Move It or Lose It: Rapid Disposition & Emergency Department Flow in Mass Casualty

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- Meredith Masters: None

- Laura Jackson: None

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Objectives

Describe the importance of having a **rapid disposition plan** and how Stanford Hospital has organized one.

Outline the **framework and partnerships necessary** for rapid disposition in the Emergency Department.

Discuss methods for efficiently **reorganizing hospital space** to care to care for mass casualty patients.

Review **special circumstances and barriers** and how to incorporate them into your plans.

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Case Study: Orlando nightclub shooting (6/12/2016)

▸ 49 people were killed and 53 injured in Pulse nightclub, where 300 people were in attendance. All but 17 people transported were brought to Orlando Regional Medical Center.

▸ ORMC (the only level 1 trauma center in central Florida) received 38 patients in 42 minutes. The facility is just blocks from the scene so was on lockdown during the response.

▸ Went on lockdown at 3:25 a.m. due to reports of gunshots in the lobby. Barricaded doors and continued care while police cleared ED.

▸ 5:02 a.m. brought a second wave of 10 patients when SWAT breached the barricaded nightclub.

▸ FAC was set up at the hospital, and 300 inquiries were received from families.

▸ 1,500 staff participated in post-incident stress debrief.

"By rapidly combining the resources of ORMC, APH, and WPH, we were able to effectively meet the needs of the victims. We briefly considered distributing patients among the three facilities but were concerned that this option would divide our manpower and resources, weakening our response."

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Case Study: 2017 Las Vegas Shooting (10/1/2017)

▶ Gunfire from a 32nd-floor hotel room onto a concert crowd.1,000 bullets fired. 60 killed.

▶ 413 were wounded but 867 total injured from the panic.

▶ Sunrise Hospital (Level II Trauma Center): 180 patients received

    – Set up pre-op ICU areas to manage surgical cases that could wait

    – Doe names for all patients in MCI

▶ UMCSN (only Level I Trauma Center): received 104 patients some at their ED versus their trauma center.

    – Roadblocks for staff coming in

    – 2 arrival locations on their campus (ED not the same as trauma center)

▶ Coroner's Office set up a family reunification center.
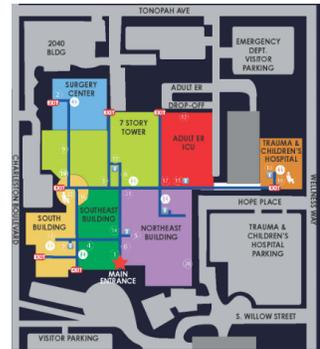
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Case Study: Asiana 214 Crash (7/6/2013)

▸ Flight crashes upon landing at SFO at 11:27 a.m.
▸ First two patients arrive to Stanford Hospital at 12:40 p.m. via USCG Helicopter.
▸ Disaster declared at 12:43 p.m., last patient arrived at 6:27 p.m., all clear sent at 8:12 p.m.
▸ Total number of patients seen: 55
▸ HCC opened at 12:43 p.m., closed at 1:30 a.m.
▸ Areas for improvement:
  – Patient ID and tracking was difficult with trauma Doe names and pre-arrivals from inaccurate EMS ringdowns
  – Registration process was slow
  – Patients released before Customs cleared them
  – Media present and persistent, unclear on how much detail could be provided to them

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Overcrowding is the Norm

LOCAL NEWS

Dozens of patients treated in 'Hallway ER' at UCSD Health La Jolla

—

Nurses protested the conditions in March, but the use of hallways to treat patients continues.

Why wait times in the emergency room are so long in California

July 6, 2023

Elizabeth Fernandez, UC San Francisco

UAB: Emergency department crowding has reached a 'crisis point'

Published: Apr. 25, 2023, 12:47 p.m.

YaleNews   EXPLORE TOPICS ▾

Emergency department crowding hits crisis levels, risking patient safety

In two studies, Yale researchers describe widespread, worsening emergency department boarding and crowding. It puts patient safety and access to care at risk.

By Mallory Locklear | SEPTEMBER 30, 2022

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When You're an Island

▸ Discharge patients ready or near ready

▸ MSE and discharge

▸ Cohort patients who cannot be moved
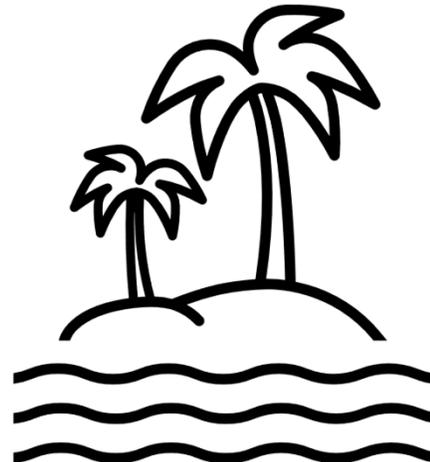
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Color Coding in EMR

Pink (in process)
Green (discharge)
Yellow (ready to discharge by resident)
Yellow-Green (conditional discharge)
Blue / Purple (ready to admit)
Emerald Green (transfer or psych)
Orange (decision to admit)
White (in waiting room, not triaged)
Bright Blue (in waiting room, triaged)
Red (roomed, not yet seen)

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Rapid Disposition Actions by Color Code

▸ **Ready-to-admit** patients get roomed by nursing sup

▸ **Ready-to-discharge** patients go to discharge lounge

▸ **Psych** patients are rapidly transferred to inpatient psych

▸ **Decision-to-admit** patients are signed out to Medicine in person

▸ **In-process** patients are changed to admit or discharge. Have a backup plan to care for these patients (residents, one MD, APPs, other units' staff…)

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Dream ➡ Reality

▶ Buy in:

   – Making sure there is a visual indicator on EMR board

   – Inpatient units accepting rapid admits

   – Discharge lounge

▶ Partners to work with:

   – Nurse Supervisors

   – Inpatient Access

   – Medicine
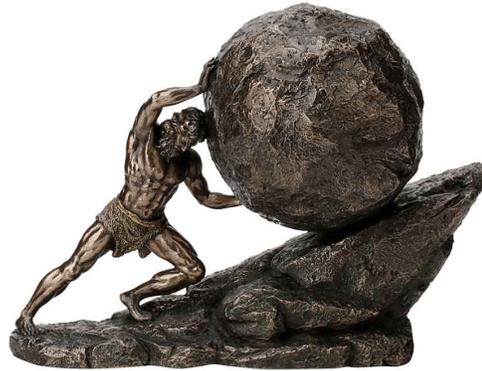
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Considerations When Activating Your MCI Plan

▶ Sometimes patients come prior to MCI activation in private vehicles/police.

▶ How good is your information from the scene?

▶ What is your threshold to activate? Should you activate early to be proactive?
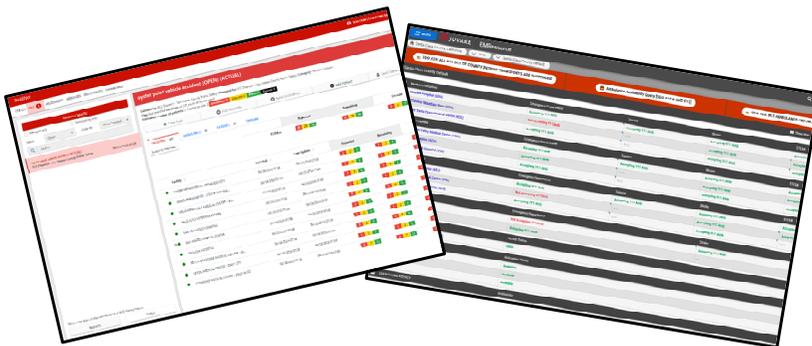
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WE MADE THE SPACE, NOW WHAT?

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Stanford Patient Arrival
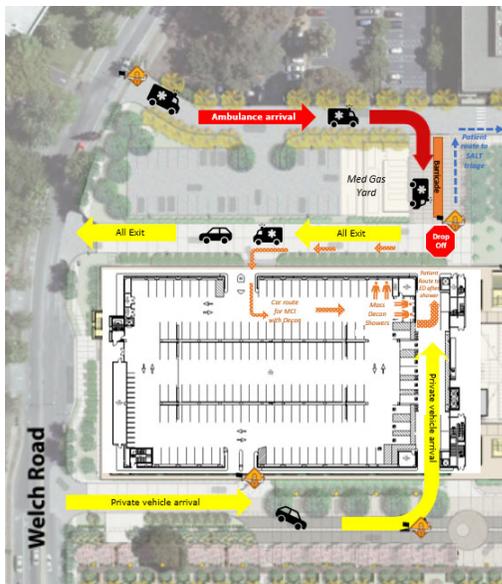
▸ Focus your resources to a single arrival point

▸ Expedite ambulance offloading

▸ Triage for cohorting /rooming

▸ Consider a quick registration

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Mass Casualty Flow

▸ Care Areas must be flexible for the needs of the incident

▸ Cohort by treatment needs and continually reassess patients in each area

▸ Some hospitals treat patients outside ED

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Create Intuitive Tools

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Triage of MCI Patients

▶ Decide on a model

▶ Do not pre-arrive from alert

▶ Use common triage language
- Immediate
- Delayed
- Minor
- Deceased
- Expectant
- Pediatric

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SALT Triage

LSI:
- Control major hemorrhage
- Open airway (if child consider 2 rescue breaths
- Chest decompression
- Auto injector antidotes

Breathing — Yes →
- Obeys commands or makes purposeful movements?
- Has Peripheral Pulse?
- Not in respiratory distress?
- Major hemorrhage is controlled?

All Yes → Minor Injuries only? — Yes → **Minor**

No (Breathing) → **Dead**

Any No → Likely to survive given current resourses — Yes → **Immediate**

No (Minor Injuries only?) → **Delayed**

No (Likely to survive) → **Expectant**

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START / JumpSTART Triage

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EMR Modifications

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Trauma Plan

▸ Be prepared for all comers
- Pediatrics
- Burns
- VA
- Trauma Center Designation will not matter

▸ Recommendation: Surgeon in charge who is not touching patients (air traffic control).They coordinate trauma teams & OR cases.

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Small ED & Critical Access Thoughts

▸ Consider pushing triage outside or to doorway

▸ Cohorting patients by acuity and disposition type

▸ Utilizing waiting room and alternate care areas

▸ MSE to DC when appropriate

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Pearls

▶ Streamlined triage process

▶ Use your space efficiently

▶ Identify ACAs/Disaster Care Areas before the event

▶ Practice where your stuff is!

▶ Consider plain language

▶ Simplify everything

▶ Everyday problems get bigger with an MCI (so fix them early)

▶ Single point of arrival

Questions

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