Disaster Triage Train-the-Trainer
START/JUMPSTART

Finger Lakes Regional Training Center

Christopher Tarantino  MEP, CMCP, CHEC-III
FLRTC Instructor
AGENDA

• Housekeeping
  • Sign in
  • Restrooms
  • Emergency exits
  • Mobile devices
• Introductions
• Presentation
• Scenario & Skills
• Train-the-Trainer Content
• Additional Resources
Introductions

• **Christopher Tarantino, MEP CMCP CHEC-III**
  • CEO/Instructor – Epicenter Media & Training
  • Firefighter/EMT & Hazmat Tech/Rescue Specialist (Monroe County)
  • Certified Hospital Emergency Coordinator (Level III) – Instructor
  • +10yrs experience in emergency response & management
  • Experience with major disaster response, training/exercises, etc. at local, county, state and federal levels & trained in many types of triage systems (SALT, MASS, START, SMART, ESI, etc.)
  • Has taught healthcare, first responders and other public safety professionals in more than 30 different states in the U.S.

• **Student Introductions:**
  • Name
  • Agency/Organization
  • Experience with triage and/or disaster response
Objectives:

- Define a Mass Casualty Incident and the unique challenges of an MCI
- Understand the differences between day-to-day triage and triage during an MCI
- Increase the region’s healthcare providers’ awareness of disaster triage
What is the Goal of MCI Management?
GOAL:
TO SAVE THE LARGEST NUMBER OF SURVIVORS FROM A MULTIPLE CASUALTY INCIDENT
The Problem
Considerations During an MCI Response

- Supply vs. Demand
- Resource Allocation
- Coordination
- Medical Management
- Ethics
The Objective

![Casualties vs Resources](image-url)
What Could Be an MCI For You?

- Transportation Accident
- Fire
- Hospital Overloading
- Hospital Evacuation

February 2008: 390 Pile Up
January 2005: 390 Bus Accident
What Could Be an MCI For You?

- Sporting Event
- Hazmat Incident
- Loss of Power
- Severe Weather
Managing Mass Casualty Incidents

- Would any of those situations lead to shortage of personnel & equipment resources?

- Would decisions and changes need to be made in how you do business?
  - Altered Standards of Care
  - Priorities
Hospital Considerations

- Transition from the EMS patient to hospital patient
- Dealing with self presenting patients
Transportation Distribution

Patient Transport - 29 US Disasters

- On foot
- Bus Taxi
- Private car
- EMS
- Police
- Other

Patient transport - Oklahoma Bombing

- On foot
- Other
- EMS
- Private car

Quarantelli, Delivery of Emergency Services in Disasters, Assumptions and Realities

Injury prevention database, OK Dept of Health
"As bad as the scene was 20 minutes after the blast, it only got worse. Patients who could self-evacuate generally had relatively minor injuries. They arrived on foot, by taxi and by motorcycle, and they were treated as they came in."

“But then the ambulances started to arrive with the most serious patients—the burn victims…”

“By then, though, the operating rooms were completely full. They had to wait”.

Dr. Tjakra Wibawa
Sanglah Trauma Center
Incident Command System

Emergency Dept.

- Triage
  - Immediate
  - Delayed
  - Minimal
- Treatment
- Transport
  - Expectant
Disaster Triage Systems

MASS – “Move, Assess, Sort, Send”

ESI – “Emergency Severity Index”

SALT – “Sort, Assess, Lifesaving Interventions, Treatment/Transport”

START/JumpSTART
Disaster Triage Systems

MASS

ESI

SALT

START/ JumpSTART

“Simple Triage and Rapid Treatment”
Types of Triage

- **Primary**
  - On scene prior to movement or at hospital (self transports)

- **Secondary**
  - Incident dependent, probably prior to or during transport or upon arrival to hospital
Triage Protocol (START)

The Triage Sieve flow chart on the reverse should only be used for an adult. For Paediatric Triage (0 to 10 years) use the Smart Paediatric Triage Tape.

Cross the next number in each row as you find a new casualty

<table>
<thead>
<tr>
<th>PRIORITY 1</th>
<th>IMEDIATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
<tr>
<td></td>
<td>9 10 11 12 13 14</td>
</tr>
<tr>
<td></td>
<td>15 16 17 18 19 20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRIORITY 2</th>
<th>URGENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
<tr>
<td></td>
<td>9 10 11 12 13 14</td>
</tr>
<tr>
<td></td>
<td>15 16 17 18 19 20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PRIORITY 3</th>
<th>DELAYED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8</td>
</tr>
<tr>
<td></td>
<td>9 10 11 12 13 14</td>
</tr>
<tr>
<td></td>
<td>15 16 17 18 19 20</td>
</tr>
</tbody>
</table>

DEAD | 1 2 3 4 5 6 7 8 9 10 |
# Triage Coding

<table>
<thead>
<tr>
<th>Priority</th>
<th>Treatment</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Immediate</td>
<td>1</td>
<td>RED</td>
</tr>
<tr>
<td>Urgent</td>
<td>2</td>
<td>Yellow</td>
</tr>
<tr>
<td>Delayed</td>
<td>3</td>
<td>Green</td>
</tr>
<tr>
<td>Dead</td>
<td>0</td>
<td>Black</td>
</tr>
</tbody>
</table>
Primary Triage

The Scene
Primary Triage

The first attempt at balancing resources and casualties/injured
PRI OR I TY 3

- Not injured or “Walking wounded”
- Have motor, respiratory, mental function

DELAYED
Example

Patient walks over to you and has an obvious broken arm

Respirations are 22

Pulse is 124 (Radial)

He is awake, alert, and crying
Primary Triage

Determining whether there is an airway and breathing
Primary Triage

If breathing, at what rate & is it good enough?

- **WALKING**
  - **Yes** → **PRIORIT 3**
  - **No** → **RESPIRATIONS**

- **RESPIRATIONS**
  - **No** → **DEAD**
  - **Yes** → **POSITION AIRWAY**

- **POSITION AIRWAY**
  - **No** → **RESPIRATIONS**
  - **Yes** → **UNDER 30/min**

- **UNDER 30/min**
  - **No** → **PRIORIT 1**
  - **Yes** → **PRIORIT 3**
Primary Triage

They have an airway, are breathing.
Are they circulating blood sufficiently?
Circulatory Check...

If you are unable to obtain a capillary refill, check the radial pulse. If absent then control any bleeding and prioritize the patient **PRIORITY 1.**
Primary Triage

A

B

C

Mental Status
PRIORITY 1

• Opening airway, starts to breathe
• Breathing is greater than 30 or less than 10
• Delayed capillary refill time (> 2 seconds)
• Absent radial pulses
• Bleeding that needs to be controlled
• Does not follow instructions

Immediate
Example

Patient has an open head Wound, bleeding controlled

Respirations are 16

Pulse is 88 (Radial)

He is unconscious
PRIORITY 2

- Did not move out, when asked
- Airway OK
- Breathing within 11 and 29
- Capillary refill less than 2 seconds or radial pulses present
- Can follow instructions to move unaffected limb

Urgent
Example

Patient states he can’t move or feel his legs

Respirations are 26

Pulse is 110 (Radial)

He is awake and oriented
EXPECTANT/DEAD

- Still require resources
- Focus of care is comfort
- Psychologically most challenging for healthcare providers
Examples

Patient gurgles but can’t maintain an open airway and is not breathing

Weak Carotid Pulse

She is unresponsive
Secondary Triage

- Generally used when there is an extended duration event
- After initial color coding triage
- Healthcare professionals who respond to the scene or PH/Hospital response teams may be utilized to further determine who gets transported from scene first
# Secondary Triage

## Glasgow Coma Score

### Eye Opening:
- **Spontaneous**: 4
- **To Voice**: 3
- **To Pain**: 2
- **None**: 1

### Verbal Response:
- **Oriented**: 5
- **Confused**: 4
- **Inappropriate Words**: 3
- **Incomprehensible Words**: 2
- **No Response**: 1

### Motor Response:
- **Obey Commands**: 6
- **Localises**: 5
- **Pain Withdraws**: 4
- **Pain Flexion**: 3
- **Pain Extension**: 2
- **No Response**: 1

### Glasgow Coma Scale Total:

<table>
<thead>
<tr>
<th>Total Glasgow Coma Scale</th>
<th>13 - 15</th>
<th>9 - 12</th>
<th>6 - 8</th>
<th>4 - 5</th>
<th>3</th>
<th>0</th>
</tr>
</thead>
</table>

### Respiratory
- **10 - 20**: 4
- **30 or more**: 3
- **Rate**: 2
- **1 - 5**: 1
- **0**: 1

### Systolic BP
- **90 or more**: 4
- **70 - 89**: 3
- **50 - 75**: 2
- **1 - 49**: 1
- **0**: 0

### Priority
- **12**: Priorit 3
- **11**: Priorit 2
- **10 or less**: Priorit 1

### Total:
Pediatric Triage

- Children are involved in mass casualty incidents

- The over prioritizing of children will take valuable resources away from more seriously injured adults

- Triage systems based on adult physiology will not provide accurate triage
The SMART Tape™
Alert and moving all limbs. [Yes] → PRIORITY 3
[No] → DEAD

Breathing [No] → Open the Airway → Breathing [Yes] →

Respiratory Rate [< 20 or > 50] → PRIORITY 1
[20 to 50] →

Capillary refill < 2 Secs (Use child’s forehead) [No] → Pulse Rate [< 90 or > 180 /min] → PRIORITY 1
[Yes] →

PRIORITY 2

PRIORITY 2
SMART Tag Triage System
SMART Triage Pack Contents

- Dynamic Tags (20)
- Dead Tags (10)
- Pencils
- Cylume Sticks
- Patient Count Card/Protocol
- SMART Pediatric Tape
Scenario - Practical Application
Instructions

Individual patients will be shown on the screen (with signs/symptoms)

1. Follow SMART Triage methodology
2. Identify important info (not all signs/symptoms are pertinent)
3. Make initial triage decision(s)
Scenario #1

An improvised explosive device is detonated at a large outdoor sporting event. At least 50 people are confirmed injured. EMS is on scene, but patients begin to arrive at your hospital before EMS.

Triage and “Tag” the following patients.
Scenario #1

What are your immediate priorities?

Who will conduct triage? Where?

How do you expect these priorities and considerations to evolve as time progresses?
Patient #1

Apneic

Pulse-less

Missing LUE
Patient #1

Apneic

Pulse-less

Missing LUE
Patient #2

- Eviscerated bowel
- Multiple penetrating wounds to chest & head
- Brain matter exposed
- Unresponsive to tactile stimuli
Patient #2

Eviscerated bowel
Multiple penetrating wounds to chest & head
Brain matter exposed
Unresponsive to tactile stimuli
Patient #3

Abd. Tenderness and minor penetrating trauma
Ambulating
A & O x 3
RR 24
Strong radial pulse
Patient #3

Abd. Tenderness and minor penetrating trauma
Ambulating
A & O x 3
RR 24
Strong radial pulse
Patient #4

Multiple penetrating injuries, blood in ears
Responds only to pain
Airway clear
RR 20
Strong Radial pulse
Patient #4

Multiple penetrating injuries, blood in ears
Responds only to pain
Airway clear
RR 20
Strong Radial pulse
Patient #5

Extremity fractures, blood in ears
A & O x 3
RR 26
Strong radial pulse
Patient #5

Extremity fractures, blood in ears
A & O x 3
RR 26
Strong radial pulse
Patient #6

Child, screaming
Minor lacs, blood in ears
RR 30
Moving all extremities
Patient #6

Child, screaming
Minor lacs, blood in ears
RR 30
Moving all extremities
Patient #7

Amputated fingers, head injury
A & O x 3
Dizzy
RR 24
Smells like beer
Patient #7

Amputated fingers, head injury

A & O x 3

Dizzy

RR 24

Smells like beer
Patient #8

Chest pain, SOB
No trauma noted
RR 34
Shallow
Weak radial pulse
Patient #8

Chest pain, SOB
No trauma noted
RR 34
Shallow
Weak radial pulse
Patient #9

Blood in nose, mouth and ears
Not breathing
Patient #9

Blood in nose, mouth and ears
Not breathing

What would you do?
Patient #9

Blood in nose, mouth and ears
Not breathing
RR 10 with manual opening
Patient #10

Some penetrating trauma
Unresponsive
Apneic
No radial pulse
Carotid 130/min
Patient #10

Some penetrating trauma
Unresponsive
Apneic
No radial pulse
Carotid 130/min
Patient #11

Arterial bleed from leg
Responsive to pain
RR 34
No radial pulse
Carotid 130/min
Patient #11

Arterial bleed from leg
Responsive to pain
RR 34
No radial pulse
Carotid 130/min
Patient #12

Minor lacs
Crying
Ambulatory
RR 24
Patient #12

Minor Iacs
Crying
Ambulatory
RR 24
Patient #13
Deviate trachea
RR 40
Weak radial pulse
+J VD
Cyanosis
Patient #13

Deviated trachea
RR 40
Weak radial pulse
+J VD
Cyanosis
Patient #14

Open fracture of RUE

Non-ambulatory

A & O x 3

RR 26

Strong radial pulse
Patient #14

Open fracture of RUE
Non-ambulatory
A & O x 3
RR 26
Strong radial pulse
Patient #15

100% TBS burns
  (partial and full)
A & O x 2
RR 36
Coughing
Strong radial pulse
Patient #15

100% TBS burns
  (partial and full)
A & O x 2
RR 36
Coughing
Strong radial pulse
Patient #16

CP, SOB
Slurred speech
R sided weakness
A & O x 1
RR 24
Strong radial pulse
Patient #16

CP, SOB
Slurred speech
R sided weakness
A & O x 1
RR 24
Strong radial pulse
Patient #17

Avulsion RUE
Arterial bleed
A & O x 2
RR 30
“i’m thirsty”
Patient #17

Avulsion RUE
Arterial bleed
A & O x 2
RR 30
“I’m thirsty”
Patient #18

Open fractures BLE
Blood in ears
A & O x 3
RR 28
Strong radial pulse
Patient #18

Open fractures BLE
Blood in ears
A & O x 3
RR 28
Strong radial pulse
Patient #19

Hysterical, screaming
Blood in ears
A & O x 3
RR 36
Strong radial pulse
Patient #19

Hysterical, screaming
Blood in ears
A & O x 3
RR 36
Strong radial pulse
Patient #20

Child
Cyanotic from nipple line up
Apneic
Patient #20

Child
Cyanotic from nipple line up
Apneic
Questions???
Train-the-Trainer

• **Set-up**
  • Appropriate classroom / lecture hall

• **Materials & resources:**
  • PowerPoint slides & slide advancer
  • Patient cards
  • SMART Triage system, triage protocol cards
  • Other peripherals & learning aids

• **Know your students:**
  • Background experience
  • Role/responsibility for triage
Train-the-Trainer

- Content delivery
  - Knowledge / Skills & Abilities / Attitudes
  - Leave enough time for logistics, housekeeping, activities, etc. (plan & practice!)

- Training / Exercise planning:
  - Don’t just “check the box”
  - Start small & grow into larger, more complex training/exercises

- Wrap-up:
  - Exams? Evaluations?
  - Other requirements
  - Certificates
  - Classroom teardown & other logistics
Remember the goal of Disaster Triage training

- Increase familiarity/proficiency of the START and Jump START triage methodologies
- Increase familiarity with the SMART Tag Triage System
- Train with a standardized methodology and system
- Grow your organization’s triage & mass casualty response competency
Questions???
Thank You!

**Epicenter Media & Training**
Instructor: Christopher Tarantino, MEP CMCP CHEC-III
c.tarantino@epimetra.com

**Finger Lakes Region Training Center**
Anne D’Angelo: anne_dangelo@urmc.rochester.edu
Eileen Spezio: eileen_spezio@urmc.rochester.edu
585-758-7640 | wrhepc.urmc.edu
ADDITIONAL EDUCATION OPPORTUNITIES

Visit Our Website at:
WRHEPC.URMC.EDU

Disaster Triage Training Resources
• wrhepc.urmc.edu
  • Preparedness & Response Tools/Resources
  • Disaster Triage