

LORAIN COUNTY FIRE DEPARTMENT

Standard Operating Guidelines

Rescue – Mass Casualty Incidents	SOG: 007 Effective Date: February 2, 2006 Supersedes: January 1, 2002 Approved: _____ President, Lorain County Fire Chiefs Association
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1.0 PURPOSE

1.1 Fire/EMS/rescue agencies respond to a wide range of emergency incidents. Although the possibility of a Mass Casualty Incident (MCI) occurring in Lorain County may seem remote, it will occur. As an MCI incident unfolds, additional organizational support will be required. The Incident Command System (ICS) provides for the effective management of personnel and resources and provides for their accountability, safety, and welfare. It also establishes procedures for the implementation of all ICS components required for a Mass Casualty Incident.

2.0 DIVISIONS AFFECTED

- 2.1 All public and private fire, rescue, and EMS personnel.
- 2.2 Lorain County Emergency Management Agency
- 2.3 Lorain County 9-1-1 Agency
- 2.4 Hospitals

3.0 RESPONSIBILITY

- 3.1 All officers/supervisors are responsible to comply with and ensure that personnel under their command are adequately trained, fully understand, and comply with this guideline.
- 3.2 All personnel have the responsibility to learn and follow this guideline.
- 3.3 The *Incident Command System* must be initiated by the first-arriving resource. ICS allows the *Incident Commander* to escalate and expand the command organization as needed. Only the positions needed should be implemented, based on the number of tasks to be performed or availability of resources.

- 3.4 The responsibility of the first-arriving fire unit will include the functions of *Command*. The *Incident Commander* is responsible for the development of an action plan that takes into account the EMS aspects of the incident and provide for:
- A. SAFETY hazard assessment (existing or potential) and/or life-threatening situations.
 - B. SURVEY the scene to approximate the number and severity of patients.
 - C. SET UP the scene for emergency medical functions.
 - D. START (simple triage and rapid treatment of patients).

.40 DEFINITIONS

- .41 Mass casualty incident (MCI): An emergency or disaster involving multiple victims exceeding the capability of responding personnel, requiring patient stabilization at the same time and location.
- .42 **START** system: A simple system used at the scene of mass casualty incidents to quickly assess and prioritize care according to three conditions: breathing, circulation, and level of consciousness.
- .43 Triage: The process of sorting and providing care to multiple victims according to the severity of their injuries or illnesses.

.50 INITIAL RESPONSE

- .51 An MCI incident exists if any one of the following conditions are present:
- A. Lack of one paramedic for each critical patient.
 - B. Lack of one EMT for every three (3) non-critical patients.
 - C. An incident that involves more than 15 patients regardless of level of injuries.
- .52 The following Branches/Groups shall be routinely established as necessary at fires, vehicular accidents, hazardous materials incidents, or any other emergency incident that produces injuries or medical emergencies.
- A. Medical: Group or Branch established to direct the activities and assume the management of all medical groups, including triage, treatment, and transportation.

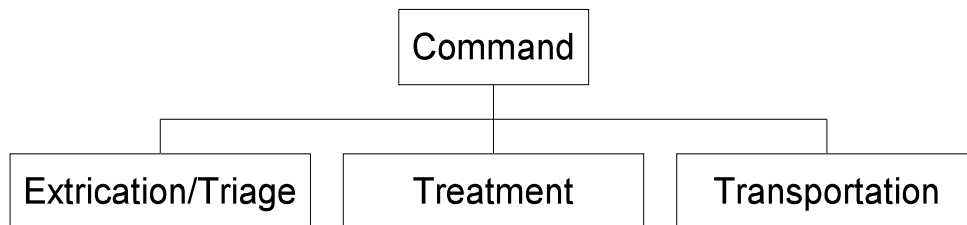
- B. Triage: Organizational group responsible for completion of a rapid assessment of victims and establishing a prioritization for emergency medical care.
 - C. Treatment: Organizational group responsible for complete field triage and patient stabilization. This group offers continuing care for patients until they can be transported to a medical facility.
 - D. Transportation: Organizational group responsible for the management and provision of ground and air transport for patients and coordination with medical facilities.
- .53 MCI Equipment Zone trailers are located at Elyria Fire and South Lorain County Ambulance District stations. These trailers shall be requested through Lorain County 9-1-1 by providing the department name, caller name, callback number, and location of incident. Each trailer carries medical equipment capable of providing care to approximately 100 patients. Equipment includes: 30 backboards, triage tags, trauma care supplies, head immobilizers, splints, gloves, a 5kw generator with lights, and an MCI command kit with area tarps.

.60 MEDICAL OPERATIONS

- .61 The responsibilities assigned to the *Medical* operations officer will vary to some degree in each situation. These responsibilities generally include:
- A. Taking control of *Medical* operations.
 - B. Maintaining initial and continuing situation evaluation with reports to *Command*.
 - C. Triage of victims or coordination with *Triage* and/or *Extrication* officers.
 - D. Field treatment, stabilization and preparation of patients for transportation or coordination with *Treatment* officer.
 - E. Provisions for transportation and distribution of patients to medical facilities or coordination with *Transportation* officer.

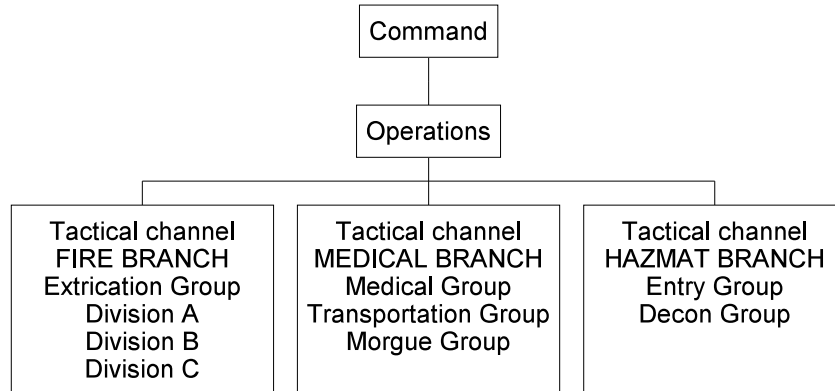
- .62 Assignments of scene personnel to specific functions will be made by either the *Medical* officer or *Command*. Personnel assigned as group officers shall wear appropriate identification vests.
- .63 The initial and continuing progress reports from the group officers will include the following information:
- Type of situation
 - Number of victims
 - Condition, type of injuries of victims (as a group)
 - Resource requirements
 - Need for special equipment, supplies, etc.
 - Fire or accident site stability
 - Hospital notification
 - Consideration to active emergency operations plan
- .64 The type and complexity of various situations suggest different, but similar organizational structures.

A. VEHICULAR ACCIDENT - several victims



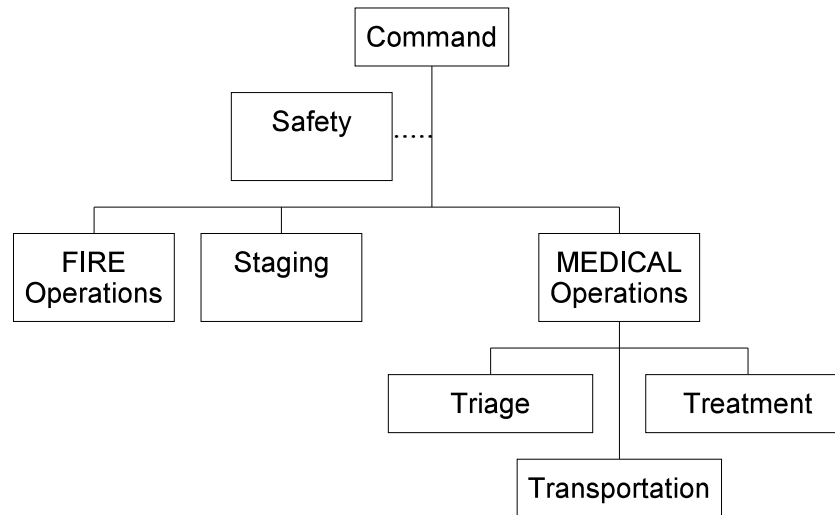
In this situation, Command would assign each company the responsibility for a specific function. This incident is entirely of an EMS nature and, unless delegated or assigned, *Command* is responsible for coordination.

B. AIRCRAFT CRASH WITH VICTIMS



C. MAJOR MEDICAL EMERGENCY (with or without fire)

In the case of a major disaster, the structure above should be instituted. When fire is involved, it will probably be wise to split *Fire*



operations and *Medical* operations, each under an operations officer who reports to *Command*. The *Medical* operations officer is responsible for the entire medical function and assigns units and Groups that report to him/her.

If there is no fire, *Command* may elect to omit the *Medical* operations level and personally command this function.

.65 The radio designation for the *Medical* operations or group officer is "**MEDICAL**".

.70 TRIAGE

.71 The Triage Group is responsible for patient management (**START** triage) at the actual incident site and for any extrication effort before the patients are moved to the Treatment area. This includes the moving of these patients from the actual site, unless an *Extrication* Group officer has been assigned.

.72 *Command* or, if designated, the *Safety* officer shall decide if the area is safe or potentially hazardous. If safe, triage shall be accomplished before removal to the treatment area. If hazardous, the operations shall proceed to a "rescue" mode, i.e., patients shall be moved rapidly to a safer area where triage shall then be completed.

.73 The *Triage* officer responsibilities shall include the following:

- A. Determination whether triage and treatment are to be conducted on site or at a separate treatment area.
- B. Evaluation of resources needed for extrication of trapped patients and removal of patients to treatment area.
- C. Evaluation of resources needed for triage and primary treatment of patients.
- D. Communication of resource requirements to *Command* (or *Medical*).
- E. Resource allocation within Group.
- F. Supervision of assigned personnel and units.
- G. Progress reports to *Command* (or *Medical*) and "All Clear" when all patients have been removed.
- H. Coordination with other Groups as required.

TRIAGE GUIDELINES

.74 The *Triage* officer should assign crews or aides to help size up the situation and report resource needs to him.

- .75 If the patients are spread out in a safe area allowing for "on the spot" triage, personnel should be assigned to a specific area or group of patients. Personnel assigned to a triage area must determine the needs of those patients and ask for assistance if necessary. Personnel have responsibility for all patients in their area until they are delivered to treatment area, to transportation area, or handed over to another company. Personnel completing triage assignments will become available for reassignment by *Triage or Command*.
- .76 Triage will be accomplished by using the **START** (Simple Triage And Rapid Treatment) system which is a simple way to quickly assess and prioritize patients. The **START** system only requires the assessment of three items: breathing, circulation and level of consciousness.
- .77 Using the **START** system, each patient is classified into one of four categories:
- A. **IMMEDIATE (Red Tag):**
Immediate patients are those persons that require immediate assistance at the paramedic level and/or immediate transport to a medical facility (severe airway/breathing problems, uncontrolled bleeding, shock, severe burns, etc.).
 - B. **SECONDARY (Yellow Tag):**
Categorization of patient who is breathing and has pulse and level of consciousness within normal limits, but who may not be able to move because of an incapacitating injury (burns, fractures, back injury, etc.).
 - C. **DELAYED (Green Tag):**
Delayed patients who are able to walk to treatment area, and will minimal treatment or be uninjured (minor burns, cuts, minor injuries, etc.).
 - D. **DECEASED (Black Tag):**
These patients are those persons with obvious mortal injuries where death appears reasonably certain or patient is already dead. Obvious dead bodies must not be moved unless necessary to provide treatment for other patients.

- .78 Using the **START** system requires that the first arriving personnel clear the area of all those patients with only minor injuries. If a person is able to walk to a designated area for evaluation by medical personnel (IMMEDIATE), allow them to do so. Movement of these patients enables personnel:
- A. To move people to a safer area.
 - B. To ensure higher-level medical care.
 - C. To reduce the number of remaining patients that must be triaged.
- .79 Designated triage personnel shall move quickly among the remaining patients, assessing the severity of injuries. Each patient will be classified into one of the four categories for care. Classification of patients will be based on the following assessment:
- A. Check breathing: Assess whether the patient is breathing or not. If not breathing, attempt to clear and open the airway. If the patient does not begin breathing on their own with the airway open, classify as DECEASED and move on to the next patient.

If patient does begin to breathe on their own when airway is opened, classify as IMMEDIATE and move on to the next patient.

Check breathing rate: Greater than 30 times a minute, classify as IMMEDIATE and move on.

Less than 30 times a minute, evaluate circulation.
 - B. Check circulation: Check for presence of the radial pulse. If you cannot find the radial pulse, the blood pressure is low. Control any severe bleeding by using direct pressure, elevation or pressure bandage. Classify the patient as IMMEDIATE and move on the next patient.

If the pulse is present and no severe bleeding is evident, check the level of consciousness.
 - C. Check level of consciousness: At this point you know that 1) breathing is normal (less than 30 per minute) and radial pulse is present. Determine the patients' level of consciousness by using AVPU scale. Classify each patient according to the following:

1. Patient is alert and responds to verbal stimuli. Classify as DELAYED.
 2. Patient who has some injury that prevents them from moving to safety, but their condition is not life threatening; or, a patient who remains unconscious, responds only to painful stimuli, or responds inappropriately to verbal stimuli is classified as IMMEDIATE.
- .80 Once classified, each patient shall be appropriately marked or tagged with the METTAG. All patients should be moved to the appropriate treatment area and monitored for changing conditions that would affect triage classification. If a change in condition occurs, the patient must be reclassified and retagged.
- .81 Triage should not be interrupted at any time to start CPR on any patient.
- .90 TREATMENT
- .91 The *Treatment* Group is responsible for establishment and operation of a treatment area in a suitable location. The proximity of this area must be determined by the circumstances; it must be in a readily accessible area, but away from any dangerous conditions associated with the incident.
- .92 The Treatment Group should prepare an area for the arrival of patients from the triage or extrication area and shall report when ready. The Treatment Group shall first establish an "Immediate" treatment area where advanced level treatment will be given. A "Secondary" treatment area, where basic treatment and supervision is available, shall be established if there is a need to hold noncritical patients. An "Assembly area" for "Delayed" level patients will be established where minimum treatment will be given before transportation.
- .93 Treatment Group will determine priorities for patients to be transported to medical facilities and will consult with the Transportation Group on the allocation of patients to facilities.
- .94 The *Treatment* officer is responsible for the following:
- A. Evaluation of resources required for treatment and reporting needs to Command.

- B. Identification of suitable treatment areas for Immediate, Secondary, and Delayed patients.
 - C. Assignment and coordination of personnel to provide suitable treatment for all patients.
 - D. Coordination with other Groups.
- .95 The treatment area shall have a readily identifiable entrance. Traffic cones or markers shall be used to make this entrance obvious and the location shall be announced. Personnel shall be assigned to meet and direct arriving litter bearers on the placement of patients in "Immediate", "Secondary" or "Assembly" areas.
- .96 Patients arriving at the treatment area must be retriaged at the entrance and retagged if necessary.
- .97 Patients in the treatment areas should be arranged in rows with five feet between patients and heads toward the aisles to provide working room.
- .98 Advanced medical functions will only be given in "Immediate" treatment area. Less intensive patient monitoring and treatment will be administered in the "Secondary" treatment area by fewer personnel. "Assembly" or Delayed treatment will be of a minor injury treatment only.
- .99 If the condition of a patient changes significantly (better or worse), it may be necessary to transfer the patient to a higher or lower priority area.

1.00 TRANSPORTATION

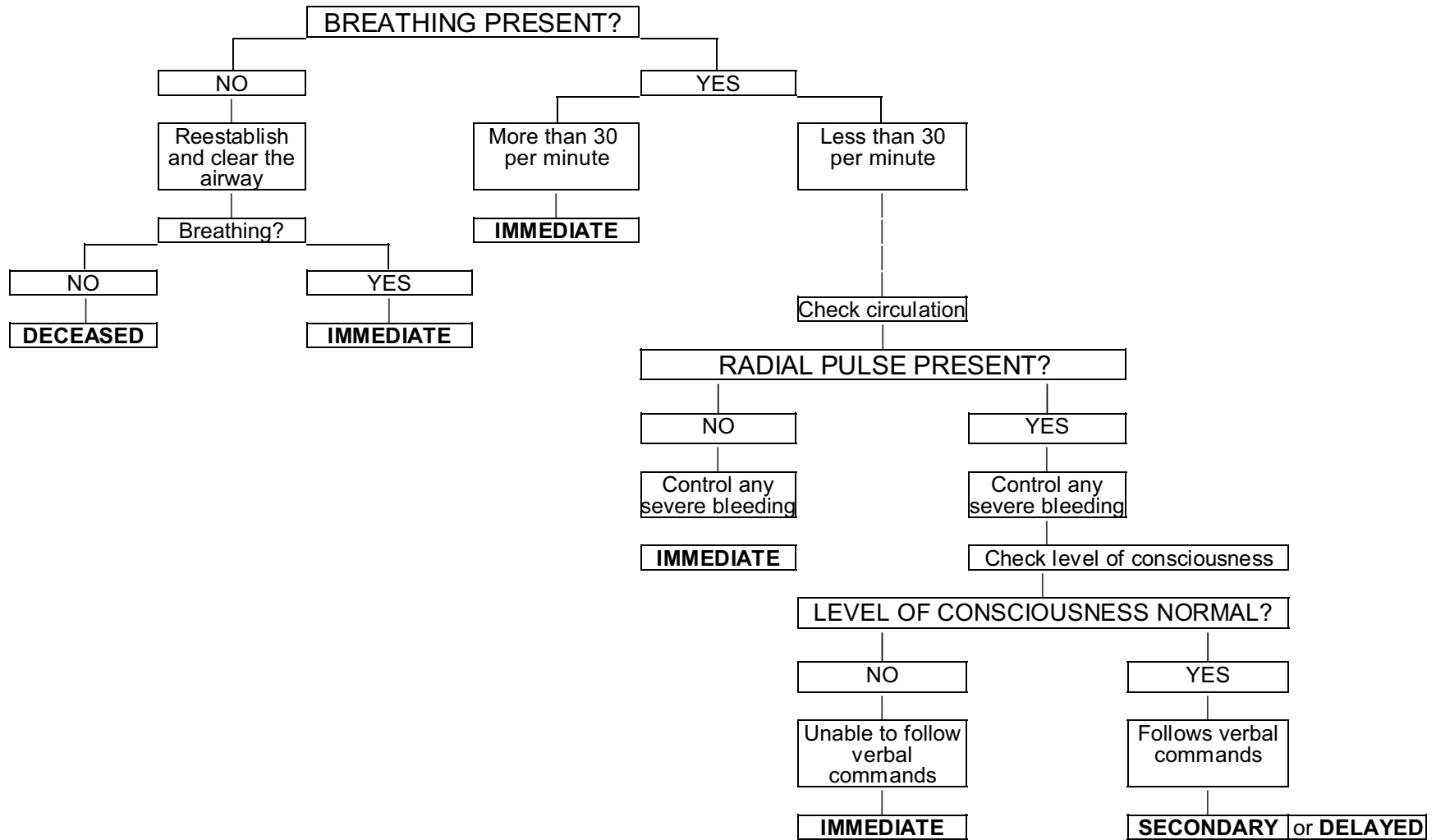
- 1.01 The *Transportation* Group is responsible for the provision of patient transportation to appropriate medical facilities and the provision of medical supplies needed at the scene. The Transportation Group also maintains hospital capacity status and uses this to allocate patients to appropriate facilities in consultation with the Treatment Group.
- 1.02 *Transportation* officer responsibilities include:
- A. Determination of patient transportation requirements and availability of ambulances and other transportation.

- B. Identification of ambulance staging and loading areas and coordinate with helicopter landing zones.
 - C. Communication with the hospital(s) to maintain the Hospital Capability status and Transportation Log for routing of patients.
 - D. Procurement of supplies needed at scene.
 - E. Coordination of patient transportation and allocation with Treatment Group.
 - F. Progress reports to *Command*.
 - G. Coordination with other Groups.
- 1.03 The *Transportation* officer, after conferring with the *Treatment* officer, shall report to the hospital(s) the estimated number of injured persons, the severity and type of injuries.
- 1.04 The *Transportation* officer shall station close to the treatment area, since frequent coordination and communication is necessary between these Groups.
- 1.05 Ambulances shall be initially staged at a regular staging area, and brought in one at a time to load. Each ambulance shall be loaded with patients for one hospital only. Paramedics units are to transport patients with advanced care given and EMT units are to transport patients with basic care given.
- 1.06 To reduce congestion at the MCI scene, responding EMS units may be requested to report to a designated *Staging* officer. The location of staging area shall be coordinated with *Command* and the *Medical* officer. The area shall be readily accessible, easy to locate, and in proximity to the loading zone in the treatment area. EMS units in the staging area shall be divided by personnel/squad capabilities:
- A. Basic life support
 - B. Intermediate life support
 - C. Advanced life support
- 1.07 If necessary, the *Medical* officer shall assign an *EMS Staging* officer. The *EMS Staging* officer shall record all pertinent information on a Unit Staging Log as EMS units arrive at staging, including person in charge, capabilities,

and supplies. Units will not be dispatched from EMS staging to transportation until requested.

- 1.08 The *Transportation* officer shall complete the transport section of the triage tag, tear it off, and retain it.
- 1.09 If helicopters are to be used, a landing area must be identified, using GPS if available, at a safe distance from the scene. Coordinators must be assigned to track patient allocation and to maintain safety in the area. Radio communications with these coordinators is necessary.
- 1.10 Communications with *air medical transport* shall be established on a separate frequency than that used by other Groups.
- 1.11 It may be necessary to use ambulances or other vehicles to move personnel and equipment between the helicopter and treatment area, and to carry patients to the landing zone.
- 1.12 Ambulance personnel may be requested to bring back needed material supplies from hospitals. Personnel shall be assigned to set up a supply pool and gather equipment that may be needed from parked apparatus. The supply pool should be close to the treatment and triage areas.

START System



MEDICAL OPERATIONS (Medical)

DEFINITION

The Medical operations (officer) shall be designated by the Incident Commander and shall be responsible for the direction and control of all medical efforts, shall manage all personnel, equipment and support materials needed for the provision of emergency medical care, and shall be responsible for the management of Triage, Treatment and Transportation Groups in the absence of designated officer(s). The Incident Commander shall act as the *Medical* (or any other operation officers) in the absence of any designated group officer.

DUTIES AND RESPONSIBILITIES

- Maintaining initial and continuing situation evaluation with reports to *Command*.
- Supervise all medical operations.
- Check with *Command* to determine if safe to begin operations.
- Coordinate with *Command* on areas of medical operations to prevent space conflicts with fire operations.
- Extrication of trapped patients and triage of patients (*Triage* or *Extrication* officers).
- Field treatment, stabilization and preparation of patients for transportation (*Treatment* officer).
- Provisions for transportation of patients and distribution of patients to medical facilities (*Transportation* officer).

TRIAGE OFFICER (Triage)

DEFINITION

The *Triage* Group (officer) shall be responsible for the sorting and prioritizing of patients for treatment, tagging, and movement into the patient collection area. *Triage* officer will be assigned based on the EMS certification level available at the incident.

DUTIES AND RESPONSIBILITIES

- Reports to *Medical* operations officer.
- Determination whether triage and treatment is to be conducted on site or at a separate treatment area.
- Evaluation of resources needed for triage and primary treatment of patients.
- Communication of resource requirements to *Command* (or *Medical*).
- Coordinate with *Treatment* on location of patient collection and temporary morgue areas.
- Have patients triaged, tagged and left in place.
- Move all patients on backboards into patient collection area by color priority:
 - RED: Most urgent; salvageable if treated and transported immediately, or any injured emergency worker.
 - YELLOW: Urgent; salvageable if treated and transported soon, or massive injury, probably not salvageable.
 - GREEN: Non-urgent; treatment can be delayed.
 - BLACK: DOA or full arrest; leave all black patients in position found unless they must be moved to assist viable patients.
- Keep *Medical* and *Transportation* informed of number of casualties.
- When all patients RED through GREEN have been moved to collection point, have all personnel report back to *Medical* for reassignment.
- Makes progress reports to *Medical* officer and "All Clear" when all patients have been removed.

TREATMENT OFFICER (Treatment)

DEFINITION

The *Treatment* Group (officer) is the person responsible for the actual stabilization and treatment of all patients.

DUTIES AND RESPONSIBILITIES

- Reports to the *Medical* operations officer
- Identification of suitable treatment areas for Immediate, Secondary, and Delayed patients.
- Coordinate with *Triage* officer on locations of triage/treatment areas and their organization. Include casualty flow.
- Evaluation of resources required for treatment and reporting needs to *Command*.
- Re-triage patients as they come into collection area.
- Place patients in color areas (R-Y-G) with worst patients of each color group, nearest to the "Transport" end of area.
- Supervise stabilization/treatment of all casualties after they have been triaged.
- Coordinate transportation priorities with *Transport* Group. Do not transport DOA's.
- Provide periodic reports to *Medical* and *Transportation*.
- Begin reducing, shifting or relieving treatment personnel, as necessary.

To prevent distraction, any injured emergency worker must be transported away from the scene immediately.

TRANSPORTATION OFFICER (Transportation)

DEFINITION

The *Transportation* Group (officer) shall be responsible for the organized movement or transport of all casualties from the collection area to receiving hospitals or specialty treatment centers, including transportation by both ground and air vehicles.

DUTIES AND RESPONSIBILITIES

- Reports to the *Medical* operations officer
- Determination of patient transportation requirements and availability of ambulances and other transportation.
- Communication with the hospital(s) to keep medical facility status and routing information of patients.
- Identification of ambulance staging and loading areas and helicopter landing zones.
- Obtain reports on number of casualties by type (RED-YELLOW-GREEN) from Triage. Update periodically as needed.
- Inform *EMS Staging* of manpower/equipment/supply needs.
- Procurement of supplies needed at scene.
- For each patient, contact the hospital and report the following:
 - * Ambulance name
 - * Tag color(s)
 - * Chief problem
 - * Keep record of casualties sent to each facility.
 - * Insure each ambulance driver knows location of hospital dispatched to.
 - * Check with Treatment to identify casualties designated for specialty centers.
- Provide reports to *Medical* on location of transportation command post, entry/exit flow of ambulances, and any other pertinent information. Keep updated as necessary.
- Begin relieving, shifting or reducing staff as necessary.

MCI COMMAND TACTICAL WORKSHEET

- Confirm Mass Casualty Incident**
 - Determine location, number and condition of patient(s)
 - Immediate (Red) _____
 - Delayed (Green) _____
 - Secondary (Yellow) _____
 - Dead (Black) _____
 - Notification of hospital(s)
 - Rescue or recovery mode

- Establish Command Post**
 - Emergency Operations Center needed?
 - Communication channel designated
 - Hazard(s) to rescuers [hazmat, structural, hot/cold]
 - Activate Lorain County EMA - mutual aid
 - Assess need for more personnel
 - Assess need for additional equipment

- Establish Branches/Groups**
 - Safety Officer
 - Extrication Officer
 - Medical Operations
 - Fire Operations
 - PIO, Liaison
 - Triage Officer
 - Treatment Officer
 - Staging Officer
 - Transportation Officer
 - EMS Staging

- MCI Operations**
 - Make general area safe
 - Identify Group operation areas
 - Extrication area
 - Treatment area(s)
 - Staging area
 - Triage area
 - Transportation area
 - Extrication personnel
 - Medical personnel
 - Personal protective equipment
 - Air supply (SCBA, SAR)
 - Communications and lighting
 - Patient removal equipment
 - Decontamination

- Termination**
 - Personnel accountability
 - Decontamination
 - Removal of equipment
 - CISD and debriefing

ADD FOLLOWING CHECKLISTS

Treatment Group Log

Medical Equipment Checklist

Hospital Capability & Patient Tally Sheet

Hospital Transportation Log

EMS Unit Staging Log