

Pediatric Anaphylaxis

Fall CME 2026

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1. Recognize. Treat. Reassess.

After the case study, reveal the new findings at 30 seconds

Try and stay “high-level”, answer questions as needed to go with the flow of the scenario, but instead of focusing on direct answers, keep people investigating.

Allow the groups to drive themselves through peer learning. Guide them if they go off track or if something inappropriate/wrong is said.

Scenario 1: "The Child Who Looks Better"

Initial Presentation

- 8-year-old with generalized hives, vomiting, and wheezing after eating a brownie containing nuts
- IM EPINEPHrine administered
- 5 minutes later:
 - Hives improving
 - Wheezing reduced
 - HR 120
 - RR 24
 - Child is talking comfortably

Question to Participants (consider asking your own depending on how the conversation is going in the group)

1. Are you reassured? Why? Why not
2. Do you have any ongoing concerns?
3. Would you begin prepping anything?
4. What are your next steps?
5. Are you thinking Code 72 since the patient improved?

Progression

- **10 minutes later (30 seconds):**
 - Wheezing becomes more pronounced
 - Child develops a persistent cough
 - RR increases to 32
 - Accessory muscle use develops

Discussion

- Are there signs that suggest deterioration?
- Would you consider repeat EPINEPHrine?
- What reassessments are important? (List them!)
- Are you considering diphenhydrAMINE? Why? Why not?

Teaching Notes (if required)

1. Improvement after the first dose does not mean the reaction is over. It does not necessarily mean a biphasic reaction, but the first episode might not have fully resolved (think: ingested versus
2. Frequent reassessment is essential.
3. Cough (airway) and wheezing (breathing) are 2 separate systems. (Think: ABCs)
4. To consider: are you treating a symptom or the underlying cause (wheezing with Salbutamol vs anaphylaxis with EPINEPHrine)
5. Code 72s are OK for anaphylaxis if things resolve, biphasic and secondary reactions are rare enough. Be sure to have the BIG conversations with the caregivers/parents regarding what to watch for, when to call back, side effects if they take diphenhydrAMINE, etc.

Scenario 2: "No More Hives"

Initial Presentation

- 4-year-old stung by a bee
- Child is very upset, screaming, holding their arm where they got stung
- Localized urticaria
- DiphenhydrAMINE given by parents (confirm correct dose, medication not expired)

Reassessment

- Urticaria begins fading
- Child appears calmer

Question to Participants

- Is the patient improving? Deteriorating? Staying the same?
- What are you looking for? (signs/symptoms)
- Are there specific reassessments you want to complete?
- What are some concerns you have right now?
- What additional things can you do for this patient?

Progression

- BP now 98/50
- HR 110
- Skin warm and pink
- Child is still very calm

Discussion

- What is happening with this child?
- Any specific questions you want to ask family? (Hx of being stung previously? Hx of anaphylaxis in the family?)
- Are they improving? Deteriorating? Staying the same?
- Are there any findings you are concerned about?
- Would the disappearance of hives reassure you? Why? Why not?
- Would you consider code 71? Why? Why not? What discussions would you have before completing a code 72?

Teaching Point

1. Don't forget about "multi-modal" treatment – ice packs, positions of comfort, distractions for younger children, etc.
2. Remember: Loss of hives does not equal resolution of anaphylaxis/allergic reaction.
3. The presence of urticaria does not mean that the patient is experiencing anaphylaxis.
4. Continuous reassessments and ongoing monitoring is imperative to ensure patient does not deteriorate into anaphylactic shock.
5. Diphenhydramine is generally not recommended for children due to serious side effects, unpredictable reactions, decreased and unreliable efficacy.

Scenario 3: "The Quiet Child"

Initial Presentation

- 6-year-old with suspected peanut exposure
- Wheezing, vomiting
- Receives IM EPINEPHrine

Reassessment

- Wheezing slightly improved
- Child sitting quietly on the stretcher
- Vitals stable

Question to Participants

- How is this patient doing?
- What are your next steps?
- Are you prepping anything? (Second dose of Epi, label and tape to the monitor?)

Progression

- Child stops talking
- Oxygen sats remain stable at 99%
- Vomiting resolved

Discussion

- Any active concerns?
- Are you concerned about respiratory failure? Anaphylactic shock?
- Are there any immediate interventions required?

Teaching Point

1. A quieter child is not always an improving child.
2. Reduced interaction may signal impending decomposition.
3. Reassess often! Document each reassessment.
4. Remember: Anaphylaxis is a serious systemic hypersensitivity reaction that is usually rapid in onset and may cause death. Severe anaphylaxis is characterized by potentially life-threatening compromise in airway, breathing and/or the circulation, and may occur without typical skin features or circulatory shock being present.”

Additional Speaking Points (if required):

- "What is your trigger for giving the next dose of EPINEPHrine?" Do these symptoms need to be SEVERE for you to intervene? (NO!) If the patient is experiencing 2 or more systems involved, even mildly, give EPINEPHrine!
- Recognize deterioration early
- Reassess continuously
- Don't wait for hypotension or collapse before acting
- Repeat IM EPINEPHrine when clinically indicated

2. Ready, Set, Epi

Provide ages and ask participants to calculate:

- Estimated weight
- EPINEPHrine dose
- Rounded dose
- Draw Medication
- Medication Checks

Examples:

- **1 year old**
 - 12kg
 - 0.12mg EPINEPHrine
 - 0.10mg EPINEPHrine
- **3 years old**
 - 16kg
 - 0.16mg EPINEPHrine 1:1000
 - 0.15mg EPINEPHrine 1:1000
- **7 years old**
 - 24kg
 - 0.24mg EPINEPHrine 1:1000
 - 0.25mg EPINEPHrine 1:1000
- **10 years old**
 - 30kg
 - 0.3mg EPINEPHrine 1:1000
 - 0.3mg EPINEPHrine 1:1000
- **13 years old**
 - 40kg
 - 0.4mg EPINEPHrine 1:1000
 - 0.4mg EPINEPHrine 1:1000

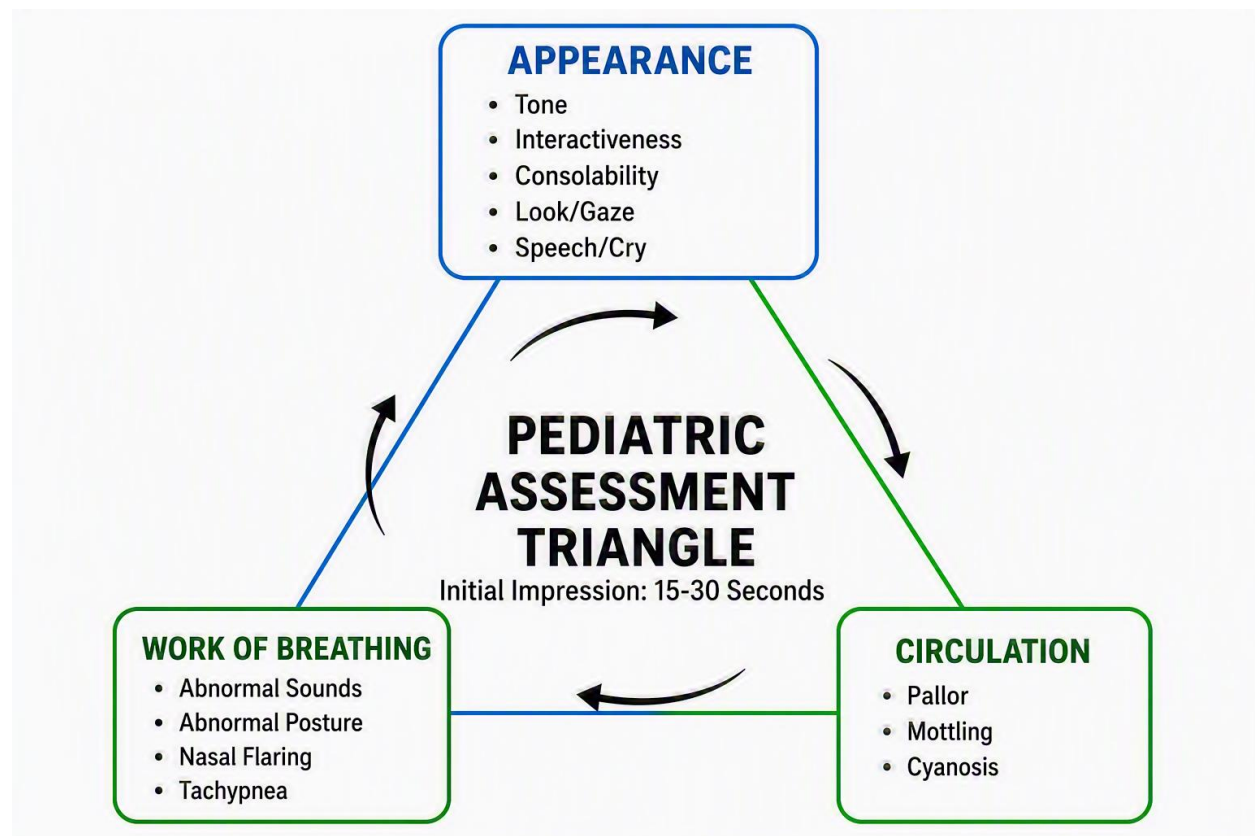
3. PAT Challenge

Display a child and ask participants to identify findings within the:

- Appearance
- Work of Breathing
- Circulation to Skin

Then ask:

"Based on the PAT alone, how concerned are you?"



**Use the attached QR codes and video links for the videos

**If there are technical issues with the tablets/internet/etc. there are 5 verbal scenarios you can provide the learners instead

Video 1: Respiratory Distress Bing Videos  SCAN ME	Video 5: Noisy breathing Bing Videos  SCAN ME
Video 2: Mottled Skin Bing Videos  SCAN ME	Video 6: Grunting 6:54-7:10 Bing Videos  SCAN ME
Video 3: Kussmaul Bing Videos  SCAN ME	Video 7: Nasal Flaring Bing Videos  SCAN ME
Video 4: Normal Breathing Bing Videos  SCAN ME	Video 8: Head bobbing Bing Videos  SCAN ME

Verbal PAT Challenge Scenarios

Scenario 1: The Child with a Rash

Presentation

A 5-year-old develops a widespread rash after eating ice cream at a birthday party.

- Sitting upright on couch
- Speaking in full sentences
- Scratching arms and chest
- Generalized hives present
- RR 24
- Skin warm and flushed
- Peripheral pulses present

PAT Discussion

Appearance

- Normal

Work of Breathing

- Normal

Circulation

- Abnormal (urticaria/flushing)

Questions

- Is this anaphylaxis?
- What additional information would you want?
- What system involvement is currently evident?

Teaching Point: Skin findings alone do not necessarily indicate anaphylaxis.

Scenario 2: The Wheezing Child

Presentation

An 8-year-old ate a cookie containing peanuts.

- Alert and interactive
- Generalized hives
- Audible wheezing
- Mild intercostal retractions
- RR 32
- Speaking in short sentences

PAT Discussion

Appearance

- Mildly abnormal

Work of Breathing

- Abnormal
 - Wheezing
 - Increased work of breathing
 - Tachypnea

Circulation to Skin

- Abnormal
 - Hives

Questions

- Which PAT components are abnormal?
- Does this meet criteria for anaphylaxis?
- What is your immediate treatment?

Teaching Point: Skin + respiratory involvement following allergen exposure should trigger rapid recognition.

"Using only the PAT, how worried are you from 1 to 10?"

Scenario 3: The Quiet Child

Presentation

A 4-year-old with known peanut allergy.

- Sitting motionless in parent's lap
- Minimal interaction
- Not speaking
- Nasal flaring
- Stridor at rest
- Generalized facial swelling

PAT Discussion

Appearance

- Abnormal

Work of Breathing

- Severely abnormal
 - Stridor
 - Upper airway obstruction
 - Increased effort

Circulation to Skin

- Abnormal
 - Facial edema

Questions

- Which PAT finding concerns you most?
- What does stridor suggest?
- How quickly could this patient deteriorate?

Teaching Point: Stridor in anaphylaxis should immediately raise concerns for airway compromise.

"Using only the PAT, how worried are you from 1 to 10?"

Scenario 4: The Child Who Suddenly "Looks Better"

Presentation

Paramedics arrive after EPINEPHrine was administered by a parent.

- Hives improving
- No longer scratching
- Child lying quietly
- Pale skin
- Delayed capillary refill
- Weak peripheral pulse
- RR 34

PAT Discussion

Appearance

- Abnormal

Work of Breathing

- Mildly abnormal

Circulation to Skin

- Severely abnormal
 - Pale
 - Poor perfusion

Questions

- Is this improvement?
- What PAT component is driving your concern?
- What complication may be developing?

Teaching Point: Improvement in skin findings can mask progression toward anaphylactic shock.

"Using only the PAT, how worried are you from 1 to 10?"

Scenario 5: The Decompensating Child

Presentation

A 10-year-old was stung by a bee 15 minutes ago.

- Eyes partially open
- Slow responses to questions
- Generalized urticaria
- Weak cry
- Very poor air movement
- Marked retractions
- Cool, clammy skin
- Weak radial pulse

PAT Discussion

Appearance

- Severely abnormal

Work of Breathing

- Severely abnormal

Circulation to Skin

- Severely abnormal

Questions

- Sick or not sick?
- Which PAT findings indicate impending respiratory failure?
- What interventions cannot wait?

Teaching Point: When all three PAT sides are abnormal, the child is critically ill and immediate intervention is required.

"Using only the PAT, how worried are you from 1 to 10?"

"Recognize early. Treat early. IM EPINEPHrine saves lives."