EMS Subspecialty Certification Review Course

4.1.1 Incident Command System (ICS)
4.1.1.1 Integration of medical operations
4.1.1.2 Local, State, and Federal Assets
4.1.1.3 Regional Resource Allocation and Management
4.1.1.4 Role of Emergency Management Agencies
4.1.2 Triage
4.1.3 Patient Care in Mass Casualty Events/Scene Management
4.1.3.1 On-site Treatment
4.1.3.2 Transport Modes
4.1.3.3 Destination

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Learning Objectives

- Describe the Incident Command System
- Review triage principles
- Identify local, state and federal assets utilized in mass casualty incidents
- Discuss regional resource allocation and management
- Describe the role of emergency management agencies

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National Incident Management System (NIMS)

- Established by presidential directive 5 after 9-11
- Designed to coordinate multi-agency, multi-jurisdictional responses to large-scale emergencies
- "Guides all levels of government, nongovernmental organizations and the private sector to work together to prevent, protect against, mitigate, respond to and recover from incidents"
- Mandates use of the Incident Command System

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Incident Command System (ICS)

- Required for state and federal agencies
- Required by OSHA and NFPA during emergency response to dangerous incidents
- Allows coordinated multi-agency responses
- Key features:
  - Flexible, scalable, virtual organization
  - Uniform terminology
  - Unified goals

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Incident Commander (IC)

- Priorities
  1. Life Safety
  2. Incident Stabilization
  3. Property and Environment Conservation
- Same regardless of incident type

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Incident Commander (IC)

- All responsibility belongs to the IC unless specifically delegated
- Organizational constraints:
  - **Unity of Command**: Each member of the team reports to only one person
  - **Span of Control**: No leader is directly responsible for more than 3 to 7 personnel or functions
- **Unified Command**: senior representatives from each agency form the IC and speak as one voice

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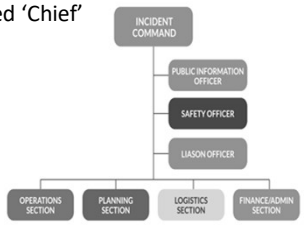
ICS Sections

- Organizational levels with the responsibility for a major functional area of the incident
- Person in Charge is called 'Chief'
- 4 Sections:
  - Operations
  - Planning
  - Logistics
  - Finance



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ICS Sections

Operations

- Responsible for tactical decisions and maintaining situational awareness
- Includes staging manager who coordinates available resources waiting on an assignment

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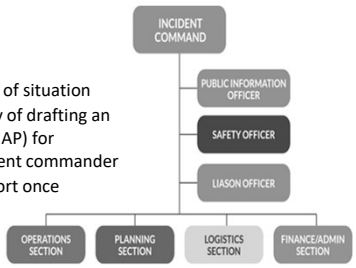
ICS Sections

Planning

- Continual monitoring of situation
- Primary responsibility of drafting an incident action plan (IAP) for approval by the incident commander
- Lead after action report once incident complete



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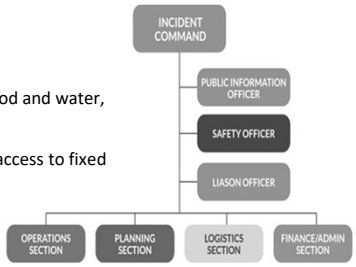
ICS Sections

Logistics

- Service branch
  - Communications, food and water, medical support
- Support branch
  - Fuel, maintenance, access to fixed facilities



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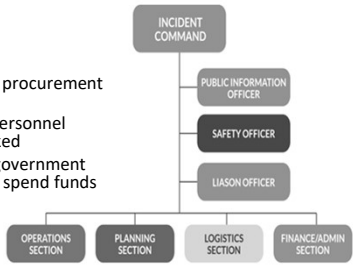
ICS Sections

Finance/Administration

- Staffed when significant procurement capabilities are needed
- Maintains records and personnel involved in periods worked
- Should be headed by a government official with authority to spend funds and sign contracts



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ICS "Command Staff"

- Inherent to command function, not included in span of control constraints
- Safety officer:
  - Responsible for scene and overall safety for responders and civilians
- Public information officer (PIO)
  - Interacts with media
- Liaison officer :
  - Provides a conduit for two-way information exchange between the IC and representatives of other responding agencies

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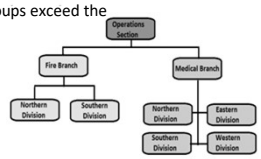
ICS Expansion

Branches

Used when the number of divisions or groups exceed the recommended span of control

Example: Fire and EMS branch

A Branch is led by a **director**



Division

Used to divide an incident geographically

Example: Fire Branch has a Northern and Southern Division

A Division is led by a **supervisor**

Group

Used to divide an incident into functional areas of operation

Example: Resources that have a special function (e.g., S&R group)

A Group is led by a **supervisor**

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Additional ICS Definitions

Units

Functional responsibility for a specific activity

Example: situation unit, supply unit

Single resources

An individual or single piece of equipment with its personnel complement

A crew or team of individuals with an identified supervisor

Example: police officer, engine company

Task force

A combination of mixed resources with a common communications capability

Led by a task force **leader**

Strike team

Set number of Similar resources

Operate under command of a strike team **leader**

Example: 4 engine companies

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ICS and the EMS Medical Director

- The EMS Medical Director role is not well defined in the ICS structure
- Dependent upon local policies, the EMS Medical Director may be assigned to the Unified Command, Medical Branch, or as advisor/subject matter expert

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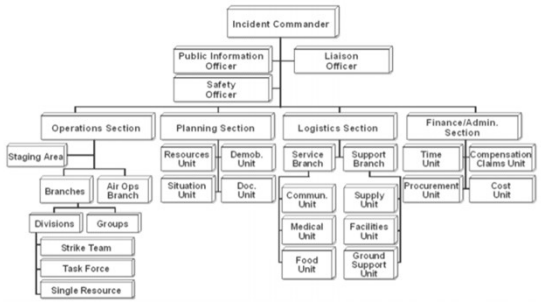
ISC Org Chart



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Primary ICS Courses

- ICS 100 Introduction to Incident Command Principles
- ICS 200 Single Resource and Initial Action Incidents
- ICS 700 National Incident Management System (NIMS)
- ICS 800 National Response Framework (NRF)

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Triage

To sort or select

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Model Uniform Core Criteria (MUCC)

- Established by the Federal Interagency Committee on EMS (FICEMS)
- US transitioning to MUCC-compliant systems
- Endorsed by NAEMSP, ACEP, ACSCOT…
- 24 Criteria, 5 triage levels
- SALT is the only fully compliant triage tool

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Primary Triage Categories

- Immediate – obvious threat to life or limb
- Delayed – need care, not likely to decompensate if delayed
- Minimal – self-limited injuries, can tolerate significant delays
- Dead – apneic despite basic maneuvers
- Expectant – little/no chance of survival despite max therapy

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Examples of Primary Triage Systems

- SALT – Sort, Assess, Life-saving interventions, Treatment/Transport
  - Developed by CDC sponsored panel
  - MUCC compliant
  - Better accuracy that others, all over-triage
- START – Simple Triage and Rapid Assessment
  - JumpSTART – Pediatric version
  - Common in US but not MUCC compliant

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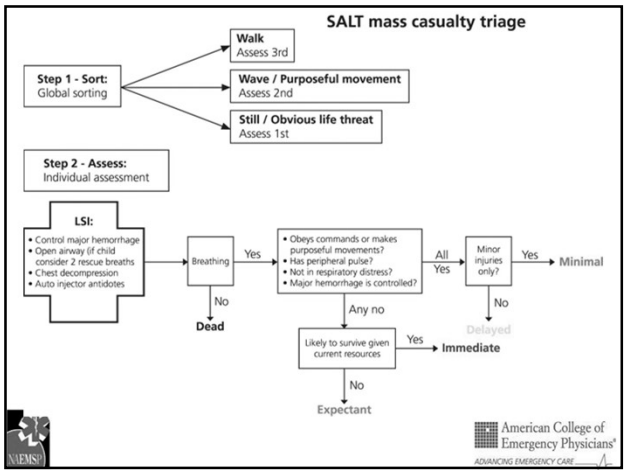
SALT mass casualty triage
Step 1 - Sort:
Global sorting
Walk
Assess 3rd
Wave / Purposeful movement
Assess 2nd
Still / Obvious life threat
Assess 1st
Step 2 - Assess:
Individual assessment
LSI:
• Control major hemorrhage
• Open airway (if child consider 2 rescue breaths
• Chest decompression
• Auto injector antidotes
Breathing
Yes
No
Dead
• Obeys commands or makes purposeful movements?
• Has peripheral pulse?
• Not in respiratory distress?
• Major hemorrhage is controlled?
All Yes
Any no
Minor injuries only?
Yes
Minimal
No
Delayed
Likely to survive given current resources
Yes
Immediate
No
Expectant
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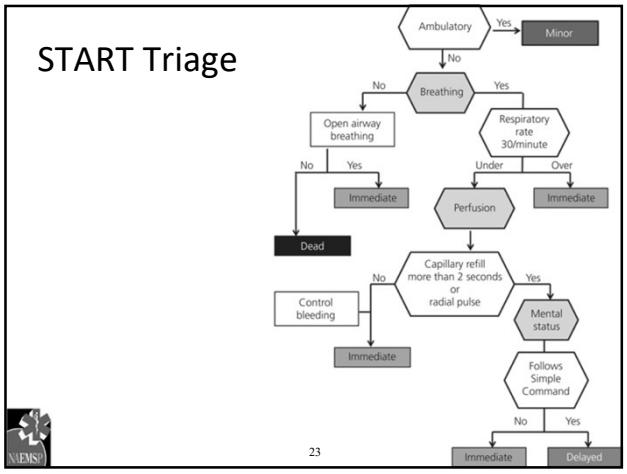
START Triage
Ambulatory
Yes
Minor
No
Breathing
No
Yes
Open airway breathing
Respiratory rate 30/minute
No
Yes
Under
Over
Immediate
Perfusion
Immediate
Dead
Capillary refill more than 2 seconds or radial pulse
No
Yes
Control bleeding
Mental status
Immediate
Follows Simple Command
No
Yes
Immediate
Delayed
23

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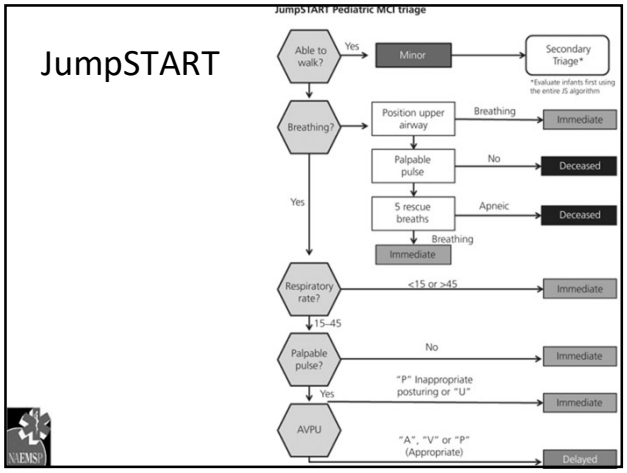
JumpSTART
JumpSTART Pediatric MCI triage
Able to walk?
Yes
Minor
Secondary Triage*
*Evaluate infants first using the entire JS algorithm
Breathing?
Position upper airway
Breathing
Immediate
Palpable pulse
No
Deceased
Yes
5 rescue breaths
Apneic
Deceased
Breathing
Immediate
Respiratory rate?
<15 or >45
Immediate
15–45
Palpable pulse?
No
Immediate
"P" Inappropriate posturing or "U"
Yes
Immediate
AVPU
"A", "V" or "P" (Appropriate)
Delayed

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Triage System Limitations

- Tend to over-triage (especially START)
- Do not account for non-traumatic conditions

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Triage Tags

- Available in a variety of different designs
- Need to allow bidirectional changes in triage category
- Unproven in actual use
- Alternatives: Marking pen, geographical locations, etc to identify triage category

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Secondary and Tertiary Triage

- Secondary triage further prioritizes patients within each category
  - Less well studied
  - Secondary Assessment and Victim Endpoint (SAVE) and System of Risk Triage (SORT)
  - Weight intervention benefit against resources
  - Typically done at hospital arrival
- Tertiary triage – triage of scarce resources
  - Utilitarian goal – maximizing outcomes for the population
  - Priority to those most likely to recover
  - Discuss ethical challenges and allocation principles

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Population Triage

- Refers to management of ongoing incident due to infrastructure loss or disease
- Balancing risk of harm to person vs community
- Examples
  - Weather prevents ambulances from responding
  - COVID-19 stay at home orders to prevent spread

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Post Triage

- Triage is dynamic; reevaluate
  - Clinical status frequently changes
  - Availability of supplies and personnel can change
- Need a system for communicating with destination hospitals and patient tracking
- Initiate treatment on scene pending transport, as resources allow
- Transportation of patients should be optimized
  - Prioritize order of transport
  - Destination: Divide patients among hospitals; higher-level centers for most critical patients

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Questions

1. Medical Branch is established at the scene of a large-scale event. Who is the Medical Branch Director and who do they report too?

1. Incident Command Priorities are?

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Answers

1. The Medical Branch Director will most often be an operational representative of an EMS agency and will report to the Incident Commander (small incidents) or the Operations Section Chief (larger scale incidents).
2. Life safety issues, incident stabilization and property conservation.

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Take-Home Points

- Be familiar with ICS structure
- IC priorities: life, incident, property
- Unity of command – one boss
- Span of control – 3-7 max subordinates
- Triage is important to improve outcomes
- Many different triage systems (SALT is MUCC compliant)
- Primary, Secondary, Tertiary triage

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