

OUTPATIENT ACUTE ASTHMA EXACERBATION PATHWAY



Obtain History

- Triggers
- Onset
- Comorbidities
- Current medication use
- History of intubations for asthma
- ED visits
- Hospitalizations for asthmas
- Tobacco exposure

***National Guidelines (2007)**

Definition:
Definition of Asthma: Asthma is a common chronic disorder of the airways that is complex and characterized by variable and recurring symptoms, airflow obstruction, bronchial hyperresponsiveness and an underlying inflammation

Child presents with history of asthma* and respiratory symptoms (cough, wheeze, shortness of breath, chest tightness/pain)

Perform an Initial Assessment:**

- Vitals
- Heart rate
 - Temperature
 - Pulse oximetry
 - Weight
- Respiratory Score
- Respiratory rate
 - Retractions
 - Dyspnea
 - Auscultation
 - Composite Asthma Severity Index (CASI)

Inclusion

>2 years old with history of asthma* or recurrent wheezing

Exclusion

- Chronic lung disease
- Congenital/acquired heart disease
- Upper airway issues
- Neuromuscular disorders
- Immune disorders
- Sickle cell anemia
- Medically complex child

() Possible Diagnostic Testing**
(Routine testing **not** recommended)

- CXR: Consider if asymmetric or for first-time wheezing
- Influenza testing: Consider if consistent with influenza-like illness or atypical pneumonia
- CBC
- CBG
- BMP

What is their respiratory score (RS)?

Moderate – Severe RS: 5 or Greater

- **Notify Provider *Immediately***
- Consider activating transport or 911: If so, transfer to ED
- Place on continuous pulse oximetry.
- Oxygen: titrate to keep pulse oximetry ≥ 90%

Medications

- Dexamethasone: 0.6mg/kg PO if able; max dose, 16mg/day (If unable to tolerate, may give IM)
- May substitute prednisone/prednisolone loading dose of 2mg/kg (Max 60mg) PO for dexamethasone
- Duoneb (Albuterol 2.5mg + Ipratropium 500mcg per vial)
 - Patients <10kg: 1 vial
 - Patients >10kg: 2 vials

Mild RS: 1 – 4

Medications

- Albuterol
 - Patients <10kg: 4 puffs
 - Patients >10kg: 8 Puffs

Consider

- Dexamethasone: 0.6mg/kg PO once; max dose, 16mg/day

OR

- Prednisone/Prednisolone 2mg/kg PO once; max dose 60mg/day

Assessment

- Reassign post treatment RS
- Initiate asthma education

Provider/RN to reassess every 10-20 minutes (RS, heart rate, pulse oximetry)

What is their RS?

Severe RS: >8

Medications:

- Repeat Albuterol nebulized
 - Patients <10kg: 2.5mg
 - Patients >10kg: 5mg every 10-20 minutes as clinically indicated

Provider/RN to reassess every 10-20 minutes (RS, heart rate, pulse oximetry)

Transport to ED for further stabilization

Moderate RS: 5-8

Medications:

- Repeat Albuterol x2 doses as clinically indicated
- Nebulized
 - Patients <10kg: 2.5mg/dose
 - Patients >10kg: 5mg/dose
- Or MDI
 - Patients <10kg: 4 puffs/dose
 - Patients >10kg: 8 puffs/dose

Provider/RN to reassess every 10-20 minutes (RS, heart rate, pulse oximetry)

Does patient continue to have moderate symptoms (RS: 5-8) and/or SpO2 remains <92%?

Yes

Consider direct admission or referral to ED for further stabilization

Mild RS: 1 – 4

Medications to Consider:

- Albuterol every 4 hours for 24-48 hours
- Repeat Dexamethasone in 24 hours or 3-5 day course of prednisone/prednisolone if asthma poorly controlled

Discharge

If Signs of Respiratory Failure:

Consider Epinephrine:

< 30kg: 0.15 mg IM
≥30 kg: 0.3 mg IM

Oxygen:

Titrate to keep pulse oximetry ≥90%



Disclaimer: Pathways are intended as a guide for practitioners and do not indicate an exclusive course of treatment nor serve as a standard of medical care. These pathways should be adapted by medical providers, when indicated, based on their professional judgement and taking into account individual patient and family circumstances.

[ChildrensNebraska.org/Pathways](https://www.childrensnebraska.org/Pathways)

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