

Appendix A: Assessment at Triage

Inclusion Criteria: Children ages 1 year of age to 17 years of age less 1 day* Presenting with wheezing, or respiratory distress, **AND**

- Diagnosed to have asthma, **OR**
- Treated 2 times prior with a bronchodilator for wheezing

**While children less than 1 year of age with their first known episode of wheeze should not be routinely treated as a part of the pathway, treating physicians may choose to include these children in the pathway.*

Inquire specifically about the:

- Duration and nature of symptoms
- Treatments used-reliever, preventer (number of puffs used at home and frequency)
- Trigger factors
- Previous admissions or similar presentations

Assess:

- Level of Consciousness
- Respiratory Rate, Heart Rate, Blood Pressure, Temperature, Oxygen Saturation on Room Air
- PRAM score

Treatment:

- Initiate treatment based on severity as determined by PRAM score (mild and moderate pathways may be nurse initiated in known asthmatics following CRNBC limits and conditions)
- Older children may present with a lower PRAM score despite having a low FEV1 (Forced expiratory volume).
Consider supplementing the PRAM score with objective markers of airway obstruction such as peak-flow or spirometry

Dose References

salbutamol:

Less than 20 kgs: 5 puffs by Metered-Dose Inhaler (MDI) and Spacer Or 2.5 mg by nebulizer

20 kgs or Greater: 10 puffs by MDI and Spacer Or 5 mg by nebulizer

ipratropium:

Less than 20 kgs: 3 puffs by MDI Spacer Or 250 mcg by nebulizer

20 kgs or Greater: 6 puffs by MDI and Spacer Or 500 mcg by nebulizer

dexamethasone:

0.3 to 0.6 mg/kg/dose (max dose 16 mg per dose) PO daily x 1-2 days

prednisone/prednisolone:

1-2 mg/kg/dose (max dose 60 mg per dose) PO daily x 5 days

methylprednisolone:

1 mg/kg/dose (max dose 60 mg per dose) IV q 6 hours

magnesium sulfate:

40 to 50 mg/kg/dose (max dose 2 g per dose) IV x 1 dose over 20 minutes

****Avoid in children with neuromuscular disease**

sodium chloride:

0.9% 20 mL/kg bolus IV (over 15 to 30 minutes)

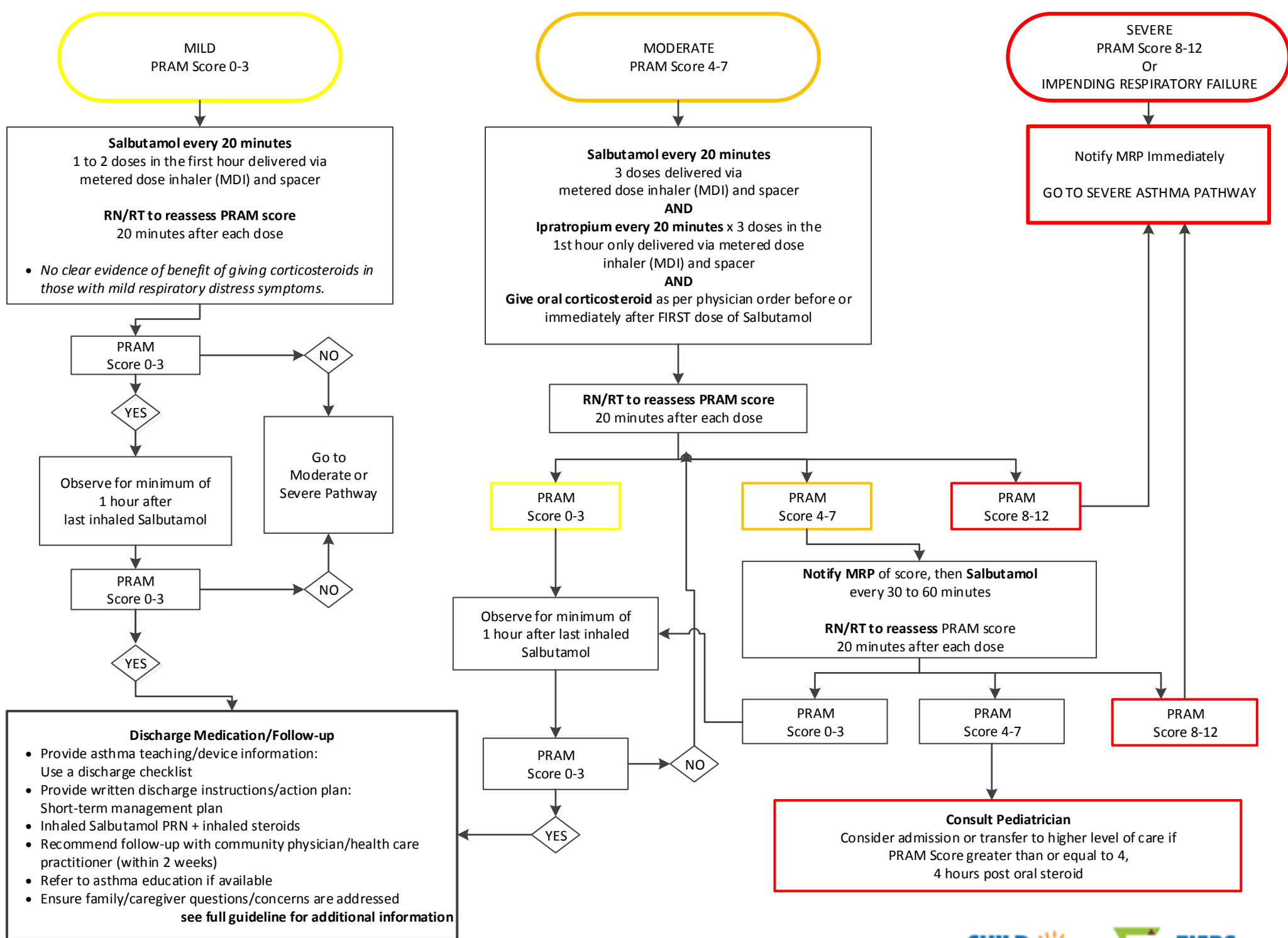
Asthma Clinical Score (PRAM): Mild, Moderate, Severe or Impending Respiratory Failure

Signs	0	1	2	3
Suprasternal Retractions	Absent		Present	
Scalene Muscle Contractions	Absent		Present	
Wheezing	Absent	Expiratory only	Inspiratory and expiratory	Audible without stethoscope/silent chest with minimal air entry
Air entry/Breath Sounds Intensity	Normal	Decreased at bases	Widespread decrease	Absent/minimal
Oxygen saturation On room air	Greater than or equal to 95%	92-94%	Less than 92%	

Severity Classification	PRAM Clinical Score
Mild	0-3
Moderate	4-7
Severe	8-12
Impending Respiratory Failure	Regardless of score, presence of lethargy, cyanosis, decreasing respiratory effort, and/or rising CO2

Suprasternal Retractions: Notch seen above the clavicle and sternum-may appear to sink in with each breath. May cause an involuntary shoulder shrug in small children.

Scalene Muscle Contractions: The scalenes are deep cervical muscles located in the floor of the lateral aspect of the neck. Scalene contraction cannot be seen. This is a palpable assessment. Occurs in about 10% of all patients – only those with severe asthma exacerbations.



**SEVERE
PRAM Score 8-12
OR
IMPENDING RESPIRATORY FAILURE
NOT improving within 1 hour of initial therapy**

1. Call MRP Immediately
2. Salbutamol continuous nebulization with oxygen
3. Ipratropium nebulized every 20 minutes x 3 doses if not already given
4. Establish IV access, run maintenance fluids
5. Methylprednisolone IV 1 mg/kg/dose every 6 hours (even if previous steroid given)
6. Continuous Cardio/Respiratory/SaO2 monitoring
7. Chest X-Ray

Reassess PRAM Score

PRAM Score 0-7

PRAM Score 8-12

Continue to give Salbutamol every 30-60 minutes. Return to algorithm for moderate PRAM score.

Magnesium Sulfate IV

- Consider Sodium Chloride 0.9% bolus 20 ml/kg prior to Magnesium Sulfate to prevent hypotension

**AND
CONSULT PEDIATRICIAN**

- Consider calling BC Patient Transfer Network (PTN) to arrange consultation or transfer
1-866-233-2337

*Consider Tele PICU consult if available

If patient is deteriorating consider:

- RT consult if not already involved
- Blood Gases (venous, capillary or arterial)
- High-Flow oxygen therapy
- BIPAP
- Anesthesia consult if considering advanced airway management
- Assisted Ventilations or Intubation

At the direction of the Intensivist:

- Aminophylline IV
- Ketamine IV

Continue to give Salbutamol every 30-60 minutes. Return to algorithm for moderate PRAM score.

PRAM Score 0-7

Reassess PRAM Score

PRAM Score 8-12

Continue to give Salbutamol continuous nebulization with oxygen

Consult and prepare for transfer to a Higher Level of Care
BC Patient Transfer Network (PTN)
1-866-233-2337