Asthma Exacerbation: Urgent Care

Children's Mercy KANSAS CITY | Evidence Based Practice

QR code for mobile access

Pt > 2 years of age in the Urgent Care with signs and symptoms of asthma exacerbation

Is there impending/actual respiratory failure?

Yes →

Please follow Standard Work for activation of emergency response and consider:
- **Epinephrine** (via Epi-pen) :
  7.5 to < 25 kg: 0.15 mg/0.3mL (1:2000) IM (EpiPen Jr)
  ≥ 25 kg: 0.3mg/0.3mL (1:1000) IM (EpiPen)
- **Bag and mask ventilation**

No ↓

Asthma Exacerbation Algorithms:
- Asthma Care Continuum
- Ambulatory
- Emergency Department
- Inpatient

Is the exacerbation severe, moderate, or mild?

Severe →

- **Oxygen** to achieve $SpO_2 \geq 90\%$
- **Place IV**
- **Start NS fluid bolus 20 mL/kg**
- **Methylprednisolone IV**
  2 mg/kg (Max: 60 mg)
- Continuous **Albuterol**** (nebulized)

OR

- **Albuterol**** (2.5mg) single nebulizer with 500 mcg Ipratropium Bromide: may be repeated q20 min prn x3 doses

Consider early transfer to higher level of care

Albuterol Dosing:**
- Continuous albuterol alone: 0.083% (2.5mg/3mL)
- If combined with ipratropium 0.5% solution (0.5 mL = 2.5 mg)

Moderate →

- **Oxygen** to achieve $SpO_2 \geq 90\%$
- **Dexamethasone**
  0.6 mg/kg PO x1 dose (Max: 12 mg)
  (2nd dose on day 2 may be considered)
  OR
  Prednisolone/Prednisone PO
  2 mg/kg/day x3-5 days (Max: 60 mg/day)
- **Albuterol** (MDI with spacer)
  <20 kg: 4 puffs
  ≥20 kg: 8 puffs

OR

- Continuous **Albuterol**** (nebulized)

OR

- **Albuterol**** (2.5mg) single nebulizer with 500 mcg Ipratropium Bromide: may be repeated q20 min prn x3 doses

Consider early transfer to higher level of care if pt continues with moderate status after 3 back-to-back doses of albuterol + ipratropium

Mild →

- **Oxygen** to achieve $SpO_2 \geq 90\%$
- **Systemic steroid if ≥ 2 albuterol treatments are required:**
  Dexamethasone
  0.6 mg/kg PO x1 dose (Max: 12 mg)
  OR
  Prednisolone/Prednisone PO
  2 mg/kg/day x3-5 days (Max: 60 mg/day)
- **Albuterol** (MDI with spacer)
  <20 kg: 4 puffs
  ≥20 kg: 8 puffs

Is pt improving with albuterol?

No → Moderate

Yes ↓

Is pt's condition worsening?

Yes → Continue care as above until discharged

No ↓

Does the pt meet discharge criteria?

Yes → Discharge with home asthma care plan and follow-up with PCP

No ↓

- Continue care as above until discharged
- Strongly consider transfer to higher level of care:
  - *Emergency Dept via private vehicle, EMS, or CMH transport depending on clinical situation*
  - *Direct admission to inpatient by EMS or CMH transport only*

Contact: EvidenceBasedPractice @cmh.edu

Link to synopsis and references

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