	<b>M05 - EPINEPHRINE (ADRENALIN)</b>	
	STANDING ORDER	<b>HIGH-ALERT MEDICATION <sup>1</sup></b>
Version date: 2024-05-15	Effective date: 2024-05-15 (0700)	

### INDICATIONS

- Known or suspected anaphylaxis
- Cardiopulmonary arrest
- Refractory asthma (not responding to, or patient cannot cooperate with / tolerate, inhaled bronchodilators)
- Moderate to severe croup

### CONTRAINDICATIONS

- No contraindications when using for cardiac arrest or anaphylaxis
- When using for refractory asthma:
  - Chronic obstructive pulmonary disease (COPD)
  - Undifferentiated respiratory failure
  - Wheezing due to heart failure
  - Chest pain suspicious for myocardial ischemia
- When using for croup:
  - Stridor known or suspected to be due to epiglottitis, angioedema or a foreign body airway obstruction

### DOSING

#### CARDIOPULMONARY ARREST

##### **INTRAVENOUS / INTRAOSSEOUS (INTERMEDIATE WORK SCOPE):**

- Use 0.1 mg/ml solution (“cardiac epi”)
- 10 yrs & older - administer 1 mg
- Up to 10 yrs - administer 0.01 mg/kg (single dose maximum = 1 mg)
- Inject by rapid push & follow with flush <sup>2</sup>
- Repeat every 3 - 5 min as required

### ANAPHYLAXIS

#### **AUTOINJECTOR (BASIC WORK SCOPE & ABOVE):**

- 6 yrs & older - administer by orange device (0.3 mg)
- 1 up to 6 yrs - administer by green device (0.15 mg) <sup>3</sup>
- Inject to lateral thigh
- Repeat once if required

#### **INTRAMUSCULAR (PRIMARY WORK SCOPE & ABOVE):**

- Use 1 mg/ml solution
- 17 yrs & older - administer 0.5 mg
- Up to 17 yrs - administer 0.01 mg/kg (single dose maximum = 0.5 mg)
- Inject into deep lateral thigh
- Repeat every 10 - 15 min as required
- See appendix A for pediatric dosing guide

### REFRACTORY ASTHMA <sup>4</sup>

#### **INTRAMUSCULAR (PRIMARY WORK SCOPE & ABOVE):**

- Use 1 mg/ml solution
- 17 yrs & older - administer 0.3 mg
- Up to 17 yrs - administer 0.01 mg/kg (single dose max = 0.3 mg)
- Inject into deep lateral thigh
- Repeat once in 20 min if required



### CROUP

#### **NEBULIZER (PRIMARY WORK SCOPE & ABOVE):**

- Use 1 mg/ml solution
- Up to 6 yrs - 0.5 ml/kg (single maximum dose = 5 ml)
- Nebulize over 15 minutes
- Repeat once in 2 hrs if required
- Observe for rebound symptoms after administration <sup>5</sup>

### **NOTES**

1. ERS HIGH-ALERT MEDICATION: Refer to Shared Health Provincial Clinical Standard - Safety Controls for High-Alert Medications (refer to A03 - HIGH ALERT MEDICATIONS).
2. Do not mix epinephrine with sodium bicarbonate.
3. If a pediatric-dose autoinjector is not available, use the adult device.
4. Use of parenteral epinephrine in asthma is an off-label indication, but is potentially useful in patients who cannot tolerate or cooperate with inhaled beta agonist.
5. The effects of nebulized epinephrine will generally last about 2 hours. Some children may experience a rebound with recurring or worsening symptoms after it wears off.

APPROVED BY	
	
EMS Medical Director	EMS Associate Medical Director

VERSION CHANGES (refer to X08 for change tracking)
<ul style="list-style-type: none"> <li>• Correction of pediatric anaphylaxis &amp; refractory asthma dosing</li> </ul>

APPENDIX A - ANAPHYLAXIS PEDIATRIC EPI DOSE QUICK REFERENCE GUIDE								
WT (kg)	DOSE (mg)	VOL (ml)	WT (kg)	DOSE (mg)	VOL (ml)	WT (kg)	DOSE (mg)	VOL (ml)
5 - 10	0.1	0.1	21 - 25	0.25	0.25	36 - 40	0.4	0.4
11 - 15	0.15	0.15	26 - 30	0.3	0.3	41 - 45	0.45	0.45
16 - 20	0.2	0.2	31 - 35	0.35	0.35	≥46	0.5	0.5