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## **MEDICAL DIRECTIVE**

### **Title: Point of Care Arterial Blood Gas Test (POCABG) in Emergency and Critical Care**

**Approved by/Date: Medical Advisory Comm. – October 25, 2011**

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#### **Authorizing physician(s)**

All LH Intensivists.

#### **Authorized to who**

All Registered Respiratory Therapists that have been certified in arterial blood gas punctures and completed the appropriate training to run arterial blood gas samples on the point of care blood gas analyzer.

#### **Patient Description / Population**

Any Lakeridge Health patient located in Emergency or Critical Care that presents in respiratory distress/respiratory failure, and/or decreased level of consciousness (LOC), and/or require mechanical ventilation whereby Point of Care Arterial Blood Gas Testing (POCABG) is available.

#### **Medical Directive Description/Physician's Order Obtaining:**

Blood is drawn from a peripheral artery via a needle puncture or an indwelling arterial cannula to measure the partial pressures of carbon dioxide (PaCO<sub>2</sub>), oxygen (PaO<sub>2</sub>) and hydrogen ion activity (pH).

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

The patient must have one or more of the following conditions:

- The patient must be in respiratory distress/failure.
- The patient must have a decreased LOC.
- The patient must require invasive or non-invasive mechanical ventilation.

#### **Contraindications to the implementation of the Directive**

- Patients unwilling or unable to provide arterial blood samples for bedside arterial blood gas testing.
- Negative results of a modified Allen's test
- Lesions, infections, peripheral vascular disease or surgical shunts on arterial site
- Refusal of patient/family consent for testing.

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

- Performing a procedure below the dermis.
- Certified in analysis of arterial blood gas sampling

**Documentation requirements**

- Documentation of the medical directive will be provided on the physician order sheet and in the health professional's documentation section.
- Report all point-of-care lab values in computer according to Ontario Laboratory Accreditation (OLA) standards.

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

This medical directive will be reviewed every two years by the Medical Director of Emergency and Critical Care and Laboratory Services Point of Care Advisory Committee.

**Related Documents**

Arterial Punctures Policy and Procedure. Lakeridge Health. 2009.

**References**

AARC Clinical Practice Guideline. Sampling of Arterial Blood Gas Analysis. Respiratory Care 1992 (8); 37:891-897.

Malley, J. Clinical Blood Gases, 2<sup>nd</sup> ed. Elsevier Saunders Publishing. 2005.

Ontario Lab Accreditation (OLA) Requirements. Standards of Practice, QMP-LS OLA Program Requirements, Version #5, Dec. 2010.