SOUTH CAROLINA EMS FORMULARY

TABLE OF CONTENTS

INTRODUCTION

INTRODUCTION

The new State approved Prehospital and Interfacility drug protocols have been developed by the Division of EMS in conjunction with the Medical Control Committee using the most current drug standards available.

New drug standards were developed specifically to assist the Paramedic in carrying out his / her daily function as it relates to drug therapy and the standard by which Paramedics are trained and tested.

There are specific drugs contained in this document which require on-line medical control. These drugs are denoted by the statement: "**ONLY WITH ON-LINE MEDICAL CONTROL ORDER**." There can be no standing order for Morphine (CII) and Nubain as these are controlled drugs. Scheduled Drugs are indicated by the symbol: "C" in the upper right hand corner of the page.

Due to the potential for abuse, the Medical Control Committee has added Nubain to the "Controlled Substances List" for EMS. This change requires that Nubain be inventoried, stored, and protected as would any other narcotic (e.g. Morphine).

C

On-Line directions 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** (**ATTACHMENT A** - DHEC-DEMS Memo: 11 October 1994).

The EMS Advisory Council specifically clarified that ***"only drugs listed in this drug document are to be used in the field."*** Also, only the approved indications, dosages, and routes of administration in this document are to be used in the field and in all Paramedic training programs. Any other use of these drugs is not the approved standard and will be considered non-compliance. This document is designed to educate the Paramedic and the Medical Control Physician (on-line and off-line) on the drugs Paramedics are prepared to utilize in the field. It is not meant to interfere in the practice of medicine - and if better methods are devised, we request the medical director to submit a pilot project for test and evaluation (SEE **ATTACHMENT G** - Pilot Projects; **ATTACHMENT H** - Request for Addition or Deletion of Drug from State Approved Drug List and **ATTACHMENT I -** How to Request Formulary Changes.)

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. 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 ***Invasive / Implanted Device 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 ***Invasive / Implanted Device 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 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.

For endotracheal drug administration, medications should be administered at 2.0 to 2.5 times the recommended IV dose and should be diluted in 10 ml of Normal Saline. A catheter should be used for administration to hasten absorption. However, intravenous drug administration is still the preferred route. In the cardiac arrest situation, normal saline (or Lactated Ringer's) is the preferred infusion solution, although D5W remains acceptable.

In 1999, the Medical Control Committee approved the use of Rapid Sequence Induction (Conscious Sedation) prior to Endotracheal Intubation as an additional skill for the Paramedic who has been properly trained. Training for this procedure may be obtained through local In-Service courses directed by the Service's Medical Control Physician based upon the training module provided by DHEC-EMS, or through the Regional EMS Offices.

Initiation of the Rapid Sequence Induction (RSI) Protocol no longer requires Direct On-Line Medical Control Authorization. However, Direct On-Line Medical Control should be established as soon as feasible without interfering with the care of the patient. The drugs contained within the approved RSI Protocol are indicated by the symbol: "Rs" in the upper right hand corner of the page.

There is now a requirement for services who wish to utilize the Rapid Sequence Induction Protocol that a functioning program for Laryngeal Mask Airways (LMA) be in place. All EMS units that will function to provide RSI must have the appropriate LMA equipment on board and those paramedics who will participate in RSI must have appropriate training in the use of Laryngeal Mask Airways. **(See Attachment "J")**

In addition to changes in the Rapid Sequence Induction protocols, the Medical Control Committee, in conjunction with the Bureau of Drug Control - DHEC, has relaxed the requirement for Direct On-Line Medical Control authorization prior to the administration of several Scheduled Drugs - e.g. Ativan and Valium. These may be initiated under Standing Order or Protocol - but still must be approved by the 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.

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 (Interfacility Drug Transport Form) 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 transported with 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.

Interfacility drugs must be supplied and initiated by the sending facility. An interfacility transport form (**ATTACHMENT B**) must accompany the patient when the patient is to be administered an interfacility transport drug enroute between facilities. It is necessary that all the information requested on the form be completed if the Paramedic is to accept the patient and act within the required protocols for appropriate interfacility transport and treatment. (**ATTACHMENT C:** DHEC-DEMS Memo: 16 August 2000)

Paramedics are not authorized to mix interhospital transport 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 or during transport. Paramedics are not authorized to initiate any additional units of Whole Blood or Packed Cells during transport.

When sodium nitroprusside, magnesium sulfate, and/or nitroglycerine are being administered, a volumetric infusion pump and a noninvasive electronic blood pressure 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.

During transfer of the patient on an Interfacility Transport Drug, the Paramedic may reduce or discontinue the drug in the event of adverse reaction or complication or upon the direction of on-line medical control. The paramedic, however, **is not authorized** to increase the rate of administration of any drug listed as an Interfacility Transport Drug once the transport has begun - even upon on-line physician direction.

Authority for Paramedics to possess and utilize certain drugs and medications on an Ambulance; as defined in this document is found in State Law 44-61-130 (Authority of Emergency Medical Technicians **[ATTACHMENT D]**); and Sections 602 and 1105 of South Carolina Act 1118 of 1974 as amended **[ATTACHMENTS D2 and D3]**.

It is the responsibility of the Local Medical Control Physician to insure 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 controlled substances (i.e. Diazepam, Lorazepam, and Morphine) (State Law 44-53-290 § e)**(ATTACHMENT E)**. Other responsibilities incumbent upon the Service's Local Medical Control Physician are outlined in the DHEC-DEMS Memo of 16 October 1996 **(ATTACHMENT F).**

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 **(ATTACHMENT "K")** may be obtained by writing the State Board of Pharmacy at:

LLR-Board of Pharmacy
110 Centerview Drive - Suite 306 (29210)
Post Office Box 11927
Columbia, SC 29211-1927
Telephone: (803) 896-4700

The form may also be downloaded in Acrobat PDF Format from:
http://www.llr.state.sc.us/pol/pharmacy/pforms/ems.pdf

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

Mr. Jim Catoe, Deputy Director
Division of EMS - SC DHEC
2600 Bull Street
Columbia, SC 29201-1708
Telephone: (803) 545-4204
Fax: (803) 545-4212
E-mail: **catoejc@dhec.state.sc.us**

Other resources concerning this Formulary, Pilot Projects, and Procedures for Application for Pilot Project or Addition and Deletion of Drugs include the Division's Medical Control Committee **(ATTACHMENT M)** or the Regional EMS Offices **(ATTACHMENT M2)**

❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖ ❖

Alonzo W. Smith, Director
Division of EMS
SC DHEC

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS – SC DHEC

PRE-HOSPITAL EMS FORMULARY

ACETAMINOPHEN

Tylenol, Feverall, Panadol

INDICATIONS:	Fever reduction
ADMINISTRATION:	Oral Liquid, Rectal Suppository
DOSAGE:	
ADULT:	N/A
PEDIATRIC:	10 – 15 mg/kg PO / PR
THERAPEUTIC EFFECTS:	Relief of mild to moderate pain and fever reduction
RELATIVE CONTRAINDICATIONS:	Known allergy Should be used with caution in patients with liver and renal disease
SIDE EFFECTS:	None when administered in the therapeutic dosage range
SPECIAL NOTES / RESTRICTIONS:	

Initially Issued:
Revision Date:
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

ACTIVATED CHARCOAL USP

Actidose, CharcoAid

INDICATIONS:	☐ Poisoning ☐ Overdose ☐ Particularly effective in binding: ☐Aspirin ☐Amphetamines ☐Dilantin ☐Strychnine ☐Phenobarbital
ADMINISTRATION:	PO, NG tube
DOSAGE:	
ADULT:	1 gm/kg mixed with water
PEDIATRIC:	∇ 1 gm/kg mixed with water **ONLY WITH DIRECT MEDICAL ORDER**
THERAPEUTIC EFFECTS:	- It binds & absorbs ingested toxins still present in the gastro-intestinal tract following emesis. - Once bound, the combined complex is excreted
RELATIVE CONTRAINDICATIONS:	_ Should not be given before or together with ipecac, as it will absorb the ipecac & render it ineffective. _ Should **not** be given in cyanide poisoning. _ Of **no** value in poisoning due to: _ Methanol _ Caustic alkalis/acids _ Iron tablets _ Lithium
SIDE EFFECTS:	None, unless the airway cannot be adequately controlled.
SPECIAL NOTES / RESTRICTIONS:	Should only be given PO or NG in a slurry solution mixed with water / premixed.

Initially Issued: 06/30/93
Revision Date: 11/03/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

ADENOSINE
Adenocard

INDICATIONS:	❑ PSVT, SVT
ADMINISTRATION:	❑ Rapid IV, IO
DOSAGE:	
ADULT:	Initial dose **up to** 12 mg rapid IV bolus 12 mg within 1-2 minutes of continuing SVT – given rapid IV bolus 12 mg dosage may be repeated once in 1-2 minutes to maximum dose of 36 mg
PEDIATRIC:	0.1 mg/kg (over 1 to 2 sec) IV followed by rapid saline flush. Max initial dose 6 mg. 0.2 mg/kg within 1-2 minutes of continuing SVT – given rapid IV bolus. Max single dose 12 mg.
THERAPEUTIC EFFECTS:	Slows conduction time through the A-V node Interruption of reentry pathways through the A-V node Restoration of NSR in patients with PSVT
RELATIVE CONTRAINDICATIONS:	Second or third degree A-V block
SIDE EFFECTS:	Short-lasting first, second or third degree AV block Transient Asystole Various arrhythmias lasting only a few seconds
SPECIAL NOTES / RESTRICTIONS:	The onset of the effect is generally within less than one minute Reported adverse experiences are predictable, short lived and easily tolerated

Initially Issued: 06/30/93
Revision Date:: 06/30/93
Current Printing: 4.11.2007

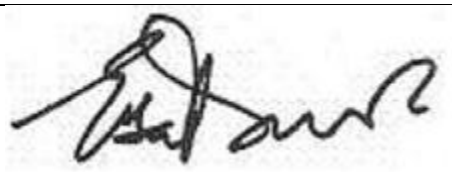
Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

ALBUTEROL SULFATE

Ventolin / Proventil

INDICATIONS:	❑ Acute bronchospasm ❑ Cardiac arrest associated with asthma
ADMINISTRATION:	❑ Handheld nebulizer OR Nebulizer Mask Or via ET Tube Connection Per Medical Order or Standing Order / Protocol.
DOSAGE:	**All patients regardless of age:** May receive a dosage of up to a maximum of 1cc (5mg) of aerosolized Albuterol with no on-line medical control. ∆ ***Repeat treatments of aerosolized Albuterol per Local protocol.***
ADULT:	∆ See Above
PEDIATRIC:	∆ See Above
THERAPEUTIC EFFECTS:	Decreases bronchospasm; Improves pulmonary function
RELATIVE CONTRAINDICATIONS:	Hypersensitivity to any of the contents of the inhalation solution
SIDE EFFECTS:	Tremor; Dizziness; Nervousness; Headache; Nausea; Tachycardia; Bronchospasm
SPECIAL NOTES / RESTRICTIONS:	***Repeat treatments of aerosolized Albuterol per Local protocol.*** ***When administering via endotracheal tube, the maximum dosage may be doubled to 2 cc. For Bronchospasm associated with COPD refractory to Albuterol, DUONEB may be administered via nebulizer. DUONEB is a premixed solution of 0.5 mg Ipratropium Bromide/3 mg Albuterol Sulfate. ONE DOSE MAY BE ADMINISTERED PER STANDING ORDERS. REPEAT DOSES REQUIRE DIRECT MEDICAL CONTROL ORDER.***

Initially Issued: 06/30/93
Revision Date: 02/14/05
Current Printing: 4.11.2007



Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

AMIODARONE
Cordarone

INDICATIONS:	❑ Shock resistant Ventricular Fibrillation or pulseless Ventricular Tachycardia. ❑ Unstable Ventricular Tachycardia ❑ Rapid atrial arrhythmias with impaired LV function
ADMINISTRATION:	❑ IV Push and by Continuous Infusion
DOSAGE:	
ADULT:	◊ Pulseless VT / VF ☐ Rapid 300 mg IV diluted 20 – 30 cc of D5W or NS ◊ Unstable VT ☐ 150 – 300 mg IV followed by IV infusion @ 1 mg / min ◊ Rapid atrial arrhythmias with impaired LV function ☐ 150 mg over 10 minutes
PEDIATRIC:	◊ Pulseless VT / VF ☐ 5mg/kg IV/IO Rapid IV bolus ◊ VT ☐ 5mg/kg IV/IO over 20 to 60 minutes Repeat does of 5mg/kg up to maximum dose of 15 mg/kg per day
THERAPEUTIC EFFECTS:	Class IIb agent for treatment of cardiac arrest due to shock-resistant VF or pulseless VT. Increases Action Potential and Refractory Period Reduces Ventricular Dysrhythmias
RELATIVE CONTRAINDICATIONS:	Hypersensitivity to any of the contents Cardiogenic Shock Marked Sinus Bradycardia Second or Third Degree AV Block (unless pacemaker is available) Do not routinely administer Amiodarone and Procainamide together
SIDE EFFECTS:	Hypotension Bradycardia AV Block Asystole PEA Hepatoxicity

SPECIAL NOTES / RESTRICTIONS:	See Attachment on Use of Guidelines and Amiodarone at end of Formulary. Serial use of calcium channel blockers, B-blockers, and primary antiarrhythmic agents should be discouraged because of the potential additive hypotensive, bradycardic, and proarrhythmic effects of these drugs in combination. This may be amended / altered / overridden by Local Medical Control based on individual situations.

Initially Issued: 05/2000
Revision Date: 05/2000
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

AMYL NITRITE

(Special Purpose: Toxicology)

INDICATIONS:	❑ Cyanide Poisoning
ADMINISTRATION:	❑ Inhalation only
DOSAGE:	
ADULT:	One or two inhalants of amyl nitrite should be crushed and inhaled for 15 to 30 seconds.
PEDIATRIC:	One inhalant should be crushed and inhaled for 15 to 30 seconds. (Smallest effective dosage should be used.)
THERAPEUTIC EFFECTS:	It is effective in the emergency management of cyanide poisoning. Amyl nitrite causes the oxidation of hemoglobin to a compound called methemoglobin. Methemoglobin reacts with the toxic cyanide ion to form cyanomethemoglobin, which can be enzymatically degraded.
RELATIVE CONTRAINDICATIONS:	No contraindications for amyl nitrite in the management of cyanide poisoning.
SIDE EFFECTS:	Headache and hypotension have been known to occur following inhalation.
SPECIAL NOTES / RESTRICTIONS:	Special Purpose Drug for TOXICOLOGY

Initially Issued: 05/14/98
Revision Date: 05/14/98
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

ASPIRIN

(Children's chewable aspirin)

INDICATIONS:	❑ Myocardial Infarction ❑ Chest pain suspicious of cardiac origin
ADMINISTRATION:	❑ Chew; P.O.
DOSAGE:	
ADULT:	**162mg to 324mg** Give two (2) to four (4) "children's" chewable Aspirin (81mg x 4 = 324mg)
PEDIATRIC:	**NOT APPROVED**
THERAPEUTIC EFFECTS:	Given as an early potent anticoagulant. Blocks formation of thromboxane A2. Thromboxane A2 causes platelets to aggregate and arteries to constrict. Reduce overall mortality of acute MI Reduce nonfatal re-infarction.
RELATIVE CONTRAINDICATIONS:	Active ulcer; Hypersensitivity to aspirin
SIDE EFFECTS:	Allergic reaction; Nausea/Vomiting; Indigestion; Heartburn; Tinnitus
SPECIAL NOTES / RESTRICTIONS:	A cost effective medication that can be given within minutes of arrival to the acute MI patient that may reduce overall mortality to almost the same degree as thrombolytic agents.

Initially Issued: 01/90
Revision Date: 09/02/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

ATROPINE SULFATE

INDICATIONS:	❑ Sinus bradycardia when accompanied by PVCs or hypotension ❑ 2nd or 3rd degree block ❑ Asystole ❑ Organophosphate poisoning ❑ Pulseless Electrical Activity (PEA) ❑ Pediatric: Symptomatic bradycardia secondary to AV block or vagal activity 2nd line after epinephrine for bradycardia due to poor perfusion or hypotension
ADMINISTRATION:	❑ IV, IO, ET IM (May double IV dosage with ET administration.)
DOSAGE:	
ADULT:	**1. Bradycardia** Δ 0.5 - 1.0 mg IV administration; repeat Q 3-5 minutes to a **total** of 0.04 mg/kg **2. Asystole & Slow Pulseless Electrical Activity (PEA)** Δ 1 mg IV administration Q 3-5 minutes to 0.04 mg/kg total dose **3. Organophosphate Poisoning:** Δ To block parasympathetic response: 1 - 2 mg; IV dose repeated Q 5 minutes until a decrease in secretions are observed or to total dose of 6 mg. Δ May be administered per standing orders
PEDIATRIC:	**1. Bradycardia** Δ 0.02 mg/kg (0.2 ml/kg) IV administration Δ Minimum 0.1 mg, Δ Maximum single dose 0.5 mg child; 1.0 mg adolescent. ❒ May be repeated once **2. Organophosphate Poisoning:** Δ To block parasympathetic response: Δ Children: 0.05 to 0.1 mg/kg Loading dose. Δ Adolescents: 2 mg Δ Repeat every 10 – 15 minutes until rales and bronchial secretions resolved. Δ May be administered per standing orders
THERAPEUTIC EFFECTS:	Blocks acetylcholine receptor sites Increase SA & AV node conduction May suppress PVCs secondary to bradycardia
RELATIVE CONTRAINDICATIONS:	Tachycardia Glaucoma Atrial fibrillation/atrial flutter with rapid ventricular response

SIDE EFFECTS:	-Tachycardia -Dry mouth -Thirst -Flushing of skin -Blurred vision -Headache -Pupillary dilatation -Urine retention
SPECIAL NOTES / RESTRICTIONS:	

Initially Issued: 06/30/93
Revision Date: 09/08/94
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

ATROVENT
IPRATROPIUM BROMIDE

INDICATIONS:	Bronchospasm, COPD
ADMINISTRATION:	Nebulizer
DOSAGE:	
ADULT:	500 mcg
PEDIATRIC:	500 mcg
THERAPEUTIC EFFECTS:	Inhibits ACTH receptor sites on bronchial smooth muscle
CONTRAINDICATIONS:	Hypersensitivity to Atrovent and/or Atropine and its derivatives
SIDE EFFECTS:	Tachycardia, palpitations, eye pain, urinary retention, UTI, Uticaria, Bronchitis
SPECIAL NOTES / RESTRICTIONS:	Can be mixed with Xopenex and Albuterol. **ONE DOSE PER STANDING ORDERS. REPEAT DOSES REQUIRE DIRECT MEDICAL ORDER.**

Initially Issued 06/30/93
Revision Date: 08/14/03
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

CALCIUM GLUCONATE (Tox)

(Special Purpose: Toxicology)

INDICATIONS:	❑ Hydrofluoric acid burns and exposure
ADMINISTRATION:	❑ Topical application, IV, or by nebulizer; rarely by direct injection
DOSAGE:	
ADULT:	❑ 10ml mixed with one ounce of water soluble lubricant for topical application, IV as ordered, or 2.5% solution nebulized with oxygen for inhalation exposure; 0.3-0.5 ml of 5% solution/cm^2 burn area injected directly for deep or subungual burns.
PEDIATRIC:	Same as adult
THERAPEUTIC EFFECTS:	Binds with fluoride ion, prevents or reverses hypocalcemia.
RELATIVE CONTRAINDICATIONS:	Not to be injected for GENERAL SKIN BURNS from THERMAL SOURCE.
SIDE EFFECTS:	Hypercalcemia, local tissue damage, pressure necrosis if injected under nail beds.
SPECIAL NOTES / RESTRICTIONS:	⊗ Special Purpose Utilization: TOXICOLOGY Infiltration of wound with local anesthetic should not be used, regional blocks may be necessary to provide adequate treatment of large or deeply penetrated burns. Ocular exposure should be treated with 1% aqueous irrigation following proparacaine anesthetic.

Initially Issued: 05/28/99
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

CALCIUM GLUCONATE

Kalcinate

INDICATIONS:	❑ Overdose (calcium channel blocker) ❑ Magnesium Sulfate drip toxicity ❑ Certain types of arrest, i.e. dialysis patients ❑ Known Hypocalcemia
ADMINISTRATION:	❑ IV, IO
DOSAGE:	
ADULT:	**5-20 ml** slow administration **ONLY WITH DIRECT MEDICAL ORDER**
PEDIATRIC:	**50 - 100 MG/KG** slow administration **ONLY WITH DIRECT MEDICAL ORDER**
THERAPEUTIC EFFECTS:	- Reverses overdose with Magnesium Sulfate or calcium channel blockers - Relieves some types of muscle spasm - Replaces electrolytes necessary for the contractile function of the heart
RELATIVE CONTRAINDICATIONS:	**Use with extreme caution in patients taking digitalis**
SIDE EFFECTS:	- Hypotension - Bradycardia - Arrhythmia - Cardiac arrest - Chalky or metallic taste - Feeling that a "wave of heat" is passing through the body
SPECIAL NOTES / RESTRICTIONS:	∇ Adult Dosage: 5-20 ml slow IV administration ∇ Pediatric Dosage: 50 - 100 mg/kg **ONLY WITH DIRECT MEDICAL ORDER** - Do not administer with Sodium Bicarbonate - Use smaller doses for patients on Digoxin

Initially Issued: 06/30/93
Revision Date: 11/03/96
Current Printing: 4.11.2007

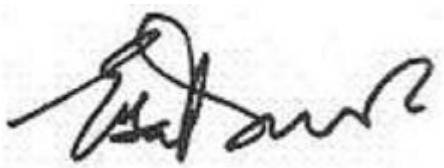
Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

COMBINATION DEXTROSE/SODIUM CHLORIDE

5% dextrose in 0.45% Sodium chloride (D51/2NS)

INDICATIONS:	☐ Heat exhaustion ☐ Diabetic disorders ☐ Impaired Renal Function (TKO) ☐ Cardiovascular function (TKO)
ADMINISTRATION:	☐ IV infusion, IO
DOSAGE:	
ADULT:	Dependent upon patient condition and situation being treated
PEDIATRIC:	**Used for Maintenance Only.** Dependent upon patient size and condition
THERAPEUTIC EFFECTS:	Provides electrolyte and sugar replacement
RELATIVE CONTRAINDICATIONS:	Need for Rapid fluid replacement indicated
SIDE EFFECTS:	Rare
SPECIAL NOTES / RESTRICTIONS:	**CLASSIFICATION:** Slightly hypertonic sugar and electrolyte solution ***Normal saline or lactated ringers is the preferred infusion solution during cardiac arrest, although D5W remains acceptable*** __ **Any combination of Dextrose and Sodium Chloride is approved.** Some other combinations include: - 5% Dextrose in 0.9% Sodium Chloride (D5NS) - 5% Dextrose in 0.2% Sodium Chloride (D5 0.2NS) - 3.3% Dextrose in 0.3% Sodium Chloride

Initially Issued: 06/30/93
Revision Date: 11/03/96
Current Printing: 4.11.2007



Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

DEXTROSE 5% IN WATER
D5W

INDICATIONS:	☐ IV access for emergency drugs (cardiac) ☐ For dilution of concentrated drugs for IV infusion ☐ Patients with actual or potential for volume overload ☐ Patients requiring sodium restriction
ADMINISTRATION:	☐ IV infusion, IO
DOSAGE:	
ADULT:	Generally administered to keep open (TKO)
PEDIATRIC:	Generally administered to keep open (TKO) vein for medications. **ONLY WITH DIRECT MEDICAL ORDER**
THERAPEUTIC EFFECTS:	Glucose nutrient solution
RELATIVE CONTRAINDICATIONS:	- As a main line for blood transfusion - For fluid replacement in hypovolemic states
SIDE EFFECTS:	Rare
SPECIAL NOTES / RESTRICTIONS:	**CLASSIFICATION:** Hypotonic Sugar Solution ***Normal saline or lactated ringers is the preferred infusion solution during cardiac arrest, although D5W remains acceptable*** ∇ In Pediatric Patients: **ONLY WITH DIRECT MEDICAL ORDER**

Initially Issued: 06/30/93
Revision Date: 03/97
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

DEXTROSE 50 %

$D_{50}W$, 50% Dextrose

INDICATIONS:	❑ Suspected hypoglycemia ❑ Altered LOC ❑ Coma/Seizure of unknown etiology
ADMINISTRATION:	❑ IO, IV through a free flowing line; Per Rectum in Pediatrics
DOSAGE:	
ADULT:	❑ 25.0 grams slow administration - initial dose ❑ May repeat doses based upon Medical Control Order or Protocols/Standing Orders for persistent hypoglycemia.
PEDIATRIC:	- 0.5 - 1.0 grams/kg, slow administration - **Dilute D50W 1:1 with sterile water, Ringer's Lactate, or Saline (2-4 ml/kg of D25 mixture)**
THERAPEUTIC EFFECTS:	Immediate source of glucose and water
RELATIVE CONTRAINDICATIONS:	- Intracranial hemorrhage - Known CVA
SIDE EFFECTS:	- Local irritation - May precipitate severe neurologic symptoms in alcoholics
SPECIAL NOTES / RESTRICTIONS:	- Draw blood sample OR do a D-stix prior to administration - Causes local tissue necrosis if IV infiltrates

Initially Issued: 06/30/93
Revision Date: 11/03/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

❖DIAZEPAM❖

Valium

CIV

C

INDICATIONS:	☐ Major motor seizures ☐ Status epilepticus ☐ Pre-medication prior to cardioversion, transcutaneous pacing ☐ Skeletal muscle relaxant ☐ Acute anxiety states ☐ Medication for combative patients and difficult intubations
ADMINISTRATION:	IV, IO, IM ∆ Per Rectum in Pediatrics and Adults
DOSAGE:	
ADULT:	❑ Slow IV administration; titrated to effect up to 15 mg (by Standing Order/Protocol) ❑ **IV Doses <u>GREATER THAN</u> 15 mg require Direct Medical Order** ❑ Rectal 10 mg maximum on initial dosage. May be repeated two times - not to exceed 30 mg Maximum Dose.
PEDIATRIC:	- IV 0.2 mg/kg titrate to effect, max dose 10mg or 0.75 mg/kg which ever is less - PR 0.5 mg/kg, may repeat 0.25 mg/kg in 10 minutes if needed
THERAPEUTIC EFFECTS:	- Suppresses the spread of seizure activity through the motor cortex of the brain - Effective skeletal-muscle relaxant
RELATIVE CONTRAINDICATIONS:	- Respiratory depression - Hypotension - ETOH or other sedative drugs - Pregnancy - Hypersensitivity to drug
SIDE EFFECTS:	- Respiratory/Cardiac arrest - Decreased LOC - Hypotension

SPECIAL NOTES / RESTRICTIONS:	❖ **This is a Schedule CIV Drug.** ❖ - Relatively short-acting when given IV; seizure activity may reoccur; additional doses may be required - No mixing with other drugs because of precipitation - After administration patient must be closely monitored with vital signs taken and recorded Q 5-10 minutes if possible • **IV Doses <u>GREATER THAN</u> 15 mg require Direct Medical Order** • **Iatrogenic dose related complications may be improved with reversal using Flumazenil.** • CANA Autoinjector may be used one time only without Medical Control Authorization in bioterrorism incidents With suspected nerve agent present. • Paramedic members of the state's COBRA teams and State certified paramedics are authorized to use the Autoinjector in those instances when a nerve agent is suspected. • The CANA Autoinjector delivers a 10MG dose via IM route.

Initially Issued: 06/30/93
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

DILTIAZEM
Cardiazem

INDICATIONS:	❑ Rate Control in Refractory Atrial Fibrillation and SVT
ADMINISTRATION:	❑ IV Bolus and Drip, IO
DOSAGE:	
ADULT:	∇ 20 - 25 mg Bolus Dose ∇ 10 mg/Hr infusion - titrated to effect
PEDIATRIC:	**NOT APPROVED**
THERAPEUTIC EFFECTS:	The therapeutic effects of Diltiazem appear related to its ability to inhibit the influx of calcium ions during membrane depolarization of cardiac and vascular smooth muscle. These effects may be seen as slowing of conduction times at the SA or AV nodes.
RELATIVE CONTRAINDICATIONS:	Concurrent or Recent use of Beta Blockers
SIDE EFFECTS:	Hypotension; Heart Block
SPECIAL NOTES / RESTRICTIONS:	

Initially Issued: 10/10/96
Revision Date: 10/10/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

DIPHENHYDRAMINE
Benadryl

INDICATIONS:	❑ Anaphylaxis ❑ Allergic reactions ❑ Urticaria ❑ Extrapyramidal reaction
ADMINISTRATION:	❑ IV, deep IM, IO
DOSAGE:	
ADULT:	Up to 50 mg slow administration - initial dose Δ Up to 100 mg total dose **ONLY WITH DIRECT MEDICAL ORDER**
PEDIATRIC:	Up to 1 mg/kg slow administration - initial dose Δ Up to 2 mg/kg total dose **ONLY WITH DIRECT MEDICAL ORDER**
THERAPEUTIC EFFECTS:	-Inhibits histamine release and effects -Mild sedative -Inhibits motion sickness
RELATIVE CONTRAINDICATIONS:	-Asthma -COPD -Pregnancy -Nursing mothers -Acute glaucoma
SIDE EFFECTS:	-Sedation -Dries bronchial secretions -Blurred vision -Headache -Palpitations
SPECIAL NOTES / RESTRICTIONS:	★ Up to 100 mg total dose - **ADULTS** ★ Up to 2 mg/kg total dose - **PEDIATRICS** ****DIRECT MEDICAL ORDER REQUIRED****

Initially Issued: 06/30/93
Revision Date: 09/08/94
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

DOBUTAMINE
Dobutrex

INDICATIONS:	☐ Cardiogenic shock ☐ Short term management of CHF
ADMINISTRATION:	❑ IV infusion, IO
DOSAGE:	
ADULT:	2.0 to 20 mcg/kg/min
PEDIATRIC:	2.0 to 20 mcg/kg/min
THERAPEUTIC EFFECTS:	- Improves cardiac output & renal blood flow with little systemic arterial constriction - Increases cardiac contractility - Increases conduction velocity - Relatively little effect on heart rate
RELATIVE CONTRAINDICATIONS:	Hypovolemia (Uncorrected)
SIDE EFFECTS:	- Tachycardia - Palpitations - Hypertension
SPECIAL NOTES / RESTRICTIONS:	- Generally used secondary to Dopamine - Monitor BP closely

Initially Issued: 06/30/93
Revision Date: 06/30/93
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

DOPAMINE
Intropin

INDICATIONS:	❑ Cardiogenic shock associated with hypotension
ADMINISTRATION:	❑ IV infusion, IO
DOSAGE:	
ADULT:	2-5 mcg/kg/min initially, up to 20 mcg/kg/min titrated to B/P
PEDIATRIC:	2-5 mcg/kg/min initially, up to 20 mcg/kg/min titrated to B/P
THERAPEUTIC EFFECTS:	- Increases perfusion & BP by increasing cardiac output & systemic arterial pressure while dilating vessels to the heart, brain & kidneys - Depending on dose; stimulates alpha, beta, & dopamine receptor sites
RELATIVE CONTRAINDICATIONS:	- Hypovolemic shock where complete fluid resuscitation has not occurred. - Uncorrected tachydysrhythmias or VF
SIDE EFFECTS:	- Tachydysrhythmias - Ectopy - Headache - Angina - Nausea/Vomiting
SPECIAL NOTES / RESTRICTIONS:	- Titrate according to blood pressure - Range is 2-20 mcg/kg/min

Initially Issued: 06/30/93
Revision Date: 06/30/93
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

EPINEPHRINE

Adrenalin

INDICATIONS:	☐ Ventricular Fibrillation/Pulseless Ventricular Tachycardia ☐ Asystole ☐ Pulseless Electrical Activity (PEA) ☐ Anaphylaxis ☐ Bronchospasm ☐ Croup
ADMINISTRATION:	☐ SQ, IV, ET, IO, IM **MAY GIVE CONTINUOUS IV INFUSION ONLY WITH DIRECT MEDICAL ORDER** ☐ NEBULIZED
DOSAGE:	
ADULT:	❒ **1. Bronchospasm** Up to 0.5 mg **SQ** ***(1:1000)*** Q 15-30 min. x 3 total doses ❒ **2. Generalized Urticaria** ***1:1000*** solution, **SQ** 0.3 - 0.5 ml ❒ **3. Anaphylaxis (In association with hypotension)** Up to 0.5 mg of a 1:10,000 solution IV only if medical control contact is not possible or feasible in the situation. ✪ **In anaphylaxis the reason for not contacting medical control must be documented.** ⌦ **Any dose above 0.5 mg. ONLY WITH DIRECT MEDICAL ORDER** ❒ **4. Asystole or Pulseless Electrical Activity (PEA)** Standard adult protocol (1:10,000) 1 mg IV Q 3-5 minutes ❒ ET dose 2.0 - 2.5 mg, Q 3-5 minutes ❒ V Fib/Pulseless V Tach 1 mg IV push, repeat every 3 to 5 minutes
PEDIATRIC:	❒ **1. Bronchospasm** 0.01 mg/kg **SQ** up to 0.3 mg Q 15-30 minutes to 3 total doses ***(1:1,000)*** ❒ **2. Bradycardia** 0.01 mg/kg IV or IO Q 3-5 min. (1:10,000) (0.1 ml/kg) ❒ ET dose 0.1 - 0.2 mg/kg, (0.1 - 0.2 ml/kg, ***1:1,000***) Q 3-5 minutes ❒ **3. Asystole or Pulseless Electrical Activity (PEA)** 0.01 mg/kg IV or IO initially (0.1 ml/kg, 1:10,000) Subsequent doses 0.1 - 0.2 mg/kg IV or IO ***(1:1,000)*** ❒ ET dose 0.1 - 0.2 mg/kg, (0.1 - 0.2 ml/kg, ***1:1,000***) Q 3-5 minutes **Continued on Next Page**

PEDIATRIC:	❒ **4. Anaphylaxis (In association with hypotension)** ∆ Up to 0.01 mg/kg **IV** (1:10,000) **ONLY WITH DIRECT MEDICAL ORDER** ∆ Maximum dose is 0.5 mg IV **ONLY WITH DIRECT MEDICAL ORDER** ❒ **5. Croup** The dosing for 1:1000 nebulized epinephrine is 0.5 ml/kg. (2.5 ml maximum dose of epinephrine if less that 4 years old and 5.0 ml maximum dose if greater than 5 years old. Then add this to 3cc of normal saline. Give every 1-2 hours.
THERAPEUTIC EFFECTS:	- Increased systemic vascular resistance - Increased arterial B/P - Increased heart rate - Increased coronary and cerebral blood flow - Increased myocardial contraction - Increased myocardial O_2 demand - Increased automaticity
RELATIVE CONTRAINDICATIONS:	- There are **no** contraindications to the use of epinephrine in the situation of cardiac arrest
SIDE EFFECTS:	- Palpitations - Hypertension - Dysrhythmias - Anxiety - Tremors
SPECIAL NOTES / RESTRICTIONS:	- Can be inactivated by alkaline solutions - Will increase myocardial oxygen demand; provide patient with high-flow oxygen - **MAY GIVE CONTINUOUS IV INFUSION ONLY WITH DIRECT MEDICAL ORDER** - **In anaphylaxis the reason for not contacting medical control must be documented.** ⊠ **Any dose above 0.5 mg. may be administered ONLY WITH DIRECT MEDICAL ORDER**

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 06/30/93
Revision Date: 09/25/2006
Current Printing: 4.11.2007

ETOMIDATE
Amidate

Rs

INDICATIONS:	❑ For use in RSI protocol – for anesthesia induction.
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	◊ .3mg/kg
PEDIATRIC:	◊ .3mg/kg
THERAPEUTIC EFFECTS:	Hypnotic drug (no analgesic activity)
RELATIVE CONTRAINDICATIONS:	Known sensitivity to drug
SIDE EFFECTS:	Transient venous pain, skeletal muscle movement
SPECIAL NOTES / RESTRICTIONS:	

Initially Issued: 08/2002
Revision Date:
Current Printing: April 11, 2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

FLUMAZENIL
Romazicon

INDICATIONS:	❑ **Reversal of acute side effects of Benzodiazepines (Valium / Ativan / Versed) limited to iatrogenic causes only with on-line medical control. (*Iatrogenic*** - Resulting from, or in the course of, treatment or diagnostic procedures. Condition caused by medical personnel or procedures or through exposure to the environment of a health care facility.**)**
ADMINISTRATION:	❑ IV Push
DOSAGE:	
ADULT:	1. IVP over 15 seconds for conscious sedation reversal; 0.2 mg initially then wait 45 sec. Δ If desired level of consciousness not attained, repeat 0.2 mg over 15 seconds IVP wait 45 seconds--may repeat this cycle to total of 1 mg (5 cycles). Δ If successful, then re-sedation OCCURS, may repeat above cycle again at 20 minute intervals **not to exceed total 3 mg in one hour.** 2. Benzodiazepine overdose reversal: Δ 0.2 mg over 30 seconds, wait as above 30 seconds. Δ 0.3 mg over 30 seconds, wait as above 30 seconds Δ 0.5 mg over 30 seconds, wait 30 seconds **Total cumulative - 3 mg.** Do not rush administration. Secure airway.
PEDIATRIC:	**NOT APPROVED**
THERAPEUTIC EFFECTS:	Benzodiazepine Antagonist
RELATIVE CONTRAINDICATIONS:	- Known hypersensitivity. - Patients given Benzodiazepine for the control of life threatening conditions. (E.g. control ICP, status epilepticus.) Δ Risk of seizure greatest if Benzodiazepine used is long term. Δ Risk of seizure if undergoing concurrent major sedative-hypnotic drug withdrawal; recent therapy with parenteral Benzodiazepine concurrent TCA overdose, those exhibiting seizure activity prior to attempt of reversal. - Caution in patients with known raised ICP due to risk of seizure and withdrawal reaction (vomiting).

SIDE EFFECTS:	- Seizures - Return of Sedation
SPECIAL NOTES / RESTRICTIONS:	This agent is **approved ONLY** for use in treatment of iatrogenic **sedation** secondary to benzodiazepine therapy. ΔΔ This agent is **specifically NOT approved** for use in treatment of self-administered (or "street level") Valium or benzodiazepine overdose.

Initially Issued: 10/10/96
Revision Date: 10/10/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

FUROSEMIDE

Lasix

INDICATIONS:	❑ Pulmonary edema ❑ CHF
ADMINISTRATION:	❑ IV, IM, IO
DOSAGE:	
ADULT:	- 40 mg slow administration (Higher dose per local protocol) – Up to 300 mg total dose ****DIRECT MEDICAL ORDER REQUIRED for Maximum Dose Administration****
PEDIATRIC:	– Up to 2 mg/kg slow administration ****DIRECT MEDICAL ORDER REQUIRED****
THERAPEUTIC EFFECTS:	- Vasodilation - Diuresis - Inhibits sodium & chloride reabsorption in the kidneys
RELATIVE CONTRAINDICATIONS:	- Pregnancy - Dehydration - Hypovolemic states - Hypokalemia
SIDE EFFECTS:	- Dehydration - Dysrhythmias - Nausea/Vomiting
SPECIAL NOTES / RESTRICTIONS:	☒ Maximum Doses may be given **ONLY WITH DIRECT MEDICAL ORDER**

Initially Issued: 06/30/93
Revision Date: 09/08/94
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

GLUCAGON USP
GlucaGen

INDICATIONS:	❑ Hypoglycemia ❑ Beta blocker overdose ❑ Calcium channel overdose
ADMINISTRATION:	❑ SQ, IM, IV, IO
DOSAGE:	
ADULT:	0.5 - 1.0 mg
PEDIATRIC:	0.1 mg/kg Maximum dosage = 1.0 mg
THERAPEUTIC EFFECTS:	- Causes breakdown of glycogen to glucose; inhibits glycogen synthesis; elevates blood glucose level
RELATIVE CONTRAINDICATIONS:	- Hypersensitivity - Insulinoma - Pheochromocytoma
SIDE EFFECTS:	- Relatively free of adverse reactions except for occasional nausea and vomiting - Urticaria, respiratory distress and hypotension have been reported
SPECIAL NOTES / RESTRICTIONS:	May be repeated 1-2 times if no response in 15-20 minutes

Initially Issued: 06/30/93
Revision Date: 06/30/93
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

HEPARIN LOCK FLUSH

INDICATIONS:	❑ Alternate method for keeping the vein open in the acutely ill patient ❑ To be used as a flush, not as a drug
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	- 10 units initially - Less than 100 units total dose
PEDIATRIC:	**NOT APPROVED**
THERAPEUTIC EFFECTS:	Clears intermittent infusion set to keep vein open
RELATIVE CONTRAINDICATIONS:	**Not** given to flush out or to irrigate clotted IV lines
SIDE EFFECTS:	Bleeding
SPECIAL NOTES / RESTRICTIONS:	Use **only** when the set is placed or after drug infusion. This agent is **not** given to flush out or to irrigate clotted IV lines

Initially Issued: 06/30/93
Revision Date: 06/30/93
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

HIGH DOSE HEPARIN

INDICATIONS:	❑ Patients with 12 lead EKG proven STEMI who: o are expected to undergo PTCA or surgical revascularization (Class I) o are expected to receive TPA or Retavase (Class IIa) ❑ **To be administered ONLY by direct order of medical control physician.**
ADMINISTRATION:	❑ IV only
DOSAGE:	
ADULT:	- Up to Maximum of 5,000 IU for 12 lead EKG proven STEMI - Patients that meet criteria listed under Indications.
PEDIATRIC:	**NOT APPROVED**
THERAPEUTIC EFFECTS:	Heparin is an anticoagulant that directly inhibits thrombin.
RELATIVE CONTRAINDICATIONS:	Same as those on checklist for fibrinolytic therapy.
SIDE EFFECTS:	No immediate side effects except hypersensitivity reaction. Late side effects include minor or major hemorrhage, including intracerebral hemorrhage.
SPECIAL NOTES / RESTRICTIONS:	**High dose Heparin to be administered ONLY after 12 lead EKG and ONLY with DIRECT medical control order.**

Initially Issued: 07/20/05
Revision Date:
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

IBUPROFEN

Motrin, Advil, Pedia-Profen

INDICATIONS:	❑ Pain, Fever, Inflammation
ADMINISTRATION:	❑ P.O.
DOSAGE:	
ADULT:	**NOT APPROVED (IN PATIENTS > 12 YEARS OF AGE)**
PEDIATRIC:	10 mg/kg
THERAPEUTIC EFFECTS:	Analgesia, Antipyretic, Anti-inflammatory
RELATIVE CONTRAINDICATIONS:	Active ulcer; < 2 months of age; Dose Within Previous 6 hours; Known Bleeding Disorders
SIDE EFFECTS:	Allergic reaction; Nausea/Vomiting; Indigestion; Heartburn;
SPECIAL NOTES / RESTRICTIONS:	Not Approved for use in patients > 12 years of age Not Approved for Pediatrics younger than 2 months of age

Initially Issued: 05/08/97
Revision Date: 05/08/97
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

IPECAC SYRUP
Syrup of Ipecac

INDICATIONS:	❑ Certain poisons and overdoses
ADMINISTRATION:	❑ PO
DOSAGE:	
ADULT:	15 to 30 ml followed by several glasses of warm water or carbonated soda ****DIRECT MEDICAL ORDER REQUIRED****
PEDIATRIC:	– Less than 6 months old - **NOT APPROVED** – 6 - 12 months 5 – 10 ml – 1 – 12 years 15 ml – 12 years 30 ml ****DIRECT MEDICAL ORDER REQUIRED****
THERAPEUTIC EFFECTS:	Induces vomiting and thereby empties the stomach of ingested substances
RELATIVE CONTRAINDICATIONS:	- Impaired LOC: Stupor; Coma - Seizures - AMI - Pregnancy - Ingestion of strong acids/alkalis or petroleum products - Strychnine or iodides - Children under one year
SIDE EFFECTS:	Possibility of aspiration
SPECIAL NOTES / RESTRICTIONS:	☒ **ONLY WITH DIRECT MEDICAL ORDER** - Constantly monitor the patient's airway during and following emesis - Walking should be encouraged

Initially Issued: 06/30/93
Revision Date: 09/08/94
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

LABETALOL

Normodyne, Trandate

INDICATIONS:	❑ Control of Blood Pressure in Severe Hypertension
ADMINISTRATION:	❑ IV Push (Slow); IV Infusion; IO
DOSAGE:	
ADULT:	**IV PUSH:** Δ Initial: 10 - 20 mg (0.25 mg/kg) IV Slow (over at least 2 minutes) Δ Repeat: May administer additional IV Slow boluses at 10 minute intervals - to a **Maximum of 300 mg IV** ✪ **MAY GIVE IV BOLUS ONLY WITH DIRECT MEDICAL ORDER** **IV DRIP:** Δ 2 - 8 mg/min maintenance ✪ **MAY GIVE CONTINUOUS IV INFUSION ONLY WITH DIRECT MEDICAL ORDER**
PEDIATRIC:	**IV PUSH:** Δ 0.2 - 0.5 mg/kg/dose to a MAXIMUM of 20 mg/dose as intermittent bolus (slow). ✪ **MAY GIVE PEDIATRIC IV BOLUS ONLY WITH DIRECT MEDICAL ORDER** **IV DRIP:** Δ 0.2 - 1.0 mg/kg/hr ✪ **MAY GIVE CONTINUOUS IV INFUSION ONLY WITH DIRECT MEDICAL ORDER**
THERAPEUTIC EFFECTS:	Dose related decrease in Blood Pressure without reflex tachycardia and without significant decrease in Heart Rate. Also has less decrease in cerebral perfusion pressure than with nitroprusside.
RELATIVE CONTRAINDICATIONS:	Asthma; Cardiogenic Shock; Cocaine Induced Hypertension; Severe Bradycardia; Hypotension; Heart Block - Greater than 1st Degree;
SIDE EFFECTS:	Mild & Transient Hypotension; Postural Hypotension if patient allowed upright within first 3 hours.

SPECIAL NOTES / RESTRICTIONS:	∇ IV Push dosage MUST be administered slowly (over at least 2 minutes) with frequent (Q 5 minute) Blood Pressure monitoring. ∇ **Maximum of 300 mg may be given as IV Bolus Administration in adults.** ✪✪ **MAY GIVE IV BOLUS or CONTINUOUS IV INFUSION ONLY WITH DIRECT MEDICAL ORDER**

Initially Issued: 05/08/97
Revision Date: 05/08/97
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

LACTATED RINGERS
(LR)

INDICATIONS:	❑ Hypovolemic shock ❑ Dehydration ❑ Burns
ADMINISTRATION:	❑ IV infusion, IO
DOSAGE:	
ADULT:	As indicated by the patient condition and situation being treated
PEDIATRIC:	As indicated by the patient condition and situation being treated
THERAPEUTIC EFFECTS:	- Source of electrolytes - Increase circulating volume
RELATIVE CONTRAINDICATIONS:	- Congestive heart failure - Renal failure
SIDE EFFECTS:	Rare
SPECIAL NOTES / RESTRICTIONS:	**CLASSIFICATION: Isotonic crystalloid** **Normal saline or lactated ringers is the preferred infusion solution during cardiac arrest, although D5W remains acceptable**

Initially Issued: 06/30/93
Revision Date: 06/30/93
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

LIDOCAINE
Xylocaine

INDICATIONS:	❑ Ventricular tachycardia ❑ Ventricular fibrillation ❑ Malignant PVCs ❑ Combative Head Injuries (before Intubation)
ADMINISTRATION:	IV, IV infusion, ET, IO, Jelly
DOSAGE:	
ADULT:	❒ **1. VF & pulseless VT** ∇ 1.5 mg/kg rapid IV bolus, repeated Q 3 to 5 minutes; ∇ **Maximum loading dose of 3 mg/kg**; ∇ Loading dose followed by maintenance infusion of 2 to 4 mg/min ❒ **2. VT with pulse, PVCs** ∇ 1 - 1.5 mg/kg rapid IV bolus; ∇ Followed by 0.5 - 0.75 mg/kg IV Q 5-10 minutes to **maximum dose of 3 mg/kg;** ∇ Followed by 2-4 mg/min maintenance infusion
PEDIATRIC:	❒ 1.0 mg/kg loading dose ❒ 20 - 50 mcg/kg/min maintenance dose
THERAPEUTIC EFFECTS:	- Suppresses ventricular ectopic activity - Elevates the threshold for ventricular fibrillation - Suppresses re-entry dysrhythmias
RELATIVE CONTRAINDICATIONS:	- PVCs in conjunction with bradycardia - High degree AV blocks - Ventricular escape rhythms - Allergy to ***-caine*** drugs
SIDE EFFECTS:	- Hypotension - Decreased LOC - Irritability - Muscle twitching - Eventually seizures

SPECIAL NOTES / RESTRICTIONS:	**Maintenance infusion should be decreased by 50% for patients in CHF, shock, or over 70 years of age** _ **Xylocaine 2% jelly** may be used as a lubricant for the NG or ET tube for intubation of the conscious patient. It is not intended for repeated use or for use on areas of denuded tissue. Possible side effect is a localized allergic reaction. Serial use of calcium channel blockers, B-blockers, and primary antiarrhythmic agents should be discouraged because of the potential additive hypotensive, bradycardic, and proarrhythmic effects of these drugs in combination. This may be amended / altered / overridden by Local Medical Control based on individual situations.

Initially Issued: 06/30/93
Revision Date: 09/11/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

❖LORAZEPAM❖

Ativan

CIV

C

INDICATIONS:	❑ Major Motor Seizures ❑ Status epilepticus ❑ Pre-Medication prior to cardioversion or Transcutaneous Pacing ❑ Skeletal muscle relaxant ❑ Acute Anxiety States ❑ Medication for combative patients and difficult intubations
ADMINISTRATION:	IV, IO, IM
DOSAGE:	
ADULT:	∇ Up to total of 4.0 mg slow administration (Over 2 - 5 minutes) **Doses <u>GREATER THAN</u> 4 mg require Direct Medical Order**
PEDIATRIC:	∇ Up to total of 0.1 mg/kg slow administration (Over 2 - 5 minutes) **Contact medical control for additional doses!** ∇ **Doses <u>GREATER THAN</u> 4 mg require Direct Medical Order**
THERAPEUTIC EFFECTS:	- Suppresses the spread of seizure activity through the motor cortex of the brain - Effective skeletal muscle relaxant
RELATIVE CONTRAINDICATIONS:	➢ Respiratory depression ➢ Hypotension ➢ ETOH or other sedative drugs ➢ Pregnancy ➢ Hypersensitivity to the drug
SIDE EFFECTS:	Δ Respiratory / Cardiac Arrest Δ Decreased LOC Δ Hypotension

SPECIAL NOTES / RESTRICTIONS:	❖ **This is a Schedule CIV Drug.** ❖ ➢ Repeat doses may be given: **ONLY WITH DIRECT MEDICAL ORDER** **<u>Lorazepam MAY BE initiated by Standing Order or Protocol. It is RECOMMENDED – where feasible – that On-Line Medical Control be obtained prior to initiation – but this should not supercede the appropriate care of the patient</u>** ▽ **Doses <u>GREATER THAN</u> 4 mg require Direct Medical Order** - Relatively short-acting when given IV; seizure activity may reoccur; additional doses may be required. - No mixing with other drugs because of precipitation. - After administration, patient must be closely monitored with vital signs taken and recorded Q 5 - 10 minutes if possible. ▽ **iatrogenic dose related complications may be improved with reversal using Flumazenil.**

Initially Issued: 10/10/96
Revision Date: 10/10/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

MAGNESIUM SULFATE
Magnesium

INDICATIONS:	❑ Refractory VT/VF unresponsive to lidocaine, Torsades de Pointes, especially in the setting of tricyclic antidepressant overdose not resolved by sodium bicarbonate and lidocaine. ❑ Digitalis induced ventricular arrhythmias. ❑ As an anticonvulsant in eclampsia. ❑ Suspected hypomagnesemia
ADMINISTRATION:	❑ IV Push in cardiac arrest. IO ❑ Over 1-2 minutes when patient is not in arrest.
DOSAGE:	
ADULT:	– 1-2 Grams IV up to 15 Grams
PEDIATRIC:	– 25 – 50 mg/kg to max 2 gm over several minutes for arrhythmias 15 – 20 minutes for hypomagnesemia
THERAPEUTIC EFFECTS:	Essential for the activity of many enzymes. Plays an important role in neurotransmission and muscular excitability. Overall is a CNS and muscular depressant.
RELATIVE CONTRAINDICATIONS:	Hypermagnesemia, hypocalcemia, anuria, heart block, active labor
SIDE EFFECTS:	Bradycardia, hypotension, hyporeflexia, diaphoresis and drowsiness, decreased respiratory rate, flaccid paralysis.
SPECIAL NOTES / RESTRICTIONS:	Magnesium insufficiency should be suspected in patients who use diuretics and in patients with poor dietary habits, poor nutrition, or poor dietary intake (such as may be seen in chronic alcohol abuse).

Initially Issued: 07/13/2000
Revision Date: 07/13/2000
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

METHYLENE BLUE

INDICATIONS:	❑ Treatment of cyanide poisoning and symptomatic methemoglobinemia (iatrogenic or accidental exposure to oxidizing agents)
ADMINISTRATION:	❑ IV, IO
DOSAGE:	**DIRECT MEDICAL ORDER REQUIRED**
ADULT:	1 mg/kg IV SLOWLY (over 10-15 minutes)
PEDIATRIC:	Same as adult dose, but must be used with extreme caution due to potential for producing methemoglobinemia.
THERAPEUTIC EFFECTS:	Reduces methemoglobin (ferric [Fe^{+3}] iron in methemoglobin to ferrous [Fe^{+2}] iron in normal hemoglobin.
RELATIVE CONTRAINDICATIONS:	Excessive methemoglobinemia in the treatment of cyanide or sulfide poisoning due to possible release of cyanide or sulfide back into cellular sites with subsequent toxicity. Patients with renal insufficiency or known allergy to methylene blue
SIDE EFFECTS:	❑ Excessive methemoglobinemia, as characterized by progressive and persistent cyanosis unresponsive to oxygen therapy and the appearance of chocolate brown color of the blood. ❑ Use of oxidizing agents may produce an acute hemolytic reaction in patients with glucose-6-phosphodehydrogenase (G6PD) deficiency. ❑ Blue-green urine ❑ May cause bladder irritation, nausea, vomiting, and diarrhea. Large doses may produce abdominal and precordial pain, dizziness, profuse sweating, fever, and/or mental confusion.
SPECIAL NOTES / RESTRICTIONS:	Rapid administration may produce increased methemoglobin formation, especially in the presence of other oxidizing agents. ****DIRECT MEDICAL ORDER REQUIRED****

Initially Issued: 05/28/99
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

❖MIDAZOLAM❖ C Rs

Versed
CIV

INDICATIONS:	❑ Major Motor Seizures ❑ Status epilepticus ❑ Pre-Medication prior to cardioversion or Transcutaneous Pacing ❑ Skeletal muscle relaxant ❑ Acute Anxiety States ❑ Medication for combative patients and difficult intubations
ADMINISTRATION:	❑ Slow IV, IM, IO
DOSAGE:	
ADULT:	- ***NON-RSI Indications:*** - 0.5 mg – 2.5 initial dose. - ***RSI Indications:*** - .02 mg/kg - .05 mg/kg initial dose - For initial administration dose of Versed, consider decreased dose if systolic BP is 80 – 100 mm **REPEAT DOSES OF VERSED MAY BE ADMINISTERED ONLY WITH DIRECT ONLINE MEDICAL ORDER.** - After successful intubation, airway control and additional IV, Versed may be administered based on patient effect up to a total of 10 MG IV.
PEDIATRIC:	- Not Indicated
THERAPEUTIC EFFECTS:	- Short-acting benzodiazepine CNS depressant - Short-term sedation - Postoperative amnesia
RELATIVE CONTRAINDICATIONS:	- Hypersensitivity to versed - Glaucoma - Shock - ETOH - Coma - Pregnancy - Renal Failure

SIDE EFFECTS:	- Apnea - Cardiac arrhythmias - Hypotension
SPECIAL NOTES / RESTRICTIONS:	- Impairs memory in 90% of patients. - **Flumazenil will reverse sedative effects.** **<u>RSI MAY BE initiated by Standing Order or Protocol. It is RECOMMENDED – where feasible – that On-Line Medical Control be obtained prior to initiation – but this should not supercede the appropriate care of the patient</u>** ➲100% QI / PI is required for ALL RSI runs.

Initially Issued: 05/13/99
Revision Date: 05/13/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

❖MORPHINE SULFATE❖

CII

C

INDICATIONS:	❑ AMI ❑ Acute pulmonary edema ❑ Combative Head Injuries (Before Intubation) ❑ Severe pain in selected situations ❑ Premedication for cardioversion, transcutaneous pacing
ADMINISTRATION:	❑ IV, IM, IO
DOSAGE:	
ADULT:	Initial dose 2 mg to 5 mg Dosing based upon Direct Medical Order ****DIRECT MEDICAL ORDER REQUIRED****
PEDIATRIC:	0.05 - 0.2 mg/kg Dosing based upon Direct Medical Order ****DIRECT MEDICAL ORDER REQUIRED****
THERAPEUTIC EFFECTS:	- CNS depressant - Peripheral vasodilation / venous pooling - Decreases sensitivity to pain
RELATIVE CONTRAINDICATIONS:	- Head injury - Hypotension - Asthma - COPD - Respiratory depression **not** caused by pulmonary edema - Undiagnosed abdominal pain - Hypersensitivity to the drug
SIDE EFFECTS:	- Respiratory depression - Hypotension - Bradycardia - Nausea/Vomiting

SPECIAL NOTES / RESTRICTIONS:	**This Schedule CII Controlled Substance may be administered:** 1. **ONLY WITH ON-LINE MEDICAL CONTROL ORDER IN THE PRE-HOSPITAL SETTING!** 2. **INTERFACILITY SETTING, MORPHINE ADMINISTRATION IS APPROVED BY DIRECT MEDICAL ORDER (Written Orders) FOR THE SPECIFIC PATIENT!** - Have Atropine/Narcan and respiratory assistance available - Monitor VS closely before & after administration - After administration patient must be closely monitored with vital signs taken and recorded Q 5-10 minutes if possible

Initially Issued: 06/30/93
Revision Date: 09/08/94
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

❖NALBUPHINE❖
Nubain

C

INDICATIONS:	❑ Moderate to severe pain
ADMINISTRATION:	❑ IV, IM, IO
DOSAGE:	
ADULT:	5 to 10 mg slow administration (10 mg/70 kg) ****DIRECT MEDICAL ORDER REQUIRED****
PEDIATRIC:	0.1 - 0.2 mg/kg IV (slow) or IM ****DIRECT MEDICAL ORDER REQUIRED****
THERAPEUTIC EFFECTS:	- CNS depression - Decreases sensitivity to pain
RELATIVE CONTRAINDICATIONS:	- Undiagnosed abdominal pain - Hypotension - Diminished LOC - Narcotics - Hypersensitivity to the drug
SIDE EFFECTS:	- Respiratory depression - Dizziness - Altered level of consciousness - Nausea - Common
SPECIAL NOTES / RESTRICTIONS:	May precipitate withdrawal syndrome in narcotic dependent persons due to antagonist properties **ONLY WITH DIRECT MEDICAL ORDER**

Initially Issued: 06/30/93
Revision Date: 11/03/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

NALOXONE
Narcan

INDICATIONS:	☐ Narcotic overdoses; i.e.: ☐ Morphine ☐ Demerol ☐ Heroin ☐ Dilaudid ☐ Paregoric ☐ Percodan ☐ Fentanyl ☐ Methadone ☐ Codeine ☐ Synthetic analgesic overdose; i.e.: ☐ Nubain ☐ Talwin ☐ Stadol ☐ Darvon/Darvocet
ADMINISTRATION:	❑ IV, IO, IM, SC, ET
DOSAGE:	
ADULT:	– 1-2 mg slow administration titrated to respirations
PEDIATRIC:	– 0.1 mg/kg for children up to 5 years old or 20 kg – 2.0 mg for children over 5 years or > 20 kg – may repeat every 2 – 3 minutes as needed
THERAPEUTIC EFFECTS:	Reverses most effects of nearly all narcotic and/or synthetic narcotic agents
RELATIVE CONTRAINDICATIONS:	- Hypersensitivity to the drug
SIDE EFFECTS:	- Vomiting with rapid administration - Ventricular dysrhythmias - Precipitate acute narcotic withdrawal syndrome - Seizures - Hypertension
SPECIAL NOTES / RESTRICTIONS:	- May reverse ETOH induced coma - Rapid onset, short acting - possible re-sedation

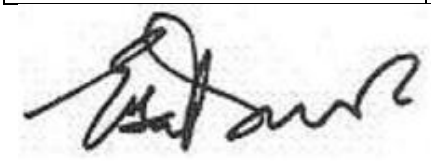
Initially Issued: 06/30/93
Revision Date: 09/08/94
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

NITROGLYCERIN

Nitro-Bid, Nitrostat, Nitro

INDICATIONS:	❑ Chest pain consistent with acute coronary symptoms. ❑ Pulmonary edema
ADMINISTRATION:	❑ Sprayed under tongue on mucous membrane or given sublingual ❑ Ointment paste applied to truncal skin
DOSAGE:	
ADULT:	**1. Spray** □ 0.4 mg/metered dose. □ **No more than 3 metered doses should be administrated in a 15 minute period. A 4th, and subsequent doses, may be administered PER STANDING ORDERS if chest pain persists and as long as systolic BP remains at 100 or greater.** **2. Sublingual** □ 1 tablet 0.3 - 0.4 mg sublingual □ **No more than 3 tablets should be administrated within a 15 minute period. A 4th, and subsequent tablets, may be administered PER STANDING ORDERS if chest pain persists and as long as systolic BP remains at 100 or greater.** **3. Ointment Paste** □ Apply in ½" to 1" thin layer to patient's skin by means of the dose measured applicator supplied with the tube □ **DO NOT RUB THE PASTE INTO THE SKIN**
PEDIATRIC:	**NOT APPROVED**
THERAPEUTIC EFFECTS:	Dilates coronary and systemic arteries
RELATIVE CONTRAINDICATIONS:	- Increased Intracranial Pressure (ICP) - Hypotension/Shock - Glaucoma - Use of VIAGRA within previous 24 Hours
SIDE EFFECTS:	- Headache - Dizziness - Hypotension
SPECIAL NOTES / RESTRICTIONS:	Monitor BP closely before & after administration ◊ **Should not be administered if erectile dysfunction drugs have been used in the previous 24 hours.**



Initially Issued: 06/30/93
Revision Date: 06/23/05
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

NITROUS OXIDE (50%) & OXYGEN (50%)

Nitronox

INDICATIONS:	❑ Moderate to severe pain ❑ Severe anxiety states
ADMINISTRATION:	❑ Inhalation
DOSAGE:	
ADULT:	Self-administered by mask
PEDIATRIC:	Self-administered by mask. **Must be old enough to self-administer.**
THERAPEUTIC EFFECTS:	Decreases sensitivity to pain
RELATIVE CONTRAINDICATIONS:	- Head injury - Chest injury - Abdominal pain - COPD - ETOH or drug intoxication
SIDE EFFECTS:	- Drowsiness - Dizziness - Nausea/Vomiting
SPECIAL NOTES / RESTRICTIONS:	Effects diminish within 2 to 5 minutes after removal of source.

Initially Issued: 06/30/93
Revision Date: 09/11/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

OXYTOCIN
Pitocin

INDICATIONS:	❑ Postpartum hemorrhage
ADMINISTRATION:	❑ IV infusion
DOSAGE:	
ADULT:	- 10 to 20 units in 500 or 1000 ml of NS/RL; slow administration titrated according to severity of bleeding & uterine response, **in postpartum females only**
PEDIATRIC:	**NOT APPROVED (UNLESS PATIENT IS POST PARTUM)**
THERAPEUTIC EFFECTS:	- Stimulates uterine smooth muscle to contract - Uterine vasoconstriction
RELATIVE CONTRAINDICATIONS:	- Presence of a second fetus - Previous cesarean section
SIDE EFFECTS:	- Uterine rupture - Anaphylaxis - Dysrhythmias - Nausea/Vomiting - Hypertension
SPECIAL NOTES / RESTRICTIONS:	_ **For use ONLY in FEMALE patients.** - Given **only** after baby & placenta are delivered - Overdose can cause uterine rupture - Vital signs & uterine tone should be monitored constantly - Do **not** give to patients taking vasopressors

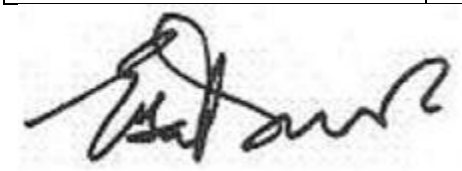
Initially Issued: 06/30/93
Revision Date: 11/03/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

PRALIDOXIME

2-Pam, Protopam Chloride
(Special Purpose: Toxicology)

INDICATIONS:	❑ Cholinergic crisis due to acetylcholinesterase inhibition caused by organophosphate toxicity (e.g. dichlorvos, dioxanthion, echothiophate iodide, endothion, fenthion, formothion, isoflurophate, malathion, methyl parathion, parathion, TEPP, diazinon). Poisoning by nerve agents having anticholinesterase activity.
ADMINISTRATION:	❑ IV, IM (if IV access not feasible)
DOSAGE:	
ADULT:	1 - 2 Gram, over 10-15 minutes in 100 cc NS. If not practicable or in the event of pulmonary edema, administer slowly as 5% solution in water over **not less than** 5 minutes.
PEDIATRIC:	20-40 mg/kg/dose over 10-15 minutes
THERAPEUTIC EFFECTS:	Reactivation of phosphorylated acetylcholinesterase. Reversal of nicotinic effects of acetylcholinesterase inhibition, particularly on skeletal muscle. Reversal of muscarinic effects of cholinesterase inhibition, usually additive with atropine.
RELATIVE CONTRAINDICATIONS:	Cholinergic crisis due to acetylcholinesterase inhibition by carbamate insecticides or other short acting cholinesterase inhibitors (physostigmine, neostigmine, etc.).
SIDE EFFECTS:	Occasional Sinus Tachycardia, laryngospasm, and muscle rigidity seen with too rapid injection. Occasional dizziness, headache, blurred vision, nausea, or diplopia (all of which may be related to the underlying poison as well).
SPECIAL NOTES / RESTRICTIONS:	**Special Purpose Drug for TOXICOLOGY** May be administered per standing order.



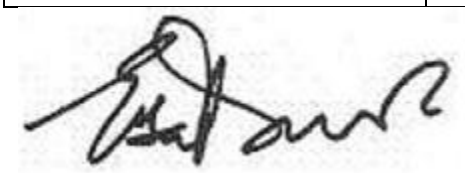
Initially Issued: 05/26/99
Revision Date: 05/26/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

PROCAINAMIDE

Procan, Pronestyl

INDICATIONS:	❑ PVCs refractory to lidocaine ❑ Ventricular tachycardia refractory to lidocaine ❑ Pediatric: symptomatic tachyarrhythmias not responsive to primary therapy
ADMINISTRATION:	❑ IV, IV infusion, IO
DOSAGE:	
ADULT:	- 20 mg/min slow IV push administration - Up to a total of 17 mg/kg - 1-4 mg/min IV infusion
PEDIATRIC:	****DIRECT MEDICAL ORDER REQUIRED**** – 15 mg / kg over 30 – 60 minutes
THERAPEUTIC EFFECTS:	- Elevates ventricular fibrillation threshold - Suppresses ventricular ectopic activity
RELATIVE CONTRAINDICATIONS:	- High degree heart blocks (Mobitz II Second Degree; Third Degree) - PVCs in conjunction with profound bradycardia
SIDE EFFECTS:	- Hypotension - Widening of QRS
SPECIAL NOTES / RESTRICTIONS:	❑ Constant monitoring of BP essential ❑ Should be withheld until 3 mg/kg of lidocaine has been given & has demonstrated no clinical response ❑ **Should be given until:** a. Dysrhythmia is suppressed b. Hypotension develops c. QRS widens by 50% d. Total of 17 mg/kg given ❑ In urgent situations (such as refractory VF) may administer up to 30 mg/min. ❑ **DIRECT MEDICAL ORDER REQUIRED**



Initially Issued: 06/30/93
Revision Date: 11/03/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

PROMETHAZINE
Phenergan

INDICATIONS:	❑ May be administered by paramedics for emesis.
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	12.5mg to 25mg IV Push
PEDIATRIC:	**Not Approved**
THERAPEUTIC EFFECTS:	Anti - emetic
RELATIVE CONTRAINDICATIONS:	- Comatose states - Those with CNS depressants already received or administered (ETOH, etc.) - Known hypersensitivity - Never give intra-arterial
SIDE EFFECTS:	- Drowsiness - Extra pyramidal - Rare changes in Heart Rate/Blood Pressure
SPECIAL NOTES / RESTRICTIONS:	In the case of a reaction treat with benadryl

Initially Issued: 01/90
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

PROPARACAINE

Ocu-Caine (Alcaine)

INDICATIONS:	To ease discomfort associated with the following: ❑ Ocular foreign bodies ❑ Corneal abrasions ❑ Ocular burns ❑ Prolonged eye irrigation
ADMINISTRATION:	❑ Eye Drops Only
DOSAGE:	
ADULT:	1 to 2 drops in the affected eye Q 5-10 minutes
PEDIATRIC:	1 to 2 drops in the affected eye Q 5-10 minutes
THERAPEUTIC EFFECTS:	Topical ophthalmic analgesia
RELATIVE CONTRAINDICATIONS:	Known hypersensitivity
SIDE EFFECTS:	- Occasional stinging - Burning - Conjunctival redness - Severe hyperallergenic corneal reaction
SPECIAL NOTES / RESTRICTIONS:	Δ **Can NOT be stored at room temperature** ➢ **Must be Refrigerated at 2 - 8° C.** - Throw away after one use - Very few side effects

Initially Issued: 06/30/93
Revision Date: 09/08/94
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

PROPRANOLOL
Inderal

INDICATIONS:	❑ Hemodynamically significant tachydysrhythmias or ventricular irritability unresponsive to, or when standard antidysrhythmics may be contraindicated. (e.g. Myocardial and neural hypersensitivity due to chlorinated hydrocarbon toxicity.)
ADMINISTRATION:	❑ IV SLOWLY (over not less than 1 minute)
DOSAGE:	**DIRECT MEDICAL ORDER REQUIRED**
ADULT:	0.5 - 1.0mg may be repeated up to a total of 3mg upon further order if desired effect does not occur within 5 minutes of administration.
PEDIATRIC:	Not indicated
THERAPEUTIC EFFECTS:	Competitive inhibition of $beta_1$ and $beta_2$ adrenergic receptor sites.
RELATIVE CONTRAINDICATIONS:	❑ Bradydysrhythmias and/or conduction disturbances. ❑ Asthma or underlying chronic pulmonary disease (relative)
SIDE EFFECTS:	1. Bradydysrhythmias or conduction disturbances 2. Bronchoconstriction 3. Hypotension
SPECIAL NOTES / RESTRICTIONS:	Reduced effect of catecholamines Increased effect of standard antidysrhythmics ****DIRECT MEDICAL ORDER REQUIRED****

Initially Issued: 11/03/96
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

VITAMIN B6
Pyridoxine HCl

INDICATIONS:	❑ Hydrazine poisoning.
ADMINISTRATION:	❑ IV Only
DOSAGE:	
ADULT:	◊ 25 mg/kg over five (5) minutes
PEDIATRIC:	◊ 25 mg/kg over five (5) minutes
THERAPEUTIC EFFECTS:	Provides a required synthetic cofactor that enables the brain to regenerate GABA and stop seizures
RELATIVE CONTRAINDICATIONS:	None
SIDE EFFECTS:	None acutely; peripheral neuropathy with chronic, excessive dosing; Pyridoxine withdrawal seizures in neonates of mothers who took chronic, excessive doses of pyridoxine during pregnancy
SPECIAL NOTES / RESTRICTIONS:	

Initially Issued: 08/2002
Revision Date:
Current Printing: April 11, 2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

RACEMIC EPINEPHRINE

MicroNEFRIN, Vaponephrine

INDICATIONS:	❑ Croup (Laryngotracheobronchitis)
ADMINISTRATION:	❑ Inhalation only
DOSAGE:	
ADULT:	0.05 mg/kg/dose (diluted to 3.0 cc with NS) to a maximum dose of 0.5 mg. Only used initially and not repeated.
PEDIATRIC:	0.05 mg/kg/dose (diluted to 3.0 cc with NS) to a maximum dose of 0.5 mg. Only used initially and not repeated
THERAPEUTIC EFFECTS:	Bronchodilation from B2 receptor stimulation
RELATIVE CONTRAINDICATIONS:	Should not be used in the management of epiglottitis.
SIDE EFFECTS:	Can result in tachycardia and possible arrhythmias.
SPECIAL NOTES / RESTRICTIONS:	Usually supplied in vials of 7.5 cc. Note that medication is diluted up to 3.0 cc with Normal Saline. Physician in receiving ED should be notified that treatment has been administered.

Initially Issued: 05/14/98
Revision Date: 05/14/98
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

SODIUM BICARBONATE
($NaHCO_3$)

INDICATIONS:	❑ Severe metabolic acidosis ❑ Cardiac arrest (after ventilation problems are corrected) ❑ Certain medication overdoses ❑ Hyperkalemia
ADMINISTRATION:	❑ IV, IV infusion, IO
DOSAGE:	
ADULT:	- 1 mEq/kg - Repeat 0.5 mEq/kg Q 10 minutes
PEDIATRIC:	- 1 mEq/kg ▽ **Age < 2 years: Must be diluted 1:1 with D5W or NS prior to administration**
THERAPEUTIC EFFECTS:	- Provides bicarbonate ion to buffer strong acids - Increases PH
RELATIVE CONTRAINDICATIONS:	- CHF - Hypokalemia
SIDE EFFECTS:	- Metabolic alkalosis - Increased vascular volume - Pulmonary edema - Dysrhythmias through serum potassium depletion - Transiently raises the arterial PCO2

SPECIAL NOTES / RESTRICTIONS:	May add up to 50 mEq to 500-1000 ml of D5W, Saline (Normal or ½ Normal) or Ringer's Lactate, infuse at rate determined by medical control **ONLY WITH DIRECT MEDICAL ORDER** ▽ **Age < 2 years: Must be diluted 1:1 with D5W or NS prior to administration** - Administration & dosage best determined by ABG's in cardiac arrest situations - Administration **must** be accompanied by controlled hyperventilation to blow-off excess CO2 produced by NaHCO3 administration

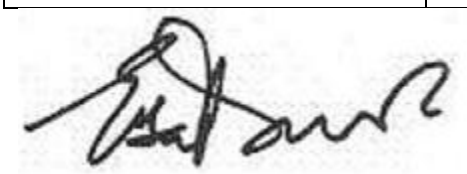
Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 06/30/93
Revision Date: 09/08/94
Current Printing: 4.11.2007

SODIUM CHLORIDE 0.9%

Normal Saline

INDICATIONS:	❑ Heat exhaustion and related heat problems ❑ Diabetic disorders ❑ Freshwater Drowning ❑ Head injury (depending upon Medical Control Physician) ❑ Hypovolemia
ADMINISTRATION:	❑ IV infusion, IO
DOSAGE:	
ADULT:	Dependent upon patient condition and situation being treated
PEDIATRIC:	Dependent upon patient size and condition
THERAPEUTIC EFFECTS:	Provides fluid and sodium replacement
RELATIVE CONTRAINDICATIONS:	Congestive Heart Failure
SIDE EFFECTS:	❑ Volume Overload ❑ Congestive Heart Failure ❑ Diuresis ❑ Thirst
SPECIAL NOTES / RESTRICTIONS:	***Normal saline or lactated ringers is the preferred infusion solution during cardiac arrest, although D5W remains acceptable*** __ **Any combination of Dextrose and Sodium Chloride is approved.** Some other combinations include: - 5% Dextrose in 0.9% Sodium Chloride (D5NS) - 5% Dextrose in 0.2% Sodium Chloride (D5 0.2NS) - 3.3% Dextrose in 0.3% Sodium Chloride



Initially Issued: 06/30/93
Revision Date: 06/30/93
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

SODIUM NITRITE

(Special Purpose for Toxicology)

INDICATIONS:	❑ Acute cyanide poisoning ❑ Acute sulfide poisoning
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	300mg (10 ml) over 3-5 minutes
PEDIATRIC:	4- 6 mg/kg to a maximum of 300mg (10ml) over 3-5 minutes
THERAPEUTIC EFFECTS:	Produces methemoglobin (oxidizes ferrous [Fe^{+2}] iron in normal hemoglobin to ferric [Fe^{+3}] iron or methemoglobin.
RELATIVE CONTRAINDICATIONS:	
SIDE EFFECTS:	1. Excessive methemoglobinemia, as characterized by progressive and persistent cyanosis unresponsive to oxygen therapy and the appearance of chocolate brown color of the blood. 2. Use of oxidizing agents may produce an acute hemolytic reaction in patients with glucose-6-phosphodehydrogenase (G6PD) deficiency.
SPECIAL NOTES / RESTRICTIONS:	Methylene blue, a reducing agent, may be used to reverse excessive methemoglobinemia. **Special Purpose Drug for TOXICOLOGY** May be administered per standing order

Initially Issued: 05/28/99
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

SODIUM THIOSULFATE

(Special Purpose for Toxicology)

INDICATIONS:	❑ Acute cyanide poisoning following administration of nitrates.
ADMINISTRATION:	❑ IV, IO
DOSAGE:	
ADULT:	12.5 grams (50 ml) over 1-2 minutes
PEDIATRIC:	250 mg/kg (1 ml/kg) to a maximum of 12.5 G over 3-5 minutes
THERAPEUTIC EFFECTS:	Removes cyanide ion from ferrocyanate complex formed with methemoglobin, producing thiocyanate; excreted by the kidneys.
RELATIVE CONTRAINDICATIONS:	
SIDE EFFECTS:	No significant side effects in setting of cyanide poisoning following administration of nitrates.
SPECIAL NOTES / RESTRICTIONS:	May rarely be ordered without previous administration of nitrate if history is unclear. **Special Purpose Drug for TOXICOLOGY** May be administered per standing order

Initially Issued: 05/28/99
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

SOLUMEDROL
Methylprednisolone

INDICATIONS:	❑ Anaphylaxis ❑ Bronchodilator for Asthma refractory to Albuterol.
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	40 – 125 MG IV
PEDIATRIC:	1 – 2 mg/kg IV
THERAPEUTIC EFFECTS:	Potentiates vascular smooth muscle relaxation by beta adrenergic agonists..
RELATIVE CONTRAINDICATIONS:	Use with caution in patients with: • GI Bleeding • Diabetes Mellitus • Severe Infection
SIDE EFFECTS:	Headache, Hypertension, Sodium and water retention, Hypokalemia, Alkalosis
SPECIAL NOTES / RESTRICTIONS:	Hypoglycemic responses to insulin and oral Hypoglycemic agents may be blunted; Potassium depleting agents may potentiate Hypokalemia induced by corticosteroids.

Initially Issued: 05/24/04
Revision Date:
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

SUCCINYLCHOLINE
Anectine

Rs

INDICATIONS:	❑ Skeletal muscle relaxation during operative and manipulative procedures ❑ Facilitate management of patients undergoing mechanical ventilation ❑ Adjunct to general anesthesia
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	-1.5mg/kg over 30 seconds; not to exceed 150mg total dose
PEDIATRIC:	- NOT INDICATED.
THERAPEUTIC EFFECTS:	-Prevents neuromuscular transmission by blocking the effect of acetylcholine at the myoneural junction
RELATIVE CONTRAINDICATIONS:	-Hypersensitivity to succinylcholine -History of malignant hyperthermia -Skeletal muscle myopathies -Penetrating eye injury
SIDE EFFECTS:	-Apnea -Cardiac arrhythmias -Increased intraocular pressure -Muscle fasciculations

SPECIAL NOTES / RESTRICTIONS:	-Succinylcholine has no effect on consciousness, pain threshold, or cerebration. Must be used only with adequate sedation. - In elderly time of onset may be delayed due to slower circulation time in cardiovascular disease. -Use with extreme caution in patients with severe burns, electrolyte imbalance, hyperkalemia, and those receiving quinidine or digitalis. -The potential for releasing histamine is present following succinylcholine use. Serious histamine-mediated flushing, hypotension, and bronchoconstriction are, however, uncommon in clinical usage. -Incidence of side effects increase with second or subsequent doses. - **STORAGE:** Refrigerate at 35 º - 46 º F. Multi-dose vials are stable for up to 14 days at room temperature. **RSI MAY BE initiated by Standing Order or Protocol. It is RECOMMENDED – where feasible – that On-Line Medical Control be obtained prior to initiation– but this should not supercede the appropriate care of the patient.** ➲100% QI / PI is required for ALL RSI runs.

Initially Issued: 05/13/99
Revision Date: 05/13/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

TERBUTALINE SULFATE
Brethine

INDICATIONS:	❑ Moderate to severe bronchial asthma ❑ Reversible bronchospasm in COPD
ADMINISTRATION:	❑ **SQ only**
DOSAGE:	
ADULT:	0.25 mg (0.25 ml)
PEDIATRIC:	0.01 mg/kg ∇**Maximum Dose = 0.25 mg**
THERAPEUTIC EFFECTS:	- Bronchodilator through selective beta 2 stimulation - Relatively little effect on heart rate - Relaxes bronchial smooth muscle
RELATIVE CONTRAINDICATIONS:	- Angina - Dysrhythmias - Hypertension - Hypersensitivity to the drug
SIDE EFFECTS:	- Palpitations - Tremor - Drowsiness - Headache - Sweating - Nausea - Muscle cramping
SPECIAL NOTES / RESTRICTIONS:	- May repeat dosage in 15-30 minutes - Do **not** give with other sympathomimetic drugs

Initially Issued: 06/30/93
Revision Date: 11/03/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

THIAMINE
Biamine

INDICATIONS:	❑ Coma and seizures of unknown origin, especially if alcohol use is suspected ❑ Delirium Tremens
ADMINISTRATION:	❑ IV, IM
DOSAGE:	
ADULT:	100 milligrams
PEDIATRIC:	10-25 mg (rarely used)
THERAPEUTIC EFFECTS:	Provides the appropriate thiamine levels to allow glucose to be utilized in sufficient amounts, thus reversing cellular hypoglycemia secondary to thiamine deficiency
RELATIVE CONTRAINDICATIONS:	Known hypersensitivity to Thiamine
SIDE EFFECTS:	Be alert for sensitivity (allergic) reactions in patients
SPECIAL NOTES / RESTRICTIONS:	- A few cases of hypersensitivity have been reported but these cases are rare. - Deaths, while rare, have resulted from IV administration. However the possibility of Wernicke's Syndrome following glucose administration presents substantially greater risk than the possibility of significant hypersensitive reaction.

Initially Issued: 10/10/96
Revision Date: 10/10/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

VASOPRESSIN
Pitressin

INDICATIONS:	❑ VF / pulseless VT, asystole
ADMINISTRATION:	❑ IV, IO
DOSAGE:	
ADULT:	40 U IV, single dose, 1 time only
PEDIATRIC:	Not recommended in pediatrics
THERAPEUTIC EFFECTS:	Vasopressin produces the same positive effects as epinephrine in terms of vasoconstriction and increasing the blood flow to the brain and heart during CPR. Moreover, vasopressin does not have the negative, adverse effects of epinephrine on the heart, such as increased ischemia and irritability and, paradoxically, the propensity for VF.
RELATIVE CONTRAINDICATIONS:	None when administered for indications
SIDE EFFECTS:	None when administered for indications
SPECIAL NOTES / RESTRICTIONS:	

Initially Issued:
Revision Date: 6-16-2005
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

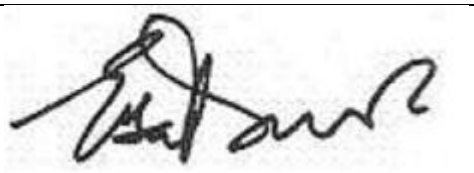
VECURONIUM BROMIDE

Norcuron

Rs

INDICATIONS:	❑ Facilitates endotracheal intubation by paralysis of skeletal muscle ❑ To increase pulmonary compliance during mechanical ventilation
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	0.1mg/kg over 30-60 seconds Onset of 2-3 min., duration of 25-30 min.
PEDIATRIC:	NOT INDICATED
THERAPEUTIC EFFECTS:	-Prevents neuromuscular transmission by blocking the effect of acetylcholine at the myoneural junction -Skeletal muscle paralysis
RELATIVE CONTRAINDICATIONS:	- Hypersensitivity to vecuronium
SIDE EFFECTS:	- No side effects have occurred except with overdoses
SPECIAL NOTES / RESTRICTIONS:	- Paralysis may be prolonged by succinylcholine, quinidine, and beta blockers **RSI MAY BE initiated by Standing Order or Protocol. It is RECOMMENDED – where feasible – that On-Line Medical Control be obtained prior to initiation – but this should not supercede the appropriate care of the patient.** ➲ 100% QI / PI is required for ALL RSI runs.

Initially Issued: 05/13/99
Revision Date: 05/13/99
Current Printing: 4.11.2007



Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

XOPENEX
Levalbuterol HCI

INDICATIONS:	Adults and adolescents 12 years of age and older with reversible obstructive airway disease.
ADMINISTRATION:	Nebulized Inhalation
DOSAGE:	
ADULT:	.63 or 1.25 mg
PEDIATRIC:	For ages 12 and over, same as adult dosage; not indicated for ages less than 12 years.
THERAPEUTIC EFFECTS:	Bronchodilation
CONTRAINDICATIONS:	History of sensitivity to levalbuterol or Racemic albuterol
SIDE EFFECTS:	Tachycardia, Leg Cramps, Nervousness, Tremor
SPECIAL NOTES / RESTRICTIONS:	

Initially Issued: 06/30/93
Revision Date: 08/14/03
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

RAPID SEQUENCE INDUCTION

Rs

ETOMIDATE

Amidate

INDICATIONS:	❑ For use in RSI protocol – for anesthesia induction.
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	◊ .3mg/kg
PEDIATRIC:	◊ .3mg/kg
THERAPEUTIC EFFECTS:	Hypnotic drug (no analgesic activity)
RELATIVE CONTRAINDICATIONS:	Known sensitivity to drug
SIDE EFFECTS:	Transient venous pain, skeletal muscle movement
SPECIAL NOTES / RESTRICTIONS:	

Initially Issued: 08/2002
Revision Date:
Current Printing: April 11, 2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

❖MIDAZOLAM❖

Versed
CIV

C Rs

INDICATIONS:	❑ Major Motor Seizures ❑ Status epilepticus ❑ Pre-Medication prior to cardioversion or Transcutaneous Pacing ❑ Skeletal muscle relaxant ❑ Acute Anxiety States ❑ Medication for combative patients and difficult intubations
ADMINISTRATION:	❑ Slow IV, IM, IO
DOSAGE:	
ADULT:	- ***NON-RSI Indications:*** - 0.5 mg – 2.5 initial dose. - ***RSI Indications:*** - .02 - .05 mg/kg not to exceed 5 mg - For administration of initial dose of Versed consider decreased dose if systolic BP is 80 – 100 mm hg - After successful intubation / airway control, additional IV Versed may be administered based on patient effect up to a total of 10 mg IV. - Repeat doses may be administered with Direct Medical Order.
PEDIATRIC:	- Not Indicated
THERAPEUTIC EFFECTS:	- Short-acting benzodiazepine CNS depressant - Short-term sedation - Postoperative amnesia
RELATIVE CONTRAINDICATIONS:	- Hypersensitivity to versed - Glaucoma - Shock - ETOH - Coma - Pregnancy - Renal Failure

SIDE EFFECTS:	- Apnea - Cardiac arrhythmias - Hypotension
SPECIAL NOTES / RESTRICTIONS:	- Impairs memory in 90% of patients. - **Flumazenil will reverse sedative effects.** **<u>RSI MAY BE initiated by Standing Order or Protocol. It is RECOMMENDED – where feasible – that On-Line Medical Control be obtained prior to initiation – but this should not supercede the appropriate care of the patient</u>** ➲100% QI / PI is required for ALL RSI runs.

Initially Issued: 05/13/99
Revision Date: 05/13/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

SUCCINYLCHOLINE
Anectine

Rs

INDICATIONS:	❑ Skeletal muscle relaxation during operative and manipulative procedures ❑ Facilitate management of patients undergoing mechanical ventilation ❑ Adjunct to general anesthesia
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	-1.5mg/kg over 30 seconds; not to exceed 150mg total dose
PEDIATRIC:	- NOT INDICATED.
THERAPEUTIC EFFECTS:	-Prevents neuromuscular transmission by blocking the effect of acetylcholine at the myoneural junction
RELATIVE CONTRAINDICATIONS:	-Hypersensitivity to succinylcholine -History of malignant hyperthermia -Skeletal muscle myopathies -Penetrating eye injury
SIDE EFFECTS:	-Apnea -Cardiac arrhythmias -Increased intraocular pressure -Muscle fasciculations -Bradycardia in children

SPECIAL NOTES / RESTRICTIONS:	-Succinylcholine has no effect on consciousness, pain threshold, or cerebration. Must be used only with adequate sedation. - In elderly time of onset may be delayed due to slower circulation time in cardiovascular disease. -Use with extreme caution in patients with severe burns, electrolyte imbalance, hyperkalemia, and those receiving quinidine or digitalis. -The potential for releasing histamine is present following succinylcholine use. Serious histamine-mediated flushing, hypotension, and bronchoconstriction are, however, uncommon in clinical usage. -Incidence of side effects increase with second or subsequent doses. - **STORAGE:** Refrigerate at 35 º - 46 º F. Multi-dose vials are stable for up to 14 days at room temperature. **RSI MAY BE initiated by Standing Order or Protocol. It is RECOMMENDED – where feasible – that On-Line Medical Control be obtained prior to initiation– but this should not supercede the appropriate care of the patient.** ➲100% QI / PI is required for ALL RSI runs.

Initially Issued: 05/13/99
Revision Date: 05/13/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

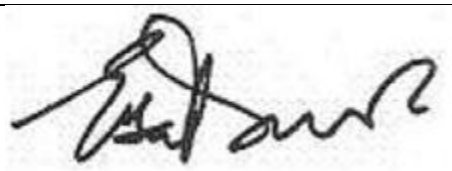
VECURONIUM BROMIDE

Norcuron

Rs

INDICATIONS:	❑ Facilitates endotracheal intubation by paralysis of skeletal muscle ❑ To increase pulmonary compliance during mechanical ventilation
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	0.1mg/kg over 30-60 seconds Onset of 2-3 min., duration of 25-30 min.
PEDIATRIC:	NOT INDICATED
THERAPEUTIC EFFECTS:	-Prevents neuromuscular transmission by blocking the effect of acetylcholine at the myoneural junction -Skeletal muscle paralysis
RELATIVE CONTRAINDICATIONS:	- Hypersensitivity to vecuronium
SIDE EFFECTS:	- No side effects have occurred except with overdoses
SPECIAL NOTES / RESTRICTIONS:	- Paralysis may be prolonged by succinylcholine, quinidine, and beta blockers **RSI MAY BE initiated by Standing Order or Protocol. It is RECOMMENDED – where feasible – that On-Line Medical Control be obtained prior to initiation – but this should not supercede the appropriate care of the patient.** ➲100% QI / PI is required for ALL RSI runs.

Initially Issued: 05/13/99
Revision Date: 05/13/99
Current Printing: 4.11.2007



Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

TOXICOLOGIC EMERGENCIES FORMULARY

ACTIVATED CHARCOAL USP

Actidose, CharcoAid

INDICATIONS:	☐ Poisoning ☐ Overdose ☐ Particularly effective in binding: ☐Aspirin ☐Amphetamines ☐Dilantin ☐Strychnine ☐Phenobarbital
ADMINISTRATION:	PO, NG tube
DOSAGE:	
ADULT:	1 gm/kg mixed with water
PEDIATRIC:	∇ 1 gm/kg mixed with water **ONLY WITH DIRECT MEDICAL ORDER**
THERAPEUTIC EFFECTS:	- It binds & absorbs ingested toxins still present in the gastro-intestinal tract following emesis. - Once bound, the combined complex is excreted
RELATIVE CONTRAINDICATIONS:	_ Should not be given before or together with ipecac, as it will absorb the ipecac & render it ineffective. _ Should **not** be given in cyanide poisoning. _ Of **no** value in poisoning due to: _ Methanol _ Caustic alkalis/acids _ Iron tablets _ Lithium
SIDE EFFECTS:	None, unless the airway cannot be adequately controlled.
SPECIAL NOTES / RESTRICTIONS:	Should only be given PO or NG in a slurry solution mixed with water / premixed.

Initially Issued: 06/30/93
Revision Date: 11/03/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

AMYL NITRITE

(Special Purpose: Toxicology)

INDICATIONS:	❑ Cyanide Poisoning
ADMINISTRATION:	❑ Inhalation only
DOSAGE:	
ADULT:	One or two inhalants of amyl nitrite should be crushed and inhaled for 15 to 30 seconds.
PEDIATRIC:	One inhalant should be crushed and inhaled for 15 to 30 seconds. (Smallest effective dosage should be used.)
THERAPEUTIC EFFECTS:	It is effective in the emergency management of cyanide poisoning. Amyl nitrite causes the oxidation of hemoglobin to a compound called methemoglobin. Methemoglobin reacts with the toxic cyanide ion to form cyanomethemoglobin, which can be enzymatically degraded.
RELATIVE CONTRAINDICATIONS:	No contraindications for amyl nitrite in the management of cyanide poisoning.
SIDE EFFECTS:	Headache and hypotension have been known to occur following inhalation.
SPECIAL NOTES / RESTRICTIONS:	Special Purpose Drug for TOXICOLOGY

Initially Issued: 05/14/98
Revision Date: 05/14/98
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

CALCIUM GLUCONATE (Tox)

(Special Purpose: Toxicology)

INDICATIONS:	❑ Hydrofluoric acid burns and exposure
ADMINISTRATION:	❑ Topical application, IV, or by nebulizer; rarely by direct injection
DOSAGE:	
ADULT:	❑ 10ml mixed with one ounce of water soluble lubricant for topical application, IV as ordered, or 2.5% solution nebulized with oxygen for inhalation exposure; 0.3-0.5 ml of 5% solution/cm^2 burn area injected directly for deep or subungual burns.
PEDIATRIC:	Same as adult
THERAPEUTIC EFFECTS:	Binds with fluoride ion, prevents or reverses hypocalcemia.
RELATIVE CONTRAINDICATIONS:	Not to be injected for GENERAL SKIN BURNS from THERMAL SOURCE.
SIDE EFFECTS:	Hypercalcemia, local tissue damage, pressure necrosis if injected under nail beds.
SPECIAL NOTES / RESTRICTIONS:	☹ Special Purpose Utilization: TOXICOLOGY Infiltration of wound with local anesthetic should not be used, regional blocks may be necessary to provide adequate treatment of large or deeply penetrated burns. Ocular exposure should be treated with 1% aqueous irrigation following proparacaine anesthetic.

Initially Issued: 05/28/99
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

IPECAC SYRUP

Syrup of Ipecac

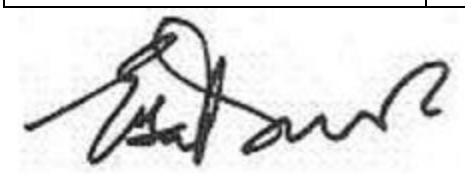
INDICATIONS:	❑ Certain poisons and overdoses
ADMINISTRATION:	❑ PO
DOSAGE:	
ADULT:	15 to 30 ml followed by several glasses of warm water or carbonated soda ****DIRECT MEDICAL ORDER REQUIRED****
PEDIATRIC:	– Less than 6 months old - **NOT APPROVED** – 6 - 12 months 5 – 10 ml – 1 – 12 years 15 ml – 12 years 30 ml ****DIRECT MEDICAL ORDER REQUIRED****
THERAPEUTIC EFFECTS:	Induces vomiting and thereby empties the stomach of ingested substances
RELATIVE CONTRAINDICATIONS:	- Impaired LOC: Stupor; Coma - Seizures - AMI - Pregnancy - Ingestion of strong acids/alkalis or petroleum products - Strychnine or iodides - Children under one year
SIDE EFFECTS:	Possibility of aspiration
SPECIAL NOTES / RESTRICTIONS:	**ONLY WITH DIRECT MEDICAL ORDER** - Constantly monitor the patient's airway during and following emesis - Walking should be encouraged

Initially Issued: 06/30/93
Revision Date: 09/08/94
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

METHYLENE BLUE

INDICATIONS:	❑ Treatment of cyanide poisoning and symptomatic methemoglobinemia (iatrogenic or accidental exposure to oxidizing agents)
ADMINISTRATION:	❑ IV, IO
DOSAGE:	**DIRECT MEDICAL ORDER REQUIRED**
ADULT:	1 mg/kg IV SLOWLY (over 10-15 minutes)
PEDIATRIC:	Same as adult dose, but must be used with extreme caution due to potential for producing methemoglobinemia.
THERAPEUTIC EFFECTS:	Reduces methemoglobin (ferric [Fe^{+3}] iron in methemoglobin to ferrous [Fe^{+2}] iron in normal hemoglobin.
RELATIVE CONTRAINDICATIONS:	Excessive methemoglobinemia in the treatment of cyanide or sulfide poisoning due to possible release of cyanide or sulfide back into cellular sites with subsequent toxicity. Patients with renal insufficiency or known allergy to methylene blue
SIDE EFFECTS:	❑ Excessive methemoglobinemia, as characterized by progressive and persistent cyanosis unresponsive to oxygen therapy and the appearance of chocolate brown color of the blood. ❑ Use of oxidizing agents may produce an acute hemolytic reaction in patients with glucose-6-phosphodehydrogenase (G6PD) deficiency. ❑ Blue-green urine ❑ May cause bladder irritation, nausea, vomiting, and diarrhea. Large doses may produce abdominal and precordial pain, dizziness, profuse sweating, fever, and/or mental confusion.
SPECIAL NOTES / RESTRICTIONS:	Rapid administration may produce increased methemoglobin formation, especially in the presence of other oxidizing agents. ****DIRECT MEDICAL ORDER REQUIRED****



Initially Issued: 05/28/99
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

PRALIDOXIME

2-Pam, Protopam Chloride
(Special Purpose: Toxicology)

INDICATIONS:	❑ Cholinergic crisis due to acetylcholinesterase inhibition caused by organophosphate toxicity (e.g. dichlorvos, dioxanthion, echothiophate iodide, endothion, fenthion, formothion, isoflurophate, malathion, methyl parathion, parathion, TEPP, diazinon). Poisoning by nerve agents having anticholinesterase activity.
ADMINISTRATION:	❑ IV, IM (if IV access not feasible)
DOSAGE:	
ADULT:	1 - 2 Gram, over 10-15 minutes in 100 cc NS. If not practicable or in the event of pulmonary edema, administer slowly as 5% solution in water over **not less than** 5 minutes.
PEDIATRIC:	20-40 mg/kg/dose over 10-15 minutes
THERAPEUTIC EFFECTS:	Reactivation of phosphorylated acetylcholinesterase. Reversal of nicotinic effects of acetylcholinesterase inhibition, particularly on skeletal muscle. Reversal of muscarinic effects of cholinesterase inhibition, usually additive with atropine.
RELATIVE CONTRAINDICATIONS:	Cholinergic crisis due to acetylcholinesterase inhibition by carbamate insecticides or other short acting cholinesterase inhibitors (physostigmine, neostigmine, etc.).
SIDE EFFECTS:	Occasional Sinus Tachycardia, laryngospasm, and muscle rigidity seen with too rapid injection. Occasional dizziness, headache, blurred vision, nausea, or diplopia (all of which may be related to the underlying poison as well).
SPECIAL NOTES / RESTRICTIONS:	**MAY ADMINISTER PER STANDING ORDER**

Initially Issued: 05/26/99
Revision Date: 05/26/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

VITAMIN B6
Pyridoxine HCl

INDICATIONS:	❑ Hydrazine poisoning.
ADMINISTRATION:	❑ IV Only
DOSAGE:	
ADULT:	◊ 25 mg/kg over five (5) minutes
PEDIATRIC:	◊ 25 mg/kg over five (5) minutes
THERAPEUTIC EFFECTS:	Provides a required synthetic cofactor that enables the brain to regenerate GABA and stop seizures
RELATIVE CONTRAINDICATIONS:	None
SIDE EFFECTS:	None acutely; peripheral neuropathy with chronic, excessive dosing; Pyridoxine withdrawal seizures in neonates of mothers who took chronic, excessive doses of pyridoxine during pregnancy
SPECIAL NOTES / RESTRICTIONS:	

Initially Issued: 08/2002
Revision Date:
Current Printing: April 11, 2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

SODIUM NITRITE

(Special Purpose for Toxicology)

INDICATIONS:	❑ Acute cyanide poisoning ❑ Acute sulfide poisoning
ADMINISTRATION:	❑ IV
DOSAGE:	
ADULT:	300mg (10 ml) over 3-5 minutes
PEDIATRIC:	4- 6 mg/kg to a maximum of 300mg (10ml) over 3-5 minutes
THERAPEUTIC EFFECTS:	Produces methemoglobin (oxidizes ferrous [Fe^{+2}] iron in normal hemoglobin to ferric [Fe^{+3}] iron or methemoglobin.
RELATIVE CONTRAINDICATIONS:	
SIDE EFFECTS:	1. Excessive methemoglobinemia, as characterized by progressive and persistent cyanosis unresponsive to oxygen therapy and the appearance of chocolate brown color of the blood. 2. Use of oxidizing agents may produce an acute hemolytic reaction in patients with glucose-6-phosphodehydrogenase (G6PD) deficiency.
SPECIAL NOTES / RESTRICTIONS:	Methylene blue, a reducing agent, may be used to reverse excessive methemoglobinemia. **May Administer Per Standing Order**

Initially Issued: 05/28/99
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

SODIUM THIOSULFATE
(Special Purpose for Toxicology)

INDICATIONS:	❑ Acute cyanide poisoning following administration of nitrates.
ADMINISTRATION:	❑ IV, IO
DOSAGE:	
ADULT:	12.5 grams (50 ml) over 1-2 minutes
PEDIATRIC:	250 mg/kg (1 ml/kg) to a maximum of 12.5 G over 3-5 minutes
THERAPEUTIC EFFECTS:	Removes cyanide ion from ferrocyanate complex formed with methemoglobin, producing thiocyanate; excreted by the kidneys.
RELATIVE CONTRAINDICATIONS:	
SIDE EFFECTS:	No significant side effects in setting of cyanide poisoning following administration of nitrates.
SPECIAL NOTES / RESTRICTIONS:	May rarely be ordered without previous administration of nitrate if history is unclear. **May Administer Per Standing Order**

Initially Issued: 05/28/99
Revision Date: 05/28/99
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

IV INFUSION FLUIDS

*COMBINATION DEXTROSE/SODIUM CHLORIDE

5% dextrose in 0.45% Sodium chloride (D51/2NS)

INDICATIONS:	☐ Heat exhaustion ☐ Diabetic disorders ☐ Impaired Renal Function (TKO) ☐ Cardiovascular function (TKO)
ADMINISTRATION:	IV infusion, IO
DOSAGE:	
ADULT:	Dependent upon patient condition and situation being treated
PEDIATRIC:	∇**Used for Maintenance Only.** Dependent upon patient size and condition
THERAPEUTIC EFFECTS:	Provides electrolyte and sugar replacement
RELATIVE CONTRAINDICATIONS:	Need for Rapid fluid replacement indicated
SIDE EFFECTS:	Rare
SPECIAL NOTES / RESTRICTIONS:	**CLASSIFICATION:** Slightly hypertonic sugar and electrolyte solution ***Normal saline or lactated ringers is the preferred infusion solution during cardiac arrest, although D5W remains acceptable*** __ **Any combination of Dextrose and Sodium Chloride is approved.** Some other combinations include: - 5% Dextrose in 0.9% Sodium Chloride (D5NS) - 5% Dextrose in 0.2% Sodium Chloride (D5 0.2NS) - 3.3% Dextrose in 0.3% Sodium Chloride

Initially Issued: 06/30/93
Revision Date: 11/03/96
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

DEXTROSE 5% IN WATER
D5W

INDICATIONS:	☐ IV access for emergency drugs (cardiac) ☐ For dilution of concentrated drugs for IV infusion ☐ Patients with actual or potential for volume overload ☐ Patients requiring sodium restriction
ADMINISTRATION:	IV infusion, IO
DOSAGE:	
ADULT:	Generally administered to keep open (TKO)
PEDIATRIC:	Generally administered to keep open (TKO) vein for medications. **ONLY WITH DIRECT MEDICAL ORDER**
THERAPEUTIC EFFECTS:	Glucose nutrient solution
RELATIVE CONTRAINDICATIONS:	- As a main line for blood transfusion - For fluid replacement in hypovolemic states
SIDE EFFECTS:	Rare
SPECIAL NOTES / RESTRICTIONS:	**CLASSIFICATION:** Hypotonic Sugar Solution ***Normal saline or lactated ringers is the preferred infusion solution during cardiac arrest, although D5W remains acceptable*** ☒ In Pediatric Patients: **ONLY WITH DIRECT MEDICAL ORDER**

Initially Issued: 06/30/93
Revision Date: 03/97
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

LACTATED RINGERS
(LR)

INDICATIONS:	☐ Hypovolemic shock ☐ Dehydration ☐ Burns
ADMINISTRATION:	IV infusion, IO
DOSAGE:	
ADULT:	As indicated by the patient condition and situation being treated
PEDIATRIC:	As indicated by the patient condition and situation being treated
THERAPEUTIC EFFECTS:	- Source of electrolytes - Increase circulating volume
RELATIVE CONTRAINDICATIONS:	- Congestive heart failure - Renal failure
SIDE EFFECTS:	Rare
SPECIAL NOTES / RESTRICTIONS:	**CLASSIFICATION: Isotonic crystalloid** **Normal saline or lactated ringers is the preferred infusion solution during cardiac arrest, although D5W remains acceptable**

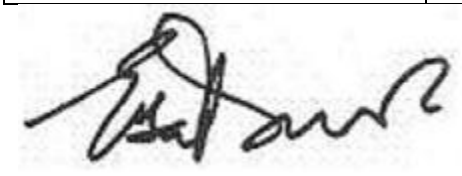
Initially Issued: 06/30/93
Revision Date: 06/30/93
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

SODIUM CHLORIDE 0.9%

Normal Saline

INDICATIONS:	☐ Heat exhaustion and related heat problems ☐ Diabetic disorders ☐ Freshwater Drowning ☐ Head injury (depending upon Medical Control Physician) ☐ Hypovolemia
ADMINISTRATION:	IV infusion, IO
DOSAGE:	
ADULT:	Dependent upon patient condition and situation being treated
PEDIATRIC:	Dependent upon patient size and condition
THERAPEUTIC EFFECTS:	Provides fluid and sodium replacement
RELATIVE CONTRAINDICATIONS:	Congestive Heart Failure
SIDE EFFECTS:	❑ Volume Overload ❑ Congestive Heart Failure ❑ Diuresis ❑ Thirst
SPECIAL NOTES / RESTRICTIONS:	***Normal saline or lactated ringers is the preferred infusion solution during cardiac arrest, although D5W remains acceptable*** __ **Any combination of Dextrose and Sodium Chloride is approved.** Some other combinations include: - 5% Dextrose in 0.9% Sodium Chloride (D5NS) - 5% Dextrose in 0.2% Sodium Chloride (D5 0.2NS) - 3.3% Dextrose in 0.3% Sodium Chloride



Initially Issued: 06/30/93
Revision Date: 06/30/93
Current Printing: 4.11.2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

END OF FORMULARY

ATTACHMENTS

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201

October 11, 1994

MEMORANDUM

TO: EMS Providers
EMS Regional Offices
Medical Control Physicians
Hospital Emergency Departments

FROM: Albert M. Futrell, Jr., Director
Division of Emergency Medical Services

SUBJECT: Orders Via Radio or Telephone

The purpose of this memorandum is to clarify DHEC's position concerning who may give orders to EMT's by radio or telephone.

Effective the date of this letter, paramedics can use protocols/standing orders authorized by the medical unit off-line control physician. Medical Control Physician (MCP) should inform all on-line physicians of these protocols and standing orders and the skills paramedics can perform under medical supervision.

This close cooperation between physicians and paramedics will allow both to understand what is expected to occur in proper patient care. " Physician to the radio" calls should be reserved for serious requests for further medical control orders or those cases that require special handling. Routine or miscellaneous radio requests of the physician should be avoided. Arrival and routine information can be made to nursing staff.

According to state regulation, only a physician licensed to practice in South Carolina may give a paramedic orders for advanced procedures. These orders 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 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.

ATTACHMENT A

Attachment B

SCDHEC - EMS DIVISION
INTERFACILITY TRANSPORT FORM
PART A - DRUG REPORT

Patient Care Form #: _____
Patient Name: _____ DOB: _____ SS #:
LAST FIRST

Referring Physician: _____ Transferring Facility:_____
Accepting Physician: _____ Receiving Facility: _____
****

Instructions: Part A (Drug Report) and Part B (Device Report) must be completed by and signed by the sending physician **or** nurse.
****

DIAGNOSIS: (1)_____ **LAST VITAL SIGNS**:_____
(2)_____
(3)_____
IV Fluids: _____ Rate: _____
Medications: _____
Dosage / Rate/Concentration:_____
Comments/Additional Orders:_____

IV Fluids:_____ Rate: _____
Medications:_____
Dosage / Rate/Concentration:_____
Comments/Additional Orders:_____

IV Fluids:_____ Rate: _____
Medications:_____
Dosage / Rate/Concentration:_____
Comments/Additional Orders:_____

PLEASE CHECK THE INTERFACILITY DEVICES BEING USED IN THIS TRANSPORT ON THE BACK PAGE OF THIS FORM.

This report was given by (**physician/nurse signature**):_____ Date:_____
(None of the drugs being sent with this patient are part of an experimental program.)

This report was accepted by (**EMT-P signature**):_____ Date:_____
EMS Service must retain a copy of this form for their records.
If any problems are experienced en route, the EMT-P must contact on-line medical control.
Version # 1-06/00

-over-

SCDHEC - EMS DIVISION
INTERFACILITY TRANSPORT FORM
PART B - DEVICE REPORT

Patient Care Form #: _____
Patient Name: _____ DOB: _____ SS #:_____
LAST FIRST

Referring Physician: _____ Transferring Facility:_____
Accepting Physician: _____ Receiving Facility: _____

****

Instructions: Part A (Drug Report) and Part B (Device Report) must be completed by and signed by the sending physician **or** nurse.

****

INTERFACILITY INVASIVE/IMPLANTED DEVICES USED IN THIS TRANSPORT

Check all devices being used:

___ Automatic Internal Cardiac Defibrillator (AICD)

___ Arterial Lines, Arterial Sheathes

___ Tube Thoracostomy/Chest Tube

___ Percutaneously Placed Central Venous Catheters (does not include Swan-Ganz catheters)

___ Peritoneal Dialysis Catheters

___ Epidural Catheters

___ Urethral/Suprapubic Catheter

___ Implantable Central Venous Catheters

___ Nasogastric/Orogastric Tubes

___ Surgically Placed Gastrointestinal Tubes

___ Percutaneous Drainage Tubes

___ Completely Implantable Venous Access Port

___ Surgical Drains

Comments/Additional Orders:_____

Version # 1-06/00

Attachment C

ATTACHMENT C

To: EMS Providers and Medical Control Physicians

From: Alonzo W. Smith, Director
Division of EMS

Date: August 26, 2003

RE: **Interfacility Drug Form With Revisions As Of August 26, 2003**

The Interfacility Drug Form is to be used for documentation necessary to transport interfacility patients who are receiving drugs. Use of this form will allow EMS providers to minimize delays in transport, provide for better patient care, and prevent the discontinuation of necessary drugs. The Interfacility Drug Form, originally approved by the DHEC Board in August, 2000, allows for a greater variety of interfacility drugs to be continued during interfacility transports.

A COPY OF THE INTERFACILITY DRUG FORM IN INCLUDED IN THIS MEMO. PLEASE FEEL FREE TO COPY IT AS NEEDED.

The form is composed of two parts. In Part A the sending physician lists the drugs which the paramedic is responsible for monitoring. Part B (Device Report) is a listing of devices approved by the EMS Division which may be used by the sending physician to stabilize the patients prior to transport.

THE FOLLOWING CONDITIONS MUST BE MET IN ORDER FOR A PATIENT WHO IS RECEIVING INTERFACILITY DRUGS TO BE TRANSPORTED.

1. The sending physician should first orient and familiarize the paramedic with the interfacility drug or device to be used, then complete BOTH Parts A and B of the form prior to transport.

2. **In order to transport a patient on interfacility drugs, the paramedic MUST have this signed written order by the sending physician. Additionally, the sending physician should be aware the he or she accepts responsibility for the patient while en-route.**

3. Only EMT-Paramedics may transport interfacility patients who are receiving drugs. EMT-Paramedics function under the law which requires that they perform only those duties for which the have been authorized by the Department. Any violation of this protocol, to include an incomplete transport form, subjects them to disciplinary actions.

REVISED SECTION AS OF AUGUST, 2003

4. **THE EMT-PARAMEDIC WHO IS TRANSPORTING AN INTERFACILITY PATIENT MAY TITRATE AN INTERFACILITY DRUG EITHER UP OR DOWN FOR EFFECT ONLY WITH DIRECT MEDICAL CONTROL, EITHER WRITTEN OR VERBAL. IT IS AN ABSOLUTE IMPERATIVE THAT THE EMT-PARAMEDIC HAVE A DIRECT MEDICAL CONTROL ORDER FOR TITRATION.**

If you have questions about the use of this form, please contact the Training/Compliance Section of the Division of EMS at (803)545-4202.

(s) "Convalescent vehicle" means a vehicle that is used for making nonemergency calls such as scheduled visits to a physician's office or hospital for treatment, routine physical examinations, x-rays or laboratory tests, or is used for transporting patients upon discharge from a hospital or nursing home to a hospital or nursing home or residence, or other nonemergency calls.
HISTORY: 1962 CODE 32-905.33;1974 (58) 2370, ACT NO 144-1.

44-61-30. Standards and regulations for improvement of emergency medical services; creation and membership of emergency medical Services Advisory Council; emergency medical technician boards.

(a) The Department of Health and Environmental Control, with the advice of the Emergency Medical Services Advisory Council, shall develop standards and prescribe regulations for the improvement of emergency medical services (heinafter referred to as EMS) in the State. All administrative responsibility for this program shall be vested in the Department.

(b) The EMS program shall include, but not be limited to, the regulation and licensing of public, private, volunteer or other type ambulance services; **provided, however,** that in developing such programs for regulating and licensing ambulance services, the programs shall be formulated in such a manner so as not to restrict or restrain competition; inspection and issuance of permits for ambulance vehicles; training and certification of EMS personnel; development, adoption and implementation of EMS standards and State plan; the development and coordination of an EMS communications system; and the categorization of hospitals and emergency room facilities as prescribed by 44-7-430 or regulations adopted pursuant thereto.

"(c) An Emergency Medical Services Advisory Council shall be established composed of representatives of the Department of Health and Environmental Control, the South Carolina Medical Association, the South Carolina Committee on Trauma, the South Carolina Hospital Association, the South Carolina Heart Association, areawide health planning agencies and regional councils of government and all such others as are deemed appropriate. Membership on the council shall be by appointment by the board. Three members of the advisory council shall be members of organized rescue squads operating in this State, three members shall represent the private emergency services systems and three members shall represent the county emergency medical services systems."
HISTORY: 1962 CODE 32-905.33;1174(58)2370;ACT NO 144-2.

44-61-40. Required licenses and permits; applications therefor; appeals; renewals.
(a) No person, firm, corporation, association, county, district, municipality or metropolitan government or agency, either as owner, agent or otherwise, shall hereafter furnish, operate, conduct, maintain, advertise, or otherwise engage in or profess to engage in the business or service of transporting patients without obtaining a valid license and ambulance permit issued by the Department.

ATTACHMENT D

R. Ambulances providing advanced cardiac life support must be equipped with a battery powered (DC) portable monitor-defibrillator unit with EKG printout.

The monitor-defibrillator equipment utilized by the service has the capability of producing hard copy of patient's EKG, and such hard copy is available to the service's medical control physician.

S. Such drugs as may be approved by the Board for possession and administration by EMT's trained and certified in their use and authorized by the medical control physician, as documented to the Department.

SECTION 603 MINIMUM AMBULANCE RESCUE EQUIPMENT

A. The following additional items will be carried by each ambulance:

1. Wrench. One 12-inch with adjustable open end.
2. Screwdriver, one 6-inch, with regular blade.
3. Screwdriver, one 6-inch, Phillips type.
4. Hacksaw, one with six each wire (carbide) blades or 12 regular blades.
5. Pliers, one 10-inch vise grip.
6. Hammer, one five-pound with 15 inch handle
7. One fire axe.
8. Wrecking Bar, one 24-inch (bar and two preceding items can either be separate or combined as a forcible entry tool).
9. Crowbar, one 51", with pinch point.
10. Tin Snip, double action, one, minimum eight inches.

ATTACHMENT D2

D. Two macro drip sets.

E. Two micro drip sets.

F. Three 21 or 23 and three 25 gauge needles, total six.

G. Three tourniquets.

H. Laryngoscope handle with batteries.

I. Laryngoscope blades, adult, child, and infant sizes.

J. Six disposable endotracheal tubes, assorted sizes.

K. Suitable equipment and supplies for collection and temporary storage of two blood samples.

L. Syringes, two 1 ml, 2 1/2, or 3 m., four 10 ml, and one 50 ml.

M. Backup power supply for all patient care devices carried.

N. Twelve (12) alcohol and iodine preps for preparing IV injection sites.

O. One (1) roll of tape.

P. Five (5) Band-Aids.

SECTION 1105 MEDICATION AND FLUIDS FOR ADVANCED LIFE SUPPORT AMBULANCES

Such drugs and fluids approved by the Board for possession and administration by advanced EMTs, and specified by the medical control physician, will be carried on the air ambulance. Drugs not included on the approved drug list for paramedics may be carried on board the air ambulance so long as there is a written protocol which is signed and dated by the medical control physician, for the use of the drug and delineates administration only by a registered nurse or physician.

ATTACHMENT D3

§ 44–53–290. Requirement of and authority granted by registration; individuals exempt from registration; registration for maintenance and detoxification treatment.

(a) Every person who manufactures, distributes, or dispenses any controlled substance or who proposes to engage in the manufacture, distribution, or dispensing of any controlled substance, shall obtain a registration issued by the Department in accordance with its rules and regulations.

(b) Persons registered by the Department under this article to manufacture, distribute, dispense, or conduct research with controlled substances may possess, manufacture, distribute, dispense, or conduct research with those substances to the extent authorized by their registration and in conformity with the other provisions of this article.

(c) The following persons need not register and may lawfully possess controlled substances under this article:

(1) An agent or employee of any registered manufacturer, distributor, or dispenser of any controlled substance if he is acting in the usual course of his business or employment;

(2) A common or contract carrier or warehouseman, or an employee thereof, whose possession of any controlled substance is in the usual course of business or employment;

(3) An ultimate user or a person in possession of any controlled substance pursuant to a lawful order of a practitioner or in lawful possession of a Schedule V substance.

(d) The Department may, by regulation, waive the requirement for registration of certain manufacturers, distributors or dispensers if it finds it consistent with the public health and safety.

(e) A separate registration shall be required at each principal place of business or professional practice where the applicant manufactures, distributes or dispenses controlled substances.

(f) The Department is authorized to inspect the establishment of a registrant or an applicant for a registration in accordance with the rules and regulations promulgated by it.

(g) The Department may authorize persons engaged in research on the use and effects of controlled substances to withhold the names and other identifying characteristics of individuals who are the subjects of the research. Persons who obtain this authorization are not compelled in any civil, criminal, administrative, legislative, or other proceeding to identify the individuals who are the subjects of research for which the authorization was obtained.

ATTACHMENT

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201-1708

MEMORANDUM

To: All EMS Services
All EMS Medical Control Physicians

From: Joe Fanning, Director, Division of EMS - DHEC
Wilbur Harling, Director, Bureau of Drug Control - DHEC
E. G. DesChamps, III, M. D., State Medical Director, Division of EMS - DHEC

SUBJECT: **Physician Registration for Controlled Substances in the EMS Setting.**

Recently several questions have arisen concerning the exact requirements for physician registration in EMS activities where controlled substances (CII or CIV) are utilized. These issues were discussed at the Division of EMS' Medical Control Committee with representatives from the Bureau of Drug Control. The following questions and answers are provided for your information.

1] **If the Medical Control Physician does not allow the EMS Service to utilize ANY Controlled (CII or CIV) agents (But other pre-hospital drugs which are non-scheduled i.e. Lidocaine, Epinephrine, Adenosine, etc. are routinely utilized);**
   A] Are any registrations required AT ALL in this instance?
   B] Are registrations/permits PERSONAL to the Medical Control Physician or INSTITUTIONAL to the EMS Service - or BOTH?

ANSWER:

A] If the Medical Control Physician does not authorize the service to utilize ANY Controlled substances (CII or CIV - all Controlled drugs approved for EMS are either Schedule CII or Schedule CIV) then no specific registrations are required - other than for the physician's personal South Carolina license and registration.

B] Registrations - both State and Federal - for the utilization of controlled substances by an EMS Service are PERSONAL to the Medical Control Physician. The ultimate responsibility and liability for the controlled substances is the Medical Control Physician's.

ATTACHMENT F

2] Physician A is Medical Control Physician for EMS Service. This EMS service utilizes medications which are controlled (CII or CIV). Appropriate registrations are in effect. Physician A retires or suddenly resigns and is replaced by Physician B.

A] Do registrations have to be re-applied for, changed, or simply transferred?

B] If registrations must be re-applied for, is service able to utilize any of the scheduled agents during the interim period? (Given that Physician B immediately replaces Physician A as Medical Control and "routine paperwork processing" requires days/weeks will the service be without access to any of the controlled substances during this time?)

ANSWER:

A] All registrations - both State and Federal - must be re-applied for. The registrations are PERSONAL to the Medical Control Physician. If Physician A is no longer associated with the EMS Service then his Controlled Substances Registrations for that service are no longer valid.** (**See Below for exception.) It is the Physician's responsibility to notify the Bureau of Drug Control when he terminates his association with the EMS Service so that his Registrations for that service may also be terminated.

B] The only exception to the rule above is that if Physician A will sign a "Power of Attorney" form for Physician B then the Service may continue to utilize the Controlled Substances previously acquired and on hand under Physician A's Registration until the new Registrations can be issued.

3] The EMS Service maintains replacement stock of scheduled agents at base station.

A] Are additional registrations required - e.g. "Drug Outlet Permit", etc.?

B] What are the Medical Control Physician's responsibilities/obligations/liabilities in reference to record keeping, inventory, inspection?
What activities may be deferred to the EMS Services' Administrative Director or similar agent?

C] Are "Power of Attorney" documents required since Medical Control Physician is authorizing "other agents" (i.e. the EMT-A's) to dispense the controlled substances?

ANSWER:

A] No further registrations are required. The Medical Control Physician must maintain his/her personal State and Federal Registrations (for his/her private practice or clinic practice) and maintain another set of State and Federal Registrations for his/her activities with the EMS Service.

B] As the Controlled Substances Registrations are PERSONAL to the Medical Control Physician, he/she has the ultimate responsibility AND liability for the secure storage of, proper dispensation of, and appropriate record maintenance for any controlled

ATTACHMENT F

substances (CII - CIV) utilized by the EMS Service. The appropriate officer for the EMS Service may sign the routine inventory records of the Service's Controlled Substances - this however, in no way absolves the Medical Control Physician from responsibility and liability for ensuring that the inventories are correct.

C] Power of Attorney forms are not required for appropriately certified and licensed personnel (EMT-A's) acting under authority of the Service's Medical Control Physician to possess (on the Service's vehicles and in jump boxes from the vehicles) and administer Controlled Substances.
Power of Attorney forms would be required as outlined in Question #2B above. **These forms may be obtained by contacting the Bureau of Drug Control DHEC.**

4] **The EMS Service replenishes drugs (including controlled substances) through "swap-out" program with local hospital.**
A] Is this acceptable?
B] Are any special records / registrations / permits required by service?

ANSWER:
A] Yes this is acceptable. Both EMS Service and the Hospital Pharmacy which dispenses the controlled substances via the "swap-out" program must maintain appropriate records detailing the dispensing and receipt of the agents.
B] No special forms are required for this type of "swap-out" program. The standard forms indicating: Substance, Amount, Date, Time, In/Out, and Signature of Recipient and Supplier are adequate for this.

5] **What is appropriate procedure for destruction of controlled substances**
A] That exceed the expiration date
B] That are left over following use on a mission (e.g. partial vial of morphine).

ANSWER:
A] Quantities of Controlled Substances which are expired should be disposed of by a Bureau of Drug Control Inspector. The Regional Inspector may be contacted through DHEC's Bureau of Drug Control at: 935-7817.
B] Small amounts of individual agents which are left over following a mission should be destroyed in the presence of at least one other licensed person who can sign the attestation to the destruction. The usual route of destruction in the instance cited above would be flushing the remaining aliquot down a drain.

ATTACHMENT F

5] A Medical Control Physician serves as Medical Control for four EMS Services within his county. Each service is authorized to utilize controlled substances (CII - CV). Are separate State and Federal DEA Registrations required for EACH INDIVIDUAL service that the physician oversees?

ANSWER:

YES**.

The Medical Control Physician must obtain and maintain separate, PERSONAL State and Federal Controlled Substances Registrations for each individual service he/she oversees that are authorized to utilized Controlled Substances.

**The only exception to the above requirement is in the event that some of the services are licensed as "County" Services. Provided these services come under the jurisdiction of a County EMS Administrator/Director, then the Medical Control Physician may obtain only ONE State and Federal Registration for ALL of the services that are designated as County Services.

In the above cited example, if two services are "County" services and the other two services are individual private or "Non-County" services, the Medical Control Physician would be required to maintain the following:

1 Private (Clinic) Practice State and Federal Registrations
1 State and Federal Registration for the TWO County Services
2 State and Federal Registrations (i.e. one each) for the TWO "Non-County" Services.

A TOTAL of FOUR (4) State and Federal Controlled Substances Registrations would be required.

Any other questions concerning the utilization of Controlled Substances may be forwarded to the Division of EMS - DHEC.

Federal and State Registration forms may be obtained from the Bureau of Drug Control - DHEC.

Power of Attorney Forms may be obtained from the Bureau of Drug Control - DHEC.

ATTACHMENT F

ITEMS TO BE CONSIDERED IN REVIEW OF PILOT PROJECTS

1. Brief description of the ambulance service.
2. Justification of need for the program, including any data available.
3. Data on costs and cost effectiveness.
4. Description of the equipment and functions.
5. Responsibilities of the medical control physician.
6. Explain how involved the medical control physician is in this project.
7. Name and qualifications of the person assisting the medical controlphysician with training.
8. Outline of the initial curriculum for training.
9. Plans andc procedures for continuing education.
10. Protocols
11. Plans for supervision of activities.
12. Record system on pilot project activities, training curriculum, and attendance at training programs.
13. Names and qualifications of the EMTs participating in the program.
14. Method for evaluation of cases and outcomes.
15. Method for handling cases of inappropriate procedures.
16. Plans for evaluation of the pilot project after 12 months.

NOTE: Please provide the information regarding the above numbered items separately. Make certain the numbered items correspond with the information you provide. Submission of this information in an orderly fashion will no doubt expedite the approval process.

ATTACHMENT G

REQUEST FOR CHANGE TO THE STATE APPROVED DRUG LIST

DRUGS ARE ONLY CONSIDERED ONCE A YEAR AT THE FEBRUARY MEDICAL CONTROL MEETING. PLEASE PROVIDE COMPLETE INFORMATION, TO INCLUDE PERTINENT REFERENCES TO THE DRUG FOUND IN MEDICAL LITERATURE.

TYPE OF REQUEST: ____DELETION, ____CHANGE IN USE, ____ADDITION

Generic Name:

Trade Name:

How Supplied:

Method of Administration:

Adult Dosage:

Pediatric Dosage:

ATTACHMENT H

Therapeutic Effects:

Note: Is the proposed use (ie., method of administration etc.) of the drug approved by the FDA? YES ___ NO ___

Indications:

Contraindications:

Side Effects:

Reason for recommendations:

List advantages for adding this drug

ATTACHMENT H

Name reference book used to provide the above information:

This addition is requested by:

Name of ambulance service _____

Signature of director _____

Signature of medical control physician _____

Signature of regional medical director _____

11/29/95

ATTACHMENT H

Attachment I
MEMORANDUM

TO: Emergency Service Provider Directors
Medical Control Physicians

FROM: Alonzo W. Smith, Director
Ed DesChamps, MD, State Medical Director
EMS Division

DATE" November 8, 2001

RE: Revision of the state approved drug list

The state□s Medical Control Committee will be reviewing requests for the addition of drugs to the list at their February or March meeting. If there are drugs you wish to add to this list, you should complete the attached form and give it to your regional EMS Medical Director no later than February 15 The form MUST be typed and completely filled out. ***Remember: there is no longer a separate interfacility drug list, so we will not be taking requests to add interfacility drugs. The interfacility drug form allows EMT-P's to transport any drug requested by the sending physician.***

The regional EMS medical directors are:

Region 1: Upstate

Carol Burger, MD
109 Yorkshire Ct.
Easley, SC 29640

Region 2: Midlands

William C. Gerard, MD
364 Frick Court
Chapin, SC 29036

Region 3: Pee Dee

Richard Rogers, MD
4009 Southborough Rd.
Florence, SC 29501

Region 4: Low Country

John F. Sorrell, MD
951 Scottland Dr.
Mt. Pleasant, SC 29464

Review of this list occurs only on an annual basis.
enclosure

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

EMS Division

Memo

To: EMS Providers and Medical Control Physicians

From: Albert M. Futrell, Jr., Acting EMS Director and Alonzo Smith, Manager, Training and Compliance

Date: 9/4/2001

Re: Important Changes in State Skills and Drugs

IMPORTANT CHANGES: PLEASE READ CAREFULLY

At the EMS Advisory Council meeting on July 14, several important recommendations proposed by the Medical Control Committee were approved. Please read the policy changes described below carefully.

CRICOTHYROTOMIES APPROVED AS A STATE SKILL:

For the past 10 years, Spartanburg County EMS and Meducare have been conducting a pilot project on surgical cricothyrotomies. The EMS Advisory Council approved the recommendation of the Medical Control Committee to allow surgical cricothyrotomies as an optional state-approved skill, with the following requirements:

- Services who wish to perform surgical cricothyrotomies must already have functioning RSI and LMA programs.
- Cricothyrotomies may only be performed on patients ages 18 and older
- Services performing surgical cricothyrotomies must submit data and CQI packet on all cricothyrotomies performed. DHEC EMS and the Training Committee will develop a training module and data collection and CQI packet for services who wish to participate in this state skill.

EMS poviders will be notified when the training module and data collection packages are available.

ATTACHMENT J

LMA'S ARE REQUIRED TRAINING FOR ANY EMT WHO INTUBATES:

Following the Advisory Council's approval of a recommendation by the Medical Control Committee, laryngeal mask airways, or LMA's, are now required training for all level EMT's who intubate. This requirement is part of the new AHA guidelines.

For services that are performing RSI, it is strongly recommended that LMA's be considered as an airway. Upon approval of a service's medical control physician alternative airways such as a combitube or PTL may be used. While these services may use other means of intubation, such as combitube or PTL, they MUST carry the LMA's on the truck.

The goal of establishing airway control should be to use endotracheal intubation as the primary airway whenever possible. If endotracheal intubation is not possible, the next airway backup to consider should be the LMA.*

To summarize these changes:

- **If your service chooses to perform cricothyrotomies**, then your service must also have an RSI and LMA program in place. Your service must carry LMA equipment on each truck in the following sizes: #3 (children 30-50 kg); #4 (adult 50-70 kg); and #5 (adult 70-100 kg). *LMA use is approved for ages 12 and above*. Contact medical control in situations in which age or weight is questionable.

- **If your service performs RSI**, then your service must also be trained and have the equipment necessary to perform LMA airway management. This includes requiring carrying LMA airway equipment on each truck in the following sizes: #3 (children 30-50 kg); #4 (adult 50-70 kg); and #5 (adult 70-100 kg).

- **EMTs of all levels who perform endotracheal intubation at the service level will now be required to have LMA training.**

CHANGES IN DRUGS/POLICIES:

The EMS Advisory Council approved allowing **services that perform RSI to administer the <u>first dose</u> of the RSI drugs under standing order, and additional doses must be administered by direct medical order, online or written. Additionally, EMT-P's may administer the <u>first dose</u> of other state-approved benzodiazepines such as Versed, Valium and Ativan by standing order.** Written standing orders for administration of RSI drugs and other benzodiazepines will suffice as guidance for initial administration. In all cases, additional doses MUST be administered only under direct medical order (online or written).

ATTACHMENT J

Standing orders will now be authorized for controlled substances per DHEC Drug Control regulations. The service's medical control physician **must sign** the standing order and the protocol/standing order must be resubmitted and signed each year.

Lastly, the Advisory Council passed a motion to require that the administration of Nubain and Morphine must have direct medical order (written, radio or online), NOT by standing order, and that Nubain must be inventoried like any scheduled drug.

Dr. Ed DesChamps, State Medical Director and Alonzo Smith, Manager of Training and Compliance with the assistance of John Dobson of the Myrtle Beach Fire Department are in the process of revising the State Approved Formulary. Once this formulary has been revised, copies will be issued to the field. DHEC Board approval is pending on several drugs.

If you have questions about this memo, or need clarification, please contact Alonzo Smith at 803-545-4204. Information in this memo is effective immediately, unless pending changes to a training module.

ATTACHMENT J

Your completed application must be receive in the Board office at least **forty-five (45)** days before the required permit is needed. Please send completed applications to:

LLR-Board of Pharmacy
110 Centerview Drive, Suite 306 (29210)
P.O. Box 11927
Columbia, SC 29211-1927
Telephone: (803) 896-4700

FOR BOARD USE ONLY
Permit Number:_____
Date Permit Mailed:_____
Date Permit Issued:_____
Amount Paid:_____
Check Number:_____
Date Referred to Inspector:_____
Inspected By:_____
Date of Inspection:_____

South Carolina Department of Labor, Licensing and Regulation-Board of Pharmacy

New EMS Non-Dispensing Drug Outlet Permit Application

This permit authorizes a facility to administer and store legend drugs. In accordance with Proviso 50.12 of the 2000-2001 Appropriations Act for the state of South Carolina, which reads "Emergency Medical Services licensed by the Department of Health and Environmental Control shall be exempted from permit fees and the requirement of Section 40-43-86(C) of the 1976 Code of Laws, as amended, that a consultant pharmacist be responsible for the duties as stated in this chapter at the permit holder's location, so as to allow either the Medical Director or a consultant pharmacist to be responsible and accountable for the duties of the consultant pharmacist as provided in Section 40-43-86 (C)"

[] New Facility
[] Change to Existing Permit
- [] Change of Ownership
- [] Change of Name
- [] Change of Location (From one city to another)

DBA Name of Facility		
Location of Facility (Street & Number)		
City	County	Zip Code
Telephone Number	Fax Number	
Name of Corporation		
Mailing Address		
City	State	Zip Code
Date of Expected Opening	Days and Hours Facility Will Be Open	

Name(s) of Owner(s) or Corporate Officers:

_____

_____

Check One:
_____ EMS (08)
_____ Other-Specify (15) _____
Responsible Person:
_____ Consultant Pharmacist
_____ Medical Director

Please describe the activity, product, and service that require this type of permit. (Attach a separate sheet if necessary.)

_____

If new application is based on a change to existing permit, list permit number, former name, ownership and/or location:

_____

Name and Title of Responsible Person Designated as Permit Holder:	Contact Phone #	Name and Title of Contact Person, if other than Permit Holder
_____	_____	_____

Name of Consultant Pharmacist or Medical Director: _____ License Number: _____

Telephone Number at which Consultant Pharmacist or Medical Director can be reached: _____

I hereby certify that the EMS Non-dispensing Drug Outlet for which this permit is sought will be conducted in full compliance with the statutory laws of this State.

_____ _____
Signature of Permit Holder Date

_____ _____
Signature of Consultant Pharmacist or Medical Director Date

ATTACHMENT K

Attachment L

WHO SHOULD I TALK TO AT THE SC STATE EMS OFFICE?
(803) 545-4204

Administrative Support ..... L. Woods
Ambulance Licensure:
- Manager: Compliance ..... T. Horton
- Inspection Schedule ..... T. Horton
- EMS Inspectors/Investigators ..... D. Spigner

Ambulance Run Reports ..... T. Hooks
Budgets ..... A. Smith/S. Wright
Certification ..... Y. Martin/R. Davis
Communication ..... A. Smith
Compliance Monitoring Enforcement ..... A. Smith
Computer Resources ..... V. Grimes
Contract Management ..... S. Wright
Director, Division of EMS ..... Al Smith
Disaster Emergency Preparedness ..... J. Catoe/S. Breen
DNR ..... L. Woods
EMS Advisory Council & Subcommittees ..... L. Woods
EMS Clearinghouse ..... L. Woods
EMS FAX NUMBER ..... (803) 545-4989
EMS Library ..... D. Whiteley
EMS Arm Patches ..... L. Woods
EMS State Plan ..... P. Beasley
EMT Examinations
- State Certification Examination ..... D. Whiteley
- State Examination Schedule ..... Y. Martin
- National Registry Examination SC State Representative ..... D. Whiteley/T. Horton

EMT First Responder Agencies ..... T. Horton
EMT Records ..... R. Davis
EMT Training Programs:
- Deputy Director: Training and Compliance ..... J.Catoe
- Manager: Training and Certification ..... D. Whiteley
- EMT-Basic ..... J. Catoe
- EMT-Intermediate ..... D. Whiteley/J. Catoe
- EMT-Paramedic ..... D. Whiteley
- In Service Program ..... D. Whiteley
- Pilot Programs ..... P. Beasley
- Specialty Programs ..... J. Catoe

Grant Programs:
- EMS for Children ..... J. Paddock
- Grant-In-Aid ..... S. Wright

Investigations:
- Compliance ..... T. Horton
- Training Programs ..... D. Whiteley

Issue Development/Technical Assistance/Pilot Projects ..... A. Smith
Location of Staff ..... L. Woods/R. Davis
Medical Control Committee ..... P. Beasley
Medical Control Physicians ..... T. Horton
Prevention Injury (Seat Belt, Alcohol, Fire, Drowning) ..... J. Paddock
Protocols ..... J. Catoe
Program Development & Evaluation ..... A. Smith/V. Grimes
Quality Assurance ..... A. Smith
Recertification ..... D. Whiteley/Y. Martin/R. Davis
Reciprocity ..... D. Whiteley
Trauma System/Centers/Committee ..... P. Beasley
Trauma Registry/Data ..... V. Grimes

Attachment M

MEDICAL CONTROL COMMITTEE

Edgar G. DesChamps, M. D., Chairman **Member Since: 1985** **STATE MEDICAL DIRECTOR** Apt 924, Vista Commons 1100 Pulaski St. Columbia, SC 29201 Phone: (803) 254-3501(ofc) fax: (803) 254-9284 beeper: (800) 502-8002 e-mail: Edeschamps@ftc-i.net	**Raymond Bynoe, M.D., FACS** **Member Since: 2003** **ACS - COMMITTEE ON TRAUMA** Two Richland Medical Park, Suite 402 Columbia, SC 20203 Phone: (803) 256-2657 (ofc) fax: (803) 929-0492 email: bynoe@medpark.sc.edu
E. Douglas Norcross, M. D. **Member Since: 1989** **DIRECTOR OF TRAUMA SERVICES - MUSC** 171 Ashley Avenue Charleston, SC 29425 Phone: (843) 792-9737 (ofc) fax: (843) 792-3315 email: Norcroed@MUSC.edu	**Carol T. Burger, M. D.** **Member Since 1990** **UPSTATE REGIONAL MEDICAL DIRECTOR** 131 Willow Point Way Easley, SC 29642 Phone: (864) 455-7157 (ofc) fax: (864) 455-5474 - (864) 220-1924 email: andkris@worldnet.att.net
John F. Sorrell, M. D. **Member Since: 1989** **LOWCOUNTRY REGIONAL MEDICAL DIRECTOR** 951 Scottland Drive Mt. Pleasant, SC 29464 Phone: (843) 881-0100 (ofc) fax: (843) 881-6349 - (843) 881-4357 email: jsorrellmd@aol.com	**William C. Gerard, MD, FACEP** **Member Since: 2001** **MIDLANDS REGIONAL MEDICAL DIRECTOR** 364 Frick Ct. Chapin, SC 29036 Phone: (803) 434-7088 (ofc) fax: (803) email: Wcgresq911@mindspring.com
James Mock, M. D. **Member Since: 2001** **SC MEDICAL ASSOCIATION** P. O. Box 3261 North Myrtle Beach, SC 29582 Phone: (843) 692-1759(ofc) Phone: (843) 457-4747(ofc) fax: email: catgutjim@aol.com	**Ron Fuerst, M. D.** **Member Since: 1997** **USC SCHOOL OF MED - DEPT. OF PEDIATRICS** 112 Turtle Cove Ct. Lexington, SC 29072 Phone: (803) 359-0323 (ofc) or 954-3867 fax: (803) 434-3946 email: fuerstr@pol.com
Richard Rogers, M. D. **Member Since: 1996** **PEE DEE REGIONAL MEDICAL DIRECTOR** 4009 Southborough Rd. Florence, SC 29501-8814 Phone: (843) 777-2027 (ofc) Home: (843) 464-8844 fax: (843)	**Mac Nowell, M.D.** **Member Since: 2002** **SCCEP - EMS COMMITTEE** 346 Whiteford Way Irmo, SC 29063 Phone: (803) 951-2151 (home) fax: email: macnowell@hotmail.com

Attachment M2

Upstate Region Region I	Midlands Region Region II	Pee Dee Region Region III	Lowcountry Region Region IV
Anderson	Abbeville	Chesterfield	Allendale
Cherokee	Aiken	Clarendon	Barnwell
Greenville	Chester	Darlington	Bamberg
Oconee	Edgefield	Dillion	Beaufort
Pickens	Fairfield	Florence	Berkeley
Spartanburg	Greenwood	Georgetown	Calhoun
Union	Kershaw	Horry	Charleston
	Lancaster	Lee	Colleton
	Laurens	Marion	Dorchester
	Lexington	Marlboro	Hampton
	McCormick	Sumter	Jasper
	Newberry	Williamsburg	Orangeburg
	Richland		
	Saluda		
	York		

Regional Directors and Offices:

Paul Lucas, Director
Lowcountry Regional EMS
6435-A Fain Street Suite A
N. Charleston, SC 29406
Phone: **843-569-2220** Fax: **843-569-2226**
Email: paul@lowcountryems.com

Debbie Hession, Director
Upstate EMS Council, Inc.
121 Interstate Drive Suite 5-B
Greenville, SC 29615
Phone: **864-289-0112** Fax: **864-289-0114**
Email: uemsc@cris.com

Chris Cothran, Director
Midlands EMS Management Association
3201 Leaphart Road
W. Columbia, SC 29169
Phone: **794-3940** Fax: **794-3941**
Email: ccothran@midlandsems.com

Ryon Watkins, Director
Pee Dee Regional EMS
1314 West Darlington Street
Florence, SC 29501
Phone: **843-662-5771** Fax: **846-662-9444**
Email: ryonw@sc.rr.com

Training Agencies :

Thomy Windham, Director
Pee Dee Regional CTC
P O Box 808
Florence, SC 29503-0808
Phone: **843-665-4671** Fax: **843-669-8842**

Mike Fisher
Greenville Technical College
P O Box 5616 Station B
Greenville, SC 29606
Phone: **864-250-8218** Fax: **864-250-8218**

Attachment N

SC EMS Training Committee Members

Updated on November 29, 2001

Paul Lucas Lowcountry Regional EMS Council 6435-A Fain Street Suite A North Charleston, SC 29406 **Regional Director** **Phone:** 843-569-2220 **Email:** paul@lowcountryems.com **Fax:** 843-569-2226	**Robert Johnson** Kershaw County EMS Haile & Roberts Street Camden, SC 29020 **SC Assoc. Of Rescue Squads** **Phone:** 803-432-4311 ex: 169 **Email:** kcmcems@yahoo.com **Fax:**	**Debbie Hession** Upstate EMS Council, Inc. 121 Interstate Drive Suite 5 B Greenville, SC 29615 **Regional Director** **Phone:** 864-289-0112 **Email:** uemsc@cris.com **Fax:** 864-289-0114
Chris Cothran Midlands EMS Management Assoc. 3201 Leaphart Road West Columbia, SC 29169 **Regional Director** **Phone:** 803-794-3940 **Email:** scmidlans@aol.com **Fax:** 803-794-3941	**Lanny Bernard** Lancaster County EMS P. O. Box 1809 Lancaster, SC 29721 **Phone:** 803-283-4134 **Email:** lcems@infoave.net **Fax:** 803-283-2092 **Pager #:** 803-872-3601	**Mike Fisher** Greenville Technical College P. O. Box 5616 Greenville, SC 29606 **State Board of Tech. & Comp. Edu.** **Phone**: 864-250-8490 **Email:** fishermaf@gvltec.edu **Fax:**
Ray Harling P. O. Box 183 Fairforest, SC 29336 **Phone:** 864-576-3230 ext: 346 **Fax:** **Email**:	**Don Lundy** 3870 Leeds Avenue Suite 104 Charleston, SC 29405 **EMS Association** **Phone:** 843-740-3253 **Email:** dlundy@charlestoncounty.org **Fax:** 803-740-3255	**Ryon Watkins** Pee Dee Regional EMS 1314 West Darlington Street Florence, SC 29501 **Regional Director** **Phone:** 843-662-5771 **Email:** pdrems@bellsouth.net **Fax:** 843-662-9444
John Dobson Myrtle Beach Fire Dept. P O Box 2468 Myrtle Beach, SC 29578 **Phone:** 843-918-2245 **Fax:** 843-918-2244 **Email**: jdobson@cityofmyrtlebeach.com	**Rusty Hollingsworth** Beaufort County EMS 2727 Depot Road Beaufort, SC 29902 **EMS Educators Association** **Phone:** 843-525-4006 **Email:** rusty@mail.co.beaufort.sc.us **Fax:** 843-525-4032	

Attachment O

POSITION STATEMENT ON THE USE AND IMPLEMENTATION OF GUIDELINES

INTRODUCTION:

EMS systems frequently encounter new guidelines and standards established by a variety of organizations, including professional societies (such as NAEMSP), clinical specialty societies (such as AHA, the American Heart Association), government agencies (such as OSHA, the Occupational Safety and Health Administration), industry associations (such as NFPA, the National Fire Protection Association), and other nonprofit groups (such as ASTM, the American Society for Testing and Materials). In some cases, particularly those involving government agencies, true standards are being set forth, with regulatory backing and mandatory compliance. Frequently, however, voluntary ***guidelines*** are being set forth as the best opinion of the promulgating agency, group, or society. In the vast majority of cases, these guidelines are developed through a rigorous process involving a detailed review of available information on the topic, and often involving a ***consensus*** process between members of many organizations with interest in the topic.

While such guidelines may be accompanied by advice regarding implementation, this is not always the case. EMS systems face myriad standards and guidelines that potentially affect the patient care practices of the system. The systems frequently turn to medical oversight, regional or state EMS offices, or other sources of leadership for assistance in evaluating these standards and guidelines for possible implementation.

DEFINITION: For the purpose of this position statement, only ***"voluntary guidelines"*** will be considered. This position statement is not meant to address regulatory standards and other guidelines that are mandated by legal authority, through statute or formal regulation.

POSITION: The Medical Control Committee believes that:

1. The approach that a given EMS agency, system, region, or state office takes in implementing voluntary guidelines must be driven by both local needs and local resources. It must be recognized that logistical, financial, and public health needs, and regulatory realities may influence how, when, or even whether a given EMS agency, system, or region considers or adopts new guidelines. Incorporation of new guidelines into any existing EMS system must be considered in the context of the public's health as a whole, rather than a single illness or injury.

> **A. Logistical/Operational:** Given the tremendous variability in EMS system size, design, capabilities, and resources, it is obvious that EMS systems must have different approaches to evaluating and implementing new guidelines. The manner in which any given system goes about evaluating and implementing guidelines will necessarily be affected by these factors as well as local EMS and public health needs. Additionally, the effect of incorporating new guidelines into pre-existing, day-to-day operations must be considered. From an operational standpoint, systems should not sacrifice baseline performance to institute new guidelines, unless the new guidelines have a higher public health priority.
>
> **B. Financial:** It must be recognized that implementation and adherence to a new set of guidelines may have significant associated costs, such as training of personnel, purchase and

maintenance of new equipment, and medical oversight expenses. The costs of attaining compliance with such guidelines must be recognized: resources expended on compliance with one set of guidelines will not be available for compliance with other guidelines, or for routine functions. From a financial standpoint, as well as an operational standpoint as outlined in **A,** above, it is rarely reasonable to sacrifice baseline capabilities in favor of compliance with new guidelines.

While in optimal circumstances new guidelines could be viewed as tools which EMS systems could use as leverage for additional resources, this is not always possible. In particular, EMS systems that rely principally on billing for services rendered (as opposed to local tax revenue support or other subsidization) will likely not be able to utilize this strategy. Similarly, many EMS services with public funding or subsidies are constrained by statutory or contractual limitations on the amount funds available. Accordingly, it may be necessary to evaluate guidelines in terms of the opportunity costs of compliance, cost-benefit (comparing economic costs with economic benefits), and cost-effectiveness (evaluating cost per degree of effect, either marginal or incremental).

C. Regulatory: Each EMS agency and its medical director must be aware of the degree of latitude granted by state legislation and regulations in modifying patient care activities and crafting protocols, policies, and other documents that involve areas for which guidelines have been promulgated. (For example: Those working in states where strict adherence to state-wide standards is required may have to consider new guidelines in a different way than those working in states that allow local variation. The former will need to work with or through the appropriate state-level authorities and agencies, while the latter will need to take on the responsibility locally.)

2. When considering the implementation of ***guidelines***, EMS systems should consider both the strength of the science supporting the guidelines as well as its applicability to the local EMS and public health environment.

A. Strength of science: EMS systems evaluating a set of guidelines must consider the strength of the science supporting the guidelines to determine if the evidence is significant enough to warrant EMS system implementation, especially when its implementation may compromise other infrastructure needs of the EMS system.

B Local applicability: Guidelines should also be considered in the context of a local EMS system's characteristics, operations, and environment. A given set of guidelines may not be applicable to all given EMS systems. For instance, some guidelines while appropriate for urban EMS systems may not be appropriate for EMS systems operating in rural or remote areas. Additionally, guidelines based on scientific studies of effectiveness in one community may not be applicable to all communities because of differences in the characteristics of the community and/or EMS/public safety systems.

3. Summary: EMS systems must provide the highest quality of service and patient care based on current resources and public health needs. ***Voluntary guidelines*** should be used to supplement and enhance the overall local system structure and function, and should be implemented in a systematic process encompassing all facets of an EMS system. ***Voluntary guidelines should not be considered required standards of care***.

Attachment P

POSITION STATEMENT
ON THE USE AND IMPLEMENTATION OF AMIODARONE and VASOPRESSIN IN ACLS PROTOCOLS

The following summarizes the Position of the Medical Control Committee on the utilization of AMIODARONE and VASOPRESSIN in the Advanced Cardiac Life Support Protocols authored by the American Heart Association (***Guidelines 2000 for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care – International Consensus on Science***. American Heart Association, ***Supplement to Circulation*** – Volume 102, Number 8 – August 22, 2000.). This position is in concert with national organizations – e.g. the American College of Emergency Physicians – and is excerpted in large part from the Position Statement developed by the American Academy of Emergency Medicine to address this issue.

THE USE OF AMIODARONE AND/OR VASOPRESSIN:

It is the position of the Medical Control Committee that the use of Vasopressin and/or Amiodarone in refractory pulseless ventricular tachycardia or ventricular fibrillation (VT/VF) should ***NOT*** be considered the current ***"Standard of Care"*** for this condition.

It is the position of the Medical Control Committee that while these agents **MAY** be appropriate for treatment of the conditions described; the strength of the science at this point is ***NOT CONCLUSIVE*** enough to consider their use mandatory or that their use represents a "Standard of Care".

Until ongoing or future research clarifies this issue, the Medical Control Committee has approved these agents for use in the Pre-Hospital setting. The Local Medical Control Physician should use his/her discretion and expertise in developing protocols for antiarrhythmic therapy in patients with cardiac arrest for their Local EMS Services

IMPLANTED / INVASIVE DEVICE LIST

INTRODUCTION
Invasive / Implanted Device List

The purpose of this manual is to denote medical devices not specifically covered in EMS training which may be transported by EMS personnel and are in place at the time of arrival of the EMTs.

Any invasive or implanted device not described within this manual should NOT be transported by EMS personnel without an accompanying nurse or physician capable of caring for the device. Additions to this manual will be considered yearly after requests for inclusion of a new device are received by DHEC's EMS Division. A request must be signed by the requesting service's medical director and regional medical director. The appropriate request form accompanies this manual.

This list should be treated in a manner similar to the state-approved drug list. EMS services and their medical control physicians may choose not to transport patients - interhospital - with any of the included devices. However, given the likelihood that an EMT may be called upon to transport a patient with one of these devices in an emergency situation, all services **MUST** provide inservice training on these devices to their personnel.

AUTOMATIC INTERNAL CARDIAC DEFIBRILLATOR (AICD)

TRADE NAMES:	Various names
USAGE:	Device implanted under skin which detects dangerous ventricular arrhythmias and automatically delivers a countershock directly to the heart to defibrillate the heart if such an arrhythmia develops.
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	Δ Approved for transport only. Δ May not be manipulated by EMS personnel.
SPECIAL NOTES / IMPORTANT POINTS:	∇ Presence of device has only a minimal potential for minor shock to EMTs and no effect on cardiac resuscitation protocols.

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

INVASIVE / IMPLANTED DEVICE

ARTERIAL LINES, ARTERIAL SHEATHS

TRADE NAMES:	Various names
USAGE:	Catheter placed into an artery for monitoring of blood pressure, for easy sampling of blood or for radiographic or invasive procedures.
TRAINING LEVEL:	✪✪✪ **PARAMEDICS ONLY**
RESTRICTIONS:	Δ Approved for transport only. Δ May not be inserted or manipulated by EMS personnel. Δ **CAN NOT BE USED FOR MEDICATION INFUSION!** Δ May not be used to monitor blood pressure unless set up to do so at referring facility.
SPECIAL NOTES / IMPORTANT POINTS:	∇ Generally requires ongoing infusion of heparinized saline solutions under pressure at low rates to maintain patency and to prevent backup of blood into tubing. This must be prepared and set up at referring institution. ∇ If dislodged - Apply pressure to site for a minimum of 15 minutes, and contact medical control. ∇ Monitor site routinely for signs of hematoma or bleeding.

Initially Issued:11/95
Revision Date: November 1996
Current Printing: April 11, 2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

INVASIVE / IMPLANTED DEVICE

TUBE THORACOSTOMY / CHEST TUBE

TRADE NAMES:	Various names
USAGE:	Placed into pleural cavity to drain fluid, evacuate blood or remove air for treatment of pneumothorax. Tube usually attached to a device which establishes and maintains a vacuum in the pleural space, or a one-way valve (e.g. Heimlich valve).
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	Δ Approved for transport only. Δ Can not be manipulated or inserted by EMS personnel. Δ May place attached vacuum control device to suction if instructed to do so by referring physician or medical control.
SPECIAL NOTES / IMPORTANT POINTS:	Keep suction device upright at all times. If tube is accidentally dislodged, cover wound with occlusive dressing taped on three sides, monitor for development of pneumothorax and contact medical control.

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

INVASIVE / IMPLANTED DEVICE

PERCUTANEOUSLY PLACED CENTRAL VENOUS CATHETERS

(Not to include Swan-Ganz catheters)

TRADE NAMES:	CVP Line, Triple Lumen Catheter, Subclavian Line, Internal Jugular Line, Femoral Line
USAGE:	Large IV placed into one of several large central veins. Used for infusion of fluids or withdrawal of blood. Also used to monitor pressures inside right side of heart.
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	Δ **PARAMEDICS** (only) may administer medications through previously placed percutaneous central venous lines when no other option is available, under direct on-line medical control or standing protocols. Δ **Intermediates and Basic EMTs** may transport IV fluids in place only (no medications).
SPECIAL NOTES / IMPORTANT POINTS:	∇ 1) If line becomes dislodged, apply pressure to control bleeding and contact medical control. ∇ 2) Prevent air embolus. ∇ 3) **(PARAMEDICS ONLY)** If used for monitoring, may require infusion of heparin solution under pressure. ∇ 4) For medication administration: prevent air embolus; maintain stringent sterile technique; flush bolus medication with double the usual amount of fluid (compared to peripheral flush).

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

INVASIVE / IMPLANTED DEVICE

PERITONEAL DIALYSIS CATHETERS

TRADE NAMES:	Tenckhoff Catheter
USAGE:	Fluid infused into abdomen through catheter. Peritoneal lining acts as a dialysis filter.
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	Δ Approved for transport only. Δ If catheter actively in use at time of transport a physician, nurse or individual actively involved in patient dialysis regimen must accompany patient in ambulance. (Awake, alert patient may fill this role.)
SPECIAL NOTES / IMPORTANT POINTS:	∇ If catheter accidentally dislodges, apply sterile pressure dressing and contact medical control.

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

INVASIVE / IMPLANTED DEVICE

EPIDURAL CATHETERS

TRADE NAMES:	Various
USAGE:	Catheter placed in epidural space around spinal cord for administration of analgesic medications.
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	Δ Approved for transport only. Δ May NOT be used for administration of any medication during transport. Δ May NOT be manipulated by EMS personnel.
SPECIAL NOTES / IMPORTANT POINTS:	∇ If catheter accidentally dislodges, apply sterile pressure dressing and contact medical control.

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

INVASIVE / IMPLANTED DEVICE

URETHRAL/SUPRAPUBIC CATHETER

TRADE NAMES:	Foley Catheter, others
USAGE:	Placed into bladder to drain urine and monitor urine output.
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	Approved for transport only. Can not be manipulated or inserted by EMS personnel.
SPECIAL NOTES / IMPORTANT POINTS:	If accidentally dislodged, contact medical control.

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

INVASIVE / IMPLANTED DEVICE

IMPLANTABLE CENTRAL VENOUS CATHETERS

TRADE NAMES:	Hickman Catheter, Broviac Catheter
USAGE:	Surgically implanted venous access device for patients requiring long term venous access for medications or dialysis. May have more than one lumen.
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	Δ **PARAMEDICS** (only) may administer medications through previously placed percutaneous central venous line when no other option is available, under direct on-line medical control or standing protocols. Δ **Intermediates and Basic EMTs** may transport IV fluids in place only (no medications).
SPECIAL NOTES / IMPORTANT POINTS:	∇ Maintenance of sterility of significant importance. Maintain dressing and, if new medications being initiated through line, sterile technique must be maintained when accessing line.

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

INVASIVE / IMPLANTED DEVICE

NASOGASTRIC / OROGASTRIC TUBES

TRADE NAMES:	Salem Sump, Dobhoff, others
USAGE:	To evacuate stomach contents. Usually placed through nose but can be placed through mouth. Also used to feed patients into stomach or proximal small intestine.
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	Δ Approved for **transportation only by basic and intermediate EMTs.** Δ Paramedics may transport and may manipulate/replace. Δ May be connected to suction if instructed to do so by referring institution.
SPECIAL NOTES / IMPORTANT POINTS:	If dislodged, contact medical control, watch for vomiting and/or aspiration and have suction available to clear oropharynx if needed. If being used for feedings, discontinue feeds prior to transport and flush tube with saline.

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

INVASIVE / IMPLANTED DEVICE

SURGICALLY PLACED GASTROINTESTINAL TUBES

TRADE NAMES:	Gastrostomy Tube, Jejunostomy Tube, Baker Tube, Peg Tube, others
USAGE:	Tubes placed into GI tract directly through the skin. Used for drainage or feeding.
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	
SPECIAL NOTES / IMPORTANT POINTS:	If accidentally dislodged, place dressing over site and contact medical control. If used for feedings, can be a continuous feed.

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

INVASIVE / IMPLANTED DEVICE

PERCUTANEOUS DRAINAGE TUBES

TRADE NAMES:	Percutaneous Nephrostomy, Pigtail catheter, others
USAGE:	Used to drain fluid or pus from interior of body.
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	Approved for transport only. Can not be manipulated or inserted by EMS personnel.
SPECIAL NOTES / IMPORTANT POINTS:	If accidentally dislodged, place dressing over site and contact medical control.

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

INVASIVE / IMPLANTED DEVICE

COMPLETELY IMPLANTABLE VENOUS ACCESS PORT

TRADE NAMES:	Porta-cath, others
USAGE:	Used for infusion of fluids or long-term medication (antibiotic, chemotherapy, etc.) therapy.
TRAINING LEVEL:	**ALL Levels**
RESTRICTIONS:	Δ **MAY NOT BE ACCESSED BY EMS PERSONNEL.** Δ May continue infusions initiated prior to transport. Δ **PARAMEDICS** may administer medications through previously placed lines when no other option is available under direct on-line medical control or standing protocol and when device is already accessed prior to transport.
SPECIAL NOTES / IMPORTANT POINTS:	∇ 1) Requires special needle to access. Any other needle will destroy device. ∇ 2) If needle in accessing port should become dislodged, discontinue infusions and contact medical control.

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

INVASIVE / IMPLANTED DEVICE

SURGICAL DRAINS

TRADE NAMES:	Sump drain, Jackson Pratt drain, Penrose drain, others
USAGE:	Placed to evacuate fluid or debris from surgical fields. Some are placed to continuous suction. Others have attached devices to apply suction and collect fluid.
TRAINING LEVEL:	All Levels
RESTRICTIONS:	Approved for transport only. Can not be manipulated or inserted by EMS personnel.
SPECIAL NOTES / IMPORTANT POINTS:	If drain becomes dislodged, place dressing over wound and contact medical control.

Edgar G. DesChamps, III, M.D.
State Medical Director
Division of EMS

Initially Issued: 11/95
Revision Date: November 1996
Current Printing: April 11, 2007

INVASIVE / IMPLANTED DEVICE

END OF DEVICE LIST