

# Lake County Fire Service Standard Operating Guidelines

Emergency Medical Service Multi-Casualty Incidents	SOG: 013 Effective Date: April 1, 2011 Supersedes: Approved: <hr/> President, Lake County Association of Chiefs of Fire Page 1 of 13
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## 1.0 PURPOSE

- 1.1 This Guideline will establish a standard structure for the operation of Fire Department units in a multi-casualty emergency medical situation. The basic system may be applied to any multi-casualty incident. Such situations may or may not include fire fighting operations which are not a part of this procedure. This will integrate into the overall fireground management system. All Fire Department standard fireground procedures will be applied to medical emergencies.

## 2.0 DIVISIONS AFFECTED

- 2.1 All Fire Department personnel
- 2.2 Communications personnel

## 3.0 RESPONSIBILITY

- 3.1 All Officers 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 members have the responsibility to learn and follow this Guideline.
- 3.3 The Communications Coordinator is responsible to ensure that all dispatchers are adequately trained in and conform to this Guideline.
- 3.4 It will be the responsibility of the highest-ranking Officer on the scene to make an early determination if this guideline needs to be implemented. The basic system outlined in this Guideline is applicable to all multiple patient situations and will be used routinely in such incidents.

## 4.0 GENERAL

### 4.1 Definitions

- A. A **Multi-casualty Incident** refers to an isolated event which produces a limited number of casualties that are managed within the scope of the community.

- B. A **Disaster** is a destructive event which produces a large number of casualties and damages the resources of a community on an economic and social level.
- C. Incident Levels
- Level One: Localized multiple casualty emergency in which the local resources are adequate to provide for the triage, field management, and stabilization of patients; and transport to the local medical facility for diagnosis and treatment.
  - Level Two: A multiple casualty event where the large number of casualties or lack of local medical care facilities are such that mutual aid of either a medical or manpower nature is needed.
  - Level Three: A mass casualty emergency where local and regional medical resources are exceeded or overwhelmed. Deficiencies in medical supplies and personnel are such that State or Federal assistance is needed.

#### 4.2 The Incident Command System

The responsibilities assigned to the Medical Branch 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 and reporting to Command.
- C. Extrication of trapped victims and triage of victims (Triage [Extrication] Group Officer).
- D. Field treatment, stabilization and preparation of patients for transportation (Treatment Manager).
- E. Provisions for transportation of victims and distribution of patients to medical facilities (Transportation Manager).

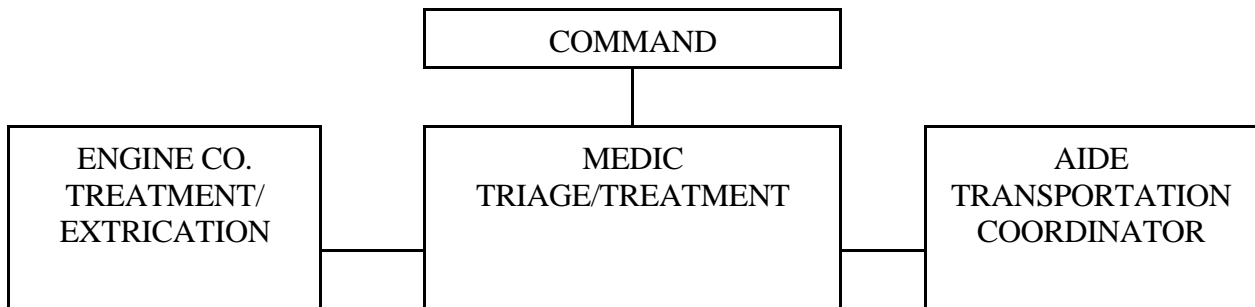
- 4.3 Assignments for Branch functions will be made by the Command to personnel on the scene. The authority of such assigned personnel shall be respected by all Fire Department personnel. Personnel assigned as division/group Officers or aides will wear appropriate identifying vests. The initial and continuing progress reports from the Branch Directors 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

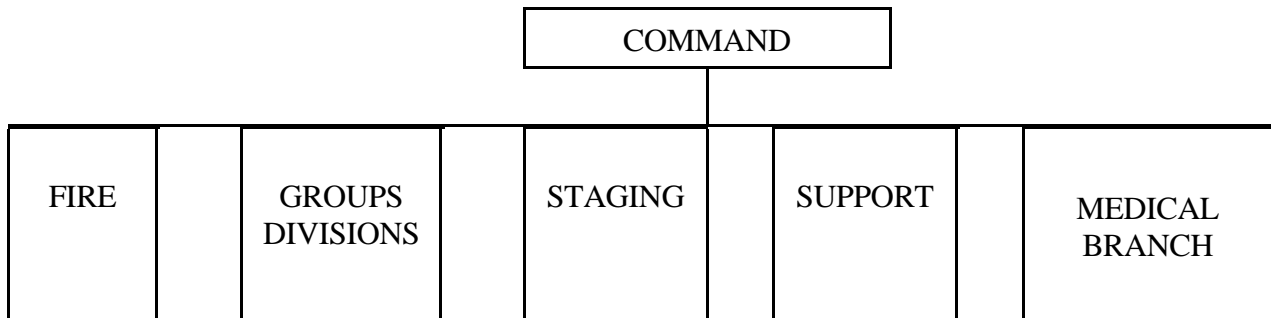
4.4 The type and complexity of various situations suggest different, but similar organizational structures.

A. **AUTOMOBILE ACCIDENT** — several victims



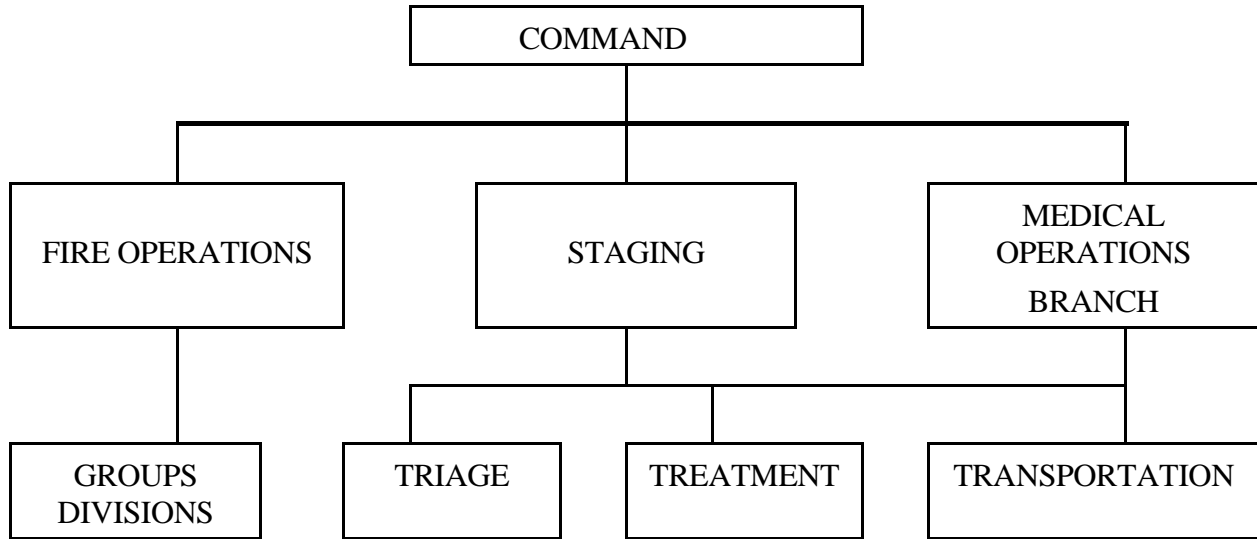
In this situation, Command would assign each company the responsibility for a specific function. This incident is entirely of an EMS nature and Command is responsible for coordination.

B. **FIRE WITH VICTIMS**



At a working fire, Medical may be one of several branches assigned by Command. It may be a Medic Unit assigned to set up an aid station or several Medics working under a Medical Branch Director.

**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/divisions which report to him/her.

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

**5.0 TRIAGE (EXTRICATION) GROUP-DESIGNATION "TRIAGE"**

5.1 The Triage Group is responsible for patient management (Start Triage) at the actual incident site and for extrication efforts before the patients are moved to the Treatment Area. This includes the moving of these patients from the actual site.

The Triage Group Leader must decide if the area is safe or potentially hazardous. If safe, Start Triage shall be accomplished prior to removal to the treatment group. If hazardous, the operations shall proceed in the "rescue" mode. Patients shall be moved rapidly to a safe area.

The Start Triage shall then be done. Triage may be accomplished in the safe area or at the entrance to the treatment area.

5.2 The Triage Group Leader responsibilities may be summarized as follows:

- A. Will evaluate needs and request resources based upon a size-up of the nature of the incident. The number of patients and type of injuries (as a group) using the MCI Resource Guide and advise Dispatch to notify hospitals. (See Appendix A for the MCI Resource Guide.)

- B. Will determine and announce if the scene is safe or hazardous and determine and announce whether triage and primary treatment will be conducted on site or at the entrance to the treatment area.
- C. If the scene is hazardous, will announce that operations will proceed in a rescue mode with triage done at the treatment area. If the scene is hazardous, will direct his crew and additional resources to proceed in the rescue mode providing rescue and hazard abatement until an "all clear" is attained.
- D. If the scene is non-hazardous, will direct the squad and engine crew members to initiate triage using the START triage system.
- E. Upon arrival assignment, obtain the "TRIAGE" vest and clipboard. Will supervise assigned personnel and resources, evaluate additional resources needed for triage and primary treatment of patients and extrication of any trapped patients, and communicate those needs to Command.
- F. Triage will report "all clear" to Command when all patients have been extricated and delivered to the treatment area. After this he/she will make his/her resources available for reassignment.
- G. Coordinate with other divisions/groups/branches as required.

## 6.0 TRIAGE GUIDELINES

6.1 Whenever there are five (5) or more patients, Triage Ribbon will be used — regardless of the severity of the patient's injuries.

### 6.2 Triage Method

- A. The START Method is to be used. START is the acronym for Simple Triage And Rapid Treatment. This system uses a rapid 14-30 second survey of a patient's physiological status, evaluating the patient's ventilation, perfusion, and mental status to determine their appropriate triage category. This system provides a rapid, efficient method of sorting out patients with immediate life-threatening injury.
- B. Under the START concept, the first responders will clear the incident scene of any ambulatory, minor injury patients, by directing them to a safe, designated location and advising them to stay there for future arriving rescuers and medical aid. These patients will be thoroughly assessed when further resources become available.

Once the "walking wounded" are cleared from the scene, the rescuers will continue the rapid triage process. Patients will be tagged with a Triage Ribbon as:

Red – Priority 1 — Immediate  
Yellow – Priority 2 — Secondary  
Green – Priority 3 — Delayed

Black – Priority 4 — Non-salvageable/DOA

Marking to denote their triage category upon completion of each assessment.

C. The START Triage Technique:

The three areas to be assessed are: ventilation, perfusion, and mental status. The first assessment falling into a "critical/immediate" category will stop all further triage assessment with the patient tagged red, "critical/immediate" at that time. Only correction of the life-threatening problems of airway blockage (by opening the airway/patient positioning) or severe bleeding (applying a dressing) will be provided prior to moving on to the next patient.

D. START Assessment:

1. Ventilations

Is the patient breathing following opening of the airway?

No: Priority 4

Yes: Rate 30+/minute — Priority 1  
Uncorrectable respiratory distress — Priority 1  
Others — on to "Perfusion"

2. Perfusion

Capillary Refill — > 2 seconds — Priority 1  
< 2 seconds — on to "Mental Status"  
If low light situations, where capillary refill cannot be observed, palpate a radial pulse. If not palpable — Priority 1; if palpable — on to "Mental Status".

3. Mental Status

Unconscious — Priority 1  
Disoriented — Priority 1  
Others — Secondary/Priority 2 or Delayed/Priority 3

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. The Triage Officer assigned will have to determine the needs of those patients and ask for assistance if necessary. The Triage Officer has responsibility for all those patients until they are delivered to a treatment area, or to the Transportation Group.

- 6.3 Patients will not be moved from a safe area until the treatment area has been established and reported ready.

- 6.4 If triage is not performed initially where the patients are found, then a triage team must be provided at the entrance to either the "safe area" or the treatment area.
- 6.5 A Triage Ribbon should be attached to the patient to guide the allocation of each patient. All patients should be monitored for changing conditions which would affect triage classification.
- 6.6 Patients will be moved on backboards with c-spine precautions if indicated by the nature of their injuries or if they are non-ambulatory. Personnel may be assigned as "litter bearers" to assist in this movement.
- 6.7 The goal of triage is to ensure the efficient use and distribution of medical and rescue manpower, equipment, and facilities; and also, not to relocate the disaster from the scene to the hospital. The purpose of triage is to ensure the survival of the maximum number of patients. In situations involving many patients, this may mean bypassing hopeless and minor injuries to concentrate on those who will receive the most benefit from the available treatment forces. The basic impulse to provide care and comfort to all patients may have to be temporarily set aside.
- 6.8 (IMMEDIATE) PRIORITY 1 — RED
- A. Red (Priority 1) Criteria
1. Have injuries such that life-threatening shock and/or hypoxia is present or imminent.
  2. The patient can be stabilized without the need for constant or labor-intensive care.
  3. The patient has a high probability of survival if given immediate care and rapidly transported.
- B. Immediate — Priority 1 patients are those persons that will require medical assistance at the paramedic level. This assistance may be started at the actual incident site, but is usually better handled at a treatment area. Trapped patients with Priority 1 injuries may have to be treated prior to and during extrication. The following conditions will necessitate paramedic level support:
- Severe airway and breathing problem
  - Uncontrolled or suspected severe bleeding
  - Severe chest or abdominal injuries
  - Shock
  - Cardiac problems
  - Abnormal childbirth
  - Severe burns
  - Moderate burns with multiple fractures
  - Poisoning, if severe
  - Other medical problems indicated by medic level triage
- 6.9 (SECONDARY) PRIORITY 2 — YELLOW

A. Yellow (Priority 2) Criteria

1. Are patients whose injuries have systemic implications and effects, but who are not yet in life-threatening shock or hypoxia.
2. They appear able to withstand a 45- to 60-minute wait in the field without immediate life risk.
3. Yellow — Priority 2 patients must be closely observed and evaluated for condition changes that may require adjustments in treatment. If during triage there is a question on treatment priorities, assume the worst in the placement of the patient.

B. The following patients will usually constitute a Yellow (Priority 2) consideration:

Moderate burns  
Major or multiple fractures  
Back injuries  
Severe psychological problems  
Normal child birth

6.10 (DELAYED) PRIORITY 3 — GREEN

A. Green (Priority 3) Criteria:

1. Have injuries that are localized that do not commonly have an immediate systemic implication.

B. These patients will require minimum treatment or be uninjured. They will receive a Green ribbon and if ambulatory, be taken to an assembly area for future removal to a convenient holding location. Priority 3 patients can usually assist themselves or each other. Priority 3 injuries will usually be:

Minor burns  
Minor fractures  
Lacerations  
Minor injuries  
No problem noted

6.11 (D.O.A.) PRIORITY 4 — BLACK

A. Priority 4 patients are those persons who are non-salvageable (no pulse or respiration).

B. The deceased must not be moved unless this is necessary to provide treatment for other patients.

C. The Coroner is responsible for disposition of dead bodies. He may respond

to incidents involving multiple fatalities and make arrangements for a temporary morgue, if necessary. Law Enforcement can act as the Coroner's representative in many situations.

## 7.0 TREATMENT GROUP DESIGNATION "TREATMENT"

7.1 The Treatment Group is responsible to:

- A. Locate and provide a suitable treatment location with designated Priority 1, 2, 3 areas; and report the location to Command/Medical and Triage.
- B. Evaluate resources required for patient treatment and report these needs to Command/Medical.
- C. Assign, supervise, and coordinate personnel in the provision of emergency medical care within the Treatment Branch.
- D. In coordination with Transport Manager, determine priorities for patient transport to medical facilities.

7.2 The treatment area should be prepared for the arrival of patients from the Triage/Extrication Group and should report when ready. The Treatment Group should first establish a "Priority 1" treatment area where paramedic-level treatment will be given. A "Priority 2" treatment area should then be established for delayed transport patients. An assembly area for "Priority 3" level patients will be established as soon as possible to reduce congestion at the incident site; minimum treatment will be given at this location.

7.3 Upon assignment, obtain the "Treatment" vest, clipboard, and any orders from Command/Medical. The Treatment Group area should be designated and its location should be reported to Command/Medical. The Officer will evaluate the resources required for patient treatment (using MCI Resource Guide, Appendix A) and report those needs to Command/Medical. While doing this they will direct their squad/engine crew to set up the treatment area in the following manner:

- A. Plan for large area, readily accessible and safe.
- B. Lay out salvage covers on ground providing designated Priority 1 (Red) and Priority 2 (Yellow) treatment areas, and a Priority 3 (Green) assembly area.
- C. These areas will be announced and marked at the corners/entrance to them by traffic cones and color priority coded 1 (Red), 2 (Yellow), 3 (Green) flags.
- D. Patients in the treatment areas will be arranged using the "CORE" method. Patients brought to the CORE (i.e., RED treatment area) are set up in a semicircle with their heads facing the center of the CORE, this allows EMS workers to take care of multiple patients. All equipment will be placed at the center of the CORE.

- E. After the layout of the Treatment Area, medical supplies will be removed from the apparatus and placed in the CORE treatment areas.
- F. In-coming crews will be assigned to the treatment areas first in Priority 1 (Red), then Priority 2 (Yellow), and then Priority 3 (Green) areas with the goal to provide critical treatment for stabilization and continuing care of patients until they can be transported to a medical facility.
- G. When the Treatment Group is prepared for arrival of patients from Triage/Extrication, the Treatment Group Leader will report that fact to Command/Medical and Triage.
- H. Patients arriving at the treatment area without triage ribbons must be triaged at the entrance and tagged. If the incident is in a rescue removal mode, the triage team will be established as a first priority since patients will not have been triaged before removal.
- I. Personnel assigned to each treatment area will provide treatment, and complete a Mass Casualty Patient Care Report form for each patient.
- J. If the condition of the patient changes significantly, it may be necessary to transfer the patient to a higher or lower level of care.
- K. The Treatment Group Leader 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.
- L. The Treatment Group Leader will report their progress to Command/Medical and advise when all patients are clear of treatment area.

## 8.0 TRANSPORTATION GROUP-DESIGNATION "TRANSPORTATION"

- 8.1 The Transportation Manager is responsible to assume command of the Transportation Group, determine patient transportation needs and obtain appropriate means of transportation (both ground and air); evaluate resources required to manage patient transport; report resource requirements to Command/Medical; establish and announce ambulance staging and loading areas, including helicopter landing zones; communicate with hospitals to determine medical facility status and treatment capabilities; coordinate patient transport with the Treatment Group and area hospitals, allocating patients to appropriate hospitals; and to advise Command/Medical when the last patient has been transported.
- 8.2 Transportation Group can be made up of any combination of staff or command personnel, and requires four personnel to operate. Responsibilities include:
  - A. 1). Transportation Manager — overall command coordination with treatment, transport priorities.
  - 2). Hospital Communication — hospital status, patient allocation.
  - 3). Loading Area — complete and retain transport portion of triage tag.

4). Air Ambulance Coordinator

8.3 Transportation Guidelines

- A. Upon arrival at the scene, the Manager will order the apparatus parked in a safe, accessible location and report to Command/Medical to obtain the "Transport" vest, clipboard, and any orders from Command/Medical.
- B. The Transportation Manager will then determine patient transportation needs using information from Command/Medical, the Treatment Group, and report those needs to Command/Medical.
- C. The Transportation Manager will station themselves as close as possible to the Treatment Group in order to allow easy communication and coordination. The Transportation Manager will evaluate the area and establish ambulance staging, patient loading areas, and helicopter landing zones as needed. (Provide an engine and crew for landing zone safety.)
- D. The Transportation Manager or their aide(s) will set up communication with hospitals to determine facility status and treatment capabilities. The Transport Group will maintain records of hospital status and capabilities, number of patients transported, time of transport, where they were transported, priority, and EMS unit number transporting. A copy of the Mass Casualty Patient Care Report form will be retained. Through coordination with the Treatment Group and area hospitals, the Transportation Manager will allocate patients to appropriate hospitals.
- E. Ambulances will stand by in the staging area and report to the loading area as requested by the Transport Manager to the Staging Manager. Each ambulance will be loaded with patients for one hospital only. Paramedic squads will transport patients needing advanced care and EMT squads will transport patients needing basic care. If the transporting unit has 3 EMT personnel, they may transport 2 Immediate (red) patients at once as long as those patients do not require ventilatory support (BVM use). Also, EMS units may transport a combination of Immediate, Delayed or Minor patients as long as they are appropriately immobilized and do not require ventilatory support (BVM). The Transportation Manager or aide will complete the transport section of the Mass Casualty Patient Care form, tear it off, and retain it.
- F. If helicopters are used, the Transportation Manager will assign an aide to coordinate with the landing zone, aircraft, and patient allocation to air transport. A landing area must be identified at a safe distance from the scene. The Coordinator will communicate with Transportation Manager the landing zone standby crew, and the aircraft to ensure safety. It may be necessary to use ambulances or other vehicles to move personnel and equipment from the helicopter to the treatment area and to carry patients to the landing area.

- G. If needed, Transportation Manager will request the transportation of the Disaster Boxes from TriPoint and Lake West to the scene by outlying or transporting ambulances. (Each Box set is up for five (5) patients, there are four (4) Boxes at both TriPoint and West). Law enforcement agencies may be requested to assist in this.
  
- H. Upon completion of transport of all patients, the Transportation Manager will advise Medical/Command.

**APPENDIX A**

**MASS CASUALTY INCIDENT**

RESOURCE GUIDE

VICTIMS	TRIAGE	TREAT	TRANSPORT
5-10	1-2	1-3	3-5
11-15	2-3	2-5	5-7
16-20	2-4	3-7	7-10
21-30	3-5	4-9	10-15
31-50	4-6	5-12	15-25
51+	4-6	5-12	25+

**This guide indicates a recommended number of companies/units that should be assigned to each division/group function. These numbers can be adjusted as the situation dictates.**