



## Medical Direction and Practices Board

### WHITE PAPER

## High Threat Treatment Guidelines

### Why are we talking about this?

We have witnessed a growing frequency of multiple casualty violent events. These are dynamic, high-threat scenarios for first responders. The historical dogma of staging until the scene is safe may no longer be operational best practice. It is not wise to assume that a rigid, traditional response protocol will remain appropriate for future events. Many of these events mirror combat scenarios and it makes sense to look to our military colleagues for guidance on how they respond to similar scenarios.

Systemic review of combat casualty data showed that the majority of fatal combat injuries die within 30 minutes<sup>1</sup>:

Greatest opportunity for life saving intervention is early on:

- 90% of deaths occurred prior to definitive care
- 42% immediately
- 26% within 5 minutes
- 16% within 5 and 30 minutes
- 8-10% within 30 minutes and 2 hours
- Remainder survived between 2 and 6 hours during prolonged extrication to care

Only 10% of combat deaths occurred after medical care was initiated

- A landmark study in 1984 identified injury patterns most likely to cause death in combat scenarios.<sup>2</sup> 15% of fatalities in combat from readily treatable causes:
- 9% Exsanguination from peripheral hemorrhage
- 5% Open/Tension pneumothorax
- 1% Airway obstruction

---

<sup>1</sup> Wound Data and Munitions Effectiveness Team (WDMET) database

<sup>2</sup> R.F. Bellamy. Causes of Death in Conventional Land Warfare. Military Medicine 1984

Predicted time to death from each of these injuries:

- Death from large artery bleeding: 2-4 minutes
- Death from airway compromise: 4-6 minutes
- Death from tension pneumothorax 15-20+ minutes

These military medicine lessons have been used to critically assess violent civilian MCI cases in our more recent past. In the aftermath of the Columbine, CO, school shooting, EMS staged for 4 hours waiting for the law enforcement team to determine the scene was safe. Initial law enforcement also staged until tactical teams arrived. The after action review of this event determined that initial law enforcement responders need to engage the threat immediately with what resources are initially available. This was the birth of what is now referred to as the “active shooter” protocol. Since that event, individuals involved in EMS have reassessed our own protocols and questioned whether staging until the scene is 100% safe is the best approach to similar events.

### **Why can't EMS providers be armed?**

Hostile Environment or High Risk scenarios are by definition high threat situations. Many consider firearms self-defense tools. However, the role assumed by EMS providers in a high threat situation is one that provides medical care. Law enforcement is dedicated to threat suppression and Force/EMS protection. EMS education does not include any firearms training. Our role is not threat suppression or force protection. Maine EMS and most internal EMS service or fire department policies do not condone arming EMS providers, regardless of the situation under which they practice.

Exceptions: If an EMS provider is a sworn law enforcement officer, that person must decide which role that they will be taking in this event. There are some individuals who are official members of law enforcement tactical/special response teams. These teams have specific rules to address the carrying of weapons as part of their team duties. It is suggested that EMS providers refer to their EMS agency administrative rules and regulations to enhance the compliance of this issue.

### **How does this change “Is the scene safe”?**

The philosophy of this type of scene management is to work with law enforcement to determine when appropriately trained EMS can enter an active shooter environment (with law enforcement protection) and provide targeted, life saving patient care. EMS and law enforcement will determine how to make the scene “safe enough” to provide limited patient triage and care.

## What equipment do I need?

### Personal Safety/Identifying Equipment:

Ultimately, EMS Service and Law Enforcement Department leadership must decide upon the most appropriate equipment for their personnel. The following is a list of some of the material that may be considered when planning to respond to active shooter events:

- Ballistic vests with clear identification for EMS (star of life, lettering, etc)
- Ballistic helmet
- Eye protection

### Patient Care Equipment:

- Chest decompression needles (paramedics only)
- Hemostatic wound packing/dressing (Combat Gauze)
- Maine EMS approved Tourniquets.

## Why does the personal safety equipment need to be consistent amongst EMS teams?

It is important for law enforcement to rapidly recognize you as an asset. You may be interacting with law enforcement personnel who you have never met. This equipment identifies you as a medical asset distinct from traditional EMS resources.

## What is the requirement to enter?

- Personal willingness to enter (this is a personal choice)
- Maine EMS approved training
- Clearance from scene command (NIMS Unified Command)
- Previous established Memorandum of Understanding (MOU) between EMS and law enforcement agencies

## What level of care are we expected to provide?

Initially, EMS will be rapidly triaging for injuries that require immediate intervention. The philosophy of care in a high threat environment is not to deliver all the care that *can* be done, but to concentrate on what **MUST** be done for lifesaving. This is not altering or relaxing current Maine EMS protocols. Life threatening injuries that are rapidly and easily stabilized are:

- Extremity hemorrhage → Tourniquet
- Other severe hemorrhage → Hemostatic wound packing
- Positional airway obstruction → Recovery position
- Tension pneumothorax → Chest decompression

### **How is this care different than traditional initial MCI triage care?**

- EMS is expected to move more rapidly from patient to patient
- Do not “tag” each patient
- Traditional MCI care will initiate once the scene is more stable or the patients are brought to a safer area of the scene (also referred to as the "cold zone.")

### **What training is required to participate in this?**

TCCC (EMT/Paramedic), TCC (law enforcement first response), or other equivalent training approved by Maine EMS.

### **What communication/agreement is required with law enforcement?**

It is critically important that MOU's be completed between EMS and law enforcement prior to activation of this program. All law enforcement agencies likely to respond must be involved. Each MOU must address the following issues:

- How will scene command be structured?
  - SUGGEST: NIMS Unified Command
- How will EMS and law enforcement determine when EMS may enter the scene?
  - SUGGEST: Coordinated effort: under unified command, no one agency will make the decision on entry of EMS
- What type of protection will law enforcement provide to EMS personnel?

### **Would an individual EMS provider be required to participate?**

No. Involvement in this type of response is a personal choice.

### **Do all my providers on a service need to be trained?**

No. See above. Given the time urgency of these scenarios, it makes sense to concentrate on those EMS responders most likely to be available. However, minimal awareness training is important.

### **What about Worker's Compensation liability?**

This will need to be address at the level of each individual EMS agency.

### **How does this change traditional scene safety protocol dogma?**

The philosophy here is to balance individual EMS personnel safety with time urgent and life threatening patient injuries. Each scenario will be unique, and will demand a risk-benefit ratio determination at the time of response. Scene command will determine when the scene is “safe enough” for specifically trained EMS personnel to enter with law enforcement protection. Benefits of proposed medical interventions MUST be weighed against potential for further harm to patient or first responders. Medical care must be tailored to the relationship between the provider and the dynamic threat.