PART
TWO

Child Health BC Provincial Asthma Guideline

Initial Management of Pediatric Asthma in Emergent/Urgent Care Settings

Practical Summary and Tools

APRIL 2018

CHILD HEALTH BC
LEAD BENEFACTOR
save on foods

Table of Contents

How to cite the CHBC Provincial Asthma Guideline:

We encourage you to share these guidelines with others and we welcome their use as a reference. Please cite each document (part 1 and part 2) in the guideline in keeping with the citation on the table of contents of each of the two documents. If referencing the full guideline, please cite as:

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

Child Health BC acknowledges the contribution of the Provincial Asthma Working Group. See Part 1, Appendix A for a list of representatives.

Purpose

This document outlines recommendations for the initial management of pediatric patients presenting to emergent/urgent care settings across British Columbia (BC) with acute asthma exacerbations. This guideline provides recommended actions based on the use of the Pediatric Respiratory Assessment Measure (PRAM) [1, 2].

Background

Evidence-based management of pediatric patients experiencing acute asthma symptoms includes repeated doses of Salbutamol and Ipratropium, along with oral corticosteroids within the first sixty minutes of care [3]. Lower rates of hospitalization and the improved use of evidence-based medications are associated with the use of a validated and standardized clinical score. The PRAM is a validated scoring tool used to classify the severity of a pediatric patient's respiratory distress and subsequent response to treatment [1, 2, 3]. The Translating Emergency Knowledge for Kids (TREKK) Bottom Line Recommendations: Asthma (2017) were used as the foundation for building this guideline [3].

Scope

This guideline is for use with 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 PRAM pathway, treating physicians may choose to include these children on a case by case basis following their assessment.

PRAM scoring is performed in the Emergency Department or Urgent Care Centre by members of the health care team including: Physicians, Nurse Practitioners, Registered Nurses and Respiratory Therapists.

1.0 Equipment

- Stethoscope
- Oximetry Monitor
- Appropriate Sized Spacer

2.0 Procedure

2.1 Starting at triage

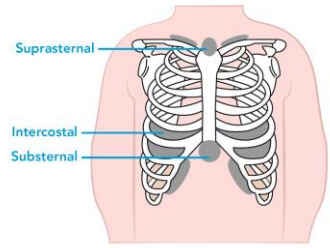
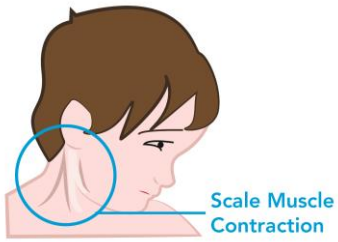
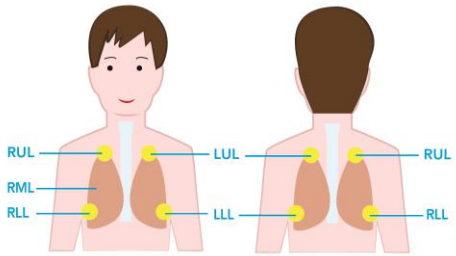
Determine eligibility for placing the child/youth on the pathway *Pediatric Asthma: Initial Management Pathway in an Emergency Setting, Appendix A.*

2.2 Inquire specifically about:

- Patient's age
- Previous diagnosis of asthma
- Prior treatment with a bronchodilator for wheezing
- Medications taken (number of puffs used at home and frequency)
- Duration and nature of symptoms
- Trigger factors
- Previous admissions or similar presentations

2.3 Assess

- Level of Consciousness
- Respiratory Rate, Heart Rate, Blood Pressure, Temperature, Oxygen Saturation on Room Air
- PRAM score (see PRAM Scoring, Table 1) [3]

Table 1: PRAM Scoring Table			
Criterions	**Description**	**Score**	**Notes**
O2 saturation	Greater than or equal to 95% 92-94% Less than 92%	0 1 2	O2 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 SpO2 falls to less than 92% you can turn oxygen back on immediately as they have automatically scored maximum (2) points.
Suprasternal Retraction 	Absent Present	0 2	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**
Scalene Muscle Contraction 	Absent Present	0 2	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 the line with the ear lobe.
Air Entry 	Normal ↓ at the base ↓ at the apex and the base Minimal or absent	0 1 2 3	****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 & RML Right posterior lung field: RUL & RLL Left anterior lung field: LUL & LLL Left posterior lung field: LUL & LLL
Wheezing	Absent Expiratory only Inspiratory (± expiratory) Audible without stethoscope or silent chest (minimal or no air entry)	0 1 2 3	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 severely affected auscultation zones, irrespectively of their location (RUL, RML, RLL, LUL, LLL), will determine the rating criterion.
PRAM Score Total	**0 – 3 Mild**	**4 – 7 Moderate**	**8 – 12 Severe**

3.0 Treatment

Initiate treatment based on severity as determined by PRAM score (mild and moderate pathways may be nurse initiated in known asthmatics only as specifically outlined in the BCCNP limits and conditions) [4].

- Communicate findings to MRP for treatment orders and ongoing care direction.
- Older children may present with a lower PRAM score despite having a low FEV1 (Forced expiratory volume measured during the first second of the forced breath) [5]. Consider supplementing the PRAM score with objective markers of airway obstruction such as peak-flow or spirometry. Particularly in patients with a history of severe exacerbations.

  **It is important to note that a substantial proportion of patients are not able to perform spirometry during exacerbations and spirometry is not available at all sites [1].*

3.1 Key Points for MILD Category [1]

- It is recommended that salbutamol be delivered with metered dose inhalers (MDIs) and spacers rather than nebulization.
- For children experiencing MILD respiratory distress, there is no clear evidence supporting the administration of oral corticosteroids.

3.2 Key Points for MODERATE Category [1]

- It is recommended that salbutamol be delivered with metered dose inhalers (MDIs) and spacers rather than nebulization.
- Administration of oral corticosteroids just before or immediately after initiating bronchodilator therapy substantially decreases respiratory distress within 2-6 hours of treatment and substantially decreases hospitalization rates.
- Oral dexamethasone or prednisone/prednisolone are likely to be comparably effective. Some studies have reported substantially lower rates of vomiting with dexamethasone.
- The intravenous form of dexamethasone may be given orally in order to minimize the volume of steroid needed to be taken by pediatric patients.
- Multiple doses of ipratropium (two to three) added to salbutamol aerosols and oral corticosteroids in the first 60 minutes of treatment yield greater improvement and lower hospital rates.
- There is no role for ipratropium in ongoing asthma management after the initial 2-3 doses.

3.3 Key Points for SEVERE Category [1]

- Patients with severe respiratory distress improve more rapidly when bronchodilators are delivered continuously via aerosol over 60 to 180 minutes as compared to intermittently.
- Although delivery via MDI/spacers is more efficient than nebulization, it is much more convenient to deliver aerosols continuously via nebulization than via MDI/spacers.
- Large volume nebulizers allow administration of bronchodilators continuously over 60 minutes or more, and should be used in preference to standard-sized nebulizers.
- Children with severe respiratory distress who do not respond to repeated or continuous bronchodilators and oral corticosteroids have been shown to have greater subsequent improvement if treated with intravenous magnesium sulfate (in addition to repeated or continuous bronchodilator therapy).

4.0 Discharge

4.1 Patient and Caregiver Teaching

Consider using a Patient Education Checklist to guide discharge teaching.

- Patient Education Checklist (Appendix B)

Key Points

Ensure patients and their caregivers understand:

- How to take their medication properly (have patient demonstrate this, not just describe it). Are Prescriptions up to date? Are they using an appropriately sized spacer?
- The difference between a reliever and controller medication.
- How to use their written action plan (including when to seek help).
- How to monitor for symptom control.
- What triggers their asthma and how to avoid their triggers (if possible).

4.2 Action Plans

Asthma fillable action plans for ages 1-5 and 6-18 are available and can be filled out and provided to families on discharge [6].

- See www.bcguidelines.ca for more information, including the full guideline “Asthma in Children – Diagnosis and Management (2015), translated action plans (available in Chinese and Punjabi), and fillable PDF versions of the action plans with drop-down medication menus.

4.3 Medications [6]

- It is recommended that metered dose inhaler (MDI) **always** be used with a spacer device in children and are as effective as nebulizers. Spacers increase the amount of medication delivered to the lungs and decrease side effects from medication.
- In selecting a medication delivery device it is important to ensure that the patient can demonstrate how to use it properly.
- Controller medication does not need to be increased with an acute loss of asthma control in children.

4.4 Inhaled Corticosteroids (ICS) [6]

- There is insufficient evidence to recommend one ICS molecule over another with respect to efficacy or safety.
- Children who present with ***moderate to severe exacerbation*** should be started on a moderate dose of ICS.
- Consider starting a trial of ICS in children who present with a mild exacerbation if they have had recurrent exacerbations.

4.5 Follow Up

- All children presenting to the ED with an acute asthma exacerbation should be followed up by their community physician/health care provider within two weeks to ensure resolution of their exacerbation and discuss how to prevent future exacerbations.
- For patients with good inhaler technique and adherence to daily controller medication, their baseline therapy should be escalated given the high risk of exacerbation in the year following an Emergency Room visit. Please refer to the CHBC/GPAC Guidelines for further details on the management of chronic asthma: http://www.bcguidelines.ca

- Consider referral to an Asthma clinic, Pediatric Respirologist or Pediatrician if available particularly for children with:
    - Poorly controlled asthma prior to exacerbation
    - Recurrent exacerbations (particularly if occurring despite daily medium dose inhaled steroid)
    - Initial PRAM 8-12
    - History of ICU admission

5.0 Documentation

Document the full assessment, medications given, steps taken to escalate care (if applicable), patient and family teaching and discharge instructions in the patient's chart as per your agency's documentation guidelines.

6.0 Definitions

Asthma: Is a chronic inflammatory disease of the airways that is characterized by bronchial hyper reactivity and variable airway obstruction which results in recurrent episodes of wheezing, breathlessness, chest tightness and/or coughing that can vary over time and in intensity.

College of Registered Nurses of British Columbia (BCCNP): Under provincial legislation (Health Professions Act), it is the duty of BCCNP to protect the public through regulation of registered nurses, nurse practitioners, and licensed graduate nurses.

Pediatric Respiratory Assessment Measure (PRAM): Is a 12 point clinical scoring rubric that captures a patient's asthma severity using a combination of scalene muscle contraction, suprasternal retractions, wheezing, and air entry and oxygen saturation.

7.0 Related Documents

BC Guidelines: Asthma in Children-Diagnosis and Management Guideline, BC
http://www.bcguidelines.ca

College of Registered Nurses of British Columbia Scope of Practice for Registered Nurses
https://www.bccnp.ca/Standards/RN_NP/StandardResources/RN_ScopeofPractice.pdf

Pediatric Asthma: Initial Management Pathway in an Emergency Setting (Appendix A)

Provincial PEWS Vital Sign, Assessment and Documentation Guidelines
http://www.childhealthbc.ca/

Translating Emergency Knowledge for Kids (TREKK) Bottom Line Recommendations: Asthma
http://trekk.ca/

8.0 Resources

Asthma Fillable Action Plans Ages 1-5 and 6-18
http://www.childhealthbc.ca/ or http://www.bcguidelines.ca

9.0 References

1) Ducharme, F.M., Chalut, D., Plotnick, L., Savdie, C., Kudirka, D., Zhang, X., Meng, L., & McGillivray, D. (2008). The pediatric respiratory assessment measure: A valid clinical score for assessing acute asthma severity from toddlers to teenagers. *Journal of Pediatrics, 152*(4), 476-80.

2) Chalut, D.S., Ducharme, F.M., & Davis, G.M. (2000). The preschool respiratory assessment measure (PRAM): A responsive index of acute asthma severity. *Journal of Pediatrics, 137*(6), 762-768.

3) Translating Emergency Knowledge for Kids (TREKK). (2016). *Bottom line recommendations: asthma*. Retrieved from https://kte01.med.umanitoba.ca/assets/trekk/assets/attachments/130/original/asthma-bottom-line-final-correct-bc-link.pdf?1481300814

4) College of Registered Nurses of British Columbia. (2017). *Scope of practice for registered nurses*. Retrieved from https://www.bccnp.ca/Standards/RN_NP/StandardResources/RN_ScopeofPractice.pdf

5) Arnold, D. H., Gebretsadik, T., & Hartert, T.V. (2013). *Spirometry and PRAM severity score changes during pediatric acute asthma exacerbation treatment in a pediatric emergency department.* J Asthma, 50:204–208.

6) BC Guidelines. (2015). *Asthma in children-Diagnosis and management guideline, BC*. Retrieved from http://www.bcguidelines.ca

7) Clinical Research and Knowledge Transfer Unit on Childhood Asthma (CRUCA) of the Research Centre of Sainte-Justine University Hospital Center. *Paediatric Respiratory Assessment Measure (PRAM) Teaching Module*. Retrieved from http://www.chu-sainte-justine.org/pram

8) Ducharme, F.M., Dell, S.D., Radhakrishnan, D., Grad, R.M., Watson, W.T.A., Yang, C.L., & Zelman, M. (2015). Diagnosis and management of asthma in preschoolers: A Canadian thoracic society and Canadian paediatric society position paper. *Canadian Respiratory Journal, 22* (3), 135-143.

9) Lehr, A.R., McKinney, M.L., Gouin, S., Blais, J.G., Pusic, M.V., & Ducharme, F.M. (2013). Development and pretesting of an electronic learning module to train health care professionals on the use of the pediatric respiratory assessment measure to assess acute asthma severity. *Canadian Respiratory Journal, 20*(6), 435-41.

10) Ontario Lung Association. (2014). Paediatric emergency department asthma clinical pathway (P- EDACP). Retrieved from https://www.on.lung.ca/file/PEDACP-Information-Package.pdf

11) Canadian Pediatric Society (2012). *Managing the paediatric patient with an acute asthma exacerbation*. Canadian Pediatric Society Position Statement. *Paediatric Child Health* 2012; 17 (5): 251-5. Reaffirmed Feb 28 2015.

12) U.S National Library of Medicine. (2012). *Asthma-children*. Retrieved from (https://www.nlm.nih.gov/medlineplus/ency/article/000990.htm

13) World Health Organization. (2013). Asthma fact sheet. Retrieved from http://www.who.int/mediacentre/factsheets/fs307/en/

14) Canadian Institute for Health Information (CIHI). (2001). *Respiratory disease in Canada*. Retrieved from https://secure.cihi.ca/free_products/RespiratoryComplete.pdf

15) Lougheed, M. D., Lemière, C., Dell, S. D., Ducharme, F. M., Fitzgerald, J. M., Leigh, R.. . Canadian Thoracic Society Asthma Committee. (2010). Canadian thoracic society asthma management continuum--2010 consensus summary for children six years of age and over, and adults. *Canadian Respiratory Journal: Journal of the Canadian Thoracic Society, 17*(1), 15.

16) Cates CJ, Crilly JA, Rowe BH. Holding chambers (spacers) versus nebulisers for beta-agonist treatment of acute asthma. *Cochrane Database Syst Rev.* 2013 Sep 13;(9):CD000052. doi: 10.1002/14651858.CD000052.pub3

17) Keeney GE et al. Dexamethasone for acute asthma exacerbations in children: A meta-analysis. *Pediatrics.* 2014 Mar 1;133(3):493-9.

18) Griffiths B, Ducharme FM. Combined inhaled anticholinergics and short-acting beta2-agonists for initial treatment of acute asthma in children. *Cochrane Database Syst Rev.* 2013 Aug 21;(8).

19) Camargo CA Jr et al. Continuous versus intermittent beta-agonists in the treatment of acute asthma. *Cochrane Database Syst Rev.* 2003;(4):CD001115.

20) Order information for MiniHEART Hi-Flo®, Westmed HEART Continuous Nebulizers (large-volume nebulizer used in RCTs).

21) Cheuk DK, Chau TC, Lee SL. A meta-analysis on intravenous magnesium sulphate for treating acute asthma. *Arch Dis Child.* 2005 Jan;74-7.

22) Griffiths B, Kew KM. Intravenous magnesium sulfate for treating children with acute asthma in the emergency department. *Cochrane Database Syst Rev.* 2016; (4):CD011050.

Appendix A: Assessment Starting 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 BCCNP 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)

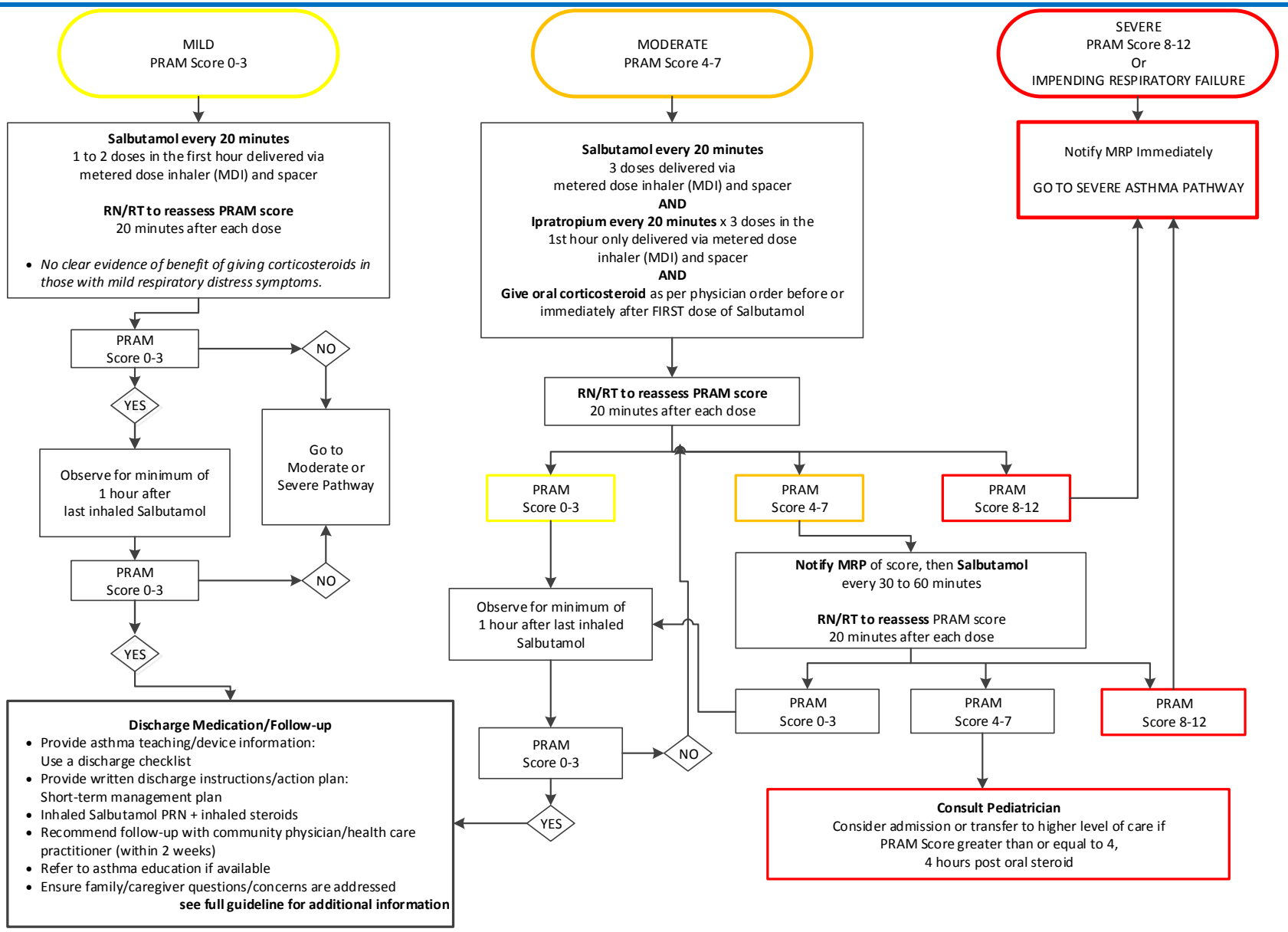
Asthma Clinical Score (PRAM): Mild, Moderate, Severe or Impending Respiratory Failure

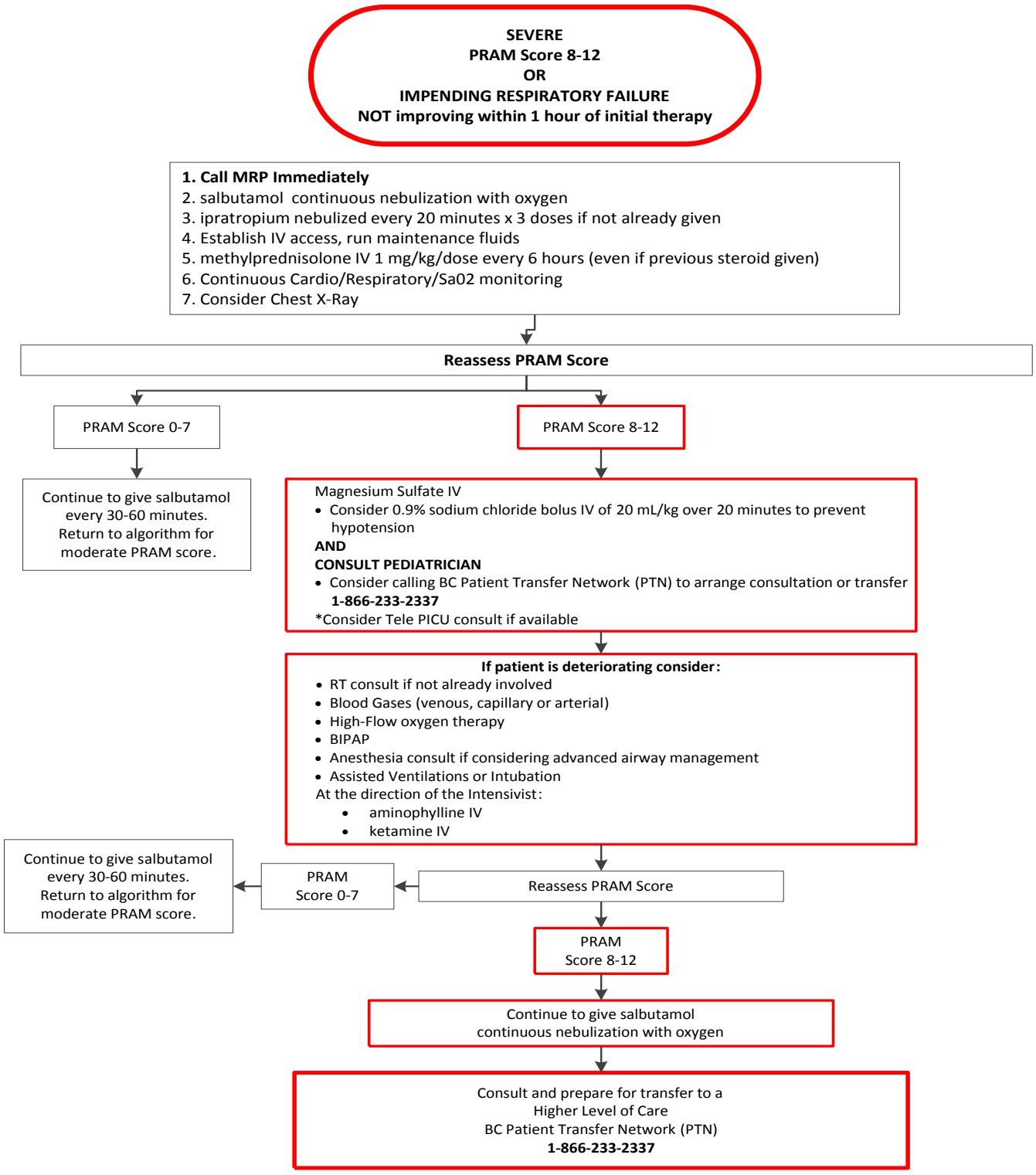
Signs	0	1	2	3
Suprasternal Retractions	Absent		Present	
Scalene Muscle Contractions	Absent		Present	
Wheezing	Absent	Expiratory only	Inspiratory and expiratory	Audible without stethoscope/silent chest with minimal air entry
Air entry/Breath Sounds Intensity	Normal	Decreased at bases	Widespread decrease	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.*


MILD
PRAM Score 0-3
Salbutamol every 20 minutes
1 to 2 doses in the first hour delivered via metered dose inhaler (MDI) and spacer
RN/RT to reassess PRAM score
20 minutes after each dose
No clear evidence of benefit of giving corticosteroids in those with mild respiratory distress symptoms.
PRAM Score 0-3
NO
YES
Go to Moderate or Severe Pathway
Observe for minimum of 1 hour after last inhaled Salbutamol
PRAM Score 0-3
NO
YES
Discharge Medication/Follow-up
Provide asthma teaching/device information: Use a discharge checklist
Provide written discharge instructions/action plan: Short-term management plan
Inhaled Salbutamol PRN + inhaled steroids
Recommend follow-up with community physician/health care practitioner (within 2 weeks)
Refer to asthma education if available
Ensure family/caregiver questions/concerns are addressed
see full guideline for additional information
MODERATE
PRAM Score 4-7
Salbutamol every 20 minutes
3 doses delivered via metered dose inhaler (MDI) and spacer
AND
Ipratropium every 20 minutes x 3 doses in the 1st hour only delivered via metered dose inhaler (MDI) and spacer
AND
Give oral corticosteroid as per physician order before or immediately after FIRST dose of Salbutamol
RN/RT to reassess PRAM score
20 minutes after each dose
PRAM Score 0-3
Observe for minimum of 1 hour after last inhaled Salbutamol
PRAM Score 0-3
NO
YES
PRAM Score 4-7
Notify MRP of score, then Salbutamol every 30 to 60 minutes
RN/RT to reassess PRAM score
20 minutes after each dose
PRAM Score 0-3
PRAM Score 4-7
PRAM Score 8-12
Consult Pediatrician
Consider admission or transfer to higher level of care if PRAM Score greater than or equal to 4, 4 hours post oral steroid
PRAM Score 8-12
SEVERE
PRAM Score 8-12
Or
IMPENDING RESPIRATORY FAILURE
Notify MRP Immediately
GO TO SEVERE ASTHMA PATHWAY


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/Sa02 monitoring
7. Consider 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 0.9% sodium chloride bolus IV of 20 mL/kg over 20 minutes 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
Reassess PRAM Score
PRAM Score 0-7
Continue to give salbutamol every 30-60 minutes. Return to algorithm for moderate 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

Appendix B: Pediatric Asthma – Education Checklist

Instructions for healthcare professionals

Please review education topics with patient/family and initial beside each topic to indicate completion.

A

Review the basics of asthma.

- Airway inflammation (swelling), increased mucous, tight airway muscles and can be intermittent/variable in nature. ☐

S

Review symptoms and asthma control.

- Coughing, wheezing, having hard time breathing.
- Knowing what signs to watch for; trouble breathing, breathing faster, nasal flaring, indrawing, can't take a deep breath. ☐

T

Assess technique and demonstrate optimal technique. Review triggers.

- Assess MDI/spacer technique and device recommendations
- Not everyone has the same triggers and it is important for patients to know what their triggers are (e.g. colds, smoke, allergies). Indicate triggers on the patient's individual action plan.
- Trigger avoidance can reduce the amount of medication needed to control the patient's asthma and can reduce asthma symptoms. ☐

H

Discuss when and where to go for help. When to go to the Emergency Department.

- Needing Rescue medications more than every four hours
- Or having difficulty breathing even after taking rescue medication ☐

M

Review asthma medications; what they are for and when to use them.

- *Reliever/Rescue* (often a blue inhaler): Use as needed to help breathing get better. It works by temporarily relaxing muscles around the airway.
- *Preventer/Controller*: Use every day to control airway swelling and inflammation.
- Discharge Plan: Medications, prescription and follow up instructions. ☐

A

Review asthma action plan.

- Asthma fillable action plans for ages 1-5 years and 6-18 years are available and can be filled out and provided to families on discharge www.bcguidelines.ca ☐

Appendix C: Disclaimer

Disclaimer

Child Health BC develops evidence-based clinical support documents that include recommendations for the care of children and youth across British Columbia. These documents are intended to give an understanding of a clinical problem, and outline one or more preferred approaches to the investigation and management of the problem. These documents are for guidance only and not intended as a substitute for the advice or professional judgment of a health care professional, nor are they intended to be the only approach to the management of a clinical problem. Healthcare professionals should continue to use their own judgment and take into consideration context, resources and other relevant factors. Neither Provincial Health Services Authority nor Child Health BC assume any responsibility or liability from reliance on or use of the documents.