



MEDICAL DIRECTIVE

Rapid Response System (RRS) – Hypotension/Shock

Approved by/Date: February 26, 2013 **(For LHB Pilot Only)**

GENERAL PREAMBLE:

The purpose of the Rapid Response System (RRS) is to assist in the early recognition of patients at risk of developing critical illnesses. It is well known that greater than 80% of in-hospital cardiac arrests are preceded by a period of abnormal vital signs. There is evidence that 41% of Critical Care Unit admissions may be avoidable if care is provided within this deterioration period. Therefore, the expected results of the RRS is to improve patient outcomes and safety, by quickly identifying patients at risk of becoming critically ill and decreasing the number of in-hospital cardiac arrests.

The RRS will be specially trained group of individuals who apply clinical medical directives when a patient's condition appears to be deteriorating. The RRS will provide additional monitoring as needed and will determine if additional levels of care and treatment are required. If the patient needs to be transferred to Critical Care, the RRS will assist with this and will communicate with the Rapid Response System Physician and / or Most Responsible Physician (MRP).

AUTHORIZING PHYSICIANS:

These Medical Directives are applicable to the Lakeridge Health. The Authorizing Physicians are all Physicians at Lakeridge Health.

“Appropriately Educated Registered Respiratory Therapists (RRT) and Registered Nurses (RN) Responders” will refer to those employees of Lakeridge Health who have successfully attained certification by a course of self-study supplied by Intensivist-Educators appointed by the Authorizing Physicians, participated in a Didactic and Simulation Day, completed orientation with an established Critical Care Response Team, and have successfully passed both oral and written examinations. The content of the Educational package will be approved by the Medical Department - Critical Care.

The Authorizing Physicians expect that only appropriately educated RRTs and RNs; who are employees of Lakeridge Health: with the specific professional qualifications as outlined in each medical directive will implement these medical directives. The Authorizing Physicians also expect that the responders performing the medical directives will adhere to the specific clinical

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Medical Advisory Committee: February 26, 2013 (for LHB Pilot ONLY)

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conditions/circumstances and contraindications. Deviation from these medical directives is not permitted.

The Authorizing Physicians expect that the appointed Intensivist-Educators will provide the initial and ongoing education and ongoing continuous quality improvement of these medical directives as directed by the section - Critical Care.

PURPOSE:

1. To define the diagnostics and interventions that may be performed by the responders of the RRS for any patient seen by the team.
2. All calls to a physician responsible to the RRS, by a RRS responder are deemed a medical consult from the patients Most Responsible Physician (MRP) / Nurse Practitioner (NP).
3. To comply with the professional standards and guidelines of the College of Physicians and Surgeons of Ontario, the College of Respiratory Therapists of Ontario and the College of Nurses of Ontario.
4. Documentation of the use of the Medical Directive will be made with a notation in the space provided on the Physician orders. SBAR communication will be used to report all interventions.

Inclusion Criteria:

1. Any adult in-patient that is referred to the RRS.

Exclusion Criteria:

1. Any out-patient
2. Any pediatric patient.

Early Recognition:

Traditional vital signs have been used to assess at-risk patients. In most circumstances, physiologic abnormalities in the vital signs occur well before a cardiac arrest takes place. These activation criteria are used to mobilize the Rapid Response System. This is the “Lakeridge Health - Medical Early Warning System (MEWS)” which will be used as activation criteria.

This will apply to the 2013 Rapid Response System (RRS) Directives listed:

Hypotension/Shock



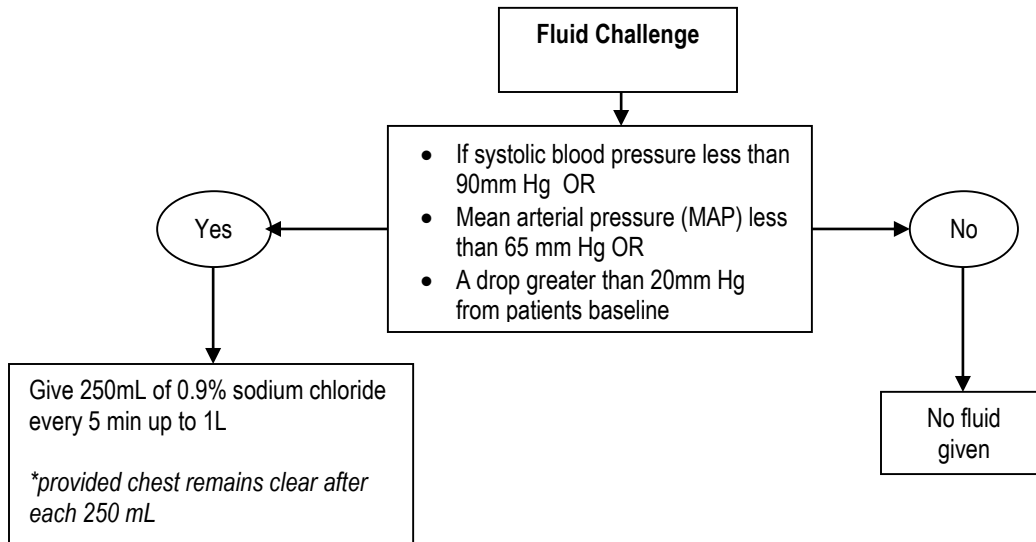
HYPOTENSION/SHOCK MEDICAL DIRECTIVE

Authorized to whom:

Appropriately educated RRS responders (RRTs and RNs) working within Lakeridge Health may initiate the following therapies for in-patients presenting with signs and symptoms of hypotension (systolic blood pressure less than 90mmHg or drop in systolic BP greater than 20mmHg from patient's normal), unexplained tachycardia, dysrhythmia, high or low temperatures and internal or external bleeding.

Medical Directive Description:

- Manage the airway including support of oxygenation and ventilation (intubation if necessary)
- Initiate monitoring including cardiac, blood pressure and pulse oximetry.
- Oxygen therapy to maintain saturation above 92%, COPD 88-92%, or patient norm if documentation available
- Vital signs including temperature
- Review patient history and diagnosis including recent antibiotics
- Stat Blood Work (CBC, electrolytes, glucose, urea, creatinine, lactate, CK, Troponin, INR, APTT, Group and Screen)
- Stat ABG (pH, pO₂ and pCO₂)
- Urine Screen (dip stick)
- Blood culture x 2, sputum culture if temperature greater than 38C
- Portable Chest X-ray – upright if possible
- Insert a large (16 if possible) gauge IV of 0.9% sodium chloride at 30 mL/hr
- Intraosseous access may be attained when it is a very unstable, life threatening situation and when IV access has not been successful after 2 attempts or 90 seconds of searching for a suitable vein.
- If systolic blood pressure is less 90mmHg or a drop in systolic BP greater than 20 mmHg from patient's baseline or a Mean Arterial Pressure (MAP) of less than 65 mmHg, [initiate a fluid crystalloid solution \(0.9% sodium chloride\) challenge \(250mL in 5 minutes\)](#) and may repeat to maximum of 1 litre if chest remains clear on auscultation



Patient Description/Population:

Patients who present with symptoms of profound hypotension, unexplained tachycardia, dysrhythmia, high or low temperatures and /or internal or external bleeding.

Identify relevant Controlled Act, Delegated Control Act or Expanded/ Added Skill associated with this Directive:

Administering a substance by inhalation or injection
Performing a procedure below the dermis - IV Insertion Certificate
- IO Certification

Putting an instrument beyond the larynx

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

- The patient must have symptoms suggestive of a low blood pressure unexplained tachycardia, dysrhythmia, high or low temperatures and /or internal or external bleeding on initial assessment.
- Each intervention will be explained to the patient and/or family and verbal consent will be obtained.

Contraindications to the implementation of the Directive:

- Patient refuses therapy – no consent.
- Patient is not capable of co-operating with the procedures.



Documentation requirements:

- Implementation of the Medical Directive must be documented on the chart under physician orders
- Response to medications administered must be documented in the RRS note

Review/Evaluation Process (how often/by whom): every 2 years by Medical Department - Emergency Medicine and Critical Care Council.

Related Documents:

ORNGE Medical Directives and Standing Orders. Altered Level of Consciousness-Hypoglycemic Emergencies Medical Directive. April. 2010. Pg. 13-14.

ORNGE Medical Directives and Standing Orders. Circulation-Volume Replacement in Hypovolemic Hypotensive Medical Directive. May. 2006. Pg. 62.

Hamilton Health Sciences Corporation. Critical Care Response Team: Care of the Patient with Dysrhythmia Medical Directive. Ontario. Canada. 2003.

Appendix A: LAB REFERENCES

“BIO10.08F Testing Menu for Vitros Analyzer at all Lakeridge Sites Version 1.0” in the Laboratory QMS

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21. North York General Hospital, Toronto, Canada. Adult Cardiac Arrest Medical Directives. Oct. 2005 pg. 1-7.
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