Lakeridge Health

MEDICAL DIRECTIVE
Rapid Response System (RRS) – Change in Central Nervous System (CNS)

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 the 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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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:

Change in Central Nervous System (CNS) Status

CHANGE IN CENTRAL NERVOUS SYSTEM (CNS) STATUS MEDICAL DIRECTIVE

Authorized to whom:

Appropriately educated RRS responders RRTs and RNs working within Lakeridge Health may initiate the following therapies for in-patients who are presenting with symptoms of an acute neurological condition or change, including but not restricted to focal weakness, dizziness, aphasia, decreasing levels of consciousness or having active seizures.

Medical Directive Description:

- Manage the airway including support of oxygenation and ventilation (intubation if necessary)
- Initiate monitoring including cardiac, blood pressure and pulse oximetry.
- Vital signs including temperature
- If postictal, place patient in recovery position
- Oxygen therapy as required to maintain oxygen saturation above 92%; COPD 88-92%
- Review patient history and diagnosis
- Stat Blood Work (CBC, electrolytes, glucose, urea, creatinine, Magnesium, Phosphorus, Corrected calcium, INR, APTT) – See Lab Appendix A
- Glucose test (point of care test)
- If a blood glucose measurement of 4 mmol/L or less and an altered level of consciousness, follow Lakeridge Health's Hypoglycemia Protocol
- Stat ABG (pH, pO2 and pCO2)
- 12-lead EKG
- Urine screen (dip stick)
- Insert a large (16 if possible) gauge IV of 0.9% sodium chloride at 30mL/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
- Naloxone (Narcan) 0.4mg IM / IV may be given if the patient remains unconscious and received any opiates within past 24 hours, and no alternate explanation is obvious for the acute change in level of consciousness
- If an intentional overdose of narcotics is suspected additional doses of Naloxone (Narcan) 0.4 mg IM /IV may be given q 3 minutes to maximum dose of 2 mg
- Activate Code Stroke response if directed by MRP or CCRS physician

Patient Description/Population:

The patient must have signs and symptoms of an acute neurological condition or change, including but not restricted to focal weakness, dizziness, aphasia, decreasing levels of consciousness or actively seizuring.

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

Performing a procedure below the dermis
- Certification in the use of Point of Care Glucose meter testing
- IV Initiation Certification
- IO Certification

Administering a substance by injection or inhalation
Putting an instrument beyond the larynx

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

- The patient must have acute symptoms of weakness, dizziness, decreasing levels of consciousness or actively seizuring.
- 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 refused therapy – no consent
- Patient is incapable of cooperating with the procedure.

Documentation requirements:

- Implementation of the Medical Directive must be documented on the chart under physician orders
- Response to medications 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-Seizure Medical Directive. Dec. 2009. Pg. 15-16.

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

Ontario Provincial Primary Care Paramedic Medical Directives – Hypoglycemia Medical Directive. Waterloo Region, Ontario, Canada. Base Hospital Program Jan 1, 2007 pg. 14.

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

Lakeridge Health Corporation. Emergency Program Medical Directives. Hypoglycemic Medical Directive 2005.

Appendix A: LAB REFERENCES

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

MEDICAL DIRECTIVE REFERENCES

1. Garrard, C, Young, D. Suboptimal care of patients before admission to an Intensive care us caused by a failure to appreciate or supply the ABCs of life support. BJM 1998; 316:1841-1842.

2. Buist MD, Jarmolowski E, Burton PR, et al. Recognizing clinical instability in hospital patients before cardiac arrest or unplanned admission to intensive care: a pilot study in a tertiary care hospital Med J. Aust. 1999; 171:22-25.

3. Berwick, DM. Redesigning hospital care. JAMA. 2006; 295:324-327.

4. Hillman K, Chen J, Cretikos M, et al. Introduction of the medical emergency team (MET) system: a cluster-randomized controlled trial. Lancet. 2005; 365:2091-2097.

5. Bellomo R, Goldstein D, Uchino, S et al. A prospective before and after trial of a medical emergency team. Med J Aust. 2003; 179:283-287.

6. Bellomo R, Goldstein D, Uchino, S et al. Prospective controlled trial of effect of a medical emergency team on postoperative morbidity and mortality rates. Crit Care Med. 2004; 32:916-921.

7. Buist MD, Moore GE, Bernard SA, et al. Effects of a medical emergency team on reduction of incidence of and mortality from unexpected cardiac arrests in hospital: a preliminary study. BMJ. 2002; 324:387-390.

8. Kenward G, Castle N, Hodgetts, T, et al. Evaluation of a medical emergency team one year after implementation. Resuscitation. 2004: 61:257-263.

9. DeVita MA, Braithwaite RS, Mahidhara R, et al. Use of medical emergency team responses to reduce hospital cardiopulmonary arrests. Qual Saf Health Care. 2004; 13:251-254.

10. Jolley J, Bendyk H, Holaday B, Lombardozzi KA, et al. Rapid Response Teams: do they make a difference? Dimens Crit Care Nurs. 2007; 35:2076-2082.

11. Jones D, Opdam H, Egi M, et al. Long term effect of a medical emergency team on mortality in a teaching hospital. Resuscitation. 2007; 74:235-241.

12. Sebat, F et al. Designing, Implementing and Enhancing a Rapid Response System. Society of Crit Care Med. 2009; 1-217.

13. London Health Sciences, Ontario Canada. UWO Program in Critical Care Document. Educational Objectives for the Critical Care Outreach Teams July 2009. Pg. 1-4.

14. Gentofte Hospital. Full-scale simulation training of MET and staff from general ward. June 14, 2009.

15. Bell M et al. Prevalence and sensitivity of MET – criteria in a Scandinavian University Hospital. Resuscitation 2006; 70:66-73.

16. Aneman A et al. The ERC Guidelines for Resuscitation 2005 and the Medical Emergency Team. Scand J Trauma Resusc Emerg Med. 2006; 14:74-77.

17. Bengtsson A et al. Medical emergency team implementation: experiences from the Karolinska University Hospital. Solna, Sweden. 2006.

18. Credit Valley Hospital, Ontario Canada. RACE Team – Preliminary Diagnostics and Interventions. Jan. 2007.

19. Hodder, Rick. Critical Care Response Team Provider Manual; Canadian Resuscitation Institute 2006.

20. Faculty of Medicine, Liverpool Health Science, Liverpool, Australia. Medical Emergency Team, 2005, pg. 1-3.

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

22. Institute for Healthcare Improvement: Establish a Rapid Response Team - Getting Started Kit: Rapid Response Teams - How-to Guide. Cambridge, Massachusetts, USA. Oct. 2005.

23. The Canadian Society of Respiratory Therapists (CSRT). CSRT-Advocacy – Rapid Response Teams /Medical Emergency Teams. April 2005.

24. Trillium Health Centre, Toronto, Ontario, Canada. Assessment and Medical Inpatient by Medical Emergency Team. June 8, 2006. Pg. 1-4.

25. McFarlan S, Hensley, S. Implementation and outcomes of a Rapid Response Team. J Nurs Care Qual. 2007, Vol 22; 4:307-313.

26. Jackson M. Rapid Response Teams; what does the RRT bring? Bingham and Women's Hospital, Boston MA. USA. 2005.

27. Anderson N, Sutton A, et al. Lessons from the Field "ICU without Walls". The Calgary Health Regions ICU Outreach Team. Alberta Canada. June 2004.

28. Hamilton Health Sciences Corporation. Critical Care Response Team : Master Medical Directives. Ontario. Canada. 2003.

29. Lakeridge Health Corporation. Medical Directive - Adult Intubation by Registered Respiratory Therapists. Ontario, Canada, Oct 2009.

30. Lougheed D et al. Canadian Respiratory Guidelines. Recommendations for the Management of Asthma, Children (6 years and older) and Adults. Can Respir J 2010. Vol. 17(1).