

LINDSBORG



EMS

Protocols
And
Standing Orders

Approved: March 18, 2014

Lindsborg EMS Protocols
BLS Enhanced Endorsement

Rationale:

This protocol has been written for BLS personnel who have been trained to higher standards or levels of skills, in order to detail their capabilities. This protocol will cover several areas of enhanced training.

BLS Administration of Home Medications

Rationale:

This procedure has been adopted to give EMTs the capability of assisting the patient with administration of the patient's prescribed medications when ALS personnel are not available.

Procedure:

The EMT may assist the patient in the administration of the following medications which have been prescribed for that patient:

1. Auto-injection epinephrine
2. Sublingual nitroglycerin
3. Inhalers for asthma and emphysema

Guidelines:

1. These medications may only be administered for the medical condition(s) according to the written directions as on the patient's prescription.
2. The patient must be able to communicate to the technician that the medical condition they are experiencing warrants the use of the prescribed medication.
3. The technician WILL NOT administer prescribed medication to an unresponsive patient.
4. The technician WILL NOT administer any of the medications listed above that are not prescribed for the patient.

Lindsborg EMS Protocols
BLS Enhanced Endorsement (Continued)

EMT Advanced Initiatives

Rationale:

The Kansas Board of Emergency Medical Services recently adopted “EMT-Basic Advanced Initiatives” by regulation 109-6-4 that essentially allows Emergency Medical Technicians, with appropriate physician oversight, by either on-line medical control or written protocol to (1) administer aspirin for chest pain, (2) monitor saturation of arterial oxygen levels of the blood by way of pulse oximetry, (3) administer bronchodilators by nebulization, and (4) monitor blood glucose levels. In order for each Emergency Medical Technician to perform any of the above activities, the Emergency Medical Technician must complete a course of instruction in each of the above listed areas and must be cleared to perform these procedures by the EMS Training Coordinator.

Guidelines:

1. The EMT whom has met the above requirements may perform the above procedures as indicated by Lindsborg EMS protocols in the same situations as MICTs



Approved Medications List

Adenosine
Albuterol
Amiodarone
Asprin
Atropine Sulfate
Dextrose
Diazepam
Diphenhydramine
Epinephrine
Fentanyl
Furosemide
Glucagon
Glucose
Ipratropium Bromide
Labetalol
Lidocaine- For IO access protocol only
Methylprednisolone
Midazolam
Morphine Sulfate
Naloxone
Nitroglycerine
Oxygen
Sodium Bicarbonate

Updated: 03/18/14

Lindsborg EMS Medical Protocol

Intranasal Drug Delivery via Mucosal Atomization Device (MAD)

Rationale:

Acute seizures, narcotic overdose, severe hypoglycemia, and acute and chronic pain control are all complex medical problems requiring multiple approaches for effective management. Nasal medication delivery takes a middle path between slow onset oral medications and invasive, highly skilled delivery of intravenous medications. Medication deposited on the highly vascular nasal mucosa may be rapidly absorbed into the blood stream and cerebral spinal fluid (CSF), achieving therapeutic drug levels more quickly and predictably than oral medications while avoiding needles. This results in therapeutic drug levels and effective treatment of seizures, pain, hypoglycemia and opiate overdose.

Indications:

In the event IV or IO access has not been established or is not warranted or desired, the MAD may be used to deliver certain intranasal medications in certain situations. The conditions/medications approved for use with the MAD are listed below, assuming the correct concentration is available (see# 4 below):

- Fentanyl for non-cardiac pain control (particularly helpful in the pediatric population)
- Narcan for suspected narcotics overdose
- Midazolam (Versed) for seizure control
- Midazolam (Versed) in the combative patient (until IV established)
- Glucagon for hypoglycemia

Be sure to follow all other appropriate steps in the respective protocols.

For this delivery method to be effective, the nasal passages need to be clear of blood or mucous or other secretions. If these are present, clearing of the nasal passages will be required or use of an alternate route of administration is recommended.

Procedure:

1. Following appropriate dosages in the respective protocol draw up the desired amount into the 3 ml syringe. Draw an extra 0.1ml of medication to account for dead space created by the MAD (medication which the patient will not receive).
2. Attach the atomizer tip (MAD) to the syringe via Luer lock mechanism.
3. Using your free hand to hold the crown of the head stable, place the tip of the atomizer snugly against the nostril aiming slightly up and outward (towards the top of the ipsilateral ear).
4. Briskly compress the syringe plunger to deliver approximately half of the medication into the nostril. (No more than 1 ml per nostril is optimal.)

Lindsborg EMS Medical Protocol

Intranasal Drug Delivery via Mucosal Atomization Device (MAD) (Continued)

5. Move the device over to the opposite nostril and briskly administer the remaining half of the medication into that nostril
6. Medications may be repeated by same route according to each specific medication guideline.

Lindsborg EMS Protocols

Intraosseous Infusion

Rationale:

Intraosseous cannulation has been established as a safe and reliable method of securing venous access in adult and pediatric patients. It has been proven to be especially useful in patients who are in shock or cardiopulmonary arrest. Studies have shown that intraosseous administration of fluid, drugs and blood products are equally effective as intravenous administration. The EZ-IO infusion system requires specific training prior to patient use.

Indications:

1. Any patient that is triaged in critical condition that does not have venous access shall be considered for this procedure. In the event that a patient is unstable and venous access is warranted but not available, the intra-osseous may be established.
2. Sites that may be considered are:
 - a) Proximal tibia (adult and ped)
 - b) Proximal humerus (adult only)
 - c) Distal tibia (adult only)

Contraindications:

1. Fracture of the tibia or femur (consider alternate tibia).
2. Previous orthopedic procedures (IO within 24 hours, knee replacement – consider alternate tibia).
3. Pre-existing medical condition (tumor near site or peripheral vascular disease).
4. Infection at insertion site (consider alternate site).
5. Inability to locate landmarks (significant edema).
6. Excessive tissue at insertion site.
7. Avoid burned tissue unless there is no alternative site.

Lindsborg EMS Protocols
Intraosseous Infusion (Continued)

Administration by: MICT, RN (If properly trained), AEMT

Considerations:

Flow rates: Due to the anatomy of the IO space, you will note rates to be slower than those achieved with IV catheters.

IO Protocols

- Ensure the administration of a 10 ml rapid bolus (flush) with a syringe.
- Use a pressure bag or pump for continuous infusions.

Pain: IO infusion can cause severe discomfort for conscious patients. If patient complains of discomfort:

* Patient up to 39 kg: administer 20 mg (1ml) of 2% Lidocaine mixed with 10 ml NS slowly through EZ-IO hub.

* Patient over 39 kg: administer 40 mg (2ml) of 2% Lidocaine mixed with 10 ml NS slowly through EZ-IO hub.

Procedure:

1. Select and locate insertion site.
2. Cleanse site with chloraprep.
3. Prepare EZ-IO driver and appropriate needle – RED 3 kg-39 kg; BLUE 40kg and greater.
4. Stabilize site and insert EZ-IO needle set.
5. Remove EZ-IO driver from needle set while stabilizing catheter hub.
6. Remove stylet from needle set; secure stylet in sharps container.
7. Connect primed EZ-Connect.
8. For conscious patients, consider the need for Lidocaine flush (see above).
9. Flush or bolus the EZ-IO catheter rapidly with 10 ml of Normal Saline using a 12 cc syringe (May skip this step if Lidocaine flush administered.)

Lindsborg EMS Protocols
Intraosseous Infusion (Continued)

10. Attach IV tubing to the EZ-Connect.
11. Place a pressure bag on solution being infused, where applicable.
12. Begin infusion.
13. Dress site, secure tubing and apply wristband.
14. Monitor EZ-IO and patient condition.

Removal:

1. Discontinue all fluid administration and disconnect all tubing from IO hub (including EZ-Connector.)
2. Grasp hub directly or attach sterile syringe to the hub (syringe acts as a handle.)
3. Support the site while rotating catheter clockwise and gently pulling up to remove catheter.
4. Always maintain 90 degree angle while removing to minimize complications. Don't "rock" the needle while removing.

Lindsborg EMS Protocols

Peripheral IV Insertion

A peripheral intravenous line may be initiated by a MICT, RN, or AEMT when patients present with the following indications:

- Evidence of moderate to severe blood loss at the scene
- Arterial bleeding not easily controlled
- Any gunshot or knife wound or other penetrating trauma to the head, neck, chest, or abdomen
- Multiple trauma with or without signs and symptoms of shock
- History of seizures immediately prior to arrival
- Moderate to severe shortness of breath
- Severe abdominal pain
- Unconsciousness of unknown origin
- Drug overdose or poisoning with decreased L.O.C.
- Any patient with notably abnormal vital signs
- Any patient in cardiac arrest, or presenting with chest pain, shortness of breath, cardiac arrhythmias, or other symptoms that the technician feels may be indicative of cardiac problems
- Any patient in shock from any source
- Unstable diabetics
- Obstetrical patient with vaginal bleeding or imminent delivery
- Suspected internal hemorrhage
- Any patient whose presenting signs and symptoms lead the technician to believe that they may deteriorate en route to the hospital and require ALS, IV medications, or fluid replacement.

(Continued)

Lindsborg EMS Protocols

Peripheral IV Insertion (Continued)

Trauma patients should receive NS at a rate appropriate to their mechanism of injury and symptoms. If no signs of hypovolemia or shock are present, rate should be at KVO. If signs of hypovolemia or shock are present, adjust rate to sustain a systolic blood pressure of 90-100 mmHg. Isolated head injuries should receive NS at a KVO rate, unless signs of hypovolemia or shock are present.

Medical patients should receive NS at a KVO rate.

Pediatric patients should receive NS; only micro drip tubing should be used with patients 0-3 yrs old; for patients greater than 3 yrs old, use tubing based on nature of call.

In the selection of an IV site, the veins in the arms are preferred. If no site is available in the arms and the patient is triaged critical, external jugular catheterization may be considered, along with the lower extremities (keeping in mind that medications will take effect at a faster or slower rate depending on alternate IV site).

1. Stable patients should have IV's initiated in the peripheral areas, ie. hands, forearms, if possible. If fluid replacement is not anticipated, it is acceptable to place an intermittent infusion catheter in lieu of fluid therapy.
2. Unstable or critical patients should have large bore IV's, (minimum 18 g.), started in the forearm, or AC. If the AC is not available, consider IO.

EMTs who possess Advanced EMT certification and RN's may initiate IV's and/or draw blood in the field under the same situations as an MICT.

Lindsborg EMS Paramedic/EMT protocols and RN standing orders

Abdominal pain

BASIC LIFE SUPPORT

- ◆ Airway
- ◆ Oxygen
- Position of comfort
- Vital signs
- ◆ Nothing by mouth
- Assessment of pain
- Examine all 4 quadrants

ADVANCED LIFE SUPPORT

- EKG
- IV
- If nauseated:
 - Zofran 4mg IVP
 - Zofran ODT if IV unable to be established
 - Any patient 60yrs. of age or less with a stable blood pressure, the medic
 - May give up to 50 mcgs. Fentanyl IV without approval from Medical Control.

If hypotensive refer to hypotension protocol

Lindsborg EMS Protocols

Needle Thoracentesis

Administration: May be performed by Paramedic only.

Rationale and procedure:

In the patient with tension pneumothorax or large simple pneumothorax, emergency decompression of the pleural space may be lifesaving. Needless to say, one must be confident of the diagnosis before attempting this procedure, since introducing a needle into a normal chest is almost certain to create a pneumothorax if the patient does not already have one.

This technique should be done under direct physician order, if time permits; however, if medical control is not immediately available, and the patient's condition warrants immediate intervention, this technique should be employed.

The technique, using flutter valve kit, is as follows:

1. Locate the 2nd or 3rd intercostal space in the mid-clavicular line on the affected side of the patient's chest.
2. Thoroughly cleanse the area first with betadine swab/povidine-iodine stick, secondly with alcohol.
3. Take the catheter and needle with syringe attached, draw 1 cc of air into the syringe, then firmly introduce the needle just above the rib margin at the site selected; you should feel a "pop" as the needle enters the pleural space; air under pressure should push the syringe obturator out, a normal chest should draw it in.
4. Advance the catheter over the needle, and remove the needle and syringe.
5. To maintain a closed system to prevent air from entering the pleural space, attach the stopcock end of the extension tubing to the catheter and the other end of the tubing to the blue side of the flutter valve.
6. Secure the catheter to the patient with the blue diaphragm needle holder and tie. Secure the tubing and flutter valve as well.

Lindsborg EMS Protocols
Registered Nurse Approved Advanced Skills

Rationale and procedure:

Help give a clear and precise outline of skills Registered Nurses are allowed to perform at Lindsborg EMS under the Medical Direction of Physician.

- Intravenous Access- Per IV protocol
- Intraosseous Access- Per IO protocol
- Combi-tube
- Medications- Any Medication may be administered under direct Physician Orders on a per patient basis.
- Any other skills learned in EMT coarse and approved by Kansas Board of EMS

Skills not approved by Medical Direction for Registered Nurse to perform at Lindsborg EMS:

- Endotracheal Intubation
- Needle Thoracentesis

Date: _____

Medical Director: _____

Service Director: _____