PARAMEDIC STANDING ORDERS

And PROTOCOLS

For Paramedics Sponsored and Supervised by

Wabash County Hospital
Wabash, IN

Jeffrey Miller, DO
EMS Medical Director

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Standing Orders Section

Introduction

The following Standing Orders are to be performed by paramedics upon recognition of need. The performance of procedures contained in these orders will be in accordance with current certification level. At no time shall it be permissible for any personnel to perform any procedure or attempt to provide any level of care beyond that for which they are certified.

For all patients requiring Pre-hospital Advanced Life Support measures, medical control will be contacted at the paramedic's earliest opportunity without delaying patient care.

ALL paramedics will strictly adhere to these Standing Orders. Failure to comply may result in disciplinary action by the Medical Director.

Communications Failure

In the event that, due to equipment failure or location, contact cannot be made with medical control via cellular telephone, landline telephone, or IHERN, the following will apply.

- EMS personnel may, within the limits of their certifications, perform necessary ALS procedures that, under normal circumstances, would require a direct physician order.
- These procedures shall be the minimum necessary to prevent the loss of life or the critical deterioration of a patient's condition.
- All procedures performed under this order and the conditions that created the communications failure shall be thoroughly documented.
- Attempts MUST be made to establish contact with medical control as soon as possible.

** NOTE - the medical director or his/her designate will audit ALL runs during which this order is utilized.

_____ _____/_____/_____

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Effective Date

Airway Control/Ventilation

It is a generally accepted concept that control of a patient's airway should be an utmost consideration of EMS personnel. For that reason, the following adjuncts have been approved for use by paramedics upon recognition of need.

A. Basic Airways (with high-flow oxygen)

1. Oropharyngeal Airway
2. Nasopharyngeal Airway
3. Combi-Tube

B. Advanced Airways (with high-flow oxygen)

1. Endotracheal Intubation[1]
2. Nasotracheal Intubation[1]
3. Cricoid Puncture/Surgical Cricothyrotomy[2]

C. Ventilation/Oxygenation

1. The patient must be ventilated periodically during prolonged efforts to intubate
2. Upon securing a patent airway, assist ventilations as necessary using positive pressure breathing techniques with high-flow supplemental oxygen
3. Monitor the SaO2 of all patients complaining of difficulty breathing via pulse oximeter

1 - If necessary to facilitate oral or nasal intubation, you may administer Versed, 2-5 mg. You may administer Versed up to 10 mg for heavier patients if not responding to lower dose.

2 - Cricoid Puncture may be used in the event of a complete airway obstruction by a foreign body, trauma, or swelling that cannot be managed by normal means. If inadequate, consider Surgical Cricothyrotomy. Refer to Surgical Cricothyrotomy Protocol - **Surgical Cricothyrotomy REQUIRES DIRECT PHYSICIAN ORDER!**

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Intravenous Lines

Intravenous lines are to be established upon recognition of need for at least one of the following.

1. Medical drug route (TKO Rate)
2. Fluid or volume replacement where a current or a potential need is evident

Fluids Available

1. Dextrose 5% in Water (D5W)
2. 0.9% Sodium Chloride (Normal Saline [NS])
3. Lactated Ringers (LR)

Intraosseous Lines

A paramedic may establish an Intraosseous line in lieu of venous cannulation when a peripheral IV cannot be established if the patient meets the following criteria.

1. Patient age is 6 years or less
2. Patient is in cardiac arrest or is otherwise hemodynamically unstable (severe hypovolemia, severe anaphylaxis, unresponsiveness)

Contraindications to intraosseous cannulation

1. Conscious Patient
2. Fracture at the insertion site
3. Severe burns at the insertion site

Existing Central Lines

A paramedic may utilize a patient's existing central line in lieu of establishing new venous access. These include subcutaneous medication ports and existing external lines. Fistulas will not be utilized.

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Cardiac Arrest

1. Initiate CPR
2. Establish basic airway/BVM with high flow oxygen - Ventilate *aggressively.*
3. Begin cardiac monitoring
4. Manage urgent dysrhythmias requiring immediate defibrillation
5. Intubate
6. Establish venous access route as soon as possible (Consider ET drug route if unable to start IV[1])
7. Manage dysrhythmias (Refer to appropriate algorithm)
8. Contact medical control as soon as possible

- For traumatic cardiac arrests initiate two (2) large bore IVs and treat en route to hospital.

1 - Epinephrine, Lidocaine, and Atropine may be given ET.

Alternative Epinephrine Dosing during Cardiac Arrest

When treating an adult patient in cardiac arrest that does not respond to initial 1 mg doses of epinephrine, paramedics may utilize one of the following alternative dosing methods.

Escalating Dosage

Epinephrine, 1 mg - 3 mg - 5 mg, IVP, 3 to 5 minutes apart

Intermediate Dosage

Epinephrine, 2 to 5 mg, IVP, every 3 to 5 minutes

High Dosage

Epinephrine, 0.1 mg/kg, IVP, every 3 to 5 minutes

Epinephrine Drip

Epinephrine, 30 mg in 250 ml of NS or D5W, IV Drip at a rate of 100 ml per hour

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Cardiac Arrest Dysrhythmia Management - Adult

Ventricular Fibrillation/Pulseless Ventricular Tachycardia

- Defib 200j, 300j, 360j
- Epinephrine, 1:10,000, 1 mg, q 3-5 minutes
- Defib 360j (30-60 seconds after each dose of medication)
- Lidocaine, 1.5 mg/kg (Repeat in 3-5 minutes)
- Bretylium, 5 mg/kg, IVP (Rebolus at 10 mg/kg in 5 minutes)
- Procainamide, 20 mg/min (up to 17 mg/kg)
- If severe, refractory V-Fib - Magnesium Sulfate, 1-2 Grams, IVP
- If resuscitation is successful...
  If antiarrhythmic therapy has not been initiated, administer Lidocaine, 1 mg/kg, IVP, and start a Lidocaine drip at 2-4 mg/min; otherwise, start a drip of the last antiarrhythmic used at 2-4 mg/min

Asystole

- Confirm in at least 2 leads if possible
- Consider and treat possible causes
- Consider immediate transcutaneous pacing if available
- Epinephrine, 1:10,000, 1 mg, q 3-5 minutes
- Atropine, 1 mg q 3-5 minutes (up to 0.04 mg/kg)
- If possibility of fine Ventricular Fibrillation, refer to the Ventricular Fibrillation Algorithm

Pulseless Electrical Activity (PEA)

- Consider and treat possible causes
- Fluid Challenge, 500 ml, NS or LR
- Epinephrine 1:10,000, 1 mg, q 3-5 minutes (Do not wait to complete fluid challenge)
- If rate < 60, Atropine, 1 mg, q 3-5 minutes (up to 0.04 mg/kg)

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Cardiac Arrest Dysrhythmia Management - Pediatric

Epinephrine Administration

- Epinephrine –1st dose
- IV/IO: 0.01 mg/kg (1:10,000)
- ET: 0.1 mg/kg (1:1,000) – diluted with 1-2 ml NS

• Epinephrine – All subsequent doses – every 3-5 minutes

- IV/IO/ET: 0.1 mg/kg (1:1,000)
- IV/IO doses up to 0.2 mg/kg (1:1,000) may be effective

Ventricular Fibrillation/Pulseless Ventricular Tachycardia

- Defib 2 j/kg, 4 j/kg, 4 j/kg
- Epinephrine every 3-5 minutes
- Defib 4 j/kg (30-60 seconds after each dose of medication)
- Lidocaine, 1 mg/kg (Repeat in 3-5 minutes)
- Bretylium, 5 mg/kg, IVP (Rebolus at 10 mg/kg in 5 minutes)
- If resuscitation is successful...
  If antiarrhythmic therapy has not been initiated, administer Lidocaine, 1 mg/kg, IVP, and start a Lidocaine drip at 20-50 ug/kg/minute; otherwise, start a drip of the last antiarrhythmic used at 20-50 ug/kg/minute

Asystole

- Confirm in at least 2 leads if possible
- Consider and treat possible causes
- Epinephrine every 3-5 minutes

Pulseless Electrical Activity (PEA)

- Consider and treat possible causes
- Fluid Challenge, 20 ml/kg ml, LR
- Epinephrine every 3-5 minutes

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Symptomatic Bradycardia

All Patients

- Airway Control/High Flow Oxygen
- Initiate IV/Cardiac Monitoring

Adult Patients

- Atropine, .5 mg, IVP, q 3-5 min (Up to 0.04 mg/kg)
- If patient is severely compromised and bradycardia is refractory to Atropine, initiate transcutaneous pacing if available (if patient is awake you may sedate with Versed, 2-5 mg, IVP)
  - Dopamine, 5-20 ug/kg/min
  - Epinephrine Drip, 2-10 ug/min

Pediatric Patients

Bradycardia in the pediatric patient is rarely vagally mediated. It is most commonly a result of hypoxia. For that reason, it is imperative that adequate oxygenation/ventilations are provided before IV access and medication therapy is initiated.

- Perform chest compressions if despite oxygenation and ventilation...
  - Heart rate < 80/min in an infant
  - Heart rate < 60/min in a child
    (Special conditions may apply in the presence of severe hypothermia - consult with medical control)
- Epinephrine, 1:10,000, 0.01 mg/kg, IVP/IO, OR 1:1000, 0.1 mg/kg, ET
- Repeat Epinephrine every 3-5 min at the same dose
- If no immediate effect from Epinephrine...
  - Atropine, 0.02 mg/kg, IVP/IO
    - Minimum dose - 0.1 mg
    - Maximum single dose...
      - 0.5 mg for child
      - 1 mg for adolescent
  - Atropine may be repeated once

Note - Symptomatic refers to poor perfusion, hypotension, and respiratory difficulty

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Ventricular Ectopy

This order applies to symptomatic patients experiencing PVC's greater than 6/min and at least one of the following...

- Multi-Focal PVC's
- R on T Pattern
- Frequent Couplets or runs of three or more PVC's (i.e. - runs of Ventricular Tachycardia)

This order will not be utilized if the PVC's occur in the presence of sinus bradycardia, sinus arrest, or second or third degree heart block.

Treatment

- Airway/High Flow Oxygen
- Initiate IV
- Lidocaine, 1 mg/kg, IVP
- If ventricular ectopy persists, additional bolus injections of 0.5 mg/kg can be given every 5-10 minutes to a total dose of 3 mg/kg
- If no change, Procainamide, 20 mg/min (up to 17 mg/kg), until no ectopy, QRS widens by 50%, or hypotension develops
- Once ectopy is resolved, begin infusion of agent which suppressed dysrhythmia at 2-4 mg/minute

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Tachycardia (Ventricular Rate > 150)

All Patients

- Secure Airway/high-flow O2
- Initiate IV
- If hemodynamically unstable refer to Synchronized Cardioversion Standing Order

Atrial Fibrillation/Atrial Flutter

- Attempt Valsalva maneuver
- Cardizem, 0.25 mg/kg, IV over 1-2 minutes

Paroxysmal Supraventricular Tachycardia

- Attempt valsalva maneuver
- Adenosine, 6 mg, rapid IV push (1-3 seconds). If no change in 1-2 min - Adenosine, 12 mg, rapid IV push (1-3 seconds). You may repeat again in 1-2 minutes if no conversion.
- If no change, Cardizem, 0.25 mg/kg, IV over 1-2 min.
- If no change contact medical control (consider cardioversion)

Ventricular Tachycardia (With Pulses)

- Lidocaine, 1-1.5 mg/kg, IVP (Rebolus if necessary at 0.5-0.75 mg/kg, IVP, q 5-10 minutes up to a maximum total of 3 mg/kg)
- If no change, Procainamide, 20 mg/min (up to 17 mg/kg), until rhythm converts, QRS widens by 50%, or hypotension develops
- If no change, Bretylium, 5-10 mg/kg, IVP over 8-10 minutes (maximum total of 30 mg/kg over 24 hours)
- If no change contact medical control (consider cardioversion)

Wide Complex of Uncertain Type

- Lidocaine, 1-1.5 mg/kg, IVP (Rebolus if necessary at 0.5-0.75 mg/kg, IVP, q 5-10 minutes up to a maximum total of 3 mg/kg)
- Adenosine, 6 mg, rapid IV push (1-3 seconds). If no change in 1-2 min - Adenosine, 12 mg, rapid IV push (1-3 seconds). You may repeat again in 1-2 minutes if no conversion.
- If no change, Procainamide, 20 mg/min (up to 17 mg/kg), until rhythm converts, QRS widens by 50%, or hypotension develops
- If no change, Bretylium, 5-10 mg/kg, IVP over 8-10 minutes (maximum total of 30 mg/kg over 24 hours)
- If no change contact medical control (consider cardioversion)

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Synchronized Cardioversion

This order is to be utilized **ONLY** for the cardioversion of *hemodynamically unstable* patients except on direct order from Medical Control.

If patient is awake you may sedate with…

Adult - Versed, 2-5 mg, IVP, titrate to effect
Pediatric – 0.1 – 0.15 mg/kg, IVP

Synchronized Cardiovert at…

Adult Patients

1. 100 joules*
2. 200 joules
3. 300 joules
4. 360 joules

Pediatric Patients

1. 0.5 joules/kg
2. 1 joule/kg
3. 2 joules/kg

If rhythm converts transiently, repeated shocks are not indicated without medication therapy.

- PSVT and Atrial Flutter often respond to lower energy settings - start at 50 joules

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Chest Pain/Discomfort

This order applies to all patients who are complaining of chest pain or pressure that is suspected to be cardiac in origin.

Treatment

- Secure Airway/high-flow O2
- Begin single lead cardiac monitoring
  - Administer chewable aspirin, 162 mg, orally (unless patient is allergic to aspirin, has a markedly diminished LOC, or has a history of ulcers)
  - Establish IV
- Nitroglycerin[1], 0.4 mg (Nitrostat Tablet or Spray), SL[2]
- Obtain 12 lead ECG and transmit to medical control if possible
- If no improvement in 5 minutes, you may repeat the Nitroglycerin twice at 5-minute intervals
- If pain is not relieved, or is relieved transiently by SL dose(s) of Nitroglycerin, initiate a Nitroglycerin Drip[3] at 5-20 ug/minute titrated - IV PUMP REQUIRED!
- If pain is severe and/or is refractory to initial SL dose of Nitroglycerin you may give Morphine[4], 2-4 mg, IVP
- If AMI is suspected complete the Pre-hospital Chest Pain Checklist

1 - Do not administer Nitroglycerin in any form if systolic BP is less than 90 mm/Hg

2 - If patient has a prescription for Nitroglycerin, one 0.4 mg dose may be given prior to initiating the IV.

3 - Limit systolic BP drop to 10% if normotensive, 30% if hypertensive; never drop below 90 mm/Hg.

4 - If patient is allergic or sensitive to morphine you may substitute with Nubain, 5 mg, IVP. May repeat one time as necessary.

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Acute Pulmonary Edema

Considerations

a. Rapid onset
b. Rales or wheezes on auscultation of breath sounds
c. Patient is normothermic
d. Respirations are labored
e. Decreased SaO2

May also have

a. Peripheral or sacral edema
b. Jugular vein distention

Contraindications

a. Slow onset
b. Fever
c. Signs of dehydration

1. Secure airway/high-flow oxygen
2. Begin cardiac monitoring, pulse oximeter, obtain vital signs
3. Initiate IV*

4a. Systolic BP 100 mm/Hg or less...

- Dopamine, 2.5 - 20 ug/kg/min
- Lasix, 0.5 - 1 mg/kg, Slow IVP, not to exceed 80 mg without physician order

4b. Systolic BP greater than 100 mm/Hg...

- Nitroglycerin, 0.4 mg, SL (maximum of 3 doses at 5-minute intervals)
- Lasix, 0.5 - 1 mg/kg, Slow IVP, not to exceed 80 mg without physician order
- Morphine, 1 - 3 mg, Slow IVP

5. If further actions are necessary...

- Nitroglycerin Drip, 5 - 20 ug/min (if systolic BP > 100)
- Intubate as needed and ventilate per Airway Control Standing Order

6. If time/patient condition permit, obtain a 12 lead ECG

- If systolic BP > 100 mm/Hg and patient has a prescription for Nitroglycerin, one 0.4 mg dose may be given prior to initiating the IV.

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- Secure Airway/high-flow O2
- Initiate IV and Cardiac Monitoring

  - Initial Albuterol treatment

  - Patients 60 lbs. and over
  - Albuterol, 2.5 mg, via Nebulizer *
  - May mix Atrovent, 2.5ml/0.02%

  - Patients under 60 lbs.
  - Contact Medical Control For Dosage

- Albuterol, 2.5 mg, may be repeated once if there is clinical improvement but wheezes persist.

  - If no improvement…

  - Patients over 40 years of age
    - Brethine, 0.25 mg, SC

  - Patients 40 years of age or younger
  - Epinephrine, 1:1000, 0.3 mg, SC

- If no improvement

  - Solu Medrol, 125 mg, Slow IVP

- Oxygen rate should be high enough to create a mist at the end of the tube (approx. 5-6 lpm). You may administer supplemental oxygen, 4-6 lpm, via Nasal Cannula, during Albuterol administration.

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Unresponsive Patients

This order applies to all patients who are unresponsive or have a markedly altered LOC due to suspected hypoglycemia or unknown etiology.

All Patients

- Secure airway/high-flow O2
- Begin cardiac monitoring
- Establish IV - Draw blood for glucose testing

Suspected Hypoglycemia

- If blood sugar < 70 or glucometer is not available...
  - If ETOH abuse is suspected, give Thiamine, 50 mg, IVP
  - D50, 25 G, Slow IVP *

Unknown Etiology

- If blood sugar < 70 or glucometer is not available...
  - If ETOH abuse is suspected, give Thiamine, 50 mg, IVP
  - D50, 25 G, Slow IVP *
- Narcan, 2 mg, IVP
- If patient responds to loading dose of Narcan, it may be repeated as necessary to support vital functions

- May give Glucagon, 1 Unit, IM, if IV attempts are not successful. Recheck blood sugar level at 10 minutes and repeat D50, 25 G, Slow IVP if blood sugar remains below 70 and the patient still has signs of an altered level of consciousness.

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Anaphylaxis

All Patients

- Secure airway/high-flow O2
- Begin cardiac monitoring (Be alert for possible cardiac dysrhythmia)
- Establish a large bore IV of NS or LR (consider a second IV if patient exhibits signs of shock)

Mild Reactions (localized swelling, wheezes)

- Albuterol, 2.5 mg, via high-mist nebulizer
- Benadryl, 25 mg, slow IV (3 - 5 minutes), or 50 mg IM if IV attempts are unsuccessful

Moderate Reactions (moderate respiratory compromise)

- Epinephrine, 1:1000, 0.3 mg, SC
- Benadryl, 25 mg, slow IV (3 - 5 minutes), or 50 mg IM if IV attempts are unsuccessful
  - Solu Medrol, 125 mg, Slow IV

Severe Reactions (signs of shock or severe respiratory compromise)

- Run the IV(s) wide open (remember to slow them down when patient condition improves)
- If patient has signs of respiratory compromise accompanied by a hoarse voice or stridor, consider immediate endotracheal intubation
- Administer Epinephrine by one of the following methods...
  - Epi, 1:1000, 0.3 mg, SC, if no signs of shock
  - Epi, 1:10,000, 0.3 - 0.5 mg, Slow IV, with signs of shock
  - If signs of shock and no IV access...
    - If intubated - Epi, 1:10,000, 0.5 - 1 mg, via the ET tube
    - If not intubated - Epi, 1:1000, 0.5 mg, injected into the vascular plexus at the base of the tongue (inferior surface)
- Benadryl, 25 mg, slow IV (3 - 5 minutes), or 50 mg IM if IV attempts are unsuccessful
- Solu Medrol, 125 mg, slow IV

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Time-Critical Trauma

This order applies to time-critical trauma patients. It's intent is to ensure rapid assessment and transportation of trauma patients with life-threatening injuries to the nearest appropriate medical facility.

- Primary Survey
- Maintain airway per Airway Control S.O.
- C-Spine Precautions
- Maintain circulation/ventilation - CPR if necessary
- Control MAJOR Bleeding
- Secondary Survey (Expose and Examine)
- Apply MAST if indicated (see below)
- Establish two (2) large bore IVs
- Vital signs every 5 minutes
- Scene times should be limited to 10 minutes unless complicated by extrication or other unforeseen circumstances. Most of the above treatments can be performed en route to the hospital. DO NOT delay transport to perform any treatment unless ABSOLUTELY necessary!

Indications for application of MAST

- Splinting and control of pelvic fractures
- Neurogenic shock

Contraindications for application of MAST

- Pulmonary Edema
- Known diaphragm rupture
- Uncontrolled hemorrhage outside confines of garment (i.e. - thoracic, upper extremity, scalp, face, or neck injury)

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Pleural Decompression

A Pleural Decompression will be performed on direct physician order or upon recognition of...

- Tension Pneumothorax
- Severe Multi-System Trauma and/or Traumatic Cardiac Arrest with clinical evidence of a potential tension pneumothorax (i.e. – decreased/absent breath sounds, flail chest, paradoxical motion of chest wall, etc)

Required Equipment

- 14 or 16 gauge IV catheter (2-2.5 inch)
- Flutter valve (omit if patient is intubated)
- Betadine swabs
- Dressing and tape

Location

1. 2nd or 3rd intercostal space, mid-clavicular line - this location is preferred unless inaccessible (i.e. - due to trauma or defib pad placement)
2. 4th or 5th intercostal space, mid-axillary line - if unable to access location #1.

Procedure

- Place patient on high flow oxygen
- Position patient upright if C-Spine injury has been ruled out and patient is not in cardiac arrest
- If patient is awake - Explain the procedure. May sedate with Versed, 2-5 mg, IVP.
- Select location and prep the area with Betadine
- Insert the catheter *over the top* of the rib until air rushes out, then remove the needle, leaving the catheter in place
- Attach the flutter valve and secure with tape (omit if intubated)
- Reassess breath sounds and patient condition (condition should improve almost immediately)
- Secure catheter with tape

Repeat this procedure on opposite side if you suspect bilateral pneumothorax, patient is suffering severe multi-systems trauma or patient is in traumatic cardiac arrest.

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Severe Burns

Indications

Partial and Full Thickness Burns caused by any of the following…

- Electricity
- Thermal
- Inhalation Injury
- Chemicals
- Radiation

Treatment

- Secure Airway/high-flow O2
- IV of Lactated Ringers
- DRY Dressings for all burns
- Pain Control
  - Morphine Sulfate
  - ADULT DOSAGE – 5 mg increments up to a total of 15 mg given or relief of pain achieved
  - PEDIATRIC DOSAGE – 0.1-0.2 mg/kg up to a total of 0.4 mg/kg given or relief of pain achieved
  - Versed
  - ADULT DOSAGE – 2.5 - 5 mg may be used to facilitate intubation or to assist with pain control
  - PEDIATRIC DOSAGE – Not recommended
- If able, remove all jewelry from burned extremities
  - Nasal Intubation with sedation should be considered if the following conditions are present: Injury to Upper Respiratory Tract, Facial Burns or Severe Facial Edema, Sooty Sputum, Hoarseness, History of being in a confined space, or for Long Term Care.
  - Consideration should be given for transportation directly to the Regional Burn Center for patients with severe burns of the face and genitalia or greater than 30% partial or full thickness burns.

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No-Code Orders

This Standing Order applies to patients with a No-Code Order, which has been issued by the patient's physician, and have either been found or become pulseless and apneic in your presence. To utilize this Order you MUST have, in your possession, the original or legible copy of the actual No-Code Order, which must be signed by both the physician and either the patient or the patient's legal guardian within the past twelve (12) months; or you must receive a direct verbal order from the treating physician.

If the above criteria are meet and you are transporting to a Wabash County medical facility, you will perform the following steps…

- Note the time that the patient was found to be in cardio-respiratory arrest
- Note the exact location of the arrest
- DO NOT attempt to resuscitate
- Contact Wabash County Hospital and advise them of the situation
  - Transport the patient, in a routine status, to whichever facility is requested by the Hospital.
- If in doubt, contact medical control for advice
- If at the scene, transportation may be provided by another source (i.e. - funeral home).

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Do Not Resuscitate

When confronted with a possible DNR situation, the medic must consider the four areas listed below:

1. Patient Viability
2. When Not To Resuscitate
3. Special Considerations
4. Written DNR/No-Code Orders

I. Patient Viability

a. Any possibility that life exists --> resuscitate
b. When in doubt --> resuscitate
c. Clinical signs are misleading (pupils, downtime, presenting rhythm) - DO NOT base your decision on these alone!

II. When Not To Resuscitate

a. Decapitation
b. Decomposition
c. Rigors mortis
d. Dependent lividity
e. Transverse dissection at the midsection
f. Any other injuries that are conclusively incompatible with life (i.e. - massive head and/or chest) and no evidence of life is present

III. Special Considerations

a. Multiple casualties - use triage
b. Living wills - DO NOT ACCEPT --> RESUSCITATE
c. Direct or telephone contact with patient's physician, who requests DNR

IV. Written DNR/No-Code Orders

a. See No-Code Orders Standing Order

Procedure for Out of Hospital Death

If patient meets any criteria from section II above the paramedic will…

1. Request law enforcement to respond to the scene
2. If apparent natural causes death contact the family physician
3. If family physician cannot be contacted, he/she refuses to sign the Death Certificate or death appears in any way suspicious request the Coroner to respond to the scene

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Major Motor Seizures

This order may be utilized if seizures persist (Status) and they interfere with vital functions.

- Secure Airway/high-flow oxygen
- Initiate IV/Cardiac monitoring
- Valium, 2-10 mg, Slow IVP*.
- If patient is pregnant and/or eclampsia is suspected - administer Magnesium Sulfate, 2-4 Grams, Slow IVP (over 3 minutes), prior to valium administration. Then if seizures persist, administer Valium, 2 – 10 mg, Slow IVP.
    - If seizures persist consider paralytics. See Paralytic Administration S.O. (page 29).
- If an IV cannot be established Valium and Versed may be administered rectally.

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Hypotension

This order applies to patients with a *sustained* systolic BP of 90 mm/Hg or less accompanied by clinical signs of hypoperfusion or shock.

- Secure Airway/high-flow O2
- Begin cardiac monitoring
- Initiate IV of Normal Saline
- Adult
    - Fluid bolus of 250 - 500 ml of NS or LR (in the absence of acute pulmonary edema)

    Pediatric
    - Fluid bolus of 20 ml/kg of NS or LR (in the absence of acute pulmonary edema)
- If no response to fluid, initiate a Dopamine drip at 5 - 20 ug/kg/min

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Transportation of Patients with Nipride Drips

Whenever possible, patients will not be transported between facilities with a Nipride (sodium nitroprusside) drip running. When it cannot be avoided paramedics are authorized to transport this medication only if the following requirements have been satisfied.

1. Written Physician Order - This order must specify the acceptable dosage range, target blood pressure, and any other information or cautionary statements specific to this patient that the physician feels are necessary.
2. Blood Pressure Reading - Must be taken at no less than five (5) minute intervals. If during transport, this becomes impossible, for any reason, you will immediately contact Medical Control (either Wabash County Hospital or the receiving facility if closer) at the earliest opportunity for further instructions.

If both of these requirements cannot be satisfied the patient may not be transported with Nipride running.

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Medical Director

Effective Date

Cold Water Drowning

A patient who is submerged in cold water (70˚ F or colder) for 1 hour or less and is pulseless and apneic shall be considered a COLD WATER DROWNING. With the suspected cold water drowning all circulation, both central and peripheral, is shut down *. For this reason you SHALL NOT administer medications or delay transport to attempt to initiate an IV.

Indications

- Evidence of submersion in cold water for 1 hour or less
- Pulseless and Apneic

Procedure

- Check pulse, if absent and patient is apneic...
  - Begin CPR and ventilate via BVM with supplemental high-flow oxygen
  - Apply defib pads
- Determine rhythm - If necessary you may defibrillate up to three (3) times
- Secure airway per Standing Order - Use care during airway placement as this may induce V-Fib.
- Notify Medical Control ASAP.
- This is a "*load and go*" situation - **TRANSPORT ASAP**.

  - * You may attempt to initiate an IV en route to the hospital - DO NOT DELAY TRANSPORT TO ACCOMPLISH THIS!

- Even though your efforts may appear to be in vain, do not give up. Remember - A patient is not dead until he/she is warm and dead. This type of resuscitation often takes a considerable amount of time.
- If a delay in transport is inevitable (i.e. - you are not on the scene yet; patient still in the water) consider aeromedical transport from the scene.

NOTE: Patients may not present in V-Fib, but they are highly susceptible to it and must be treated very carefully. This V-Fib is usually refractory and care must be taken not to jostle, move vigorously, or otherwise handle these patients roughly.

_____ _____/_____/_____

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Nasogastric Tubes/Gastric Lavage

Paramedics may utilize a nasogastric tube to evacuate a patient's stomach contents when indicated below or on direct order from Medical Control. Additionally, gastric lavage may be performed and activated charcoal administered when indicated.

Indications

- NG Tube, Gastric Lavage*, and Activated Charcoal
  - Overdose/Accidental Poisoning by ingestion
- NG Tube Only
  - Patient is experiencing severe vomiting that cannot be controlled by other means
  - Prolonged ventilation by BVM or other method has created gross abdominal distention
  - Evacuation of other non-toxic substances (i.e. - blood) becomes necessary

Contraindications

- Patient is stuporous or unconscious (unless intubated)
- Patient is pregnant
- Patient is suffering a suspected AMI (Does not include patients in cardiac arrest)
- Patient has ingested any of the following...
  - Corrosives (strong acids or alkalis)
  - Hydrocarbons (kerosene, gasoline, etc.)
  - Iodides
  - Silver Nitrate
  - Strychnine (contained in some rat poisons)

Activated Charcoal

Administer 50 grams via the NG Tube following gastric lavage when indicated

- Consider transport without gastric lavage if transport time is less than 10 minutes

_____ _____/_____/_____

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Pain Control

This order is provided to allow paramedics to provide a level of analgesia to patients who complain of severe pain which cannot be controlled by other means (i.e., position, splinting, etc.) and is not covered by any other standing order.

Contraindications

- Patients with head injury
- Patients with undiagnosed abdominal pain

Treatment

- Administer oxygen as needed
- Initiate an IV
- Administer Mepergan, 1-2 ml, titrated to pain level (maximum 2 ml)
- If an IV cannot be established, Mepergan may be given IM
- If additional analgesia is required contact Medical Control for advice
- If patient has an allergy to Demerol or Phenergan substitute with Nubain 5-10 mg

_____ _____/_____/_____

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Phenergan Administration

Indications

- Nausea and vomiting
- Motion sickness

Contraindications

- Patients in comatose states
- Patients who have received a large amount of depressants

Administration

- Administer Phenergan, 12.5 mg IVP or 25 mg IM
- If narcotics or other CNS depressants have recently been administered use the lower 12.5 mg dose
- If administered in the presence of a possible AMI administer the medication IVP only
- **DO NOT** use for pediatric patients unless ordered by medical control.

_____ _____/_____/_____

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Effective Date

Paralytic Administration

Indications

- To facilitate intubation in patients for whom Versed alone is not effective
- Combative head injury patients
- Status seizures that cannot be controlled by normal means

Contraindications

- Conscious, non-sedated patients
- Patients who, for any reason, cannot be ventilated with a BVM

Procedure

- Assemble all equipment necessary to intubate and artificially ventilate the patient.
- Mivacron has no known effect on level of consciousness or pain threshold. If patient is conscious and has not been sedated, sedate with Versed, 2-5 mg, IVP, or Valium, 5-10 mg, IVP. Resedate patient with Valium or Versed, 2 mg, every 10-15 minutes.
- Administer Mivacron, 0.5 mg/kg, IVP - muscle relaxant effects should begin in approximately 1 minute with maximum effect achieved in approximately 2.5 minutes.
- At onset of effects hyperventilate patient with BVM and supplemental oxygen.
- Intubate - Note: Mivacron causes short-term total or near total paralysis. A patent airway with artificial ventilations is a must. Pulse oximetry and end tidal CO2 detection will be utilized.
- Recovery from Mivacron administration should begin in 10-15 minutes. Maintenance doses of Mivacron, 0.1 mg/kg IVP, may be administered at 15-minute intervals if continued paralysis is required.

_____ _____/_____/_____

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Dosing For Pediatric Patients

When treating a pediatric patient (age 14 and under) for which there is no pediatric Standing Order, the following drug dosages and defibrillation energies will be substituted for the adult dosages referred to in Standing Orders and Protocols.

Medications

Adenosine	Initial dose: 0.1 mg/kg Add'l doses: 0.2 mg/kg Maximum single dose is 12 mg
Albuterol	Consult with medical control first, unless patient has a prescription (then use the prescribed dose)
Epinephrine	For Anaphylaxis/Asthma: SC - 0.01 mg/kg of 1:1000 (up to 0.3 mg)
Lidocaine Infusion	20-50 ug/kg/minute
Narcan	0.1 mg/kg
Nubain	0.1 mg/kg
Sodium Bicarbonate	1 mEq/kg per dose
Solu-Medrol	1 mg/kg over 5 minutes
Valium	0.25 mg/kg (up to 10 mg)

Miscellaneous

Fluid Challenge	20 ml/kg

_____ _____/_____/_____

Jeffrey Miller, DO — Effective Date

Medical Director

Patient Restraint

Purpose

The use of restraints may be necessary for the protection of the patient or health care providers to enable the provision of treatment and transport for the patient.

Indications

A. When necessary to restrain a sick or injured (non-mentally ill) person who because of central nervous impairment is behaving in such a manner as to interfere with his/her examination, care and treatment to the extent they endanger their own life or the safety of others.
B. When restraining and transporting a mentally ill patient at the request of a police officer.

Procedure

A. Assure that enough personnel are available to properly control the patient and establish the restraints.
B. Explain to family and bystanders the purpose of the restraints. Clear the area of family and bystanders as necessary.
C. Physically control the patient and apply the restraints.
D. If the patient is restrained secondary to central nervous system impairment and is at risk of vomiting, keep patient in a left lateral-recumbent position.
E. Assure the restraints do not impair circulation and do not damage soft tissue.
F. Patient should be secured to a backboard or stretcher only. Patients must never be secured to a vehicle or immovable object.
G. Transport patient. CONTACT MEDICAL CONTROL.
H. Inform the hospital that restraints are in place and assistance will be necessary at the hospital to continue restraints of the patient.

Special Considerations

A. Restraints should be of a soft nature, i.e. cravats, sheets, cloth restraints, etc., applied to the wrists and ankles. A restraint may also be needed across the chest and/or pelvis.
B. Make a plan before any attempt at restraint, assigning specific duties to each member of the team. Designate a team leader.
C. A show of force may initially be sufficient to gain the cooperation of the patient and is preferable to the actual use of force as a first step. No threat should ever be made to a patient.
D. Use only as much force as is required. Never strike a patient.
E. If secured to a stretcher, the patient should be secured by straps or sheets at the chest, pelvis and legs.
F. Once restraints have been applied, they should never be removed until the patient is safely in the hospital.
G. Stay with a restrained patient at all times. Be observant for possible vomiting and be prepared to turn the patient and suction if necessary.
H. Document the time that restraints were applied and the rationale for their use. Assess circulation, movement, sensation of extremity distal to the restraint prior to and after restraint application. CMS should be assessed every 15 minutes while the patient is restrained.
I. Remain between the patient and vehicle doors.
J. **Handcuffed Patients** – If requested or ordered by a police officer to transport a handcuffed patient, the police officer must accompany the patient in the ambulance at all times.

_____ _____/_____/_____

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Protocols Section

Introduction

The following section contains Protocols. Protocols are similar to Standing Orders, but may only be utilized on direct order of Medical Control or during any situation addressed in the Communications Failure Standing Order.

Surgical Cricothyrotomy

(PHYSICIAN ORDER REQUIRED!)

Indications

Permission to perform a Surgical Cricothyrotomy should be requested from Medical Control for any patient who is more than four (4) years old and has at least one of the following conditions...

- Complete airway obstruction that cannot be managed by other BLS/ALS methods
- Massive facial trauma that makes intubation impossible

Procedure

1. Expose the neck; hyperextend if not trauma related.
2. Locate and palpate the cricothyroid membrane.
3. Make a 1-2 cm *vertical* incision over the membrane.
4. Spread skin to expose the cricothyroid membrane.
5. Make a small horizontal incision through the membrane. Insert the handle of the scalpel into the incision and rotate it 90 degrees to open the airway (may also use a hemostat or McGill forceps).
6. Insert an appropriately sized cuffed ET-Tube or tracheostomy tube into the incision, directing the tube distally into the trachea. When in place inflate the cuff.
7. Ventilate the patient and confirm correct placement by observing the chest rise and auscultating breath sounds.
8. Secure the ET-Tube or tracheostomy tube to the patient to prevent dislodging.
9. Dress with Vaseline gauze or other occlusive dressing as necessary.

_____ _____/_____/_____

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ALS/BLS Transport Protocol

Once the paramedic unit has arrived on scene, patient contact must be made. Patient contact is defined as a thorough assessment of the patient's condition and consideration of the possible complications of releasing patient care to the ALS/BLS unit. The paramedic will assess the patient, render appropriate medical care, and transport the patient(s).

1. If, after Paramedic contact and assessment of the patient, the Paramedic(s) and EMT's determine that BLS transport is appropriate, MEDICAL CONTROL will be contacted and will make the final determination.
2. When BLS transport is approved by Medical Control, a full "No Haul" chart will be written. This will include all patient demographics and a full assessment including, but not limited to, vitals. Medical Control's signature is not required.
3. When the patient's condition warrants Paramedic intervention and the Paramedic unit is greater than 5 minutes away, the BLS unit will package the patient and begin transport. The Paramedic unit will meet the transporting unit en route.
4. If the BLS/ALS unit that is en route with the patient is less than 5 minutes from the hospital, transport will not be interrupted except for a Cardiac Arrest or Severe Airway Compromise.
5. The practice of two ambulances running red lights and siren to the hospital with one patient is strictly prohibited.
6. In the event the Paramedic is in the BLS ambulance and is unable to utilize cellular communications, IHERN will be used for all traffic with the hospital.

_____ _____/_____/_____

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Physician at Scene Protocol

Purpose

To give paramedics and physicians a clarification of Medical Control procedures when a physician is present at the scene of an accident or illness. The following procedure will be implemented.

Procedure

A. Upon request by any physician to give orders or directions at the scene of an accident or illness, the paramedic(s) will:

1. Inform the physician that they are in direct radio contact with a base station physician.
2. Inform the physician that they can take orders only from the base station physician
3. Inform the physician of the procedure for taking over medical control.

B. If the physician at the scene insists on taking over medical control, the paramedic(s) will:

1. Inform the base station physician of the request.
2. Allow the physician at the scene to speak with the base station physician as necessary.
3. Follow directions of the base station physician.

C. Should, at any time, the physician at the scene give absolutely contraindicated or inappropriate directions, orders which could adversely affect patient care, or refuse to accompany the paramedics to the hospital as required by the base station physician, the paramedic(s) will:

1. Immediately contact the base station physician and inform him/her of the situation.
2. Follow directions and orders from the base station physician.

_____ _____/_____/_____

Jeffrey Miller, DO — Effective Date

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Approved Medications and IV Supplies

Drug Name	Dosage	Supplied	Min Qty
Activated Charcoal	50 grams	Tube	1
Adenosine	6 mg	1 ml Vial	5
Albuterol	2.5 mg	Bottle with nebulizer	4
Aspirin, Chewable	81 mg	81 mg Unit Dose	6
Atropine	1 mg	10 ml Preload	5
Atropine	8 mg	20 ml Multi-dose Vial	1
Atrovent	500ug	Bottle with neublizer	4
Benadryl	50 mg	1 ml Tubex or Preload	2
Brethine	1 mg	1 ml Ampule	2
Bretylium	500 mg	10 ml Preload \ Vial	5
Calcium Gluconate	46.5 mEq	10 ml Vial	1
Cardizem	25 mg	5 ml Preload	1
Decadron	4 mg	1 ml Vial	1
Dextrose 50	25 grams	50 ml Preload	2
Dopamine	3200 ug/ml	Premix	1
Epinephrine 1:1,000	1 mg	1 ml Tubex	2
Epinephrine 1:1,000	30 mg	Multi-dose Vial	2
Epinephrine 1:10,000	1 mg	10 ml Preload	10
Glucagon	1 mg	1 ml Combo Pack	1
Heparin	5,000u	Vial	2
Heparin Drip	50,000u/500ml.	Or 25,000u/250ml	Premix 2
Lasix	100 mg	10 ml Preload	2
Lidocaine	100 mg	5 ml Preload	3
Lidocaine Drip	4 mg/ml	Premix	1
Magnesium Sulfate	5 grams	10 ml Preload	1
Mepergan	50 mg	2 ml Tubex	2*
Mivacron	20 mg	10 ml Vial	5
Morphine Sulfate	10 mg	1 ml Tubex	4*
Narcan	2 mg	2 ml Preload	3
Nitroglycerin Spray	0.4 mg	Spray Bottle	2
Nitroglycerin Drip	100 ug/ml	Premix	2
Nubain	10 mg	1 ml Ampule	2
Phenergan	25 mg	1 ml Ampule	2
Procainamide	1 gram	10 ml Preload	3
Sodium Bicarb 8.4%	50 mEq	50 ml Preload	1
Solu Medrol	125 mg	2 ml Activial	1
Thiamine	100 mg	1 ml Tubex	1
Valium	10 mg	2 ml Preload or Vial	2*
Versed	5 mg	5 ml Vial	4*

0.9% Sodium Chloride	250 ml bags	4
0.9% Sodium Chloride	500 ml bags	4
0.9% Sodium Chloride	1000 ml bags	4
Lactated Ringers	1000 ml bags	4
Primary IV Tubing	10 Drop Sets	6
Micro Drop Tubing	60 Drop Sets	2
Vented IV Tubing	Compatible with current pumps	2
IV Catheter Over Needle	#14, #16, #18, #20, #22, #24	4 Ea.
Intraosseous Needle	Illinois or Jamshidi	2

The medications listed on this page will be carried on all paramedic units in at least the minimum amounts listed. Additional quantities may be carried as spares on non-paramedic ambulances operated by certified paramedic providers. Forms of packaging may be substituted, according to hospital supply, as long as dosage remains the same.

- Mepergan, Morphine, Valium, Nubain and Versed may be stored in either the drug box or the cabinet, providing they are locked and accessible only by paramedics.

Jeffrey Miller, DO, Medical Director

Effective Date

This order applies to all patients who are complaining of chest pain or pressure that is confirmed to be an AMI by 12 lead ECG and are being enrolled into the TIMI 19 study.

Treatment

- Secure Airway/high-flow O2
- Apply cardiac monitor and perform 12 lead ECG and transmit to receiving hospital
- Complete inclusion/exclusion check list
- Contact medical control and provide all information to physician to determine patients eligibility for thrombolytic

    a. If physician grants permission, continue with this order.
    b. If physician denies permission, refer to (PAGE 12) Chest pain/Discomfort SO.

- Start Minimum of 1 IV, 2 preferred
- Draw blood sample in tube provided in TIMI 19 Kit, Perform Rapid bedside Assay as soon as possible
- Reconstitute Retavase and administer first 10U bolus over 2 minutes
- Give 324mg ASA PO (unless allergic to ASA)
- Administer Heparin bolus of 60U/kg (max of 4000U) then continuous infusion et 12 U/kg/hr (max 800U/hr)
- If transport time is >30min. administer second 10U bolus of Retavase
- Upon arrival at ED, Transfer study drug kit all supporting documentation to ED staff

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1 – At any time you may administer 0.4mg Nitro-spray to a max of 3 doses. Don't allow pt's SBP to Drop below 90mm/hg. If pt has prescription for Nitro one 0.4mg dose may be given prior to initiating the IV

2 – If pain is not relieved or is relieved transiently by SL doses of Nitro, you may initiate a Nitro drip @ 5ug/min and titrate to a max of 20ug/min any time after the initial Retavase bolus

3 – If pain is severe and/or is refractory to initial SL dose of Nitroglycerin, you may give Morphine 2-4mg, IVP

4 – If pt is allergic or hypersensitive to MS you may substitute with Nubain, 5mg IVP, May repeat once if necessary

_____ ____/____/____

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