



M E D I C A L P R O T O C O L S

*** STANDING ORDERS**

1. Assess ABCs, protect C-Spine, obtain vital signs, including pulse oximetry, and initiate appropriate NYS BLS treatment protocols.
2. Monitor and evaluate cardiac rhythm. **(a)**
3. Establish IV / IO access as indicated.
4. Contact On-line Medical Control as indicated by specific protocol.

NOTE

- a. In an uncooperative patient, the requirement to initiate full ALS assessment and care may be waived in favor of assuring the patient is transported to an appropriate facility.

*** STANDING ORDERS**

1. Initiate Routine Medical Care
2. If airway is obstructed, **DIRECT LARYNGOSCOPY** and remove foreign body using Magill forceps
3. If a tension pneumothorax is suspected, perform **NEEDLE DECOMPRESSION**.
4. If basic life support airway management CAN NOT maintain adequate ventilation and oxygen saturation, only then initiate **ADVANCED AIRWAY MANAGEMENT**
5. If patient needs facilitated advanced airway management:
 - a) Consider **ETOMIDATE** 0.3 mg/kg IV or IO, perform **ENDOTRACHEAL INTUBATION**, and
 - b) **CONTACT MEDICAL CONTROL**
6. If unable to manage airway using basic or advanced airway procedures due to an obstruction, perform **NEEDLE CRICOTHYROTOMY**
7. Continuous monitoring of cardiac rhythm, pulse oximetry and wave-form capnography.

 MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders.
- For **FACILITATION** of ETT consider:
 - **DIAZEPAM** 5 - 10 mg slow IV or IO (not to exceed 5 mg/min)
 - **MIDAZOLAM** 2 – 5 mg slow IV or IO
 - **MORPHINE SULFATE** 2 - 10 mg IV or IO

*** STANDING ORDERS**

1. Initiate Routine Medical Care
2. **PULSE OXIMETRY** and **PEAK FLOW**
3. Administer **ALBUTEROL** 2.5 mg / 3 ml normal saline plus **IPRATROPIUM** 0.5 mg / 2.5 ml 0.9% Normal Saline via nebulizer, followed by **PEAK FLOW** if possible. Maintain the treatment continuously up to 3 doses.
4. For patients with severe Bronchospasm, administer **METHYLPREDNISOLONE** 125 mg / 50 ml 0.9% Normal Saline infused over 2 minutes.
5. For patients exhibiting severe Bronchospasm, administer **MAGNESIUM SULFATE** 2 g IV infused over 10 minutes.

 MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders.
- **EPINEPHRINE** 1:1,000 0.3 mg IM (**a**); repeat as directed.
- **TERBUTALINE** 0.25 mg IM; repeat as directed.

 NOTE

- a. Use **EPINEPHRINE** with caution in patients with history of or presence of hypertension, heart disease, current pregnancy, beta-blockers.

*** STANDING ORDERS**

1. Initiate Routine Medical Care
2. Obtain a **12 LEAD EKG** as directed in each cardiac sub-protocol.
3. Follow the appropriate sub-protocol (**a**):
 - a) **Acute Coronary Syndrome: M – 4.1**
 - b) **Acute Pulmonary Edema / Congestive Heart Failure: M - 4.2**
 - c) **Bradycardia : M – 4.3**
 - d) **Narrow Complex Tachycardia - Unstable: M – 4.4**
 - e) **Narrow Complex Tachycardia - Stable: M – 4.5**
 - f) **Wide Complex Tachycardia - Unstable: M - 4.6**
 - g) **Wide Complex Tachycardia - Stable: M – 4.7**

FOR ALL CARDIAC RELATED PRESENTING PROBLEMS

☑ NOTE

- a. Remember to search for and treat (if possible) any likely contributing factors: Hypovolemia, Hypoxia, Hydrogen Ion (Acidosis), Hypo/Hyperkalemia, Hypoglycemia, Hypothermia, Toxins, Tamponade, Tension Pneumothorax, Thrombosis, and Trauma.

*** STANDING ORDERS**

1. Obtain a **12 LEAD EKG**
2. If chest pain is present, administer **NITROGLYCERIN** 0.4 mg sublingual tablets or spray (**a**); May be repeated every 5 minutes if SBP remains greater than or equal to 100 mmHg.
3. **ASPIRIN** 81 mg tablets (up to 4 tablets) if the patient has not taken aspirin in the past 24 hours.

☎ MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders
- **MORPHINE SULFATE** 2 - 5 mg IV; repeated as directed.

☑ NOTE

- a. **NITROGLYCERIN** should be given with caution to patients taking erectile dysfunction (ED) medications (i.e. Viagra, Cialis, Levitra), or suspected inferior wall or right ventricle (RV) myocardial infarctions (MI)

**MEDICAL –
4.2**

CARDIAC (General)

Acute Pulmonary Edema /
Congestive Heart Failure (SBP > 100 mmHg)

*** STANDING ORDERS**

1. **NITROGLYCERIN** 0.4 mg SL or spray (**a**); May be repeated every 5 minutes if SBP remains above 100 mmHg.
2. **FUROSEMIDE** 40 - 80 mg IVP.
3. Administer **CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP)** if available.
4. Obtain **12 LEAD EKG** if possible.

☎ MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders.
- **FUROSEMIDE** 80 - 120 mg IVP.
- **MORPHINE SULFATE** 2 - 5 mg IVP. Repeated as directed.

☑ NOTE

- a. **NITROGLYCERIN** should be given with caution to patients taking erectile dysfunction (ED) medications (i.e. Viagra, Cialis, Levitra), or suspected inferior wall or right ventricle (RV) myocardial infarctions (MI).

*** STANDING ORDERS**

1. FOR PATIENTS WITH **SYMPTOMATIC BRADYCARDIA:**
 - a) Obtain **12 LEAD EKG (a)**
2. IF SIGNS OR SYMPTOMS OF **POOR PERFUSION (b)** CAUSED BY THE BRADYCARDIA:
 - a) Begin **TRANSCUTANEOUS PACING**, especially if high-degree block.
 - b) Consider **ATROPINE** 0.5 mg IVP while setting up pacer **(a)**. If inadequate response, may repeat 0.5 mg IVP every 3 minutes to a maximum of 3 mg.
 - c) If pacing is ineffective, **CONTACT MEDICAL CONTROL.**
3. IF SIGNS OR SYMPTOMS OF **ADEQUATE PERFUSION:**
 - a) Continue to monitor patient's vital signs and EKG.

☎ MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders.
- For sedation / analgesia for **TRANSCUTANEOUS PACING**; consider:
 - **DIAZEPAM** 5 – 10 mg slow IVP;
 - **MIDAZOLAM** 2 – 5 mg slow IVP; or
 - **MORPHINE SULFATE** 5 - 10 mg IVP
- **FLUID CHALLENGE** of 0.9% Normal Saline (300 – 500 ml rapid infusion)
- **DOPAMINE HCL** 400 mg in 250 ml of 0.9% Normal Saline; initial rate of 2 - 10 mcg/kg/min titrated upwards every 5 minutes in increments of 5 mcg/kg/min until the desired therapeutic effect is achieved (maximum dose of 25 mcg/kg/min).
- **EPINEPHRINE** 1:10,000 1 mg/ 250 ml 0.9% Normal Saline (4 mcg/ml); administer at a rate of 2 - 10 mcg/min, titrated to SBP 100 mmHg.

☑ NOTE

- a. If STEMI present, avoid **ATROPINE.**

NOTE

- b. Signs of **POOR PERFUSION** includes acute altered mental status, ongoing chest pain, hypotension or other signs of shock.
- c. If beta or calcium channel blocker overdose suspected, **CONTACT MEDICAL CONTROL**

*** STANDING ORDERS**

1. Apply cardiac monitor to determine rhythm.(b)
2. If sinus rhythm, consider **FLUID CHALLENGE** of 0.9% Normal Saline (300 – 500 ml rapid infusion).
3. IF PATIENT IS **UNSTABLE (a) AND UNCONSCIOUS**:
 - a) **SYNCHRONOUS CARADIOVERSION (c)**
4. IF PATIENT IS **UNSTABLE (a) AND CONSCIOUS**:
 - a) **CONTACT MEDICAL CONTROL**

☎ MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders.
- **AMIODARONE** 150 mg/ 100ml D₅W over 10 minutes.
- **AMIODARONE INFUSION** of 1 mg/min in D₅W
- **CALCIUM CHLORIDE** 250 - 1,000 mg slow IVP.
- **DILTIAZEM** 15 - 25 mg IV over 2 minutes; may be repeated after 15 minutes.
- **VERAPAMIL** 5 -10 mg IV administered at a rate of 5 mg over 2 minutes.
- For sedation / analgesia for **CARDIOVERSION**; consider:
 - **DIAZEPAM** 5 - 10 mg slow IVP (not to exceed 5 mg/min)
 - **MIDAZOLAM** 2 – 5 mg slow IVP
 - **MORPHINE SULFATE** 5 - 10 mg IVP

☑ NOTE

- a. **UNSTABLE** denotes signs or symptoms of **POOR PERFUSION**, including acute altered mental status, ongoing chest pain, hypotension or other signs of shock.
- b. If at any time the rhythm is determined to be a **WIDE COMPLEX TACHYCARDIA**, go to **Protocol M - 4.6**.

**NOTE**

- c. Doses of energy for **CARDIOVERSION** depends on the underlying rhythm:
- **A-Fib, Stable/Monomorphic VT** - begin at 100 joules (monophasic) **OR** 100-120 joules (biphasic), or as per manufacturer's recommendation. If there is no change after initial attempt, escalate energy sequentially to 200, 300 and 360 joules (monophasic) or 120 – 200 joules (biphasic), or as per manufacturer's recommendation, until effective.
 - **A-Flutter, SVT** – begin at 50 joules (monophasic) **OR** as per manufacturer's equivalent recommendation for biphasic. If there is no change after initial attempt, follow dosing under A-Fib.
 - **Unstable/Polymorphic VT** – begin at 360 joules (monophasic) **OR** 120 joules (biphasic), or as per manufacturer's recommendation, until effective.

*** STANDING ORDERS**

1. Obtain a **12 LEAD EKG (b)**.
2. If **SINUS TACHYCARDIA**, **FLUID CHALLENGE** of 0.9% Normal Saline (300 – 500 ml rapid infusion)
3. If **ATRIAL FLUTTER**, **ATRIAL FIBRILLATION** or **MULTIFOCAL ATRIAL TACHYCARDIA**, administer **DILTIAZEM (c)** 15 - 25 mg IV over 2 minutes
4. If **SVT (A-V NODAL RE-ENTRY)**:
 - a. Perform a **VAGAL MANEUVER** if possible to slow the rate; may be repeated if necessary.
 - b. Administer **ADENOSINE** 6 mg rapid IVP; if ineffective after 2 minutes, give **ADENOSINE** 12 mg rapid IVP; may be repeated once if ineffective. Follow each dose with 10 ml 0.9% Normal Saline rapid bolus or flush.

☎ MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders.
- **AMIODARONE** 150 mg/ 100 ml D₅W over 10 minutes.
- **AMIODARONE INFUSION** of 1 mg/min in D₅W.
- **CARDIOVERSION (d)**.
- For sedation / analgesia for **CARDIOVERSION**; consider:
 - **DIAZEPAM** 5 - 10 mg slow IVP (not to exceed 5 mg/min)
 - **MORPHINE SULFATE** 2 - 10 mg slow IVP
 - **MIDAZOLAM** 2 – 5 mg slow IVP
- **CALCIUM CHLORIDE** 250 - 1,000 mg slow IVP.

☑ NOTE

- a. **STABLE** denotes no signs or symptoms of **POOR PERFUSION**, including acute altered mental status, ongoing chest pain, hypotension or other signs of shock.
- b. If at any time the rhythm is determined to be a **WIDE COMPLEX TACHYCARDIA**, go to **Protocol M - 4.7**.

**NOTE**

- c. **DILTIAZEM** should not be given if the patient has a known history of Wolff-Parkinson-White Syndrome (WPW)
- d. Doses of energy for **CARDIOVERSION** depends on the underlying rhythm:
- **A-Fib, Stable/Monomorphic VT** - begin at 100 joules (monophasic) **OR** 100 - 120 joules (biphasic), or as per manufacturer's recommendation. If there is no change after initial attempt, escalate energy sequentially to 200, 300 and 360 joules (monophasic) or 120 – 200 joules (biphasic), or as per manufacturer's recommendation, until effective.
 - **A-Flutter, SVT** – begin at 50 joules (monophasic) **OR** as per manufacturer's equivalent recommendation for biphasic. If there is no change after initial attempt, follow dosing under A-Fib.
 - **Unstable/Polymorphic VT** – begin at 360 joules(monophasic) **OR** 120 joules (biphasic), or as per manufacturer's recommendation, until effective.

*** STANDING ORDERS**

1. Apply cardiac monitor to determine rhythm **(b)**.
2. **SYNCHRONOUS CARディオVERSION (c, d)**
3. If rhythm **FAILS TO COVERT** to a supraventricular rhythm **AND** remains in an **UNSTABLE (a) WIDE COMPLEX TACHYCARDIA**, administer:
 - a) **AMIODARONE** 150 mg / 20 ml IV over 10 minutes **(e)**; may be repeated every 10 minutes (total maximum dose of 2.2 gm / 24 hrs).

OR

 - b) **LIDOCAINE** 1.5 mg/kg IVP **(e)**; may be repeated in 5 - 10 minutes **ONCE**.
4. If rhythm **CONVERTS** to a **SUPRAVENTRICULAR** rhythm prior to any drug administration, administer:
 - a) **AMIODARONE** 150 mg/ 20 ml IV over 10 minutes and then an infusion of 0.5 mg/min in D₅W **(e)**.

OR

 - b) **LIDOCAINE** 1.0 mg/kg IV and then an infusion of 2 mg/min **(e)**.
5. Obtain a **12 LEAD EKG** to determine the rhythm **(b)**.

☎ MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders.
- **ADENOSINE** 6 mg or 12 mg IVP; if ineffective, may immediately repeat at 12 mg bolus up to total dose of 30 mg; follow each dose with 20 ml 0.9% Normal Saline bolus.
- **AMIODARONE** 150 mg / 20 ml IV over 10 minutes **(e)**.
- **AMIODARONE INFUSION** of 1 mg/min in D₅W **(e)**.
- For sedation / analgesia for **CARDIOVERSION**; consider:
 - **DIAZEPAM** 5 - 10 mg slow IVP (not to exceed 5 mg/min)
 - **MIDAZOLAM** 2 – 5 mg slow IVP
 - **MORPHINE SULFATE** 5 - 10 mg IVP
- **LIDOCAINE** 0.5 - 1.5 mg/kg IVP **(e)**.



MEDICAL CONTROL OPTIONS

- **LIDOCAINE INFUSION** at 2 - 4 mg/min (**e**).
- **MAGNESIUM SULFATE** 1 - 2 grams IV over 5 minutes.
- **PROCAINAMIDE** 20 mg/min IV until the **WIDE COMPLEX TACHYCARDIA** resolves or up to 17 mg/kg (**e, f**).
- **PROCAINAMIDE INFUSION** 1 - 4 mg/min IV infusion (**e, f**).



NOTE

- a. **UNSTABLE** denotes signs or symptoms of **POOR PERFUSION**, including acute altered mental status, ongoing chest pain, hypotension or other signs of shock.
- b. If at any time the rhythm is determined to be a **NARROW COMPLEX TACHYCARDIA**, go to **Protocol M - 4.4**.
- c. Doses of energy for **CARDIOVERSION** depends on the underlying rhythm:
 - **A-Fib, Stable/Monomorphic VT - begin** at 100 joules (monophasic) **OR** 100 - 120 joules (biphasic), or as per manufacturer's recommendation. If there is no change after initial attempt, escalate energy sequentially to 200, 300 and 360 joules (monophasic) or 120 – 200 joules (biphasic), or as per manufacturer's recommendation, until effective.
 - **A-Flutter, SVT – begin** at 50 joules (monophasic) **OR** as per manufacturer's equivalent recommendation for biphasic. If there is no change after initial attempt, follow dosing under A-Fib.
 - **Unstable/Polymorphic VT – begin** at 360 joules (monophasic) **OR** 120 joules (biphasic), or as per manufacturer's recommendation, until effective.
- d. If **SYNCHRONOUS CARDIOVERSION** cannot be accomplished for technical reasons, use **ASYNCHRONOUS CARDIOVERSION**.
- e. It is recommended that not more than one antidysrhythmic agent be used on any patient.
- f. Stop **PROCAINAMIDE** if hypotension occurs, or if the QRS widens more than 50%, or if **NARROW COMPLEX TACHYCARDIA** resolves.

*** STANDING ORDERS**

1. Obtain a **12 LEAD EKG (b)**
2. If **VENTRICULAR TACHYCARDIA (VT)**:
 - a) **AMIODARONE** 150 mg / 100 ml D₅W IV over 10 minutes **(c)**; May repeat if VT persists (up to a total maximum dose of 2.2 gm / 24 hrs).

☎ MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders.
- **ADENOSINE** 6 mg or 12 mg IVP; if ineffective, may immediately repeat at 12 mg bolus up to total dose of 30 mg; follow each dose with 20 ml 0.9% Normal Saline bolus.
- **AMIODARONE INFUSION** of 1 mg/min in D₅W **(c)**.
- **CARDIOVERSION (e)**
- For sedation / analgesia for **CARDIOVERSION**; consider:
 - **DIAZEPAM** 5 - 10 mg slow IVP (not to exceed 5 mg/min)
 - **MIDAZOLAM** 2 – 5 mg slow IVP
 - **MORPHINE SULFATE** 5 - 10 mg IVP
- **LIDOCAINE** 1 - 1.5 mg/kg IVP **(c)**.
- **LIDOCAINE INFUSION** at 2 - 4 mg/min **(c)**.
- **MAGNESIUM SULFATE** 1 - 2 grams IV over 5 minutes.
- **PROCAINAMIDE** 20 mg/min IV **(c)**, to a maximum dose of 17 mg/kg **(d)**.
- **PROCAINAMIDE INFUSION** 1 - 4 mg/min IV infusion **(c, d)**.

☑ NOTE

- a. **STABLE** denotes no signs or symptoms of **POOR PERFUSION**, including acute altered mental status, ongoing chest pain, hypotension or other signs of shock.
- b. If at any time the rhythm is determined to be a **NARROW COMPLEX TACHYCARDIA**, go to **Protocol M - 4.5**

NOTE

- c. It is recommended that not more than one antidysrhythmic agent be used on any patient.
- d. Stop **PROCAINAMIDE** if hypotension occurs, or if the QRS widens more than 50%, or if **NARROW COMPLEX TACHYCARDIA** resolves.
- e. Doses of energy for **CARDIOVERSION** depends on the underlying rhythm:
 - **A-Fib, Stable/Monomorphic VT** - begin at 100 joules (monophasic) **OR** 100 - 120 joules (biphasic), or as per manufacturer's recommendation. If there is no change after initial attempt, escalate energy sequentially to 200, 300 and 360 joules (monophasic) or 120 – 200 joules (biphasic), or as per manufacturer's recommendation, until effective.
 - **A-Flutter, SVT** – begin at 50 joules (monophasic) **OR** as per manufacturer's equivalent recommendation for biphasic. If there is no change after initial attempt, follow dosing under A-Fib.
 - **Unstable/Polymorphic VT** – begin at 360 joules (monophasic) **OR** 120 joules (biphasic), or as per manufacturer's recommendation, until effective..

*** STANDING ORDERS**

1. Initiate cardiopulmonary resuscitation (CPR).
2. Follow the appropriate sub-protocol:
 - a) **Shockable Rhythm: M - 5.1**
 - b) **Non-shockable Rhythm: M - 5.2**

FOR ALL CARDIAC ARRESTS

☑ NOTE

- a. Consider **SODIUM BICARBONATE** 1 mEq/kg IVP or IO with suspected hyperkalemia, profound acidosis, tricyclic antidepressant, cocaine, or diphenhydramine overdoses. Dose may be repeated at 0.5 mEq/kg every 10 minutes.
- b. Consider **DEXTROSE** 50% IVP or IO if clinically indicated; may be repeated once.
- c. Consider **NALOXONE** 2 mg IV or IO if clinically indicated.
- d. Consider **TERMINATION OF RESUSCITATION, Protocol M – 5.3**

📞 MEDICAL CONTROL OPTIONS

- Repeat any standing orders
- **DOPAMINE** 400 mg in 250 ml 0.9% Normal Saline; initiate drip at 5 - 10 mcg/kg/min. If there is insufficient improvement in status, the infusion may be titrated upward every 5 minutes in increments of 5 mcg/kg/min until desired therapeutic effect (max. 25 mcg/kg/min).
- **CALCIUM CHLORIDE** 250 – 500 mg IVP or IO; may be repeated to a maximum of 1 gm. Only indicated with hyperkalemia, hypocalcemia, or calcium channel blocker toxicity.

MEDICAL – 5.1

CARDIAC (ARREST)

Shockable Rhythm (VF or Pulseless VT)

* STANDING ORDERS

1. **DEFIBRILLATE (a); CONTINUE CPR** immediately after defibrillation;
2. When possible during CPR, initiate airway control, monitor adequate ventilation and oxygenation, and obtain IV or IO access.
3. After **5 CYCLES of CPR** (2 minutes), check rhythm **(b, c)**
4. **DEFIBRILLATE (a); CONTINUE CPR** immediately after defibrillation.
5. **EPINEPHRINE** 1:10,000 1 mg (10 ml) IV, IO **(d, e)**; repeated once during every 5 cycles of CPR.

OR

VASOPRESSIN 40 units IV or IO **(d, e)** may be given in place of the 1st or 2nd dose of **EPINEPHRINE**.

6. After **5 CYCLES of CPR** (2 minutes), check rhythm.**(b, c)**
7. **DEFIBRILLATE (a); CONTINUE CPR** immediately after defibrillation.
8. When possible during cycles of CPR administer antidysrhythmic:
 - a) **AMIODARONE** 300 mg IVP **(c, d, f)**; if necessary, repeat at 150 mg IVP.

OR

- b) **LIDOCAINE** 1.5 mg/kg IVP **(d, e, f)**; same dose may be repeated in 3 minutes.
9. After **5 CYCLES of CPR** (2 minutes), check rhythm.**(b, c)**
 10. Consider **MAGNESIUM SULFATE** 1 - 2 gm IV over 5 minutes **(d, e)** for known hypomagnesemia or multifocal ventricular tachycardia (Torsades de Pointes).
 11. **DEFIBRILLATE (a); CONTINUE CPR** immediately after defibrillation.

NOTE

- a. **DEFIBRILLATION** is at 360 joules (monophasic) **OR** 120-200 joules (biphasic), or as per manufacturer's recommendation
- b. Assessment of rhythm should take no longer than 10 seconds. If at any time rhythm has converted to a **NON-SHOCKABLE RHYTHM**, go to **PROTOCOL M – 5.2**

**NOTE**

- c. If the rhythm converts to supraventricular and the patient **HAS NOT** received an antidysrhythmic, administer **LIDOCAINE** 1 mg/kg IVP and a drip of **LIDOCAINE** at 2 mg/min.
- d. Administer drug during CPR as soon as possible after rhythm check confirms **SHOCKABLE RHYTHM**.
- e. **IV DRUG BOLUSES** are followed by a 20 - 30 ml bolus of 0.9% Normal Saline. When practical, elevation of the arm is recommended.
- f. If after receiving an anti-arrhythmic drug the rhythm converts to supraventricular, administer a drip of the effective antidysrhythmic.:

LIDOCAINE:

- At 3 mg/min if 1 - 2 mg/kg of Lidocaine was used.
- At 4 mg/min if 3 - 4 mg/kg of Lidocaine was used.

AMIODARONE:

- At 1 mg/min.

*** STANDING ORDERS**

1. **CONTINUE CPR**; When possible during CPR, initiate airway control, monitor adequate ventilation and oxygenation, and obtain IV or IO access.
2. Search for and treat for contributing factors; address as appropriate.**(a)**
3. **EPINEPHRINE** 1:10,000 1 mg (10 ml) IV, IO **(b)**; repeated once during every 5 cycles of CPR.

OR

VASOPRESSIN 40 units IV or IO **(b)** may be given in place of the 1st or 2nd dose of **EPINEPHRINE**.

4. **IV or IO FLUID CHALLENGE of 0.9% NORMAL SALINE**, rapid infusion. May be repeated as needed.
5. **ATROPINE** 1 mg IV, IO **(b)** for Asystole or PEA with a ventricular rate less than 60 bpm. Dose may be repeated every 3 minutes to a maximum 3 mg.
6. After each **5 CYCLES of CPR** (2 minutes), check rhythm.**(c)**

☑ NOTE

- a. If any of these factors are present: hypovolemia, hypoxia, hydrogen ion (acidosis), hyper / hypokalemia, hypoglycemia, hypothermia, toxins, tamponade, tension pneumothorax; thrombosis (coronary and pulmonary), or trauma, treat / transport accordingly.
- b. **IV DRUG BOLUSES** are followed by a 20 - 30 ml bolus of 0.9% Normal Saline. When practical, elevation of the arm is recommended.
- c. Assessment of rhythm should take no longer than 10 seconds. If at any time rhythm has converted to a **SHOCKABLE RHYTHM**, go to **PROTOCOL M – 5.1**



MEDICAL CONTROL OPTION ONLY

RESUSCITATION EFFORTS SHOULD CEASE IF THE FOLLOWING CRITERIA HAVE BEEN MET:

1. Non-traumatic adult cardiac arrest.
2. Achieved airway control with tracheal intubation or advanced airway device, confirmed proper tube placement, and secured tube to prevent dislodgement.
3. Achieved effective oxygenation and ventilation.
4. Defibrillated patient when indicated.
5. Gained access to circulatory system and administered **EPINEPHRINE** (or **VASOPRESSIN**), **ATROPINE**, and antidysrhythmics as appropriate.
6. Considered, searched for, and corrected reversible causes or special resuscitation circumstances.
7. Considered continuous and documented pulseless arrest after all of the above has been accomplished for 20 minutes.



EXCLUSIONS

1. Profound hypothermia.
2. Toxin or drug ingestion.
3. Communication failure.
4. Environmental situation not conducive to termination.

IF THE PATIENT MEETS ALL OF THE ABOVE CONDITIONS, ONLINE MEDICAL CONTROL WILL BE CONTACTED FOR THE FOLLOWING OPTIONS:

1. Termination of resuscitative efforts. Leave body at the scene with all tubes and lines in place. Have police contact the Westchester County Medical Examiner.
2. Transport of the body to the closest Medical Control Hospital, if:
 - o Arrest in public place.
 - o No police agency is present.
 - o Family request.

*** STANDING ORDERS**

1. Initiate Routine Medical Care.
2. For documented or suspected hypoglycemia:
 - a) Administer **DEXTROSE 50%** 50 ml IVP; if no response in 5 minutes, repeat the same dose.
 - b) If an IV route is unobtainable, administer **GLUCAGON** 1 mg IM.
3. For suspected opiate overdose, administer **NALOXONE** 0.4 mg IV, IN or IM; may be repeated up to 8 mg.

*** STANDING ORDERS**

1. Initiate Routine Medical Care.
2. **EPINEPHRINE (a)**
 - a) Cardiovascular collapse present, 1:10,000 1 mg IVP
 - b) Mild reaction, 1:1,000 0.3 ml IM
 - c) If patient is taking beta-blockers, also administer **GLUCAGON** 1 mg IM or IV.
3. **DIPHENHYDRAMINE** 50 mg IM or IV
4. **METHYLPREDNISOLONE** 125 mg / 50 ml in 0.9% Normal Saline IV
5. **0.9% NORMAL SALINE** rapid infusion up to 3 Liters
6. **ALBUTEROL** 2.5 mg with 0.3 cc 0.9% Normal Saline via nebulizer.

☎ MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders
- **EPINEPHRINE (a)**
 - **1:1,000** 0.1 - 0.5 ml (0.1 - 0.5 mg) IM or SC; may be repeated every 5 minutes.
 - **1:10,000** 1 mg in 250 ml 0.9% NS, infused IV 1 - 2 ml/min (titrated to desired effect).
 - **1:10,000** 1 – 5 ml (0.1 - 0.5 mg) IV.

☑ NOTE

- a. **EPINEPHRINE** should be used with caution in patients with beta blockers, cardiac disease, hypertension, or pregnancy.

*** STANDING ORDERS**

1. Initiate Routine Medical Care.
2. **SUSPECTED INGESTION** (i.e. prescription medications, chemicals, etc.), **CONTACT MEDICAL CONTROL**
3. **CARBON MONOXIDE (CO) EXPOSURE** – If there is a history of potential CO exposure **AND** there are presenting signs and symptoms:
 - a) Monitor CO levels (if available)
 - b) 100% OXYGEN therapy
4. **CYANIDE EXPOSURE** - If there is a history of potential cyanide exposure **AND** findings are consistent with cyanide toxicity:
 - a) Follow the manufacturer's guidelines for the facility provided "**CYANIDE ANTIDOTE KIT**"; or
 - b) Administer **CYANOKIT® (HYDROXYCOBALAMINE** for injection) per manufacturer's guidelines, if available.
5. **OPHTHALMIC EXPOSURE**
 - a) Administer **TETRACAINE** 2 drops in the affected eye.
 - b) Irrigate affected eye continuously with 0.9% Normal Saline; may use a Morgan Lens if available.
6. **ORGANOPHOSPHATE / CARBAMATE EXPOSURE** – If there is a known history of a cholinergic poisoning, **AND** there are severe presenting signs and symptoms;

OR

There has been a suspected cholinergic poisoning **AND** there are severe presenting signs and symptoms **AND** there is a communications failure:

 - a) Administer **ATROPINE** 2 mg IV, IO or IM, every 5 minutes until secretions dry, to a maximum of 6 mg.

 **MEDICAL CONTROL OPTIONS**

- Repeat of any of the above standing orders
- **ACTIVATED CHARCOAL** 1 gm/kg PO.
- **CALCIUM CHLORIDE** 250 - 1,000 mg IVP.



MEDICAL CONTROL OPTIONS

- **GLUCAGON** 1 mg IV or IM; may be repeated as indicated.
- **SODIUM BICARBONATE** 1 - 2 mEq/kg slow IVP.
- **SODIUM BICARBONATE INFUSION** 44 - 132 mEq in 250 ml 0.9% Normal Saline, run at 1 ml/min.

*** STANDING ORDERS**

1. Initiate Routine Medical Care
2. **0.9% NORMAL SALINE** 250 ml; titrated to adequate perfusion. Avoid in the presence of pulmonary edema.

 MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders.
- **DOBUTAMINE** 400 mg / 250 ml 0.9% Normal Saline, initiate drip at 5 – 10 mcg/kg/min. If there is insufficient improvement in status, the infusion rate may be titrated upward in increments of 5 mcg/kg/min until desired therapeutic effect is reached (maximum dose of 25 mcg/kg/min).

*** STANDING ORDERS**

1. Initiate Routine Medical Care.
2. After delivery of the placenta, administer:
 - a) **OXYTOCIN** 20 units in 1000 ml Normal Saline IV given rapidly.
 - b) If IV not available, administer **OXYTOCIN** 10 units IM.

 MEDICAL CONTROL OPTIONS

- Repeat above standing orders

*** STANDING ORDERS**

1. Initiate Routine Medical Care
2. If patient is presenting with **PRE-ECLAMPSIA** (Combination of BP 140/90 or greater, peripheral edema, and symptoms: headache, visual disturbances, upper abdominal pain):
 - a) Administer **MAGNESIUM SULFATE** 4 gm / 250 ml of 0.9% Normal Saline **(a)** infused over 20 minutes.
 - b) Monitor vital signs and EKG.
3. If patient develops **ECLAMPSIA**:
 - a) Administer **MAGNESIUM SULFATE** 4 gm / 250 ml of 0.9% Normal Saline **(a)** infused over 20 minutes.
 - b) Go to **SEIZURE PROTOCOL**.



MEDICAL CONTROL OPTIONS

- Repeat any of the above standing orders.
- **CALCIUM CHLORIDE** 250 - 1000 mg IV.



NOTE

- a. Discontinue the administration of **MAGNESIUM SULFATE** if the patient becomes lethargic or hypotonic.

*** STANDING ORDERS**

1. Initiate Routine Medical Care
2. Measure serum glucose. For hypoglycemia, administer:
 - a) **DEXTROSE** 50% 50 ml IV, or
 - b) **GLUCAGON** 1 mg IM if IV route is not available.
3. Administer a **BENZODIAZEPINE (a)**:
 - a) **DIAZEPAM** 5 - 10 mg slow IV or rectal (**a**); may be repeated up to 20 mg.
 - b) **LORAZEPAM** 2 mg slow IV or IM (**a**); may be repeated once in 5 minutes.
 - c) **MIDAZOLAM** 2 mg slow IV or IM (**a**); may be repeated once in 5 minutes.
4. Consider **TOXEMIA OF PREGNANCY, Protocol M - 11**



MEDICAL CONTROL OPTIONS

- Repeat of any of the above standing orders.



NOTE

- a. Discontinue the administration of a **BENZODIAZEPINE** once the seizure has stopped whether or not the entire dose has been administered.