Mass Casualty Incident (MCI) Response - Basic
LEVEL 5 Incident Management Team

Kentucky Board of Emergency Medical Services
DISASTER PREPAREDNESS / MCI TRAINING PROGRAM
WHAT IS A MASS CASUALTY INCIDENT (MCI)?

A mass casualty is defined as any incident in which emergency response resources, such as personnel and equipment, are overwhelmed by the quantity and severity of patients.
TYPES OF MASS CASUALTY INCIDENTS:

- Aircraft crash
- Natural disaster
- Terrorist attack
- Highway accidents involving mass transit or multiple vehicles
- Pandemic Outbreak
- Mass shooting
- Hazardous materials release
TYPES OF MCI SPECIAL RESPONSE:

- Building / Structural Collapse (USAR)
- Hazardous Materials (HAZMAT)
- Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE)
- Aircraft Rescue (ARFF)
- Hurricane / Flooding (Swiftwater Rescue)
Historical Mass Casualty Incidents:

- Columbine High School Massacre in Littleton, CO (1999)
- Sarin gas attack on subway by Aum Shinrikyo cult in Tokyo, Japan (1995)
**FACT:**

*The majority of victims involved in a natural or man-made disaster will have minor injuries.*

The sheer number of patients involved in an MCI can:

- Overwhelm the emergency response system
- Impair identification of patients with critical injuries
- Interfere with treatment and transport of priority patients
Time is important!!!

The critical trauma patient has only a short period from the time of injury to reach definitive surgical care, or the odds of a successful outcome deteriorate drastically!

So Move Em’ Out!!!
Key Points about MCI Response

- A mass casualty incident is one of the most chaotic and stressful situations an emergency responder may face during the course of their career....

- Noise, smoke, hysteria, and the screams of the injured and dying are typical for these types of incidents. Develop a strong mental attitude because your decisions may be the difference between survival and death for a significant number of people, including your fellow responders.
Unit #1 Introduction to Mass Casualty Incidents

Training Essentials:

✓ NIMS ICS 100, 200, 700, 800 courses for non-supervisory personnel – online/self study

✓ NIMS ICS 300 & 400 for intermediate and upper level command level personnel – (36) hours

✓ HAZMAT Awareness – (8) hours

✓ MCI response & management training – (2) hours required for recertification in the commonwealth
Mass Casualty Incident (MCI) Response - Basic

LEVEL 5 Incident Management Team

S.T.A.R.T. TRIAGE METHODOLOGY

MODULE #2
PRINCIPLES OF MCI TRIAGE:

- Do the greatest good for the greatest number of people
- Resources must be used wisely
- Treat and transport as many as possible, patients who have a chance of survival
- Use agreed upon criteria to triage patients appropriately
KEY POINTS ABOUT MCI TRIAGE

- All victims must have equal importance at the time of primary triage.

- No individual or patient group can receive special consideration other than what is dictated by their physiology and condition at the time they are triaged.

THIS INCLUDES CHILDREN!!!
THE START TRIAGE SYSTEM

Simple
Triage
And
Rapid
Treatment
THE S.T.A.R.T. TRIAGE SYSTEM

- Triage = Sorting
- This is **NOT** a treatment role
- Only 2 interventions are allowed:
  - OPEN AND CLEAR THE AIRWAY
  - APPLY DIRECT PRESSURE TO EXTERNAL HEMORRHAGE
- You have 30 seconds per patient!
The S.T.A.R.T. and JumpSTART methods are the only triage system endorsed by the Kentucky Board of Emergency Medical Services, and is recommended for operational continuity purposes...
WHY USE S.T.A.R.T / JumpSTART TRIAGE?

✓ FAST
✓ SIMPLE
✓ EASY TO USE
✓ EASY TO REMEMBER
✓ STANDARDIZED
✓ PRIORITIZES PATIENTS WITH LIFE THREATENING INJURIES
✓ IDENTIFIES THOSE THAT HAVE THE BEST CHANCE OF SURVIVAL
TRIAGE PRIORITIES AND IDENTIFIERS:

**GREEN**
MINOR = WALKING WOUNDED

**YELLOW**
DELAYED = STABLE BUT SERIOUS

**RED**
IMMEDIATE = CRITICAL

**BLACK**
DECEASED / EXPECTANT = DEAD OR NOT LIKELY TO SURVIVE
GREEN:
- MINOR INJURIES THAT CAN WAIT FOR LONGER PERIODS OF TIME FOR TREATMENT
- WALKING WOUNDED / PSYCH CASUALTIES
TRIAGE CATEGORIES:

YELLOW:

- POTENTIALLY SERIOUS INJURIES, BUT ARE STABLE ENOUGH TO WAIT A SHORT WHILE FOR MEDICAL TREATMENT.
- STATUS NOT LIKELY TO DETERIORATE OVER SEVERAL HOURS
Unit #2 S.T.A.R.T. Triage

TRIAGE CATEGORIES:

**RED:**
- LIFE-THREATENING / CRITICAL INJURIES REQUIRING RAPID MEDICAL INTERVENTION
- RECEIVES FIRST PRIORITY FOR TREATMENT AND TRANSPORT.
TRIAGE CATEGORIES:

BLACK:

- DEAD OR EXPECTANT – PATIENT HAS NO SIGNS OF LIFE, WEAK LIFE SIGNS, OR THEIR INJURIES ARE INCOMPATIBLE WITH SURVIVAL IN AUSTERE CONDITIONS. MAY HAVE TO BE REMOVED TO ACCESS PATIENTS WHO ARE SALVAGEABLE.

- DO NOT INITIATE CPR!
S.T.A.R.T. TRIAGE EXCLUSION CRITERIA

R - 30
P - 2
M - Can Do
Begin where you stand and move on to the next patient in an orderly and systematic manner.
ALL WALKING WOUNDED

MINOR

RE-POSITION AIRWAY

NO RESPIRATIONS

DECEASED

RESPIRATIONS

IMMEDIATE

RESPIRATIONS

NONE

PRESENT

< 30 RESP/MIN

> 30 RESP/MIN

PERFUSION

RADIAL PULSE (−) OR CAPILLARY REFILL

> 2

CONTROL BLEEDING

IMMEDIATE

IMMEDIATE

< 2

MENTAL STATUS

CAN’T FOLLOW COMMANDS

IMMEDIATE

FOLLOWS COMMANDS

DELAYED
Unit #2 S.T.A.R.T. Triage

JumpSTART Pediatric Triage

Flowchart diagram showing the triage process for pediatric patients. The process includes the following steps:

1. Ambulatory?
   - Yes: Minor
   - No: Breathing?

2. Breathing?
   - No: Re-position airway
     - Yes: Palpable pulse?
       - Yes: Immediate
       - No: Deceased
     - No: 5 rescue breaths
       - Yes: Immediate
       - No: Deceased

3. Palpable pulse?
   - Yes: Immediate
   - No: Respiratory rate

4. Respiratory rate
   - <15 to >45 breaths / min: Immediate
   - 15 to 45 breaths / min: Palpable pulse
     - No: Immediate
     - Yes: AVPU scale

5. AVPU scale
   - "P", inappropriate posturing, or "U": Immediate
   - "A", "V" or "P" appropriate: Delayed
“All patients that can walk should get up and go over to (designate area)”

All ambulatory patients are **INITIALLY** categorized as:

- **MINOR**

“**WALKING WOUNDED**”
Those that are able to walk are considered to have an adequately compensated physiology regardless of the nature of their illness or injury…
S.T.A.R.T. Triage

Who’s Left?

- IMMEDIATE
- DELAYED
- DECEASED

Start your RPM exclusion criteria:

- R=Respiratory
- P=Perfusion
- M=Mental Status
Unit #2 S.T.A.R.T. Triage

Step #1 - Respirations

If Respirations are Absent, Reposition the Airway*.

If Absent = DECEASED

If Spontaneous respirations return = IMMEDIATE

If Respirations >30 IMMEDIATE

If Respirations <30, proceed to step #2

*Note: C-Spine protocols are not observed during initial triage.
Step #2-Perfusion

Cap Refill >2 Seconds = IMMEDIATE

Cap Refill <2 Seconds, go to step #3

Or

No Radial Pulse = DELAYED

No Palpable Pulse = IMMEDIATE

(+) Pulse, proceed to step #3
Step #3 - Mental Status

Assess Mental Status using AVPU –

For non-ambulatory patients only:

If Able to Obey Simple Commands = DELAYED

If Unable to Obey Simple Commands = IMMEDIATE
Remember…

The Only 2 Treatments Allowed:

- Re-position Airway
- Direct Pressure to External Hemorrhage
S.T.A.R.T. Triage

Resp-30
Perfusion-2
Mental Status-Can Do!
Triage Assessment Activity

- A commercial aircraft has crash landed onto a crowded highway during rush hour. First responders have been dispatched to the scene.

- You and your partner arrive and report to the EMS branch leader. There are a large number of casualties reported and you are assigned to triage victims in the area.
What's The Call?

A 32 year old man is found lying in the grass -

R = Respirations @ 10 per minute

P = (+) Radial pulse

M = Groans to painful stimuli, but is not awake.

IMMEDIATE
What’s The Call?

A 42 year old female is spurting blood from the neck -

R = >30 per minute

P = (+) Radial pulse

M = Obeys simple commands

IMMEDIATE
What’s The Call?

A 21 year old female lies among the wreckage -

R = 40

P = Absent radial pulse, (+) carotid pulse

M = Withdraws from painful stimulus

IMMEDIATE
What’s The Call?

A young woman is sitting by burning wreckage screaming -

R = 28

P = (+) Radial Pulse

M = Focuses and reaches for you and asks you to help her. She has a partial amputation of the foot without active bleeding.

DELAYED
What’s The Call?

An adult male lies trapped inside the aircraft -

P = None detected

R = None/No spontaneous respirations

*No respirations with jaw thrust

M = Unresponsive

DECEASED
What’s The Call?

An older man found sitting near the roadway -

R = 28

P = Good distal pulse

M = Groggy, will slowly follow commands but won’t get up and walk.

DELAYED
What’s The Call?

An adult male lies on the ground -

R = 20

P = Good distal pulse

M = Obeys commands but cries that he can’t move his legs

DELAYED
What’s The Call?

A young woman has a large head wound with brain matter showing -

R=Absent
P=Absent
M=Unconscious

DECEASED
What’s The Call?

An adult kneels at the side of the road, shaking his head. He says he’s too dizzy to walk.

R=20

P=Cap Refill < 2 sec

M=Obeys Commands

DELAYED
What’s The Call?

30 year old male with shrapnel in chest, short of breath, and says he can’t walk -

R = 36

P = Radial pulse present, cap refill < 2 sec

M = Confused

IMMEDIATE
What’s The Call?

21 year old male with partial and full thickness burns to the arms and abdomen -

R = 22

P = Radial pulse present, cap refill < 2 sec

M = Ambulatory

MINOR
What’s The Call?

28 year old with foreign body protruding from upper thigh -

R=28
P=Present
M=Follow commands

DELAYED
What’s The Call?

56 year old male, kneeling on the sidewalk -

R=24

P=Capillary refill < 2 seconds

M=Dazed, not following commands well

IMMEDIATE
Triage is a dynamic process and should be done more than once…
SECONDARY TRIAGE

- A secondary assessment should be performed shortly after patient has been moved into an appropriate triage area.

- Some patients may initially present as **MINOR**

- A patient’s condition may deteriorate rapidly from traumatic injuries or exposure to hazardous materials.

- Children are at greater risk because their physiology will compensate for longer periods before succumbing to shock.
Unit #2 S.T.A.R.T. Triage

CHANGING PATIENT TRIAGE PRIORITY

✓ Leave the original tag attached to the patient –

✓ Apply a new triage tag and write an easily visible “2” to indicate a priority change -

✓ Additional changes in triage priority should be documented in the same fashion, and numbered sequentially.
PRINCIPLES OF MCI SCENE MANAGEMENT:

Once an incident has been declared an MCI by either the first responding unit, dispatch, or command level responder, events will be put into motion requiring a systematic and organized approach...
SCENE MANAGEMENT – INITIAL ACTIONS:

✓ Establish Incident Command
✓ Perform rapid size-up
✓ Insure scene safety
✓ Determine number of patients
✓ Call for additional resources
SCENE MANAGEMENT CONSIDERATIONS:

What are we going to need to handle this?

- Who’s in charge? Fire, EMS, HAZMAT, Police, EMA, FBI, NTSB?

- Available Resources -

- Manpower -

- Multi-Agency Response / Interoperability

- Resource Allocation -
Emergency Support Functions (ESF) provide the structure for coordinating interagency support for response to an incident. They are mechanisms for grouping functions most frequently used to provide government support for both declared disasters and emergencies including mass casualty incidents.
FEMA Emergency Support Functions for MCI

ESF 1 - Transportation
ESF 4 - Firefighting
ESF 6 - Mass Care
ESF 8 - Public Health and Medical Services
ESF 7 - Resource Support
ESF 9 - Search and Rescue
ESF 10 - Hazardous Materials
ESF 13 – Public Safety and Security
ESF 15 - Public Information
KY ESF -8 KEY PLAYERS

Kentucky Board of Emergency Medical Services

Kentucky Community Crisis Board

Ky. Department of Public Health (ESF-8)
KY ESF -8 KEY PLAYERS

Kentucky Board of Emergency Medical Services:

Provides personnel, as applicable, to coordinate emergency medical services and assists in securing ground and air EMS assets to support the medical evacuation and transportation of injured persons. Organizes and coordinates interstate EMS personnel and equipment for mobilization and deployment.
KY ESF -8 KEY PLAYERS

Kentucky Community Crisis Board

Coordinates the activation and deployment of Crisis Intervention Teams to provide assessment and behavioral health services, if indicated, to disaster casualties, emergency workers, and others as required
KY ESF -8 KEY PLAYERS

Ky. Department of Public Health (ESF-8)

Serves as the coordinating agency for ESF-8; Provides personnel to coordinate public health and emergency medical services. Maintains communications with state agencies and local jurisdictions regarding the status of response and recovery efforts and to determine if a Public Health Emergency Declaration is needed.
PRE-DETERMINED INITIAL RESPONSE:

Example Only -

MCI CATEGORY A: (5-10 victims)

(7) Transport Units, (1) EMS Operations Supervisor
(2) Fire/Rescue Engine Companies

Note: The 2 closest hospitals to the incident and level 1 trauma center will be placed on standby by communications
PRE-DETERMINED INITIAL RESPONSE:

MCI CATEGORY B: (11-20 victims)

(12) Transport Units, (2) EMS Operations Supervisors

(3) Fire/Rescue Engine Companies

(1) MCI Support Asset (MCI bus or trailer)

Note: The 3 closest hospitals to the incident and level 1 trauma center will be placed on standby by 911 communications
PRE-DETERMINED INITIAL RESPONSE:

MCI CATEGORY C: (21-50 victims)

(25) Transport Units, (3) EMS Operations Supervisors and MCI Support Asset (MCI bus or trailer)

(4) Fire/Rescue Engine Companies

(1) School bus or mass transit vehicle

(2) Command Level Staff

EOC notification recommended

Establishment of Alternative Community Treatment Site (ESF-8)

Note: The 4 closest hospitals to the incident and level 1 trauma center will be placed on standby by 911 communications
PRE-DETERMINED INITIAL RESPONSE:

EMS Specialized Unit Composition

- **Ambulance Strike Team (AST):** (5) of the same type of unit and resource leader

- **Medical Task Force (MTF):** May be comprised of different units for a specific mission. Example: (2)ALS Transport units, (2) BLS Transport units, (1) Fire/Rescue Engine Company, task force resource leader, and MCI trailer.
Special Hazards / Variable Threat Considerations:

En Route to Scene -

- Request additional resources. Examples: HAZMAT team, Fire/Rescue Companies, Decontamination resources, Public Health, Law Enforcement, MCI Trailers, Mobile Command Post

- Observe DOT Emergency Response Guidebook (ERG) recommendations

- Approach cautiously from uphill/upwind if possible. Establish a safe staging area early. Do not use radios/cell phones in close proximity to suspicious devices (within 500ft)
Special Hazards / Variable Threat Considerations:

En Route to Scene -

- Park a safe distance from an identified hazard or area that could endanger personnel or equipment. Use binoculars, look for unusual sights, sounds and be prepared to relocate if odor/cloud/casualties are noted. Consider the patient’s reported signs, symptoms and mechanism of injury as indicators that special hazards are present.

- Consider secondary IED devices, and request law enforcement to sweep the area for secondary devices.
Special Hazards / Variable Threat Considerations:

On Scene -

- Establish Command, and be prepared to establish a Unified Command with all agencies having jurisdiction and assess the security of the command post.

- Initiate an initial scene size up and hazard risk assessment. Continually size up the incident, evaluate hazards and risks. Scene safety is everyone’s job!

- Coordinate with Law Enforcement to establish an incident perimeter – Secure the scene, deny entry, and assist Fire/Rescue and HAZMAT with establishment of control zones (Hot, Warm, Cold). Request Law Enforcement to assist with perimeter security.
Special Hazards / Variable Threat Considerations:

- Direct victims using bullhorns/PA systems to decon area.

- Ensure appropriate level of PPE is used.

- If TOXMED antidote kit is used, this information must be recorded on the triage tag along with pharmacological intervention used.

- Notify communications of HAZMAT hazard and degree of decontamination completed; Transport decontaminated victims only and observe patient isolation measures.
Special Hazards / Variable Threat Considerations:

ACTIVE SHOOTER (AS/MCI)

- *Old* conventional wisdom – EMS providers do not move in to care for patients until threat has been completely neutralized.

- *New* best practice – EMS providers form a unit called a Rescue Task Force along with armed law enforcement personnel to enter “hot zone” for triage and evacuation of patients to casualty collection points for additional trauma care and transport.

- Utilize Care Under Fire (CUF) tactics as outlined by NAEMT course Tactical Combat Casualty Care (TCCC)
MCI Incident Command: CT3S

The Level 5 EMS Incident Management Team is comprised of (5) essential command positions utilizing the CT3S system. Non-EMS responders may be required to take on EMS IMT responsibilities based on personnel availability on scene.
Level 5 EMS Incident Management Team

- Type 5: Local Village and Township Level – Incident management starts as the smallest unit and escalates according to the complexity of the emergency.

- IMTs are "typed" according to the complexity of incidents they are capable of managing and are part of an incident command system.

- To manage the operational complexities and management issues related to an MCI, an EMS Incident Management Team will provide the command and control infrastructure that is required to navigate the event.
Level 5 EMS Incident Management Team

✓ Incident Commander/EMS Branch Leader
✓ Triage Officer
✓ Treatment Officer
✓ Transport Officer
✓ Staging Officer

IC/EMS BRANCH LEADER

TRIAGE OFFICER
TREATMENT OFFICER
TRANSPORT OFFICER
STAGING OFFICER
Incident Commander: IC CP

The first arriving EMS or Fire-Rescue unit at a confirmed mass-casualty incident will assume command of the scene if incident command has not already been established. Command will be transferred to the appropriate supervisory or command level personnel upon their arrival on scene. Designate a **COMMAND POST (CP)** in a safe, visible and fixed location, uphill and upwind of the scene if the incident involves a hazardous materials release (HAZMAT), chemical, biological, radiological, nuclear, or explosive (CBRNE), or other weapon of mass destruction (WMD).
Incident Commander

- The Incident Commander's responsibility is the overall management of the incident. On all incidents the command activity is carried out by a single Incident Commander.

- Assigns personnel to incident command and IMT positions

- Makes appropriate notifications to local EM manager, state EOC, ESF-8, etc. when additional support is needed
Incident Commander (IC)

- Advises public safety communications of the exact number of victims and their triage priority once information has been received from the triage officer.

- Determine amount and type of additional resources and supplies needed to adequately manage the remainder of the incident.

- Request law enforcement for scene security, traffic control and access control for emergency vehicles.
EMS Branch Leader

- May assume role as EMS Branch Leader as part of larger unified command structure for incidents where other agencies have assumed IC responsibilities i.e. fire, law enforcement, emergency management, etc.
Transfer of Command

- Moves the responsibility for incident command from one Incident Commander to another

- Must include a transfer of command briefing
  - Oral
  - Written
  - Both oral and written
Triage Officer -

- Supervises triage operations

- Designates **IMMEDIATE**, **DELAYED**, **MINOR**, and **MORGUE** triage areas

- Coordinates movement of patients from triage area to treatment areas
Triage Officer –

 ✓ Establish a Triage & Treatment Area in a safe and secure area with easy access. Areas for IMMEDIATE (PRIORITY 1), DELAYED (PRIORITY 2), MINOR (PRIORITY 3), MORGUE (NO PRIORITY) will need to be designated RAPIDLY. Traffic cones, barricade tape, or colored tarps can be utilized to mark triage & treatment areas.

 ✓ Assign personnel to triage non-ambulatory patients first. Ambulatory patients or “walking wounded” will be initially prioritized as MINOR. Use bullhorn/PA system to direct ambulatory patients to a specific location or to a decon station if HAZMAT / CBRNE agent is involved.
Triage Officer –

- Direct personnel to triage and tag patients where they lay if scene safety has been verified.

- Assign Litter Bearer Teams to assist with evacuation of patients from the incident site to the triage/treatment area. Coordinate movement with the Transport and Staging Officer. Long spine boards, SKEDs, and stretchers will be utilized to move patients on scene. Alternative methods of moving patients can be utilized in place of more conventional equipment if needed. One or two person carry techniques are acceptable in emergency situations where patient moving equipment is not available or has been depleted.
Patients that are triaged as Deceased / Expectant should be left where they are found until all live patients on scene have been triaged. Deceased patients can be moved to a designated area away from live patients and secured by law enforcement until custody is transferred to the medical examiner or coroner’s office. If terrorism is suspected, deceased patients WILL NOT be moved in order to preserve evidence.

- Report to Incident Commander / EMS Branch Leader the number and triage category of all patients.

- Verify that all areas of the scene have been checked for patients, and that all patients have received primary and secondary triage.
Triage Officer –

- Once initial triage is completed and all patients have been prioritized, contact incident command or medical branch officer for re-assignment.

- If patients have been exposed to HAZMAT / CBRNE, document the agent (if known) on the triage tag, as well as any antidote interventions that have been administered.
Treatment Officer –

- ALS provider (if available)

- Supervises treatment area; ensures life saving interventions are being provided to patients based on triage priority.
  ***Triage area can also serve as treatment area depending on personnel and resources.

- Ensures secondary triage has been performed on all patients prior to transport
Treatment Officer –

- Coordinate the movement of victims into the Triage / Treatment Area with the Triage Officer.

- Request additional medical supplies as necessary and coordinate location of the supply cache and MCI trailer with the EMS Branch Leader.

- If the incident size warrants it, designate a Treatment Area Manager for each triage category. (Immediate, Delayed, Minor) Consider Level 4 IMT
Treatment Officer –

- Advise Transport Officer of patients requiring immediate transportation.
- Account for all patients treated on the treatment log.
- Advise Incident Commander, EMS Branch Leader, or Triage Officer of any changes in the patient count.
Treatment Officer –

- Document on triage tag if patients are contaminated and any antidotes administered in the treatment area.

- If the incident is due to a known or suspected HAZMAT / CBRNE event, coordinate Fire-Rescue and other EMS IMT personnel to insure decontamination, TOXMED administration, and treatment of victims.
Transport Officer –

- Directs movement of patients to loading location(s).
- Determines patient transport destination based on triage priority.
- Responsible for obtaining hospital bed status, patient tracking, and requesting additional air or ground transport units.
Transport Officer –

- Obtain a Documentation Aide to record the triage tag numbers, patient name, age, sex, transporting unit, and hospital destination for each patient on the destination log.

- Coordinates with the Staging Officer to establish a centralized patient loading zone accessible to the triage / treatment area with clear points of entry and egress.

- Consult with the Triage Officer on the number and priority of patients.
Transport Officer –

- Directs the loading of patients by priority to transport units

- Assign a least (2) immediate patients to each unit and ensure adequate transport crew. Patients with different triage priorities can be combined if multiple patients are assigned to a unit, and adequate space has been made to accommodate critical patients first.

- Assign a hospital destination to each transporting unit and provide verbal and/or written transport instructions
Transport Officer –

If the incident is a known or suspected HAZMAT/CBRNE event, transport decontaminated patients only. Coordinate with Fire/Rescue or HAZMAT personnel on scene to determine that a decon station is operational on scene, and that patients are being decontaminated prior to loading.

When transporting patients from a HAZMAT/CBRNE event, insure crews have donned level C protective ensemble at a minimum, and that patient isolation measures have been implemented.
Transport Officer –

- Communications will contact area hospitals for patient receiving and bed capacity. Document this information on the destination log.

- When units are prepared to transport, advise communications and supply them with the following information:
  - Transporting unit
  - The number of patients en route to the facility
  - Triage priority, i.e. number of **IMMEDIATE**, **DELAYED**, and **MINOR** patients
Transport Officer –

- Patients should be assigned to hospitals on a rotating basis

- Notify the hospital(s) & online medical control of HAZMAT/WMD exposure and any antidotes administered
PATIENT TRANSPORT FLOW RATE

- Transport Flow Rate Estimate: Turn around time required for an ambulance to transport a patient to the hospital and return to the scene.

- Number of patients vs. available resource units

- Initiative and Force Ratio are critical factors
PATIENT TRANSPORT FLOW RATE

ACTIVITY:

You are the transport officer at the scene of an MCI. You have been tasked with moving 30 patients to a receiving facility 40 minutes away. You are loading (2) patients per ambulance. How many patients can be moved per hour?

You have (5) ambulances available

\[(\text{ambulances available}) \times (\text{patients carried in ambulance}) \times (\frac{60 \text{ minutes}}{\text{hour}} \pm \text{by the average time taken for a round trip}) = \text{Number of patients that can be transported in 1 hour}\]
ACTIVITY:

You are the transport officer at the scene of an MCI. You have been tasked with moving 30 patients to a receiving facility 40 minutes away. You are loading (2) patients per ambulance. How many patients can be moved per hour?

\[(5) \times (2) \times (60 \text{ minutes/hour} \text{ divided by 80 minutes}) = 7.5 \text{ patients transported in 1 hour}\]
Patient Tracking

- Writing intensive
- Utilization of a scribe is highly recommended
- When information on hospital bed status is received from communications, the number of beds must be accurately recorded and deducted from the log each time a patient is transported to the facility.
- Document patient demographics, destination, and triage category
KY ePatient Tracking System

- Patient Tracking module developed by ImageTrend
- Partnership between KBEMS and Kentucky Dept. for Public Health’s Hospital Preparedness Program (KDPH HPP)
- Completely Internet browser based, no proprietary hardware to buy
- Configured as an open platform; if you have any access you have full access
KY ePatient Tracking System

- Also available to hospital staff
- Training videos will be posted to KBEMS website
Staging Officer –

- Maintain Staging Area established by the Incident Commander / Medical Branch Officer or establish a location and notify the Transport Officer and Dispatch on where to direct incoming units

- Establish a visible location in the Staging Area

- Maintain a Unit Staging Log
Staging Officer –

- Ensure that personnel stay with their vehicle unless otherwise directed
- Organize arriving units, and keep same series units together. If personnel leave their vehicle, keep the keys with each vehicle
- Coordinate with the Transport Officer what units are needed and direct units to the patient loading area
Staging Officer –

✓ Maintain an adequate number of ALS/BLS transport units in the staging area. If more units are needed in reserve, contact the Incident Commander / EMS Branch Leader or communications to request additional reserve units.

✓ Coordinate with Fire-Rescue personnel to establish a landing zone in a clear 150’ X 150’ area in accordance with state air medical guidelines.
MCI Scene Stations:

- Immediate Area
- Delayed Area
- Minor Area
- Morgue Area
- Command Post
MAJOR CONSIDERATIONS:

- Set up close to the incident so the IC can have an unrestricted view of the scene, but far enough away that the CP location does not interfere with on-going operations.

- The CP can be anything from a tent to a command vehicle depending on resources and jurisdictional preference.
MINOR AREA
PRIORITY LEVEL 3:

MAJOR CONSIDERATIONS:

- “Walking wounded”
- Patients with Non-life threatening injuries
- Can be transported by ambulance with immediate category patients if space permits, or evacuated by public transportation.
MAJOR CONSIDERATIONS:

- Patients with serious injuries that DO NOT require immediate transport.
- Secondary triage assessment early
- Rule-outs
IMMEADIATE AREA
PRIORITY LEVEL 1:

MAJOR CONSIDERATIONS:

- Patients with life-threatening injuries that require immediate critical care interventions & transport to an appropriate emergency department.
- Receives priority evacuation from the scene.
- Needs to be positioned near egress point and supply cache.
MORGUE STATION
NO PRIORITY LEVEL

MAJOR CONSIDERATIONS:

- Set up on the far side of the incident away from public view. Use tents or cover victims if possible.
- Secondary triage should be performed on patients who have not expired for an extended period.
- Consider refrigerated transport vehicles for larger scale incidents.
- If the MCI is a crime scene, i.e. active shooter, WMD attack, etc. DO NOT move deceased patients to the morgue station unless it is necessary to access viable patients.
Logistics – IC Considerations

- Assure that the necessary medical supplies and equipment is available on scene.

- Ensure support vehicles have been requested and on scene, i.e. MCI trailer(s), Mobile Command Post, etc.

- Consult with the Treatment Officer on the need for additional medical supplies in the Treatment Area, and establish a supply cache on scene. The supply cache needs to be positioned near the **IMMEDIATE** triage & treatment area for easy access.
LOGISTICAL CONSIDERATIONS:

✓ Patient transport
✓ Patient movement
✓ Area designations
✓ Supplies
✓ Communications

MORE THAN YOU NEED IS BETTER THAN NOT ENOUGH!!!
PATIENT EVACUATION:

✓ The number of patients involved in the mass casualty incident will directly determine how many transport units will be needed.

✓ All IMMEDIATE and DELAYED priority patients will need to be transported by ALS ambulance if available.

✓ Alternative means of transportation can be utilized for patients in the MINOR category. This includes public transportation, POVs, police cars, school buses, etc.

✓ Air medical can be utilized for critically injured patients if air operations can be implemented safely.
SUPPLIES:

 ✓ O2, C-collars, LSB(s), stretchers, ALS equipment, and other supplies are essential to MCI operations.

 ✓ If jurisdictional resources allow, have reserve equipment set aside and specifically allocated for MCI response.

 ✓ Mutual aid agencies can be utilized for additional equipment, and should be requested during the initial response, and not after supplies have already been depleted.
COMMUNICATIONS:

✓ Mass casualty incidents will more than likely **ALWAYS** call for a multi-agency response.

✓ On-scene communications are a major factor in the successful management of an MCI

✓ If possible, move all communications to a designated operations channel specifically for the incident.
ALTERNATIVE COMMUNITY TREATMENT SITES:

- Mass casualty incidents have the potential to overwhelm area hospitals due to the sheer number of patients arriving at the emergency department simultaneously.

- Priority patients who arrive by ambulance require rapid and definitive treatment.

- Patients with minor injuries only can interfere with care for critical patients, and deplete hospital manpower and resources.
ALTERNATIVE COMMUNITY TREATMENT SITES:

- Patients that have been triaged and fall into the **MINOR** category can be transported to a pre-designated site other than the hospital for secondary assessment, treatment, and discharge.

- An alternative community site can be set up at a school, fire station, university, community health department, or church.

- Medical Reserve Corps (MRC), American Red Cross (ARC), or area firefighters can be utilized to care for these patients.
ALTERNATIVE COMMUNITY TREATMENT SITES:

- Many **MINOR** priority patients will have superficial injuries requiring basic first aid.

- Many of these patients will be “psychological casualties” and have no detectable physical injuries.

- Clergy and mental health professionals trained in disaster psychology such as Kentucky Community Crisis Response Team (KCCRT) can be called in to assist with these patients.

- Have a pre-established documentation, discharge, and after-care mechanism to release patients directly from the Alternative Community Treatment Site.
TRIAGE PRACTICAL

- Locate patients throughout the facility and triage according to RPM exclusion criteria

- Return patients to triage area and place them on the appropriate tarp

- Make sure the area has been thoroughly searched, and all patients have been evacuated

- Discuss triage decisions with instructor
QUESTIONS?
Acknowledgments:

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