

# Cardiac Arrest - Asystole Protocol

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## **Preamble**

Patients who have suffered a cardiorespiratory arrest who present with asystole as the initial rhythm have a poor prognosis. There is adequate literature to support no possibility of survival without irreversible neurologic deficits for those who lack a return of spontaneous circulation after 25 minutes of asystole, except under certain circumstances. Nevertheless, an initial attempt at resuscitation must be made for these patients.

## **Requirements**

1. Fully licensed Technician-Paramedic.
2. Certification in tracheal intubation or double-lumen airway protocol by the Medical Director.
3. Certification in asystole protocol by the Medical Director.
4. Certification in the other "cardiac arrest" protocols as determined by the Medical Director.
5. Current certification as an advanced cardiac life support provider.

## **Indications**

1. Cardiac arrest patient presenting in asystole on cardiac monitor but does not meet standard criteria for determination of death.

## **Contraindications**

1. Cardiac arrest possibly due to trauma or hypothermia.
2. Patient less than 16 years of age.
3. Patient meets standard criteria for determination of death.

## **Drug Doses and Frequencies**

1. epinephrine

IV: 1 mg IV bolus; repeat q3-5 minutes prn

ETT: 2 mg diluted in 10 ml normal saline; repeat q3-5 minutes prn

2. atropine

IV: 1 mg IV bolus; repeat q3-5 minutes prn

ETT: 2 mg diluted in 10 ml normal saline; repeat q3-5 minutes prn

maximum total dose by any route: 0.04 mg / kg

## **Procedure**

1. Perform patient assessment and record vital signs.
2. Assess that patient meets criteria for this protocol.
3. Ensure there are no contraindications to use of this protocol.
4. Initiate and continue CPR.
5. Monitor cardiac rhythm. Confirm asystole in at least two leads.
6. Reassess and consider possible causes of cardiac arrest. If identified, go to protocol based on identified cause.
7. If, at any time, a cardiac rhythm other than asystole is noted on the monitor, treat based on the appropriate protocol.
8. Intubate (using endotracheal tube or double-lumen airway) and ventilate.
9. If sufficient personnel are available, initiate a large bore intravenous line of normal saline, TKVO.
10. If patient is a known dialysis patient, or if a fistula is noted, go to Cardiac Arrest Dialysis protocol.
11. Administer epinephrine and atropine as per drug dose and frequency regimen.
12. Reassess rhythm. If there is no change, continue CPR for one minute.
13. If no change in rhythm, repeat step 10 or consider proceeding to step 13.

14. Consider initiating discontinuing resuscitation in the field for cardiac arrest protocol if indicated (if available as an option and certified to do so).
15. Initiate transport, unless other emergency condition required immediate treatment.
16. Monitor and reassess patient en route.
17. Notify receiving facility of patient's condition and medication used.

### **Documentation Requirements**

The following information must be documented on the patient care report form:

1. Patient's presenting signs and symptoms, including vital signs.
2. Indications for protocol use.
3. Dose(s), route(s), time(s), and effect(s) of medications used.
4. Repeat assessment and vital signs, as indicated.
5. Changes from baseline, if any, that occur during treatment or transport.
6. Signature and license number of EMS personnel performing any transfer of function skills.

### **Certification Requirements**

1. Attend in-depth classes and lectures on static and dynamic rhythm interpretation.
2. Demonstrate an understanding of the pharmacology and mechanism of action of epinephrine and atropine.
3. Pass a written examination.
4. Pass practical scenarios incorporating variations of the asystole protocol.
5. Certification is by the Medical Director.

### **Recertification Requirements**

1. Review class and recertification is done every 12 months.
2. Current advanced cardiac life support provider certification.
3. A record documenting all cases where this protocol is used.

### **Decertification**

1. Decertification is at the discretion of the Medical Director or the Provincial Medical Director, Emergency Medical Services, Manitoba Health & Healthy Living.

### **Quality Assurance Requirements**

1. Appropriate quality assurance policies must be in place. The Medical Director or designate must review all instances where this protocol is used. As a minimum, the following must be assessed:
  - i) appropriateness of implementation
  - ii) adherence to protocol
  - iii) any deviation from the protocol
  - iv) corrective measures taken, if indicated
2. Yearly statistics for protocol use compiled and forwarded to Emergency Medical Services, Manitoba Health & Healthy Living.