



Portage County EMS Patient Care Guidelines



Allergy and Anaphylaxis

Note:

- Allergic reactions span a continuum from minor to life threatening [1].
- If due to a bee sting, remove stinger by scraping horizontally with tongue depressor or plastic card. Do not squeeze the venom sac.
- If anaphylactic shock is present, treat for shock and maintain warmth.
- Angioedema with significant swelling of the tongue increases the risk of obstructed airway but also makes RSI technically more difficult and therefore relatively contraindicated. Institute emergent transport and prepare the ED for emergency intubation procedures. In angioedema, diphenhydramine and epinephrine may be given, but are not likely to help.
- In patients with underlying coronary artery disease, or those at risk for it, epinephrine should be used with caution, because of the risk of inducing a myocardial infarction. In moderate to severe allergy and anaphylaxis, there is no contraindication to epinephrine.

Priorities	Assessment Findings
Chief Complaint	"Allergic Reaction", "Hives", "Itching Rash"
LOPQRST	What provoked the reaction? Did the patient take diphenhydramine (Benadryl) or use an epinephrine auto-injector (EpiPen), and how did they respond?
AS/PN	Subjective swelling of facial, oral or pharyngeal structures, difficulty breathing, wheezing and light headedness.
AMPL	Does the patient have any environmental, medication, food or other allergies? Is the patient taking an antibiotic? If the patient has angioedema, is he/she taking an ACE inhibitor? Is he/she taking a beta blocker? If the patient is taking a beta blocker, he/she might not respond to epinephrine.
Initial Exam	Check ABCs and correct immediately life-threatening problems.
Detailed Focused Exam	Vital Signs: BP, HR, RR, Temp, SpO ₂ , ETCO ₂ General: Identify degree of severity: mild, moderate or severe [1]. Skin: Urticaria (hives) HEENT: Swelling of the lips, tongue or pharynx (angioedema) Chest: Use of accessory muscles of respiration, labored breathing Lungs: Wheezing Cardiovascular: Hypotension, tachycardia (anaphylactic shock) Neurological: ALOC
Data	SpO ₂ , ETCO ₂
Goals of Therapy	Reverse the allergic reaction, relieve bronchospasm, correct hypotension/shock
Monitoring	Vital signs, cardiac monitoring and capnography

EMERGENCY MEDICAL RESPONDER

- Administer oxygen 2 – 4 LPM per nasal cannula if SpO₂ < 94%. Increase flow and consider non-rebreather mask to keep SpO₂ > 94%
- Assist with patient-prescribed albuterol metered dose inhaler
- Nebulizer Therapy:
 - **Albuterol** unit dose (2.5 mg in 3 ml) administer per hand held nebulizer or mask; May repeat X 2 additional doses
 - May use premixed albuterol unit dose and administer per hand held nebulizer or mask

- In severe allergic reaction (anaphylaxis), administer:
 - **Adults - EpiPen 1:1,000** IM in the anterolateral thigh
 - **Peds - EpiPen Jr. 1:2,000** IM in the anterolateral thigh
- If the response to EpiPen is inadequate after 10 minutes, repeat dosage.
- **Epinephrine 1:1,000** for severe allergic reaction (anaphylaxis)
 - Adults - draw up 0.3 – 0.5 ml (0.3 – 0.5 mg) and administer IM in the lateral thigh or deltoid
 - Peds - draw up 0.01 ml/kg (0.01 mg/kg) and administer IM. Max dose is 0.3 mg in the lateral thigh or deltoid.
- If the response to epinephrine is inadequate after 10 minutes, repeat dosage.
-

Give a status report to the ambulance crew by radio ASAP.

EMERGENCY MEDICAL TECHNICIAN

- Nebulizer Therapy:
 - **Ipratropium** unit dose (0.5 mg in 2.5 ml) administer per hand held nebulizer or mask
 - May mix albuterol and ipratropium in same nebulizer or give them separately.
 - May use premixed albuterol/ ipratropium unit dose administer per hand held nebulizer or mask
 - Do not repeat ipratropium alone or in combination without an order from medical control.
-

Give a status report to the ambulance crew by radio ASAP.

ADVANCED EMERGENCY MEDICAL TECHNICIAN

- Initiate IV normal saline @ KVO.
- If the patient is hypotensive, run wide open.

Contact Medical Control for the following:

- Additional doses of albuterol or epinephrine
- Additional fluid orders

INTERMEDIATE

- Consider **epinephrine 1:1000** for moderate to severe reactions.
 - ADULTS - draw up 0.3 – 0.5 ml (0.3 – 0.5 mg) and administer IM
 - PEDS - draw up 0.01 ml/kg (0.01 mg/kg) and administer IM. Max dose is 0.3 mg.
 - Repeat every 10 – 15 minutes X 3 if patient is not improving, or as ordered per medical control.

Contact Medical Control for the following:

- For moderate to severe reactions:
 - Additional doses of epinephrine
 - Epinephrine 1:10,000 1 ml (0.1 mg) IV/IO every 5 – 10 minutes or as ordered by medical control.

PARAMEDIC

- **Diphenhydramine** 50 mg IM/IV/IO for mild, moderate or severe reactions
- **Methylprednisolone** 125 mg IV/IO for moderate to severe reactions

Contact Medical Control for the following:

- For moderate to severe reactions:
 - Epinephrine 1:10,000 1.0 ml (0.1mg) IV every 5 – 10 minutes or as ordered by medical control.
 - **Glucagon** 1 mg IV if the patient is taking beta blockers and is not responding to epinephrine.

FOOTNOTES:

[1] Severity of Allergy/Anaphylaxis

- Mild Allergic reaction: localized or generalized urticaria, without swelling of oral or pharyngeal structures, difficulty breathing, hypotension or ALOC;
- Moderate Allergic Reaction: oral or pharyngeal swelling is present, mild to moderate difficulty breathing and wheezing are present.
- Severe Allergic Reaction (Anaphylaxis): moderate to severe difficulty breathing is present, hypotension is present and ALOC may occur.

Date of Origin: 3/25/14	Medical Director Approval:12/18/2016
Date of This Revision: 5/18/16	Electronically Signed
Stae of Wisconsin Approval 03/20/2017	M. Sarah Brandt, MD
Date of Review: 11/1/2016	