



EMS Drug Formulary

Acetaminophen (TYLENOL®)
Activated Charcoal
Aspirin
Albuterol Sulfate
Adenosine (ADENOCARD®)
Amiodarone (CORDARONE®)
Atropine Sulfate
Amyl Nitrite
Atropine and Pralidoxime Chloride Injection
Broadpectrum Antibiotic(s)
Calcium Chloride
Calcium Gluconate
Dextrose 5% in Water (D5W)
Dextrose 10% (D10)
Dextrose 25% (D25)
Dextrose 50% (D50)
Diazepam (VALIUM®) - **Class IV**
Diltiazem (CARDIZEM®)
Diphenhydramine (BENADRYL®)
Dobutamine (DOBUTREX®)
Dopamine (INTROPIN®)
Epinephrine Auto Injector(s)
Epinephrine 1:1,000
Epinephrine 1:10,000
Etomidate (AMIDATE®)
Fentanyl Citrate (SUBLIMAZE®) - **Class II**
Flumazenil (ROMAZICON®)
Furosemide (LASIX®)
Glucagon USP (GlucaGen®)
High Dose Heparin
Hydroxocobalamin Injection (CYANOKIT®)
Ibuprofen (MOTRIN®)
Ipratropium Bromide (ATROVENT®)
Ketamine (KETALAR®) - **Class III**
Labetalol
Lactated Ringers
Levalbuterol (XOPENEX®)
Lidocaine (XYLOCAINE®)
Lorazepam (ATIVAN®) - **Class IV**

Magnesium Sulfate
Methylprednisolone (SOLU-MEDROL®)
Metoprolol (LOPRESSOR®)
Methylene Blue
Midazolam (VERSED®) - **CLASS IV**
Morphine Sulfate - **Class II**
Nalbuphine (NUBAIN®) ***OLMC**
Naloxone (NARCAN®)
Nitroglycerin Paste (NITRO-BID®)
Nitroglycerin-Tablet/Spray (Nitrostat®)
Nitrous Oxide (N₂O)
Norepinephrine (LEVOPHED)
0.9% Normal Saline (NS)
Oral Glucose (Glucose 15™)
Oxygen (O₂)
Ondansetron (ZOFTRAN®)
Oxymetazoline HCl Nasal Spray (Afrin®)
Oxytocin (PITOCIN®)
Phenobarbital - **Class IV**
Pralidoxime (2-PAM®)
Procainamide (PROCAN®)
Prochlorperazine (COMPAZINE®)
Proparacaine (ALCAINE®)
Propranolol (INDERAL®)
Pyridoxine HCL (Vitamin B6)
Racemic Epi (MicroNEFRIN®)
Rocuronium Bromide (ZEMURON®)
Sodium Bicarbonate (NaHCO₃)
Sodium Nitrite
Sodium Thiosulfate
Succinylcholine
Terbutaline Sulfate (BRETHINE®)
Thiamine (BIAMINE®)
Vasopressin (PITRESSIN®)
Vecuronium Bromide (NORCURON®)
Ziprasidone (GEODON®) ***OLMC**

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South Carolina State Medical Director



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The EMS Drug Formulary was developed by the Division of EMS and Trauma in conjunction with the Medical Control and EMS Advisory Committees. There are specific drugs contained in this document which require on-line medical control, these drugs are denoted by "OLMC". There can be no standing order for Controlled Substances in Class II other than the approved South Carolina State Protocol. In addition, due to the potential for abuse, the Medical Control Committee has added Geodon and Nubain to the "Controlled Substances List" for EMS. This change requires that these substances be inventoried, stored, and protected as would any other Scheduled II narcotic. On-Line orders to Paramedics should be rendered by the physician - either in person, by telephone, or over the radio. If a physician is unable to speak directly to the Paramedic, medical control should not be abandoned. It is then permissible for a physician's designee to relay his/her (the physician's) direct orders by telephone or radio. It is, however, never acceptable for orders to originate from a nurse, physician's assistant, or anyone other than the on-line Medical Control Physician.

Medication pumps used by home-bound patients are considered patient administered medication and all EMTs may transport such patients as long as the EMT does not have to do anything to the pump and the route of administration is a venous line. Patients who have certain intravenous access devices such as Percutaneously Placed Central Venous Catheters (e.g. CVP line; Triple Lumen Catheter; Subclavian, Internal Jugular, or Femoral Line - but NOT including Swan Ganz catheters) or Implantable Central Venous Catheters (e.g. Hickman or Broviac Catheter) may have medications administered through these catheters - by Paramedics ONLY when no other option is available for intravenous access. Such medication administration may be guided either by Standing Order or direct On-Line Medical Control order. AEMT, Intermediate and Basic EMTs may transport patients with these catheters provided that the catheter is either not in use or has plain (non-medicated) IV Fluids in place. These privileges are delineated in the SCDHEC: EMS and Trauma Certification Skills List. Patients who have certain implanted access devices such as the Completely Implantable Venous Access Port (i.e. Porta-Cath) may be transported by Paramedics with previously placed medication infusions. Since these devices require special needles for access, a Paramedic may administer medications through this device ONLY by way of previously placed lines when NO OTHER OPTION is available. This action may be authorized either by Standing Order or direct On-Line Medical Control Order - PROVIDED that the device has already been accessed with the appropriate needle set PRIOR to transport. These privileges are delineated in the current publication of the SCDHEC: EMS and Trauma Certification Skills List.

Other devices - e.g. Epidural Catheters - are approved for TRANSPORT ONLY. The Paramedic MAY NOT utilize this catheter to administer ANY medication during transport and the device MAY NOT BE MANIPULATED by EMS personnel.

Effective November 2013, The Medical Control Committee was requested to address the issue of Basic EMTs to administer sublingual Nitroglycerin (NTG) for patients experiencing chest pain. It has been universally accepted that EMTs may assist the administration of NTG to patients who already have NTG prescribed. It is further approved and authorized for EMTs to initiate NTG to the patient utilizing the EMS stock supply and acting under their local Medical Control's signed and dated standing orders.

Effective in 1997, Paramedics may utilize the Per Rectal route of drug administration in certain patients - provided the Paramedic has received In-Service Training on the method and technique of rectal administration, and provided that the route is approved by the local Medical Control Physician for that service. The utilization of the Per Rectal route of administration for Diazepam in adult patients was approved in 1999.

Initiation of the Drug Assisted Intubation Protocol no longer requires Direct On-Line Medical Control



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authorization. However, Direct On-Line Medical Control should be established as soon as feasible without interfering with the care of the patient.

In addition to changes in the Drug Assisted Intubation protocols, the Medical Control Committee, in conjunction with the DHEC: Bureau of Drug Control, has relaxed the requirement for Direct On-Line Medical Control authorization prior to the administration of several Scheduled IVs Drugs -e.g. Ketamine, Ativan and Valium. These may be initiated under Standing Order or Protocol - but still must be approved by the Local Medical Control Physician for the Service. The Paramedic should make every reasonable effort to contact Medical Control prior to utilizing these agents - or immediately after utilizing these agents - provided that this does not interfere with the appropriate delivery of care to the patient. The paramedic must still obtain a signature for administration of Class IIIs and IVs by the receiving physician or Medical Control Physician.

Also, during 2000, the Department has also approved the transport of patients on various "Interfacility Drugs" and in so doing has eliminated the previous "Interfacility Drug List." These drugs were approved because the Department agreed that they may be necessary for continued patient care during transport - rather than for the sake of convenience. The interfacility transport drugs must be initiated at the sending facility and the patient must be stabilized on the medication prior to transport. The Paramedic in charge of the call is responsible for accepting the patient and for ensuring that the appropriate documentation, including the Interfacility Drug Transport Form(s): Part A and Part B (D-3485), has been completed. The Paramedic in charge of the call must also ensure that he/she has received adequate education and information on the Interfacility Drugs to be infused during transportation of the patient (i.e. side effects, adverse reactions, etc.) prior to accepting the patient for transfer. This information is to be documented on the Interfacility Drug Transport Form(s). Interfacility drugs must be supplied and initiated by the sending facility. An Interfacility Transport Form(s) must accompany the patient during transport between facilities to continue administration of the drug(s) not listed on the SCDHEC: EMS Formulary. It is necessary that all the information requested on the form(s) be completed if the Paramedic is to accept the patient and act within the required protocols for appropriate interfacility transport and treatment. A copy of the Interfacility Transport Form(s) must be attached to the ePCR.

Paramedics are not authorized to mix interhospital drugs. If it is anticipated intravenous therapy will run out during transport, an additional bag of fluid should be supplied, pre-mixed and piggybacked into the existing IV infusion before transport begins. Paramedics are not authorized to initiate any additional units of Packed Red Blood Cells (PRBCs) or other Blood Products, i.g. Fresh Frozen Plasma (FFPs), during transport. When Sodium Nitroprusside, Magnesium Sulfate, and/or Nitroglycerin are being administered by a volumetric infusion pump, a noninvasive electronic blood pressure monitor and cardiac monitor are required during transport. Patients being transported on Mannitol require an indwelling urinary catheter to be in place prior to transport. Drugs will be monitored in transit by the Paramedic based upon signed, written orders of the sending physician. **ONLY** Paramedics are authorized to maintain these drugs.

In November 2013, the Medical Control Committee made the decision in conjunction with approval of the SC EMS Advisory Council for Interfacility Medications to be administered by existing IV infusion(s). These medications are necessary, among other things, for continuity of care, for patient safety, or for patient comfort in the case of pain management. During transfer of the patient on an Interfacility Transport Drug, the Paramedic may titrate the medication(s) downward or up to the original dose prescribed, as needed. The medication(s) cannot be titrated past the original dose prescribed unless direction of on-line medical control or written order is obtained by a physician.



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In May 2015, after a successful pilot program, the Medical Control Committee made the decision in conjunction with approval of the SC Training Committee to allow use of a Broadpectrum Antibiotic(s) to treat suspected sepsis patients. The Local Medical Control Physician may allow the use of a Broadpectrum Antibiotic for treatment of sepsis as long as the following are met: (1) Prior to implementing, the EMS Agency has to complete the required training as established by the Department. (2) The patient must have a suspected infection source. (3) The patient meets at least two signs/symptoms of systemic inflammatory response syndrome (SIRS). (4) The receiving hospital(s) has 'sponsored' the sepsis protocol and agree to accept Blood Culture(s) and lab work drawn in the field. (5) In addition, the hospital(s) agree to share the lab results to the EMS agency for QA/QI.

It is the responsibility of the Local Medical Control Physician to ensure that the appropriate State and Federal Registrations are in place for each EMS Service he/she oversees. The Local Medical Control Physician must have separate and individual State and Federal Controlled Substance Registrations for each and every Service that he/she oversees and authorizes to utilize each class of controlled substances (State Law 44-53-290 § e).

It is the responsibility of the EMS Service to ascertain that it (the Service) is in compliance with the State Board of Pharmacy Licensing requirements and has the appropriate Pharmaceutical Dispensing Permit(s) for the Service. Applications for these permits may be obtained at:

SC LLR-Board of Pharmacy
110 Centerview Drive - Suite 306 (29210)
Post Office Box 11927
Columbia, SC 29211
Telephone: (803) 896-4700


Questions regarding this Formulary or Division Policy concerning these agents may be directed to:


SCDHEC: Division of EMS and Trauma
EMS Coordinator
2600 Bull Street
Columbia, SC 29201
(803) 545-4204

All Drugs are to be administration under On Line Medical Control direction or Standing Orders submitted and reviewed by the Department within the Food and Drug Administration (FDA) standards. Any drug(s) not listed on the EMS Drug Formulary must have prior, written approval to be administered by EMS personnel in the PreHospital setting by the Department.


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