Resource Prioritization and prehospital care in Disaster Management

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“ Making every resource count when seconds matter.”

“Prehospital strategies for resilience in crisis.”

Resource Prioritization in Disaster Management

- **Definition:** Allocating limited supplies, personnel, and funds to urgent needs first.
- **Goal:** Save lives, stabilize infrastructure, ensure fairness.
- **Modern focus:** Efficiency, equity, sustainability, and data-driven decision-making.

Resource Prioritization in Disaster Management

Hazard Vulnerability Assessment (HVA)

- **Purpose:** Identify risks, assess vulnerabilities, and prioritize preparedness.
- **Key Components:**
  - **Hazard Identification:** Natural (earthquakes, floods), technological (power outage), human-caused (conflict, terrorism).
  - **Vulnerability Analysis:** Population density, infrastructure strength, resource availability.

Resource Prioritization in Disaster Management

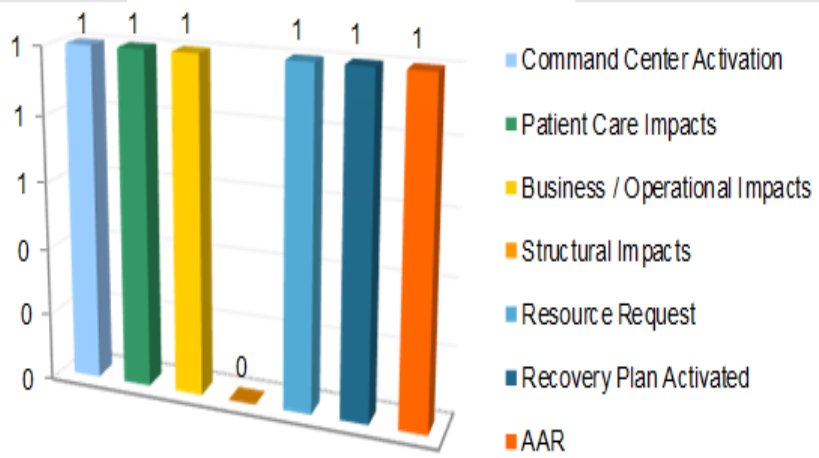
- **Impact Estimation:** Potential consequences on health, economy, and environment.
- **Risk Prioritization:** Rank hazards by likelihood and severity.
- **Mitigation & Preparedness:** Develop strategies to reduce impact and strengthen resilience.

Kaiser Permanente

Event	PROBABILITY	ALERTS	ACTIVATIONS	SEVERITY = (MAGNITUDE - MITGATION)						RISK
				HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED-NESS	INTERNAL RESPONSE	EXTERNAL RESPONSE	
	Likelihood this will occur			Possibility of death or injury	Physical losses and damages	Interuption of services	Preplanning	Time, effectiveness, resources	Community/Mutual Aid staff and supplies	* Relative threat
SCORE	0 = N/A 1 = Low 2 = Moderate 3 = High	Number of Alerts	Number of Activations	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = Low 2 = Moderate 3 = High	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 = High 2 = Moderate 3 = Low	0 = N/A 1 =High 2 = Moderate 3 = Low	0 - 100%
Active Shooter										
Bomb Threat										
Chemical Exposure, External										
Civil Unrest										
Communication / Telephony Failure										
Drought										
Earthquake										
Evacuation										

Summary For - SITE & ADDRESS AaBET Hospital

ALERT TYPE	OCCURRENCE
Command Center Activation	1
Patient Care Impacts	1
Business / Operational Impacts	1
Structural Impacts	0
Resource Request	1
Recovery Plan Activated	1
AAR	1
Total Alert	**1**



YEAR 2025

TOP 10 HVA	RANK	OCCURRENCE
Mass Casualty Incident - Trauma	1	1
Trauma	2	0
Civil Unrest / Protesting	3	0
Pandemic	4	0
Drought	5	0
Infectious Disease Outbreak	6	0
Earthquake	7	0
Epidemic	8	0
Landslide	9	0
Power Outage	10	0

YEAR 2025

TOP 10 ACTUAL ALERTS	OCCURRENCE	HVA RANK
Mass Casualty Incident - Trauma	1	1

- http://www.calhospitalprepare.org/hazard-vulnerability-analysis

Integrated Disaster Management & System Dynamics

Made with AI

Preparedness Phase

- Plan & Organize Resources
- Training & Drills
- Mutual Aid Agreements
- Stockpile & Pre-Position Supplies
- Strategic Warehousing

Response Phase

- Activate Emergency Operations
- Rapid Resource Deployment
- Procure Additional Supplies
- Speed is Critical (e.g.) SNS in 12 Hours)
- Real-Time Data & Reasssesment

Integrated Disaster Management



System Dynamics



Ethical Principles

Principle	Description
Life-saving first	Prioritize medical aid, search and rescue, evacuation.
Critical infrastructure	Restore electricity, water, communication systems.
Equity and fairness	Protect vulnerable groups (children, elderly, disabled).
Sustainability	Minimize waste and environmental impact for long-term resilience.

Practical Steps

- **Rapid Needs Assessment**
- Identify casualties, damage, shortages.
- Use mobile data and GIS mapping.
- **Tiered Resource Allocation**
- Tier 1: Emergency medical care, food, water, shelter.
- Tier 2: Utilities and transport restoration.
- Tier 3: Long-term recovery (schools, housing, economy).
- **Coordination Mechanisms**
- Clear command structures (ICS).
- Integrate local, national, and international aid.
- **Monitoring & Feedback**
- Real-time tracking and adaptive prioritization.

Challenges & Risks

- Resource scarcity and tough trade-offs.
- Logistical bottlenecks (damaged roads, airports).
- Political and social pressures.
- Data gaps reducing efficiency and fairness.

Recommendations

- Adopt hybrid models combining speed and fairness.
- Invest in local capacity for early response.
- Use technology (AI & drones) for real-time monitoring.
- Plan ahead with pre-positioned supplies and trained personnel.

Conclusion

- Resource prioritization is **the backbone of effective disaster management**.
- Balancing efficiency, equity, and sustainability ensures resilience.
- Data-driven planning and coordination save lives and rebuild communities.

Prehospital Care in Disaster Victims

Objectives

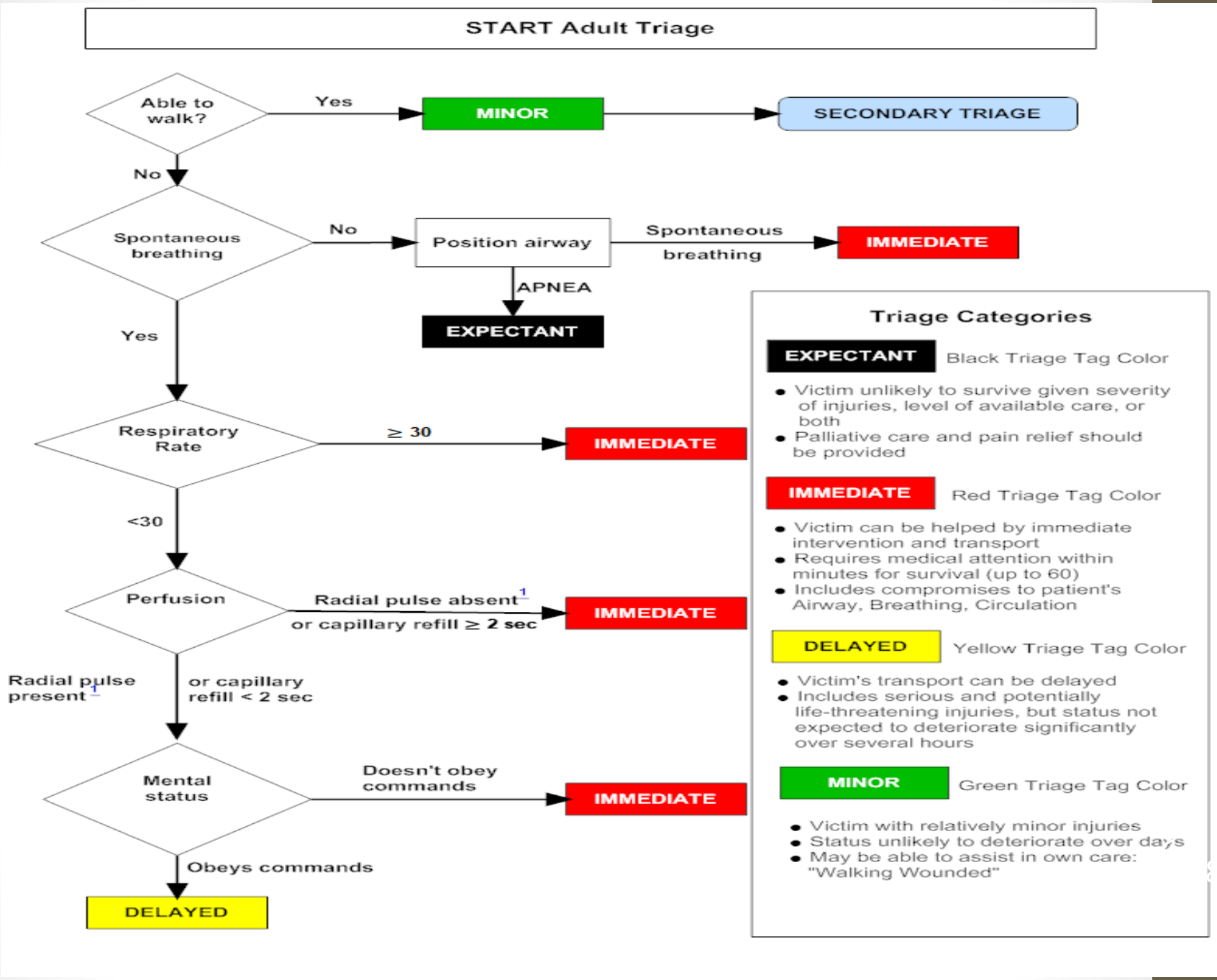
- Save lives through rapid triage and stabilization
- Prevent complications with early interventions
- Ensure safe transfer to hospitals
- Coordinate responders and resources

Pre-hospital Medical Plan:

- Establishing a command post or incident command center.
- Establish a clear coordination and communication pathway(radios, satellite phones)
- Emergency medical technicians, paramedics, nurses, and physicians

Key Components

- **Triage** – START system, color-coded categories
- **Basic Life Support (BLS)** – airway, bleeding control
- **Advanced Life Support (ALS)** – IV fluids, defibrillation, advanced airway
- **Psychological First Aid** – reassurance, stress management
- **Transport & Evacuation** – ambulances, helicopters, improvised vehicles


START Adult Triage
Able to walk?
Yes
MINOR
SECONDARY TRIAGE
No
Spontaneous breathing
No
Position airway
Spontaneous breathing
IMMEDIATE
APNEA
EXPECTANT
Yes
Respiratory Rate
≥ 30
IMMEDIATE
<30
Perfusion
Radial pulse absent[1] or capillary refill ≥ 2 sec
IMMEDIATE
Radial pulse present[1]
or capillary refill < 2 sec
Mental status
Doesn't obey commands
IMMEDIATE
Obeys commands
DELAYED
Triage Categories
EXPECTANT
Black Triage Tag Color
Victim unlikely to survive given severity of injuries, level of available care, or both
Palliative care and pain relief should be provided
IMMEDIATE
Red Triage Tag Color
Victim can be helped by immediate intervention and transport
Requires medical attention within minutes for survival (up to 60)
Includes compromises to patient's Airway, Breathing, Circulation
DELAYED
Yellow Triage Tag Color
Victim's transport can be delayed
Includes serious and potentially life-threatening injuries, but status not expected to deteriorate significantly over several hours
MINOR
Green Triage Tag Color
Victim with relatively minor injuries
Status unlikely to deteriorate over days
May be able to assist in own care: "Walking Wounded"

Challenges

- Overwhelming casualty numbers
- Limited equipment and trained personnel
- Damaged infrastructure delaying evacuation
- Difficulty in maintaining patient records

Best Practices

- Pre-positioned emergency medical teams and supplies
- Regular disaster drills for EMS and volunteers
- Mobile apps & GIS for victim tracking
- Strong referral pathways to higher-level care

Conclusion

- Prehospital care is **life-saving and foundational** in disaster response
- Effective triage, stabilization, and coordination reduce mortality
- Strengthening systems ensures resilience in future disasters

QUESTIONS?