptom progression

- Avoid sudden changes in position, especially to standing
- Continuous monitoring CR and O2 sat
- Vitals (BP, HR, RR) and skin check **Q 1 hour**
- See above for symptoms of anaphylaxis

4 – 8 hours

- CR and O2 sat monitoring
- Vitals (BP, HR, RR) and skin check **Q 2 hours**
- See above for symptoms of anaphylaxis

8- 16 hours, No epinephrine for 8 hours

- O2 sat monitoring if respiratory symptoms
- Routine Vitals and skin check **Q 4 hours**
- See above for symptoms of anaphylaxis

Discharge: For patients admitted with anaphylaxis

D/C Criteria
- >12 hours since last epinephrine
- Teaching completed
- PCP F/U arranged within 72 hours
- Allergist referral initiated
- Tolerating PO intake

If risk of allergen re-exposure provide:
Food Allergy and Anaphylaxis (PE 3772)

Discharge Epinephrine:
- Epi Auto-injector in hand (not sent to outside pharmacy) pharmacy to train in use; watch video on Get Well/FRC

Discharge Medications:
If persistent rash:
- Cetirizine PRN x3 days
- H2 receptor blocker PRN x3 days

If rash or wheezing:
- Prednisone x3 days

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For questions concerning this pathway, contact: anaphylaxis@seattlechildrens.org

Last Updated: December 2023
Next Expected Review: August 2022

Anaphylaxis v6.6: Inpatient Acute Onset

Approval & Citation | Summary of Version Changes | Explanation of Evidence Ratings

Epinephrine should be Pre-ordered and readily available

- High-risk medications with epinephrine in orderset
- Recent (~24h) exposure to known allergen
- Diagnosis of anaphylaxis this admission
- Home Rx for Epinephrine auto-injector
- Home anaphylaxis action plan

Inclusion Criteria

≥ 3 months with suspected anaphylaxis

Exclusion Criteria

- Blood transfusion reactions that are not anaphylaxis
- Symptoms clearly attributable to other causes

Symptoms Suggestive of Anaphylaxis

Mild Symptoms:

- Generalized erythema, hives, angioedema

Moderate Symptoms:

- Chest or throat tightness
- Dyspnea, stridor, wheeze
- Nausea, vomiting, abdominal pain
- Dizziness (presyncope), diaphoresis

Severe Symptoms:

- Cyanosis, saturation <= 92%
- Hypotension, collapse
- Confusion, LOC
- Incontinence

Risk Factors for Anaphylaxis

- Possible exposure to know allergen
- Home anaphylaxis management plan

Adapted from Brown, 2004

High probability of anaphylaxis?

- No → Continue to observe for further signs and symptoms
- Yes → Stop Currently-Infusing Medications

Is epinephrine pre-ordered and readily available?

- Yes → **Give epinephrine 0.01mg/kg (max 0.3mg)** intramuscularly (IM) in lateral thigh; repeat as needed
  DO NOT DELAY WHILE WAITING FOR TEAM OR RRT TO ARRIVE
  → **Call RRT**
  Call provider with STAT page
- No → **Call Code Blue**
  → Code Team to give IM epinephrine **or** providers can order/give epinephrine before they arrive

! Call Code Blue for rapidly progressive symptoms

Anaphylaxis Score Assisting Providers

- Consider using as a supplemental aid to help in the recognition of anaphylaxis

- Place supine
- Provide O2 if sats < 90% or in distress
- If MAP <5% ile → place IV and administer N/S 20 cc/kg
- If bronchospasm → place IV and give albuterol 8 puffs

! **Steroids with immunotherapy**

Observe for 5-10 mins
Continue monitoring with vitals every 5 minutes

Anaphylaxis Resolved

- Yes →
  - If not already done, order one dose each of cetirizine + H2 receptor blocker IV/PO
  - Go to the Inpatient Continued Management
- No →
  - **Repeat epinephrine 0.01mg/kg** (max 0.3mg) intramuscularly (IM) in lateral thigh
  - Plan for PICU transfer

Last Updated: December 2023
Next Expected Review: August 2022

ASAP

1. **If the patient is clearly in anaphylaxis:**
   GIVE EPINEPHRINE FIRST
   DO NOT WAIT TO SCORE THE PATIENT
2. **Use the score:**
   a) To aid in the diagnosis of anaphylaxis and need for epinephrine, for patients where the diagnosis is unclear.
   b) To obtain a symptom score, sometimes after treatment is initiated, in order to track symptom severity over time.

Actions based on Anaphylaxis Score:

SCORE 1 - 4 pt. **Acute anaphylaxis may still be developing.** Routine use of epinephrine Is not indicated, but may be appropriate if symptoms are recent and progressing rapidly, or if indicated per the patient's anaphylaxis action plan. Place on monitors, observe closely in an environment with staff trained to monitor and treat for anaphylaxis, prepare to treat if needed.

SCORE ≥ 5 pts. **Acute anaphylaxis is very likely.** In the appropriate clinical context, epinephrine is indicated.

This score is only a guide. The decision to give epinephrine is a clinical decision that may vary by patient

ANAPHYLAXIS SCORE ASSISTING PROVIDERS (ASAP) *** SCORE ONLY CURRENT SYMPTOMS AND SIGNS, UNLESS 1 HOUR TIME FRAME IS NOTED (SKIN, ABDOMINAL) ***		
SKIN & MUCOSA	❑ **0 Absent:** No signs or symptoms ❑ **1 Mild:** Mild itching; =3 hives; flushing, erythema or hives that resolved in past 1 hour after antihistamine ❑ **2 Moderate (Mod):** Severe itching; >3 hives; flushing, erythema or raised rash (patchy or onset over >1 hour); face or lip edema, angioedema, red eyes ❑ **3 Severe:** Rapid (WITHIN THE PAST 1 HOUR) whole body flushing, erythema or hives; tongue or intraoral edema	
RESPIRATORY	❑ **0 Absent:** No signs or symptoms ❑ **1 Mild:** Occasional sneeze or cough; mild nasal congestion or runny nose; throat tickle; hoarseness ❑ **2 Mod:** Frequent sneezing or cough; severe nasal congestion or runny nose; subjective trouble swallowing or breathing, throat or chest tightness; chest pain; coarse breath sounds ❑ **3 Severe:** Stridor, wheeze, drooling or not swallowing, sniff position, dyspnea, diminished breath sounds, hypoxia	
CARDIOVASCULAR	❑ **0 Absent:** No symptoms, normal pulse, no hypotension (MAP = 5th %ile) ❑ **1 Mild:** Tired; lightheaded; mildly dizzy; unexplained tachycardia; delayed capillary refill. ❑ **2 Mod:** Very dizzy/near fainting; pallor; weak pulse; sweaty; somnolent. Infants: listless or lethargic ❑ **3 Severe:** Hypotension (MAP <5th %ile); cyanosis; confusion; fainting, loss of consciousness, bradycardia, arrest.	
ABDOMINAL & PELVIC	❑ **0 Absent:** No signs or symptoms ❑ **1 Mild:** Nausea without vomiting; mild abdominal cramps or pain; uterine cramps; urinary incontinence ❑ **2 Mod:** Mod-severe pain; or vomiting and/or diarrhea =3 total WITHIN THE PAST 1 HOUR (or since epinephrine if it was given in the past hour) ❑ 3 **Severe:** Vomiting and/or diarrhea >3 total WITHIN THE PAST 1 HOUR (or since epinephrine if it was given in past hour)	
NEUROLOGICAL	❑ **0 Absent:** No signs or symptoms ❑ **1 Mild: A**nxious (without explanation); headache In infants: persistent crying or irritability ❑ **2 Mod:** Feeling of impending doom (like something terrible is about to happen)	
RISK FACTORS	❑ **0 Absent:** No suspected exposure, no history of allergies ❑ **1 Moderate Risk: S**ymptom onset 1-10 hours after possible exposure AND no allergy history; known allergies with no exposure ❑ **2 High Risk: R**apid onset, e.g. = 1 hour post exposure (food, drugs, contrast); OR known allergies with possible exposure	
	TOTAL SCORE	

Return to Lower Initial Concern | Return to Moderate/Severe | Return to Inpt Cont Mgmt | Return to Inpt Acute Onset

Definition of hypotension & resuscitation goals

Age	Critical Hypotension MAP ≤ 1% for age	Hypotension MAP ≤ 5% for age	Resuscitation Goal (Minimum) MAP ≥ 10% for age	Normotension (Median for Age) MAP = 50% for age
0-30 days	32	≤ 39	≥ 42	57
30-90 days	37	≤ 44	≥ 47	62
91 days-1 year	41	≤ 48	≥ 52	68
>1-2 years	41	≤ 48	≥ 53	70
>2-4 years	41	≤ 50	≥ 55	70
>4-6 years	43	≤ 51	≥ 56	70
>6-10 years	46	≤ 54	≥ 58	72
>10-13 years	47	≤ 55	≥ 60	74
>13 years	48	≤ 57	≥ 61	76

Resolution of hypotension = Two blood pressure measurements obtained 15 minutes apart with MAP ≥10 %ile

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Return to Lower Initial Concern | Return to Moderate/Severe | Return to Inpt Cont Mgmt | Return to Inpt Acute Onset

Patient Position in Anaphylaxis

Guidelines (i.e. Lieberman 2010) recommend that patients in anaphylaxis be placed **supine**, based on a pathology study that primarily involved adults:

Pathology series of 214 anaphylaxis deaths (including children)

- 38 anaphylactic shock deaths occurred outside hospital
  - 10 had info on postural history
    - 4 died within seconds of a change to more upright posture
    - 6 died after they were propped in a sitting position after loss of consciousness
    - Age not mentioned, none reported to be children

"During anaphylactic shock, the capacity of the veins and capillaries expands greatly. While a shocked person is lying down, sufficient blood might return to the vena cava to maintain a reduced circulation, but on the person's sitting up or standing, this venous return stops; the vena cava will then become empty within seconds. There is then no flow through the right side of the heart, and within a few seconds more, no blood will return to the left side of the heart from the lungs. Pulseless electric activity continues, but in the absence of left ventricular filling there can be no contractions; this prevents coronary arterial flow and leads to myocardial ischemia. In less extreme cases, too, the coronary circulation, which is dependent on the diastolic pressure, is likely to become inadequate, because the blood pressure is the product of the cardiac output and the systemic vascular resistance, both of which are low in cases of anaphylactic shock. If this hypothesis is correct, once the vena cava is empty, epinephrine—no matter where or how it is given—could not circulate and so could not reverse the shock."

Lieberman *J Allergy Clin Imm* 2010; Pumphrey *J Allergy Clin Imm* 2003

Return to Higher Initial Concern

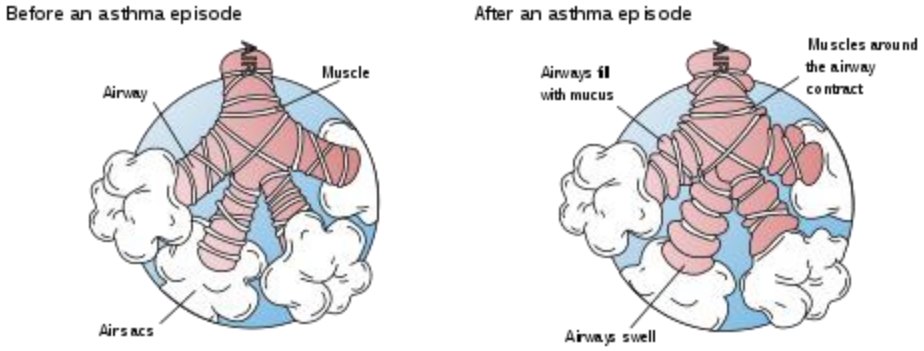
Bronchospasm

Bronchospasm or a bronchial spasm is a sudden constriction of the muscles in the walls of the bronchioles. It is caused by the release (degranulation) of substances from mast cells or basophils under the influence of anaphylatoxins. It causes difficulty in breathing which can be very mild to severe.

Inflamed airways and bronchoconstriction in asthma. Airways narrowed as a result of the inflammatory response cause wheezing.

Bronchospasms appear as the feature of asthma, chronic bronchitis and anaphylaxis.

Source: Wikipedia 2017



Return to
Higher Initial Concern

Consider alternate diagnoses

Alternate diagnoses for the patients with mild symptoms:

- Resp: choking event, asthma
- Cardiac: vagal syncope, dehydration
- GI: gastroenteritis
- Neurologic: seizure, postural orthostatic tachycardia (POTS)
- Infectious: viral syndrome
- Allergic: simple hives, angioedema
- Psychiatric: psychogenic stridor, panic attack

Alternate diagnoses for patients with mod/severe symptoms:

- Resp: epiglottitis, foreign body aspiration, pulmonary embolism
- Cardiac: myocarditis, infarction, other heart disease
- GI: caustic ingestion, gastroenteritis
- Neurologic: seizure, stroke, increased ICP
- Infectious: sepsis, toxic shock syndrome
- Toxicologic: exposure (organophosphate) overdose (sedative-hypnotic, ACE inhibitor), scombroid poisoning
- Psychiatric: psychogenic stridor, panic attack

Return to
ED Disposition

Corticosteroids and immunotherapy

Before starting corticosteroids on a hematology/oncology patient, please contact the Hematology-Oncology team to see if there is a contraindication due to current therapy, such as immunotherapy.

Return to Mild
Return to Moderate/Severe
Return to Inpt Acute Onset

What is a Biphasic reaction?

- A second wave of reaction after the first wave improved
- Estimated 15% of pediatric anaphylaxis

8 hours after exposure

4 hours after epi

Next morning

- Can be less severe, as severe or more severe than the initial reaction
- Up to 25% of fatal and near-fatal food reactions
- Most within 10 hours, reported up to 72 hours after the initial reaction
- If no biphasic reaction by ED discharge (3.5 - 6 hr observation), the chance after that is 4%

Alqurashi W. Ann Allergy Asthma Immunol. 2015;115(3):217-223

Observation

- How long to observe: 4 hours from latest of symptoms, epinephrine, any worsening

- Indications for Extended Observation
  - Severe reaction of slow onset
  - History of previous biphasic reaction
  - Marked asthmatic component
  - Slow response to treatment
  - Ingested antigen (continuous absorption)
  - Long distance from care

Return to Mild

Evidence Ratings

This pathway was developed through local consensus based on published evidence and expert opinion as part of Clinical Standard Work at Seattle Children's. Pathway teams include representatives from Medical, Subspecialty, and/or Surgical Services, Nursing, Pharmacy, Clinical Effectiveness, and other services as appropriate.

When possible, we used the GRADE method of rating evidence quality. Evidence is first assessed as to whether it is from randomized trial or cohort studies. The rating is then adjusted in the following manner (from: Guyatt G et al. J Clin Epidemiol. 2011;4:383-94.):

Quality ratings are *downgraded* if studies:

- Have serious limitations
- Have inconsistent results
- If evidence does not directly address clinical questions
- If estimates are imprecise OR
- If it is felt that there is substantial publication bias

Quality ratings are *upgraded* if it is felt that:

- The effect size is large
- If studies are designed in a way that confounding would likely underreport the magnitude of the effect OR
- If a dose-response gradient is evident

Guideline – Recommendation is from a published guideline that used methodology deemed acceptable by the team.

Expert Opinion – Our expert opinion is based on available evidence that does not meet GRADE criteria (for example, case-control studies).

Quality of Evidence:

✪✪✪✪ High quality
✪✪✪○ Moderate quality
✪✪○○ Low quality
✪○○○ Very low quality
Guideline
Expert Opinion

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Summary of Version Changes

Version 1.0 (8/29/2017): Go live.
Version 1.1 (9/1/2017): Administrative changes/edits.
Version 2.0 (11/10/2017): Famotidine IV substituted for ranitidine IV; administrative changes/edits.
Version 3.0 (3/9/2018): ASAP updated; administrative changes/edits.
Version 4.0 (4/9/2018): MAP added to algorithm and administrative changes/edits.
Version 5.0 (12/5/2018): Observe for 3 hours for patients meeting all “LIKE A ROSE” criteria.
Version 6.0 (4/10/2020): Due to drug recall the medication ranitidine was removed. from the pathway algorithm. A general statement about giving an oral H2 receptor blocker was added.
Version 6.1 (5/26/2020): Updated broken FARE link on ED Disposition page and Inpatient Continued Management page.
Version 6.2 (6/29/2021): Updated the algorithm to reflect the EPIC order panel name. Removed references to the CIS PowerPlan.
Version 6.3 (5/19/2022): No content changes. Medication dosages reviewed and approved by Pharmacy and Therapeutics Committee on 12/22/2021.
Version 6.4 (10/17/2022): Deleted old caregiver discharge handout links and added link to new SCH handout: Food Allergy and Anaphylaxis (PE3772). Removed the word “Acute” in the header “Acute Anaphylaxis Score Assisting Providers”. Fixed the link to the document explaining blood transfusion reactions.
Version 6.5 (8/23/2023): Changed Food Allergy and Anaphylaxis (PE3772) on ED Disposition and Inpatient Continued Management phases of the .ORG algorithm. Replaced with link to Patient and Family Education – Clinical Nutrition Program landing page.
Version 6.6 (12/22/2023): Background text behind link in exclusion criteria updated from “Blood transfusion reactions that are not” to “Blood transfusion reactions that are not anaphylaxis.” .ORG PDF updated to reflect changes.

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Medical Disclaimer

Medicine is an ever-changing science. As new research and clinical experience broaden our knowledge, changes in treatment and drug therapy are required.

The authors have checked with sources believed to be reliable in their efforts to provide information that is complete and generally in accord with the standards accepted at the time of publication.

However, in view of the possibility of human error or changes in medical sciences, neither the authors nor Seattle Children's Healthcare System nor any other party who has been involved in the preparation or publication of this work warrants that the information contained herein is in every respect accurate or complete, and they are not responsible for any errors or omissions or for the results obtained from the use of such information.

Readers should confirm the information contained herein with other sources and are encouraged to consult with their health care provider before making any health care decision.

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Anaphylaxis Approval & Citation

Approved by the CSW Anaphylaxis for August 29, 2017 Go Live date

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Retrieval Website: http://www.seattlechildrens.org/pdf/Anaphylaxis-pathway.pdf

Please cite as: Seattle Children's Hospital, Brown, J., Allard, A., Fenstermacher, S., Foti, J., Hallstrand, J., Kazmier, K., Mahoney, S., Shepard, E., Migita, D. 2017 August. Anaphylaxis Pathway. Available from: http://www.seattlechildrens.org/pdf/Anaphylaxis-pathway.pdf

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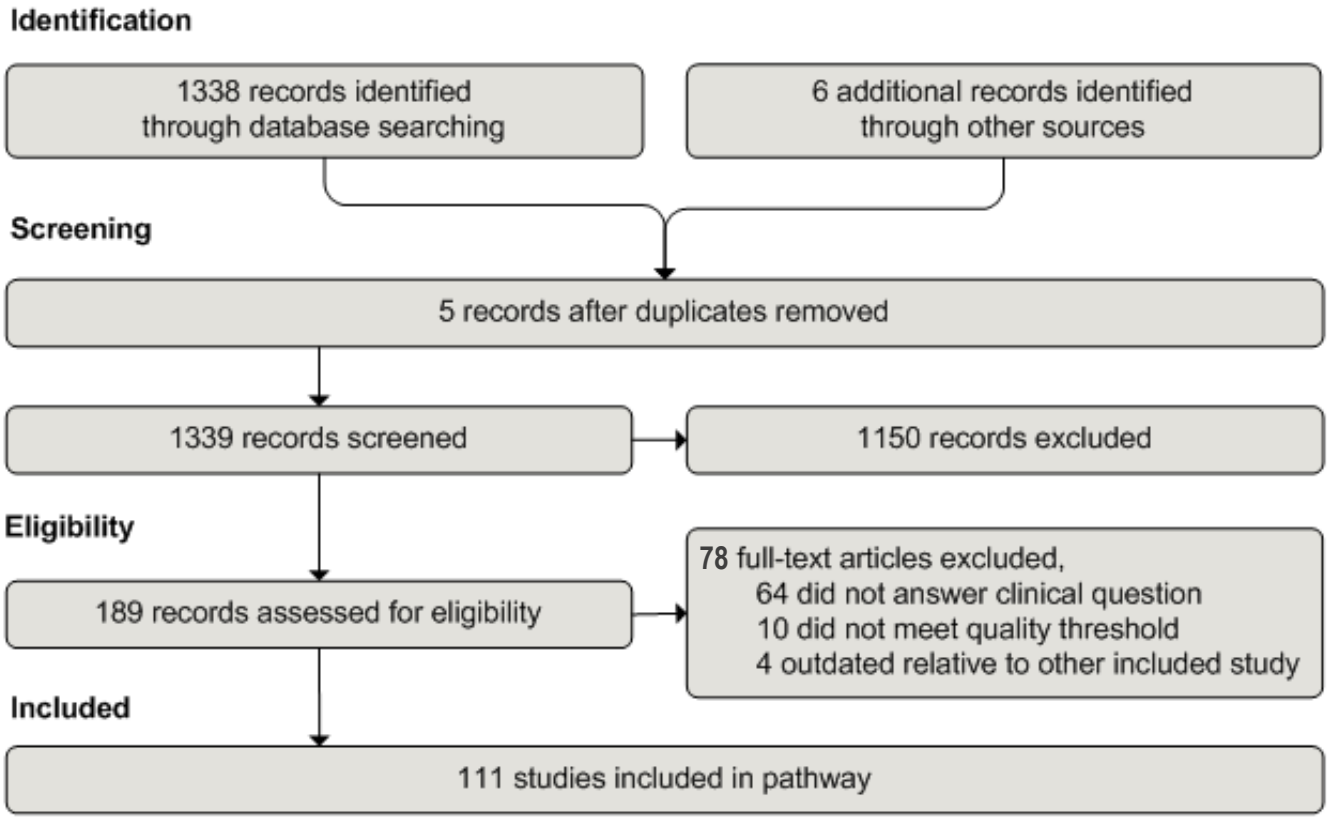
Bibliography

Search Methods, *Anaphylaxis*, Clinical Standard Work

Studies were identified by searching electronic databases using search strategies developed and executed by a medical librarian, Jackie Morton. Searches were performed in November, 2016. The following databases were searched – on the Ovid platform: Medline, Cochrane Database of Systematic Reviews; Cochrane Central Register of Controlled Trials; elsewhere – Embase, National Guideline Clearinghouse, TRIP and Cincinnati Children's Evidence-Based Care Guidelines. In Medline and Embase, appropriate Medical Subject Headings (MeSH) and Emtree headings were used respectively, along with text words, and the search strategy was adapted for other databases using their controlled vocabularies, where available, along with text words.

In Medline and Embase, appropriate Medical Subject Headings (MeSH) and Emtree headings were used respectively, along with text words, and the search strategy was adapted for other databases using their controlled vocabularies, where available, along with text words. The time frame searched for some clinical questions was 2006 to the date the search was conducted and included all levels of evidence currently in place for Clinical Effectiveness pathways. Some clinical questions were searched for 1996 to the date of the search and included all levels of evidence currently in place for Clinical Effectiveness pathways. Some clinical questions were searched for 2006 to the date of the search and have no levels of evidence applied. Concepts searched were the diagnosis, grading and treatment of anaphylaxis including the broader concept of hypersensitivities. The search strategy does not include the concept of severity or grade of acuteness; this is to be determined during the review process. All retrieval was limited to English language. The team added 38 citations not retrieved with the search strategy limitations.

Jackie Morton, MLS
May 24, 2017



Flow diagram adapted from Moher D et al. BMJ 2009;339:bmj.b2535

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