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Keeping Track of Patients in an MCI: *The Impact of Incident Command*

2017 Metro Minnesota

Toward Zero Deaths Workshop

Roseville, MN

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Peer Review Organization Activity Disclosure

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Introductions

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Objectives

1. Describe best-practice incident command procedures for MCIs and interfacing across multiple public safety agencies and disciplines
2. Discuss required elements for good communication between public safety agencies, pre-hospital and hospital
3. Discuss ways patient outcomes can be optimized through the EMS – Hospital interface

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Disclosures

Disclosure Policy: It is the policy of Hennepin County Medical Center to ensure balance, independence, objectivity and scientific rigor in all its sponsored educational activities. All faculty participating in sponsored programs are expected to disclose to the audience any real or apparent conflicts of interest to the content of their presentation. ***Ross Chavez and Wendy Lynch*** has indicated that s/he has no financial relationships to disclose related to this presentation.

Incident Walk Through: State Patrol

- State Patrol
  - 90 seconds from call for stalled vehicle prior to crash
  - Arrived on scene 30 seconds after crash
  - Driver placed in squad; MSP drives to van
  - 7-8 minutes, HEMS updated re: several children
  - Two most critical identified prior to EMS arrival

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Incident Walk Through: Communications

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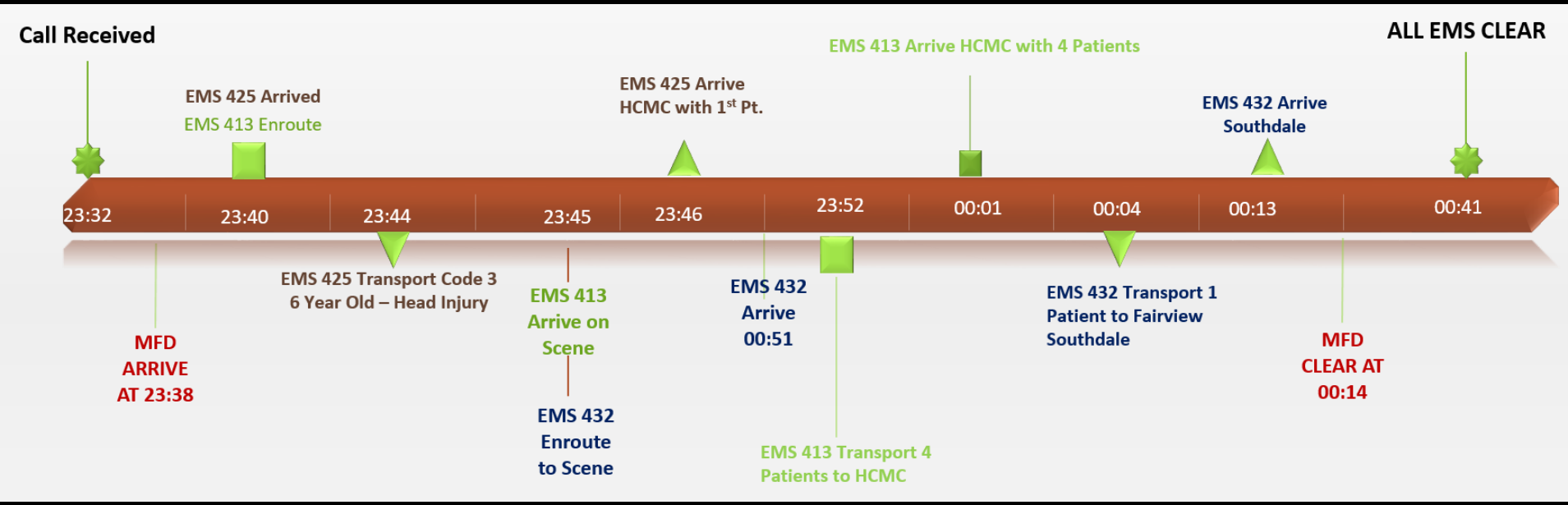
Response Timeline



- 1st ambulance scene time: 4 minutes
- 2nd ambulance scene time: 7 minutes

Incident Walk Through: Scene Operations

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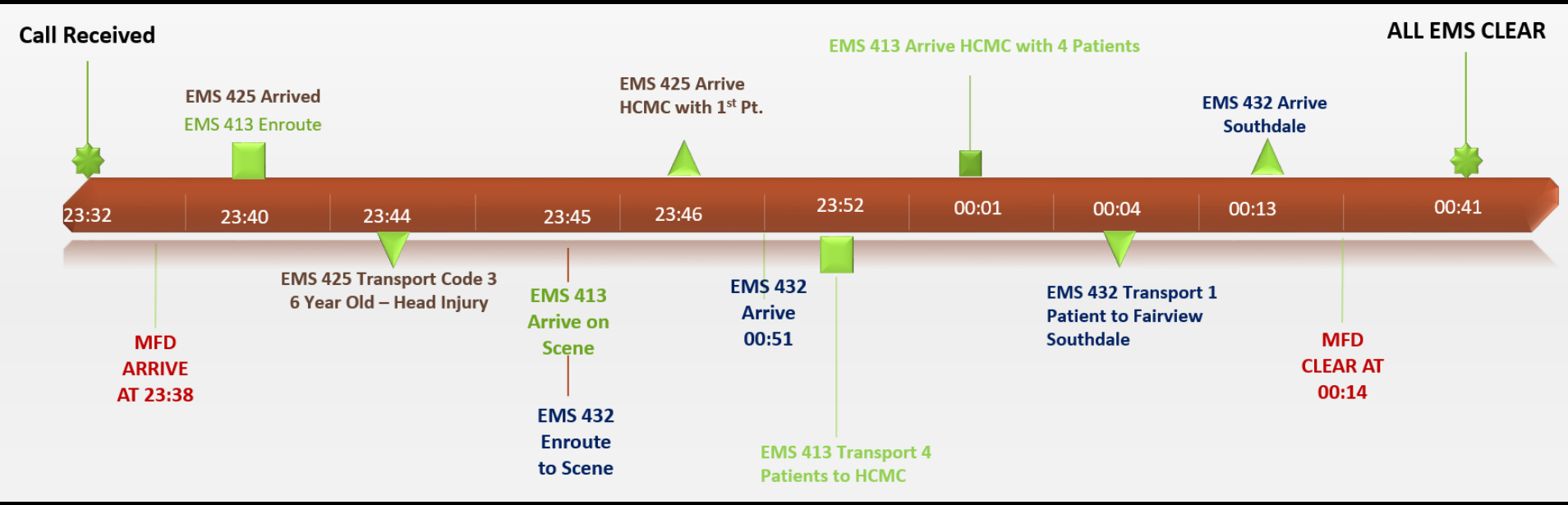
Response Timeline



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- 2nd ambulance scene time: 7 minutes

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Incident Walk Through: Hospital

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Night Shift 11/28/15 – 11/29/15

- Typical Saturday night in the ED
- Main department full
- Triage ~10 patients
- Anticipating bar closing
- 3 - Faculty MD's
- 2 - 3rd year Emergency Medicine Residents
- 6 – Junior Residents / Interns

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How they presented to the ED Registration times

- 2347, Critical Care Bay #3 – 6 yo head injury
- 0003, Critical Care Bay #1 – 12 yo paraplegic, difficulty breathing
- 0020, Main ED C8 – 10 yo foot injury
- 0021, Main ED C7 – 2 yo knee pain
- 0021, Critical Care Bay #2 – 4 yo severe abdominal pain
- 0055, Not registered as a patient – 32 yo driver
- 0058, Not registered as a patient, 3 month old
- 0109, Not registered as a patient, found in Internal Waiting Room – 12 yo with abdominal pain
- 0111, Main ED A9 – 9 yo with headache and hip pain

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Learning Points: Scene Response

Issues with short scene times on MCI

- Failure to gather critical information
- Patient identification, tracking, and documentation
  - 425: 1 pt. to HCMC
  - 413: 4 pts. to HCMC
  - 432: 1 pt. to FVSD
- Domino effect

4 patients unaccounted for in EMS documentation!

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Consequences of EMS Command absence

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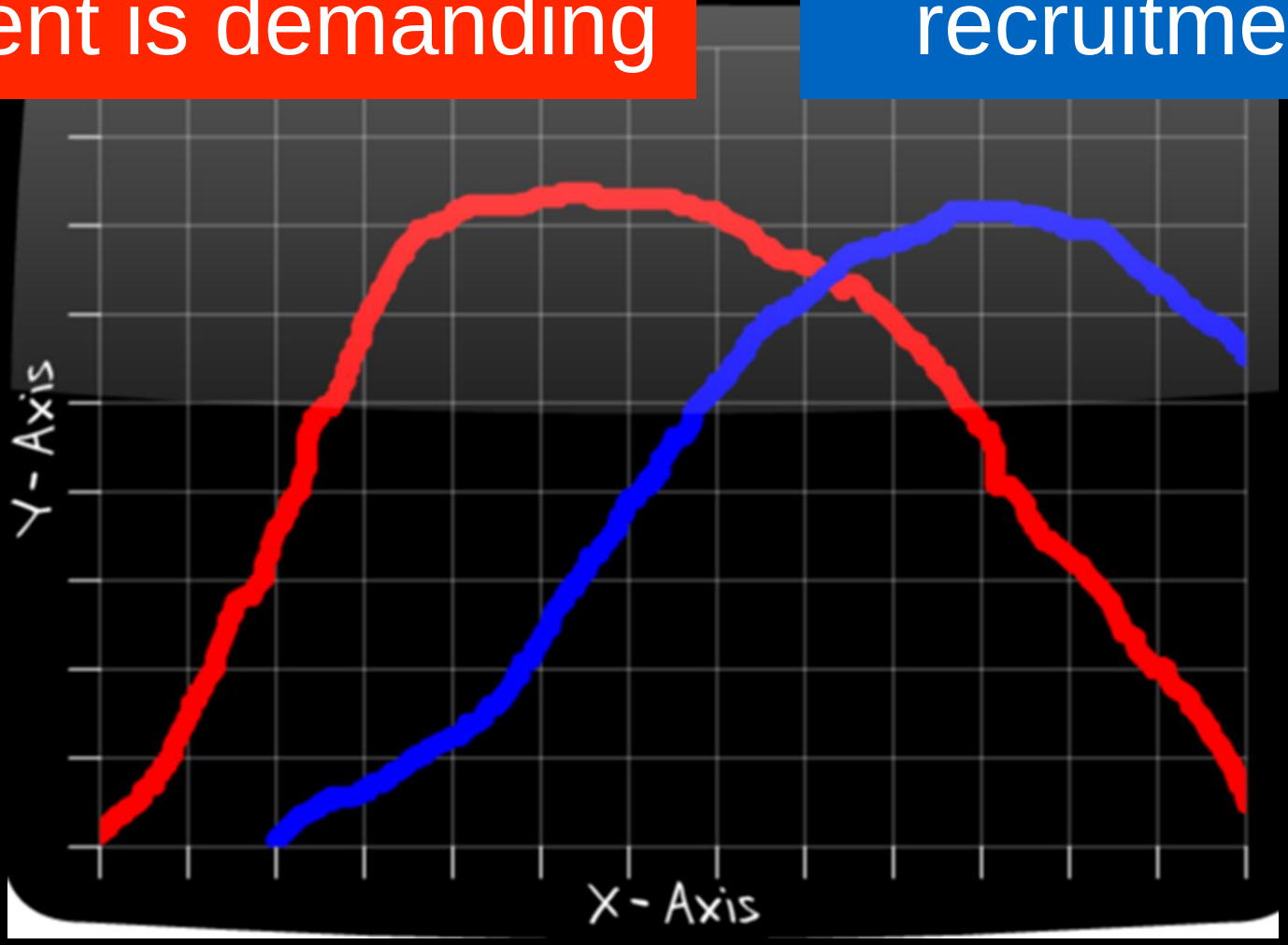
Amount of resources incident is demanding

Actual resource recruitment



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Crew resource management plays crucial role in stressful/complex situations

CRM can be defined as a management system which makes optimum use of all available resources – equipment, procedures and people – to promote safety and enhance the efficiency of flight operations.

http://www.crewresourcemanagement.net/introduction

“Just a Routine Operation” - https://youtu.be/JzlvgtPIof4

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Learning Points: Communications

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WMRCC Today

- Housed inside Hennepin EMS Communications center
- 2 Dispatchers dedicated to WMRCC 10:00-22:00 24/7
- 1 Dispatcher dedicated to WMRCC 22:00-10:00 24/7
- Daily responsibilities - pt. information relays from field/air personnel to hospital emergency department
- MNTrac - monitor and coordinate hospital diversions
- Work with system medical directors related to WMRCC functions and major incidents within Hennepin County
- Patient tracking for major incidents – EMS system advisories

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Learning points:
Hospital readiness

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Notification: Key goal of planning and incident management

Get the…

- **Right *resources***…to the
- **Right *place***…at the
- **Right *time***…to prevent
- An ‘incident’ from becoming a…
- **DISASTER**

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Best Practices at HCMC: Three Basic Steps

1. Alerting and resource mobilization
2. Incident management / HICS
3. Surge capacity

HICS Basics

- A lot of times it's not just the injured that stress the system
  - Family
  - Transportation management
  - Media
- Activate the disaster plan EARLY so you get help faster – it's rare to be wrong to do so
- Make sure you have Job Aids for your line personnel and they understand their roles

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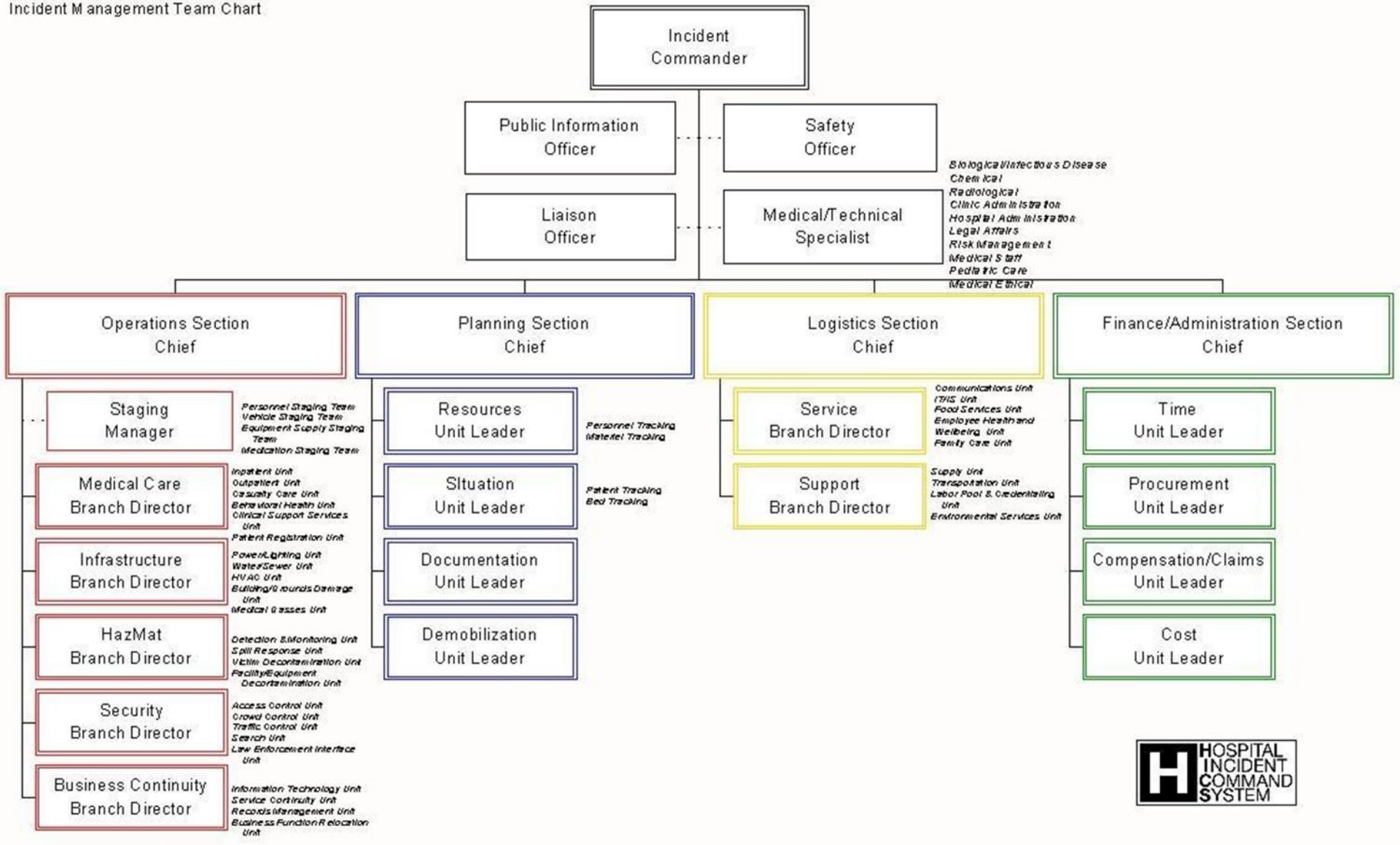
Hospital Incident Command System
Incident Management Team Chart



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Surge Capacity: CO-S-TR

- CO
  - Command
  - Control
  - Communications
  - Coordination
- S
  - Staff
  - Stuff
  - Space
  - Special
- TR
  - Triage
  - Treat
  - Transport
  - Track

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HCMC Alerting / Notification

- ED physician or house supervisor can activate
- Internal notifications (Alertus system) and pages
- External pages – EM, surgery, critical care, lab, blood bank, administration, etc. paged
- Identification vests, radios, and job action sheets
- Messaging to all hospitals / EMS via MnTrac

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HCMC Surge Capacity

- Pending admits go upstairs
- Existing ambulatory moved to Urgent Care or back to triage area
- Inpatient units assess for ‘surge discharge’ / early discharge to patient holding area
- Spare carts and WC to ED
- Each team center has a leader
- Overflow spaces identified
- PACU, same-day surgery are main trauma care overflow

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HCMC Supplies

- Disaster boxes
  - Critical care – 20 peds, 20 adult
  - Triage area
- Triage tags at main entrances
- Pharmacy disaster supplies (‘pull’ to ED)
- Central supply disaster cart
- Surgical / sterile supplies
- Pediatric safe area supplies
- Transport ventilators (18), 24 spare monitors

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Level 1 Trauma Resources for Pediatric MCI

- Minimum 2 EM Faculty at all times (peak 4)
- 1-3 EM Senior residents
- Emergency Preparedness Group - <15 min response time - >10 EM Faculty
- Minimum 6 junior residents/PA's
- Minimum 1 Surgical Faculty at all times (1 additional on-call)
- 1 Senior Surgical residents
- 1 Pediatric Surgical Faculty on-call
- 1 PICU and 1 Pediatric Faculty on-call
- Neurosurgical resident in house 24 hours/day
- Neurosurgical Faculty and Senior Resident on-call

Pediatric Issues

- Unaccompanied minors – major issue – assure their safety and a process for re-unification
- Equipment – have to have the right sized stuff – remember after age 6 you're basically using adult sized stuff though
- Dosing errors are common – especially under stress

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Patient #1

- 2347, Critical Care Bay #3
- 6 yo female
- Presented with a GCS 4-5
- Predominantly, obvious external signs of head trauma
- First to CT scanner
- Non-operative SDH
- Admitted to PICU

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Patient #2

- 0003, Critical Care Bay #1
- 12 yo female
- Paraplegic , deformities bil femurs, mild resp distress
- Obvious cervical spine injury
- Intubated for airway protection and respiratory distress
- Additional diagnostics performed in ED to prioritize patient #1 to CT scanner
- Tibial traction pin L, Femoral traction pin R
- To CT #3
- CTs with L clavicle fx, pulmonary contusion, C6,7 & T1, 2 fractures, L acetabular fx, bil femur fx, cardiac contusion

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Patient #3

- 0021, Critical Care Bay #2
- 4 yo female
- Managed by a colleague, Dr. Stephen Smith
- Presented with abdominal pain
- Exam with abdominal tenderness
- Taken to CT #2
- Contained liver laceration identified, non-operative
- Admit PICU

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Patient #4

- 0109, Found in Internal Waiting Room, sitting with cousin (not involved in MVC)
- 12 yo female
- She reported she was in the accident and was having abdominal pain.
- Moved to main ED cubicle, A11.
- eFAST and CT's negative.
- Admitted for observation.

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Patient #5

- 0055, Not registered as a patient
- Main ED, C7
- Mother (Driver), 32 yo female
- Registered as a patient in the Stab room after syncopal event
- ED evaluation unremarkable.
- D/C from ED

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Patient #6

- 0058, Not registered as a patient
- Main ED, C7
- 3 month old female
- eFAST performed prior to registration and negative
- Concerns that patient may be more somnolent
  - Head and cervical spine CT negative
- Admit Pediatrics for serial exams and tertiary survey

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Patient #7

- 0111, Main ED, A9
- 9 yo female
- Complaining of HA and hip pain
- ED work up only notable for possible small IPH
- Admitted to PICU
- Repeat head CT with same

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Patient #8

- 0021, Main ED C7
- 2 yo female
- Right knee pain
- eFAST negative
- Knee xray negative
- Admit Pediatrics for observation and tertiary exam

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Patient #9

- 0020, Main ED C8
- 10 yo female
- Left foot injury and abrasion
- eFAST negative
- Admit Pediatrics for observation and tertiary exam

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Concluding Points

“Can we just stick to the plan?”

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A EMS COMMAND
(Coordinate with Incident Command (IC)/form Unified Command)

- Upon arrival at the scene, the role of EMS Command will be assumed by an individual and announced on the radio. (Example: "[*name*] will be EMS Command, or Division Supervisor, etc.")
- Announce arrival of EMS to IC face to face or via radio.
- Any change in the person filling the role must also be announced.
- EMS Command is responsible for all unassigned positions within the Incident Response Plan (IRP) until delegated.
- Radio discipline on scene is maintained by allowing only EMS Command or designee to interface with the Communication Center.
- To manage complex incidents, EMS Command may appoint staff to serve in support roles.
- EMS Command must provide regular Situation Reports (SITREPs).
- Consider notifications for hospitals, command staff, etc.
- Give early consideration to resource needs.

SCENE SIZE-UP

It is vital to communicate an accurate scene size-up so the appropriate resources can be started. It is better to start more resources and cancel them, than to have a delayed response.

The information should include:

- Type of Incident.
- Potential number of patients.
- Types of injuries.
- Severity of injuries.
- Give staging location.
- Best route in/out.
- Is the on-call Medical Director needed on scene?

Do hospitals need to be alerted to the incident or potential patients? If yes, contact MRCC.

This will initiate:
- MNTrac EMS System Advisory
- MRCC Patient Tracking.

EMS Command is responsible for the Safety and Accountability of EMS Personnel unless delegated.

B EMS OPERATIONS
(Responsible for Triage, Treatment, Transport, & Staging until delegated)

TRIAGE SUPERVISOR
(Coordinate with Operations and/or Transportation Supervisor)

1. Provide EMS Command with approximate number of patients.
2. Identify, corral, and monitor "walking wounded."
3. Update EMS Command with resource needs.
4. Expedite and coordinate patient movement to transport area.

TRIAGE

The category descriptions below serve only as guidelines and should not preclude medical personnel from categorizing a patient based on experience or other clinical findings.

GREEN: minor, may go to hospital triage area.

YELLOW: moderate, requires an ER bed.

RED: critical, requires ER stabilization room.

BLACK: dead. Do *NOT* move.

TREATMENT SUPERVISOR
(Coordinate with Triage and/or Transportation Supervisor)

- Organize medical care in treatment area.
- Update EMS Command with resource needs (supplies, personnel, etc.).
- Provide for medical needs of "walking wounded."
- Direct First Responders when caring for multiple patients.

STAGING SUPERVISOR
(Report to EMS Command or designee)

- Establish staging area and keep entry/exit routes open.
- Respond to requests for resources from EMS Command or designee.
- Assign the appropriate resource to meet request.
- Provide requested resources with location of assignment, talkgroup, and any special instructions.
- Keep EMS Command updated on resources in staging.

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TRANSPORTATION SUPERVISOR
(Report to EMS Command or Division Supervisor)

- Requests resources through EMS Command.
- Coordinate the rapid loading of transporting vehicles.
- Record the triage color and number of patients transported by each vehicle. Record names if possible.
- Keep entry/exit routes open.

Patient Tracking

EMS Unit				Receiving Hospital

Resource Accountability
In=At scene Out= Left scene

Resource	In	Out

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C — 2nd IN or LATE ARRIVING AMBULANCES
(Report to EMS Command or designee)

Notification
1. Go to assigned radio tactical talkgroup.
2. Contact the Communication Center of the agency controlling the incident for instructions.
3. Approach scene using designated route to avoid hazards.
4. Upon arrival at assigned area, contact EMS Command, or Staging Supervisor if established.
5. All responders will identify themselves using the following format: Dept Name, Type of Resource, and Radio #.

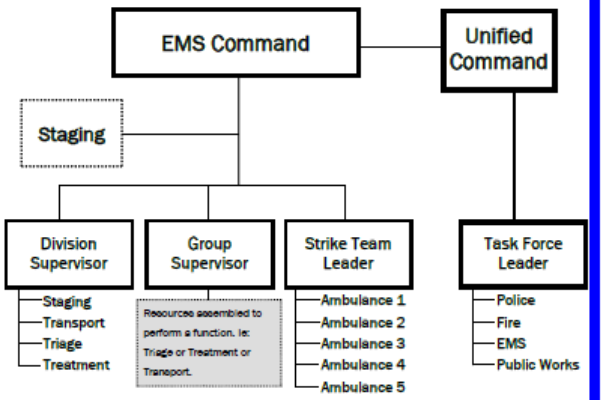
At Staging
- Remember other vehicles, do not block entry/exit routes.
- Stay inside the vehicle until assigned a duty.

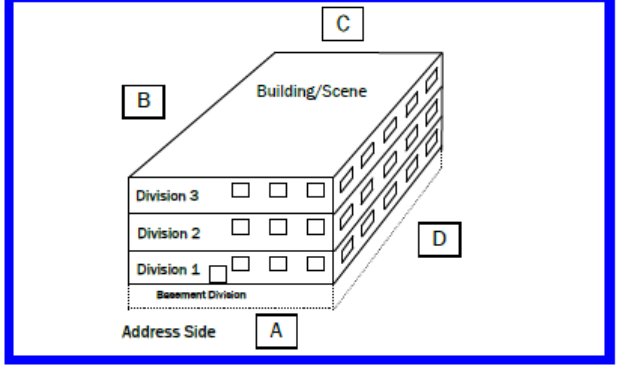
Loading Patients and Leaving the Scene
1. Quickly load patients and provide treatment while transporting to the appropriate hospital!
2. Provide EMS Command, or designee, the number of patients and triage category being transported.
3. Contact your Communication Center and advise them of your status.
4. Immediately contact MRCC/Medical Control by RADIO.
5. Communicate: Radio-ID, Destination, Age, Gender, First Name, Last Name, Chief Complaint, Triage Color, ETA. *(Crews may be prompted for additional information.)*
6. In order to facilitate patient tracking, prior to clearing destination/ receiving facility EMS crews are encouraged to contact MRCC or Medical Control with patient(s) name(s) and/or physical description of patinet(s) in not given previously.

Metro Region
EMS System

Funded and Created by the:
Metropolitan Emergency Services Board,
Metro Region EMS System,
Emergency Preparedness Sub-Committee

Using Divisions/Groups
- In large or widely scattered scenes (ie: natural disasters) establish divisions/groups early to maintain operational control.
- Divisions are geographic areas with assigned resources.
- Groups are resources assembled to perform a specific function.
- Divisions operate independent from one another. Division Supervisors report to EMS Command.
- Requests for resources (vehicles, talkgroups, personnel, etc.) must be made through EMS Command.





EMERGENCY MEDICAL SERVICES INCIDENT RESPONSE PLAN

GUIDELINES
This plan is based on the principles and guidelines of the National Incident Management System (NIMS) and assumes responders have a working knowledge of the Incident Command System (ICS) and the positions it utilizes.

- The command structure presented in this plan may require expansion to meet the needs of larger or more complex incidents.
- Refer to agency specific guidelines for special incidents: HazMat, Police Tactical Operation, Fire Standby, Water Rescue, Structural Collapse, Rehab, etc.
- MRCC should be notified if the incident may impact hospital and/or EMS systems.

- FIRST ARRIVING CREW: *Refer to Panels A & B .*
- 2nd IN or LATE ARRIVING AMBULANCES: Refer to Panel C.
- **Do NOT respond unless requested!**

Operational Considerations
- Contact MRCC/Medical Control of the potential for contaminated patients to self transport.
- Ensure crews are wearing proper protective equipment.
- Ensure crews are wearing identification vests.
- Multi-patient/MCI buses. (Contact MN Duty Officer 651.649.5451)
- MCI Trailer - Additional supplies - Mobile Comm. Unit.
- Access to and use of mutual-aid management staff.
- Need for command staff call-

Revised: June 2011

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Concluding Points

- Maximize communication throughout incidents
  - Inter-agency and intra-agency
  - Pre-hospital – Hospital
  - Hospital (internal)
  - Regional partnerships

Concluding Points

- Train on challenging scenarios
  - Include all elements of response & care
    - LEOs, EMS, Fire, Hospital, OEM
  - Stress inoculation

> "We don't rise to the level of our expectations, we fall to the level of our training"
>
> - *Archilochus*

Concluding Points

- In MCI situations, conventional wisdom may not be relevant
  - Focus resources on what will bring the greatest benefit to the most
  - Ethical dilemmas in triage/decision-making will exist
  - Activate resources early; it's easier to cancel a resource than realize you need them when it's too late

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Questions