Mass Casualty START Triage SMART Tag System

OBJECTIVES

• 1) Define triage and mass casualty
• 2) Review the dynamics of START triage
• 3) Review use of the SMART tagging system
• 4) Demonstrate competency in the START triage method in a variety of scenarios
• 5) Demonstrate competency in the SMART triage tag and JumpStart.

MASS CASUALTY EVENTS

• There have been many recent events that have caused our emergency services to respond to mass casualty events. The mass casualty triage system is invaluable during these events.
What is a Mass Casualty Incident?

• ANY event that overwhelms the available resources.
• By available resources this could mean that we don’t have enough ambulances, enough personnel or enough hospital beds.
• It could be:
  – Natural
  – Accidental or
  – Intentional event

Is There A Set Number of Casualties To Be Considered A Mass Casualty or Disaster?

NO

– There is no set number associated with declaring a disaster.
– At times the number of critical patients might impact you more than just overall numbers.

Types of Common MCI’s

• Highway Accidents
• Earthquakes
• Air Crashes
• Major Fires
• Train Derailments
• Building Collapses
• Explosions
• Hazardous Materials Releases
• Terrorist Attacks
• Shootings
• Tornadoes
• Hurricanes
• Floods
Boston, Massachusetts 2013

- During the Boston Marathon on April 15, 2013, two pressure cooker bombs exploded at 2:49 P.M., killing 3 and injuring 264 people.
- The bombs exploded about 13 seconds apart and were located 210 yards from each other.
- They were placed on Boylston Street.

Boston Marathon Bombing
April 2013

The Blast

The blasts blew out windows on adjacent building but did not cause any structural damage.
Confusion?
Some runners continued to cross the finish line until 2:57 p.m. EDT, 7 minutes after the explosions.

On Scene
- Rescue workers and medical personnel were on hand to assist runners and bystanders rushed to help the wounded in the immediate aftermath.
- The 264 people injured were treated at 27 local hospitals.
- At least 14 people required amputation as a result of the blasts.
Scene Safety

- Many people dropped backpacks and other bags as they fled, requiring each bag to be treated as a potential bomb.
- A number of news reports stated that more bombs had been found nearby and the Boston Police Bomb Squad said they would perform a controlled explosion on the 600 block of Boylston Street, but in the end no other bombs were found.
- The Navy sent one of its bomb-disposal units to Boston to help local authorities.

Communications Limitations???

- The Massachusetts Emergency Management Agency suggested people trying to contact those in the vicinity use text messaging instead of voice calls because of crowded cell phone lines.
- Cell phone service in Boston was congested but remained in operation, despite some local media reports stating that cell service was shut down to prevent cell phones from being used as detonators.

Getting Information Out

- The American Red Cross helped concerned friends and family receive information about runners and casualties.
- The Boston Police Department also set up a helpline for people concerned about relatives or acquaintances to contact and a line for people to provide information.
**Victim Helps Prevent Other Attacks**

- Jeff, a victim who lost both legs, was adjacent to the location of one of the bombs.
- Upon recovering consciousness, he asked for pen and paper and wrote a note to the FBI, “bag, saw the guy, looked right at me”.
- He was later able to provide detailed descriptions to the authorities of a suspect who was seen placing a backpack beside him at the bombing scene two and a half minutes before it exploded, enabling the photo to be identified and circulated quickly.

**Internet Trained...It’s That Easy??**

During an initial interrogation in the hospital, Dzhokhar said Tamerlan was the mastermind.

- He said they were motivated by extremist Islamist beliefs and the wars in Iraq and Afghanistan, and that they were self-radicalized and unconnected to any outside terrorist group, but that they had learned how to build explosive devices from an online magazine of the al-Qaeda affiliate in Yemen.

**Internet Trained....**

He said that he and his brother had decided after the Boston bombings to travel to New York City to bomb Times Square.

- Dzhokhar was charged on April 22, while still in the hospital, with use of a weapon of mass destruction and malicious destruction of property resulting in death.
Injury and Treatment

- A number of the injuries were grievous, requiring intensive care, and appeared to be "war-like injuries" of mutilation, shrapnel wounds, and dismemberment.
- The trauma surgery chief at Boston Medical Center said:
  - "We see patients like this, with mangled extremities, but we don't see 16 of them at the same time, and we don't see patients from blast injuries."

Can You Hear Me????

- Doctors described removing "ball-bearing type" metallic beads a little larger than BBs, and small carpenter-type nails about 1 to 2.5 centimeters (0.4 to 1.0 inch) long.
  - Similar objects were found at the scene
- The New York Times stated that, according to doctors, because the bombs were low to the ground, the injuries mainly affected the legs and feet instead of abdomens, chests, and heads, and as a result few deaths occurred.
- Some suffered ruptured eardrums.

Systems Are Activated...

- Brigham and Women's Hospital received thirty-one victims, twenty-eight of them with significant injuries.
- Seven arrived nearly at once, starting at 3:08 p.m.
- All required emergency surgery. The first to go to surgery—a patient in shock, hemorrhaging profusely, with inadequate breathing and a near-completely severed leg—was resuscitated and on an operating table by 3:25 p.m., just thirty-five minutes after the blast.
- The rest followed, one after another, spaced by just minutes.
- Twelve patients in all would undergo surgery—mostly vascular and orthopedic procedures—before the evening was done.
Where Did They All Go?

- Massachusetts General Hospital also received 31 victims—at least four of whom required amputations.
- Boston Medical Center received 23 victims.
- Beth Isreal Deaconess Medical Center handled 21 victims.
- Boston Children’s Hospital took in 10 children ages two to twelve.
- Tufts Medical Center and St. Elizabeth’s Medical Center each treated 18 victims.

WWYD---What Would YOU Do???

If an explosion, bombing, or any event which created a large number of injured and dying people happen while you were on duty:
- What would you do to care for the injured?
- How would you sort the priority of treatment?
- How would you prioritize?

Answer: YOU would use the SMART Tag Triage System

TRIAGE

First, what is Triage?
- Triage is the process of prioritizing or sorting of sick or injured people for treatment according of the seriousness of the condition or injury.
Triage: Sorting of Patients

- You can’t commit to “one-on-one” care
- You have to be fast – 30 seconds or less per patient
- **Very limited** treatment is provided
  - Manually open airways
  - Clear airway with finger
  - Control major bleeding

Primary and Secondary Triage

- **Primary Triage**
  - 1st contact
  - Assign triage category

- **Secondary Triage**
  - Ongoing process that takes place after the patient has been moved to a **treatment/holding area** awaiting transport

Triage Categories

**RED (1)** = immediate – **CRITICAL** patient

**YELLOW (2)** = delayed -- **SERIOUS** patient that could wait until all reds have been transported

**GREEN (3)** = ambulatory/hold – **MINOR** injuries

**BLACK** = **DECEASED** (expectant)
The “START” System of Triage

Simple Triage And Rapid Treatment (START) is a triage method used by first responders to quickly classify victims during a mass casualty incident (MCI) based on the severity of their injury.

The “START” System of Triage

Simple Triage and Rapid Treatment (START)
The method was developed in 1983 by the staff members of the Newport Beach Fire Department located at Hoag Memorial Hospital in Newport Beach, CA.

– Easy to use
– Focus is on signs/symptoms
– Fast

START
4 THINGS TO THINK ABOUT....

• Ability to follow directions and walk

• Respiratory Effort

• Pulses/Perfusion

• Mental Status

“RPM’S”
The “START” System of Triage

Using START Triage, evaluate victims and assign them to one of the following four categories:

– Walking wounded/minor (GREEN)
– Delayed (YELLOW)
– Immediate (RED)
– Deceased/Expectant (BLACK)

“START” Focus On Tagging The Patients

BEGIN...
Clear out all ambulatory patients – tag Green

Rest of the patient require more triage – 3 steps: They will either be red, yellow, or black.
– Respiratory effort
– Pulses/Perfusion
– Mental Status
The “Greens”

- Once they walk toward you – designate a place for them to go
- Someone needs to tag them green
- Someone needs to stay with them and keep them informed

Something To Think About...

- Keep in mind that in a larger scale event, patients may be spread out over a large area or even on several floors or rooms in a building.
- In this type of situation, you may encounter further ambulatory patients as you progress. They are still tagged green – direct them to the area that you selected for the “greens” to stage.

START – STEP 1
Respiratory Effort

- Not Breathing – manually open their airway
  - If they start breathing – tag RED
  - If they don’t start breathing – tag BLACK
- Breathing >30 OR <10 = tag RED
- Breathing normal 10-30 = go to next step
START – STEP 2
Pulses/Perfusion

Check for Radial Pulse

– Radial pulse absent = RED
– Radial pulse present = go to next step

START – STEP 3
Mental Status

• You are assessing whether or not the person can follow a simple command.
  – “Squeeze my hand”

• Can follow a simple command = tag YELLOW
• Cannot follow simple command = tag RED

Triage Tags

• Types of triage tags
  – There are several types of tags on the market

• Advantages of using triage tag
  – Alerts providers to priorities
  – Prevents re-triage
  – Tracking system
**Patient Tracking**

- Document minimal information depending on your situation
  - **Primary Triage**
    - Very little documentation
  - **Secondary Triage**
    - More information
    - More assessment and treatment will be done

- Smart Tag has a command board to keep track of where the patient went

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**Important Info**

- Remember that anyone who can walk at the scene will be tagged **GREEN**.

- The patient could **deteriorate** or you may determine a different priority when you re-triage at the scene or the ED.
**Important Info**

- If a bus-load of "greens" is sent to you from the incident site, you can hold them on the bus in the ED parking lot until you are ready for them.

- Just make sure someone boards the bus to see what you have in case anyone needs immediate attention.

**Morgue-Tagged BLACK**

- Establish an area away from other patients
- It should be a secure area away from on-lookers, media, etc.
- Accessible for you and coroner staff
  - At scene...

**In the Treatment Area**

Patients should be separated as tagged
In the Treatment Area

- Designate someone to oversee the entire treatment area or each color depending on scale of event
- Additional treatment can be provided in this area while awaiting transport
- Secondary triage is ongoing—patients can and do deteriorate.

SMART TRIAGE TAG

- A kit versus a group of tags
- Larger, easier to see colors
- Patient condition changes, tag changes
- Larger area for documentation
- Better patient tracking system
- Decon/Hazmat capabilities

Size Matters!

- Smart tag has a larger colored area
  - Can be seen at night
  - Numbers and colors
    - For the colorblind
- Less chance for error
  - No tear of section
- Documentation area
  - Secondary triage/assessment/treatment
THE COLORS OF THE TAG

Only 1 color will show.

Documentation

Documentation for Secondary Triage
START

START is not a system for determining resource allocation.
   - The classification algorithm used in START does not depend on the number of victims or on the number of resources available to treat them
     • Some attempt has been made to prioritization of patients within a category, such as folding down a triage tag corner to signify an emergent transport need.
SUMMARY

Knowing how to use the SMART TAG will:
– Assure the appropriate people receive the appropriate care
– Prevent re-triage
– Assure your Mass Casualty scene does not become a DISASTER
– Assist with priority of treatment and transfer