Critical Care Response Team (CCRT) Adult In-Patient – Medical Directive

Medical Advisory Committee Approved: 27FEB2024

☑ Harmonized

Authorizing Prescriber(s)

LHO – Critical Care Intensivists
LHAP – Critical Care Intensivists

Authorized to Whom

Critical Care Response Team (CCRT) who have the knowledge, skill, judgement, and have successfully completed the CCRT certification and competency validation program. Competency evaluation on theory and practical simulation testing must be validated prior to becoming a member of CCRT.

Co-implementers:

- Medical Radiation Technologists (MRT[R])
- Medical Laboratory Assistants/Technologists (MLA/T)
- Nurses
- Registered Respiratory Therapists

Patient Description/Population

Any patient over 18 years of age admitted into an in-patient care department, excluding the emergency department.

Order and/or Procedure

The order and/or procedures are not presented in sequential order. Any one of or combination may be performed by a CCRT member. Refer to the Order Table Form. The CCRT member will also complete the following:

- Review patient's history and diagnosis including recent antibiotics
- Initiate vital sign monitoring including temperature and perform every 5 – 30 minutes and PRN
- Manage airway to prevent and/or relieve airway obstruction
- Implement Intraosseous Medical Directive if required
- Ensure Most Responsible Practitioner (MRP) is aware of the treatment initiated
- Ensure CCRT Intensivist is aware of patient's condition and treatment initiated
- Each intervention will be explained to the patient and/or family, and or Substitute Decision Maker (SDM) when possible

Indications to the Implementation of the Directive

Any admitted adult in-patient with indications for Hypotension/Shock, and/or Abdominal Pain, and/or Chest Pain, and/or Respiratory Distress, and/or Suspected Anaphylaxis, and/or Change in Central Nervous System (CNS) as per the Order Table Form.

Contraindications to the Implementation of the Directive

The directive must not be implemented in any of the following circumstances:

- The patient refuses to consent to the procedure. Patient's advanced care plan doesn't support initiating or continuing with Medical Directive procedure(s).
- Existence of procedure specific contraindications as noted in the Order Table Form
  Note: If a patient or substitute decision maker (SDM) refuses treatment, contact the MRP or delegate immediately to determine plan of care.

Consent

The CCRT Regulated Health Care Provider (RHCP) implementing the medical directive must obtain consent if the patient is capable of providing it. In an emergency situation, if the patient is not capable of providing consent, the CCRT RHCP may administer treatment without consent if, in his or her opinion, all of the following are true:

- The patient is experiencing severe suffering or is at risk if the treatment is not administered promptly, of suffering serious bodily harm
- It is not reasonably possible to obtain consent or refusal on the person's behalf or the delay required to do so will prolong the suffering that the patient is experiencing or will put the patient at risk of suffering serious bodily harm.

Documentation Requirements

In addition to standard documentation practices, the RHCP implementing this directive must use the Epic order set which is appropriate to the patient's clinical condition:

- *LH Med Directive CCRT Hypotension/Shock*
- *LH Med Directive CCRT Chest Pain*
- *LH Med Directive CCRT Respiratory Status*
- *LH Med Directive Change in Level of Central Nervous System*
- *LH Med Directive CCRT Abdo Pain*
- *LH Med Directive CCRT Suspected Anaphylaxis*

The order mode "per medical Directive" must be selected and the RHCP must enter their name as the ordering provider. The authorizing provider selected is the CCRT Intensivist. The medical directive used will be placed in the comment section.

If documenting during downtime document in the order section of the chart the following:

- The procedure performed on the patient
- The name of this medical directive
- The name of the implementer
- Legible signature of implementer including credentials
- Date and time

- Co-implementers will document in the patient's health record and as per standard documentation practices

Review/Evaluation Process

This medical directive will be reviewed every 2 years by the Critical Care Program.

References

Canadian Heart and Stroke Foundation. (2020). *Advanced cardiovascular life support provider manual.* Canadian Heart and Stroke Foundation.

College of Nurses of Ontario. (2023). *Practice guideline: Directives*. College of Nurses of Ontario.

College of Nurses of Ontario. (2023). *Standards of practice*. College of Nurses of Ontario.

Institute for Safe Medication Practices Canada. (2016). Changes in expression of strength: Elimination of ratios on single-entity injectable products. *ISMP Canada Safety Bulletin*, *16*(2), 1-5.

Regulated Health Professions Act, 1991, SO 1991, c 18.

This table must **not** be used independently apart from the Medical Directive

Order Table Form

Hypotension/Shock		
Order	**Indication**	**Contraindication**
1. Oxygen therapy to maintain oxygen saturation between 92-98%, COPD 88-92% 2. Initiate cardiac monitoring and perform 12 lead ECG 3. STAT blood work (CBC, electrolytes, extended electrolytes Panel, glucose, urea, creatinine, lactate, CK, Troponin, INR, APTT, IP LAB Liver function panel, Type and Screen, ABG [i-STAT ABG] or VBG if ABG not available or delays in obtaining ABG 4. Blood cultures x 2, sputum culture and urine culture if temperature greater than 38°C 5. STAT portable chest x-ray – upright if possible	The patient has symptoms suggestive of hypotension/shock such as: • Low BP (SBP less than 90 mmHg, drop in SBP greater than 20 mmHg, SBP less than patient's baseline, MAP less than 65 mmHg) • Unexplained tachycardia and/or dysrhythmia • Temperature below 35ºC or over 38ºC • Bleeding identified on assessment with associated hypotension • Altered level of consciousness	The patient's symptoms are not suggestive of hypotension or shock
7. Initiate Ringers Lactate (RL) 500 mL bolus over 5 minutes if Systolic Blood Pressure (SBP) is less than 90 mmHg **OR** a drop in SBP greater than 20 mmHg from patient's baseline **OR** a MAP less than 65 mmHg 8. Repeat Ringers Lactate fluid bolus to a maximum of 1 Litre		Do not administer RL bolus if patient's chest is not clear on auscultation or patient oxygen saturation has decreased

Abdominal Pain			
Order	**Indication**	**Contraindication**	**Notes (Optional)**
1. Oxygen therapy to maintain oxygen saturation between 92- 98%, COPD 88-92% 2. Initiate cardiac monitoring and perform 12-lead ECG 3. STAT blood work (CBC, electrolytes, extended electrolytes Panel, glucose, urea, creatinine, lactate, INR, APTT, IP LAB Liver function panel, GGT, AST, Lipase, Type and Screen, ABG [i-STAT ABG] or VBG if ABG not available or delays in obtaining ABG 4. Blood cultures x 2, sputum culture and urine culture if temperature greater than 38°C 5. Specimen for C Difficile if loose stools 6. Insert a large gauge saline lock (18 if possible)	The patient complains of abdominal pain or withdrawals from pain during abdominal palpation.	Patient denies abdominal pain.	Check use of antibiotics in past 12 weeks to assist in identifying if potential C Difficile related to antibiotic use
7. STAT portable chest x-ray – upright if possible 8. Stat Portable abdominal x-ray – include information about area of abdominal pain			Chest x-ray in upright position to rule out intraperitoneal air.

Chest Pain			
Order	**Indication**	**Contraindication**	**Notes** (Optional)
1. Oxygen therapy to maintain oxygen saturation between 92 - 98%, COPD 88-92% 2. Check BP in both arms 3. Initiate cardiac monitoring and perform 12-lead ECG, notify CCRT physician STAT if ST elevation, ST segment depression or new onset LBBB 4. Obtain 15 lead ECG to rule out inferior or posterior MI 5. STAT blood work (CBC, electrolytes, extended electrolytes panel, glucose, urea, creatinine, lactate, INR, APTT [if on anticoagulants], Albumin, Troponin, ABG [i-STAT ABG] or VBG if ABG not available or delays in obtaining ABG 6. Insert a large gauge saline lock (18 if possible)	The patient complains of chest pain or symptoms such as: • Chest pressure, tightness • Pain present in areas from umbilical to neck including Back, jaw, arm or epigastric pain • Short of breath • Cold sweats • Dizziness or lightheadedness • Nausea or vomiting	Patient denies chest pain	Checking BP in both arms is to assess for aortic dissection and identify if there is a significant (greater than 20 mmHg) difference in values

Chest Pain			
Order	**Indication**	**Contraindication**	**Notes** (Optional)
7. If SBP greater than 90 mmHg, administer Nitroglycerin 0.4 mg sublingually q 5 min. as required for chest pain to a maximum of 3 administrations 8. Monitor HR and SBP after each Nitroglycerin dose 9. Hold Nitroglycerin if SBP drops to less than 90 mmHg or if HR less than 40 or greater than 140 beats min		If there is a documented allergy to Nitroglycerin, do not administer. Do not give Nitroglycerin with Right sided or inferior myocardial infarction. Do not give Nitroglycerine if patient is receiving phosphodiesterase type 5 (PDE5) inhibitors (e.g. sildenafil, tadalafil); commonly used for erectile dysfunction and pulmonary hypertension.	Erectile dysfunction medications can cause severe drop in BP leading to cardiovascular collapse

Respiratory Distress		
Order	**Indication**	**Contraindication**
1. Oxygen therapy to maintain oxygen saturation between 92 - 98%, COPD 88-92% 2. Initiate cardiac monitoring and perform 12-lead ECG 3. STAT blood work (CBC, electrolytes, extended electrolytes panel, glucose, urea, creatinine, CK, BNP, Lactate, Troponin, ABG [i-STAT ABG] or VBG if ABG not available or delays in obtaining ABG 4. STAT Portable chest x-ray – upright if possible 5. Insert a large gauge saline lock (18 if possible)	The patient complains of respiratory distress or presents with symptoms such as: • Shortness of breath • Tachypnea • Dyspnea • Orthopnea • Cyanosis • Accessory muscle use • Stridor • Crackles/wheezes/silent chest	The patient's symptoms are not suggestive of respiratory distress
6. If on auscultation: a) wheeze or silent chest – give Salbutamol 100 mcg/puff 4 – 8 puffs inhaled q 15 min up to 3 times and Ipratropium 20 mcg/ 4 – 8 puffs inhaled once b) crackles – position in Semi to High Fowlers		If there is a documented allergy to Salbutamol, do not administer If there is a documented allergy to Ipratropium, do not administer

Suspected Anaphylaxis		
Order	**Indication**	**Contraindication**
1. Oxygen therapy to maintain oxygen saturation between 92- 98%, COPD 88-92% 2. Initiate cardiac monitoring and perform 12-lead ECG 3. STAT blood work (CBC, electrolytes, extended electrolyte panel, glucose, urea, creatinine, lactate, ABG [i-STAT ABG] or VBG if ABG not available or delays in obtaining ABG 4. STAT portable chest x-ray if patient is short of breath – upright if possible 5. Immediately stop/discontinue offending agent, if unclear which agent is causative, pause all IV infusions that are safe to stop 6. Insert a large gauge saline lock (18 if possible)	The patient states they are having an allergic reaction, and/or who present with a recent exposure to a probable allergen and demonstrate signs and symptoms of an anaphylactic reaction such as: • Rash • Hives • Shortness of breath • Nausea/vomiting	The patient's symptoms are not suggestive of an anaphylaxis reaction
7. Administer DiphenhydrAMINE 50 mg IM/IV push x 1 dose		If there is a documented allergy to DiphenhydrAMINE, do not administer
8. Severe allergic reaction administer (0.3 mg) EPINEPHrine 1mg/ml IM 9. Repeat q5min x total of 3 doses. if remains in respiratory distress or SBP less than 90 mmHg. **if first Dose ineffective—call Code Blue	Severe allergic reaction: • Respiratory distress • Audible stridor • SBP less than 90 mmHg	If there is a documented allergy to EPINEPHrine, do not administer

Suspected Anaphylaxis		
Order	**Indication**	**Contraindication**
10. Initiate Ringers Lactate (RL) 500 mL bolus over 5 minutes if SBP is less than 90 mmHg **OR** a drop in SBP greater than 20 mmHg from patient's baseline **OR** a MAP less than 65 mmHg		

Change in Level of Central Nervous System (CNS)			
Order	**Indication**	**Contraindication**	**Notes** (Optional)
1. Oxygen therapy to maintain oxygen saturation between 92 - 98%, COPD 88-92% 2. Initiate cardiac monitoring and perform 12-lead ECG 3. STAT blood work (CBC, electrolytes, extended electrolyte panel, glucose, urea, creatinine, lactate, INR, APTT, ABG [i-STAT ABG] or VBG if ABG not available or delays in obtaining ABG 4. POC blood glucose and initiate Hypoglycemic Protocol if blood glucose is less than 4mmol/L 5. If patient is postictal, may place in recovery position, if safe to do so. 6. Insert a large gauge saline lock (18 if possible)	The patient presents with symptoms such as: • Acute neurological condition change • Focal weakness • Dizziness • Aphasia • Decreasing level of consciousness • Active seizures	The patient's symptoms are not suggestive of a change in CNS	Activate a Code Stroke if indicated in consultation with MRP or intensivist
7. Naloxone 0.4 mg IM/IV push STAT if patient unconscious and received opiates within past 24 hours and no alternate explanation has been identified as to reason for decrease in level of consciousness: give q 3 min PRN to maximum of 2 mg		If there is a documented allergy to Naloxone, do not administer	