

Initial Management of Pediatric Asthma Exacerbations Medication References

Bronchodilators

salbutamol (intermittent)	Child weight less than 20 kg: 5 puffs via MDI with spacer (100 mcg/puff); <u>or</u> 2.5 mg via nebulizer
	Child weight greater than or equal to 20 kg: 10 puffs via MDI with spacer (100 mcg/puff); <u>or</u> 5 mg via nebulizer
<i>Note: salbutamol doses are the same throughout the management algorithm.</i>	
salbutamol (continuous)	20 mg/hr via nebulizer <i>Note: salbutamol doses are the same throughout the management algorithm.</i>
ipratropium (intermittent)	Child weight less than 20 kg: 3 puffs via MDI with spacer (20 mcg/puff); <u>or</u> 0.25 mg via nebulizer
	Child weight greater than or equal to 20 kg: 6 puffs via MDI with spacer (20 mcg/puff); <u>or</u> 0.5 mg via nebulizer

Note: administering nebulized medication through a HFNC circuit will dramatically reduce delivered dose. See guideline for detailed instructions.

Systemic Steroids

dexamethasone	0.6 mg/kg/dose (max 16 mg/dose) PO x 1 dose <i>Second dose to be given after 24 hours in hospital if scoring moderate or severe PRAM</i>
prednisone/prednisolone	1 mg/kg/dose (max 60 mg/dose) PO daily (x 5 days)
methylPREDNISolone	1 mg/kg/dose (max 60 mg/dose) IV q6h

Other

magnesium sulfate	50 mg/kg/dose (max 2000mg/dose) IV x 1 dose over 20 minutes
0.9% NaCl/Ringer's Lactate bolus	10-20 mL/kg bolus (max 1L) over 10 to 20 minutes

List of Abbreviations

BCCH/VGH PICU = BC Children's Hospital/Victoria General Hospital Pediatric Intensive Care Unit
 BIPAP = Bilevel positive airway pressure
 BP = Blood pressure
 CBC = Complete blood count
 CHARLIE = Child health advice in real-time electronically
 CXR = Chest x-ray
 HFNC = High flow nasal cannula
 ICS = Inhaled corticosteroid
 IV = Intravenous
 MDI = Metered dose inhaler
 MRP = Most responsible physician
 NaCl/LR = Sodium chloride/Lactated Ringer's

O₂ = Oxygen
 PO = By mouth
 POC = Point of care
 PRAM = Pediatric Respiratory Assessment Measure
 PRN = As needed
 PTN = Patient transfer network
 q = Every
 RR = Respiratory rate
 RRT = Registered Respiratory therapist
 SpO₂ = Oxygen saturation

This material has been prepared by Child Health BC (CHBC) as guidance in the provision of care to pediatric patients in British Columbia. Please consult your health authority leaders for clarification on the adoption and use of this guidance within your local context. A printed copy of this document may not reflect the current electronic version. This document is a component of the Child Health BC Provincial Asthma Guideline. For full recommendation refer to PHSA SHOP # C-0506-07-63037.

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Ongoing Management of Pediatric Asthma Exacerbations Medication References

Bronchodilators

salbutamol (intermittent)	<p>Child weight less than 20 kg: 5 puffs via MDI with spacer (100 mcg/puff); <u>or</u> 2.5 mg via nebulizer</p> <p>Child weight greater than or equal to 20 kg: 10 puffs via MDI with spacer (100 mcg/puff); <u>or</u> 5 mg via nebulizer</p>
salbutamol (weaned dose)* <i>ONLY when sustained PRAM score 3 or less with salbutamol q4h</i>	<p>2-4 puffs via MDI with spacer (100mcg/puff) q4h</p> <p><i>*Follow site specific policies/procedures for weaning dose (i.e. MRP/RN/RRT scope of practice).</i></p>
salbutamol (continuous)	20 mg/hr via nebulizer

Note: administering nebulized medication through a HFNC circuit will dramatically reduce delivered dose. See guideline for detailed instruction

Systemic Steroids

dexamethasone	0.6 mg/kg/dose (max 16 mg/dose) PO x 1 dose <i>Second dose to be given after 24 hours in hospital if scoring moderate or severe PRAM</i>
prednisone/prednisolone	1 mg/kg/dose (max 60 mg/dose) PO daily (x 5 days)
methylPREDNISolone	1 mg/kg/dose (max 60 mg/dose) IV q6h

Inhaled Corticosteroids (continue home maintenance therapy if applicable)

beclomethasone dipropionate HFA	100 mcg/dose inhaled BID
fluticasone propionate MDI	125 mcg/dose inhaled BID
ciclesonide MDI	200 mcg/dose inhaled once daily
budesonide DPI	200 mcg/dose inhaled BID
fluticasone propionate DPI	100 mcg/dose inhaled BID

Other

magnesium sulfate	50 mg/kg/dose (max 2000 mg/dose) IV x 1 dose over 20 minutes
0.9% NaCl/Ringer's Lactate bolus	10-20 mL/kg bolus (max 1L) over 10-20 minutes

LIST OF ABBREVIATIONS

BCCH/VGH PICU = BC Children's Hospital/Victoria General Hospital Pediatric Intensive Care Unit
BIPAP = Bilevel positive airway pressure
BP = Blood Pressure
CBC = Complete Blood Count
CHARLIE = Child Health Advice in Real-time Electronically
CXR = Chest X-Ray

DPI = Dry Powder Inhaler
HFNC = High Flow Nasal Cannula
ICS = Inhaled Corticosteroid
IV = Intravenous
MDI = Metered Dose Inhaler
MRP = Most Responsible Practitioner
O₂ = Oxygen
PRAM = Pediatric Respiratory Assessment Measure

PO = Per mouth
POC = Point of Care
PRN = as needed (Pro Re Nata)
PTN = Patient Transfer Network
q = Every
RR = Respiratory Rate
RRT = Registered Respiratory Therapist
SpO₂ = Oxygen Saturation

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