



Seed
GLOBAL HEALTH



EMS ECHO 119



Enhancing Clinical Competencies in MCI

EXPERTS



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Chat Questions
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This session will delve into areas such as;

1. Definition of MCI
2. Key principles of triage during MCI response
3. Resource prioritization during MCI
4. Clinical decision making, effective communication and coordination during MCI
5. Referral pathways for MCI
6. Practical demonstration of on-scene care and principles of effective MCI management



scan to register

FRIDAY

31st July 2026

2-4pm EAT

Use link;

<https://shorturl.at/NWUWu>

Meeting ID: 977 3744 9380



A BLOODY TEN DAYS

JULY 7



**High-Speed Tragedy
in Omoro.**
*15 dead, 28 injured on
Kampala–Gulu Highway.*

JULY 10



**Train Collision
in Mukono.**
*School bus struck
by train at crossing.*

JULY 14



**Mbale–Iganga
Highway Collision.**
*School trip bus hits
stationary trailer;
1 death, 15 injuries.*

JULY 16



Fatal Crash in Kapchorwa.
*Third school bus accident in one
week (Kings David Junior School).*



**AN URGENT CALL FOR
ROADWORTHINESS.**

*Authorities must prioritize
driver conduct and vehicle
safety to protect children
and travelers.*



KASESE FLOODS

RIVER NYAMWAMBA WREAKS HAVOC IN MUNICIPALITY

NTV

WWW.NTVUGANDA.CO.UG

NTV

GET NTV NEWS U

NTV

All Things Mass Casualty

Not Another Bus please!!!!

Dr. Daniel Olinga

Emergency Medicine Physician & Lecturer, Department of Emergency Medicine, MUST

Friday, 31 July 2026 · 2:00–4:00 PM EAT

So, let's Indulge Our selves!!!



Session Roadmap

What this session will cover

1

Definition of MCI

2

Key principles of triage during MCI response

3

Resource prioritization during MCI

4

Clinical decision-making, communication & coordination during MCI

5

Referral pathways for MCI

6

Practical demonstration of on-scene care & MCI management principles

Definition of a Mass-Casualty Incident

“An event in which the number and severity of casualties exceeds the immediately available medical resources and capacity to manage them using routine procedures.”

Key idea

Resource capacity is exceeded — not simply patient count. A situation involving few casualties can still be an MCI for an under-resourced facility, and vice versa.

Classification of MCI

Scaled by demand relative to local capacity

LEVEL I – LOCAL

SIMPLE MCI

Demand can be met by local resources, augmented internally (extra staff, beds, supplies).

LEVEL II – REGIONAL

COMPOUND MCI

Local resources & infrastructure are overwhelmed; external / regional mutual aid is required.

LEVEL III – NATIONAL

MAJOR / CATASTROPHIC

Widespread infrastructure damage; national or international assistance is required.

A Paradigm Shift in Care

Routine practice vs. MCI response

ROUTINE CLINICAL CARE

FOCUS

Best possible outcome for one patient

RESOURCES

Essentially unconstrained per patient

DECISION SPEED

Deliberate, fully worked-up

GUIDING QUESTION

“What is best for this patient?”

MCI RESPONSE

Best possible outcome for the group

Deliberately rationed & prioritized

Rapid, protocol-driven

“What does the most good for the most people?”

Five Pillars of MCI Response

The structure for the rest of this session

1

Triage

2

**Resource
Prioritization**

3

**Clinical
Decision-
Making**

4

**Communicatio
n &
Coordination**

5

**Referral
Pathways**

Triage — Purpose & Principles

Sorting casualties by survivability and urgency

Purpose

To rapidly identify who needs care first — directing limited resources to those most likely to benefit, as fast as possible.

1

Speed Seconds per casualty, not minutes — a full assessment is not the goal.

2

Simplicity Few, clear decision points anyone trained can apply consistently.

3

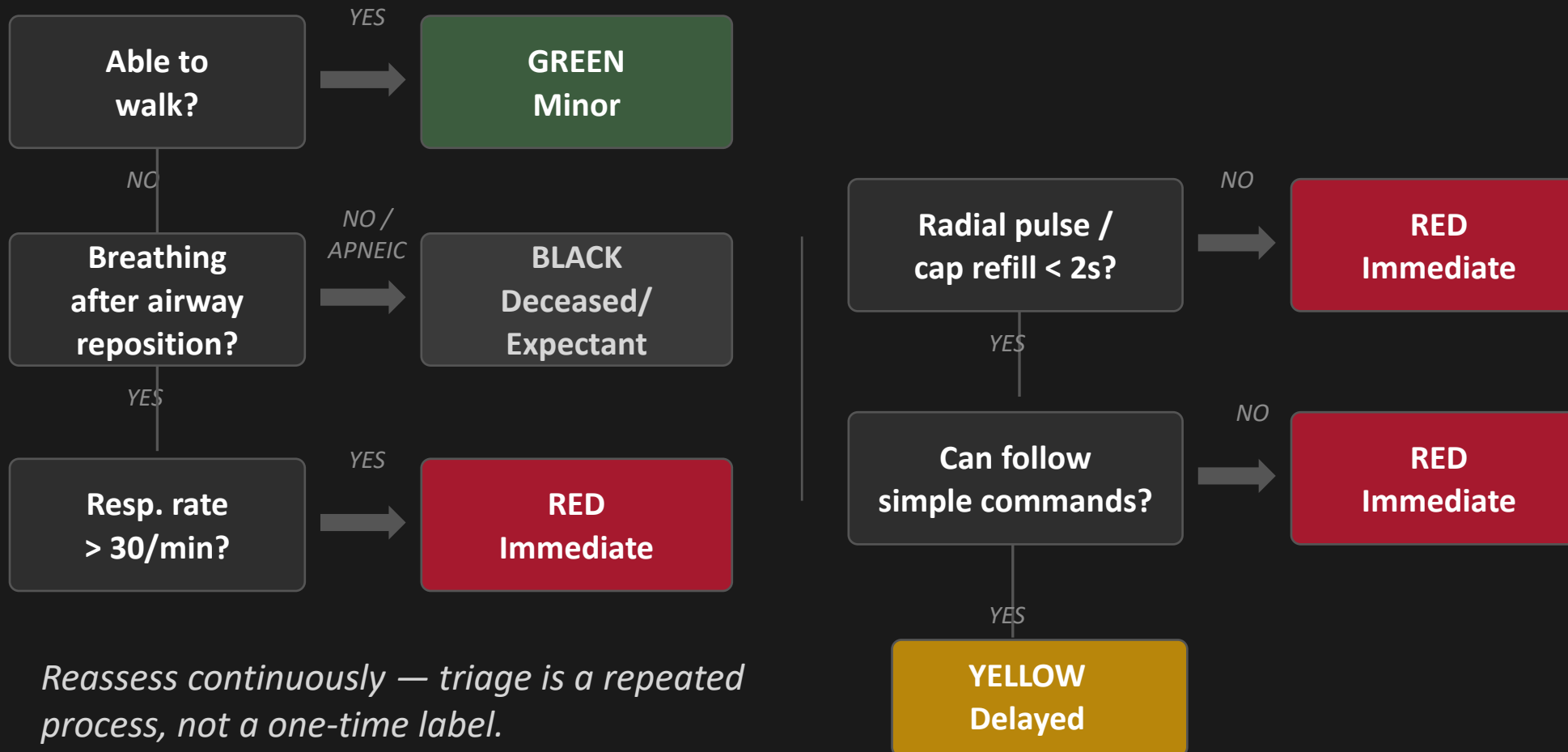
Repeatability The same casualty, assessed by different responders, is triaged the same way.

4

Dynamic Status changes — triage category is reassessed at every stage of care.

The START Triage Algorithm

Simple Triage And Rapid Treatment



Reassess continuously — triage is a repeated process, not a one-time label.

START TRIAGE

(Simple Triage and Rapid Treatment)

All Walking Wounded

MINOR

RESPIRATIONS

YES

Over
30/min

IMMEDIATE

Under
30/min

PERFUSION

Radial Pulse Present

Radial Pulse Absent

Capillary Refill

Over
2
Seconds

Under
2
Seconds

Control
Bleeding

IMMEDIATE

NO

Position Airway

YES

IMMEDIATE

NO

DECEASED

MENTAL STATUS

Can't Follow
Simple Commands

IMMEDIATE

Can Follow
Simple Commands

DELAYED

Respiration 30
Perfusion 2
Mental Status CAN DO

SALT Triage

An alternative / complementary global-sort system



Sort

Global sort by voice/visual command: those who walk, then those who wave or purposefully move, then those who show no movement — assessed in that order.



Assess

Individually assess each casualty in priority order — life-threatening conditions first.



Lifesaving Interventions

Control major hemorrhage, open the airway, needle-decompress a chest, give an antidote — brief interventions only, before moving to the next casualty.



Treatment / Transport

Assign a final category — Immediate, Delayed, Minimal, or Expectant/Dead — and transport in that priority order.

SALT vs. START: SALT begins with a global voice/visual sort across the whole scene and folds hemorrhage control and airway opening into the sorting pass itself — useful when casualty numbers are very high.

Triage Categories

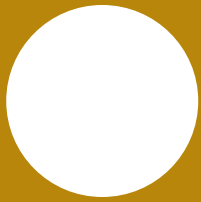
Universal colour-coding for casualty status



RED

Immediate

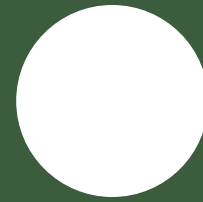
Life-threatening but
survivable injuries needing
care within minutes.



YELLOW

Delayed

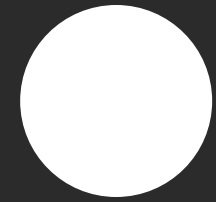
Serious injuries; care can
safely wait hours without
threat to life.



GREEN

Minor

Walking wounded; minimal
injuries, can wait or self-
transport.



BLACK

Expectant / Deceased

Injuries incompatible with
survival given available
resources.

Resource Prioritization

Matching scarce means to sorted need

1

Match to triage category

Personnel, equipment and transport are allocated in order of RED → YELLOW → GREEN, not arrival order.

2

Use scarce-resource protocols

Pre-agreed criteria (e.g. ventilator allocation) applied consistently, not case-by-case improvisation.

3

Reassess & reallocate

Resources shift as casualties are re-triaged and as new supplies or personnel arrive.

4

Activate surge capacity

Cancel elective work, open surge beds, call in off-duty staff, and request mutual aid early.

The Ethics of Allocation

Fair process when demand outstrips supply

Guiding principle

“The greatest good for the greatest number.”

This utilitarian standard justifies withholding maximal effort from a single casualty when it would consume resources needed to save several others.

- Transparency — criteria known and applied openly
- Consistency — same criteria for every casualty
- Non-discrimination — no priority by status or connections
- Alignment with Uganda MoH EMS guidance

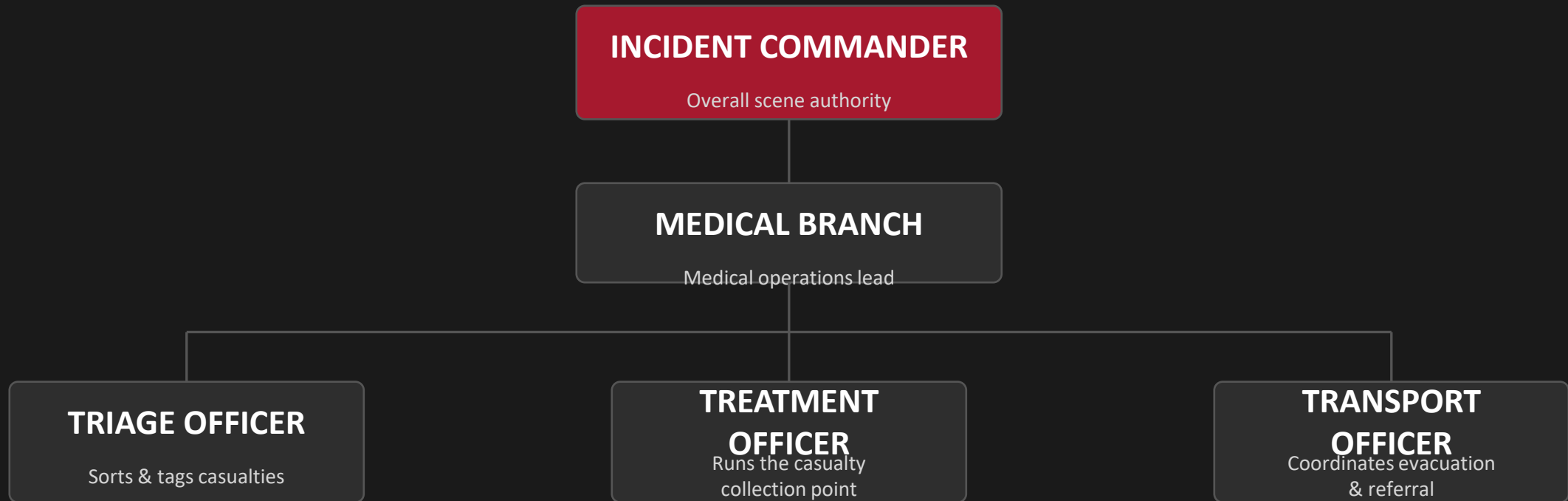
Effective Clinical Decision-Making

Adapting judgement to the scale of the incident

- 1 Protocol over work-up** Apply simplified, pre-agreed algorithms rather than individualized diagnostic work-ups.
- 2 Continuous re-triage** Treat triage as a moving target — reassess as condition and context change.
- 3 Recognize decision fatigue** Rotate decision-makers; cognitive load rises sharply after the first hour.
- 4 Senior oversight** A designated senior clinician owns final calls on contested or scarce-resource decisions.
- 5 Team-based judgement** Cross-check high-stakes decisions with at least one other responder where time allows.

Communication & Coordination

Incident Command System — Medical Branch



Common terminology, a single chain of command, and defined spans of control prevent the confusion that overwhelms scenes fastest.

Communication — Key Elements

What keeps a scene coordinated

Common terminology

Plain, standard language across all responding agencies
— no service-specific codes.

METHANE / SBAR reports

Structured handover to receiving facilities: Major incident, Exact location, Type, Hazards, Access, Number of casualties, Emergency services.

Redundant channels

Radio, phone and runner back-up each other; no single point of communication failure.

Regular SITREPs

Scheduled situation reports keep command, facilities and responders on the same picture.

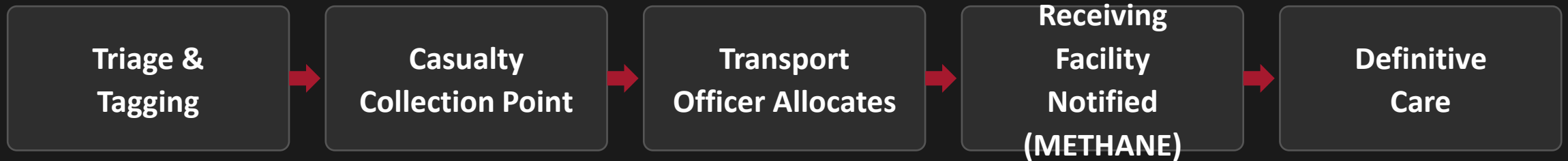
METHANE

The standard first-report mnemonic to receiving facilities & command

M	Major incident declared	Confirm a major incident / MCI status has been declared.
E	Exact location	Precise location, landmark, or GPS coordinates of the incident.
T	Type of incident	e.g. road traffic collision, structural collapse, fire, chemical release.
H	Hazards	Present or potential hazards — fire, fuel, structural instability, chemicals.
A	Access / egress	Best routes in for responders and out for casualty transport.
N	Number of casualties	Estimated numbers, by severity where possible.
E	Emergency services	Services present and further services required.

Referral Pathways during MCI

From scene to definitive care



- Load-balance across facilities — avoid overwhelming the nearest hospital while others sit idle.
- Every casualty is tagged and tracked from scene to discharge or death.
- Receiving facility confirms capacity before transport departs, wherever possible.



KAMPALA

KAPCHORWA SCHOOL BUS CRASH DEATH TOLL RISES TO 24



nbs

2885 views

MUSEVENI, UN INVOL DISCUSSES SUDAN PEACE EFFORTS AND REGIONAL SECURITY

09:01 PM

A Recent Ugandan Tragedy

Kapchorwa District, 17 July 2026

The King David Junior School bus crash

A school bus returning to Kampala from an educational trip to Sipi Falls veered off the road and overturned at Chekwatit village, Kapchorwa District, after reportedly striking a large stone. The crash claimed the lives of 23 pupils and one adult, with dozens more injured — several critically — and casualties dispersed to facilities across a rural, resource-limited district roughly 300 km from Kampala.

Why this is an MCI teaching case

- A single incident instantly exceeded local (rural district) resource capacity
- Casualties needed rapid triage & distribution across multiple receiving facilities
- Remote location strained communication, access and referral pathways

Steps Taken So Far

The Ugandan government's response to the Kapchorwa tragedy

1

Nationwide suspension

All school trips and educational excursions suspended with immediate effect, pending review.

2

Mandatory vehicle inspection

Compulsory roadworthiness inspection required for all school transport vehicles.

3

Stricter driver clearance

Tighter vetting and clearance requirements introduced for school transport drivers.

4

Tighter trip approval

New, stricter approval procedures required before any future school trip is authorized.

5

Dedicated bus identification

Plans announced for dedicated markings/identification for registered school buses.

6

Inter-ministerial committee

A committee has been tasked with drafting long-term school transport regulations.

Source: Ministry of Education & Sports / Uganda Police Force public statements, July 2026.

Common Challenges & Pitfalls

What most often breaks an MCI response



Communication breakdown

Competing channels, unclear command, or radio silence at critical moments.



Triage creep / over-triage

Too many casualties labelled RED overwhelms treatment capacity meant for the truly critical.



Resource hoarding

Units hold supplies or transport 'just in case', starving other parts of the response.



Poor scene coordination

Freelancing responders, duplicated efforts, and unclear casualty collection points.

Key Takeaways

- 1 Speed and simplicity in triage save lives — perfection is not the goal.
- 2 Resource decisions follow the greatest-good principle, applied consistently and transparently.
- 3 Communication is the backbone of coordination — structure it deliberately, don't leave it to chance.
- 4 Referral pathways must balance load across facilities, with every casualty tracked.
- 5 MCI response is a skill — it improves with drills, review, and practice.

Discussion & Questions

Session 5 — Discussion / Q&A precedes on-scene practical demonstration.

Dr. Daniel Olinga

Emergency Medicine Physician & Lecturer, Department of Emergency Medicine, MUST
Ministry of Health, Uganda · EMS ECHO Session 119

Prehospital team:

On-scene management

- Staff
- Patient
- Equipment / Medications
- Mode of transport
- Documentation/Handover

Identify

Situation

Background

Assessment

Recommendation

ON SCENE CARE PROCESS

Overall responsibility for all aspects: CSCATTT Aims: 1) Salvage many patients as possible / Clinical urgency 2) Safety of response teams 3) Optimal utilisation of resources 4) Synchronised engagement of specialised forces and system capacities. 5) Reduced response and clearing time. 6) Effective Proximity and appropriate evacuation to definitive care.	Command and Control (SHOC) Room Strategic, Tactical and Operation Commands
	Safety Identify hazards (PCBRN), secure inner/outer cordons, and ensure personal protective gear is used.
	Communication Maintain reliable multi-agency information sharing and log all key command decisions.
	Assessment Continuously evaluate the scale, scope, and changing needs of the incident. (METHANE)
	Triage Sort victims rapidly using established systems like SIEVE & SORT, START or SALT and use the colour codes.
	Treatment Provide immediate, basic life-saving interventions (such as (ABCDE) assessment and controls, haemorrhage stoppage, Immobilisation, Resuscitation, Psychotherapy, Gathering Casualty data, etc.) at the CCS
	Transport Coordinate the orderly flow and evacuation of patients to appropriate receiving hospitals. Consider Proximity, Specialisation, Financial implications, not to over surge Receiving facilities.

COMMAND and CONTROL



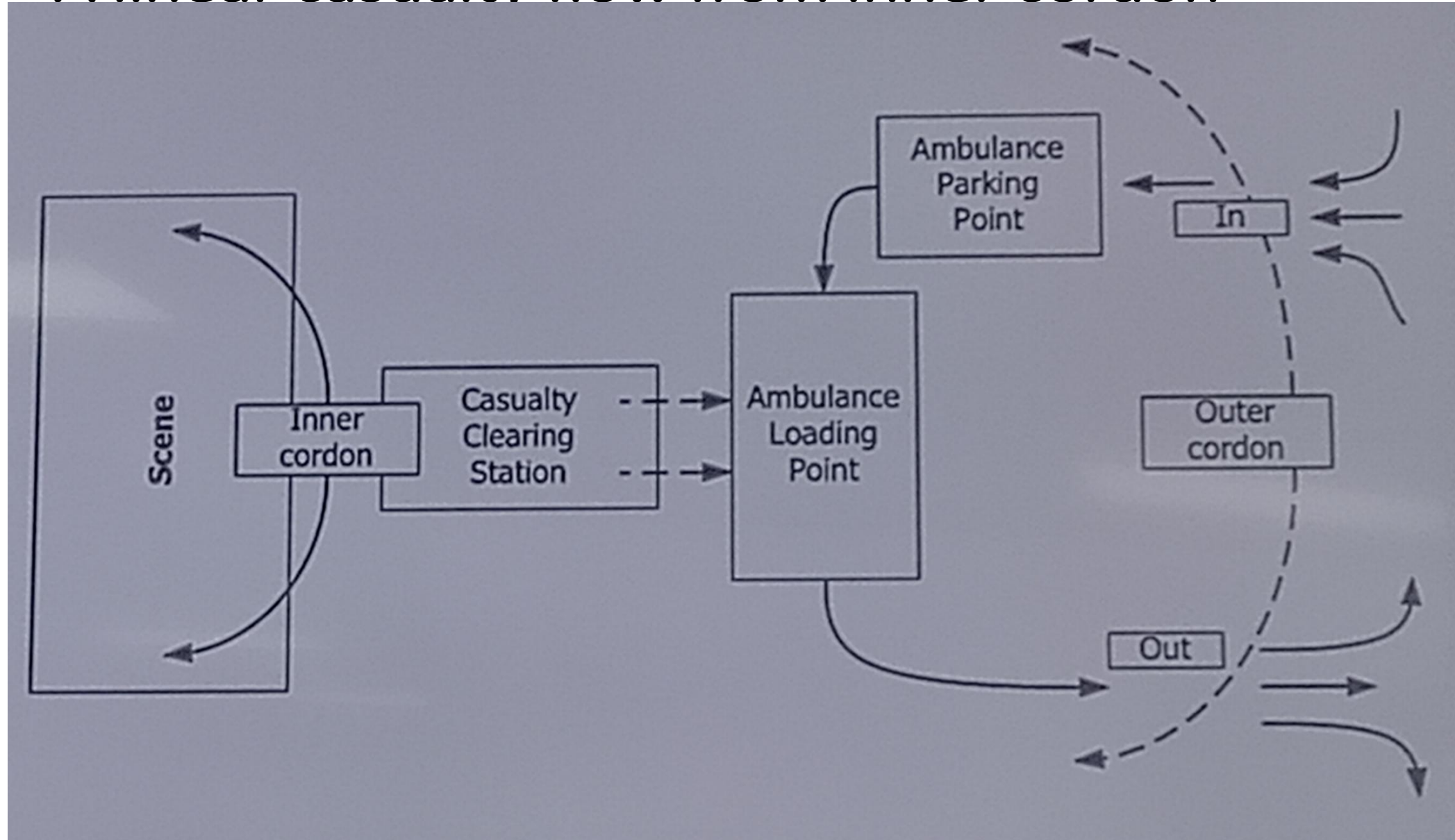
SAFETY METHANE

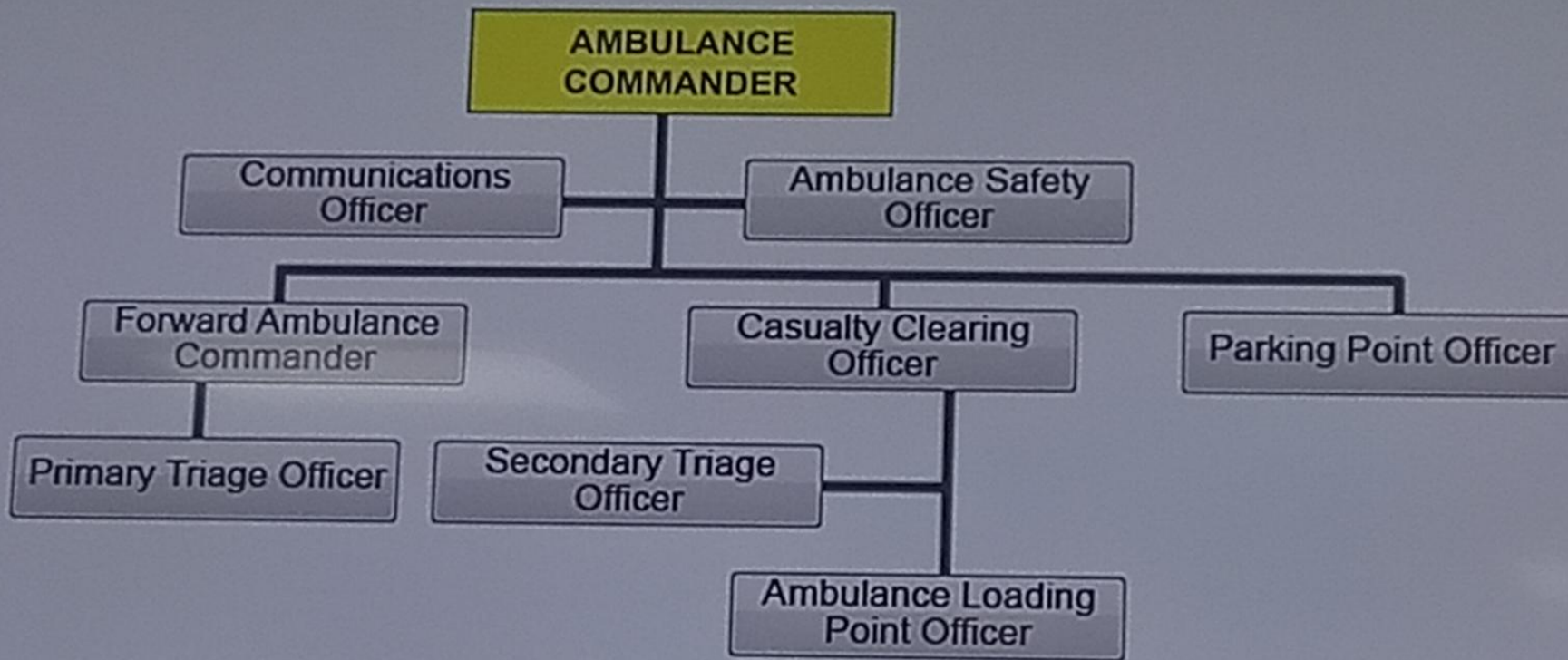
- Hazard Assessment

- 1) Physical
- 2) Chemical
- 3) Biological
- 4) Radiological
- 5) Nuclear

- 1) Major Incident Declared
- 2) Exact location
- 3) Type of incident
- 4) Hazards
- 5) Access and Egress
- 6) Number and type of casualties
- 7) Emergency services present and required

A linear casualty flow from inner cordon



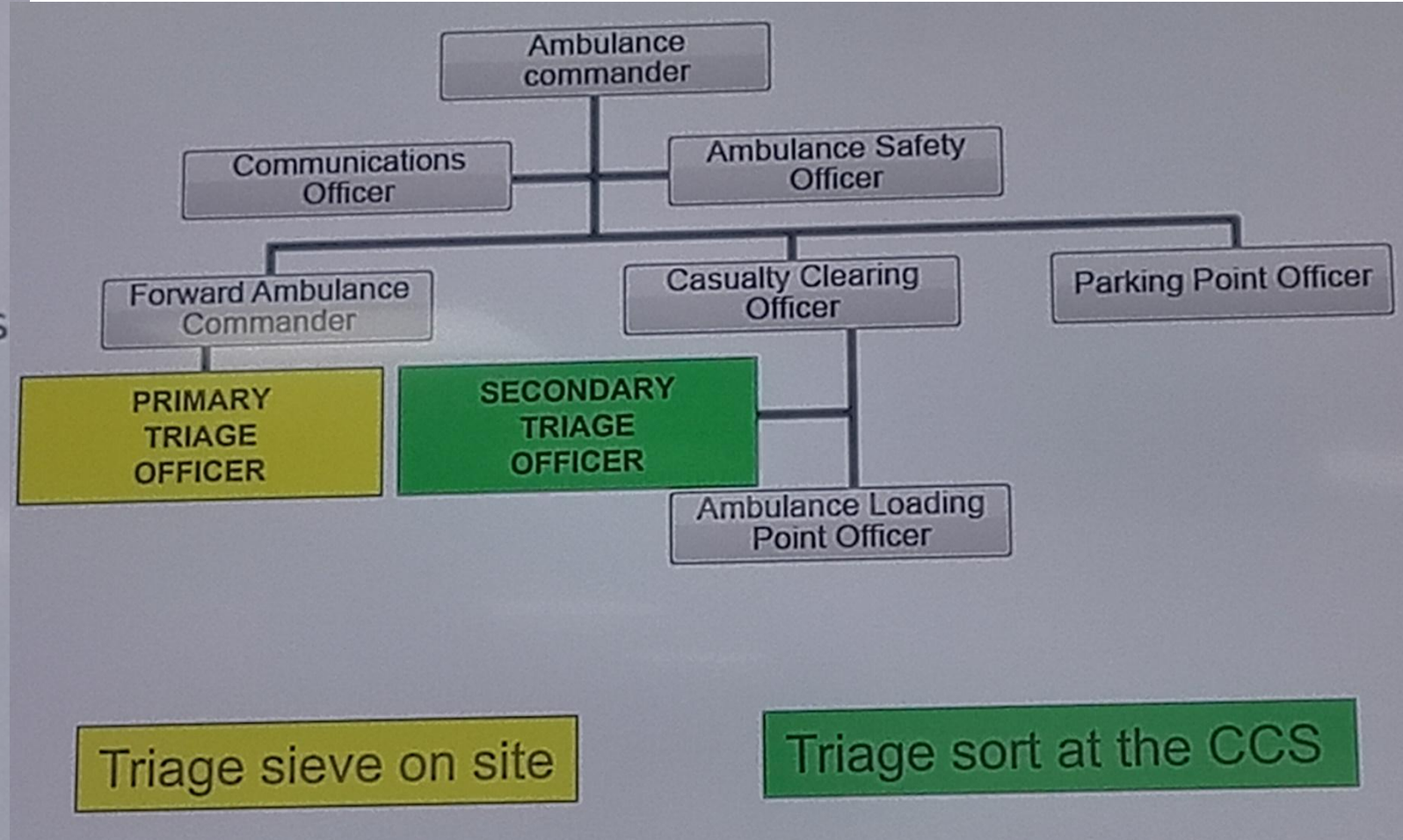


Overall responsibility for all aspects of

C
S
C
A
T
T
T

Casualty Clearing Station (CCS) selection criteria

- Safe distance from all hazards
- Accessible from the site
- Accessible from the evacuation route
- Sheltered



Sieve Triage

• CATEGORY	• RESOURCES	• EXAMPLES
RED PRIORITY 1 — EMERGENCY (Immediate Dispatch)	• More than three resources needed	• Unresponsive Airway & Breathing: stridor, respiratory distress, Severe allergic reactions with airway compromise • Circulation: Catastrophic heavy bleeding, cardiac arrest • Disability: active convulsions, unconsciousness, suspected stroke, head injury • Other: High-Risk Trauma, Major Burns over 20%, Poisoning, Snake Bite, Severe Chest/Abdominal Pain, Electrocution, Overdose • Pregnant with heavy bleeding, severe abdominal pain, convulsions, active labour, trauma.
YELLOW PRIORITY 2 — URGENT (Urgent Dispatch)	• More than two resources	• Yellow Airway & Breathing: swelling/mass of mouth or throat; wheezing (no red criteria) • Circulation: vomiting everything, ongoing diarrhoea, unable to feed/drink, ongoing bleeding • Disability: altered mental status, acute focal neurologic complaint, acute visual disturbance • Other: visible acute limb deformity, open fracture, suspected dislocation, sexual assault, needlestick exposure • Pregnancy-related complaints (no red criteria)
GREEN PRIORITY 3 — ROUTINE (Dispatch when ambulance available)	• One resource	• NO Red or Yellow criteria present • Walk wounded
EXPECTANT / BLACK	•	• Obviously dead / cardiac arrest and resuscitation effort are not going to be provided • Critically injured with minimal chances of surviving (Need a lot of resources, time with) • Requires extensive treatment that exceeds the available resources

SIEVE TRIAGE

CCS SORT

ASSIGNING PRIORITY USING SORT

No	(A) Eye opening	(A) Verbal Response	(A) Motor response	Score
Step 1 GCS	3	4	3	10
	GCS = (A)+(B)+(C) = 10			
Step 2 SORT Score	(X) GCS score 3	(Y) Respiratory rate score 3	(Z) Systolic B/P 3	9
	SORT = (X)+(Y)+(Z) = 9			
Step 3 PRIORITY	Score (09) Less Than Ten is RED			
Step 4 Up grade	Depend on injury diagnosed			

No	(A) Eye opening	(A) Verbal Response	(A) Motor response	Score
Step 1 GCS	4	5	5	14
	GCS = (A)+(B)+(C) = 10			
Step 2 SORT Score	(X) GCS score 4	(Y) Respiratory rate score 4	(Z) Systolic B/P 4	12
	SORT = (X)+(Y)+(Z) = 9			
Step 3 PRIORITY	Score (12) Twelve + is Green			
Step 4 Up grade	Depend on injury diagnosed			

STEP 1: Calculate the GLASGOW COMA SCORE (GCS)

A: Eye opening:		B: Verbal response:		C: Motor response:	
Spontaneous	4	Orientated	5	Follows command	6
To Voice	3	Confused	4	Localise Pain	5
To Pain	2	Inappropriate	3	Withdrawal to pain	4
None	1	Incomprehensible	2	Flexion to pain	3
		No Response	1	Extension to pain	2
				No Response	1

$$\text{Glasgow Coma Score (GCS)} = A + B + C$$

STEP 2: Calculate the TRIAGE SORT SCORE

X: Convert Glasgow Coma Scale		Y: Respiratory Rate		Z: Systolic Blood Pressure	
13 – 15	4	10 – 29	4	≥ 90	4
9 – 12	3	> 29	3	76 – 89	3
6 – 8	2	6 – 9	2	50 – 75	2
4 – 5	1	1 – 5	1	1 – 49	1
3	0	0	0	0	0

$$\text{Triage Sort Score} = X + Y + Z$$

STEP 3: Assign a triage PRIORITY

12	=	Priority 3
11	=	Priority 2
≤ 10	=	Priority 1
0	=	Dead

STEP 4: Upgrade PRIORITY, dependent on the injury/ diagnosis

No	Casualty	AVPU & GCS	RR	Sys. BP	Other conditions	Colour code	Resources needed
1)	Driver M/ 28yrs	• Doesn't react to pain	• N/A	• N/A	• Head injury		
2)	Passenger F/32yrs	• Unconscious but reacts to pain	• 34/Min	• 80 mmHg	• Rt. Humerus Fracture • Approximately 20 weeks pregnant • Temp 34.4°C		
3)	Passenger M/45yrs	• Oriented	• 30/Min	• 125 mmHg	• Fractured Tibia • Temp 36.8°C		
4)	Passenger M/60yrs	• Eyes open to painful stimulus • Seems confused • Withdraw from painful stimulus	• 29/Min	• 135mmHg	• Temp 35.8°C • Complain of severe neck pain • Bruise on the scalp		
5)	Passenger M/48yrs	• Unconscious	• 34/Min	• 82 mmHg	• Temp 33.6°C • Clammy skin • Capillary refill 3 Sec • No obvious injury		
6)	A M/02yrs with mother	• Crying	• 30/Min	• N/A	• N/A		
7)	Back seats M/23yrs	• Oriented	• 18/Min	• 110	• Upper arm deformity • Severe pain • Temp 36.6°C		
8)	Back seats F/26yrs	• Eyes Open to speech • Uses inappropriate words • Withdraw from painful stimulus • Cannot stand	• 09/Min	• 85 mmHg	• Seemingly she has a pelvic injury		
9)	Back seats M/28yrs	• Oriented • Walking	• 24 /Min	• 115 mmHg	• Has a bruised wound on the hand		

