

2025 Trauma Reach

Managing Mass Casualty Events

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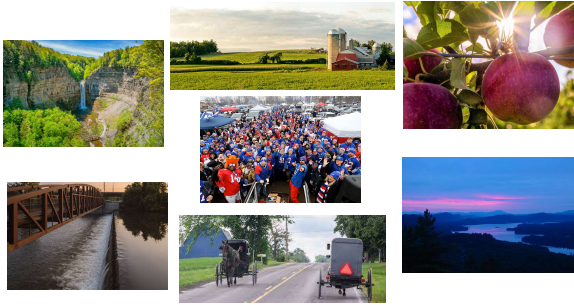
Where's home?

2

Where everyone thinks we live

3

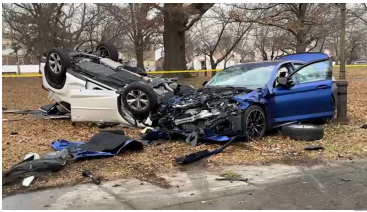
Where we live



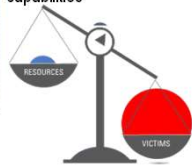
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Mass Casualty Incident?



Overwhelms the local health care system, number of patients exceeds local resources & capabilities



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Common Causes

Fires
Accidents
Industrial Accidents
Acts of Violence
Natural Disasters
Planned events



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What are your Local Capabilities?

EMS
Fire & Rescue
Specialized Rescue
Hazardous Materials
Aeromedical
Alternate Transportation
Hospitals



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Coordinated Response

Incident Command System

Common Terminology
Modular
Incident Action Plan
Span of Control
Resource Management
Chain of Command



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Often Forgotten

Shelter needs
Facilities
Food & Water
Medications
Language Barriers
Family Reunification

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Media

Have a plan

Control your narrative

Positive messages

Tell your story.....
or someone else will



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ICS Roles

Incident Commander: Manage all EMS related aspects of incident, ensuring effective coordination with other agencies, efficient resource allocation.

Triage Officer: Responsible for sorting patient based on severity of injury

Treatment Officer: Responsible for overseeing the treatment / triage area during a MCI

Transport Officer: Responsible for managing the flow of patients to area hospitals during an MCI



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Timely trauma care saves lives

Guideline is intended to help avoid over & under triage

Overtriage: overestimating the severity of injuries and unnecessary mobilization of the trauma team for patients without significant injuries

Undertriage: underestimating the severity, urgency of condition, possibly resulting in missed injuries and suboptimal care

Goal is to Get the Right Patient to the Appropriate Destination in a Timely Manner.

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National Guideline for the Field Triage of Injured Patients

RED CRITERIA
High Risk for Serious Injury

Injury Patterns	Mental Status & Vital Signs
<ul style="list-style-type: none"> Penetrating injuries to head, neck, torso, and proximal extremities Skull deformity, suspected skull fracture Suspected spinal injury with new motor or sensory loss Chest wall instability, deformity, or suspected flail chest Suspected pelvic fracture Suspected fracture of two or more proximal long bones Crushed, degloved, mangled, or pulseless extremity Amputation proximal to wrist or ankle Active bleeding requiring a tourniquet or wound packing with continuous pressure 	<p>All Patients</p> <ul style="list-style-type: none"> Unable to follow commands (motor GCS < 6) RR < 10 or > 29 breaths/min Respiratory distress or need for respiratory support Room-air pulse oximetry < 90% <p>Age 0-9 years</p> <ul style="list-style-type: none"> SBP < 70mm Hg + (2 x age in years) <p>Age 10-64 years</p> <ul style="list-style-type: none"> SBP < 90 mmHg or HR > SBP <p>Age ≥ 65 years</p> <ul style="list-style-type: none"> SBP < 110 mmHg or HR > SBP

Patients meeting any one of the above RED criteria should be transported to the highest-level trauma center available within the geographic constraints of the regional trauma system

YELLOW CRITERIA
Moderate Risk for Serious Injury


Mechanism of Injury	EMS Judgment
<ul style="list-style-type: none"> High-Risk Auto Crash <ul style="list-style-type: none"> Partial or complete inversion Significant intrusion (including roof) CRASH escape rate 50% CRASH escape rate 50% Need for extrication for unresponsive patient Crash (age 0-9 years) unrestrained or unrestrained (CRASH) seat belt Vehicle telemetry data consistent with severe injury (impact seq, motorcycle, ATV, horse, etc.) Highly unstable (air, water, fire, etc.) or with significant impact Fall from height > 15 feet (all ages) 	<p>Consider risk factors, including:</p> <ul style="list-style-type: none"> Lowest level of injury (age 1-15 years) or older adults (age 16-64 years) with significant head injury Anticipation of air Suspicion of child abuse Special, high resource healthcare needs Pregnancy > 20 weeks Burns in conjunction with trauma Children should be triaged preferentially to pediatric capable centers <p>If concerned, take to trauma center</p>

Patients meeting any one of the above YELLOW CRITERIA WHO DO NOT MEET RED CRITERIA should be preferentially transported to a trauma center, as available within the geographic constraints of the regional trauma system (need not be the highest-level trauma center)

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Destinations Matter



Trauma programs afford:

- Improved survival
- Better outcomes & quality of life
- Cost-effective care
- Require Effective Triage

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Should be transported directly to the highest-level trauma center in your region

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National Guideline for Field Triage of Injured Patients

YELLOW CRITERIA Moderate Risk for Serious Injury

Mechanism of Injury	EMS Judgment
<ul style="list-style-type: none"> High-Risk Auto Crash <ul style="list-style-type: none"> Partial or complete ejection Significant intrusion (including roof) <ul style="list-style-type: none"> >12 inches occupant side OR >18 inches any side OR Need for extrication for entrapped patient Death in passenger compartment Child (Age 0-9 years) unrestrained or in unsecured child safety seat <ul style="list-style-type: none"> Vehicle telemetry data consistent with severe injury Rider separated from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.) Pedestrian/bicycle rider thrown, run over, or with significant impact Fall from height > 10 feet (all ages) 	<p>Consider risk factors, including:</p> <ul style="list-style-type: none"> Low-level falls in young children (age ≤ 5 years) or older adults (age ≥ 65 years) with significant head impact Anticoagulant use Suspicion of child abuse Special, high-resource healthcare needs Pregnancy > 20 weeks Burns in conjunction with trauma Children should be triaged preferentially to pediatric capable centers <p>If concerned, take to a trauma center</p>

Patients meeting any one of the YELLOW CRITERIA WHO DO NOT MEET RED CRITERIA should be preferentially transported to a trauma center, as available within the geographic constraints of the regional trauma system (need not be the highest-level trauma center)

Requires specialty care at the closest trauma center

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Pediatric Trauma

A pediatric trauma system functions best as a part of an inclusive emergency medical services (EMS), trauma system, and disaster response system at the local, regional, state, and national levels

Not all Hospitals will be completely equipped with appropriate pediatric resuscitation equipment or medications.

There may be significant variability in pediatric specific training & experience among physicians, nurses and ancillary staff.

Pediatric Readiness Project; ensuring emergency care for all children.

Children have unique characteristics that require specific care in emergencies.

Not all children have access to specialized care

Pediatric Readiness Saves Lives

76% Lower mortality in ill children

60 % Lower mortality in injured children

Pediatric patients should be preferentially transported to pediatric trauma centers or pediatric capable hospitals

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Pediatric Readiness

Engaged	Ready	Innovator
Participate in NPRP	Participate in NPRP	Participate in NPRP
Any score is eligible	Score above 70	Score above 80
Identified PECC	Identified PECC	Identified PECC
		Willing to share ARC best practices & resources
2	14	20

Always Ready for Children

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Western	Finger Lakes	Central New York	Northeast	Hudson Valley	NYC	Nassau	Suffolk
Adult Level I 1	Combined Level I 1	Combined Level I 1	Adult Level I Pediatric Level II 1	Combined Level I 1	Adult Level I Pediatric Level II 5	Adult Level I 3	Combined Level I 1
Pediatric Level I 1	Adult Level I 1 (PA)	Adult Level II 1	Adult Level I 1 (VT)	Adult Level II 3	Adult Level I 7	Adult Level II 1	Adult Level I 1
	Adult Level III 1	Adult Level III 3	Adult Level III 2	Adult Level III 4	Adult Level II 5		Adult Level II
 New York State Trauma Regions					Pediatric Level I 2		Pediatric Level II 1
					Pediatric Level II 2		Adult Level III 3

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Transport Officers Essential Role

Assign destinations & transport resources

Communicate with receiving hospitals

What are their capabilities

Soon after a disaster passes, we tend to turn our eyes away & focus our resources on the day-to-day, rather than preparing for the rare, but foreseeable, potentially catastrophic disaster. It's another form of triage, how much we invest in preparing for that, a very important question for public policy. We are a short-sighted species – Sheri Fink

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Key Points

EMS

What are your receiving hospitals capabilities presently?
How many patients can they accept?

Hospitals

Nature of the event & how many patients are involved?
What are you sending them?

M Mechanism • Age/Sex • Mechanism of Injury • History	I Injuries • Injuries • Time of injury	S Signs & Symptoms Vital Signs (including significant changes)	T Treatment Treatment (interventions performed)
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After-Action Review

Structured process for evaluating an event, project or task after it is completed. The goal is to learn from both our successes and failures to improve

What was our mission?

What went well?

What could have gone better?

What might we have done differently?

Who needs to know?

Identify & engage stakeholders

First Response Agencies
Emergency Management
PSAP
Hospitals
Supporting NGO's

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Destinations Matter

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<ul style="list-style-type: none"> High-Risk Auto Crash <ul style="list-style-type: none"> Single or multiple vehicle Significant intrusion (including roof) > 10 inches occupant air bag > 10 inches any side air bag Roof for extrusion for ejection/ ejection Death in passenger compartment > 1000 gpg 10+ g force sustained or uncontrolled 1000 gpg sustained Witness testimony data consistent with severe injury Major extrusion from transport vehicle with significant impact (eg, motorcycle, ATV, horse, etc.) Penetrating air, fire, thermal, or other significant injury Age from 18 to 100 (all ages) 	<ul style="list-style-type: none"> Consider risk factors, including: <ul style="list-style-type: none"> Low level falls in young children (age < 5 years) or older adults (age > 65 years) with significant head impact Anticoagulant use Location of crash scene Special, high-responder healthcare needs Pregnancy > 20 weeks Access to resources with trauma capable centers Children should be triaged preferentially to pediatric capable centers If concerned, take to trauma center

Patients meeting any one of the YELLOW CRITERIA WHO DO NOT MEET RED CRITERIA should be preferentially transported to a trauma center (as available within the geographic constraints of the regional trauma system (need not be the highest level trauma center))

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Questions?

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UNIVERSITY HOSPITAL

Trauma
Center

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Golisano Children's Hospital

Pediatric
Trauma
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