MEDICAL DIRECTIVE
Critical Care Outreach Team (CCOT) – Chest Pain

Approved by/Date: Medical Advisory Committee – October 27, 2015

Authorizing physician(s)

Intensivists who are part of the Critical Care Physician Section

Authorized to who

CCOT Responders (RRTs and RNs) that have the knowledge, skill and judgment and who have successfully attained certification by a course of self-study supplied by the Intensivist – Educators appointed by the Authorizing Physicians, participated in Didactic and Simulation education, completed orientation with Critical Care Outreach Team, and have successfully passed examinations.

Patient Description / Population

Adult Patients over 18. Patients who present with signs and symptoms of cardiac problems or chest pain suggestive of cardiac ischemic pain.

Medical Directive Description/Physician's Order

1. Manage the airway including support of oxygenation and ventilation
2. Apply oxygen to keep SaO2 greater than or equal to 95%
3. Initiate pulse oximetry, cardiac monitoring (record a 10 second strip), BP (check in both arms and consider aortic dissection if there is a difference of 20 or greater in SBP)
4. Vital signs including temperature q5 – 30 min and PRN
5. 12 Lead EKG - notify physician immediately if ST elevation, ST segment depression or new onset LBBB
6. Obtain additional leads; 15 lead ECG, if inferior or posterior myocardial infarction suspected
7. Review patient history and diagnosis
8. Insert a large (18 if possible) gauge IV
9. Stat Blood Work (CBC, electrolytes, glucose, urea, creatinine, Corrected calcium, Troponin, Magnesium, Phosphorus, INR, APTT (if on anticoagulation)
10. Stat POC or i-Stat ABG or VBG (pH, pO2, pCO2)
11. *Only if IV in place***: Confirm no exclusions to nitroglycerin (use of erectile dysfunction medications, allergy). If Blood Pressure greater than 90 systolic, administer Nitroglycerin 0.4mg sublingually (SL) every 5 minutes as required for chest pain to a maximum of 3 administrations. Heart rate and blood pressure must

be checked after each Nitroglycerin dose. Further doses of Nitroglycerin to be withheld if BP drops to less than 90 systolic at any time or if HR less than 40 or greater than 140

12. 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

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

- The patient must have signs and symptoms of cardiac problems.
- Each intervention will be explained to the patient and/or family when possible.
- Medications given by hospital personnel or taken by the patient prior to the event, must be included in the calculation of maximum doses.

Contraindications to the implementation of the Directive

- Patient refuses therapy.
- Nitroglycerin is to be held if SBP is less than 90 and/or HR less than 40 bpm or above 140 bpm.
- Allergies to Nitroglycerin will preclude administration of that drug.
- Patient is incapable of cooperating with the procedures.
- Patient is taking erectile dysfunction medications.

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

Administering a substance by injection or inhalation.
Performing a procedure below the dermis:

- IV Insertion Certification
- IO Insertion Certification

Documentation requirements

- Implementation of the Medical Directive must be documented on the chart under physician orders.
- Vitals signs pre and q 15 minutes post medication.
- Response to medications administered must be documented in the CCOT note.

Review/Evaluation Process (how often/by who)

Every 2 years by Medical Department - Emergency Medicine and Critical Care Council.

Related Documents

Lakeridge Health Corporation – Preprinted Order-Facilitated Percutaneous Coronary Intervention (Code Stemi Facilitated). April 20, 2010.

Lakeridge Health Corporation- ED Facilitated Stemi PCI Process Triage to EMS Loading Time less than 30 minutes. April 20, 2010.

ORNGE- Medical Directives and Standing Orders. Circulation-Chest Pain and Cardiac Events- Ischemic Chest Pain Protocol. May 2007. Pg. 72-74.

Ontario Provincial Primary Care Paramedic Medical Directives – Acute Coronary Syndromes Medical Directive. Waterloo Region, Ontario, Canada. Base Hospital Program Jan 1, 2007 pg.12.

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

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

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).