**MEDICAL DIRECTIVE: ADULT ASTHMA MEDICAL DIRECTIVE**

**Approved by/Date: Medical Advisory Committee – Nov 10, 2009**

## Authorizing Physician(s)
All LH ER Physicians

## Authorized to who
Any Registered Respiratory Therapist or Registered Nurse working in a Lakeridge Health Emergency Department who has attained validation to perform this medical directive may initiate the following shared therapies for patients, 12 years of age and older, who present with symptoms of asthma.

## Patient Description / Population
Patients 12 yrs of age and over who present with symptoms of asthma.

## Medical Directive Description/Physician's Order
- Oxygen therapy as required to maintain oxygen saturation (SpO2) above 92 %
- Peak Expiratory Flow Rate (PEFR) - record measurements x 3 on initial assessment and post bronchodilator therapy; if patient able to perform.
- RN will monitor vital signs q15 – 30 min for mild and moderate presentations
- RN will monitor vital signs and ECG continuously for all severe presentations

| | MILD | MODERATE | SEVERE |
|---|---|---|---|
| **Assessment** | • Dyspnea or cough on exertion<br>• With or without nocturnal symptoms<br>• Increased use of β-agonist to control symptoms<br>• good response to β agonist<br>• **PEFR greater than 60% of predicted** | • Dyspnea at rest<br>• Cough, congestion, chest tightness<br>• Nocturnal symptoms<br>• Partial relief β-agonist<br>• β-agonist required greater than q4h<br>• **Decreased breath sounds, may have exp wheeze**<br>• **PEFR 40%-60% of predicted** | • Laboured respirations<br>• Agitated, confused<br>• Diaphoretic, cyanotic<br>• Difficulty speaking<br>• No relief with β-agonist<br>• Decreased breath sounds**, may have insp/exp wheeze**<br>• Initial tachycardia<br>• Oxygen saturation less than 90%<br>• **PEFR less than 40% predicted**<br>• (may be unable to provide PEFR) |
| **Treatment** | • Notify Physician<br>• Provide oxygen to maintain SpO2 greater than 92%<br>• Salbutamol puffer 4-8 puffs q15min x 3 (MDI **+** spacer device) or equivalent nebulized Salbutamol* repeat prn<br>• PEFR to evaluate response | • Notify Physician<br>• Provide oxygen to maintain SpO2 greater than 92%<br>• Monitor vital signs<br>• Salbutamol 4-8 puffs q15min x 3 sets (MDI + spacer) or equivalent nebulized Salbutamol*<br>• Vital signs & PEFR after each med. administration | • Notify physician Stat<br>• 100% oxygen<br>• monitor vitals & ECG continuously<br>• continuous Salbutamol 4-8 puffs q15 minutes x 3and Ipratropium 4-8 puffs q15min x 3 or nebulized Salbutamol (5 mg in 3 mL saline) & Ipratropium (0.25 mg in 3 mL saline) |

| | | | |
|---|---|---|---|
| | | | then reassess<br>• Chest x-ray – portable<br>• 1:1 nurse patient ratio |

*** see dosage conversion chart**

| Salbutamol Solution (5 mg/mL) | Salbutamol Inhaler via MDI (100 mcg/puff) |
|---|---|
| 1.25 mg (0.25 mL) | 2 puffs |
| 2.5 mg (0.5 mL) | 3 puffs |
| 3.75 mg (0.75 mL) | 4 puffs |
| 5 mg (1 mL) | 6 puffs |

| Ipratropium Solution (0.25mg/ml) | Ipratropium Inhaler via MDI (20 mcg/puff) |
|---|---|
| 0.125 mg (0.5 mL) | 2 puffs |
| 0.25 mg (1 mL) | 3 puffs |
| 0.375 mg (1.5 mL) | 4 puffs |
| 0.5 mg (2 mL) | 6 puffs |

**Table 1** Asthma Dosage Conversion Chart

## Specific conditions/circumstances that must be met before the Directive can be implemented

- Each health care provider will provide the portion of the directive that falls within their scope of practice
- Patient must be assessed and placed into a severity category by the nurse or respiratory therapist.
- The patient must have symptoms suggestive of asthma – refer to assessment categories.
- Each intervention will be explained to the patient and/or family and verbal consent will be obtained. Medications given by pre-hospital personnel or taken by patient just prior to arrival must be included in the calculation of maximum doses.

## Contraindications to the implementation of the Directive

- Patient refuses therapy – no consent.
- Patient is in pre-morbid state (silent chest, cyanosis, confusion)
- Patient is incapable of cooperating with the procedure.

## Identify relevant Delegated Control Act or Added Skill associated with this Directive

- Initiation of treatment.

- Each health care provider will provide the portion of the directive that falls within their scope of practice

**Documentation requirements**

- Implementation of the Medical Directive must be documented on the ER chart under physician orders
- Response to bronchodilator medication must be documented

**Review/Evaluation Process (how often/by who)**

- Every 2 years by Corporate ER Council and Corporate RRT Council

**Related Documents**

- Nomogram for PEFR

**References**

Canadian Asthma Consensus Guidelines 1999 Can Respir J. 2001 Mar-Apr; 8 65-8

Summary of recommendations from the Canadian Asthma Consensus Report 1999; Canadian Medical Association Journal 1999.

Adult Asthma Consensus Guidelines Update 2003 Can Respir J 2004; 11 (Suppl A): 9A-18A

**Approvals and Signatures:**

| | | | |
|---|---|---|---|
| **Department Chief:** | Name | Signature | Date |
| **Medical Director:** | Name | Signature | Date |
| **Program Director:** | Name | Signature | Date |
| **Chair of HDAC:** | Name | Signature | Date |
| **Chair of CNAC:** | Name | Signature | Date |
| **Chair of P & T Comm.:** | Name | Signature | Date |
| **Final Approval: Chair of MAC:** | Name | Signature | Date |