

Acute Asthma Exacerbations

Inclusion criteria:

- Age: > 24 months of age
- H/o asthma, reactive airway disease or wheezing +/- family history of asthma

Exclusion criteria:

- Contraindication/allergy to medications used within guideline
- Disease of other origin: pneumonia, bronchiolitis, croup
- Complicated medical history, including congenital/acquired heart disease, chronic lung disease/ bronchopulmonary dysplasia/cystic fibrosis, immune mediated disorders, tracheostomy

Criteria for radiographic imaging or labs:

- No absolute indication
- Consider radiographic imaging in children with fever > 39°C, hypoxia, focal abnormality on pulmonary examination, absence of family history of asthma, or those who respond less favorably than expected to bronchodilator therapy. May also be considered in patients with concern for presence of foreign body, pneumomediastinum or pneumothorax.
- Consider blood gas testing if there is a clinical worsening of mental status, neurologic and/or respiratory exam.

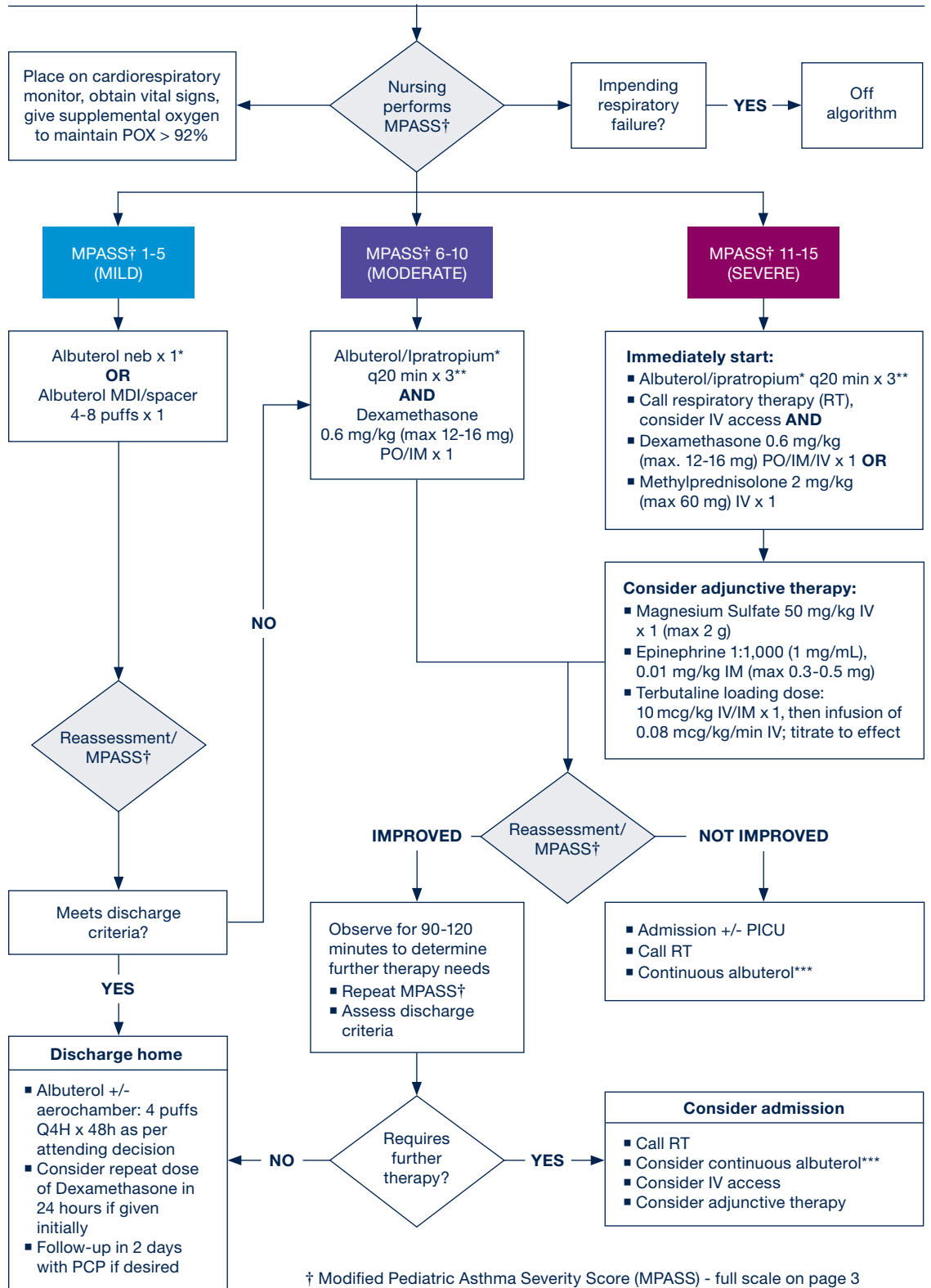
Discharge criteria:

- MPASS† ≤ 7
- Able to obtain/tolerate medicine and manage outpatient asthma

Dosing references:

- * Albuterol: < 20 kg (2.5 mg) > 20 kg (5 mg)
- Ipratropium: < 20 kg (250 mcg) > 20 kg (500 mcg)
- Above dosing reference pertains to one-time nebulized treatments
- ** To be used with EZ-Flow device if available
- *** Continuous Albuterol: 20 mg/hr

Respiratory Distress and Concern for Asthma Exacerbation



Modified Pediatric Asthma Severity Score (MPASS)

	0	1	2	3
Oxygenation	> 98% on RA	95% - 97% in RA	90% - 94% on RA	< 90% on RA
Auscultation	No wheezing Normal breath sounds	End expiratory wheezes	Inspiratory and expiratory wheezes	Wheezing audible without stethoscope or silent chest
Retractions	No retractions	Intercostal retractions and/or diaphragmatic (belly) breathing	Two of the following: <ul style="list-style-type: none"> ■ Intercostal ■ Suprasternal ■ Diaphragmatic (belly) breathing ■ Nasal flaring (infant) 	Three of the following: <ul style="list-style-type: none"> ■ Subcostal ■ Intercostal ■ Substernal ■ Supraclavicular ■ Nasal flaring or head bobbing (infant)
Dyspnea	Absent dyspnea; speaks in complete sentences; alert; playful	Normal activity and speech. Some dyspnea, irritable, coughing after play	Decreased activity. 5- to 8-word sentences. Moderate dyspnea; not sleeping or eating; coughing after play	Not speaking. Severe dyspnea; grunting; lethargic, stops playing
Respiratory Rate				
Infant (birth - 1 yr)	< 60	60-80	81-99	≥ 100
Toddler (>1-3 yrs)	< 40	40-60	61-79	≥ 80
Preschool (>3-6 yrs)	< 30	30-40	41-59	≥ 60
School Age (> 6-12 yrs)	< 20	20-26	27-30	≥ 31
Adolescent (> 12-18 yrs)	< 18	18-23	24-27	≥ 28
Severity Scores	0	1-5 MILD	6-10 MODERATE	11-15 SEVERE

Approved: 1/2016 – Asthma Education Committee

MPASS has not been validated for use in the emergency department but is widely used for assessing asthma severity in UCSF Benioff Children's Hospitals.