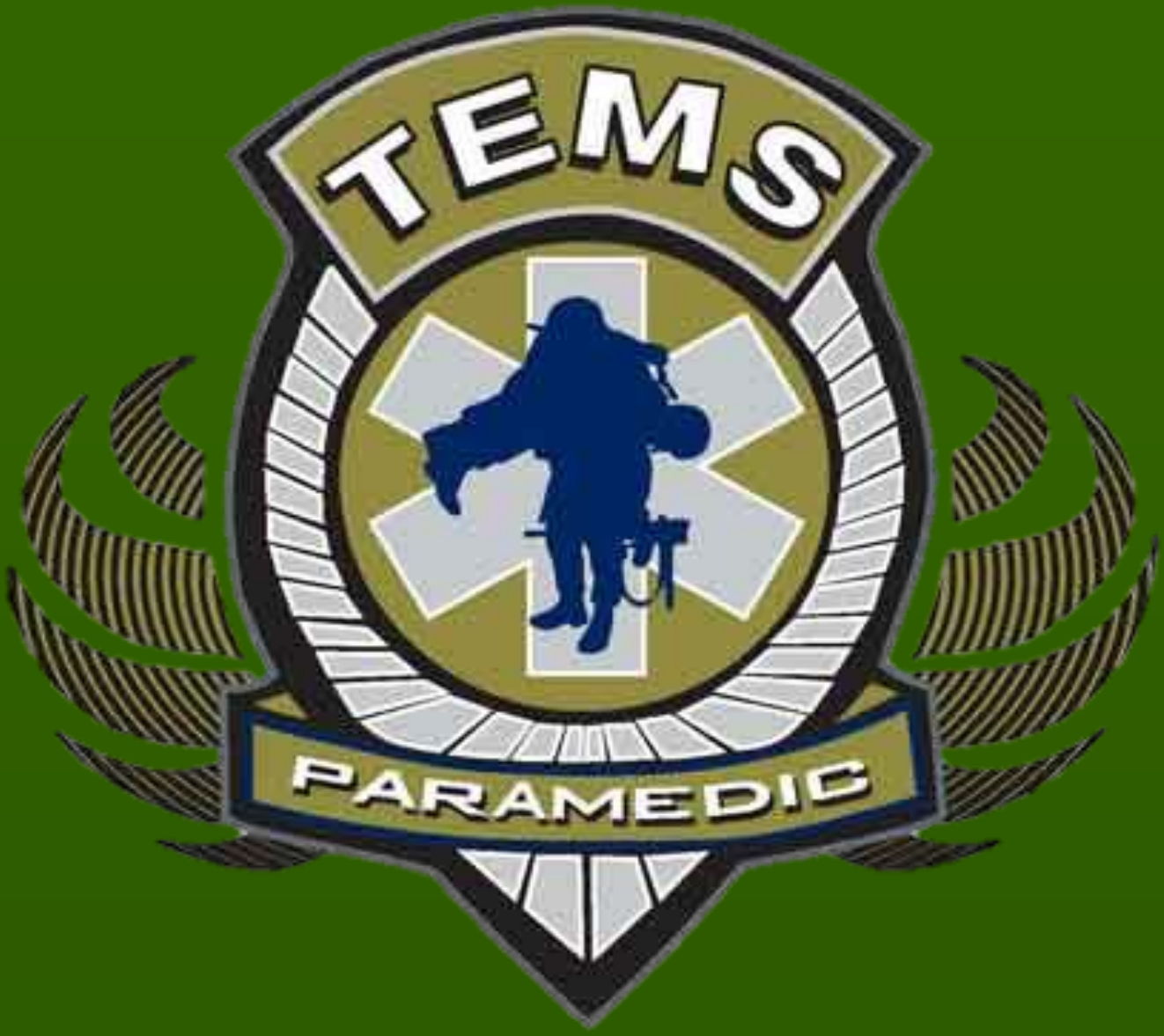
Dane County EMS System



Protocols, Policies & Procedures

2020-2022

Tactical EMS

Approved January, 2020

Madison and Dane County Community Resources

Call 2-1-1 any time for information about almost anything related to health and human services.
You can also visit http://www.211wisconsin.org or https://www.danecountyhumanservices.org

Aging and Disability Resource Center (http://www.daneadrc.org/)..... **608-240-7400**
Free information and assistance for adults aged 60+ and people with disabilities

Drug Abuse and Addiction Resources
Parent Addiction Network of Dane County (http://www.parentaddictionnetwork.org)..... **608-441-3060**
Resources for family and friends of people battling drug addiction
Dane County Behavioral Health Specialist..... **608-242-6461**

Clothing (Free)
Community Action Coalition (http://www.cacscw.org/clothing-center.php)..... **608-246-4730, ext. 216**

Dane County Human Services (http://www.danecountyhumanservices.org/default.aspx)..... **608-242-6200**
Provides protection of children and adults at risk mental health and substance abuse services; services and transportation for older adults and people with disabilities; and financial assistance

Domestic Abuse Intervention Services (http://abuseintervention.org/)..... **608-251-4445**
Assistance for individuals in abusive relationships

Economic Assistance
Dane County Job Center (**http://www.danejobs.com/**)..... **888-794-5556** and/or **608-242-4900**

Food Pantries and Meal Locations..... **2-1-1**

Health Care Coverage
Dane County Job Center-Income Maintenance Agency (http://access.wisconsin.gov/)..... **888-794-5556**
Application assistance for BadgerCare / Medicaid and food stamps
Covering Wisconsin (http://coveringwi.org/)..... **608-261-1455**
Application assistance for Affordable Care Act ("Obamacare") health care plans

Home Health, Hospice Care, Medical Equipment and Supplies..... **2-1-1**
If you have insurance, contact your provider and/or insurance company
Aging and Disability Resource Center (http://www.daneadrc.org/)..... **608-240-7400**

Homeless Services and Shelters
Housing Crisis Hotline (Community Action Coalition)..... **855-510-2323**
Porchlight, Inc. (http://porchlightinc.org)..... **608-257-2534**
YWCA (http://www.ywcamadison.org)..... **608-257-1436**
Salvation Army (http://www.salvationarmydanecounty.org/)..... **608-256-2321**
The Road Home (family support) (http://trhome.org/)..... **608-294-7998**

Dental Care
D.A.N.E. Cares (http://danecares.org/)..... **608-957-5802**
Public Health Madison and Dane County Dental Line..... **608-243-0354**

Housing (Public and Subsidized)
Madison Housing Authority (https://www.cityofmadison.com/dpced/housing/)..... **608-266-4675**
Dane County Housing Authority (http://www.dcha.net/)..... **608-224-3636**

Mental Health Services If you have health insurance, contact your provider and/or insurance company
Recovery Dane..... **608-237-1661**
Journey Mental Health Center (http://www.journeymhc.org/)..... **608-280-2700**
Mental Health Crisis Line (24 hours per day)..... **608-280-2600**
Parental Stress Line (8am – 10pm daily)..... **608-241-2221**
Emergency and Crisis Child Care (24 hours per day)..... **608-244-5700**

Transportation
Dane County Transportation Services (http://danecountyhumanservices.org/Transportation/key_phone_numbers.aspx)..... **608-242-6486**
Madison Metro Transit and Paratransit (https://cityofmadison.com/metro/ ; https://www.cityofmadison.com/metro/paratransit/)
BadgerCare / Medicaid (https://www.dhs.wisconsin.gov/nemt/index.htm)..... **866-907-1493**

Medical Emergency : Call 9-1-1

Table of Contents

Preliminary Information

Authorization..... x
Definitions..... x
Provisions..... x

Policies

Hot Zone..... x
Warm Zone..... x
Cold Zone..... x

Care For Personnel

X – Exsanguinating Hemorrhage
- Hemorrhage Control..... x
- Wound Care..... x

A – Airway Management
- Airway Management..... x
- Airway Obstruction..... x

B – Breathing
- Open Chest Wound..... x
- Tension Pneumothorax..... x
- Asthma / Bronchospasm..... x

C – Circulation
- Chest Pain (Non-Traumatic)..... x
- Allergic Reaction / Anaphylaxis..... x
- Dehydration / Hypovolemic Shock..... x

D – Drugs, Deficits, Diabetic Emergencies
- Opiate Exposure / OD..... x
- Altered Mental Status..... x
- Diabetic Emergency..... x

E – Extremity Injuries, Environmental Exposures
- MSK Injuries..... x
- Heat Exposure..... x
- Cold Exposure..... x

General Protocols
- Triage Protocol..... x
- Pain Management..... x
- Over-The-Counter Med Administration..... x

Hemorrhage Control
- Basic Wound Care..... x
- Wound Packing..... x
- Tourniquet Application..... x

Needle Thoracostomy..... x
Surgical Cricothyrotomy..... x
King LTS-D Laryngeal Tube Airway..... x
Venous Access
- Peripheral..... x
- External Jugular..... x
- Intraossesous..... x

Sedation Protocol..... x
Wound Closure – Staples..... x

Summary:
This purpose of this section is to define the scope of the Tactical Emergency Medical Services (TEMS) Medic and their interaction with TRT/SWAT Team members. This document will outline responsibilities for individuals providing TEMS and define the authorization of TEMS procedures.

Mission:
The primary mission of the Dane County TEMS Officers is to provide care to SWAT Operators using the principles of Tactical Emergency Casualty Care (TECC) to ensure the successful completion of the tactical mission. Under this supposition, the TEMS Officers may provide care in three distinct environments:

1. Hot Zone
2. Warm Zone
3. Cold Zone

The ultimate goal of this standard is to decrease preventable combat deaths at the initial time of injury.

Authorization

In accordance with Wisconsin Statute 256 and Chapter 110 of the Wisconsin Administrative Code, effective 7/15/2015 the following medical treatment protocols are authorized by the Medical Director for use with the Dane County Tactical Response Team and Madison Fire Department TEMS Units. Changes can be made only with authorization of the Medical Director.

Dane County TEMS Medical Director

Definitions:

Basic Life Support:
"Basic Life Support (BLS) Services" refers to a level of pre-hospital emergency and non-emergency medical care that includes airway management, cardiopulmonary resuscitation (CPR), management of shock, hemorrhage control and splinting of fractures. The scope of practice is defined by the Wisconsin Department of Health Services (DHS). Authorized medications by this level of provider are also outlined by the Wisconsin DHS. https://www.dhs.wisconsin.gov/publications/p0/p00451.pdf
This care shall be initiated as authorized by the TEMS Medical Director.

Advanced Life Support:
"Advanced Life Support (ALS) Services" refers to an advanced level of pre-hospital emergency and non-emergency medical care that builds upon the BLS skills listed and includes: cardiac monitoring, cardiac defibrillation, electrocardiography, intravenous access, administration of medications, drugs and IV solutions, and use of advanced medical devices. The scope of practice is defined by the Wisconsin DHS. Authorized medications by this level of provider are also outlined by the Wisconsin DHS.
https://www.dhs.wisconsin.gov/publications/p0/p00451e.pdf
This care shall be initiated as authorized by the TEMS Medical Director.

Hot Zone:
That area in which there is a direct and immediate threat (such as gunfire); as a result, there is a high likelihood of injury to those exposed in this area. This is typically referred to as “on the X”.

Warm Zone:
That area in which there is a potential hostile threat. This is typically within the inner perimeter.

Cold Zone:
That area where no significant danger or threat is reasonably anticipated for the provider or patient. This is typically within the outer perimeter.

General Provisions:

I. TEMS staff assigned to the Dane County TRT or MFD TEMS team will provide the following services:

- ❑ Medical care and triage for the SWAT Team when appropriate security by Entry Team Operators is available.
- ❑ Medical care and triage for the Perimeter Team(s).
- ❑ Medical care, triage and rehabilitative services for SWAT Operators, Command Post staff and other ancillary staff as needed.
- ❑ Serve as Liaison with local EMS/Fire and Hospital personnel.
- ❑ Assist the Incident Commander as needed.
- ❑ Initiate and continue ALS care until hospital delivery or when care is transferred to an equal or higher level of care.
- ❑ Provide initial tactical liaison training for specific EMT-P's from those Dane County EMS paramedic services.

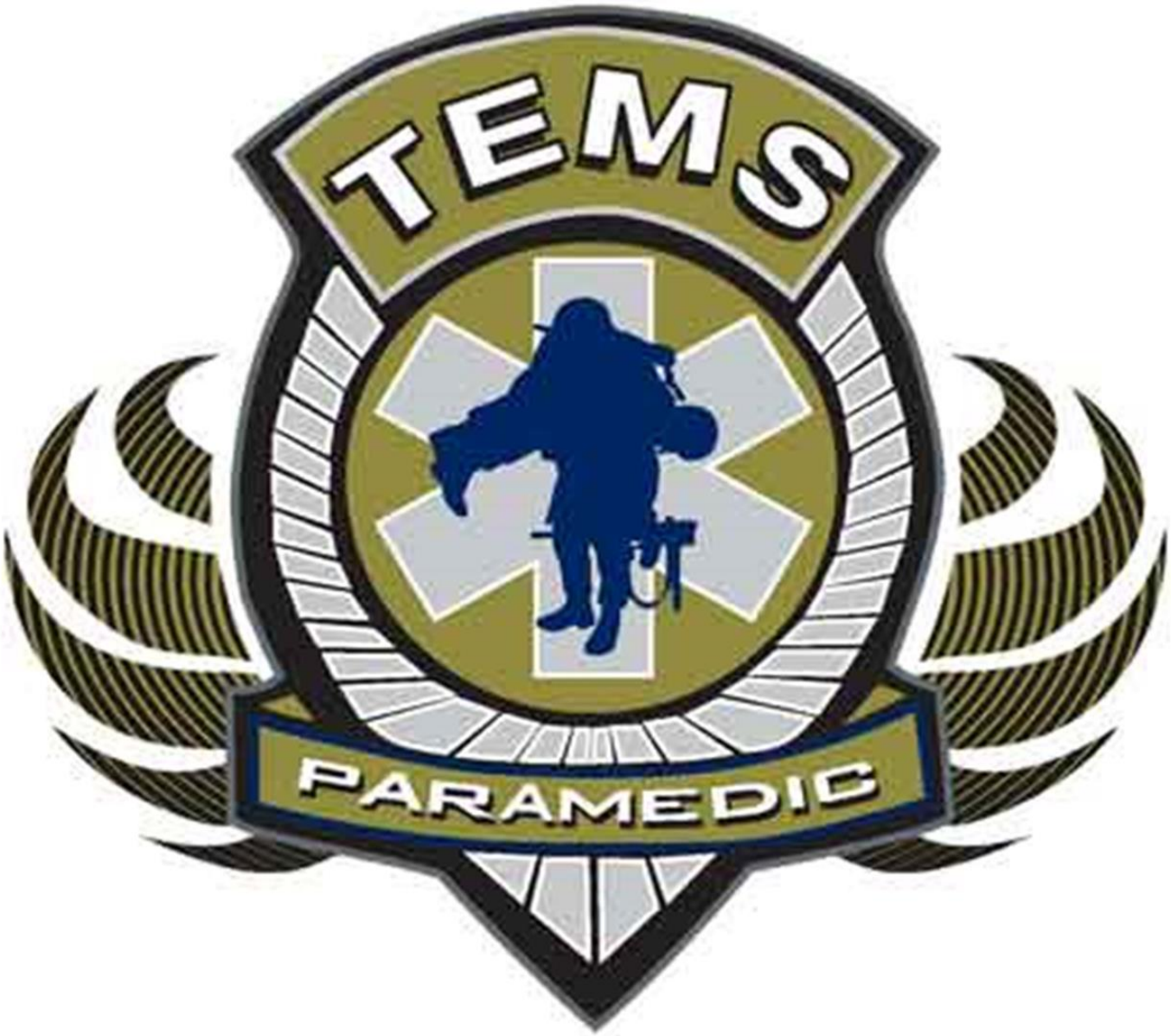
When Dane County EMS TEMS providers are not available the SWAT Commander will ensure ALS coverage is provided to the CP by one of the Dane County EMS Paramedic services. This can be done via the dispatch center.

II. The Paramedic service will:

- ❑ Provide a tactically competent EMT-P to act as liaison with SWAT and local EMS. Non-TEMS will not be allowed in the "Hot-zone".
- ❑ Assist with care and rehabilitation at the CP only.
- ❑ Ensure ALS and BLS coverage during incidents.
- ❑ Provide this stand-by free of charge to local EMS and Law Enforcement.
- ❑ Be able to bill for services when patients are transported in ALS ambulance(s).

III. Approved Dane County EMS Paramedic services as of 01/01/2019

- ❑ Madison Fire Department
- ❑ Middleton EMS
- ❑ FitchRona EMS
- ❑ Sun Prairie EMS
- ❑ Monona EMS



“Good Medicine In Bad Places”

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Hot Zone - General

General Approach:

Purpose

The purpose of this guideline is to outline care that should be rendered while involved in a tactical environment. Keeping in mind "tactical" may mean involvement with Law Enforcement, but could also reflect care in an austere/disaster type situation. The basis of this guideline is in-line with the tenants of TECC (Tactical Emergency Casualty Care). The three phases of care are as follows:

Hot Zone: Safety of the TEMS provider is paramount. If gunfire is being exchanged, seek cover and do not attempt medical intervention unless escorted by armed law enforcement personnel. Equipment should be kept to a minimum to ensure rapid movement and extrication of the patient from the point of wounding.

- ❑ **Massive extremity hemorrhage-** Massive extremity hemorrhage should be controlled with the use of an approved CAT or SOFT-W tourniquet. Apply as high on the extremity as possible and tighten until bleeding stops. If the bleeding site is amenable to use of a junctional tourniquet, immediately apply a CoTECC-recommended junctional tourniquet. For hemorrhages not amenable to a tourniquet the wound should be packed with an approved Hemostatic agent then direct pressure should be applied over the Hemostatic agent for 2-5 minutes. Bleeding control should be confirmed before applying a pressure dressing over the wound. Frequent re-assessment should be done to check for re-bleeding.

- ❑ **Penetrating Torso Trauma** - All open and/or sucking chest wounds should be treated by immediately applying an occlusive seal to cover the defect.

- ❑ **Shortness of Breath -** In the presence of penetrating trauma to the torso with associated respiratory distress and/or hemodynamic instability secondary to a suspected tension pneumothorax, immediate chest needle decompression/thoracentesis is indicated.

- ❑ **Airway Compromise** - Any patient found with airway compromise should be placed in position that best maintains airway, i.e. sitting and leaning forward to allow secretions to drain and consider placement of a nasopharyngeal airway (recommend 28fr as a standard size for all tactical operators).

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Warm Zone - General

General Approach:

Purpose

The purpose of this guideline is to outline care that should be rendered while involved in a tactical environment. Keeping in mind "tactical" may mean involvement with Law Enforcement, but could also reflect care in an austere/disaster type situation. The basis of this guideline is in-line with the tenants of TECC (Tactical Emergency Casualty Care). The three phases of care are as follows:

Warm Zone: Keep in mind this phase may be dynamic; the environment in which the TEMS provider is working must constantly be reassessed for unstable changes and safety concerns.

- ❑ **Bleeding** - Wounds that have been addressed with tourniquets should be reassessed and if bleeding continues, a 2nd tourniquet should be applied 2-3 inches above the point of injury or directly below the prior tourniquet. Leave the first tourniquet in place if hemostasis is achieved. Wounds with hemostatic agent/packing should be assessed for ongoing bleeding. If present, additional wound packing and/or direct pressure should be applied until bleeding stops and pressure dressing may be applied.

- ❑ **If airway compromise continues -** Consider definitive airway per Airway Protocol.

- ❑ **If patient's respiratory effort does not improve** - Consider 2nd needle decompression right next to the first needle insertion or at alternate site (4th/5th intercostal space at the anterior axillary line).

- ❑ **Initiate at least one large bore IV/IO** - 18-16 gauge and infuse boluses of 500cc of 0.9% NS not to exceed 2000 ml. Goal to keep systolic BP at 90mmHg or greater. Be mindful not to over-resuscitation with IVF as this may reduce body's oxygen carrying capacity and clotting abilities.

- ❑ **Prevent heat loss** - Cover patient even in warmer months to help prevent complications associated with clotting abnormalities.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Cold Zone - General

General Approach:

Purpose

The purpose of this guideline is to outline care that should be rendered while involved in a tactical environment. Keeping in mind "tactical" may mean involvement with Law Enforcement, but could also reflect care in an austere/disaster type situation. The basis of this guideline is in-line with the tenants of TECC (Tactical Emergency Casualty Care). The three phases of care are as follows:

Cold Zone: This phase of TECC should imitate mainstream EMS as is allowed by the environment and equipment available. The expectation is that the patient would be transported to an ambulance on standby that would be able to provide oxygen, cardiac monitoring, blood pressure, SpO2, EtCO2, and environmental protection from the elements.

- ❑ **Monitor Vital Signs** - Place patient on cardiac monitoring and obtain full set of vitals including BP, SpO2, HR and if airway in place EtCO2. Frequently re-assess for any changes.
- ❑ **Apply Oxygen -** Assess patient for need of supplemental oxygen including any hypoxia, respiratory distress, or signs of poor perfusion.
- ❑ **Continual re-evaluation for bleeding** - Ensure tourniquet is tight and has not become loose during patient movement including checking to ensure that distal pulses are absent in the extremity with a tourniquet applied. Additional wound care should be provided to other non-major hemorrhage as needed.
- ❑ **Consider C-spine precautions -** If penetrating injury only, c-spine precautions do NOT need to be taken. However, if the patient has sustained a fall or other traumatic injury where cervical spine injury is suspected, c-spine precautions should be taken.
- ❑ **Access local EMS system-** Access and hand-off to local EMS who is on-scene should occur in a timely manner as the scene/environment allows. Patient must be transported to an appropriate medical/trauma center. Consider use of Aero-Medical Services, but DO NOT delay transport.
- ❑ **Contact destination hospital** - Attempt to contact/alert destination hospital as soon as possible during patient care to provide early notification and appropriate trauma activations.
- ❑ **Provide psychological support -** Attempt to provide emotional support for the patient during all levels of care.
- ❑ **Complete documentation** – When time allows, document all care provided and events leading up to injury. This should be communicated with local EMS as well as the destination hospital.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Care For Tactical Personnel

ADDITIONAL CARE OF SWAT PERSONNEL:

Care at a medical facility or by a physician is always recommended as well as EMS activation and transport. Care should be documented appropriately. If there are safety concerns that inhibit the SWAT operator to safely perform their job duties, this should be immediately discussed with the SWAT commander. Any treatments provided should be promptly brought to the Medical Directors' attention. Always assess for possible acute serious cause of illness and consider use of appropriate protocol(s) below, EMS activation and transport.

W: Weapons Securement

X: Exsanguinating Hemorrhage & Wound Care
- ❑ Hemorrhage Control
- ❑ Emergency Wound Care and Closure

A: Airway
- ❑ Airway Management
- ❑ Airway Obstruction

B: Breathing
- ❑ Open Chest Wound
- ❑ Tension Pneumothorax
- ❑ Asthma/Bronchospasm

C: Circulation
- ❑ Chest Pain (non-traumatic)
- ❑ Allergic Reaction/Anaphylaxis
- ❑ Dehydration

D: Drugs, Deficits, Diabetic Emergencies
- ❑ Opiate Exposure/OD
- ❑ Altered Mental Status
- ❑ Diabetic Emergency

E: Extremity Injuries, Environmental Exposures
- ❑ MSK Injuries
- ❑ Heat Exposure
- ❑ Cold Exposure

F: General Protocols
- ❑ Triage
- ❑ Pain Management
- ❑ OTC Medication Administration

G: General Procedures
- ❑ Hemorrhage Control: Basic Wound Care
- ❑ Hemorrhage Control: Wound Packing
- ❑ Hemorrhage Control: Tourniquet Application
- ❑ Wound Closure: Staples
- ❑ Needle Thoracostomy (THORACIC DECOMPRESSION)
- ❑ Surgical Cricothyrotomy
- ❑ King LTS-D – Laryngeal Tube Airway
- ❑ Venous Access- Peripheral
- ❑ External Jugular Venous Access
- ❑ Intraosseous Venous Access Protocol
- ❑ Sedation Protocol

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

X: Exsanguinating Hemorrhage & Wound Care

Hemorrhage Control:

Extremity Bleeding Site

- ❑ While under tactical conditions, apply a tourniquet as proximal as possible on the injured limb to control all major bleeding. Refer to TOURNIQUET PROCEDURE.
  - If bleeding is not controlled, apply a second tourniquet adjacent to and below the first. Do NOT remove the first tourniquet.
  - In the hot zone, do not remove clothing prior to applying the tourniquet. Verify tourniquet is effective by confirming that distal pulses are absent and/or bleeding stops.
  - Releasing the tourniquet may be considered when tactical conditions permit once wound is able to be packed with a pressure dressing and/or hemostatic dressing.
  - Once a tourniquet has been applied, it should not be removed in the field if:
    - ➢ The patient is in shock
    - ➢ There is an amputation
    - ➢ Bleeding is likely to be uncontrollable by other means
    - ➢ The tourniquet has been in place for 6 or more hours
    - ➢ There is inability for continued monitoring of the patient
  - Do not release and retighten tourniquet multiple times to check on bleeding.
  - Never cover up the tourniquet.
- ❑ Once tactical conditions allow, apply firm direct pressure to the wound site utilizing hemostatic gauze if available for 2-5 minutes.
  - Attempt to isolate and identify the actual active bleeding vessel(s)/area.
  - Clear away any pooled blood.
  - Apply hemostatic impregnated dressing directly to bleeding vessel(s)/area and hold pressure for 2-5 minutes.
  - Consider wound packing if wound is deep and/or bleeding has slowed or stopped or if the patient requires movement which will not allow for continued direct pressure.
  - Secure impregnated gauze dressing(s) with a pressure dressing or other stabilizing method.
  - If bleeding soaks through the dressing**,** apply additional dressings while continuing direct pressure. **Efforts should be made NOT to remove dressings from the injured site once dressing is placed.**
- ❑ Consider TXA (tranexamic acid) if there is marked blood loss with sustained tachycardia (>100 bpm) and hypotension (systolic <90 mmHg)
  - Must be <3 hours after injury
  - Loading Dose: 1gm IVP over 10 minutes
  - Maintenance dose must be given at receiving facility.
  - Contraindications to use of TXA:
    - ➢ Known history of thromboembolic disease (DVT, PE, etc) or thrombophilia
    - ➢ Isolated head injury

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

X: Exsanguinating Hemorrhage & Wound Care

Hemorrhage Control:

Non-Extremity Bleeding Site

- ❑ Apply firm direct pressure to the wound site utilizing hemostatic gauze if available for 2-5 minutes.
  - Attempt to isolate and identify the actual active bleeding vessel(s)/area.
  - Clear away any pooled blood.
  - Apply hemostatic impregnated dressing directly to bleeding vessel(s)/area and hold pressure for 2-5 minutes.
  - Consider wound packing if wound is deep and/or bleeding has slowed or stopped or if the patient requires movement which will not allow for continued direct pressure.
  - Secure impregnated gauze dressing(s) with a pressure dressing or other stabilizing method.
  - If bleeding soaks through the dressing**,** apply additional dressings while continuing direct pressure. **Efforts should be made NOT to remove dressings from the injured site once dressing is placed.**
- ❑ Consider TXA (tranexamic acid) if there is marked blood loss with sustained tachycardia (>100 bpm) and hypotension (systolic <90 mmHg)
  - Must be <3 hours after injury
  - Loading Dose: 1gm IVP over 10 minutes
  - Maintenance dose must be given at receiving facility.
  - Contraindications to use of TXA:
    - ➢ Known history of thromboembolic disease (DVT, PE, etc) or thrombophilia
    - ➢ Isolated head injury

Junctional Region Bleeding Site

- ❑ Apply a junctional hemorrhage control device, if available.
- ❑ If junctional hemorrhage control device is unavailable, use techniques described above for hemorrhage control including tourniquet application, wound packing and direct pressure.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

X: Exsanguinating Hemorrhage & Wound Care

Emergency Wound Care and Closure :

In an effort to keep SWAT Operators on scene and available for duty in a tactical situation, it may be necessary for TEMS to perform simple wound care and wound closure. When possible, SWAT Operators who have been injured and treated on scene by TEMS will be evaluated by the TEMS Medical Director and/or transferred to a medical facility for definitive wound care.

Wound Care

- ❑ Control bleeding as described above and in Basic Wound Care procedure.
- ❑ If necessary, stabilize but do not remove an impaled object (except potentially in the cheek when both ends of the object are visible).
- ❑ Clean site with copious clean water or NS irrigation. If able, use forceful irrigation from needleless angiocatheter and syringe.
- ❑ Examine injured site to exclude internal structural damage (e.g. nerve injury, ligamentous injury, bony injury).
- ❑ Determine open treatment vs wound closure.
- ❑ Consider open treatment for the following:
  - Wounds not easily approximated.
  - Grossly contaminated wounds
  - Wound is too old
    - ➢ >6 hours on the body
    - ➢ >24 hours on the face
  - Wound with suspected underlying fracture
  - Wounds with evidence of possible infection
    - ➢ Apply topical antibacterial ointment after cleansing.
    - ➢ Cover wound site with sterile dressing.
    - ➢ Splint site if indicated
  - Over joint, especially fingers
  - Any wound that is under tension
- ❑ Consult medical control to discuss need for transport, tetanus prophylaxis, rabies prophylaxis and/or antibiotic prophylaxis.
- ❑ Recheck all wounds within 24 hours.

Wound Closure

- ❑ Preform proper wound care (see above) prior to wound closure
- ❑ Steri-Strips may be utilized for wounds that are well approximated.
- ❑ Staples may be used for any wound that is under slight tension and comes together with minimal effort. See Wound Closure-Staples Procedure for details.
- ❑ Any wound that does not easily come together should have proper wound care as described above including wound packing or covering with sterile gauze until definitive wound management can be performed.
- ❑ Once wound is closed, apply topical antibacterial ointment.
- ❑ Cover wound site with sterile dressing.
- ❑ Splint site if indicated
  - Wounds over a joint, especially any digit injury
  - Wound is under tension
- ❑ Medical Director and/or transported to a medical center for comprehensive closure of the injury.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

A: Airway Management

Airway Management:

Conscious Patient (respiratory distress):

- ❑ Allow patient to assume any position that best protects the airway.
- ❑ Perform basic airway maneuver (chin lift or jaw thrust).
- ❑ Consider nasopharyngeal airway if no facial trauma.
- ❑ Consider airway obstruction, see Airway Obstruction protocol below.
- ❑ Consider other causes of respiratory distress, see Breathing protocols below.
- ❑ Monitor closely for worsening respiratory distress, deterioration of mental status or need for advanced airway.

Unconscious Patient (not breathing):

- ❑ Perform basic airway maneuver (chin lift or jaw thrust)
- ❑ If patient begins spontaneous respirations, maintain airway in position of effectiveness.
  - If patient remains apneic, discontinue resuscitation efforts if in hot zone
- ❑ Consider placing a nasopharyngeal airway if no facial trauma present.
- ❑ Consider rapid extrication when conditions permit.
- ❑ If previous measures from above are unsuccessful and if the following techniques are safe to perform:
  - Consider placement of supraglottic airway device (i.e King LTS-D). Please refer to King LTS-D Laryngeal Tube procedure.
  - If unable to place supraglottic airway device, consider Airway Obstruction (see Airway Obstruction Protocol) and/or Cricothyrotomy (see Cricothyrotomy procedure).
- ❑ Place on cardiac monitor and pulse oximetry, if /when available
- ❑ Request EMS support for rapid transport

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

A: Airway Management

Airway Obstruction :

Airway obstruction is life-threatening occlusion of the upper airway that can lead to unconsciousness and anoxic death. In SWAT operators, this may occur due to traumatic (airway/neck injury) or non-traumatic (choking) etiologies. Symptoms consistent with upper airway obstruction include

- Gasping/coughing/stridor
- Inability to speak
- Universal Choking Sign (hands clutched around throat)

Airway/Neck Trauma

- ❑ Manage the airway to the extent necessary to ensure patency based on extent of patient's airway compromise and level of consciousness
- ❑ In blunt trauma: Be wary of the potential for underlying expanding neck hematoma causing loss of airway patency. Consider c-spine precautions given potential for associated spinal injury.
- ❑ In penetrating trauma: Be wary of potential for expanding neck hematoma and worsening airway occlusion by debris or blood. Allow patient to assume position of comfort to maintain patent airway.
- ❑ Utilize basic airway management as described above.
- ❑ Consider cricothyrotomy early if signs of impending airway compromise are present with failed basic airway maneuvers and supraglottic airway placement.
- ❑ Request EMS support for transfer to definitive care as soon as possible.

Foreign Body Choking

- ❑ *Conscious* Patient
  - If person is choking on an object but can effectively speak or cough, allow them to continue coughing but be prepared to intervene.
  - If person cannot cough or speak effectively, ask if they need assistance then provide Heimlich Maneuver (vertical abdominal thrust) until object is dislodged or patient becomes unconscious.

- ❑ *Unconscious* Patient
  - Attempt head/neck repositioning if no c-spine concerns.
  - Manually remove/suction foreign body or other debris.
  - Initiate CPR
  - Consider needle or open cricothyrotomy if equipment is available and evidence of upper airway compromise is present despite other efforts.
  - Request EMS support for transfer to definitive care as soon as possible.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Open Chest Wound:

Penetrating injuries to the chest may result in a traumatic defect of the chest wall resulting in impaired breathing and/or air-entry through the chest ("sucking chest wound").

- ❑ Apply and secure an occlusive dressing/chest seal to all major open chest wounds.
- ❑ Be certain to look for multiple injuries/wounds.
- ❑ Provide oxygen via NRB as indicated and available.
- ❑ Be prepared to manage the evolution of tension pneumothorax in all casualties who have had occlusive dressings applied (see Tension Pneumothorax Protocol below).
- ❑ Request EMS support for rapid transport.

Tension Pneumothorax:

Any chest injury, including both penetrating and blunt, may result in collapse of the lung permitting air under pressure to build inside the chest cavity that can lead to shock and eventual cardiac arrest. All patients with chest injuries should be assess for the following signs/symptoms suggestive of tension pneumothorax including:

- Absent breath sounds on one side of chest
- Jugular venous distension
- Tracheal deviation
- Air hunger and/or anxiety
- Respiratory Distress
- Hypotension
- Tachycardia

- ❑ Occlusive dressing/chest seal should be placed over all chest wounds.
- ❑ Temporarily unseal ("burp") any occlusive dressing/chest seal that has been applied.
- ❑ Perform needle chest decompression if no improvement in patient with signs of tension pneumothorax as described above (see Needle Thoracostomy procedure).
- ❑ Consider bilateral needle decompression if no improvement.
- ❑ Oxygen via NRB, if available.
- ❑ Assist ventilation (PPV) as needed.
- ❑ Monitor pulse oximetry, if available.
- ❑ Request EMS support for rapid transport.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Asthma/Bronchospasm:

This protocol applies to persons with respiratory disorders such as chronic obstructive pulmonary disease, emphysema, chronic bronchitis, and asthma. Please consider other etiologies of shortness of breath including airway obstruction, pneumothorax, and anaphylaxis, for which other treatment may be indicated.

- ❑ Assist patient with self-administered doses of their Albuterol metered dose inhaler
  - Administer 2 puffs every 1-2 minutes until patient clinically improves or patient becomes significantly tremulous.
- ❑ If patient's inhaler is not available, utilize TEMS Albuterol metered dose inhaler.
  - Administer 2 puffs every 1-2 minutes until patient clinically improves or patient becomes significantly tremulous.
- ❑ If respiratory distress persists, administer Albuterol 2.5mg/3mL nebulizer treatment.
  - May repeat every 3-5 minutes until patient clinically improves or patient becomes significantly tremulous.
- ❑ Allow patient to assume a position of comfort to facilitate breathing (e.g. tripod position).
- ❑ Monitor pulse oximetry, if available.
- ❑ Request EMS support, if no improvement following multiple doses of metered dose inhaler or use of Albuterol nebulizer.
- ❑ If needed, assist ventilation with PPV using 100% oxygen
- ❑ If in extremis: Administer Epi-Pen (Epinephrine auto-injector 0.3 mg 1:1000 IM).
- ❑ Place on cardiac monitor, if available.
- ❑ Consider advanced airway as indicated

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Chest Pain (Non-Ttraumatic):

Non-traumatic chest pain in the field, especially during exertion should be considered cardiac in nature and treated as such with rapid recognition and transport. Symptoms suggestive of cardiac etiology are as follows:

- Crushing substernal chest discomfort like someone “sitting on chest”
- Discomfort radiating to left neck/jaw or left upper extremity
- Nausea/vomiting
- Diaphoresis (sweating)
- Shortness of breath
- Feeling of impending doom

- ❑ Remove operator from the tactical environment. If unable to immediately remove, minimize significant exertional activity until extraction is able to be safely executed.
- ❑ Administer 325 mg of chewable aspirin unless contraindicated by the following:
  - Allergy to ASA
  - Current traumatic injury with suspected or active bleeding
- ❑ If applicable, assist in the administration of the patient’s own nitroglycerin exactly as written on the prescription container.
- ❑ Apply oxygen via nasal cannula, if available.
- ❑ Treat for shock, if indicated.
- ❑ Request EMS support, if available.
- ❑ Place on cardiac monitor, obtain 12-lead ECG and monitor pulse oximetry, if available.
- ❑ Consider IV access.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

C: Circulation

Allergic Reaction/Anaphylaxis:

Spectrum of immune system reactions to environmental agents (such as pollen or stings), foods (such as peanuts) or medications (such as penicillin) ranging from mild reactions (allergy) to severe life- threatening reactions (anaphylaxis)

- Hives and itching
- Sensation of airway closure or presence of stridor
- Dyspnea or audible wheezing
- Vomiting
- Hypotension (in anaphylaxis)

Assess the degree of allergic reaction

- ❑ Mild to moderate - generalized hives and mild wheezing
- ❑ Severe - respiratory distress, impending airway closure, hypotension (<80 mmHg) or any patient with 2 systems with significant responses (skin, respiratory, GI)

Mild to Moderate Reaction:

- ❑ OTC Medications may be administered per protocol
  - Allergy medications (Cetirizine, Loratadine, Fexofenadine)
  - Diphenhydramine 50mg PO
    - ➢ May cause drowsiness so operator should not be directly engaged with threat/training.
  - Administer Albuterol if wheezing
    - ➢ Mild wheezing–administer Albuterol 2 puffs via metered-dose inhaler with spacer, 1–2 minutes apart. May repeat if needed. If minimal improvement, consider use of albuterol nebulizer.
    - ➢ Moderate wheezing–administer Albuterol 2.5mg/3mL nebulizer. May repeat every 3-5 minutes until patient clinically improves or patient becomes significantly tremulous.
  - Monitor closely for progression of symptoms to a severe reaction

Severe Allergic Reaction (Anaphylaxis):

- ❑ Administer EpiPen (epinephrine auto-injector containing 0.3 mg of 1:1000 epinephrine) according to the instructions for severe reactions or history of anaphylactic reactions to the same exposure. May repeat every 5-10 minutes if symptoms not improving or recur.
  - Diphenhydramine 50mg PO if patient is conscious and protecting airway.
  - Administer Albuterol if wheezing
    - ➢ Administer Albuterol 2.5mg/3mL nebulizer. May repeat every 3-5 minutes until patient clinically improves or patient becomes significantly tremulous.
- ❑ Establish IV access.
  - If hypotensive (systolic <90), following EpiPen, consider IVF with 1L NS, may be repeated for total 2 L.
- ❑ Place on cardiac monitor and pulse oximetry, if available.
- ❑ Request EMS support, if available.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

C: Circulation

Dehydration/Hypovolemic Shock:

Dehydration may occur due to an imbalance between excessive fluid loss and/or inadequate fluid intake. Oral rehydration should be encouraged throughout training and during operations. Signs or symptoms of poor tissue perfusion secondary to significant hypovolemia are as follows:

- Headache
- Irritability
- Nausea/vomiting
- Thirst
- Delayed capillary refill
- Poor skin turgor

- ❑ Encourage oral rehydration as tolerated using one-half strength electrolyte solution if available.
- ❑ If unable to tolerate oral fluids, establish IV access.
- ❑ May consider IO access if patient with hemodynamic instability and inability to obtain IV.
- ❑ Administer 500mL and reassess patient status including heart rate, BP, mental status. If findings persist of hypovolemia, repeat fluid bolus up to 2L.
- ❑ Place on cardiac monitor, if available.
- ❑ Institution of IV therapy automatically warrants subsequent medical evaluation at a designated treatment facility in all cases unless otherwise directed by medical control.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

D: Drugs, Deficits, Diabetic Emergencies

Opiate Exposure/OD:

Intentional or accidental exposure to opiates may occur to operators and/or suspects. TEMS providers should be highly suspicious for potential exposures. Sign/symptoms of opiate exposure includes:

- Decreased or otherwise altered mental status
- Decreased respiratory rate with or without pulmonary edema

- ❑ Assist ventilations if <8 per minute.
- ❑ Apply oxygen, if available.
- ❑ Administer Naloxone (Narcan) 0.4-2.0mg via IV, IM, SC or intranasal via Mucosal Atomizer Device if respirations <8 bpm or inability to maintain SpO2 >88%.
  - May repeat every 2–3 minutes up to 10mg.
  - If no response, consider other causes of AMS and/or exposure.
- ❑ Place on cardiac monitor and monitor pulse oximetry, if available.
- ❑ Consider advanced airway, if indicated.
- ❑ Establish IV access.
- ❑ Request EMS support, if available.

Altered Mental Status:

Agitated or combative patients pose special concerns for assessment and treatment. One potentially fatal condition that must be excluded or managed is Excited Delirium Syndrome, which can progress along a cascade to Sudden In-Custody Death. Signs of possible Excited Delirium Syndrome are as follows:

- Altered mental status
- Psychomotor agitation
- Anxiety
- Hallucinations
- Speech disturbances
- Violent and bizarre behavior
- Insensitivity to pain
- Elevated body temperature
- Superhuman strength

- ❑ *REACT* to the problem:
  - ***Rapid Sedation***: Administer IM Ketamine 2-4mg/kg, max 200mg if patient is a danger to themselves or others.
  - ***Emergency Care***: Manage W-X-ABC's.
  - ***Assessment***: Consider safety issues and potential causes of AMS, such as cocaine intoxication. Measure blood glucose, if available.
  - ***Contain*** and Restrain, but Don't Restrict
  - ***Secure*** individual without hog-tying or holding prone, which can restrict breathing.
  - ***Transport***: Excited Delirium is a medical emergency and EMS should be contacted as soon as it is suspected to initiate rapid transport
- ❑ Apply oxygen via NRB, if available.
- ❑ Assist ventilation if needed.
- ❑ Establish IV access, if conditions permit.
- ❑ Place on cardiac monitor and monitor pulse oximetry, if available.
- ❑ Advanced airway, if indicated.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

D: Drugs, Deficits, Diabetic Emergencies

Diabetic Emergency:

Alterations in blood glucose levels have many effects including affecting global functioning. This protocol is for patients with known diabetes exhibiting the following:

- Anxiety, sensation of low blood sugar
- Clammy, cool and diaphoretic skin
- Altered mental status
- History of recent illness or missed meals

❑ Check blood glucose, if >100mg/dL assess for other possible etiologies of symptoms including dehydration, intoxication or other exposure.

❑ If conscious and blood glucose <80mg/dL or patient clinically symptomatic with blood glucose <100mg/dL
- Encourage PO glucose intake.
- Recheck blood glucose after 5-10 minutes.
- Continue close monitoring for recurrent symptoms.
- Consider formal medical evaluation if history of trauma, recent illness, or use of oral hypoglycemics.

❑ If unconscious and blood glucose <80 mg/dL
- Establish IV.
- Administer Dextrose (125mL D10 or 25mL D50) if available.
- Recheck blood glucose after 5-10 minutes.
- Request EMS support for transport to medical facility.
- Place on cardiac monitor and pulse oximetry, if available.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

E: Extremity Injuries, Environmental Exposures

MSK Injuries:

Musculoskeletal injuries are common in SWAT operators and can occur during training or during SWAT operations. Injuries can range from simple sprains/strains to fractures and dislocations. It is imperative to exam the operator for range of motion and overall ability to continue duties to their best capability.

- ❑ If extended scene time, prolonged extrication and pulseless extremity, contact Medical Control for recommendations.
- ❑ If injury not witness by TEMS provider, obtain history about injury specifically paying attention to injury patterns.
- ❑ Remove all clothing from the extremity to visualize the site of injury.
- ❑ Examine for obvious deformities, swelling, and ecchymosis.
- ❑ Assess CMS including peripheral pulses, motor function, capillary refill and distal sensation.
- ❑ Assess range of motion of the affected joint or extremity.
  - Limited or no range of motion:
    - ➢ Splint the injury
      - Select a site to secure the splint both proximal and distal to the area of suspected injury or the area where the medical device will be placed.
      - Do not secure the splint directly over the injury.
      - Place the splint and secure with Velcro, straps, or bandage material (ie. Kling, kerlex, cloth bandage, etc.) depending on the splint manufacturer and design.
      - Document pulses, sensation and motor function after placement of the splint. If there has been a deterioration in any of these 3 parameters, reposition the splint and reassess. If no improvement, remove splint.
      - If a femur fracture is suspected and there is no evidence of pelvic fracture or instability, place a traction splint if available.
      - If under tactical condition and lower extremity injury, discuss with SWAT command the need for extraction.
      - If able to ambulate (upper extremity injury), alert SWAT command of injury and need for extraction on less emergent basis.
  - Normal range of motion:
    - ➢ If severe pain, consider splint placement as described above, need for extraction and pain management per protocol.
    - ➢ If minimal pain, evaluate operator's ability to perform operational duties.
    - ➢ Consider use of OTC medications (Ibuprofen, Acetaminophen) for pain management.
    - ➢ Recommend RICE (Rest, Ice, and Elevation) therapy.
    - ➢ If ongoing symptoms, recommend formal medical evaluation.
- ❑ Consider pain management per Pain Management Protocol.
- ❑ If at any time, there is question that the operator is limited in their mobility, SWAT command should be made aware and operator should seek formal medical evaluation.

Heat Exposure:

Spectrum of injury involving elevated core body temperature including Heat Exhaustion and Heat Stroke. Signs/symptoms for these heat related illnesses:

- Heat Exhaustion
  - ✓ Heat-related weakness
  - ✓ Dehydration
  - ✓ Profuse sweating
  - ✓ Nausea/vomiting
  - ✓ Warm to touch
- Heat Stroke
  - ✓ Heat-related collapse
  - ✓ Altered mental status
  - ✓ Profuse sweating or absence of sweating
  - ✓ Hot to touch

<u>Heat Exhaustion</u>

- ❑ Protect the patient from heat. Stop exercise and put patient at rest in a cool, shady place.
- ❑ Oral fluids can be effective if the patient is not vomiting. Use dilute (<5% sugar) fluids given in small sips. Commercial sports drinks should be diluted to half strength.
- ❑ If vomiting or unable to tolerate PO fluids, establish IV access and perform fluid challenge.
- ❑ Treat for dehydration per protocol, if indicated.
  - Institution of IV therapy automatically warrants subsequent medical evaluation at a designated treatment facility in all cases unless otherwise directed by medical control.

<u>Heat Stroke</u>

- ❑ Heat stroke is a true medical emergency that requires aggressive field treatment and rapid transport.
- ❑ Cool the patient immediately by any practical means:
  - Mist the skin and fan vigorously.
  - Ice packs to the groin and axilla.
  - Place in air conditioned environment.
  - Immerse the patient to the neck in cool water.
- ❑ Discontinue radical cooling if shivering begins, core temperature falls to 102°F, or if consciousness and CNS function return to normal.
  - CAUTION: Do not give acetaminophen or other antipyretics to victims of heat injury (hyperthermia).
- ❑ Establish IV access and administer 1L of cool NS if hypotensive (systolic <90) or other signs of dehydration.
- ❑ Oxygen via NRB, if available.
- ❑ Place on cardiac monitor, if available.
- ❑ Request EMS support for transport to definitive care

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

E: Extremity Injuries, Environmental Exposures

Cold Exposure:

Decreased core body temperature can quickly progress to a life-threatening clinical situation. As core body temperature decreases, the body progressively will shunt blood from the periphery to the core. Remember that in severe hypothermia, the heart becomes irritable and may easily fibrillate with noxious stimuli to the body.

- Mild 34–36°C (93.2–96.8°F) - Shivering, poor coordination
- Moderate 30–34°C (86–93.2°F) - Loss of shivering, altered mental status
- Severe <30°C (86°F) - Comatose

Mild/Moderate Hypothermia

- ❑ Since mild and moderate hypothermia cause no significant cardiac instability, any method of field rewarming is generally safe.
- ❑ Protect the patient from the cold environment.
- ❑ Remove cold/damp clothing as circumstances permit.
- ❑ Reverse the cold challenge by adding external heat using a thermal rescue blanket, “burrito wrap” device or chemical warmers. Target especially truncal areas and take precautions against burns from warming devices.
- ❑ Increase heat retention by adding insulation.
- ❑ Treat associated conditions.

Severe Hypothermia

- ❑ The severely cold heart is sensitive to a variety of stimuli and fatal dysrhythmias can be caused by incorrect or carelessly applied treatment efforts.
- ❑ Initiate transport as soon as possible as field rewarming and resuscitation is difficult, dangerous, and rarely effective.
- ❑ Handle gently to prevent ventricular fibrillation. Keep clothing in place unless wet.
- ❑ Keep the patient flat to avoid vascular shock from postural changes.
- ❑ Protect the patient from the cold environment.
- ❑ Ventilate as necessary with heated and humidified air or oxygen.
- ❑ Add insulation to avoid further heat loss.
- ❑ Heat packs may be applied to help prevent further heat loss to a cold environment; they generally do not produce extreme shell rewarming.
  - When using heat packs, apply to axilla, groin, and head.
  - Protect cold skin from direct contact with hot packs.
- ❑ Treat associated conditions.
- ❑ Advanced airway, as necessary.
- ❑ Place on cardiac monitor, if available.
- ❑ Establish IV access and administer warmed IV fluids.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

F: General Protocols

Triage Protocol:

- ❑ Standard triage techniques should be utilized when feasible. The ability to get to injured persons and to perform standard triage may be inhibited or require modification based on the tactical circumstance.
- ❑ **Remote Assessment** may be utilized if the tactical situation does not allow for standard triage techniques to safely be performed. Remote Assessment allows for assessment of a potential patient from a distance to determine injuries and viability as well as provide self-care instructions. This may require using binoculars, video surveillance feed or other visual/audio aids.
- ❑ Patient extraction is to be coordinated with the SWAT commander and SWAT team leader. Extraction methods in an active tactical hot-zone may not allow for spinal immobilization.
- ❑ Patients with an altered mental status should be disarmed immediately prior to provider contact.
- ❑ Non-law enforcement patients should be searched for weapons by SWAT Operators.
- ❑ Expectant category patients (based on SALT Triage) will not be resuscitated in an active tactical hot-zone unless extenuating circumstances allow for treatment that does not compromise provider and team safety.
- ❑ Pulseless patients will not be resuscitated in active tactical hot-zone unless extenuating circumstances allow for treatment that does not compromise provider and team safety.
- ❑ SALT Triage system methods will apply to any Mass Casualty Incident (MCI).

Pain Management:

- ❑ Manage W-X-ABC's as needed.
- ❑ MSK Protocol for splinting/stabilization of injury as needed
- ❑ OTC Medications protocol including use of Ibuprofen and/or Acetaminophen
- ❑ If pain is severe or transportation/extraction is going to cause significant discomfort, administer 0.2mg/kg IV Ketamine (max dose 20mg), may repeat every 30 minutes for recurrent severe pain.
- ❑ Apply Oxygen as needed.
- ❑ Monitor cardiac and pulse oximetry, if available.
- ❑ If Ketamine is administered, patient must be transported by EMS to medical facility for evaluation.

OTC Medication Administration:

For the purposes of SWAT Operator rehabilitation and health maintenance, TEMS staff may provide the below listed medications. The operator *must* be able to self-administer the medication. Allergies should be reviewed prior to administration. Dosing and administration instructions should be followed based on the medication instructions. If operator is requiring multiple medications and/or repeat medications they should undergo further evaluation by TEMS provider and/or Medical Director to ensure they are capable of preforming all required duties. Below is a list of suggested medications to have available for operators.

Pain Relief
- ❑ Aspirin
- ❑ Acetaminophen (Tylenol)
- ❑ Naproxen (Aleve)
- ❑ Ibuprofen (Advil)
- ❑ Migraine APAP/ASA/Caffeine

GI
- ❑ Imodium
- ❑ Pepto Bismol
- ❑ Tums/Antacids

Allergy
- ❑ Benadryl (PO)
- ❑ Benadryl (topical)
- ❑ Fexofenadine (Allegra)
- ❑ Pseudophedrine (Sudafed)
- ❑ Non-Drowsy Cold Medicine
- ❑ Cough Drops

OTHER
- ❑ Saline solution/contact lens case
- ❑ Clear Eye
- ❑ Baby Powder

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Hemorrhage Control - Basics

Basic Wound Care:

Clinical Indications

- ❑ Any open skin or soft tissue injury with or without active bleeding.

Equipment

- ❑ Sterile gauze pads of a size (appropriate to the area to be covered (i.e. ABD pad or 4x4)
- ❑ Hemostatic Dressing (Combat Gauze®, Celox Rapid X and Chito Gauze)
- ❑ Elastic Trauma Dressing (OLEAS)
- ❑ Tape
- ❑ Commercial Tourniquet (C.A.T.® SOF-TW®)
- ❑ Personal protective equipment to prevent exposure to blood/body fluids

Procedure

- ❑ Assure scene safety and observe universal precautions.
- ❑ Complete primary and secondary physical assessment.
- ❑ Expose the wound and assess potential damage.
- ❑ Control severe hemorrhage with Direct Pressure. If unable to stop bleeding and injury is to an extremity, apply tourniquet. (see Tourniquet Application Procedure)
- ❑ For anatomical areas that a tourniquet is unable to be applied consider use of hemostatic dressing and/or wound packing (see Wound Packing Procedure).
- ❑ Assess distal circulation, sensation and movement if the wound is on an extremity or maintaining sterility, apply the gauze dressing pad or elastic bandage to cover the entire wound.
- ❑ Secure the dressing pad with tape or roller bandage applying gentle, even pressure.
- ❑ Monitor distal circulation, sensation and movement after bandaging wounds on an extremity. Loosen bandage if necessary to maintain distal circulation, but control bleeding.
- ❑ Splint area as necessary to prevent motion.
- ❑ Continue to evaluate the patient's condition.
- ❑ Document procedure and results including any unusual circumstances and/or difficulties encountered.

NOTE: State of Wisconsin Standards and Procedures of Practical Skills Manual is appended and contains step-by-step instructions for: abdominal evisceration, amputations, axillary wounds, burns, chest injuries open, chest injuries penetration, eye injuries, genitalia wounds, hand injuries, head wounds, neck wounds, shoulder wounds, torso injuries.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Hemorrhage Control – Wound Packing

Wound Packing:

Clinical Indications

- ❑ Skin and soft tissue wounds with MAJOR bleeding not controlled by direct pressure or tourniquet deployment as above.

Equipment

- ❑ Sterile gauze pads of a size (appropriate to the area to be covered (i.e. ABD pad or 4x4)
- ❑ Hemostatic Dressing (Combat Gauze®, Celox Rapid X and Chito Gauze)
- ❑ Elastic Trauma Dressing (OLEAS)
- ❑ Tape
- ❑ Personal protective equipment to prevent exposure to blood/body fluids

Procedure

- ❑ Use personal protective equipment, including gloves, gown and mask as indicated.
- ❑ Apply direct pressure to the wound
- ❑ Insert finger(s) into the wound and apply firm pressure to visualized bleeding vessel to control bleeding.
- ❑ Create a small ball at the beginning of the roll gauze (preferentially hemostatic impregnated)
- ❑ Press the gauze deep into the wound, occluding the bleeding vessel against bone or firm tissue.
- ❑ While maintaining pressure on the leading edge of the gauze, begin to feed more gauze into the wound while maintain pressure on the bleeding vessel.
  - Continue packing the wound until you have filled the wound space -OR- until you have a minimum 2-3" of gauze remaining.
  - Leave an adequate “tail” on packing to facilitate later removal at the hospital.
- ❑ Maintain manual direct pressure on the wound for 3-5 minutes.
- ❑ Reassess and wrap the wound with a pressure dressing to maintain pressure for support.
- ❑ If bleeding persists, apply more gauze but DO NOT remove the wound packing and consider tourniquet application.
- ❑ Continue monitoring the wound and assess for continued direct pressure as needed throughout transport.
- ❑ Document the wound assessment and patient care in the electronic Patient Care Report (ePCR),

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Hemorrhage Control – Tourniquet

Tourniquet Application:

Clinical Indications

- ❑ Severe extremity bleeding that is not able to be controlled by direct pressure or situation does not allow for continued direct pressure to be applied.

Equipment

- ❑ Commercially available and approved tourniquet device example: C.A.T® or SOF-TW®

Procedure

- ❑ Assess scene safety (keep in mind in the tactical environment the scene may **NOT** be safe), the intent is to rapidly evacuate to an area that provides substantial ballistic protection. The risk/benefit of treat-in-place must be evaluated on a scene by scene basis.
- ❑ Verify the patient has sustained an injury that may benefit from tourniquet application (massive external blood loss or visualized extremity distension, i.e. bilateral femur fractures with the presence of shock or Traumatic Amputation).
- ❑ Ideally the tourniquet should be applied approximately 2-3 inches above the point of injury on bare skin.
  - In a dynamic tactical environment, the tourniquet may be applied as proximally as possible on the extremity and over clothing.
- ❑ The windlass of the chosen device must be tightened enough to visibly see the cessation of bleeding (ideally the distal pulse of the effected extremity should be absent).
  - Do not forget to secure the windlass to prevent unwanted loosening of the device.
- ❑ The application of the tourniquet can be very painful; consider pain control as per protocol.
- ❑ Early notification of medical control is REQUIRED.
- ❑ Constant assessment of the bleeding site must be done and documented.
  - If bleeding is not successfully controlled with one tourniquet, consider the application of a second right next to the first, making sure to offset the windlass as to not tangle the devices.
- ❑ Never remove the tourniquet once applied.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Needle Thoracostomy

Needle Thoracostomy (Chest Decompression):

Equipment

- ❑ 14 gauge 3.25 inch IV catheter
- ❑ Alcohol prep
- ❑ Tape
- ❑ Stethoscope (if available)
- ❑ Personal protective equipment to prevent exposure to blood/body fluids

Procedure

- ❑ Assure scene safety and observe universal precautions
- ❑ Confirm the order with medical control if tactical situation dictates.
- ❑ Determine which side of the chest has a tension pneumothorax.
- ❑ Locate the suprasternal notch, move laterally to the midclavicular line and locate the second and third rib on the side of the pneumothorax.
- ❑ Remove the protective sheath and confirm the IV catheter is in place on the 14-gauge needle.
- ❑ Cleanse the insertion site with alcohol.
- ❑ Insert the needle and catheter at a 90º angle directly over the 3rd rib. When the tip of the needle has passed through the chest skin and touches the 3rd rib, alter the angle and "walk" the needle over the 3rd rib advancing it into the pleural cavity.
  - *NOTE: Alternative site 4th intercostal space, midaxillary line*
- ❑ Listen for escape of air to confirm placement of the catheter.
- ❑ Withdraw the needle and tape the catheter in place.
- ❑ Dispose of contaminated materials in the appropriate receptacle.
- ❑ Reassess the patient's condition and vital signs.
- ❑ Document procedure and results, including any unusual circumstances and/or difficulties encountered.

Recognize/verbalize signs/symptoms of a tension pneumothorax

- Restless/agitated
- Increased resistance to ventilation
- Jugular vein distention
- Decreased or absent breath sounds on the affected side
- Mechanism of injury, nature of illness, iatrogenic interventions

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Surgical Cricothyrotomy

Surgical Cricothyrotomy:

If Possible Contact Medical Control Before Proceeding!

Clinical Indications

- ❑ When all airway management measures have failed and the patient needs an advanced airway immediately consider performing cricothyrotomy.
- ❑ If, in the paramedics' judgment, the time necessary to contact medical control will compromise the patient's chance of survival AND it is not possible to ventilate the patient with a bag-valve-mask during transport, cricothyrotomy may be performed without Medical Control.

Relative Contraindications

- ❑ Ability to ventilate patient with an oral-pharyngeal/nasal-pharyngeal airway, BVM, LTA/LMA or endotracheal tube.

Equipment

- ❑ Scalpel
- ❑ Antiseptic swab
- ❑ Bougie
- ❑ 6.0-6.5mm ETT
- ❑ 10mL syringe

Procedure

- ❑ Position patient supine in the sniffing position with slight extension of the neck – identify landmarks of the cricothyroid membrane by palpation utilizing anatomical landmarks (below the thyroid cartilage and above the cricoid cartilage).
- ❑ Prep the area with an antiseptic swab.
- ❑ Using the non-dominant hand, spread the overlying skin taut with the thumb and fingers, and slightly depress the skin over the cricothyroid membrane with the index finger to mark the site of cricothyrotomy. Do not release the non-dominant hand from the neck until the procedure is complete. Once the anatomy is found and defined, avoid movement of the anatomy to promote proper cricothyrotomy airway placement.
- ❑ Using a sterile scalpel, make a vertical incision in the mid-line of the neck extending from just above the lower edge of the thyroid cartilage to the middle of the cricoid cartilage. Make the depth of this incision sufficient to extend through the skin and fatty tissue underneath.
- ❑ Using the same scalpel, make a short horizontal incision in the middle of the cricothyroid membrane into the trachea.
  - Use a bougie device as an introducer into the tracheal opening prior to passing the ET tube.
- ❑ Pass a 6.0-6.5 mm Endotracheal Tube through the horizontal incision in the cricothyroid membrane, angling the tube inferior and posterior along the tracheal anatomy.
- ❑ Inflate the endotracheal cuff with 5-10mL of air and verify airway placement with physical exam (chest rise, breath sounds).
- ❑ Confirm placement with gentle ventilation via BVM, continuous digital waveform capnography, and physical exam. Be sure air movement is fluid with bilateral symmetric chest rise and that no visible neck or soft-tissue distortion is noted
- ❑ If tracheal placement is unclear, remove device and transport immediately to the closest Emergency Department.
- ❑ Consider Sedation Protocol as appropriate.
- ❑ If not previously done, immediately contact receiving facility and Medical Control.
- ❑ Continually monitor for respiratory changes during transport, especially after any patient movement/transfers.
- ❑ Monitor for complications (i.e. hemorrhage, expanding neck hematoma, dislodgement).

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

King LTS-D Laryngeal Tube Airway

King LTS-D – Laryngeal Tube Airway:

Equipment

- ❑ Correctly sized King LTS-D (see chart below).
- ❑ Bag valve mask.
- ❑ Oxygen reservoir.
- ❑ Bite block and/or endotracheal tube holder (if available).
- ❑ Appropriately sized syringes for expanding cuff.
- ❑ End tidal CO2 and oxygen saturation monitoring devices (if available)

Connector Color Patient Height

- Yellow: 4-5 feet
- Red: 5-6 feet
- Purple: >6 feet

Procedure

- ❑ Pre-oxygenate patient with 100% oxygen via Bag Valve Mask or spontaneous ventilation to achieve O2 saturation of >93% if possible.
- ❑ Tightly inflate the cuff with the syringe.
- ❑ Check the integrity of the cuff inflation system and pilot balloon.
- ❑ Lubricate the posterior distal tip of the King LTS-D with a water soluble lubricant.
- ❑ Place the patient in neutral sniffing position (if no c-spine/spinal injury suspected).
  - For patients with suspected c-spine injury, perform two-person insertion technique.
  - One person maintains manual in-line cervical stabilization while the other person proceeds with procedure.
- ❑ Pull mandible down to open mouth.
- ❑ Insert uninflated King LTS-D into oral cavity with midline or lateral technique.
- ❑ Advance the tip behind the base of the tongue while rotating tube back to midline so that the blue orientation line faces the chin of the patient.
- ❑ Without exerting excessive force, advance tube until the base of the colored connector is aligned with teeth or gums.
- ❑ Inflate the King with the appropriate volume:
  - If uninflated King Airway insertion is difficult, perform a jaw thrust pulling the tongue forward. Alternately, a laryngoscope may be used to lift the jaw/mandible to facilitate insertion.
- ❑ Attach the BVM to the King LTS-D.
- ❑ While bagging the patient, gently withdraw the tube until ventilation becomes easy and free flowing (large tidal volume with minimal airway pressure).
- ❑ Adjust cuff inflation if necessary to obtain a seal of the airway at the peak ventilatory pressure employed.
- ❑ Obtain end-tidal CO2 waveform (if available), listen for breath sounds bilaterally, look for chest excursion and check oxygen saturation.
- ❑ Secure in the midline to help maintain a good seal over the larynx.
- ❑ Place bite block, oral airway or endotracheal tube holder (if available) between teeth to prevent biting tube.
- ❑ Consider Sedation Procedure.
- ❑ Ensure c-spine is still immobilized.
- ❑ If repeated attempts are made, oxygenate with 100% O2 for 2 minutes between attempts.
- ❑ **Follow manufacturers suggested guidelines at all times**

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Venous Access - Peripheral

Peripheral Vascular Access:

Clinical Indication

- ❑ Patients requiring IV medications or fluids
- ❑ Patients with any potential for deteriorations (ie, seizures, altered mentation, trauma, chest pain, difficulty)

Equipment

- ❑ Appropriate tubing or IV lock
- ❑ #14-#24 catheter over the needle or butterfly needle
- ❑ Venous tourniquet
- ❑ Antiseptic swab
- ❑ Gauze pad or adhesive bandage
- ❑ Tape or other securing device

Procedure

- ❑ Saline locks may be used as an alternated to IV tubing and fluid at the discretion of the paramedic.
- ❑ Use the largest catheter bore necessary based upon the patients condition and size of veins.
- ❑ Fluid and setup choice is preferably:
  - Normal Saline with a macro drip (10-gtt/cc) for medical/ trauma conditions
  - Normal Saline with a micro drip (60-gtt/cc) for medication infusion or for patients where fluid overload is of concern
- ❑ Assemble IV solution and tubing
  - Open IV bag and check for clarity, expiration date, etc.
  - Verity correct solution
  - Open IV tubing
  - Assemble IV tubing according to manufacturer's guidelines
- ❑ Insertion
  - Explain to the patient that an IV is going to be started
  - Place the tourniquet around the patient's arm proximal to the IV site, if appropriate
  - Palpate veins for resilience
  - Clean the skin with an antiseptic swab in an increasing sized concentric circle and follow it with an alcohol swab
  - Stabilized the vein distally with the thumb/ fingers
  - Enter the skin with the bevel of the needle facing upward
  - Enter the vein, obtain a flash, and advance the catheter into the vein while stabilizing the needle
  - Remove the needle while compressing the proximal tip of the catheter to minimize blood loss
  - Remove the tourniquet
  - Appropriate solution (normal saline)
  - Open the IV clamp to assure free flow
  - Set IV infusion rate
- ❑ Secure the IV:
  - Secure the IV catheter, and tubing
  - Recheck IV drip rate to make sure it is flowing at appropriate rate.
- ❑ Troubleshooting the IV, (if the IV is not working well):
  - Make sure the tourniquet is off
  - Check the IV insertion site for swelling
  - Check the IV tubing clamp to make sure it is open
  - Check the drip chamber to make sure it is half full
  - Lower the IV bag below IV site and watch for blood to return into the tubing

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Venous Access – External Jugular

External Jugular Vascular Access:

Clinical Indication

- ❑ Patients who require IV Access but attempts at peripheral IV access has been exhausted

Contraindication

- ❑ Anterior neck hematoma
- ❑ Anterior neck mass
- ❑ Medical appliance in place covering anterior neck
- ❑ Previous Surgical Procedure of anterior neck
- ❑ Monitor for complications:
- ❑ Expanding hematoma
- ❑ Tracheal shift
- ❑ Difficulty breathing
- ❑ Increase in pain

Equipment

- ❑ Appropriate tubing or IV lock
- ❑ #14--#24 catheter over the needle or butterfly needle
- ❑ Antiseptic swab
- ❑ Gauze pad or adhesive bandage
- ❑ Tape or other securing device

Procedure

- ❑ Position yourself at the head of the patient.
- ❑ Place the patient in a slight Trendelenburg (supine, head down) position if possible. This helps distend the vein and prevent air embolism.
- ❑ Turn the patient's head toward the opposite side if no risk of cervical injury exists.
- ❑ Align the catheter with the vein (insertion direction is away from the patient's head, toward the patient's same side shoulder).
- ❑ Anchoring the vein lightly with one finger above the clavicle, puncture the vein at a superficial angle midway between the angle of the jaw and the clavicle and cannulate the vein.
- ❑ Confirm placement with saline flush.
- ❑ Attach the IV and secure the catheter (avoiding circumferential dressing or taping around the neck).
- ❑ If unsuccessful, place occlusive dressing over site and do NOT go to other side of neck
- ❑ Document the procedure appropriately.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Venous Access – Intraosseous

Intraosseous Venous Access Protocol:

Clinical Indication

- ❑ Need for venous access with inability to obtain venous access by other means

Contraindication

- ❑ Fracture proximal to proposed intraosseous site
- ❑ History of Osteogenesis Imperfecta
- ❑ Current or prior infection at proposed intraosseous site
- ❑ Previous intraosseous insertion or joint replacement at the selected site

Equipment

- ❑ Antiseptic swab
- ❑ Intraosseous device (EZ-IO, NIO)
- ❑ Appropriate IV tubing

Procedure

- ❑ Select the appropriate insertion site and palpate the appropriate bony landmarks to identify the site of insertion. The humerus is the preferred site, especially for any penetrating injury to the torso or lower extremities.
  - **Anterior Tibia** Anteromedial aspect of the proximal tibia (bony prominence below the kneecap). The insertion location will be 1-2cm (2 finger widths) below this.
  - **Proximal Humerus (Hand Over Umbilicus Technique)** Keeping the elbow flat on the floor and close to the side of the body, rotate the palm over the umbilicus (belly button) and palpate the greater tubercle of the humerus. The insertion location will be 1-2cm (2 finger widths) above the surgical neck.
  - **Proximal Humerus ("Thumb-to-Bum" Technique)** With the arm fully extended and tight to the body, rotate the hand medially (inward) until the palm is facing out. Palpate the greater tubercle of the humerus approximately 1-2cm (2 finger widths) above the surgical neck.
- ❑ Cleanse the site with chlorhexidine, iodine or alcohol prep pad.
- ❑ Device insertion:
  - Powered Intraosseous Device (EZ-IO):
    - ➢ Hold the intraosseous needle at a 90 degree angle to the bony surface, aimed away from the nearby joint and epiphyseal plate.
    - ➢ Provide pressure to push the needle tip through the skin until resistance form the bone is felt.
    - ➢ Power the driver until a "pop" or loss of resistance is felt.
    - ➢ *Do not advance more than 1cm after the loss or resistance is felt*.
  - Automatic Intraosseous Device (NIO):
    - ➢ Place dominant hand over cap, and press device against patient.
    - ➢ While pressing down on the device with palm, pull trigger wings upwards with fingers
    - ➢ Gently pull the NIO up in a rotating motion while holding the needle stabilizer against the insertion site
- ❑ Remove the stylet and place in an approved sharps container.
- ❑ Attach a 10mL syringe filled with 5mL of Normal Saline; aspirate bone marrow to verify placement, then inject 5mL of Normal Saline to clear the lumen of the needle.
- ❑ Attach the IV line with fluids on a pressure bag.
- ❑ Stabilize and secure the needle with dressings and tape

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Sedation Protocol

Sedation:

Clinical Indication

- ❑ Signs of clinical agitation following airway management
- ❑ Severe agitation and/or excited delirium

Equipment

- ❑ Ketamine
- ❑ IV access or appropriate equipment for IM administration
- ❑ Antiseptic swab

Procedure

- ❑ Post-airway Sedation
  - Consider sedation for patients with signs of agitation following airway procedure
  - Ketamine 1-2mg/kg IV (max 200 mg)
    - ➢ Monitor for laryngospasm, more common with IV administration especially with IV push administration.
  - Reassess frequently for signs of recurrent agitation
    - ➢ Pulling at lines and tubes
    - ➢ Coughing or gagging on invasive airway device
    - ➢ Tachycardia
    - ➢ Hypertension
  - May repeat dose at 1-2mg/kg Ketamine IV for signs of recurrent agitation.
- ❑ Agitated/Excited Delirium
  - Ketamine 2-4mg/kg IM (max 200 mg)
    - ➢ Monitor for potential laryngospasm, more common with IV administration.
  - Reassess frequently:
    - ➢ Mental Status
    - ➢ SpO2
    - ➢ Respiratory rate and effort
  - Once patient is no longer agitated, consider establishing IV access.
  - May repeat Ketamine dose 1-2mg/kg IV as needed for recurrent agitation.

Legend	
	EMT
A	A-EMT
P	Paramedic
M	Medical Control

Wound Closure - Staples

Wound Closure – Staples:

Clinical Indication

- ❑ Open skin or soft tissue wound that is not easily managed with basic wound care and is large or gaping and there is an expected delay to definitive care

Equipment

- ❑ Saline solution
- ❑ Antiseptic swab
- ❑ Staple gun

Procedure

- ❑ Provide basic wound care as described above
- ❑ The wound should be thoroughly cleansed to ensure that no retained foreign bodies are present prior to closure
- ❑ Ensure that the wound edges are able to be well approximated easily without significant tension.
- ❑ Use staple gun to place adequate amount of staples to allow for wound closure and bleeding cessation.
- ❑ After wound closure, wound should be covered and splinted as indicated.
- ❑ Definitive wound care/closure should occur at the earliest availability and ideally within 24 hours.
- ❑ Reassessment of the wound should occur if tactical situation does not allow for immediate extraction for definitive care

Madison and Dane County Responder Resources

"In case you haven't felt it today… **You are appreciated.**
In case you wanted to quit today… **Don't. You are needed.**
In case you need to talk but feel noone will listen… **There are many who will**.
In case you haven't heard it today… **THANK YOU**"

Call 2-1-1 any time for information about almost anything related to health and human services.
You can also visit http://www.211wisconsin.org or http://www.referweb.net/uwdc/

Employee Assistance Program (EAP) City of Madison…… (608) 266-6561
tmartinez@cityofmadison.com
hkrueger@cityofmadison.com
samos@cityofmadison.com
2300 S. Park St
Suite 111
Madison, WI

Employee Assistance Program (EAP) Dane County…. (608) 280-2644
Karen Smith
http://www.journeymhc.org/
Journey Mental Health Center
49 Kessel Ct
Madison, WI

Dane County Human Services (http://www.danecountyhumanservices.org/default.aspx)…… **(608) 242-6200**

Mental Health Services
Mental Health Crisis Line (24 Hours)…… **(608) 280-2600**
Emergency and Crisis Child Care (24 hours per day)…… **(608) 244-5700**
Parental Stress Line (8am – 10pm daily)…… **(608) 241-2221**
Recovery Dane…… **(608) 237-1661**

National Alliance on Mental Illness (NAMI) Dane County……(608) 249-7188
contact@namidanecounty.org
National Alliance on Mental Illness
2059 Atwood Ave
Madison, WI

Transportation
Dane County Transportation Services……**(608) 242-6486**
http://danecountyhumanservices.org/Transportation/key_phone_numbers.aspx
Madison Metro Transit and Paratransit
https://cityofmadison.com/metro/ and https://www.cityofmadison.com/metro/paratransit/
BadgerCare / Medicaid……**(608) 907-1493**

Medical Emergency : Call 9-1-1