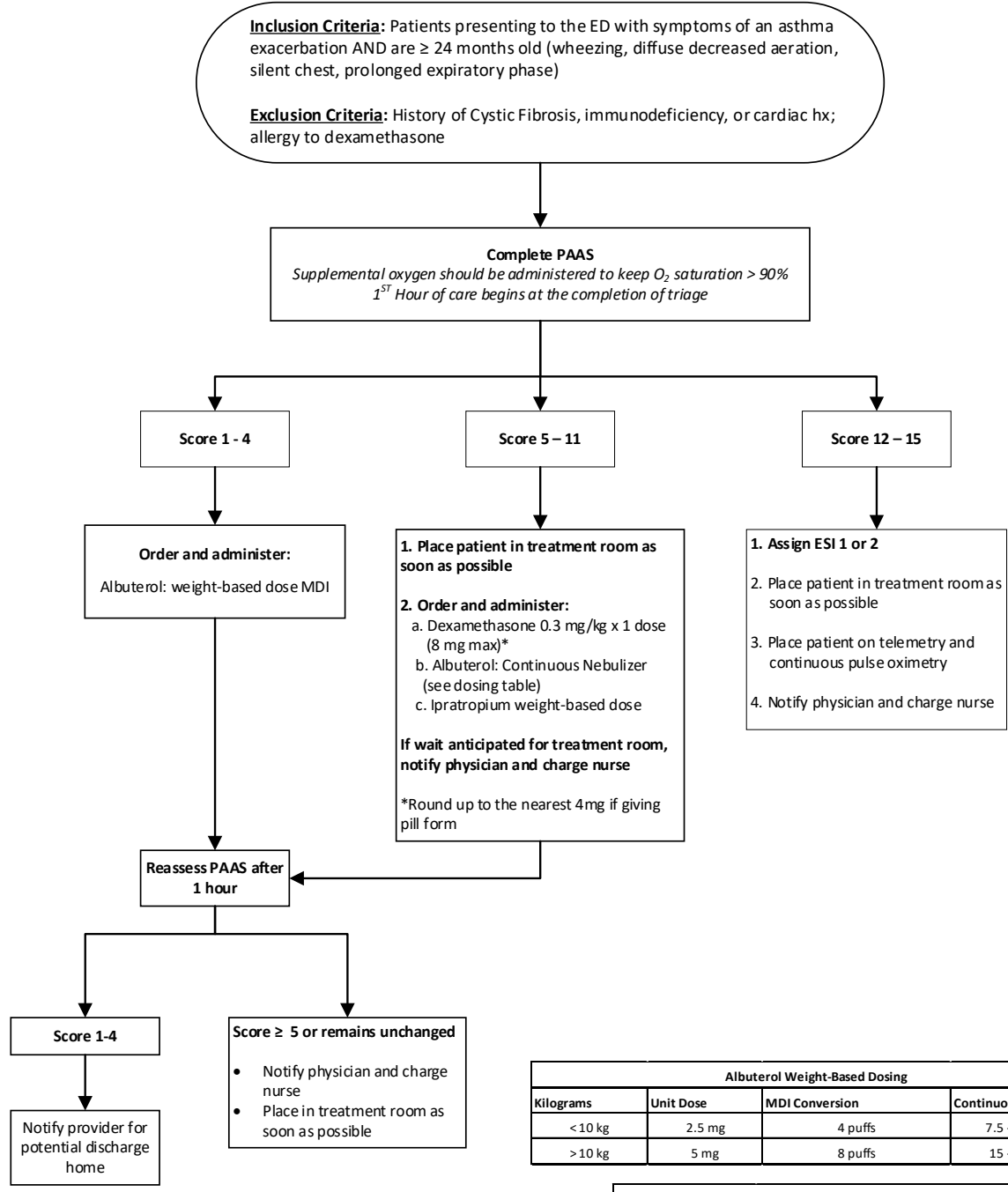


Pediatric ED Asthma

Nurse Driven Initiation of Guideline in Triage:



Albuterol Weight-Based Dosing			
Kilograms	Unit Dose	MDI Conversion	Continuous
< 10 kg	2.5 mg	4 puffs	7.5 - 10 mg/hr
> 10 kg	5 mg	8 puffs	15 - 20 mg/hr

Ipratropium Bromide Weight-Based Dosing	
Kilograms	Unit Dose
< 10 kg	0.5 mg
> 10 kg	1 mg

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Pediatric ED Asthma

Supplemental O2 should be administered to keep O2 saturation > 90%

1st Hour

PAAS 1-4

Albuterol:
Weight based dose x1

Consider Dexamethasone:
0.3 mg/kg PO (8 mg max)

*PAAS reference table on pg 4

PAAS 5-11

Albuterol:
Weight based 1-hour continuous Dose

Ipratropium: weight based dose

Dexamethasone:
0.3 mg/kg PO (8 mg max)^{1,2}

Consider Magnesium Sulfate:
50mg/kg IV (max 2gm)

Consider IVF bolus
(if giving Magnesium)

PAAS 12-15

Albuterol:
Weight based 1-hour continuous dose
Ipratropium: weight-based dose

Solumedrol: 2mg/kg IV **or**
Dexamethasone: 0.3 mg/kg PO/IV/IM^{1,2} (8 mg max)

Magnesium Sulfate:
50mg/kg IV (max 2gm)

IVF bolus

Consider HFNC, +/- escalate to NIPPV

2nd Hour

**PAAS 1-4
Discharge**

*Observe 1 hour if received hour-long continuous neb
* Observe 2-hours if received magnesium
Discharge if PAAS remains 1-4 & stable

PAAS 5-8

Albuterol:
Weight-based dose x1 (MDI when able)

Observe x 1 hour (2 hours if received Magnesium and meet discharge criteria)

PAAS 9-15

Albuterol:
Weight-based 1-hour continuous dose

Ipratropium: weight-based dose (if not already given)

Magnesium Sulfate:
50mg/kg IV (max 2gm) (if not already given)

IVF bolus: (if giving Magnesium)

Consider Epinephrine if persistent severe symptoms
0.01 mg/kg IM max 0.5mg

Consider Terbutaline (consult PICU if ordering):
10mcg/kg IV (max 250mcg) bolus followed by 0.4 mcg/kg/min drip³

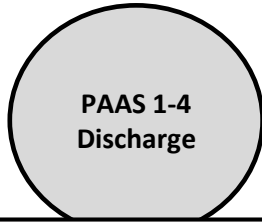
Consider HFNC, +/-escalate to NIPPV

Admit to PICU if score 11-15⁴

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3rd Hour



*Observe 1 hour if received hour-long continuous neb
* Observe 2-hours if received magnesium
Discharge if PAAS remains 1-4 & stable

PAAS 5-8

Admit to Floor:
Observe additional hour in ED (2h if just completed an hour-long albuterol) and re-evaluate before moving patient to floor.

Albuterol:
Weight-based dose q2 hours until transferred to floor

PAAS 9-15

Albuterol:
Weight based 1-hour continuous dose

Consider Epinephrine if persistent severe symptoms
0.01 mg/kg IM max 0.5mg

Consider Terbutaline (consult PICU if ordering):
10mcg/kg IV (max 250mcg) bolus followed by 0.4 mcg/kg/min drip³

Consider HFNC, +/- escalate to NIPPV

Admit to PICU

Albuterol Weight-based Dosing

kg	Unit dose	MDI Conversion	Continuous
< 10kg	2.5mg	4 puffs	7.5-10mg/hr 8 puffs q30min
≥ 10kg	5mg	8 puffs	15-20mg/hr 8-11 puffs q20min

Ipratropium Bromide Weight-based Dosing

kg	Unit Dose	MDI Conversion
< 10kg	0.5mg	4 puffs
≥ 10kg	1mg	8 puffs

Discharge Plan

Home on steroid:

1st line: dexamethasone (0.3mg/kg max 8mg)

Single dose to be taken in 24-48 hours/prescribe increments of 4mg as it comes in pill form (pills can be crushed).

Order home ICS: for all who have a presenting PAAS score ≥5 or do not meet discharge criteria after 1 hour. Flovent 44mcg HFA weight based dose: <10kg: 1 puff bid, ≥10kg 2 puffs bid .

Order as dose in ED to be re-labeled.

Albuterol MDI with spacer teaching: advise to give 4 puffs q 4 x 48 hours, then prn

Follow-up with PCP: within 48 hours

¹ Order oral dexamethasone 1st (pill form rounded to nearest increment of 4mg) followed by IV form for po if above not tolerated. Crush pill, mix with sweetease. Can use prednisone/prednisolone 2mg/kg as a 2nd line alternative or if already started on prednisolone course prior to arrival.

² Can use IM dexamethasone (same as po dose) or Methylprednisolone 2mg/kg IV if po not tolerated.

³ Titrate drip q 30 min to max of 4mcg/kg/min. Risk of cardiotoxicity. Obtain EKG, troponin, and CMP when ordering.

⁴ PICU criteria: PAAS 11-15, drowsiness, confusion, silent chest

****CXR and Antibiotics not routinely recommended****

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Pediatric ED Asthma

Pediatric Acute Asthma Score (PAAS)				
Score	0	1	2	3
O2 sat on RA	> 97%	94-96%	91-93%	< 90%
Respiratory Rate				
2-3y	18-26	27-34	35-39	40 or greater
4-5y	16-24	25-30	31-35	36 or greater
6-12y	14-20	21-26	27-30	31 or greater
≥ 13y	12-18	19-23	24-27	28 or greater
Auscultation	Normal breath sounds	Minimal to mild expiratory wheeze	Moderate to severe expiratory wheeze	Inspiratory and expiratory wheeze and/or diminished breath sounds
Accessory Muscle Use	None	Intercostal only	Intercostal and sub-sternal	Intercostal, sub-sternal and supraclavicular
Cerebral Function	Normal	Slightly decreased	Lethargic	Unresponsive

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