EMS and the Active Shooter Response

Guidelines for High Risk Scenarios

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Objectives

- Look at the history
- Define the problem
- Examine risk assessment
- Explore the old paradigm
- Working with law enforcement
- Look at the new means of care
Keep In Mind…

- That these considerations apply to:
  - Active shooter incidents
    - Schools
    - Businesses
    - Malls
    - Live events
  - Bombings
  - ANY Mass Casualty event
History

- University of Texas, Austin, bell tower
  - August 1, 1966
  - 16 killed, 32 injured

- Columbine High School, Colorado
  - April 20, 1999
  - 13 killed, 24 injured (21 by gunfire)
Scenario

- Two High School Students...
  - TEC-9
  - Highpoint 9mm carbine
  - Shotgun x 2
  - 4 knives
  - 99 IEDs
Scenario
Scenario
Scenario

US SCHOOL SHOOTING
Up to 25 students reported shot dead
Scenario

I am bleeding to death.
Scenario
History

- Columbine High School
  - Response was a tactical success by the standards of the time
  - Paradigm was to secure scene for SWAT intervention
History

● The Old Paradigm
  – The Five “C’s”
    ● Contain
    ● Control
    ● Call SWAT
    ● Communicate with perpetrators
    ● Come up with tentative plan
  – Predicated on concept of Hostage Taking
History
History

- Columbine High School
  - Perpetrators were done killing in twenty minutes, wandered for another 30 minutes shooting up the place
  - Suicide at 49 minutes
  - School not completely evacuated for 3.5 hours
  - William David Sanders, shot in the chest and neck, bled to death waiting
History

• Most events end quickly
  – Majority of perps give up or commit suicide
  – On average, event lasts 12 minutes
    • Many 3-4 minutes
  – With school shootings, 93% of incidents finished by the time of arrival of LE and EMS
History

● The likelihood that anyone of us might respond to such an event has increased dramatically

● A need to be prepared to respond and react
  – Civilians
  – Teammates
  – Self
History

- Since 2000, law enforcement response has changed
  - Rapid deployment
  - Patrol officers
  - Movement to contact
History
Paradigm

- Fire/EMS response has NOT changed
  - Still tend to wait in a Cold Zone until scene completely cleared
  - Standard of “Scene Safety” above all else
  - Operating in unsecured environment is too risk intense
High Threat Mass Casualty

Are we going to stage away from the incident in a safe zone?
So Why the Reluctance?

● Risk Assessment
  – Risk is risk
  – The immediate threat— the shooter – is usually out of play by the time EMS (and LE) is on scene
  – Cleared but unsecured areas (Warm Zone or Indirect Threat Zone) have low risk
Paradigm

- Risk Assessment
  - Consider risk of daily Fire/EMS
    - Past 30 years have produced over 3000 FF deaths
    - Over 5000 ambulance crashes per year
  - Risk is risk
    - We do what we can to mitigate it
      - Training
      - Equipment
Paradigm

- Risk Assessment
  - Over 33 years, only four incidents with casualties among first responders to AS events
    - Recently there have been 4 first responders significantly injured
      - Ft Hood
      - Sikh Temple
      - Navy Yard
    - ALL were Law Enforcement
Paradigm

- Risk Assessment
  - Perps generally tend to avoid LE
    - Don’t hide or “lie in wait”
    - Motivation is to kill the defenseless and unarmed – risk averse
    - Tend to fold or commit suicide when confronted
  - Risk of ambush very low
Paradigm

- Overall, risk to EMS responders is very low
  - Risk Mitigation
    - Proper training with LE
    - Proper ballistic PPE
Working with Law Enforcement

- LEOs take the lead
  - Job is to “Stop the Killing”
  - A limited resource at the outset
  - Move to contact
  - Unable to evacuate or treat wounded
  - Victims with life-threatening but survivable injuries left to die
Working with Law Enforcement

“Stop the Killing”
Working with Law Enforcement

- LEOs not equipped or trained to deal with these issues
  - Survivable wounding patterns
    - Exsanguination
      - Extremity wounds
      - Trunk wounds
    - Tension pneumothorax
    - Airway positioning
Working with SWAT

- Tactical medics (TEMS)
  - Are a dedicated component of the tactical team
  - Are committed to moving with the tactical team
  - Limited numbers
  - Often have limited resources
  - May not be present at all
Working With SWAT
So Where Does That Leave Us (EMS)?

- Rescue Task Force
  - A means of safely introducing the needed life-saving medical care into the warm zone of the incident – at or near the point of wounding
  - Time is of the essence
Time is of the Essence

Causes of Death in Combat

- 15% of fatalities in combat from readily treatable causes:
  - 9% Exsanguination from peripheral hemorrhage
  - 5% Open/Tension pneumothorax
  - 1% Airway obstruction
So Where Does That Leave **US**?

- **Rescue Task Force**
  - The integration of LE and EMS
  - Provides security for EMS
  - Allows EMS access to the Point of Wounding
  - Designed to “Stop the Dying”
But First…

● Definitions
  – **Hot Zone** (Direct Threat Zone) – Area in which there is a clear and direct threat to responders and victims. Immediate proximity to shooter or device
  – **Warm Zone** (Indirect Threat Zone) – Area that has been cleared by LE but not secured. Potential but unlikely threat area
The Scene

● Definitions
  – **Cold Zone** (No Threat Zone) – Completely safe from any threat. Cleared, secured, out of line of fire or blast effect
Terminology

● **Concealment**
  - Anything that obscures your visual signature from the enemy
    - Does NOT provide any ballistic protection

● **Cover**
  - Any feature, natural or manmade, that provides ballistic protection from the enemy
    - Consider that there are a wide range of ballistic threats
The Scene

**PREVIOUS PROCEDURE**
Firefighters establish a medical triage center a safe distance from the shooter, known as a “cold zone,” and wait until police have secured the area before treating victims.

**NEW TACTICS**
Medics will enter “warm zones” with police, even if a shooter has not been contained and a threat still exists.

A rescue task force combines firefighters and paramedics with armed police.
The Scene

- Unified Command
  - First on scene
  - Positioned in Cold or Warm Zone close to activity
  - Consists of LE and EMS command elements
  - Permits coordination of all activities
The Scene

- Unified Command
  - Permits coordination of all activities
    - Law Enforcement – “Stop the Killing”
      - Neutralizing threat
      - Clearing and securing scene
      - EOD activity
      - Evidence preservation
The Scene

- Unified Command
  - Permits coordination of all activities
    - EMS – “Stop the Dying”
      - Establish ingress and egress for responding units
      - Prepare response teams
      - Triage
      - Evacuation
      - Hospital notification
      - Controls patient flow and documentation
The Scene

- Unified Command
  - Identify hazard zones
  - Establish staging area
  - Establish evacuation corridors
  - Establish and deploy Rescue Task Forces
    - Two LEOs, two medics
  - Designate Casualty Collection Point(s) (CCP)
The Scene

- EMS Staging
  - Ambulance flow
    - Transport officer
  - Casualty Collection Point (CPP)
    - May be triage site
      - Triage officer
    - May be more than one
      - Aurora Theater shootings – 4 CCPs
The Scene
The Scene

- Rescue Task Force
  - Consists of two LEOs and two medics
  - LEO in front and at rear
  - Two medics in between
  - LEOs are dedicated exclusively to that team and its protection
    - They stay together during all movement and while medics are focused on assessment and treatment of victims
The Scene
The Scene
The Scene
The Scene
The Scene

- Rescue Task Force – Medic’s roll
  - Will have appropriate ballistic PPE
    - Body armor
    - Helmet
The Scene
The Scene
The Scene
The Scene

- Now that you’re at the patient’s side, then what?
  - What can you expect to see?
  - How will you treat?
  - What equipment will you have?
  - What are your PRIORITIES?
High Threat Mass Casualty

If EMS decides to enter, are they carrying equipment appropriate to the situation?
The Scene

- Is it feasible to bring this stuff in?
- Is it even needed?
- How, exactly, do you deal with these situations?
New Threat Environment
High Threat Mass Casualty
Are we appropriately trained to provide care prior to and during evacuation?
New Threat Environment
New Threat Environment
High Threat Mass Casualty
Rescue Task Force

- Medic’s roll
  - Appropriate training
    - Tactical Emergency Casualty Care (TECC)
    - Designed specifically for this setting and typical wounding patterns
New Standard of Care

- Tactical Emergency Casualty Care (TECC)
  - Evidence-based, best-practices care
  - Delivered near the point of wounding during high-risk operations
  - Based on well tested TCCC guidelines
The goal of TECC is to identify and treat those casualties with preventable causes of death and keep them alive long enough to reach the hospital.

- If they don’t arrive alive, there is nothing that the trauma surgeons can do for them.
New Standard of Care

- TECC
  - Based on wounding patterns
  - Rapid, directed, simple treatment of life-threatening, survivable injuries
  - Triage
  - Evacuation
The Scene

- TECC
  - A different paradigm from street EMS
  - Priorities are slightly different – MARCH
    - M – Massive hemorrhage
    - A – Airway
    - R – Respirations
    - C – Circulation
    - H – Head injury and Hypothermia
    - E – Evacuation and Everything else
The Scene

- **Massive hemorrhage**
  - Obvious exsanguinating hemorrhage
    - Once SBP drops below 90 mm Hg, even if just for a single reading, MORTALITY DOUBLES
  - Quick application of tourniquet to extremity
  - Quick hemostatic dressing to other bleeding
The Scene

- **Airway**
  - Position patient
    - Jaw thrust, chin lift
    - Recovery position
  - Nasopharyngeal airway
  - Consider cricothyroidotomy
The Scene

- **Respiration**
  - Quick assessment of breathing
  - If potential tension pneumothorax
    - NEEDLE DECOMPRESSION
  - If large open chest wound
    - Chest seal
The Scene

- **Circulation**
  - If out of the warm zone
  - IV/IO access with limited crystalloid support if patient with SBP < 90 or ALOC not due to a TBI
The Scene

- **Hypothermia and Head**
  - Keep patient warm
    - Cover, protect from elements
  - HPMK – Hypothermia Prevention and Maintenance Kit
  - **Head**
    - Evaluate for TBI, neurologic injury
    - Maintain adequate cerebral perfusion pressure
    - Consider elevating HOB if appropriate
The Scene

- **Evacuation**
  - Rapid, under LEO cover if in Warm Zone
  - Drag patient on folding stretcher
    - Easily done by two people
  - Move patient to CCP
The Scene

- This paradigm shift in priorities informs the needed equipment
  - Stop massive hemorrhage
  - Simple airway management
  - Address chest injury
  - Evacuation
The Scene

- Medical equipment specific to AS setting
  - “Go” bag
    - Tourniquets
    - Hemostatic dressings
    - Trauma dressings
    - NPAs
    - Chest seals
    - Decompression needles
    - Triage tags
    - Triage light sticks
Med Kit

NOTE: Chem Lights Not Included
Hypothermia Prevention and Maintenance Kit
Evac
The Scene

- Casualty Collection Point
  - A position just outside the Warm Zone
  - Should be sheltered from the elements
    - Lobby, front office, foyer, etc.
  - May also serve as main Triage area
    - Site of evacuation to definitive care
CCP
CCP
Evacuation to Definitive Care
Evacuation to Definitive Care
Evacuation to Definitive Care
Summary

- Traditional pre-hospital guidelines are not written for high threat environments, thus the current threat scenario requires a new paradigm.
Summary

- Tactical Emergency Casualty Care is a set of best practice, evidence based guidelines for use by all pre-hospital providers in all high risk operational medical settings.
Summary

• Improving Survival – How do we do it?
  – Rapid application of simple appropriate stabilizing treatment at or near the site of wounding
  -PLUS-
  – Expedient evacuation to closest appropriate medical facility
  -EQUALS-
  – Maximal survival rate for those injured
“The fate of the injured often lies in the hands of the one who provides the first care to the casualty”