

ST. PETERSBURG FIRE & RESCUE DEPARTMENT TAC MEDICAL TEAM STANDARD OPERATING PROCEDURES REVISED 01/99

**St. Petersburg Fire and Rescue Department
Paramedic Team Standard Operating Procedures for the
Tactical
Apprehension and Control Team of the St. Petersburg Police
Department**

Definition:

Paramedics working as team members of the St. Petersburg Police departments TAC Team. Providing a high level of medical care inside the perimeter of a tactical operation. Under the direction of a Medical Director.

Medical Director: Steven Epstein M.D., Trauma Surgeon

Training: TAC- Paramedics on the TAC medical team will train with the Police TAC

team on every 4th Friday. Training includes but is not limited to physical fitness, hostage situations, hand signals, hand gun practice and crowd control situations.

MEDICAL- Due to the nature of injuries that may be encountered during TAC operations additional medical training has been approved by the medical director

(see medical procedure section). Each paramedic will be individually approved by the medical director for any training above the current MOMs manual. A training

check sheet will be kept on all members. **NOTE - NO PARAMEDIC SHALL PERFORM ANY**

ADVANCED MEDICAL CARE WITHOUT THE TRAUMING AND WRITTEN APPROVAL OF THE MEDICAL

DMECTOR. The team coordinator will keep all training sheets for documentation. A copy of all medical training will be provided to the medical director.

Team Activation: TAC ALERT- When a situation exists where there may be a possibility of using the team a police officer will give a TAC alert. Police dispatch will notify SP500, SP501, and LR-1 of the possibility of a TAC operation.

LR-1 will alert the on duty members to begin preparing for a call up.

TAC CALL UP- When the police determine the TAC team is needed a TAC call up is given. Police dispatch will notify SP500, SP501, and LR-1 of the upgrade of the situation and the location of the police command post. LR- I will mobilize team members to meet at the command post, keeping as many rescues in service as possible. SP501 will respond to the command post or assist LR-1 in mobilizing the team.

COMMAND POST PROCEDURES: SP501, or in his/her absence LR-1, will have 2 medics fully dressed out for inner perimeter support. Two additional medics will be fully dressed out for back up and transport responsibilities. All members after dressing will report to SP501 or LR-1 for pre-operation instructions. SP501 or LR-1 will remain at the command post to coordinate medical aspects of the operation

Note - It is the philosophy of the team to have 4 paramedics at all TAC call up.

At the discretion of SP501 or LR-1 additional TAC medics may be called in.

(1-1)

OPTIONS:

1. 4 Paramedics - 2 forward
1 backup
1 command post
2. 3 Paramedics - 2 forward
1 command post/backup
3. 2 Paramedics - 1 forward
1 backup

As part of the operation plan, police and medical command will determine before

the start of an operation, a safety zone in which the forward medics will

operate from. Preferably this zone will be located somewhere in the "safe"

perimeter in a location out of the line of fire. Forward medics will support

assault operations from this point. In all operations, the risk factor for the

safety of the forward medical team will be determined before any movement into

the inner perimeter. Risk factors will be defined in one of three ways:

1. Green - Risk 0 or minimal
2. Yellow - Risk above minimal - when the risk is yellow, movement into the inner perimeter would only be in extreme circumstances.
3. Red - Risk at highest - under no circumstance would a forward medical team move into the inner perimeter under "Red" conditions Risk would have

to be reduced to yellow or preferably green conditions.

In all cases, both members of the forward team will agree on the degree of risk.

If there is any doubt the conditions will automatically move to red.

Where

possible, communications with the command post will assist in the determination

of risk factors

HIGH RISK WARRANTS:

Definition: Warrants served by the TAC team due to an increased level of risk.

Notification: SP501 or LR-1 will be notified through the police department. The

police will provide a time and a location for a pre- operation briefing.

Medical Team: 2 on duty TAC medics will be assigned to the operation.

The 2

medics will attend the pre-operation briefing and will be assigned one of the in

service rescue vehicles. Off duty medics will be used when the on duty shift

lacks the required number of TAC paramedics.

VICE AND NARCOTICS OPERATIONS:

Definition: Operations under the direction of the police vice and narcotics unit.

Notification: SP5 01 or LR- I will be notified by the vice and narcotics team of

the time of the pre-operation briefing.

Medical Team: One TAC paramedic will be assigned to the operation. The medic

will report to vice and narcotics in plain cloths with uniform hidden from view.

Equipment: Basic medical equipment and radio will be provided at the vice and

narcotic location. (1-2)

TAC MEDICAL TEAM UNIFORMS

1. TAC call outs: Black BDUs and all safety equipment issued.

2. Vice and Narcotics operations: Black polo style shirt with medic on the

front. Along with all safety equipment issued.

EQUIPMENT: All personal equipment will be kept and maintained by each member.

The equipment will be kept at his/or assigned station during duty hours.

Assigned Equipment:

1. Uniforms X 3 (see uniform description)

2. Helmet

3. Gas mask and cover

4. Ballistic vest

5. Boots

6. Belt

7. Web belt

a. Handcuffs, holder, and key

b. Asp with holder

c. Pepper spray with holder

8. Goggles

9. Gloves

Medical Supplies:

The trauma bags will be maintained on the TAC van. It is each members responsibility to inspect and restock the bags after each use. Each

paramedic

may carry additional approved medical supplies in addition to what is carried in

the bags.

Medications:

All specially approved Level 3 medications will be kept secure at the paramedics assigned station. Each medic should bring all medications to TAC operations.

Equipment Distribution:

1. Forward paramedics
 - a. TAC trauma bags x 2
 - b. Assigned equipment (including medications)
2. Backup paramedics
 - a. TAC trauma bag
 - b. Support equipment bag
 - c. Assigned equipment (including medications)
3. Command post
 - a. Support -equipment bag if back up not available
 - b. Keys to transport vehicle if not left in cab
 - c. Assigned equipment (including medications)

Radios for TAC call up:

1. SP501 if available
2. LR-1 if available
3. Assigned rescue
4. Radios assigned from police
(1-3)

TAC Team Equipment and Medications

Trauma Bag Support Equipment Bag

BVM with mask 02 Tank
2 Lactated Ringers (1000 cc) Additional Ringers
1 unit Hespan Cardiac Drugs
Arrow 8.5 catheter Additional IV set ups
I BP cuff Miscellaneous supplies
Endotracheal tubes (8.5, 8.0, 7.5) Mannitol
Laryngoscope with 2 blades
1 12cc syringe
1 stylet
1 scalpel
1 OPA

Web Belt: (optional)

Pouch 1: Pouch 2:
Angio Cath (2 each - 18,16,14) 2 abdominal soft pads
Vena Guards Several unsterile 4x4's
1 roll of kling 1 roll of 1" tape
12 cc syringe 2 - 14 gauge 2" catheters
alcohol preps
1 tourniquet
Pouch 3:
3 rolls of kling
1 3" ace wrap
1 roll of 3" tape

Leg Pocket:

Anectine
Mivacron
1 12 cc syringe
1 18 gauge 1 1/2 needle
(1-4)

TAC Team Quality Assurance

Training:

All level 3 paramedics will complete the initial training on any procedure before approval is given and equipment is issued. All quarterly level 3 training is mandatory. In the event training is missed the paramedic will be placed on provisional status until such time training is made up. While on provisional

status all equipment related to the missed training will be returned to the TAC team coordinator. All training will be documented with copies forwarded to the OMD.

Documentation:

Each level 3 paramedic will have documentation on file with the OMD and the EMS office indicating which level 3 procedures have been approved. The documentation will include the signature of the team medical director, team coordinator and the level 3 paramedic. The documentation shall be reviewed on an annual bases.

Level 3 Procedure Review:

For each level 3 procedure that is attempted a Level 3 Procedure Review form will be completed and sent to the team coordinator. The purpose of this form is to document the usage of the level 3 protocols, procedure review and training.

Medical Control Contact:

All level 3 procedures well require medical control contact. Every effort should be made to contact medical control prior to attempting the procedure. Unless a delay in the procedure would be detrimental to the patient. A Quality Assurance Review will automatically be initiated on all level 3 procedures by the Medical Communications Officer. All level 3 QARs will be reviewed by the Team medical director and will be followed up by County Medical Director.

Level 3 Procedure Review

Date: _____ Procedure: _____ Incident#:

Level 3 Paramedics Name: _____ EMS ID#:

Briefly describe the call:

Briefly describe the indications for the procedure:

Comments/Recommendations by team coordinator:

Level 3 Paramedic Signature _____
Team Coordinator Name _____
Team Coordinator Signature _____
Year: _____ Review #: _____ (4-1)
Subject: **Succinylcholine Chloride**
History: Effective _____ Original _____
Pharmaceutical Name: Anectine

Class: Paralytic

Actions: Ultra short acting depolarizing-type, skeletal muscle relaxant
For IV use.

Indications: Provide for skeletal muscle relaxation during mechanical
Ventilation, or to facilitate endotracheal intubation.

Contraindications:

Family history of malignant hyperthermia, elevated CPK, acute
narrow glaucoma, penetrating eye injury. It is also contraindicated in
patients

after the acute phase of injury following major burns, multiple trauma,
extensive

denervation of skeletal muscle, or upper motor neuron injury because
succinylcholine administration to such patients may result in severe
hyperkalemia

which may result in cardiac arrest

Precautions: All patients receiving succinylchloride must be intubated
prior

to or after administration of the medication.

Adverse Actions:

Profound skeletal muscle relaxation resulting in respiratory
depression to the point of apnea. Bradycardia, tachycardia, cardiac
arrest,

salivation may also occur

Route: IV, IM

Dosage: To facilitate intubation:

0.6 mg/kg IV is usually effective within 1 minute lasting 2-3
minutes.

Optimum dose is 0.3-1.1 mg/kg IV

IM dose is 3-4 mg/kg not to exceed 150 mg

Technique of Administration

How supplied: Anectine injection 20mg/ml in 10 ml vials

End Points: suppression of gag reflex to facilitate endotracheal
intubation

Additional Information:

Physician's Desk Reference, 51st edition, 1997, pp. 1062

Subject: **Vecuronium Bromide**

History: Effective _____ Original _____

Pharmaceutical Name: Norcuron

Class: Paralytic

Actions: A non-depolarizing neuromuscular blocking agent of intermediate
duration

(4-2)

Indications: To facilitate endotracheal intubation and to provide
skeletal

Muscle relaxation during mechanical ventilation.

Contraindications:

Known hypersensitivity

Precautions: All patients receiving Norcuron must be intubated either
before

or after administration of the medication.

Adverse Reaction:

Extension of the drug's pharmacological action beyond time
period needed.

Side Effects: Hypertension, bronchospasm, tachycardia, hypotension

Route: IV only

Dose: 0.08 to 0.10 mg/kg

Technique of Administration:

How, Supplied: 10 ml vials (10 mg) and 10ml diluent (bacteriostatic
water)

End Points: Suppression of gag reflex

MOM's Reference:

Additional Information:

Physician's Desk Reference, 51st Edition, 1997, pp. 1875

Proposed Addition to MOM's Section 8.10

Cricothyrotomy Airway Access

Surgical Cricothyrotomy

- a) Assemble the equipment
 - i) personal protective equipment
 - ii) 6.0 mm E.T tube
 - iii) sterile scalpel
 - iv) curved Kelly forceps
 - v) alcohol prep pads
 - vi) Betadine swabs
 - vii) BVM and supplemental oxygen source
- b) Cut the top of a 6.0 mm ET tube as close as possible to the pilot balloon inflation line. Place the 15mm adapter into the ET section that still has the cuff attached
- c) Identify and palpate the cricothyroid membrane, if you cannot locate the correct landmarks, do not attempt the procedure
- d) Hyperextend the neck if no cervical injury is suspected
- e) One horizontal incision is made with a sterile scalpel through the cricothyroid membrane (approx 1/2inch in length) (4-3)
- f) Place curved Kelly forceps into the incision you just created. Dilate the opening with the use of the curved forceps
- g) Hold the incision open with the forceps. Insert the ET tube directed downward until the entire cuff is into the trachea. Insert no further.
- h) Inflate the cuff of the ET tube and hyperventilate with supplemental oxygen
- i) Auscultate breath sounds
- j) Secure ET tube in place, constantly monitoring for signs of adequate ventilation

Subject: **Chest Tube Placement**

History: Effective _____ Original _____

Purpose:

The purpose of this protocol is to describe the authorized procedure for the treatment of a tension pneumothorax by performing emergent chest tube placement

Description:

1. Confirm the need for chest tube placement

a) respiratory distress

i) dyspnea

ii) tachypnea

iii) cyanosis

iv) chest pain

and

b) absent or decreased breath sounds on the affected side; And/Or BVM compliance decreasing; And

c) deviated trachea away from the affected side

d) needle decompression with no or little results

2. Apply high concentration oxygen if not already intubated

3. Determine the insertion site:

Low lateral (5th or 6th) intercostal, anterior top of the midaxillary line site

is used for most indications, especially trauma with the potential for bleeding,

since fluids tend to settle in the lowest part of the chest

4. Prep and drape the chest at the predetermined site of the tube insertion if

possible.

5. Make a 2-3 cm transverse (horizontal) skin incision at the predetermined site

and bluntly dissect through the subcutaneous tissues, just over the top of the

rib, to create a subcutaneous tunnel, using a clamp.

6. Grasping the clamp along the shaft to prevent injury to the lung parenchyma, puncture the parietal pleura. Spread the clamp to enlarge the opening, then

remove the clamp.

7. Insert a gloved finger into the pleural cavity to gently clear any clots or adhesions, ensure the opening is large enough for the tube, and confirm free pleural space.

8. Using the clamp or a gloved finger as a guide, carefully insert the tube.

Make sure all holes are within the pleural space, and quickly attach to suction.

(4-4)

9. Secure tube to the chest wall by suturing in place or alternatively by use

of petrolatum gauze and tape, making sure the system is airtight.

10. Apply dressings over the airtight seal and monitor for results

Proposed Addition to MOM's Section 8

Special Equipment and Procedures

Subject: **Central Venous (Subclavian) Catheter Placement**

History: Effective _____ Original _____

Purpose:

The purpose of this protocol is to describe the procedure for placement of a

central venous catheter into the subclavian vein by authorized clinicians.

Description:

1. Indications:

a) intravenous access in patients with inadequate peripheral venous access

b) venous access for resuscitation with large fluid volumes

c) hypovolemia secondary to trauma

2. Contraindications

There are no absolute contraindications to central venous access.

Relative

indications include the following:

a) Coagulopathy. In the instance of coagulopathy, the site of choice is the internal jugular or femoral vein

b) Local trauma to the area. In cases of upper extremity trauma, a femoral

catheter should be placed.

3. Technique

Assemble equipment

i) central vein catheter kit, an 8.5 French introducer is frequently used for large volume infusion, or a 16 gauge, 8 inch single lumen catheter

ii) betadine solution

iii) 1% lidocaine solution

iv) 5 ml syringe with 25g needle

v) I8 gauge 2 1/2 inch finder needle

vi) #11 scalpel blade

vii) sterile towels

viii) sterile 4x4 dressing

The Seldinger (catheter over a wire) technique is the safest and easiest method of central venous catheter placement. Only the infraclavicular approach will be used.

a) prepare the skin with betadine solution

b) drape the area with sterile towels if possible

c) anesthetize the skin over the area of insertion using a 5ml syringe with a 25 gauge needle with approximately 5ml of a 1% lidocaine solution
d) attach the finder needle to a 5cc syringe
e) insert the needle until a backflow of blood is obtained
f) detach the syringe from the needle and place a thumb over the hub of the needle to avoid entrance of air into the venous system
g) gently insert the guide wire through the hub of the needle (4-5)
h) once the wire has been inserted approximately 8 to 10 cm, remove the needle and allow the wire to remain in place
i) with a #11 scalpel blade, make a small nick where the wire enters the skin
some kits may provide a dilator for the vein, which should be inserted into the hub and then removed, leaving the wire in place. Other kits have the dilator and catheter together, to be inserted in unison
k) insert the catheter over the wire, being careful to maintain a grasp on the wire at all times
l) once the catheter has been inserted to the hub, remove the wire and dilator (if present) from the lumen of the catheter
m) aspirate to ascertain that there is a good backflow of blood
n) attach IV tubing that has been flushed with fluid to the hub of the catheter
o) secure the catheter tip with suture material
p) cover the catheter site with sterile dressing and tape in place

Subject: **Mannitol**

History: Effective _____ Original: _____

Pharmaceutical Name: Mannitol

Class: Osmotic Diuretic

Actions: Poorly metabolized sugar used as a osmotic diuretic. When administered parenterally, mannitol is confined to the extracellular space, only

slightly metabolized and rapidly excreted by the kidney

Indications: reduction of intracranial pressure and treatment of cerebral

edema by shrinking brain mass

Contraindications:

Active intracranial bleed, severe pulmonary congestion or frank pulmonary edema,

severe dehydration, well established anuria due to severe renal disease

Precautions: Care should be exercised in the administration of Mannitol to

patients with hypovolemia, renal insufficiency, impending or frank cardiac

decompensation

Adverse Reactions: fluid and electrolyte imbalance, dizziness,

hypotension,

tachycardia, fever, hypotension, angina-like chest pains, urticaria,

nausea and

vomiting, rhinitis

Dose: 25mg IV solution IV push

Techniques of Administration

How Supplied:

MOM's Reference:

Additional Information:

Physician's Desk Reference, 51st Edition, 1997

(4-6)

Subject: **Hespan (Hetastarch)**

History: Effective _____ Original:

Pharmaceutical Name: Hespan

Class: Volume Expander

Actions: Plasma volume expansion by Hespan approximates those of 5% human

albumin. IV infusion of Hespan results in expansion of plasma volume that

decreases over the succeeding 24 to 36 hours

Indications: Indicated in the treatment of hypovolemia when plasma volume

expansion is desired

Contraindications:

Known hypersensitivity to hydroxyethyl starch, with bleeding disorders.

Or with

congested heart failure where volume overload may be a problem. It should not be

used in renal disease with oliguria or anuria not related to hypovolemia

Precautions: Life-threatening anaphylactic reactions are rare.

Effectiveness in

pediatric patients has not been established

Adverse Reactions:

Hypersensitivity, death, anaphylactic reaction, V-fib, non-cardiac pulmonary

edema, bronchospasm, tachypnea, chest pain, bradycardia, tachycardia, periorbital

edema

Route: IV only

Dose: Usual dose is 500 to 1000ml. Doses more than 1500 ml/day for the typical 70kg patient (approx 20ml/kgbody weight) are usually not required,

although higher doses have been reported in postoperative and trauma patients

with severe blood loss.

Techniques of Administration:

How Supplied- Hespan is supplied sterile and non-pyrogenic in 500ml containers

MOM's Reference:

Additional Information:

Physician's Desk Reference, 51st Edition, 1997, pp. 945

Proposed Addition to MOM's Section 8

Special Equipment and Procedures

Subject: Pericardiocentesis

History: Effective _____ Original:

Purpose:

The purpose of this protocol is to describe the technique to perform pericardiocentesis by authorized clinicians.

(4-7)

Description:

1. Indications:

Suspected cardiac tamponade with severe hemodynamic impairment

2. Hazards:

Significant risk accompanying pericardiocentesis. Cardiac arrhythmia's, including V-fib and Asystole. Puncture or laceration of the cardiac chamber or

coronary arteries is possible. Air may be inadvertently injected into the system

if a catheter is left open to air. Hemothorax, pneumothorax or both are possible.

3. Assemble equipment:

a. a short bevel large-bore needle at least 16 gauge and 9cm long (a Seldinger catheter set may also be used.

b. A 30 or 50 ml syringe

- c. Povidone-iodine solution for skin preparation
- d. Syringe with small-bore needle and 1% lidocaine without epinephrine for local anesthetic
- e. Sterile gloves and sterile drapes: ideally, sterile gowns and masks

Technique:

5th Intercostal approach

a. Have the patient in a supine position or with the upper torso elevated

20-30 degrees

b. Prepare the anterior midthorax with povidone-iodine solution

c. If the patient is conscious or responsive to pain, infiltrate the skin

or subcutaneous tissues immediately to the left of the sternum in the fifth intercostal space with 1% lidocaine without epinephrine. A small skin incision with a scalpel blade will facilitate entry of the large-bore

needle

d. Insert the large bore needle attached to the syringe perpendicular to the frontal plane. Aspiration should be continuous. As the needle is advanced beneath the skin, the resistance of the taut pericardium may be felt, and entry into the pericardial space may produce a distant

"giving"

sensation.

e. If gross body fluid is obtained, it should not clot if from the pericardial space.

Subxiphoid approach

Some clinician prefer the xiphisternal or subxiphoid approach for pericardiocentesis. This technique is performed like the 5th intercostal approach, although the needle is inserted between the xiphoid process and

the left costal margin at a 30-45 degree angle to the skin. The heart is located between the neck and the left shoulder when the needle is directed

in the coronal plane.

EKG Monitoring during pericardiocentesis.

Ideally, an EKG V lead should be attached to the large-bore needle by means of a

sterile alligator clip, ensuring the patient limb leads are attached as well. If

ST elevation occurs as the needle is advanced, ventricular contact is suggested.

If PR segment elevation occurs, atrial contact is suggested.

(4-8)

Level III Training:

Drugs:

An initial classroom training course will be scheduled for orientation of the

new drugs and drug protocols. Because of the small number of new drugs, this

should not be a drawn out process. It should be possible to have actual drug

samples of the same type we will be using on calls there to make the training

more realistic. Incorporating some scenario based practice sessions should

produce our desired goal.

Additionally, we should look at some clinical rotation time for intubation after

paralytic use as well as for the procedure labs.

Procedures:

Because of the nature of the procedures that we will be doing, an intense and

specific initial training course is mandatory. While the skills are not far from

the realm of some of our pre-hospital work, the conditions that we will be using

them are less than ideal. This make the initial training that much more important in terms of the necessity of realism and specific ability.

We have a few options on how to proceed with the clinical training.

1. We can use mannequins for some of the trauma skills as we have in the past

for chest decompression. We can adapt these methods for chest tubes and for

surgical cricothyrotomy. We can also acquire some animal tracheas and use those

as well.

2. In addition to this we should utilize some cadaver practice. I think this

would have a positive effect. I have spoken with both SPJC Funeral Services and SPJC EMS as to this availability and they have both told me this was possible to accomplish at the HEC campus.

3. Another resource for us to develop is the USF cadaver lab in Tampa. Currently, paramedics from Tampa FD and Hillsborough Co. utilize this lab

for in depth training in some of the procedure we are attempting to acquire.

4. A clinical rotation at a trauma center for training would also be important for us to put in place, not only for initial training but also for periodic refresher training as well.

Our initial training course would need to be instructed and monitored by the

teams medical director. Refresher training would be handled by the various

training members we currently have, in addition to clinical rotation.

(4-9)