T. TACTICAL EMS

A. INTRODUCTION

1. Scope & Applicability
    a) These protocols are intended for use during high-risk, large-scale, and extended law enforcement or homeland security operations.
    b) The Tactical Emergency Medical Services (TEMS) provider is not directly responsible for any person(s) outside the direct field of operations, whose care may safely be provided by the local EMS Operational Program.
    c) These protocols supplement the current version of Maryland Medical Protocols for Emergency Medical Services Providers and at the Tactical Physician's discretion, may incorporate other EMS protocol components, such as: Wilderness, Inter-Facility, Pilot/Optional, and WMD sections.
    d) The Tactical Emergency Medical Services Protocols shall be used only by Tactical EMS providers sponsored by a law enforcement agency and operating under law enforcement command.
    e) To be approved, there must be a written, integrated relationship between the EMS Operational Program and the TEMS program, with both the EMS Operational Program Medical Director and the TEMS Medical Director having signed-off on the agreement.
    f) Tactical EMS Providers at the BLS or ALS levels may administer the medications and perform the procedures listed in these protocols only after receiving specific training on their use and only under the medical direction of a Tactical Physician.
    g) The primary function of the Tactical EMS Provider is to support law enforcement or homeland security operations by facilitating the health and safety of critical public safety personnel inside the perimeter of high-risk, large-scale, and extended operations.
    h) Once the patient is removed from the law enforcement perimeter of operation, the TEMS protocol will end, the Maryland Medical Protocol for EMS providers will be implemented, and the transition of care will be made to the local EMS agency.
    i) An exception may be made when the Tactical EMS Provider's specialized training is needed to manage a specific illness/injury.
        (1) If the Tactical EMS Provider's specialized training is needed to manage the patient's illness/injury, then the highest-trained Tactical EMS Provider shall ride to the hospital with the patient to maintain medications that are not allowed by Maryland Medical Protocol for EMS providers.
        (2) If, during transport, Tactical EMS personnel encounter a significant conflict between TEMS protocols and those of the transporting EMS agency, they should attempt to contact their own Tactical Physician and request a dual consult with the local Base Station Physician.
        (3) If they cannot reach a Tactical Physician, they should contact the local EMS Base Station for on-line medical consultation.

2. Definition of Tactical Environment
   The Tactical Environment is defined as:
   a) Any law enforcement or homeland security operation where deployed personnel are in a large-scale operation or where the risk of injury is sufficiently high as to warrant the presence of on-scene emergency medical services providers.
   b) Types of operations may include: high-risk warrant service, hostage-barricade situations, emergency ordinance disposal, executive protection details, civil demonstration or protest, dynamic training operations, aquatic operations, high-angle, search and rescue missions, and acts of terrorism.
   c) Any prolonged law enforcement deployment, where performance decrement or environmental issues may arise and the safety of the public and deployed law enforcement personnel would benefit from the presence of a Tactical EMS Provider to monitor these circumstances.

3. Demonstration of Need
   a) Jurisdictions that seek approval for a Tactical EMS Program shall submit a demonstration-of-need letter outlining the necessity for the program.
   b) The letter shall be submitted to the Executive Director of the Maryland Institute for Emergency Medical Services Systems for approval and include the following:
      (1) Name of organization and scope of the Tactical EMS Team
      (2) Name and qualifications of the Tactical Medical Director and other Tactical Physicians
      (3) Name and qualifications of the Tactical EMS Coordinator and other Tactical EMS Providers

4. Sponsoring Law Enforcement Agency Requirements
   a) Sponsoring Law Enforcement Agencies shall be responsible for:
      (1) Completing background investigations appropriate for medical providers working in and around law enforcement operations
      (2) Providing appropriate personal protective equipment to accommodate conditions that the team may reasonably encounter to the Tactical EMS Providers and Tactical Physician(s), and ensure adequate training in the equipment's use
      (3) Providing written documentation to MIEMSS that addresses the medical liability and personal injury considerations of the Tactical EMS Providers/ Physician(s)

5. Tactical EMS Provider/Tactical Physician Minimum Training Requirements:
   a) The Tactical EMS Provider shall be a Maryland licensed/certified BLS or ALS provider, and have successfully completed a nationally recognized (CONTOMS/ IFHP [COunter-Narcotic Tactical Operation Medical Support / Integrated Force Health Provider] Program or equivalent) Tactical Provider course that includes instruction and training in:

(1) Team wellness and health management, including preventive medicine
(2) Providing care under fire/basic weapons safety
(3) Officer rescue
(4) Planning medical operations and medical intelligence
(5) Response to the Active Shooter
(6) Orientation to specialized medical gear personal protective equipment used in tactical medical operations
(7) Remote medical assessment ("medicine across the barricade")
(8) Response and management of WMD events, including field-expedient decontamination ("hasty decon") procedures
(9) Operational security, light and sound discipline, helicopter operations, pyrotechnic and other chemical agents, as utilized by law enforcement teams
(10) Less-than-lethal weaponry, the injuries they may cause, and any specific interventions required

b) The Tactical EMS Provider shall have responsibilities for part or all of these protocols, as summarized as follows, based upon either BLS (EMT) or ALS (EMT-Intermediate or Paramedic) level certification.

INTERVENTION	BLS	ALS	MAIS
Provision of access to medications: Ibuprofen, Naproxen, Fexofenadine, Fexofenadine+Pseudoephedrine, Pseudoephedrine, Oxymetazoline nasal spray, Mylanta, Cimetidine, Omperazole, Clove oil, Acetaminophen, Caffeine	✔	✔	✔
Administration of medications in Protocol, not listed above		✔	✔
Cyanoacrylate tissue adhesive (Dermabond)	✔	✔	✔
Field expedient wound closure (Stapling)	✔	✔	
ELECTRIC CONDUCTIVE WEAPON dart removal	✔	✔	

c) The Tactical EMS Provider shall document each patient contact utilizing MAIS or EMAIS. The documentation must be consistent with current MIEMSS regulations for interventions, as summarized in the above table. All TEMS implementations will be reviewed.

d) The Tactical Physician shall possess an unrestricted Maryland License (preferred Emergency Medicine, General/Orthopedic/ Trauma Surgery, or Critical Care), have experience in on-line medical direction, and have

completed a nationally recognized (CONTOMS / IFHP or equivalent) tactical medical director's course that includes instruction and training in the following topics:
(1) History of/need for Tactical EMS provision
(2) Administrative/Command concerns and responsibilities
(3) Care under fire
(4) Special equipment/hazards in the Tactical environment
(5) Forensic examination
(6) Medicine "across the barricade"
(7) Medical threat assessment

6. Quality Assurance
   a) Individual Tactical EMS providers must be Approved for TEMS Pilot Participation by the TEMS Medical Director.
      Successful completion of small group training of the following:
      (1) Classroom lecture
      (2) Mannequin instruction
      (3) Must demonstrate proficiency through skills testing and written test
   b) Ongoing Demonstration of Proficiency
      A verification of all TEMS skills and review of TEMS principles of safety will be performed on an annual basis by the Medical Director, or the provider may document utilization of skills in the field.
   c) Review of Each Call
      (1) Mechanism for follow-up of each call will be in accordance with the Quality Review Procedure for Pilot Programs (formerly "Class B" Additional Procedure Algorithm) of the Maryland Medical Protocols, with the addition of (2) and (3) below:
      (2) Upon completion of the Tactical Incident, notification of any implementation of the TEMS protocol will be made to your jurisdictional TEMS supervisor.
      (3) Medical Director will evaluate all TEMS interventions within 48 hours of resolution of the Tactical Incident.
   d) The TEMS program will maintain a detailed TEMS database and will provide an annual report to the State EMS Medical Director.

B. GENERAL PROTOCOLS

1. Medical Direction
   a) Tactical EMS Providers may provide medical care using Tactical Medical Protocols only under the medical direction of a Tactical Physician.
   b) Immediately available telephone or radio contact during an operation shall be considered a reasonable substitute for in-person supervision of the Tactical EMS Providers.
   c) In the absence of medical direction by a Tactical Physician, jurisdictional trained and designated Tactical EMS Providers should defer to their usual EMS protocols.

2. Operational Command
   Operational command within a law enforcement perimeter of operation lies with the law enforcement commander. At times, the safety and success of the law enforcement objectives may override the need to care for casualties. The law enforcement commander is responsible for the care and movement of casualties within a law enforcement operation.

C. SPECIAL CONSIDERATION FOR TACTICAL EMS

1. The execution of some law enforcement operations may require that minor illness or injury in essential public safety personnel be treated and, to the extent that it is medically safe to do so, that those treated personnel return to duty. Fitness for duty of public safety personnel with minor injuries or illnesses shall be determined by the law enforcement commander in consultation with a tactical physician.

2. Prescription and Over the Counter (OTC) medications may be used for the treatment [or "symptomatic relief"] of constitutional symptoms as required to promote the health, safety, and functionality of persons necessary to the operation. The Tactical EMS Provider(s) under the Tactical Physician will know the indications/contraindications for the medications available to him/her (as will be delineated under "Additional Medications for Tactical EMS," to follow). At the BLS level, medications will be made available to those persons under the Tactical Provider's care to self-select and self-medicate at the individual requesting person's own discretion regarding appropriateness of use.

3. The Tactical EMS Provider may provide care to all persons associated with the operation, and shall be responsible for initial access, assessment, and stabilization (within the scope of the Maryland Medical Protocols for EMS Providers) of those victims, bystanders, and suspects within the "warm" or "hot" zones until they may be extracted to local EMS providers. The Tactical EMS provider is not directly responsible for any person(s) outside the direct field of operations, whose care may safely be provided by the local EMS Operational Program.

D. SPECIFIC PROCEDURES

1. Cyanoacrylate tissue adhesive (Dermabond).
   a) Purpose: To limit blood loss, pain, and risk of secondary contamination/injury to a minor open wound.
   b) Indications
      (1) Clean wounds
      (2) Minor bleeding wounds difficult to control with other interventions
      (3) Wounds in personnel who must remain operational
   c) Contraindications
      (1) Grossly contaminated wounds

(2) Greater than two hours since infliction of wound
(3) Macerated/crushed surrounding tissue
(4) Wounds near the eyes

d) Potential adverse effects/Complications
(1) This is not intended to constitute definitive wound closure—however, if properly cleaned prior to procedure, may be reviewed by physician without further intervention.
(2) Transient local pain at application site may be reported.

e) Precautions
(1) Ask regarding previous reaction/exposure to agent.
(2) Advise patient of requirement for further evaluation by physician.

2. "Field expedient" wound closure (stapling)
a) Purpose: To limit blood loss and risk of secondary contamination injury to an open wound.
b) Indications
(1) Clean wounds
(2) Delay in transportation to definitive care will be or is anticipated to be several hours
(3) Bleeding wounds difficult to control with other interventions
(4) Wounds in personnel who must remain operational
c) Contraindications
(1) Grossly contaminated wounds
(2) Greater than six hours since infliction of wound
(3) Macerated/crushed surrounding tissue
(4) Situations with less than two hours anticipated time to transportation to definitive care
(5) Facial wounds
d) Potential adverse effects/Complications
(1) This is **not** intended to constitute definitive wound closure—this will minimize the potential for increased infection risk and increased retained foreign body risk.
e) Precautions
(1) Ask regarding local anesthetic allergies.
(2) Advise patient of requirement for further evaluation by physician.

3. Impaled electric conductive weapon dart removal
a) ANY electric conductive weapon dart impalement to the head, neck, hands, feet, or genitalia must be stabilized in place and evaluated by a physician.
b) In order to safely transport the patient, attempted extraction may be made one time by a Tactical EMS Provider as long as the dart is not lodged in a location listed in a) above, and is not fully embedded up to the hub in tissue.
c) All patients receiving electric conductive weapon intervention will need to be transported to the Emergency Department for assessment.

SUPPLEMENTAL FORMULARY FOR TACTICAL EMS

Tactical EMS providers may administer the following medications to support and maintain Tactical personnel in the operation environment.

1. Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)
   a) Ibuprofen (Motrin/Advil)
   b) Naproxen (Aleve/Naprosyn)
   c) Ketorolac (Toradol) (injectable)
2. Antihistamines / Decongestants
   a) Fexofenadine (Allegra)
   b) Fexofenadine + Pseudoephedrine (Allegra-D)
   c) Pseudoephedrine (Sudafed)
   c) Oxymetazoline nasal spray (Afrin)
3. Gastrointestinal
   a) Liquid Antacid (Mylanta or other equivalent liquid antacid)
   b) Cimetidine (Tagamet—or other equivalent H2 blocker)
   c) Omperazole (Prilosec—or other equivalent Proton Pump Inhibitor)
   d) Loperamide (Immodium)
   e) Metoclopramide (Reglan) (injectable)
   f) Dimenhydrinate (Dramamine), Meclizine (Antivert) [for motion sickness]
   g) 5-HT3 Antagonist (Zofran/Ondansetron, Kytril/Granisetron, Anzemet/ Dolasetron—or other equivalent 5-HT3 antagonist) (become non-operational member if given)
4. Opthalmologicals
   a) Proparacaine or Tetracaine (Alcaine) ophthetic
   b) Fluorescein stain (and Blue light)
5. Antimicrobials (agent specific training)
   a) Betalactames or Cefazolin (Ancef) (IV) [for trauma applications when transport delayed]
   b) Quinolones (Following exposure or prophylaxis)
6. Steroids
   a) Prednisone (PO or IV)
   b) Dexamethasone (Decadron) (PO or IV)
7. Clove oil (for topical dental analgesia)
8. Analgesics / Anesthetics
   a) Tramadol (Ultram) (PO)
   b) Acetaminophen (Tylenol)
   c) Lidocaine (IM/SQ for stapling as temporizing measure only, alternate dosing regimen)
9. Nitroglycerin (alternate dosing regimen – Just taking out consultating requirement [not for hypertension])
10. Performance aids
    a) Zaleplon (Sonata) (sleeper)
    b) Modafinil (Provigil)

- c) Caffeine (No-Doz)

11. Volume Expanders
    - a) Hydroxyethyl starch (Hespan)
    - b) 3% NaCl
12. Wound Management
    - a) Cyanoacrylate tissue adhesive (Dermabond)
    - b) Powdered hemostatic agent or impregnated dressing (Quik-Clot / equivalent)

OPERATIONAL: THE MEDICATION MAY BE GIVEN TO A LAW ENFORCEMENT MEMBER WHO MAY CONTINUE TO PERFORM HIS/HER ASSIGNED DUTIES.

NON-OPERATIONAL: ONCE THE MEDICATION HAS BEEN ADMINISTERED, THE LAW ENFORCEMENT MEMBER IS REMOVED FROM HIS/HER ASSIGNED DUTIES SINCE THE MEDICATION OR THE ASSOCIATED MEDICAL/TRAUMATIC COMPLAINT MAY IMPAIR HIS/HER ABILITY TO PERFORM CRITICAL LAW ENFORCEMENT TASKS AND DUTIES.

1. Non-Steroidal Anti-Inflammatory Drugs

IBUPROFEN (Motrin/Advil)

AVAILABILITY…………………………Tablet: 200mg (OTC) and 100mg/5mL suspension
ACTION………………………………..Non-steroidal anti-inflammatory pain medication
INDICATIONS………………………....Mild to moderate pain
CONTRAINDICATIONS……..……Known hypersensitivity; renal insufficiency (not failure); PUD/GERD/GI bleed history
PRECAUTIONS………………………Do not use with other NSAIDs; caution with concomitant steroid use. aL CB (D in 3rd trimester) [a]+
OPERATIONAL STATUS?……..……**Operational**
SIDE EFFECTS………………………GI upset / nausea; GI bleeding risk
INTERACTIONS…………………..…..
DOSAGE………………………………400-600mg / 4 to 6 hours or 600-800mg / 6 to 8 hours

NAPROXEN (Aleve/Naprosyn)

AVAILABILITY…………………………Tablet: 220 / 375 / 500mg
ACTION……………………………….… Non-steroidal anti-inflammatory pain medication
INDICATIONS……………………..…...Mild to moderate pain
CONTRAINDICATIONS……..……Known hypersensitivity; renal insufficiency (not failure); PUD/GERD/GI bleed history
PRECAUTIONS………………………Do not use with other NSAIDs; caution with concomitant steroid use. aL CB (D in 3rd trimester) [a]+
OPERATIONAL STATUS?……..……**Operational**
SIDE EFFECTS………………………GI upset / nausea; GI bleeding risk
INTERACTIONS…………………..…..
DOSAGE……………………………..…220-500mg / 12 hours

KETOROLAC (Toradol) (Injectable)

AVAILABILITY…………………………30mg/mL IV/IM
ACTION…………………………………Non-steroidal anti-inflammatory pain medication
INDICATIONS…………………………Mild to moderate pain
CONTRAINDICATIONS………………Known hypersensitivity; renal insufficiency (not failure); PUD/GERD/GI bleed history
PRECAUTIONS………………………Do not use with other NSAIDs; caution with concomitant steroid use. aPlasma CC (D 3rd trimester) [a]?
OPERATIONAL STATUS?……………**Operational**
SIDE EFFECTS………………………GI upset / nausea; GI bleeding risk
INTERACTIONS………………………
DOSAGE…………………………………30mg IM/IV every 6 to 8 hours

2. Antihistamines / Decongestants

FEXOFENADINE (Allegra)

AVAILABILITY…………………………Tablet: 60mg
ACTION…………………………………Non-sedating antihistamine
INDICATIONS…………………………Allergic symptoms
CONTRAINDICATIONS………………Known hypersensitivity
PRECAUTIONS………………………Hypertension history; aLK CC [a]+
OPERATIONAL STATUS?……………**Operational**
SIDE EFFECTS………………………
INTERACTIONS………………………
DOSAGE…………………………………60mg / once or twice daily

FEXOFENADINE & PSEUDOEPHEDRINE (Allegra-D)

AVAILABILITY…………………………Tablet
ACTION…………………………………Non-sedating antihistamine with decongestant
INDICATIONS…………………………Allergy symptoms with nasal congestion / symptoms
CONTRAINDICATIONS………………Known hypersensitivity
PRECAUTIONS………………………Hypertension history; aL CC [a]+ (C–psdphd but used)
OPERATIONAL STATUS?……………**Operational**
SIDE EFFECTS………………………
INTERACTIONS………………………
DOSAGE…………………………………One tablet once or twice daily

PSEUDOEPHEDRINE (Sudafed)

AVAILABILITY…………………………Tablet: 30mg; 60mg (OTC)
ACTION…………………………………Decongestant
INDICATIONS…………………………Nasal congestion; rhinorrhea
CONTRAINDICATIONS………………Known hypersensitivity; hypertension
PRECAUTIONS………………………
OPERATIONAL STATUS?……………**Operational**
SIDE EFFECTS………………………Insomnia
INTERACTIONS………………………
DOSAGE…………………………………30mg to 60mg every 4 to 6 hours, as needed

OXYMETAZOLINE (Afrin)

AVAILABILITY……………………………Nasal spray 0.05%
ACTION……………………………….…..Nasal vasoconstriction; decongestant
INDICATIONS……………………….……Rhinorrhea; sinus congestion and pain
CONTRAINDICATIONS……….……..Known hypersensitivity
PRECAUTIONS……………………...…..aL CC ª?
OPERATIONAL STATUS?……..……**Operational**
SIDE EFFECTS……………………….Nose bleed (minor) possible, often used in treatment of nosebleed
INTERACTIONS……………………..……
DOSAGE…………………………….…Two sprays per nostril two to three times per day

3. Gastrointestinal

LIQUID ANTACID (Mylanta/Maalox)

AVAILABILITY……………………………Liquid (OTC)
ACTION……………………………….…Antacid
INDICATIONS ……………………….…GI upset; GERD; PUD; Gastritis; Esophagitis
CONTRAINDICATIONS……….……Known hypersensitivity
PRECAUTIONS……………………...….Some medications require acidic pH and should not be taken at same time with this medication: aK C+ (? 1st trimester) ª?
OPERATIONAL STATUS?……..……**Operational**
SIDE EFFECTS……………………….
INTERACTIONS ……………………..…Loose stools possible
DOSAGE……………………………....15-45mL every 4 to 8 hours

CIMETIDINE (Tagamet)

AVAILABILITY ………………………200, 300, 400mg tablet; 300mg IV/IM
ACTION……………………………….…Proton pump inhibitor
INDICATIONS ……………………….…PUD; GERD; Esophagitis; Gastritis
CONTRAINDICATIONS……….……Known hypersensitivity; concomitant H-2 blocker use
PRECAUTIONS……………………...….aL CC ª?
OPERATIONAL STATUS?……..……**Operational**
SIDE EFFECTS……………………….
INTERACTIONS ……………………..…
DOSAGE……………………………....300mg IV/IM/PO every 6-8 hours; 400mg twice daily

OMPERAZOLE (Prilosec)

AVAILABILITY ………………………Capsule: 20mg, 40mg (OTC)
ACTION……………………………….…Proton pump inhibitor
INDICATIONS ……………………….…PUD; GERD; Esophagitis; Gastritis
CONTRAINDICATIONS……….……Known hypersensitivity; concomitant H-2 blocker use
PRECAUTIONS……………………...…..aL CC ª?
OPERATIONAL STATUS?……..……Operational
SIDE EFFECTS……………………….
INTERACTIONS……………………..……
DOSAGE…………………………….…40mg once daily

LOPERAMIDE (Immodium)

AVAILABILITY……………………………Tablet: 2mg (OTC) and 1mg/5mL suspension
ACTION…………………………………..Anti-diarrheal
INDICATIONS……………………….……Diarrhea
CONTRAINDICATIONS………..………Known hypersensitivity; hypertension; bloody diarrhea
PRECAUTIONS…………………...…..aL CB ª+
OPERATIONAL STATUS?……..……Operational
SIDE EFFECTS………………………ENT-dryness
INTERACTIONS……………………….…
DOSAGE……………………………….4mg first dose; 2mg each subsequent episode until stool formed; maximum 16mg per day

METOCLOPRAMIDE (Reglan) (Injectable)

AVAILABILITY……………………………IM/IV injectable; 10mg
ACTION……………………………….… Anti-emetic; promotes GI motility
INDICATIONS ………………………..…Nausea / vomiting
CONTRAINDICATIONS………..………Known hypersensitivity
PRECAUTIONS…………………...….. Dystonic reaction risk (treat with Diphenhydramine); may see sedation; aK CB ª?
OPERATIONAL STATUS?……..……NON-OPERATIONAL
SIDE EFFECTS………………………Sedation; dystonia
INTERACTIONS……………………..…..
DOSAGE……………………………....10-20mg IM/IV/PO every 4 hours, as needed; per MD/DO

DIMENHYDRINATE (Dramamine)

AVAILABILITY……………………………IM/IV injectable; 50mg tablet
ACTION ……………………………..…Anti-emetic; anti-motion sickness
INDICATIONS ………………………..…Nausea / vomiting
CONTRAINDICATIONS………..………Known hypersensitivity
PRECAUTIONS…………………...…..May see sedation; aK CB ª?
OPERATIONAL STATUS?……..…….NON-OPERATIONAL
SIDE EFFECTS………………………Sedation
INTERACTIONS……………………….…
DOSAGE……………………………….50-100mg IM/IV/PO every 4 hours, as needed; per MD/DO

MECLIZINE (Antivert)

AVAILABILITY……………………………25-50mg tablet
ACTION…………………………………..Anti-emetic; anti-motion sickness
INDICATIONS…………………………...Nausea / vomiting
CONTRAINDICATIONS………..……… Known hypersensitivity
PRECAUTIONS…………………...…..May see sedation; aK CB ª?
OPERATIONAL STATUS?……..…….NON-OPERATIONAL
SIDE EFFECTS………………………Sedation
INTERACTIONS……………………….…
DOSAGE……………………………....25-50mg PO every 4 hours, as needed; per MD/DO

ONDANSETRON / 5-HT3 Antagonist (Zofran)

AVAILABILITY…………………………IM/IV injectable; tablets
ACTION…………………………….….Anti-emetic; anti-motion sickness
INDICATIONS……………………….…..Nausea / vomiting
CONTRAINDICATIONS……….……Known hypersensitivity
PRECAUTIONS…………………...….aK CB ª?
OPERATIONAL STATUS?……..……NON-OPERATIONAL
SIDE EFFECTS……………………….
INTERACTIONS……………………...
DOSAGE……………………………....Per MD/DO

4. Opthalmologicals

PROPARACAINE /Tetracaine (Alcaine)

AVAILABILITY ………………………Ocular anesthetic solution
ACTION………………………………..Topical anesthetic
INDICATIONS………………………..To facilitate eye exam; relieve eye pain; per MD/DO
CONTRAINDICATIONS……….…… Known hypersensitivity
PRECAUTIONS…………………...….Insure eye protection from foreign objects after exam
OPERATIONAL STATUS?……..……Operational
SIDE EFFECTS……………………….
INTERACTIONS……………………..Eye pain
DOSAGE……………………………....1-2 drops per eye; per MD/DO

FLUORESCEIN (and Blue light)

AVAILABILITY ………………………Single application strips
ACTION…………………………….….Dye to facilitate eye exam
INDICATIONS………………………..Suspected eye injury (foreign body / corneal abrasion)
CONTRAINDICATIONS……….……Known hypersensitivity
PRECAUTIONS…………………...….N/A
OPERATIONAL STATUS?……..……Operational
SIDE EFFECTS……………………….N/A
INTERACTIONS……………………...N/A
DOSAGE……………………………....One drop per eye

5. Antimicrobials (agent specific training)

Quinolones (Following exposure or prophylaxis)

CIPROFLOXACIN (Cipro)

AVAILABILITY ………………………Tablet:250/500/750mg; 400mg IVPB; 250 or 500/5 susp
ACTION…………………………….….2nd generation Quinolone antimicrobial agent
INDICATIONS………………………..Per MD/DO—infectious exposures
CONTRAINDICATIONS……….…….Known hypersensitivity
PRECAUTIONS…………………...….aLK CC (teratogenicity unlikely) ª?+
OPERATIONAL STATUS?……..……Operational
SIDE EFFECTS……………………….GI upset; nausea/vomiting; diarrhea; yeast infection
INTERACTIONS……………………...
DOSAGE……………………………....Per MD/DO

Betalactam eg: Aminocillins, Cephalosporins, Carbapenems, Monobactams

CEFAZOLIN (Ancef)

AVAILABILITY……………………………0.5-1.5 gram IM/IV
ACTION…………………………………1st generation Cephalosporin antimicrobial agent
INDICATIONS ………………………Per MD/DO—infectious exposures / trauma
CONTRAINDICATIONS………………Known hypersensitivity to PCN or Cephalosporins
PRECAUTIONS……………………aK CB ª+
OPERATIONAL STATUS?……………NON-OPERATIONAL
SIDE EFFECTS……………………… GI upset; nausea/vomiting; diarrhea; yeast infection
INTERACTIONS………………………
DOSAGE………………………………Per MD/DO

6. Steroids

PREDNISONE

AVAILABILITY……………………………PO or IV; Tablet: 1; 5; 10; 20; 50mg and 5mg/mL or 5mg/5mL sol.
ACTION…………………………………Corticosteroid; anti-inflammatory
INDICATIONS ………………………Allergic reaction; auto-immune condition; per MD/DO
CONTRAINDICATIONS……………… Known hypersensitivity
PRECAUTIONS……………………PUD/GERD/GI bleed history; aL CC ª+
OPERATIONAL STATUS?……………Operational
SIDE EFFECTS………………………GI upset / nausea
INTERACTIONS………………………
DOSAGE ……………………………40mg to 60mg once daily; per MD/DO

DEXAMETHASONE (Decadron)

AVAILABILITY ………………………PO or IV/IM; tablets
ACTION…………………………………Corticosteroid; anti-inflammatory
INDICATIONS ………………………Allergic reaction; auto-immune condition; per MD/DO
CONTRAINDICATIONS………………Known hypersensitivity
PRECAUTIONS……………………PUD/GERD/GI bleed history; aL CC ª-
OPERATIONAL STATUS?……………Operational
SIDE EFFECTS………………………GI upset / nausea
INTERACTIONS………………………
DOSAGE………………………………10mg once daily; per MD/DO

7. Clove Oil

CLOVE OIL

AVAILABILITY……………………………Topical Liquid (OTC)
ACTION…………………………………Topical (dental) anesthetic
INDICATIONS…………………………Dental pain / injury
CONTRAINDICATIONS………………Known hypersensitivity
PRECAUTIONS……………………Penetrating / open intra-oral wounds
OPERATIONAL STATUS?……………Operational

SIDE EFFECTS ……………………….
INTERACTIONS……………………….
DOSAGE……………………………….Topical application to site of dental pain

8.Analgesics

TRAMADOL (Ultram)

AVAILABILITY ………………………PO Tablet: 50 and 100mg
ACTION……………………………….Pain medication
INDICATIONS………………………...Moderate to moderately severe pain
CONTRAINDICATIONS…………….Known hypersensitivity; seizure disorder; SSRI / TCA / MAOI use; renal or hepatic insufficiency (adjust dose)
PRECAUTIONS…………………...….Caution with concomitant narcotic use. aLiver CC ª?
OPERATIONAL STATUS?…………..Operational (if no side effects reported)
SIDE EFFECTS……………………….Potentially dizziness / nausea
INTERACTIONS……………………..Antidepressants; antipsychotics; Warfarin; Digoxin; Tegretol; Quinidine
DOSAGE……………………………… 50 to 100mg every 4 to 6 hours; 400mg/day maximum

ACETAMINOPHEN (Tylenol)

AVAILABILITY ………………………Tablet: 325 and 500mg
ACTION……………………………….Pain medication
INDICATIONS………………………...Mild to moderate pain
CONTRAINDICATIONS…………….Known hypersensitivity; liver disease; PUD/GERD/GI bleed history
PRECAUTIONS…………………...…. aL CB ª+
OPERATIONAL STATUS?…………. Operational
SIDE EFFECTS……………………….GI upset
INTERACTIONS ……………………
DOSAGE……………………………….650-1000mg / 4 to 6 hours

LIDOCAINE (For stapling as temporizing measure only)

AVAILABILITY ………………………IM or SQ Injectable 1% solution
ACTION……………………………….Local anesthetic
INDICATIONS……………………….Infiltration anesthesia
CONTRAINDICATIONS…………….Known hypersensitivity
PRECAUTIONS…………………...….a C ª
OPERATIONAL STATUS?…………..Operational
SIDE EFFECTS……………………….
INTERACTIONS……………………..
DOSAGE……………………………...5mg/kg maximum

9. Nitroglycerin

NITROGLYCERIN

AVAILABILITY ……………………… 1:150 grain (=0.4mg) sublingual tablet
ACTION……………………………… Vasodilator; antihypertensive
INDICATIONS ……………………… Chest pain suspicious for cardiac origin; pulmonary edema
CONTRAINDICATIONS…………… Known hypersensitivity; hypotension (SBP <90mmHg); Pulmonary Artery Hypertension (eg. Adcirca) or erectile dysfunction drugs (eg Viagra) used within 48 hours
PRECAUTIONS………………… Obtain IV access prior to administration, if possible; aL CC ª? (mother's needs paramount)
OPERATIONAL STATUS?………… NON-OPERATIONAL
SIDE EFFECTS……………………. Headache (transient); hypotension
INTERACTIONS…………………… Erectile dysfunction drugs (eg Sildenafil [Viagra]) may cause lethal hypotension
DOSAGE………………………….. 0.4mg sublingual every 3 to 5 minutes for chest pain until improvement of pain or desired BP; discuss utilization of Morphine for chest pain with MD/DO versus continued NTG and frequency

10. Performance Affecting

ZALEPLON (Sonata) (sleeper)

AVAILABILITY ……………………… Capsule: 10mg
ACTION……………………………… Anxiolytic / hypnotic; shortest t-1/2 of agents available
INDICATIONS ……………………… Facilitate rest during non-operational periods in prolonged deployment / transportation; minimum 4-hour block required for usage (6 hours preferred)
CONTRAINDICATIONS…………… Known hypersensitivity; insecure location; lack of assured 4-hour non-operational period
PRECAUTIONS………………… May not drive / operate machinery / use weapons minimum 4 hours post-administration aL CC ª-
OPERATIONAL STATUS?………… NON-OPERATIONAL (x 4 hours after administration)
SIDE EFFECTS…………………… Sedation
INTERACTIONS…………………… Alcohol / other sedatives potentiate effect
DOSAGE…………………………… 10-20mg with assured 4-hour non-operational block, as approved by MD/DO

MODAFINIL (Provigil)

AVAILABILITY……………………… 200mg Tablet
ACTION……………………………… Enhances alertness / concentration
INDICATIONS ……………………… To facilitate functioning with limited rest periods
CONTRAINDICATIONS…………… Known hypersensitivity
PRECAUTIONS………………… aL CC ª?
OPERATIONAL STATUS?………… Operational
SIDE EFFECTS…………………… Insomnia, mild blood pressure elevation
INTERACTIONS……………………
DOSAGE………………………….. 200mg once daily

CAFFEINE (No-Doz)

AVAILABILITY……………………………200mg Tablet
ACTION…………………………………Enhances alertness
INDICATIONS………………………...Suspected caffeine withdrawal headache; to facilitate functioning with limited rest periods
CONTRAINDICATIONS……….…… Known hypersensitivity
PRECAUTIONS…………………..….aL CB ª?
OPERATIONAL STATUS?……..……Operational
SIDE EFFECTS…………………………Insomnia
INTERACTIONS……………………...
DOSAGE……………………………....100-200mg / 3 to 4 hours as needed

11. Volume Expanders

HYDROXYETHYL STARCH (Hespan)

AVAILABILITY ………………………500 & 1000mL IV bags 6% solution
ACTION…………………………………Volume expander
INDICATIONS………………………..Hemorrhagic shock / hypovolemia
CONTRAINDICATIONS……….……Known hypersensitivity
PRECAUTIONS…………………..….Attempt to maintain adequate urine output; aK CC ª?
OPERATIONAL STATUS?……..……NON-OPERATIONAL
SIDE EFFECTS……………………….
INTERACTIONS……………………...
DOSAGE……………………………....500-1000mL 6% solution IV

3% NaCl (Hypertonic Saline)

AVAILABILITY ………………………250 & 500mL IV bags
ACTION…………………………………Volume expander
INDICATIONS………………………..Hemorrhagic shock / hypovolemia
CONTRAINDICATIONS ……….……Known hypernatremia
PRECAUTIONS…………………..….Attempt to maintain adequate urine output; aK CC ª?
OPERATIONAL STATUS?……..……NON-OPERATIONAL
SIDE EFFECTS……………………….
INTERACTIONS……………………...
DOSAGE…………………………….…100-500mL IV

12. Wound Management

Cyanoacrylate Tissue Adhesive (Dermabond)

AVAILABILITY ………………………Single use ampoules
ACTION…………………………………Tissue adhesive
INDICATIONS………………………..Minor trauma
CONTRAINDICATIONS……….…… Known hypersensitivity
PRECAUTIONS…………………..….Avoid near eyes
OPERATIONAL STATUS? ……..…Operational
SIDE EFFECTS ………………………Transient local discomfort
INTERACTIONS……………………..N/A
DOSAGE ……………………………As required for wound closure, 2-4 layered applications

Powdered Hemostatic Agent or Impregnated Dressing (Quik-Clot / equivalent)

AVAILABILITY ……………………… Single use packets
ACTION……………………………….….Blood clotting aid
INDICATIONS ……………………..…..Hemorrhage
CONTRAINDICATIONS……….……Known hypersensitivity
PRECAUTIONS………………….…..Standard / Universal precautions for wound care
OPERATIONAL STATUS? ……..…...NON-OPERATIONAL
SIDE EFFECTS………………………N/A
INTERACTIONS ……………….…...N/A
DOSAGE………………………………Single or multiple packet(s) applied to bleeding wound

U. Transport of ACUTE Ventilated Inter-Facility Patients

1. **PURPOSE**
   To define the indications for use of a mechanical ventilator by a Paramedic for the acute ventilated patient
   a) The level of care required for the inter-facility transport of the **"acute ventilated inter-facility patient"** is beyond the routine training curriculum for a paramedic; this type of patient must be transported by a higher level health care provider who is credentialed, educated, and competent in dealing with the ventilator and the ventilated patient. **or**
   b) When a critical interfacility transfer is needed and a credentialed, educated, and competent higher level health care provider is **genuinely unavailable**, a credentialed, educated, and competent paramedic (through a MIEMSS approved training program) may attend the ventilator and the ventilated patient with the addition of a second ALS provider or advanced airway trained health care provider when determined appropriate by the sending/referring physician.
2. **INDICATIONS**
   ACUTE VENTILATED PATIENTS for the interfacility transport are defined as:
   a) Intubated **or**
   b) Tracheostomy patient when the reason for transport is:
      (1) For increased level of care from a hospital, **or**
      (2) To continue the same level of care in an acute care setting, **or**
      (3) The new tracheostomy patient within the last 7 days **(NEW '12)**
3. **VENTILATOR STANDARDS**
   a) ACUTE VENTILATOR DEVICE STANDARDS
      (1) The ventilator that the service is to use for the acute ventilated patient should be able to match the existing ventilator settings. The following minimum device features (including circuit) must be present for this category of patient:
         (a) Set rate of ventilations
         (b) Adjust delivered Tidal Volume
         (c) Adjustable Pressure Support Settings
         (d) Adjustable Inspiratory and Expiratory ratios (I:E ratio)
         (e) Positive End-Expiratory Pressure (PEEP)
         (f) Peak airway pressure gauge
         (g) Continuous Expiratory Volume measurement (Required)
         (h) Modes
            (i) Assist Control (AC)
            (ii) Synchronized Intermittent Mandatory Ventilation (SIMV)
            (iii) Controlled Mechanical Ventilation (CMV)