Interior Health

PEDIATRIC INPATIENT ASTHMA MANAGEMENT

Less than 17 years of age

Weight (kg)

Bulleted orders are initiated by default, unless crossed out and initialed by the physician / prescriber. Boxed orders (☐) require physician / prescriber check mark (☑) to be initiated.

Severity	Mild	Moderate	Severe	Signs of Impending Respiratory Failure:
PRAM	0 – 3	4 – 7	8 – 12	lethargy, cyanosis, decreasing respiratory effort, and / or rising pCO_2

This order set pertains to pediatric patients experiencing a mild to moderate asthma exacerbation and is to be used in conjunction with the Pediatric Asthma Inpatient Management Pathway (attached on reverse).

1. **ALLERGIES:** see #826234 – Allergy and Adverse Reaction Record

2. **ADMISSION INSTRUCTIONS:** Admit to _____

Patient Isolation

- ☐ Enhanced Droplet and Contact
- ☐ Airborne

Patient Care

- Weight upon admission
- ☐ Intake and Output Q 12 H
- ☐ Intake and Output Q ____ H

3. **CONSULTS** (specify if able)
   - ☐ Respiratory Therapist (RT)
   - ☐ Other _____

4. **DIET**
   - ☐ NPO
   - ☐ Pediatric Diet, Regular Texture
   - ☐ Other _____

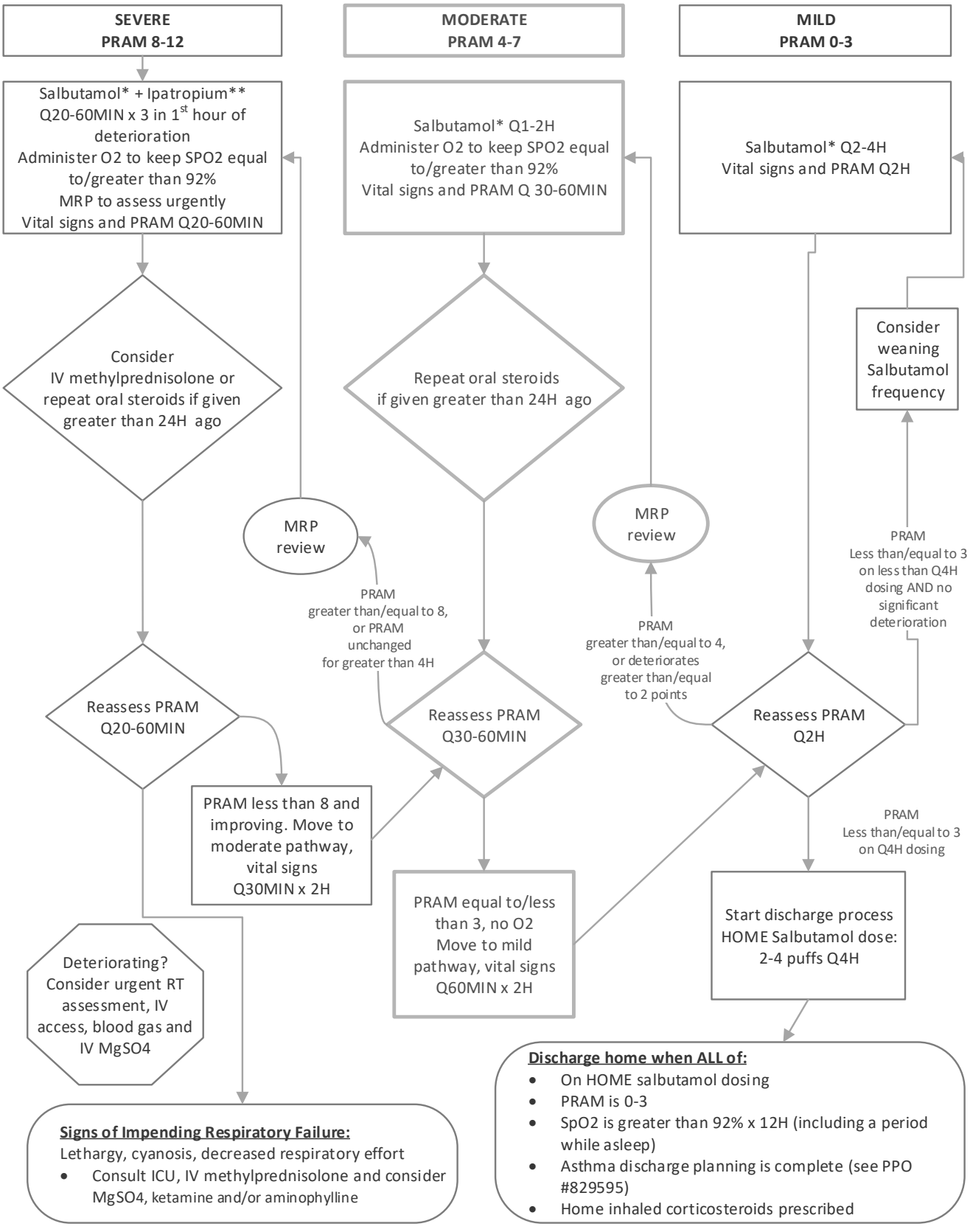
5. **ACTIVITY**
   - ☐ Activity as Tolerated
   - ☐ Activity (please specify) _____

6. **MONITORING**
   - Vital signs (heart rate, respiratory rate, blood pressure, SpO_2 and temperature) per Inpatient Asthma Management Guideline (See document #MN1080PD) and PRN as clinically indicated
   - ☐ Peak Expiratory Flow (PEFR) Q ____ H × ____ H
   - ☐ Continuous Heart rate / Respiratory / SpO_2 monitoring
   - ☐ Other _____

Date (dd / mm / yyyy)	Time	Prescriber's Signature	Printed Name or College ID#
/ /			

PEDIATRIC INPATIENT ASTHMA MANAGEMENT PATHWAY

Dose References (see PPO #829595 for further details)
*Salbutamol: 5 puffs (less than 20kg); 10 puffs (equal to/greater than 20kg)
**Ipatropium: 3 puffs(less than 20kg); 6 puffs (equal to/greater than 20kg)



Adapted from "Inpatient Asthma Management Pathway Algorithm," by BC Children's Hospital, 2019, *Pediatric asthma inpatient: Management guideline*, BC Children's Hospital, Canada. Adapted for Interior Health Authority with permission.

BC Children's Hospital. (August 2, 2019). Pediatric asthma inpatient: Management guideline. Provincial Health Services Authority. Canada.

Interior Health

PEDIATRIC INPATIENT ASTHMA MANAGEMENT

Less than 17 years of age

Weight (kg)

Bulleted orders are initiated by default, unless crossed out and initialed by the physician / prescriber. Boxed orders (☐) require physician / prescriber check mark (☑) to be initiated.

Severity	Mild	Moderate	Severe	Signs of Impending Respiratory Failure:
PRAM	0 – 3	4 – 7	8 – 12	lethargy, cyanosis, decreasing respiratory effort, and / or rising pCO_2

7. LABORATORY

☐ Lytes 4 daily
☐ Other _____

8. DIAGNOSTICS

NOTE: *Routine chest X-ray is NOT recommended in asthma. Consider in patients who fail to respond to treatment in 48hrs, or develop increasing oxygen requirements.*

☐ Chest X-ray (AP and lateral): Portable Peds less than 17 years
☐ Chest X-ray (AP and lateral): Peds less than 17 years

9. TREATMENTS

- Oxygen to keep SpO_2 greater than 92%

☐ Other _____

10. INTRAVENOUS THERAPY AND HYDRATION (IV)

☐ Saline lock
☐ IV: Fluid, type and rate _____

Fluid Bolus: *Consider fluid bolus if there are clinical signs of dehydration*

☐ Sodium chloride 0.9% _____ mL IV over _____ minutes (10 mL / kg)
*****OR*****
☐ Sodium chloride 0.9% _____ mL IV over _____ minutes (20 mL / kg)

11. MEDICATION AND MANAGEMENT

- PRAM score pre-salbutamol and 20 minutes post-salbutamol
- **NOTIFY** MRP and RT immediately if PRAM score greater than or equal to 8 (PRAM scoring guidance attached) and refer to Inpatient Asthma Management Pathway – Severe (MRP will need to provide additional orders).

Inhaled Bronchodilators:

NOTE: *Ensure appropriately sized spacer device is utilized with inhaled medications:*

1) Aerochamber with mask (recommended for children under 5 years);
2) Aerochamber with mouthpiece (recommended for children 5 years and older).

Salbutamol 100 mcg / puff metred dose inhaler (MDI) with spacer

☐ **Pediatric less than 20 kg:**
- Regular dosing - **salbutamol 500 mcg (5 puffs) inhaled per MDI with spacer Q _____ H**
- PRN dosing - **salbutamol 500 mcg (5 puffs) inhaled per MDI with spacer**

☐ **Q 30 MIN PRN** *****OR***** ☐ **Q _____ H PRN**

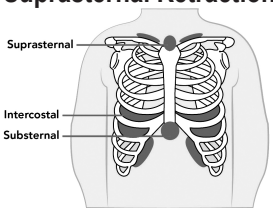
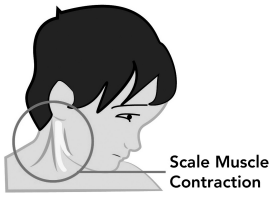
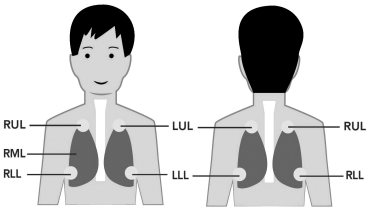
☐ **Pediatric 20 kg or greater:**
- Regular dosing **salbutamol 1,000 mcg (10 puffs) inhaled per MDI with spacer Q _____ H**
- PRN dosing - **salbutamol 1,000 mcg (10 puffs) inhaled per MDI with spacer**

☐ **Q 30 MIN PRN** *****OR***** ☐ **Q _____ H PRN**

Date (dd / mm / yyyy)	Time	Prescriber's Signature	Printed Name or College ID#
/ /			

Table 1: PRAM Scoring Table *

See also CHBC Provincial Asthma Guideline – Part Two: Appendix A for additional information*

Criterions	Description	Score	Notes
02 saturation	Greater than or equal to 95%	0	0_2 saturation must be measured with the patient breathing ambient air until stabilization of the oximetry value for at least 1 minute. **Turn Off Supplementary Oxygen** when measuring PRAM. If $Sp0_2$ falls to less than 92% you can turn oxygen back on immediately as they have automatically scored maximum (2) points.
	92 to 94%	1	
	Less than 92%	2	
Suprasternal Retraction 	Absent	0	The suprasternal retraction is visible indrawing of the skin above the sternum and between the sterno-cleido-mastoid muscle with every intake of breath. **This is a visual assessment.**
	Present	2	
Scalene Muscle Contraction 	Absent	0	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. Land mark for locating scalene muscles in the triangle bordered by the clavicle (in the front), the trapezius (in the back) and neck (medially) in line with the ear lobe. Occurs in about 10% of all patients – only those with severe asthma exacerbations.
	Present	2	
Air Entry 	Normal	0	**In cases of asymmetry, the most severely affected lung field determines the rating.** Use lung fields to grade air entry. **Lung field = two contiguous VERTICAL auscultation zones of the major lobes:** Right anterior lung field: RUL and RML Right posterior lung field: RUL and RLL ↓ at the base 1 Left anterior lung field: LUL and LLL ↓ at the apex and 2 Left posterior lung field: LUL and LLL
	↓ at the base	1	
	↓ at the apex and the base	2	
	Minimal or absent	3	
Wheezing	Absent	0	Use auscultation zones to grade wheeze. **At least two auscultation zones must be affected to influence the rating.** **In case of asymmetry, the two most Audible without severely affected auscultation zones, stethoscope or 3 irrespectively of their location (RUL, RML, silent chest RLL, LUL, LLL), will determine the rating (minimal or no air criterion).
	Expiratory only	1	
	Inspiratory (± expiratory)	2	
	Audible without stethoscope or silent chest (minimal or no air entry)	3	

Child Health BC. *Provincial Asthma Guideline; Initial Management of Pediatric Asthma in Emergent/Urgent Care Settings.* Vancouver, BC: Child Health BC, April 2018.

Severity Classification

Mild	0 to 3
Moderate	4 to 7
Severe	8 to 12
Impending Respiratory Failure	Regardless of score, presence of lethargy, cyanosis, decreasing respiratory effort, and / or rising $C0_2$

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.

Interior Health

PEDIATRIC INPATIENT ASTHMA MANAGEMENT

Less than 17 years of age

Weight (kg)

Bulleted orders are initiated by default, unless crossed out and initialed by the physician / prescriber. Boxed orders (☐) require physician / prescriber check mark (☑) to be initiated.

Severity	Mild	Moderate	Severe	Signs of Impending Respiratory Failure:
PRAM	0 – 3	4 – 7	8 – 12	lethargy, cyanosis, decreasing respiratory effort, and / or rising pCO_2

11. MEDICATION and MANAGEMENT *(continued)*

Systemic Corticosteroids:

☐ **dexamethasone** _____ **mg PO × 1 dose 24H** after first dose if given in ED (0.6 mg / kg / dose to max 16 mg / day, and 2 doses total)

☐ **methylPREDNIsolone** _____ **mg IV Q6H for** _____ **H** (1 mg / kg / dose to max 60 mg / dose)

Inhaled Corticosteroids (ICS):

Fluticasone 125 mcg / puff metered-dose Inhaler (MDI) with spacer

☐ **fluticasone 125 mcg (1 puff) inhaled BID**

Ciclesonide 200 mcg / puff metered-dose inhaler (MDI) with spacer

☐ **ciclesonide 200 mcg (1 puff) inhaled DAILY**

☐ **Other** _____

Adjunctive Medications:

☐ **magnesium sulfate** _____ **mg IV × 1 over 20 minutes** (50 mg / kg / dose to max 2,000 mg / dose) ***Note:*** *Requires continuous cardiorespiratory monitoring (HR, RR, O_2 saturation) and Q5MIN BP checks.*

Pain or fever - pediatric less than or equal to 3 months old

☐ **acetaminophen** _____ **mg PO Q4H PRN** for fever or pain (10 mg / kg / dose to max 60 mg / kg / 24 hours)

Pain or fever - pediatric greater than 3 months old

☐ **acetaminophen** _____ **mg PO Q4H PRN** for fever or pain (15 mg / kg / dose to max 75 mg / kg / 24 hours or 4,000 mg / 24 hours)

☐ **ibuprofen** _____ **mg PO Q8H PRN** for fever or pain (10 mg / kg / dose to max 40 mg / kg / 24 hours or 2,400 mg / 24 hours)
Note: *If patient dehydrated, has renal insufficiency should avoid ibuprofen.*

Other Medications:

☐ _____

☐ _____

12. DISCHARGE

NOTE: *For discharge medications please complete document # 829596 Pediatric Asthma Discharge Prescription*

- Nurse initiated pediatric asthma education and discharge teaching
- Age appropriate asthma action plan for patient / family to take home (take photocopy for patient chart)
- Follow-up appointment scheduled with primary care provider (1-2 weeks after discharge)

☐ Referral to Asthma Education Program (if available in patient's community)

☐ Referral to community pediatrician (if on ICS / new diagnosis / repeated presentations to hospital)

☐ Referral to Pulmonary Function Lab (if greater than 6 years old)

☐ Referral to Allergist for a skin test

Date (dd / mm / yyyy)	Time	Prescriber's Signature	Printed Name or College ID#
/ /			