

**The Valley Hospital
Mobile Intensive Care Unit
Standing Orders
And
Communications Failure Orders**



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Section I:

Adult Standing Orders

And

Adult Communication Failure Orders

Introduction – Adult Standing Orders

The following treatment protocols shall be considered standing orders when treating adult patients. For the purpose of this subchapter, adult patients are defined as those persons who have attained the age of 13 years or older (that is, from the date of the person's thirteenth birthday and beyond).

The standing orders set forth in this subchapter shall be adopted in their entirety by the provider's medical director with the exception of the standing order for cyanide poisoning and standing order for nerve agent poisoning, after notification to OEMS. Except where specifically noted, these standing orders shall not be altered, abbreviated, or enhanced in any manner.

The standing orders contained in this subchapter are initial treatment protocols that may be utilized by ALS crewmembers. These protocols apply only to adult patients, and may be implemented prior to contact with medical command. In the event the implementation of these standing orders is delayed for any reason, the medical command physician shall be contacted immediately following the delay.

Any situation other than those specifically identified in this subchapter requires the ALS crewmembers to contact medical command before providing any ALS treatment.

These standing orders shall not be interpreted as a requirement to administer ALS treatment prior to contact with medical command. ALS crewmembers may elect to contact medical command at any time during the provision of therapy. Unless otherwise provided in these rules, standing orders cease to be operative once contact is made with medical command.

The standing orders contained in this subchapter shall not be considered to represent total patient management. Contact with medical command shall be established at the point indicated in the standing order, unless established sooner. At no time shall communications with medical command be delayed due to difficulty in intubating the patient and/or initiating an IV line.

The presence of an allergy to any medication or therapeutic agent set forth in these standing orders shall be deemed to be a contraindication to the administration of that medication or therapeutic agent. In such instances, the medication or therapeutic agent shall not be administered.

Each case utilizing these standing orders shall be fully documented on the patient care report. The provider's quality assurance plan shall include provisions for review of calls where standing orders are utilized, in accordance with the standards set. Cases that do

not follow the standing orders as set forth in this chapter or where contact is never made with medical command shall be forwarded to the medical director for a mandatory review.

Introduction – Adult Communications Failure Orders

The Communications Failure Orders contained in this book are for the use of ALS crewmembers in the field when normal means of communication with medical command, as well as secondary means of communication, have failed. As with the standing orders, adult patients are defined as those persons who have attained the age of 13 years or older (that is, from the date of the person's thirteenth birthday and beyond). The Communications Failure Orders are specific for advanced life support intervention. These orders should not be implemented until all secondary means of communication with medical direction have been attempted and have failed. This shall include attempting to contact the back-up Medical Command Facility (St. Joseph's Regional Medical Center – 973-977-8476). Since the primary means of communication with medical direction is the cellular phone, the secondary means of communication with medical direction are via Landline and HEAR Communications.

It is understood that if Communications Failure Orders are in use, the crew will have completed all appropriate Standing Orders first. When Communications Failure Orders are in use, the ALS crewmembers will not deviate from them in any manner relating to procedure, drug, dosage, route of administration, or repetition of therapy. The only exception will be that, a treatment may be withheld if the patient or family member reports an allergy to the medication or therapeutic agent. Should the ALS provider deviate from these protocols when they are in use, it will be considered **practicing medicine without a license**. An emsCharts Special Report must be completed within the patient's chart when Communications Failure Orders are utilized.

Standing Orders and Communications Failure Protocols are not to be used in the place of medical command. It is imperative that the MICP/MICN establish communications communication with medical command as soon as possible. Below is a list of all telephone numbers that may be used to establish contact with Medical Control:

Adult ED: 201-251-3266, **Backup Adult:** 201-447-5918, **PEDS ED:** 201-251-3271

Revised: 01/97, 09/98, 03/00, 11/02, 5/2010, 9/2011, 10/2013

8:41-7.3 Standing orders for Advanced Airway Management

(a) The following standing orders are authorized in the event that an adult patient presents:

1. in respiratory arrest;
2. In respiratory failure with associated inadequate spontaneous ventilatory volume; and/or
3. Unconscious with absent protective gag reflex.

(b) In the event that a patient presents as above, the ALS crewmembers may perform advanced airway insertion to include intubation or insertion of a supraglottic airway.

(c) Advanced interventions shall only be attempted after all BLS interventions have been instituted.

1. In the event of a suspected tension pneumothorax, where the patient presents with progressive severe respiratory distress with cyanosis, hypoxia as defined by a pulse oximetry reading of 90% or less with a non-rebreather mask in place at 12-15 lpm or intubated, diminished or absent breath sounds on the affected side, and hypotension as defined as a systolic blood pressure less than 90 mmHg, perform a needle chest decompression;

(d) If patient exhibits signs and symptoms of gastric distension that compromises ventilation or circulation, and an advanced airway is in place, the ALS crewmember may place a naso/orogastric tube to relieve the gastric distention or pressure in an effort to reduce the risk of aspiration and increase the intrathoracic volume.

(e) It is imperative that the ALS crewmembers initiate contact with medical command as soon as possible after the above treatment has been rendered. These procedures shall not delay the transportation of a patient in the event of a difficult intubation, nor shall contact with medical command be delayed by a difficult airway.

(f) This standing order may be utilized in conjunction with any other standing order where the patient's airway needs to be secured.

Communications Failure Orders for Advanced Airway Management:

(a) Do not delay transport in the event of a patient with a difficult airway.

(b) ALS crewmembers shall consider the underlying disease process or injury prior to performing intubation and shall treat underlying, reversible causes prior to intubation (e.g. hypoglycemia, reversible overdose).

(c) Provide high flow oxygen (12-15 lpm via non-rebreather mask) prior to intubation. Positive pressure ventilation shall be instituted prior to intubation as needed to maintain a pulse oximetry reading >90% or as dictated by patient's spontaneous respiratory effort.

(d) If the patient requires sedation in order to achieve intubation, administer Midazolam 0.1mg/kg IV/IO push (maximum dose 10mg) in order to facilitate the intubation process as long as the systolic blood pressure is at least 100 mmHg.

- (e) Orotracheal and nasotracheal intubation are both considered appropriate management options.
 - (f) ALS personnel will be permitted only two intubation attempts per person. If the intubation attempts are unsuccessful, a supraglottic airway should be utilized.
 - (g) If insertion supraglottic airway does not result in adequate ventilation, ALS crewmembers shall ventilate the patient with a bag valve mask and basic airway adjuncts.
 - (h) In the rare case that the ALS crewmembers are presented with a patient who cannot be intubated and where ventilation with a BVM and basic adjuncts or a supraglottic airway device have failed (also known as the “Can’t Intubate, Can’t Ventilate” scenario), the ALS crewmembers shall establish an airway using the approved Cricothyrotomy kit.
 - (i) Post intubation, continuous waveform capnography shall be monitored for the duration of the patient encounter.
 - (j) If the patient requires sedation due to bucking or combative behavior, the ALS crewmembers shall administer Lorazepam 2mg IV/IO push as long as the systolic blood pressure is at least 100mmHg. This may be repeated one time in 15 minutes if the patient requires additional sedation.
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8:41-7.4 Standing orders for Vascular Access

- (a) The following standing orders for the initiation of vascular access are authorized in those cases where an emergent or potentially emergent condition exists and current ALS treatment protocols require the initiation of vascular access. In such cases, ALS crewmembers may establish vascular access at “keep vein open” (KVO) rate or with a saline port prior to contacting medical command.
 - i). If IO access is achieved on a conscious patient, ALS may administer 40mg of Lidocaine prior to fluid infusion
 - ii). If IV/IO access is not available or unsuccessful the patient’s Established Vascular Access Device (EVAD) may be accessed if one of the following emergent conditions is present:
 1. Cardiac Arrest
 2. Unstable patient with systolic blood pressure less than 90 mmHg with signs of shock (chest pain, cardiac arrhythmia, altered mental status, significant dyspnea, anaphylaxis)
 - iii). EVAD is defined as an established central venous catheters and/or subcutaneous indwelling catheters
- (b) ALS crewmembers shall contact medical command as soon as possible after the establishment of vascular access. Contact with medical command shall not be delayed by, or as a result of, unsuccessful vascular access in the field.

- (c) The time of the initiation of vascular access and the time of contact with medical command shall be recorded on the patient care report.
 - (d) This standing order may be utilized in conjunction with any other standing order where vascular access is indicated.
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8.41-7.5 Standing orders for Ventricular Fibrillation and Pulseless Ventricular Tachycardia

(a) The following standing orders are authorized in the event that an adult patient presents with cardiac arrest with the rhythm determined to be ventricular fibrillation or pulseless ventricular tachycardia:

1. If the patient is not a witnessed arrest, initiate CPR.
2. If CPR has been started by a first responder or is a witnessed arrest by ALS crewmember(s), immediately review the cardiac rhythm. If indicated defibrillate at 360 joules or manufacturer's suggested biphasic equivalent and immediately resume CPR;
3. During CPR;
 - i. Assess and secure airway. Once an advanced airway has been established, perform continuous compressions at a rate of at least 100 per minute while giving ventilations at a rate of 8 to 10 times per minute, for 2-minute cycles.
 - ii. Establish vascular access and administer 500 mL normal saline via vascular access;
 - iii. Administer Epinephrine 1 mg 1:10,000 via vascular access or 2 mg 1:10,000 through the endotracheal tube. May be repeated every three to five minutes while continuing protocol, or administer Vasopressin 40 units via vascular access one time only and continue CPR;
4. Reassess the cardiac rhythm every two minutes, if rhythm remains ventricular fibrillation or pulseless ventricular tachycardia, defibrillate at 360 joules or manufacturer's suggested biphasic equivalent and immediately resume CPR;
 - i. If at any point the patient has return of spontaneous circulation and has not been given any anti-dysrhythmic medication, then administer Amiodarone 150 mg over 10 minutes via vascular access and go to step 6;
5. Administer 300 mg Amiodarone via vascular access and continue CPR. If rhythm remains ventricular fibrillation or pulseless ventricular tachycardia, administer 150 mg Amiodarone via vascular access in 3 to 5 minutes from the first dose, and continue CPR;
6. Contact medical command.

(b) Should ventricular fibrillation or pulseless ventricular tachycardia recur after contact is made with medical command, an ALS crewmember may follow step 2 through 4 until medical command can be re-established.

(c) Follow each medication given via vascular access with a 20 mL fluid bolus;

(d) Total amount of solutions given via ET not to exceed 50 mL;

(e) Any treatments related to this protocol administered prior to ALS arrival should be considered as part of this standing order.

Communications Failure Orders for Ventricular Fibrillation and Pulseless Ventricular Tachycardia:

(a) Continue two minute cycles of CPR followed by a rhythm check and if ventricular fibrillation or pulseless ventricular tachycardia persists, defibrillate at 360 joules or manufacturer's suggested biphasic equivalent and immediately resume CPR. If patient's rhythm converts to PEA or Asystole, continue CPR and follow the Standing Orders and Communications Failure Orders for Asystole/PEA.

(b) Administer an additional Normal Saline 500 ml bolus, repeated to a maximum of two liters. If patient is moderately to severely hypothermic, administer warmed IV fluids.

(c) If there is no response to the above therapies or the presenting rhythm is Torsades de Pointes, administer Magnesium Sulfate 2 grams IV/IO over two minutes.

(d) Check blood glucose. If blood glucose is <60mg/dL, administer Dextrose 50%W 25 grams IV/IO push. If IV/IO access is not available, administer Glucagon 1 mg IM.

(e) If the provider suspects a severe pre-existing acidosis based on available clinical history and exam, administer Sodium Bicarbonate 50 mEq IV/IO. This may be repeated one time in fifteen minutes.

(f) If the provider suspects hyperkalemia, administer Calcium Chloride 1 gram IV/IO push followed by a 20 ml fluid bolus. Then administer Sodium Bicarbonate 50 mEq IV/IO push.

(g) If the provider suspects an overdose, treat according to suspected agents:

1. Opiate toxicity: Naloxone 2mg IV/IO push.
2. Benzodiazepine toxicity: Romazicon 0.3mg IV/IO push
 - i. Hold Romazicon for any patient who may be chronically taking benzodiazepines
3. Tricyclic Antidepressant toxicity: Sodium Bicarbonate 50 mEq IV/IO push.
4. Beta Blocker: Glucagon 3mg IV/IO push.
5. Calcium Channel Blocker: Calcium Chloride 1 gram IV/IO push.

(h) If the patient has a return of spontaneous circulation, performing the following steps:

1. Reassess vital signs. Continue positive pressure ventilation as required by clinical presentation. If the patient has not been intubated, proceed with appropriate airway management as dictated by the clinical presentation. Titrate to a pulse oximetry >94% and end-tidal CO₂ of 35-45mmHg.
2. If the systolic blood pressure is <90mmHg, administer Normal Saline to a maximum of one liter.
3. Administer a continuous infusion of Amiodarone 1 mg/min IV/IO.
4. Acquire a 12-lead Electrocardiogram.
5. Establish secondary IV/IO access if possible.
6. If, after a total of one liter the patient remains hypotensive with a systolic blood pressure <90mmHg, administer Dopamine 5 mcg/kg/min IV/IO drip. This may be titrated to a maximum dose of 20 mcg/kg/min. A second liter of Normal Saline shall be administered simultaneously.

8:41-7.6 Standing orders for Asystole/PEA:

(a) The following standing orders are authorized in the event that an adult patient presents with cardiac arrest with the rhythm determined to be Asystole or PEA:

1. Initiate or continue CPR;
 - i. If Asystole confirm in a second lead;
2. During CPR;
 - ii. Assess and secure airway. Once an advanced airway has been established, perform continuous compressions at a rate of at least 100 per minute while giving ventilations at a rate of 8 to 10 times per minute, for 2-minute cycles.
 - iii. Establish vascular access and administer 500 mL normal saline via vascular access;
 - iv. Administer Epinephrine 1 mg 1:10,000 via vascular access or 2 mg 1:10,000 through the endotracheal tube. May be repeated every three to five minutes while continuing protocol, or administer Vasopressin 40 units via vascular access one time only and continue CPR;
3. Search for reversible causes;

- v. If the blood glucose test indicates a level less than 60 mg/dL, administer 25 g of 50 percent Dextrose in water intravenously. If unable to establish vascular access, administer 1 mg Glucagon intramuscularly;
 - vi. If suspected opiate overdose administer Naloxone 2 mg through an approved route of administration;
4. Reassess the cardiac rhythm every two minutes; and
- vii. If the cardiac rhythm ventricular fibrillation or pulseless ventricular tachycardia follow standing orders for ventricular fibrillation / pulseless ventricular tachycardia as outline in N.J.A.C. 8:41-7.5.
5. Contact the medical command
- (b) Consider termination of efforts only with the input of the medical command physician if Asystole/Agonal rhythms continue after successful advanced airway placement and initial medications. The time interval since arrest shall also be considered.
 - (c) Follow each medication given via vascular access with a 20 mL fluid bolus
 - (d) Total amount of solutions given via ET not to exceed 50 mL.

Communications Failure Orders for Asystole/PEA

- (a) Continue two minute cycles of CPR followed by a rhythm check and if ventricular fibrillation or pulseless ventricular tachycardia occurs, defibrillate and 360 joules or manufacturer's suggested biphasic equivalent and immediately resume CPR; then follow the Communications Failure Orders for Ventricular Fibrillation or Pulseless Ventricular Tachycardia.
- (b) Administer an additional Normal Saline 500 ml bolus, repeated to a maximum of two liters. If patient is moderately to severely hypothermic, administer warmed IV fluids.
- (c) If the provider suspects increased vagal tone involvement and the patient is in Asystole or PEA with a ventricular rate <60, administer Atropine 1mg IV/IO push repeated every three to five minutes to a maximum of 3mg.
- (d) If the provider suspects a severe pre-existing acidosis based on available clinical history and exam, administer Sodium Bicarbonate 50 mEq IV/IO. This may be repeated one time in fifteen minutes.
- (e) If the provider suspects hyperkalemia, administer Calcium Chloride 1 gram IV/IO push followed by a 20 ml fluid bolus. Then administer Sodium Bicarbonate 50 mEq IV/IO push.

(f) If the provider suspects an overdose, treat according to suspected agents:

1. Benzodiazepine toxicity: Romazicon 0.3mg IV/IO push
 - i. Hold Romazicon for any patient who may be chronically taking benzodiazepines
2. Tricyclic Antidepressant toxicity: Sodium Bicarbonate 50 mEq IV/IO push.
3. Beta Blocker toxicity: Glucagon 3mg IV/IO push.
4. Calcium Channel Blocker toxicity: Calcium Chloride 1 gram IV/IO push.

(g) If the patient has a return of spontaneous circulation, performing the following steps:

1. Reassess vital signs. Continue positive pressure ventilation as required by clinical presentation. If the patient has not been intubated, proceed with appropriate airway management as dictated by the clinical presentation. Titrate to a pulse oximetry >94% and end-tidal CO₂ of 35-45mmHg.
2. If the systolic blood pressure is <90mmHg, administer Normal Saline to a maximum of one liter.
3. Acquire a 12 Lead Electrocardiogram.
4. Establish secondary IV/IO access if possible.
5. If after a total of one liter the patient remains hypotensive with a systolic blood pressure <90mmHg, administer Dopamine 5 mcg/kg/min IV/IO drip. This may be titrated to a maximum dose of 20 mcg/kg/min. A second liter of Normal Saline shall be administered simultaneously.

8:41-7.7 Standing orders for burn management

(a) The following standing orders are authorized in the event that a patient presents with burns:

1. Stop the burning process;
2. If hazardous materials are suspected, take proper precautions and contact medical command physician for guidance on treatment protocols;
3. Immobilize the spine if indicated;
4. Assess and secure the airway;
 - a. If evidence of trauma, refer to N.J.A.C. 8:41-7.8, *Standing orders for trauma*;

5. Consider endotracheal intubation if indicated for airway burns and/or respiratory compromise;
6. Administer oxygen therapy as patient condition indicates;
7. Cover the burns with a dry dressing or sheet;
8. Maintain normal body temperature;
9. Begin transportation of patient to the most appropriate facility;
10. Establish vascular access;
11. ALS crewmember may administer up to 1 liter normal saline or Lactated Ringer's based on patient presentation;
12. If the systolic blood pressure is at least 90mmHg, administer Morphine Sulfate 0.1 mg/kg up to 10 mg or Fentanyl 1 mcg/kg up to 100 mcg, titrated slowly; and
13. Contact the medical command

Communications Failure Orders burn management

- (a) Establish secondary IV/IO access if possible, preferably large bore.
- (b) For significant partial and full thickness burns, administer additional normal saline or Lactated Ringer's to a maximum of 30 ml/Kg total fluid administration.
- (c) If additional pain management is required, administer Morphine Sulfate 0.1 mg/kg up to 10 mg single dose titrated slowly or administer Fentanyl 1mcg/kg up to 100 mcg single dose titrated slowly. These may be and repeated every 10 minutes as long as the systolic blood pressure is at least 90 mmHg.
- (d) If during the course of transport, patient requires intubation, refer to the Standing Orders and Communications Failure Orders for Advanced Airway Management.

8:41-7.8 Standing orders for trauma

- (a) The following standing orders are authorized in the event that an adult patient presents with a traumatic injury;
 1. Provide basic life support as necessary;
 2. Assess and secure airway;
 3. Provide spinal precautions if indicated;
 4. Administer oxygen therapy as patient condition indicates;

- i. In the event of a suspected tension pneumothorax, where the patient presents with progressive severe respiratory distress with cyanosis, hypoxia as defined by a pulse oximetry reading of 90% or less with a non-rebreather mask in place at 12-15 lpm or intubated, diminished or absent breath sounds on the affected side, and hypotension as defined as a systolic blood pressure less than 90 mmHg, perform a needle chest decompression
5. Transport the patient as soon as possible to the most appropriate facility according to the National Trauma Triage Protocols; transportation shall not be delayed due to difficulty in placing an advanced airway and/or establishing vascular access, except at the specific direction of the medical command;
6. Establish vascular access using Lactated Ringer's solution or normal saline solution with two large bore catheters. Titrate the fluid administration rate to maintain a systolic blood pressure of greater than 90 mmHg and a pulse rate of less than 120 per minute, to a maximum dose of one liter;
7. If patient's systolic blood pressure is at least 90 mmHg, ALS crewmember may administer Morphine Sulfate 0.1mg/kg up to 10 mg or Fentanyl 1mcg/kg up to 100 mcg for pain management, titrated slowly; and
8. Contact medical command.

Communications Failure Orders for trauma

- (a) If additional pain management is required, administer Morphine Sulfate 0.1 mg/kg up to 10 mg single dose titrated slowly or administer Fentanyl 1mcg/kg up to 100 mcg single dose titrated slowly. These may be and repeated every 10 minutes as long as the systolic blood pressure is at least 90 mmHg.
 - (b) If, after receiving one liter of fluid the patient remains hypotensive as defined by a systolic blood pressure <90 mmHg or tachycardic as defined by a heart rate > 120 per minute, continue fluid administration to a maximum of three liters.
 - (c) If during the course of transport, patient requires intubation, refer to the Standing Orders and Communications Failure Orders for Advanced Airway Management.
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8:41-7.9 Standing orders for bradycardia

- (a) The following standing orders are authorized in the event that an adult patient presents with bradycardia (heart rate less than 60 beats per minute) in which the patient displays hypotension, shock or other significant symptoms consistent with hemodynamic instability:
 1. Assess and secure airway;
 2. Obtain 12 lead electrocardiogram;

3. Establish vascular access;
 - i. If vascular access cannot be established, proceed directly to transcutaneous pacing;
4. If the patient does not have signs or symptoms of an acute myocardial infarction, administer Atropine Sulfate 0.5 mg via vascular access; May be repeated every three to five minutes to a maximum of 3 mg;
 - ii. Note: De-eneruated hearts (i.e. heart transplants) and patients with high degree heart blocks will not respond to Atropine Sulfate. In such cases, initiate external cardiac pacing.
5. If there is no response to the Atropine Sulfate or the patient is having signs or symptoms of an acute myocardial infarction, administer transcutaneous pacing at a rate of 70, at the lowest amount of energy necessary to obtain capture; and
6. Contact medical command.

(b) In stable patients with Type II second degree or third degree AV block, transcutaneous pacemaker pads should be applied as a precaution.

Communications Failure Orders for bradycardia

- (a) If the patient is having signs or symptoms of, or the electrocardiogram suggests, an acute myocardial infarction, administer Acetylsalicylic Acid by mouth to make the total dose received by the patient to a maximum dose of 324 mg; this includes any aspirin already taken by the patient prior to ALS encounter.
- (b) If the EKG is consistent with hyperkalemia or the patient is known to be on dialysis or has evidence of dialysis or fistula, administer Calcium Chloride 1 gram IV/IO push followed by a 20 ml fluid bolus. Then administer Sodium Bicarbonate 50 mEq IV/IO push. If patient is conscious, also administer Albuterol 7.5mg via nebulizer. If patient is bradycardic due to hyperkalemia, atropine and pacing will not be effective.
- (c) If the patient requires pain control during transcutaneous pacing, administer Morphine Sulfate 0.1 mg/kg to a maximum of 10mg per dose or administer Fentanyl 1mcg/kg to a maximum of 100 mcg per dose. These may be and repeated every 10 minutes as long as the systolic blood pressure is at least 90 mmHg.
- (d) If patient requires sedation during transcutaneous pacing, administer Midazolam 2mg IV/IO push. This may be repeated one time as needed as long as the systolic blood pressure is at least 90 mmHg.
- (e) If the patient does not respond to Atropine or transcutaneous pacing, administer Dopamine 5 mcg/kg/min IV/IO drip titrated to a maximum dose of 10 mcg/kg/min.

8:41-7.10 Standing orders for pulmonary edema/congestive heart failure

(a) The following standing orders are authorized in the event that an adult patient presents with pulmonary edema/congestive heart failure:

1. Assess and secure airway;
2. Administer Oxygen therapy as patient condition indicates;
3. Administer 0.4mg Nitroglycerin sublingually every five minutes, provided the systolic blood pressure is greater than or equal to 100 mmHg;
4. Obtain 12-lead electrocardiogram tracing;
 - i. If the patient presents with chest pain or electrocardiogram suggests an acute myocardial infarction, ALS crewmember may administer Acetylsalicylic Acid by mouth to make the total dose received by the patient to a maximum dose of 324mg; this includes any aspirin already taken by the patient prior to ALS encounter;
5. Establish vascular access;
6. Administer Furosemide 20 mg via vascular access; and
7. Contact medical command.

Communications Failure Orders for pulmonary edema/congestive heart failure

- (a) If the patient appears to be significantly volume overloaded, administer additional Furosemide to equal a dose of 20 mg IV/IO push or administer additional Bumetanide 0.5mg IV/IO push.
- (b) If patient is on CPAP, administer Nitroglycerin paste 1-2 inch transdermal. Hold for systolic blood pressure < 100 mm/Hg.
- (c) If patient develops severe respiratory failure or respiratory arrest, refer to the Standing Orders and Communications Failure Orders for Advanced Airway Management

8:41-7.11 Standing orders for acute myocardial infarction/chest pain

- (a) The following standing orders are authorized in the event that an adult patient presents with acute myocardial infarction/chest pain:
- a. Assess and secure airway;
 - b. Administer oxygen therapy as patient condition indicates;
 - c. Administer Acetylsalicylic Acid by mouth to make the total dose received by the patient to a maximum dose of 324mg; this includes any aspirin already taken by the patient prior to ALS encounter;
 - d. Obtain 12-lead electrocardiogram tracing;
 - e. Administer 0.4mg Nitroglycerin sublingually every five minutes, provided the systolic blood pressure is greater than or equal to 100 mmHg;
 - f. Establish vascular access;
 - g. If the patient is having an acute myocardial infarction, review patient's eligibility for thrombolytic therapy as determined by the provider's Medical Director, and follow the New Jersey Department of Health and Senior Services' STEMI Triage Guidelines;
 - h. Contact medical command.
- (b) The sequence of actions 2 to 6 above may be performed simultaneously and does not need to be in specific order.

Communications Failure Orders for acute myocardial infarction/chest pain

- (a) If the patient's 12-lead electrocardiogram shows a ST Elevation Myocardial Infarction (STEMI), perform the following steps:
1. Transmit all relevant electrocardiograms to the receiving facility.
 2. Establish secondary IV/IO access if possible.
 3. If the patient is hypotensive with SBP<100 and there is no evidence for congestive heart failure, administer a normal saline boluses of 500 ml until SBP of 120 or a maximum of 2 liters is given. If the patient is hypotensive with an SBP of <100 do not give Nitroglycerine, Morphine or Fentanyl.
 4. If the patient has a HR > 80 beats per minute and a systolic blood pressure > 120 mmHg, and there is no evidence of pulmonary edema/congestive heart failure, administer Metoprolol 5mg IV/IO push.

5.

- (b) If after three sublingual doses of Nitroglycerin, the patient continues to have chest pain, administer Morphine Sulfate 0.1 mg/kg to a maximum of 10mg per dose or administer Fentanyl 1 mcg/kg to a maximum of 100mcg per dose. These may be and repeated one time in ten minutes as long as the systolic blood pressure is at least 100 mmHg.
- (c) If the patient experiences any relief of pain, administer Nitroglycerin 1 inch transdermal as long as the systolic blood pressure is 100 mmHg.

8:41-7.12 Standing orders for sustained stable wide-complex tachycardia

- (a) The following orders are authorized in the event that an adult patient presents with a stable wide-complex tachycardia
 - 1. Assess and secure airway;
 - 2. Establish vascular access;
 - 3. Obtain 12-lead electrocardiogram tracing;
 - 4. Continue to assess the patient and monitor the cardiac rhythm
 - 5. If sustained wide-complex tachycardia, administer Amiodarone 150mg via vascular access over ten minutes; and
 - 6. Contact the medical command

Communications Failure Orders for sustained stable wide-complex tachycardia

- (a) If the rhythm converts, administer continuous Amiodarone infusion at 1 mg/min IV/IO.
 - (b) If the patient continues to have wide-complex tachycardia that does not respond to Amiodarone, or if the patient becomes hemodynamically unstable, refer to the Standing Orders and Communications Failure Orders for unstable wide-complex tachycardia.
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8.41-7.13 Standing orders for unstable wide-complex tachycardia

- (a) The following orders are authorized in the event that an adult patient presents with an unstable wide-complex tachycardia where the patient is unconscious or hemodynamically compromised:
1. Assess and secure airway;
 2. Establish vascular access;
 3. If the patient is conscious, consider sedation with Lorazepam 0.05 mg/kg up to a maximum of 2 mg or Midazolam 0.05 mg/kg up to a maximum dose of 5 mg, based on patient's clinical presentation and administer if appropriate;
 4. Perform a synchronized cardioversion at 100 joules or manufacturer's recommended biphasic equivalent. Check the patient's pulse and cardiac rhythm after the shock;
 - i. If the rhythm fails to convert, perform a synchronized cardioversion at 200 joules or manufacturer's recommended biphasic equivalent. Check the patient's pulse and cardiac rhythm after the shock;
 - ii. Perform a synchronized cardioversion at 300 joules or manufacturer's recommended biphasic equivalent. Check the patient's pulse and cardiac rhythm after the shock;
 - iii. Perform a synchronized cardioversion at 360 joules or manufacturer's recommended biphasic equivalent. Check the patient's pulse and cardiac rhythm after the shock;
 5. If the rhythm is converted at any point, administer Amiodarone 150mg via vascular access over 10 minutes;
 6. Contact medical command.
- (b) If the patient deteriorates into VF/Pulseless VT, deliver high-energy *unsynchronized* shock [i.e., defibrillation dose] at 360 J or manufacturer's recommended equivalent biphasic and follow standing orders for ventricular fibrillation/ pulseless ventricular tachycardia as outlined in N.J.A.C. 8:41-7.5.
- (c) If a patient has polymorphic VT and is unstable, treat the rhythm as ventricular fibrillation and deliver high-energy *unsynchronized* shocks [i.e., defibrillation doses] at 360 J or manufacturer's recommended equivalent biphasic. If there is any doubt whether monomorphic or polymorphic VT is present in the unstable patient, do not delay shock delivery to perform detailed rhythm analysis – provide high-energy unsynchronized shocks (i.e. Defibrillation doses).

Communications Failure Orders for unstable wide-complex tachycardia

- (a) Administer Amiodarone 150 mg IV/IO over ten minutes.
- (b) Obtain 12-lead electrocardiogram tracing.

- (c) If the rhythm converts, begin continuous Amiodarone 1 mg/min IV/IO infusion after initial bolus is complete.
- (d) If there is any recurrence of the wide-complex tachycardia, continue the sequence at the previously successful energy level.
1. If the patient is conscious and requires additional sedation, consider Lorazepam 0.05 mg/kg up to a maximum of 2 mg or Midazolam 0.05 mg/kg up to a maximum dose of 5 mg based on patient's clinical presentation and administer if appropriate.
-

8.41-7.14 Standing orders for stable narrow-complex tachycardia

- (a) The following standing orders are authorized in the event that an adult patient presents with a stable narrow complex tachycardia:
1. Assess and secure airway;
 2. Establish vascular access (IV, in the antecubital fossa, if possible);
 3. Perform a patient assessment, including medical history and allergies;
 4. Perform a 12-lead electrocardiogram tracing and continue to assess the patient and monitor the cardiac rhythm;
 - i. If Wolff-Parkinson-White is identified, go to step 10.
 - ii. If atrial fibrillation or atrial flutter is identified at any time, and no Wolff-Parkinson-White is known or suspected, administer Diltiazem 0.25mg/kg IV over 2 minutes and go to step 10.
 5. Attempt vagal maneuver;
 6. Administer 6mg Adenosine rapid push via vascular access over a period of one to three seconds, followed by a 20mL bolus of normal saline solution rapid push via vascular access;
 7. If there is no conversion with 6mg Adenosine, then administer 12mg Adenosine rapid push via vascular access over a period of one to three seconds, followed by a 20mL bolus of normal saline solution rapid push via vascular access;
 8. If there is no conversion with 12mg Adenosine, then repeat administration of 12mg Adenosine rapid push via vascular access over a period of one to three seconds, followed by a 20mL bolus of normal saline solution rapid push via vascular access;

9. If there is no conversion with the third dose of Adenosine and no Wolff-Parkinson-White is known or suspected then administer Diltiazem 0.25mg/kg over 2 minutes via vascular access, and;
10. Contact medical command.

Communications Failure Orders for stable narrow-complex tachycardia

- (a) If the patient fails to convert ten minutes after the first dose of Diltiazem, administer Diltiazem 0.35 mg/kg IV/IO push over two minutes.
 - (b) If at any point the patient becomes unstable, refer to the Standing Orders and Communications Failure Orders for unstable narrow complex tachycardia.
 - (c) If Wolff-Parkinson-White is identified, administer Amiodarone 150 mg IV/IO over ten minutes.
 - (d) If rhythm converts with Amiodarone, administer Amiodarone 1 mg/min IV/IO drip.
-

8.41-7.15 Standing orders for unstable narrow-complex tachycardia

- (a) The following standing orders are authorized in the event that an adult patient presents with an unstable narrow complex tachycardia:
 1. Assess and secure airway;
 - i. If Wolff-Parkinson-White is identified go to step 7;
 2. Establish vascular access;
 3. If patient is unconscious go to step 6;
 4. If the patient is conscious and vascular access has been established, and the rhythm is regular, administer Adenosine 6 mg rapid push via vascular access, followed by 20 mL fluid bolus rapid push via vascular access;
 - i. If the patient becomes unconscious go to Step 6;
 - ii. If the patient converts and is conscious go to Step 7;

5. If there is no conversion and the patient is still conscious, administer Adenosine 12 mg rapid push via vascular access, followed by 20 mL fluid bolus rapid push via vascular access;
 - i. If there is no conversion with the 12 mg Adenosine and the patient is conscious ALS crewmember may administer if appropriate either Lorazepam 0.05 mg/kg up to a maximum of 2 mg or Midazolam 0.05 mg/kg up to a maximum of 5mg through an approved route of administration;
 6. Perform a synchronized cardioversion at 50J or manufacturer's recommended biphasic equivalent. Check the patient's pulse and cardiac rhythm after the shock;
 - i. If the rhythm fails to convert, perform a synchronized cardioversion at 100J or manufacturer's recommended biphasic equivalent. Check the patient's pulse and cardiac rhythm after the shock;
 - ii. If the rhythm fails to convert, perform a synchronized cardioversion at 200J or manufacturer's recommended biphasic equivalent. Check the patient's pulse and cardiac rhythm after the shock;
 - iii. If the rhythm fails to convert, perform a synchronized cardioversion at 300J or manufacturer's recommended biphasic equivalent. Check the patient's pulse and cardiac rhythm after the shock;
 - iv. If the rhythm fails to convert, perform a synchronized cardioversion at 360J or manufacturer's recommended biphasic equivalent. Check the patient's pulse and cardiac rhythm after the shock;
 7. Contact the medical command.
- (b) If the patient deteriorates into VF/Pulseless VT, deliver high-energy *unsynchronized* shock [i.e., defibrillation dose] at 360 J or manufacturer's recommended equivalent biphasic and follow standing orders for ventricular fibrillation/ pulseless ventricular tachycardia as outlined in N.J.A.C. 8:41-7.5.

Communications Failure Orders for unstable narrow-complex tachycardia

- (a) Obtain 12-lead electrocardiogram tracing.
 - (b) If the patient fails to convert after cardioversion attempts, administer Amiodarone 150 mg IV/IO over ten minutes.
-

8.41-7.16 Standing orders for allergic reaction/anaphylactic shock

- (a) The following standing orders are authorized in the event that an adult patient presents with signs of generalized allergic findings such as urticaria without signs of acute significant respiratory distress and/or profound hypotension (systolic blood pressure less than or equal to 90 mmHg)
1. Assess and secure airway;
 2. Administer oxygen therapy as patient condition indicates;
 3. Establish vascular access
 4. Administer 50 mg Diphenhydramine HCL via vascular access;
 5. Contact medical command.
- (b) The following standing orders are authorized in the event that an adult patient presents with signs of generalized allergic findings such as urticaria with signs of acute significant respiratory distress and /or profound hypotension, (systolic blood pressure less than or equal to 90mmHg) with clinical evidence of shock, (altered mental status; cool clammy or mottled skin; and /or delayed capillary refill).
1. Assess and secure airway;
 2. Administer oxygen therapy as patient condition indicates;
 3. Administer 0.3mg Epinephrine 1:1000 IM in lateral thigh or deltoid;
 4. If wheezing is present, administer 2.5mg Albuterol/3 mL normal saline solution via nebulizer; which may be repeated up to three times at the same dose;
 5. Establish vascular access and administer 500 mL fluid bolus. The bolus should be repeated up to one liter if blood pressure remains less than 100 systolic and the patient is not exhibiting new signs of pulmonary edema;
 6. Administer Diphenhydramine HCL 50mg via vascular access;
 7. Administer Methylprednisolone Sodium Succinate 125 mg or Dexamethasone Sodium Phosphate 10 mg via vascular access; and
 8. Contact medical command.

Communications Failure Orders for allergic/reaction/anaphylaxis

- (a) The following Communications Failure Orders are authorized in the event that an adult patient presents with signs of generalized allergic findings such as urticaria without signs of acute significant respiratory distress and/or profound hypotension (systolic blood pressure less than or equal to 90 mmHg)
1. Administer Methylprednisolone Sodium Succinate 125 mg or Dexamethasone Sodium Phosphate 10 mg IV/IO over one to two minutes.
 2. If at any point the patient develops signs or symptoms of acute significant respiratory distress and /or profound hypotension (systolic blood pressure less than or equal to 90mmHg) with clinical evidence of shock, (altered mental status; cool clammy or mottled skin; and /or delayed capillary refill), refer to part (b) of 8.41-7.16 Standing orders for allergic reaction/anaphylactic shock and part (b) below.
- (b) The following Communications Failure Orders are authorized in the event that an adult patient presents with signs of generalized allergic findings such as urticaria with signs of acute significant respiratory distress and /or profound hypotension, (systolic blood pressure less than or equal to 90mmHg) with clinical evidence of shock, (altered mental status; cool clammy or mottled skin; and /or delayed capillary refill).
1. If the patient continues to have serious signs and symptoms that are not resolving, repeat administration of Epinephrine 0.3 mg IM in lateral thigh or deltoid.
 2. Consider intubation for patients who fail to respond to initial therapy. Refer to the Standing Orders and Communications Failure Orders for Advanced Airway Management.
 3. Administer additional Normal Saline 1 liter IV/IO.
 4. If patient is severely hypotensive (systolic blood pressure less than or equal to 70 mmHg), administer Epinephrine 1:10,000 0.25 mg IV/IO slow push.
 5. If patient still does not respond to treatment, administer Epinephrine 1:1000 1-10 mcg/min IV/IO drip.

8.41-7.17 Standing orders for respiratory distress with wheezing due to Asthma, COPD or bronchoconstriction

- (a) The following standing orders are authorized in the event that an adult patient presents with dyspnea where the signs and symptoms are consistent with asthma, COPD or any other dyspnea associated with wheezing or suspected bronchospasm:
1. Assess and secure airway; administer oxygen as needed, or via nebulizer;
 2. Mix 2.5 mg Albuterol and Ipratropium Bromide 0.5 mg into normal saline and administer via nebulizer;
 3. Establish vascular access;
 - i. If patient presents with signs and symptoms of pulmonary edema/congestive follow standing orders for pulmonary edema/congestive heart failure as outlined in N.J.A.C. 8:41-7.10.
 4. Reassess the patient and if patient condition requires administer a maximum of two additional treatments of 2.5 mg/3 mL normal saline solution via nebulizer;
 5. Contact medical command.

Communications Failure Orders for respiratory distress with wheezing due to COPD or bronchoconstriction

- (a) The following Communications Failure Orders are authorized in the event that the patient is presenting with an exacerbation of Asthma or other unspecified bronchoconstriction:
1. Administer Methylprednisolone Sodium Succinate 125 mg or Dexamethasone Sodium Phosphate 10 mg IV/IO over one to two minutes.
 2. If the patient has not responded to front line therapy and present with severe, ongoing exacerbation, administer Magnesium Sulfate 2 grams IV/IO drip over ten minutes.
 3. Administer Normal Saline 500 mL IV/IO bolus. This may be repeated one time to a maximum of one liter.
 4. If the patient presents in respiratory failure as defined by altered mental status, fatigued and/or shallow respirations or absent lung sounds, or the patient is in respiratory arrest:
 - a. Age < 40 without significant cardiac history: Administer Epinephrine 1:1000 0.3 mg IM

5. If the patient does not improve after the epinephrine, administer Epinephrine 1:1000 1-10 mcg/min IV/IO drip.
6. If the patient develops severe respiratory failure or respiratory arrest, refer to the Standing Orders and Communications Failure Orders for Advanced Airway Management

(b) The following Communications Failure Orders are authorized in the event that the patient is presenting with an exacerbation of COPD:

1. Administer Methylprednisolone Sodium Succinate 125 mg or Dexamethasone Sodium Phosphate 10 mg IV/IO over one to two minutes.
2. Administer Normal Saline 500 mL IV/IO bolus.
3. If the patient presents in moderate to severe respiratory distress or respiratory failure that does not respond to initial therapy, initiate Continuous Positive Airway Pressure (CPAP) and establish secondary IV/IO access if possible.
 - a. Use with caution and frequently re-examine patient. If a tension pneumothorax develops, refer to the Standing Orders and Communications Failure Orders for Advanced Airway Management
4. If the patient develops severe respiratory failure or respiratory arrest, refer to the Standing Orders and Communications Failure Orders for Advanced Airway Management

8.41-7.18 Standing orders for altered mental status

(a) The following standing orders are authorized in the event that an adult patient is unconscious or presents with altered mental status. The treatment of an unconscious person/altered mental status patient shall be directed by the suspected etiology of the event. Specific orders may be omitted by an ALS crewmember if the order does not pertain to the suspected etiology of the medical emergency:

1. Assess and secure airway;
2. Evaluate blood glucose. If etiology suggests possible stroke follow the New Jersey Department of Health and Senior Services' Stroke Triage Guidelines.
3. Establish vascular access;
4. Assess blood glucose, if blood glucose is less than 60mg/dL;
 - i. Administer 25 g Dextrose in water intravenously;
 - ii. If unable to establish vascular access, administer 1 mg Glucagon intramuscularly; and
 - iii. If there is no response to (a) 4 i and ii above, or if the blood glucose is greater than 60mg/dL, administer up to 2mg Naloxone through an approved route of administration. Start with 0.4mg and titrate the dose to reversal of any respiratory depression; and
5. Contact Medical Command

Communications Failure Orders for altered mental status

- (a) If the patient has a blood glucose level > 300mg/dL and is presenting with signs and symptoms of Diabetic Ketoacidosis, administer Normal Saline 1 liter IV/IO drip.
- (b) If the patient is presenting with the signs or symptoms of a stroke and the onset of symptoms is less than 4.5 hours of the ALS crew's arrival, establish secondary vascular access.
- (c) If the patient is combative and requires sedation, Lorazepam 2 mg IV/IM.
- (d) If patient presents with signs of dystonic reaction or extrapyramidal symptoms, administer Diphenhydramine 50 mg IV/IM.

(e) If the provider suspects an overdose, treat according to suspected agents:

1. Opiate toxicity: Repeat Naloxone 2mg IV/IO/IM/IN as needed for respiratory depression titrated in 0.4mg doses.
 2. Benzodiazepine toxicity: Romazicon 0.3mg IV/IO push
 1. Hold Romazicon for any patient who may be chronically taking benzodiazepines
 3. Tricyclic Antidepressant toxicity: Sodium Bicarbonate 50 mEq IV/IO push.
 4. Beta Blocker: Glucagon 3mg IV/IO push.
 5. Calcium Channel Blocker: Calcium Chloride 1 gram IV/IO push.
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8.41-7.19 Standing orders for non-traumatic hypotension

(a) The following standing orders are authorized in the event that an adult patient presents with significant and symptomatic hypotension (systolic blood pressure less than 90 mmHg) unaccompanied by bradycardia or trauma, with patient exhibiting signs of shock due to dehydration, sepsis, and non-traumatic hemorrhage (for example, gastrointestinal bleeding):

1. Assess and secure airway;
2. Establish vascular access, and administer a 500 mL bolus of IV solution;
3. Reassess vital signs and the condition of the patient; and
4. Contact medical command.

Communications Failure Orders for non-traumatic hypotension

(a) If the patient continues to have a systolic blood pressure less than 100 mmHg, then repeat administration of a 500 mL bolus of IV solution as long as there is no evidence of pulmonary edema. This may be repeated to a maximum of 2 liters.

(b) Establish additional IV/IO access if possible.

(c) If the patient remains hypotensive after 2 liters with a blood pressure less than 100 mmHg, administer Dopamine 5 mcg/kg/min. This shall be titrated to a blood pressure of 100 mmHg to a maximum dose of 20 mcg/kg/min.

8.41-7.20 Standing orders for seizures

- a) The following standing orders are authorized in the event that an adult patient presents with active seizures:
1. Assess and secure airway;
 2. Establish vascular access;
 3. If ALS witnesses the patient actively having a generalized seizure for 2 minutes or greater or having repetitive seizures, then administer either Lorazepam 2mg via vascular access or Diazepam 5mg via vascular access;
 4. If no vascular access administer 5mg of Midazolam or 2mg of Lorazepam through an approved route of administration; and
 5. Assess blood glucose, if blood glucose is less than 60mg/dL; administer 25 g of 50 percent Dextrose in water intravenously;
 - i. If unable to establish vascular access, administer 1 mg Glucagon intramuscularly; and
 6. Contact medical command

Communications Failure Orders for seizures

- a) If patient continues, to have seizures, repeat administration of Lorazepam 2 mg via vascular access. This may be repeated to a maximum of 8mg for Lorazepam.
- a. If no vascular access administer 5mg of Midazolam or 2mg of Lorazepam through an approved route of administration. This may be repeated to a maximum of 20mg of Midazolam or 8mg of Lorazepam.
- b) If patient continues to seizure, and then seizure is atraumatic in nature, administer Normal Saline 500 mL IV drip.
- c) Provide airway management as required by patient's clinical condition; Refer to the Standing Orders and Communications Failure Orders for Advanced Airway Management.
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Communications Failure Orders for nausea

- a) If during course of treatment patient complains of nausea, administer Zofran 4mg IV push.

8:41-7.21 Standing orders for cyanide poisoning

(a) The following standing orders are authorized in the event that an adult patient presents with cyanide poisoning:

1. Do not enter or attempt to rescue a person in an area suspected or documented to be contaminated with cyanide poison;

2. Before making patient contact, ensure that appropriate decontamination has been performed;

i. If the patient has been exposed to liquid cyanide, ensure that all of the patient's clothing has been removed;

ii. No decontamination is needed for pure vapor exposure;

3. Determine the level of exposure;

i. If the level of exposure is mild (that is, the patient is conscious and breathing):

(1) Assess and secure the airway;

(2) Administer high concentration oxygen; and

(3) Observe the patient for respiratory distress;

ii. If the level of exposure is severe (that is, the patient is unconscious or if respirations are severely compromised):

(1) Assess and secure the airway;

(2) Administer high concentration oxygen;

(3) Provide suctioning (if necessary);

If using the CYANOKIT® skip to step 7;

(4) ***If Cyanide kit is available***, break and hold an aspirol of Amyl Nitrite in front of the patient's nose for 30 seconds, followed by removal for 30 seconds; use a new aspirol of Amyl Nitrite approximately every three minutes thereafter until IV access has been established. If the patient is unconscious, place the aspirol of Amyl Nitrite in the mask of the bag-valve-mask device or in the bag-valve-mask device itself;

- (5) Establish IV access;
- (6) Administer Sodium Thiosulfate 12.5 grams IV over ten (10) minutes; and go to step 11,
- (7) If CYANOKIT® is available, add 100 mL of 0.9% Sodium Chloride Injection to first CYANOKIT® vial using transfer spike;
- (8) Mix CYANOKIT® vial for 30 seconds to mix solution. Do not shake;
- (9) Use vented IV tubing to hang and infuse first vial over 10 minutes;
- (10) Repeat steps 7 through 9 for second vial of CYANOKIT®; and
- (11) Contact medical command.

**The Valley Hospital
Emergency Services
Pediatric
Standing Orders
And
Communications Failure Orders**



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Section II:

Pediatric Standing Orders

And

Pediatric Communication Failure Orders

Introduction – Pediatric Standing Orders

With the exception of N.J.A.C. 8:41-8.4, the following treatment protocols shall be considered standing orders for treating pediatric patients. The standing orders set forth at N.J.A.C. 8:41-8.4 are for the exclusive utilization in resuscitating neonatal patients. As defined at N.J.A.C. 8:41- 1.3, "neonatal" means the period of time from the moment of birth up to and including the 28th day following birth and "pediatric" means the period of time beginning with the 29th day following birth up to, but not including, a person's 13th birthday.

The standing orders set forth in this subchapter shall be adopted in their entirety by the provider's medical director, after notification to OEMS. Except where specifically noted, these standing orders shall not be altered, abbreviated, or enhanced in any manner.

The standing orders contained in this subchapter are initial treatment protocols that may be utilized by ALS crewmembers. These protocols apply only to pediatric patients and may be implemented prior to contact with medical command. In the event the implementation of these standing orders is delayed for any reason, the medical command physician shall be contacted immediately following the delay.

Any situation other than those specifically identified in this subchapter requires the ALS crewmembers to contact medical command before providing any ALS treatment.

These standing orders shall not be interpreted as a requirement to administer ALS treatment prior to contact with medical command. ALS crewmembers may elect to contact medical command at any time during the provision of therapy. Unless otherwise provided in these rules, standing orders cease to be operative once contact is made with medical command.

The standing orders contained in this subchapter shall not be considered to represent total patient management. Contact with medical command shall be established at the point indicated in the standing order, unless established sooner. At no time shall communications with medical command be delayed due to difficulty in intubating the patient and/or initiating an IV line.

The presence of an allergy to any medication or therapeutic agent set forth in these standing orders shall be deemed to be a contraindication to the administration of that medication or therapeutic agent. In such instances, the medication or therapeutic agent shall not be administered.

Each case utilizing these standing orders shall be fully documented on the patient care report. The provider's quality assurance plan shall include provisions for review of calls

where standing orders are utilized, in accordance with the standards set. Cases that do not follow the standing orders as set forth in this chapter or where contact is never made with medical command shall be forwarded to the medical director for a mandatory review.

Introduction – Pediatric Communications Failure Orders

The Communications Failure Orders contained in this book are for the use of ALS crewmembers in the field when normal means of communication with medical command, as well as secondary means of communication, have failed. As with the standing orders, pediatric patients are defined the period of time beginning with the 29th day following birth up to, but not including, a person's 13th birthday. This section will also apply where appropriate to neonatal patients, defined as the period of time from the moment of birth up to and including the 28th day following birth. The Communications Failure Orders are specific for advanced life support intervention. These orders should not be implemented until all secondary means of communication with medical direction have been attempted and have failed. This shall include attempting to contact the back-up Medical Command Facility (St. Joseph's Regional Medical Center 973-977-8476). Since the primary means of communication with medical direction is the cellular phone, the secondary means of communication with medical direction are via Landline and HEAR Communications.

It is understood that if Communications Failure Orders are in use, the crew will have completed all appropriate Standing Orders first. When Communications Failure Orders are in use, the ALS crewmembers will not deviate from them in any manner relating to procedure, drug, dosage, route of administration, or repetition of therapy. The only exception will be that, a treatment may be withheld if the patient or family member reports an allergy to the medication or therapeutic agent. Should the ALS provider deviate from these protocols when they are in use, it will be considered **practicing medicine without a license**. An EMS Charts Special Report must be completed within the patient's chart when Communications Failure Orders are utilized. Standing Orders and Communications Failure Protocols are not to be used in the place of medical command. It is imperative that the MICP/MICN establish communications communication with medical command as soon as possible.

8.41-8.4 Standing orders for neonatal resuscitation

(a) The following shall constitute standing orders for the resuscitation of neonatal patients:

1. As to the airway:

(i) If meconium is present:

(1) If stable, suction the mouth, pharynx and nose with a bulb syringe or a large-bore catheter (12 or 14F) as soon as the head is delivered;

(2) If unstable, intubate the patient and extubate while applying suction at a vacuum pressure no greater than -100 mmHg until little meconium is recovered or heart rate and/or respirations become severely depressed;

(ii) If no meconium:

(1) Position the infant and suction the mouth then the nose with a bulb syringe;

2. Dry the infant;

3. Maintain normal body temperature;

4. Provide tactile stimulation;

5. If infant is unstable (cyanotic, apnea, gasping respirations, a heart rate less than 100 beats per minute) administer 100 percent oxygen at a flow rate of at least five L/minute;

6. If no improvement, begin bag-valve-mask ventilation at a rate of 40 to 60 breaths per minute with sufficient volume to cause visible chest expansion. Reassess after 30 seconds;

7. Assess the heart rate;

(i) If the heart rate is greater than 100 beats/minute, contact medical command;

(ii) If the heart rate is 60 to 100 beats/minute, assist ventilations and contact medical command;

(iii) If the heart rate is less than 60 beats per minute, place an advanced airway, begin a 3:1 ratio of chest compressions to ventilations at a rate of 120 compressions per minute. Reassess every 30 seconds;

(1) If no change following intervention in (a)7iii above, establish vascular access with normal saline solution at a KVO rate;

(A) If no change following intervention described in (a)7iii(1) above, administer epinephrine: IV/IO/ET dose 0.01 mg/kg (0.1 mL/kg) of a 1:10,000 solution;

8. If no change, administer a fluid bolus of 10 mL/kg of normal saline over five (5) to ten (10) minutes;
9. Determine blood glucose;
 - (i) If equal to or greater than 40, contact medical command; and
 - (ii) If less than 40, administer 0.5 g/kg (5 mL/kg) of a 10 percent dextrose solution, contact medical command.

Communications Failure Orders for neonatal resuscitation

- a) Continue administration of epinephrine 1:10,000 0.01 mg/kg via vascular access every three to five minutes as long as chest compressions are being provided.
- b) If ventricular fibrillation or ventricular tachycardia is present, defibrillate at 2 J/kg.
 - a. If ventricular fibrillation persists, provide additional shocks every two minutes at 4 J/kg and;
 - b. Administer Amiodarone 5 mg/kg via vascular access once
- c) Repeat administration of a fluid bolus of 10mL/kg of normal saline over five (5) to ten (10) minutes to a maximum of 30mL/kg.
- d) If mother is suspected to have been under the influence of opiate or opioid narcotics, administer Naloxone 0.1mg/kg to a maximum of 2mg via vascular access.
- e) If chest compressions have been administered for longer than five minutes, administer Sodium Bicarbonate 4.2% 1 mEq/kg to a maximum of 10 mEq/kg via vascular access.
- f) During re-assessments, if patient has a heart rate greater than 60 beats per minute, stop CPR and continue positive pressure ventilation.
- g) During re-assessments, if patient has a heart rate greater than 100 beats per minute, assess respiratory effort;
 - a. If effort is inadequate, continue positive pressure ventilation.
 - b. If effort is adequate, provide supplemental oxygen

8.41-8.5 Standing orders for pediatric advanced airway

- (a) The following standing orders for placement of an advanced airway are authorized in the event that an pediatric patient presents:
1. In respiratory arrest;
 2. In respiratory failure with associated inadequate spontaneous ventilatory volume; and/or
 3. Unconscious with absent protective gag reflex.
- (b) Advanced interventions shall only be attempted after all BLS interventions have been instituted.
- (c) It is imperative that the ALS crewmembers initiate contact with medical command as soon as possible after the above treatment has been rendered. These procedures shall not delay the transportation of a patient in the event of a difficult intubation, nor shall contact with medical command be delayed by a difficult airway.
- (d) This standing order may be utilized in conjunction with any other standing order where the patient's airway needs to be secured.

Communications Failure Orders for pediatric advanced airway:

- (a) Do not delay transport in the event of a patient with a difficult airway.
- (b) ALS crewmembers shall consider the underlying disease process or injury prior to performing intubation and shall treat underlying, reversible causes prior to intubation (eg. hypoglycemia, reversible overdose).
- (c) Provide high flow oxygen (12-15 lpm via non-rebreather mask) prior to intubation. Positive pressure ventilation shall be instituted prior to intubation as needed to maintain a pulse oximetry reading >90% or as dictated by patient's spontaneous respiratory effort.
- (d) If the patient requires sedation in order to achieve intubation, administer Midazolam 0.1 mg/kg IV/IO push (maximum dose 10 mg) in order to facilitate the intubation process as long as the systolic blood pressure is at least 90 mmHg.
- (e) Orotracheal and nasotracheal intubation are both considered appropriate management options.
- (f) ALS personnel will be permitted only two intubation attempts per person. If the intubation attempts are unsuccessful, a supraglottic airway should be utilized.
- (g) If insertion of a supraglottic airway does not result in adequate ventilation, ALS crewmembers shall ventilate the patient with a bag valve mask and basic airway adjuncts.

- (h) Post intubation, continuous waveform capnography shall be monitored for the duration of the patient encounter.
- (i) If the patient requires sedation due to bucking or combative behavior, the ALS crewmembers shall administer Lorazepam 0.1 mg/kg to a maximum dose of 2 mg IV/IO push as long as the systolic blood pressure is at least 90 mmHg. This may be repeated one time in 15 minutes if the patient requires additional sedation.

8.41-8.6 Standing orders for pediatric vascular access

- (a) The following standing orders for the initiation of pediatric vascular access are authorized in those cases where an emergent or potentially emergent condition exists and current ALS treatment protocols require the initiation of IV therapy. In such cases, ALS crewmembers may establish vascular access at keep vein open (KVO) rate, establish vascular access with a saline port, or establish intraosseous infusion prior to contacting medical command.
 - a. ALS crewmembers shall contact medical command as soon as possible after the establishment of vascular access. Contact with medical command shall not be delayed by, or as a result of, unsuccessful vascular access in the field.
 - b. The time of the initiation of vascular access and the time of contact with medical command shall be recorded on the patient care report.
 - c. The provider's medical director shall notify the Department as to the solution to be utilized for vascular access when established under this section.
- (b) This standing order may be utilized in conjunction with any other standing order where vascular access is indicated.

Communications Failure Orders for pediatric vascular access:

- (a) Do not delay transport in the event of a patient with difficult vascular access.

8.41-8.7 Standing orders for pediatric cardiac arrest

- (a) The following standing orders are authorized in the event that a pediatric patient presents with ventricular fibrillation and/or pulseless ventricular tachycardia:
- a. Determine pulselessness and begin CPR;
 - b. Ventilate with 100 percent oxygen, secure airway, and establish vascular access with normal saline solution at KVO rate;
 - c. Maintain normal body temperature;
 - d. Defibrillate at 2 J/kg or equivalent biphasic and continue with CPR;
 - e. If no change in rhythm, defibrillate at 4 J/kg or equivalent biphasic and continue with CPR;
 - f. Administer Epinephrine every three to five minutes:
 - i. 0.01 mg/kg (0.1 mL/kg) of a 1:10,000 solution via IV/IO; or
 - ii. 0.1 mg/kg (0.1 mL/kg) of a 1:1,000 solution via ET (diluted with normal saline)
 - g. If no change in rhythm, defibrillate at 4 J/kg or equivalent biphasic and continue with CPR; and
 - h. During CPR, administer 5mg/kg of Amiodarone; and
 - i. Contact medical command.
- (b) The following standing orders are authorized in the event that a patient presents with asystole and/or pulseless electrical activity (PEA):
- a. Determine pulselessness and begin CPR;
 - b. Ventilate with 100 percent oxygen, secure airway, and establish vascular access with normal saline solution at KVO rate;
 - c. Maintain normal body temperature;
 - d. If asystole, confirm cardiac rhythm in more than one lead, and identify causes ;(ALS crewmember may continue standing order while identifying causes)
 - i. if the blood glucose test indicates a level less than 60 mg/dl;

1. For patient < 1 month of age administer 0.5 g/kg of a 10% Dextrose solution via vascular access
 2. For patients > 1 month of age administer 0.5 g/kg of a 25% Dextrose solution via vascular access
 3. If unable to establish vascular access, administer Glucagon 0.1 mg/kg (0.1 mL/kg) to a maximum of 1 mg IM (1 mg = 1 mL = 1 unit);
 - ii. If suspected opiate overdose administer Naloxone 0.2 mg and if no response, then administer Naloxone 0.1 mg/kg, with a maximum dose of 2 mg via vascular access, endotracheal tube or intranasal route
- e. Administer Epinephrine every three to five minutes:
- i. 0.01 mg/kg (0.1 mL/kg) of a 1:10,000 solution via IV/IO; or
 - ii. 0.1 mg/kg (0.1 mL/kg) of a 1:1,000 solution via ET (diluted with normal saline to 5 ml);
- f. Administer a rapid fluid bolus of 20 ml/kg of normal saline; and
- g. Contact medical command.
- (c) Should ventricular fibrillation recur after contact is made with medical command, an ALS crewmember may follow steps 2 through 7 until contact is made with medical command. CPR is to be immediate after defibrillation.
- (d) Consider termination of efforts only with the input of the medical command physician if asystole/agonal rhythms continue after successful advanced airway placement, medication administration and no reversible causes are identified. The time interval since arrest shall be considered.
- (e) Any treatments related to this protocol administered prior to ALS arrival should be considered as part of this standing order.

Communications Failure Orders for pediatric cardiac arrest:

- (a) The following communications failure orders are authorized in the event the pediatric patient presents with persistent cardiac arrest:
- a. If the patient has persistent Ventricular Fibrillation or Ventricular Tachycardia, continue two-minute cycles of CPR followed by a rhythm check and if ventricular fibrillation or pulseless ventricular tachycardia persists, defibrillate at 4 J/kg and immediately resume CPR.
 - b. If patient has asystole or PEA, continue CPR and recheck the rhythm and pulse every two minutes

- c. Administer an additional Normal Saline 20 mL/kg bolus, repeated to a maximum of 60 mL/kg. If patient is moderately to severely hypothermic, administer warmed IV fluids.
- d. If the presenting rhythm is Torsades de Pointes, administer Magnesium Sulfate 25 mg/kg to a maximum of one (1) gram IV/IO over two minutes.
- e. If the provider suspects a severe pre-existing acidosis based on available clinical history and exam, administer Sodium Bicarbonate 8.4% 1 mEq/kg to a maximum of 50 mEq IV/IO.
- f. If the provider suspects an overdose, treat according to suspected agents:
 - i. Opiate toxicity: Naloxone 0.1 mg/kg to a maximum of 2 mg IV/IO push.
 - ii. Benzodizepine toxicity: Romazicon 0.01 mg/kg IV/IO push to a maximum of 0.2mg
 - a. Hold Romazicon for any patient who may be chronically taking benzodiazepines
 - iii. Tricyclic Antidepressant toxicity: Sodium Bicarbonate 8.4% 1 mEq/kg to a maximum of 50 mEq IV/IO push.
 - iv. Beta Blocker: Glucagon 0.1 mg/kg to a maximum of 3mg IV/IO push.
 - v. Calcium Channel Blocker: Calcium Chloride 20 mg/kg to a maximum of 1 gram IV/IO push.
- g. If the patient has a return of spontaneous circulation, performing the following steps:
 1. Reassess vital signs. Continue positive pressure ventilation as required by clinical presentation. If the patient has not been intubated, proceed with appropriate airway management as dictated by the clinical presentation. Titrate to a pulse oximetry >94% and end-tidal CO₂ of 35-45mmHg.
 2. If the systolic blood pressure is < (70 + [Age*2]) mmHg, administer Normal Saline 20 mL/kg to a maximum of 60 mL/kg. Providers shall consider amount of fluid already administered.
 3. Acquire a 12-lead Electrocardiogram.
 4. Establish secondary IV/IO access if possible.

8.41-8.8 Standing orders for pediatric trauma

- (a) The following standing orders are authorized in the event a pediatric patient presents with traumatic injuries. Immobilize the spine if indicated;
- a. Immobilize the spine if indicated;
 - b. Assess and secure the airway;
 - c. Administer oxygen therapy as patient condition indicates;
 - d. Control hemorrhage and bleeding;
 - e. Maintain normal body temperature;
 - f. Begin transport to the appropriate facility according to the National Trauma Triage Protocols;
 - g. Establish vascular access with Ringer's Lactate solution at a KVO rate. If trauma is accompanied by burns, substitute normal saline for Ringers Lactate solution;
 - h. Administer a rapid fluid bolus of Lactated Ringers 20 ml/kg or normal saline 20 ml/kg (if trauma is accompanied by burns); and
 - i. If patient's systolic blood pressure is at least 90 mmHg, administer Morphine Sulfate 0.1mg/kg up to 10 mg or Fentanyl 1mcg/kg up to 100 mcg, titrated slowly for pain; and
 - j. Contact medical command.

Communications Failure Orders for trauma

- (a) If additional pain management is required, administer Morphine Sulfate 0.1 mg/kg up to 10 mg single dose titrated slowly or administer Fentanyl 1mcg/kg up to 100 mcg single dose titrated slowly. These may be repeated as long as the systolic blood pressure is at least 90 mmHg.
- (b) If, after receiving one liter of fluid, the patient remains hypotensive as defined by a systolic blood pressure $< (70 + [2 * \text{Age}])$ mmHg or tachycardic as defined by a heart rate above the normal for the patient's age, continue fluid administration to a maximum of 60 mL/kg.
- (c) If during the course of transport, patient requires intubation, refer to the Standing Orders and Communications Failure Orders for pediatric advanced airway.

8.41-8.9 Standing orders for pediatric seizures

(a) The following standing orders are authorized in the event a pediatric patient presents with active seizures:

- a. Assess and secure the airway;
- b. Administer oxygen therapy as patient condition indicates;
- c. Maintain normal body temperature;
- d. Obtain a rapid glucose test;
 - i. If blood glucose is greater than or equal to 60, contact medical command;
 - ii. If blood glucose is less than 60:
 1. Establish vascular access with normal saline at a KVO rate.
 2. For patients less than one month of age, administer 0.5 g/kg of a 10 percent Dextrose solution via IV/IO.
 3. For patients greater than or equal to one month of age, administer 0.5 g/kg of a 25 percent Dextrose solution via IV/IO.
 4. If unable to establish vascular access, administer Glucagon 0.1 mg/kg (0.1 ml/kg) to a maximum of 1 mg IM (1mg=1ml=1 unit);
- e. If ALS witnesses the patient actively having a generalized seizure for 2 minutes or greater or having repetitive seizures, then administer Lorazepam 0.05 mg/kg up to 2mg IV;
- f. If no vascular access administer Midazolam 0.15 mg/kg up to 5 mg or Lorazepam 0.05 mg/kg up to 2mg through an approved route of administration; and
- g. Contact medical command.

Communications Failure Orders for seizures

(a) If patient continues, to have seizures, repeat administration of Lorazepam 0.05 mg/kg up to 2 mg via vascular access; This may be repeated to a maximum of 8mg for Lorazepam or 20 mg of Diazepam.

- a. If no vascular access administer 0.15 mg/kg up to 5 mg of Midazolam or 0.05 mg/kg up to 2mg of Lorazepam through an approved route of administration (intra-nasal or rectal). This may be repeated to a maximum of 10 mg of Midazolam or 8mg of Lorazepam.

- (b) If patient continues to seizure, and the seizure is atraumatic in nature, administer Normal Saline 20 mL/kg via vascular access.
- (c) Provide airway management as required by patient's clinical condition; Refer to the Standing Orders and Communications Failure Orders for pediatric advanced airway.

8.41-8.10 Standing orders for pediatric allergic reaction and/or anaphylaxis

- (a) The following standing orders are authorized in the event a pediatric patient presents with an allergic reaction and/or anaphylaxis:
 - a. Assess and secure the airway;
 - b. Administer oxygen therapy as patient condition indicates;
 - c. Maintain normal body temperature;
 - d. Administer Epinephrine 0.01 mg/kg (0.01 ml/kg) of a 1:1,000 solution to a maximum of 0.3 mg IM;
 - e. If the patient is wheezing, administer Albuterol 2.5 mg via nebulizer;
 - f. Establish vascular access with normal saline solution at a KVO rate;
 - g. If patient remains hemodynamically unstable, administer a rapid fluid bolus of normal saline solution at a dose of 20 ml/kg via vascular access;
 - h. If no improvement, administer Diphenhydramine hydrochloride at a dose of 1 mg/kg (to a maximum dose of 50 mg) slowly via vascular access; and
 - i. Contact medical command.

Communications Failure Orders for pediatric allergic/reaction and/or anaphylaxis

- (a) The following Communications Failure Orders are authorized in the event that a pediatric patient presents with signs of generalized allergic findings such as urticaria without signs of acute significant respiratory distress and/or profound hypotension (systolic blood pressure less than or equal to $(70+[2*Age])$ mmHg)
 - a. Administer Methylprednisolone Sodium Succinate 2 mg/kg up to 125 mg or Dexamethasone Sodium Phosphate 0.7 mg/kg up to 10 mg IV/IO over one to two minutes.

- b. If at any point the patient develops signs or symptoms of acute significant respiratory distress and /or profound hypotension (systolic blood pressure less than or equal to 90mmHg) with clinical evidence of shock, (altered mental status; cool clammy or mottled skin; and /or delayed capillary refill), refer to 8.41-8.10 Standing orders for allergic reaction/anaphylactic shock and part (b) below.

(b) The following Communications Failure Orders are authorized in the event that a pediatric patient presents with signs of generalized allergic findings such as urticaria with signs of acute significant respiratory distress and /or profound hypotension (systolic blood pressure less than or equal to $(70+[2*\text{Age}])$ mmHg) with clinical evidence of shock, (altered mental status; cool clammy or mottled skin; and /or delayed capillary refill).

- a. If patient is receiving Albuterol via nebulizer, administer Ipratropium Bromide 0.5 mg / 2.5 mL normal saline via nebulizer.
- b. If the patient continues to have serious signs and symptoms that are not resolving, repeat administration of Epinephrine 0.01 mg/kg (0.01 ml/kg) of a 1:1,000 solution to a maximum of 0.3 mg IM in lateral thigh or deltoid.
- c. Consider intubation for patients who fail to respond to initial therapy. Refer to the Standing Orders and Communications Failure Orders for pediatric advanced airway.
- d. Administer additional Normal Saline 20 mL/kg IV/IO and repeat as necessary up to 60 mL/kg.
- e. If patient is severely hypotensive (systolic blood pressure less than or equal to 70 mmHg), administer Epinephrine 1:10,000, 0.01 mg/kg, up to 0.25 mg IV/IO slow push.

8.41-8.11 Standing orders for pediatric altered mental status

(a) The following standing orders are authorized in the event that a pediatric patient presents with altered mental status:

- a. Assess and secure the airway;
- b. Administer oxygen therapy as patient condition indicates; Maintain normal body temperature;
- c. If evidence of trauma, refer to the “Standing Orders for Pediatric Trauma” found at N.J.A.C. 8:41-8.8;
- d. Establish vascular access with normal saline solution at a KVO rate;
- e. Obtain a rapid glucose test. If blood glucose is < 60 mg/dl;

- i. For patient < 1 month of age administer 0.5 g/kg of a 10% dextrose solution via vascular access
- ii. For patients > 1 month of age administer 0.5 g/kg of a 25% dextrose solution via vascular access
- iii. If unable to establish vascular access, administer Glucagon 0.1 mg/kg (0.1 mL/kg) to a maximum of 1 mg IM (1 mg = 1 mL = 1 unit);
- f. If there is no change in the patient's mental status and there are signs of possible opioid toxicity (eg., decreased respirations), administer Naloxone 0.2 mg and if no response, then administer Naloxone 0.1 mg/kg, with a maximum dose of 2 mg via vascular access, endotracheal tube or intranasal route;
- g. If there is a history of dehydration and vascular access has been established, administer a fluid bolus of normal saline at 20 mL/kg via vascular access
- h. Contact medical command.

Communications Failure Orders for pediatric altered mental status

- (a) If the patient has a blood glucose level > 300mg/dL and is presenting with signs and symptoms of Diabetic Ketoacidosis, administer Normal Saline 20 ml/kg IV/IO drip.
- (b) If the patient is combative and requires sedation, administer Lorazepam 0.05 mg/kg up to 2 mg IV/IM.
- (c) If the provider suspects an overdose, treat according to suspected agents:
 - a. Opiate toxicity: Naloxone 0.1 mg/kg to a maximum of 2 mg IV/IO push.
 - b. Benzodizepine toxicity: Romazicon 0.01 mg/kg IV/IO push to a maximum of 0.2mg
 - i. Hold Romazicon for any patient who may be chronically taking benzodiazepines
 - c. Tricyclic Antidepressant toxicity: Sodium Bicarbonate 8.4% 1 mEq/kg to a maximum of 50 mEq IV/IO push.
 - d. Beta Blocker: Glucagon 0.1 mg/kg to a maximum of 3mg IV/IO push.
 - e. Calcium Channel Blocker: Calcium Chloride 20 mg/kg to a maximum of 1 gram IV/IO push.

8.41-8.12 Standing orders for pediatric asthma

- (a) The following standing orders are authorized in the event that a pediatric patient presents with asthma:
- a. Assess and secure airway; administer oxygen as needed, or via nebulizer;
 - b. Maintain normal body temperature;
 - c. Mix 2.5 mg Albuterol and Ipratropium Bromide 0.5 mg into normal saline and administer via nebulizer;
 - d. Reassess patient and if patient condition requires administer a maximum of two additional treatments of 2.5 mg Albuterol/3 mL normal saline solution via nebulizer;
 - e. If patient condition becomes more unstable:
 - i. Administer Epinephrine 0.01 mg/kg (0.01mL/kg) of a 1:1,000 solution to a maximum of 0.5 mg via SC route;
 - ii. Establish vascular access of normal saline solution at a KVO rate;
 - f. Contact medical command.

Communications Failure Orders for pediatric asthma

- (a) Administer continuous Albuterol 2.5 mg treatments via nebulizer.
- (b) Administer Methylprednisolone Sodium Succinate 2 mg/kg up to 125 mg
- (c) Administer Ipratropium Bromide 0.5 mg / 2.5 mL normal saline via nebulizer.
- (d) If patient continues to show signs of significant distress;
- a. Administer Magnesium 25 mg/kg up to one (1) gram via vascular access; and
 - b. Administer Normal Saline 20 mL/kg via vascular access
- (e) Consider intubation for patients who fail to respond to initial therapy. Refer to the Standing Orders and Communications Failure Orders for pediatric advanced airway.

8.41-8.13 Standing orders for pediatric bradycardia

- (a) The following standing orders are authorized in the event that a pediatric patient presents with bradycardia in which the patient displays hypotension, shock or other significant symptoms consistent with cardiopulmonary compromise:
- a. Assess and secure the airway;
 - b. Administer oxygen therapy as patient condition indicates;
 - c. Maintain normal body temperature;
 - d. If appropriate oxygenation and ventilation are delivered and patient has HR < 60 beats/minute with persistent signs of cardiopulmonary compromise, establish vascular access and administer 20 mL/kg normal saline bolus and initiate CPR;
 - e. Reassess patient – if patient still has HR < 60 beats/minute and still with persistent signs of cardiopulmonary compromise, then administer Epinephrine 0.01 mg/kg (0.1 mL/kg of 1:10,000 solution) via vascular access.
 - f. If no vascular access, administer Epinephrine 0.1 mg/kg (0.1 mL/kg of 1:1000 concentration) through the endotracheal tube;
 - g. Contact medical command.

Communications Failure Orders for bradycardia

- (a) Obtain a 12 Lead EKG.
- (b) If patient remains unstable;
- a. Repeat administration of Epinephrine 0.01 mg/kg (0.1 mL/kg of 1:10,000 solution) via vascular access every five minutes
 - b. Repeat administration of Normal Saline 20 mL/kg via vascular access
- (c) If the provider suspects increased vagal tone as a cause, administer Atropine 0.02 mg/kg via vascular access with a minimum dose of 0.1 mg and a maximum dose of 1 mg. This can be repeated to a total of three doses.

8.41-8.14 Standing orders for pediatric burn management

- (a) The following standing orders are authorized in the event that a pediatric patient presents with burns:
- a. Stop the burning process;
 - b. If hazardous materials are suspected, take proper precautions and contact medical command for guidance on treatment protocols;
 - c. Immobilize the spine if indicated;
 - d. Assess and secure the airway;
 - e. Consider endotracheal intubation if indicated for airway burns and/or respiratory compromise;
 - f. Administer 100 percent oxygen;
 - g. Cover the burns with a dry dressing;
 - h. Maintain normal body temperature;
 - i. Begin transportation of patient to the appropriate facility;
 - j. If evidence of trauma, refer to N.J.A.C. 8:41-8.8, Standing orders for pediatric trauma;
 - k. Establish IV access with normal saline at a KVO rate or, if patient is severely unstable, establish IO access; and
 - l. If patient's systolic blood pressure is at least 90 mmHg, administer Morphine Sulfate 0.1 mg/kg up to 10 mg or Fentanyl 1 mcg/kg up to 100 mcg, titrated slowly
 - m. Contact medical command.

Communications Failure Orders pediatric burn management

- (a) Establish secondary IV/IO access if possible, preferably large bore.
- (b) For significant partial and full thickness burns, administer additional normal saline or to a maximum of 60 ml/Kg total fluid administration.
- (c) If additional pain management is required, administer Morphine Sulfate 0.1 mg/kg up to 10 mg single dose titrated slowly or administer Fentanyl 1mcg/kg up to 100 mcg single dose titrated slowly. These may be and repeated as long as the systolic blood pressure is at least 90 mmHg.
- (d) If during the course of transport, patient requires intubation, refer to the Standing Orders and Communications Failure Orders for pediatric advanced airway.

8.41-8.15 Standing orders for pediatric croup

- (a) The following standing orders are authorized in the event that a pediatric patient presents with croup:
- a. Assess and secure the airway;
 - b. Administer oxygen therapy as patient condition indicates;
 - c. Maintain normal body temperature and position of comfort;
 - d. Mild to moderate distress (barking cough, inspiratory stridor):
 - i. Administer 3 cc normal saline via nebulizer with simple mask; and
 - ii. Contact medical command;
 - e. Moderate to severe distress (stridor at rest, retractions, tripodding, and accessory muscle use):
 - i. Administer Epinephrine 3 mg (3 cc) 1:1,000 solution via nebulizer;
 - ii. If no change, establish IV/IO access with normal saline at a KVO rate; and
 - iii. Contact medical command.

Communications Failure Orders pediatric croup

- (a) If during the course of transport, patient requires intubation, refer to the Standing Orders and Communications Failure Orders for pediatric advanced airway.
- (b) Administer Dexamethasone 0.7 mg/kg to a maximum of 10 mg via vascular access.

8.41-8.16 Standing orders for pediatric non-traumatic shock

- (a) The following standing orders are authorized in the event that a pediatric patient presents with non-traumatic shock:
- a. Assess and secure the airway;
 - b. Administer oxygen therapy as patient condition indicates;
 - c. Maintain normal body temperature;
 - d. Establish vascular access with normal saline solution at a KVO rate;
 - e. Administer a rapid fluid bolus of normal saline at a dose of 20 mL/kg;
 - f. Obtain a rapid glucose test. If blood glucose is less than 60:
 - i. For patients less than one month of age, administer 0.5 g/kg of a 10 percent dextrose solution via IV/IO;
 - ii. For patients greater than one month of age, administer 0.5 g/kg of a 25 percent dextrose solution via IV/IO.
 - iii. If unable to establish vascular access, administer Glucagon 0.1 mg/kg (0.1 ml/kg) to a maximum of 1 mg IM (1mg=1ml=1 unit);
 - g. If no change, administer a rapid fluid bolus of normal saline solution at a dose of 20 mL/kg; and
 - h. Contact medical command.

Communications Failure Orders pediatric non-traumatic shock

- (a) If the patient has not improved, administer a rapid fluid bolus of normal saline at a dose of 20 mL/kg.
- (b) If during the course of transport, patient requires intubation, refer to the Standing Orders and Communications Failure Orders for pediatric advanced airway.

8.41-8.17 Standing orders for pediatric tachycardia

(a) The following standing orders are authorized in the event that a patient presents with an unstable narrow complex tachycardia that is likely supraventricular in etiology where the patient is unconscious or potentially hemodynamically unstable:

- a. Assess and secure the airway;
- b. Administer oxygen therapy as patient condition indicates;
- c. Maintain normal body temperature;
- d. Establish vascular access and administer 20 mL/kg normal saline bolus. If rhythm is regular and the patient is hemodynamically stable, then attempt vagal maneuvers;
- e. If the patient is conscious, vascular access has been established, and the rhythm is regular and not probable sinus tachycardia;
 - i. Administer Adenosine 0.1 mg/kg rapid push via vascular access followed by a 10 mL normal saline solution bolus via vascular access;
 - ii. If there is no conversion with Adenosine 0.1 mg/kg rapid push via vascular access and if not identified to be atrial fibrillation, atrial flutter and does not have history of Wolff-Parkinson-White, then administer Adenosine 0.2 mg/kg rapid push via vascular access followed by a 10 mL normal saline solution bolus via vascular access;
- f. Contact medical command.

(b) The following standing orders are authorized in the event that a patient presents with wide complex tachycardia:

- a. Assess and secure the airway;
- b. Administer oxygen therapy as patient condition indicates;
- c. Maintain normal body temperature;
- d. Establish vascular access and administer 20 mL/kg normal saline bolus;
- e. Contact medical command.

Communications Failure Orders pediatric tachycardia

- (a) The following Communications Failure orders are authorized in the event that a patient presents with a narrow complex tachycardia:
- a. If patient is stable, proceed with treatment as listed above in 8.41-8.17 part (a).
 - b. If there is any evidence of Wolff-Parkinson-White, administer Amiodarone 5mg/kg up to 150mg via vascular access over 20 minutes.
 - c. If the patient is unstable and the rhythm has not converted with the above treatment and the patient is conscious, administer Midazolam 0.05 mg/kg to a maximum of 10 mg/kg via vascular access.
 - d. If the patient has been sedated or is unconscious, provide synchronized cardioversion at 2 J/kg;
 - i. If there is no response, administer synchronized cardioversion at 4 J/kg
 - ii. If there is no response, administer synchronized cardioversion at 4 J/kg
 - e. If the patient still fails to respond, Administer Amiodarone 5 mg/kg up to 150mg via vascular access over 20 minutes.
- (b) The following standing orders are authorized in the event that a patient presents with wide complex tachycardia:
- a. If the patient is stable, administer Amiodarone 5 mg/kg up to 150 mg via vascular access over 20 minutes.
 - b. If the patient is unstable and the patient is conscious administer Midazolam 0.05 mg/kg to a maximum of 10 mg/kg via vascular access.
 - c. If the patient has been sedated or is unconscious, provide synchronized cardioversion at 2 J/kg;
 - i. If there is no response, administer synchronized cardioversion at 4 J/kg
 - ii. If there is no response, administer synchronized cardioversion at 4 J/kg

8.41-8.18 Standing orders for sudden infant death syndrome

(a) The following standing orders are authorized in the event that sudden infant death syndrome is suspected:

- a. Form a general impression of the patient's condition;
- b. Establish responsiveness;
- c. Assess airway and breathing and confirm apnea;
- d. Assess pulselessness and initiate cardiac monitoring;
- e. If patient does not exhibit lividity and/or rigor, go to cardiac arrest guidelines found at N.J.A.C. 8:41-8.7;
- f. If patient exhibits lividity and/or rigor, contact medical command physician for pronouncement;
- g. Provide supportive measures and New Jersey SIDS Center (800) 545-7437 telephone number for caregivers;
- h. Obtain patient history; and
- i. Reassess the environment, documenting:
 - i. Where was the patient located on arrival;
 - ii. Description of objects located near the child upon arrival; and
 - iii. Unusual environmental conditions (that is; high room temperature, abnormal odors, etc.).



Standards of Care

The enclosed Standards of Care have been formulated by the QA/CQI Coordinator based on standardized clinical assessment parameters as documented in the medical literature. All Standards of Care have been reviewed and accepted by the QA/CQI committee.

OBJECTIVE:

To effectively and uniformly assess documentation for the minimum requirements in chart and telemetry completeness based on the patient's chief complaint.

MONITORING:

Each year the QA/CQI Coordinator will designate a set number of Standards of Care to be reviewed by the QA/CQI committee for both chart and telemetry completeness. Results will be posted for staff review with any corrective action being done by the Clinical Coordinator.

OUTCOME:

All patients falling under the category reviewed will be assessed in an efficient and effective manner as based on standardized clinical practices in the pre-hospital setting.

The Valley Hospital

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Standards of Care

Cardiac Assessment:

1. Full set of ALS vitals (BP, pulse, respirations)
2. Assess skin color and moisture.
3. Apply ECG monitoring with interpretation (check for presence of arrhythmias)
4. Perform 12 lead ECG. Transmit as applicable and necessary.
5. Notify Emergency Department of presence of STEMI
6. Assess for level of consciousness
7. Auscultate bilateral breath sounds
8. Assess for JVD and lower leg edema
9. Assess for chest pain (onset, provocation, quality, region/radiation, severity, time of onset)
10. Assess for nausea and vomiting
11. Assess for SOB
12. Ascertain past medical history, medications and allergies
13. Document success or failure of 12 lead transmission to receiving ED as well as medical control. Utilize appropriate drop-down in flowchart on page 8. of electronic charting program.

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Standards of Care

Neurological Assessment:

CVA/TIA:

1. Assess LOC for presence of stupor, delirium, hallucinations
2. Full set of ALS vitals (BP, pulse, respirations)
3. Obtain a blood sugar reading
4. Obtain 12 lead ECG
5. Assess for presence of unsteady gait
6. Pupillary response
7. Neurological exam (speech, motor, vision, dysphasia, numbness, tingling, swallowing, vertigo)
8. Assess if the patient has a headache
9. Ascertain the past medical history, medications, allergies

Seizure:

1. Assess LOC
2. Full set of ALS vitals (BP, pulse, respirations)
3. Obtain 12 lead ECG for adult patient with prior cardiac and/or arrhythmia history
4. Obtain a blood sugar reading
5. Assess if the patient has a headache and/or nausea and vomiting
6. Pupillary response
7. Neurological exam
8. Assess for tongue trauma and/or incontinence
9. Assess for fever
10. Ascertain duration and type of seizure
11. Ascertain the past medical history, medications, allergies

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Standards of Care

Diabetic Emergencies:

1. Assess LOC
2. Full set of ALS vitals (BP, pulse, respirations)
3. Obtain a blood sugar reading (Abnormal reading is <80 or > 250). This should be performed pre and post treatment
4. Assess skin color, temperature, and moisture
5. Ascertain past medical history, medications, and allergies
6. If patient refuses further treatment or transportation to the emergency room:
 - a. Removal of IV is documented
 - b. Post treatment care instructions copy scanned in and attached to chart

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Standards of Care

Trauma Assessment:

1. Assess LOC
2. Full set of ALS vitals (BP, pulse, respirations)
3. Initial and ED arrival GCS level
4. Assess pulse location/quality
5. Assess skin color, temperature and moisture
6. Assess for uncontrolled active bleeding, quantity of blood loss and signs of shock
7. Ascertain mechanism of trauma (i.e.: fall of >8feet, head-on MVA, speeds of vehicles etc...)
8. For every body part injured, document some physical exam findings that pertain to that area (i.e.: abd. Pain=abd. Soft, non-tender, neck pain=unremarkable, neurological exam WNL, etc...)
9. Ascertain past medical history, medications, and allergies

Burns:

1. Assess LOC
2. Full set of ALS vitals (BP, pulse, respirations)
3. Assess skin color, temperature and moisture
4. Assess type of burn to include partial or full thickness, electrical, chemical, inhalation
5. For every body part burned, ascertain the percentage area of burn
6. Ascertain if trauma involved in addition to burns
7. Ascertain past medical history, medications, and allergies

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Standards of Care

OB/GYN Emergencies:

1. Full set of ALS vitals. (BP, pulse, respirations)
2. Ascertain LMP and/or pregnancy history (Para & Gravida)
3. Assess skin color, temperature and moisture)
4. Assess if patient has abdominal pain (quality and location)
5. Assess if patient has any vaginal bleeding (description/amount) and/or organ prolapse
6. Assess pulse location and quality
7. Ascertain past medical history, medications and allergies

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Standards of Care

Abdominal Assessment:

1. Full set of ALS vitals (BP, pulse, respirations)
2. Assess the abdominal pain (onset, provocation, quality, region/radiation, severity, time/onset)
3. Assess for nausea and vomiting
4. Assess bowel habits (i.e.: presence of diarrhea)
5. Check skin for color, temperature and moisture
6. Abdominal exam
7. Ascertain past medical history, medications and allergies

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Standards of Care

Allergic Reactions:

1. Full set of ALS vitals (BP, pulse and respirations)
2. Ascertain source of possible allergic reactions
3. Assess for signs and symptoms of allergic reactions including SOB, oral/facial/laryngeal edema.
4. Assess skin color, temperature and moisture
5. Auscultate bilateral lung sounds
6. Assess for rapidly progressing symptoms
7. Ascertain if any previous allergies
8. Ascertain past medical history and medications

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Standards of Care

Respiratory Assessment:

1. Full set of ALS vitals (BP, pulse, respirations)
2. Obtain a 12 lead ECG as applicable and necessary.
3. Auscultate bilateral lung sounds
4. Document degree of distress (accessory muscle usage, level of distress)
5. Pulse oximetry reading; preferably pre and post-treatment
6. Assess skin color, temperature and moisture
7. Assess JVD
8. Ascertain past medical history, medications and allergies

Intubation: (Subsection of above)

1. Utilize 3-3-2 rule to ascertain feasibility of intubation
2. Obtain and document end-tidal CO₂ readings and waveforms for intubated patients
3. A minimum of two end-tidal CO₂ readings and wave-form is required
 - a. First: when endotracheal intubation is completed and confirmed
 - b. Second and subsequent: any time the patient is moved during transport including movement to the Emergency Department stretcher (mandatory)
4. Document the confirmation steps taken to confirm the endotracheal tube placement which includes:
 - a. Presence of bilateral breath sounds and chest rise
 - b. Absence of epigastric sounds
 - c. Direct visualization of vocal cords
 - d. End-tidal CO₂ readings and waveform

The Valley Hospital

MICU Department

Standards of Care

Ingestion/Poisoning

1. Assess level of consciousness
2. Obtain ALS vitals
3. Assess pupillary response
4. Perform a neurological exam
5. Ascertain poisoning history (time taken, amount taken, type)
6. Ascertain past medical history, medications, allergies

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Standards of Care

Hazardous Substance Exposure

1. Obtain initial assessment
 - a. Vital signs (Full set of ALS vitals: B/P, pulse, respirations)
 - b. Signs and symptoms
 - c. Level of consciousness
2. Assess skin color, temperature and moisture
3. Auscultate bilateral lung sounds
4. Assess for rapidly progressing symptoms
5. Identify and document type of exposure (toxic fumes, smoke inhalation, liquid exposure, inhalation, absorption, ingestion, radiation, powder)
6. Document appropriate airway management
7. Document appropriate decontamination
8. Ascertain pertinent medical history, medications, and allergies
9. Assess for signs and symptoms: SLUDGEM
10. Document request and/or use of ChemPak through MICCOM
11. Document use of proper PPE
12. Document notification of receiving facility

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Standards of Care

Telemetry Assessment

The assessment of telemetry will include the following additional parameters beyond the review of the telemetered transmission of the Standards of Care for that patient's chief complaint.

1. Standards of Care
2. Objective Assessment
 - a. Orders repeated/confirmed
 - b. Orders followed correctly
 - c. Patient's chart and call-in are equivalent
3. Subjective Assessment
 - a. Paramedic had good understanding of patient's condition and relayed as such.
 - b. Appropriate orders were received
4. Proper utilization of notification to RN vs. direct contact with Medical Control Physician
5. Provide Emergency Room with proper notification of STEMI utilizing STEMI alert
6. Provide Emergency Room with proper notification of possible CVA utilizing Code Grey alert

Valley Emergency Services

Selective Spinal Restriction

Standard of Care

PURPOSE: This standard of care provides guidance regarding the assessment and care of patients who have a possible spinal injury.

DEFINITIONS:

Spinal Motion Restriction: the application of a cervical collar and the maintenance of the spine in neutral alignment on an ambulance cot.

Full Spinal immobilization: the application of a cervical collar and securing a patient to a long backboard for full immobilization of the patient's spine.

ASSESSMENT FOR SELECTIVE SPINAL CARE

Patients who have experienced a mechanism of spinal injury require spinal motion restriction and protection of the injury site if they exhibit any of the following:

- Midline spinal pain, spinal deformity or tenderness with palpation;
- Abnormal (i.e. not baseline) neurological function or motor strength in any extremity;
- Numbness or tingling (paresthesia);
- Sensation is not intact and symmetrical (or baseline for patient);
- Cervical flexion, extension and rotation elicits midline spinal pain.

OR if they cannot competently participate in the assessment due to one of the following:

- Altered mental status (e.g., dementia, preexisting brain injury, developmental delay, psychosis, etc.);
- Alcohol or drug intoxication;
- Distracted by significant injuries to self or others;
- Insurmountable communication barriers (e.g. hearing impairment, language, etc.).

Patients without any of the above findings should generally be transported without the use of a cervical collar or other means to restrict spinal motion. Utilize spinal motion restriction only where, in the professional judgment of the provider, the patient is at high risk for spinal injury or displays clinical indications of injury (e.g. midline spinal pain or deformity of the spine). When possible, the highest level provider on scene should determine whether spinal motion restriction is to be used or discontinued (collar removed, etc.).

When spinal motion restriction has been initiated and a higher level provider arrives, patients should be reassessed for spinal injury (as described in this section) to determine the most appropriate ongoing care.

CARE FOR PATIENTS WITH POSSIBLE SPINAL INJURY

- Routine Patient Care.
- Maintain manual in-line stabilization during assessment.
- Minimize spinal movement during assessment and extrication.
- Self-extrication by patient is allowable if patient is capable.
- A long backboard scoop stretcher, vacuum mattress, or other appropriate full length extrication device may be used for extrication if needed.
- Apply adequate padding to prevent tissue ischemia and minimize discomfort.

If patient requires spinal motion restriction:

- Apply a cervical collar.

- For ambulatory patients, allow the patient to sit on the stretcher, and then lie flat. (The "standing take-down" is eliminated.)
- If the patient can manipulate themselves out of the situation, they can move themselves to the EMS cot or a long spine board can be used to transfer the patient to the EMS stretcher. If the patient cannot manipulate themselves out of the situation, then the patient will be placed on a long spine board or scoop type stretcher and transferred to the EMS stretcher.
- Pull sheets, other flexible devices, scoops and scoop-like devices should preferentially be utilized to move non-ambulatory patients when appropriate. Long, rigid spine boards should have only limited utilization.
- Once the patient is moved to the stretcher, remove any hard backboard device.
- Patients should only be transported to the hospital on a rigid vacuum mattress or hard backboard if removal would delay transport of an unstable patient or it is necessary for other treatment priorities.
- Lay the patient flat on the stretcher, secure firmly with all straps, and leave the cervical collar in place. Elevate the back of the stretcher only if necessary to support respiratory function, patient compliance or other significant treatment priority.
- Instruct the patient to avoid moving their head or neck as much as possible.
- Consider the use of SpO₂ and EtCO₂ to monitor respiratory function.
- For conscious patients who poorly tolerate a rigid cervical collar (e.g., due to anxiety, shortness of breath), the cervical collar may be replaced with a towel roll and/or padding to minimize spinal motion.

- Patients with nausea or vomiting may be placed in a lateral recumbent position maintaining the head in a neutral position using manual stabilization, padding, pillows, and/or the patient's arm. Refer to applicable nausea and vomiting protocol.
- Transfer from ambulance to hospital stretchers and vice-versa should be accomplished while continuing to limit motion of the spine. The uses of slide boards, sheet lifts, etc. should be considered.

SPECIAL CONSIDERATION:

Patients found in full spinal immobilization prior to arrival of ALS

If a patient is found by ALS in full spinal immobilization, performed by BLS prior to their arrival, a neurological exam will be completed by the paramedics. If it will not delay the transport of the patient to the hospital, the patient will be removed from the long spine board and placed on the ambulance stretcher with a cervical collar in place and the head of the cot at approximately 20° to 30°. Removal from the board will be by the long-axis method, where the board is removed from the foot of the patient, or the log-roll method, where the patient is log-rolled to a side and the board is removed from the patient.

If the transport time to the hospital is short and transport of the patient will be delayed by removing the patient from full spinal immobilization, then the patient will remain in the full spinal immobilization on the long backboard to the hospital.

If the patient is found to be in a vest type immobilization device (i.e. KED), the same procedure as above should be followed.

Documentation

All findings and decision-making regarding the use of the selective spinal restriction procedure must be fully documented in the narrative of the PCR.