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Hospital Evacuation in Disasters and Emergencies

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Definition

Emptying entire hospital or a part of it

which is **insecure** for the patients and their relatives

due to internal and external factors

transferring people to **safer zones**



REF: [Khankeh et al, National hospital disaster risk management program based on accreditation indicators, 2018](#)



History

- 275 hospital evacuations in the United States within 1971 to 1997
- Italy, Pakistan, China, Indonesia, South American countries, and the United Kingdom, where some hospitals have been evacuated because of earthquake, flood, fire, and other disasters
- More than 9 hospital evacuations in IRAN within 2019 to 2020 because of earthquake, flood and corona.



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رئیس بیمارستان گلستان اهواز با اشاره به تخلیه و انتقال بیماران بیمارستان سلامت در پی خطر آبرگرفتی گفت: اولین گروه از بیماران بیمارستان سلامت، به بیمارستان گلستان رسیدند.

به گزارش «تابناک» به نقل از ایسنا دکتر میثم معزی اظهار کرد: با توجه به احتمال آبرگرفتی به دانشگاه علوم پزشکی اهواز، بیمارستان سلامت تخلیه و بیماران با اتوبوس آمبولانس فوریت‌ها وی افزود: با هماهنگی واحدها و بخش‌های مربوطه، هم‌اکنون این بیماران در حال بستری شدن و با تمام قوا در دستور کار قرار دارد.



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دسته‌بندی: خوزستان



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مدیر درمان تامین اجتماعی استان خبر داد:

تخلیه دو بیمارستان تامین اجتماعی خوزستان برای مقابله با کرونا



عکس خبر تزیینی است

ایسنا/خوزستان مدیر درمان اداره کل تامین اجتماعی

تامین

عنوان

خبر

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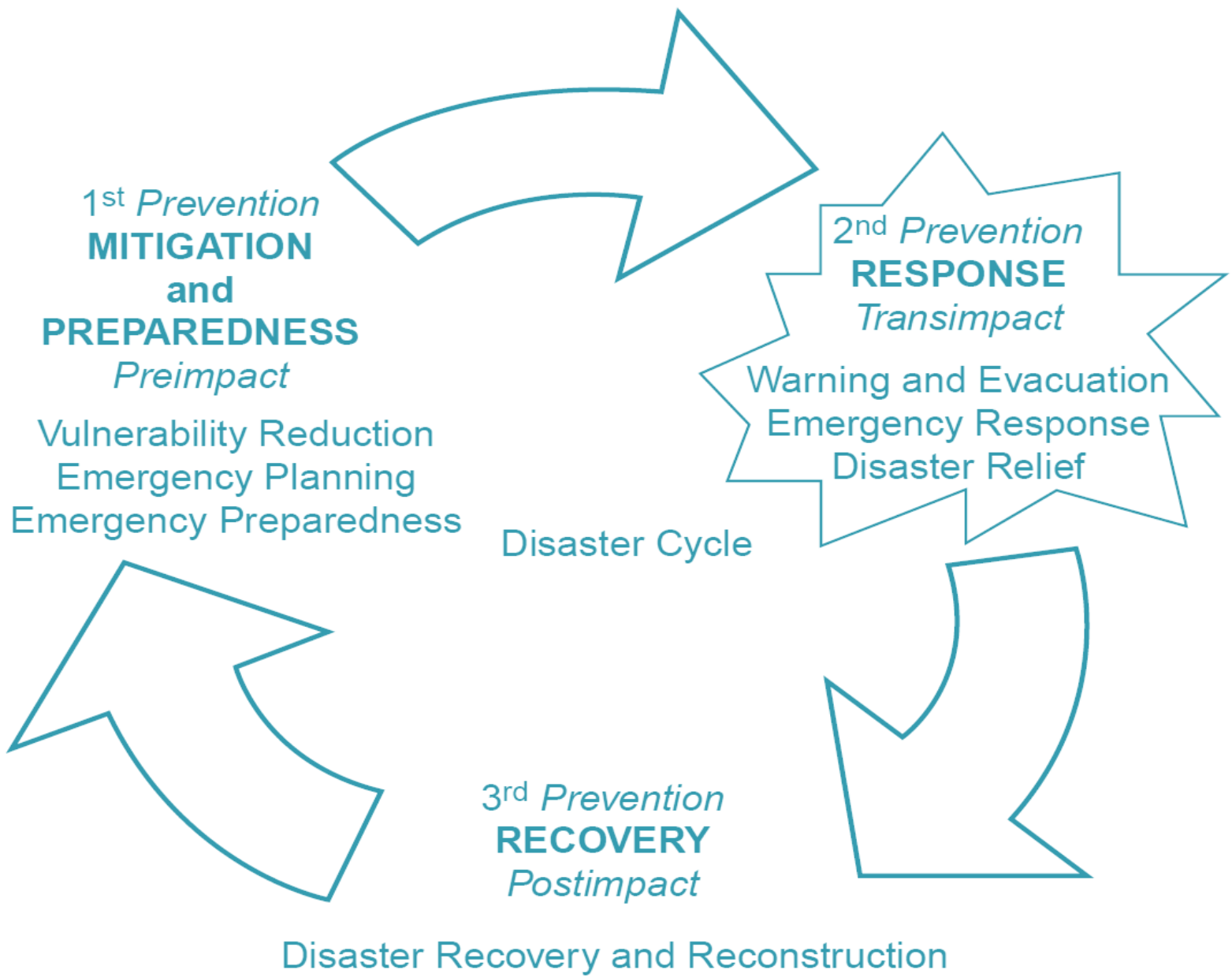
عالیت

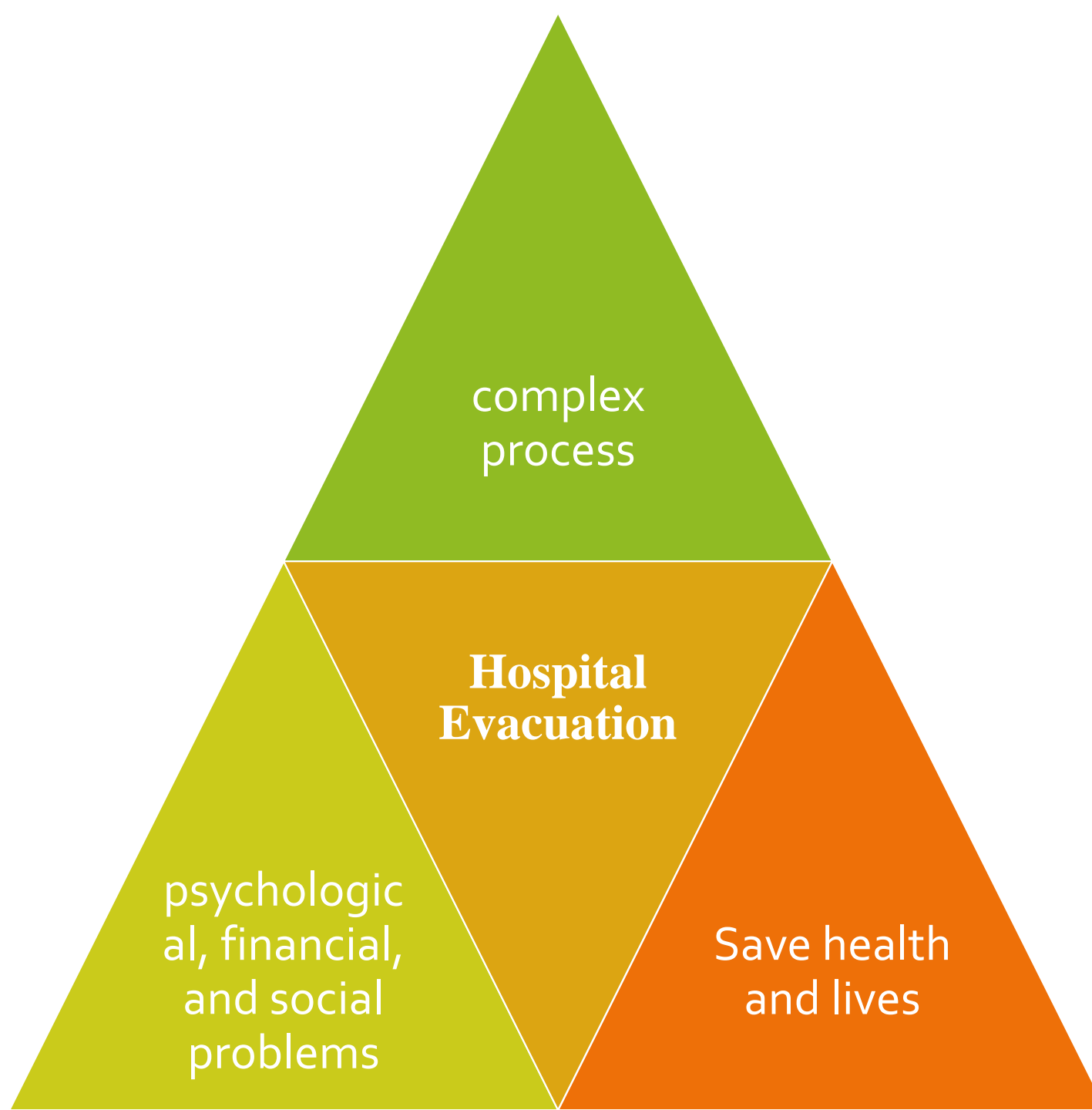
آوریل 8, 2019 | دکتر سلامت

تخلیه بیمارستان سوسنگرد / انتقال ۲۰ بیمار به اهواز



ISNA PHOTO
Mahnaz Dezhban







Hospital evacuation factors

- Fire and smoke
- Damage to infrastructure
- Lack of basic welfare services
- Exposure to hazardous substances
- Terrorist or violent operations
- Threat of bombing





Evacuate the hospital

Determination

- precise criteria
- rapid decision-making process

Basic needs

- enormous logistical undertaking
- Cooperation
- involvement of other organizations, such as police, fire and EMS
- provide transportation, facilities, supplies, equipment and staffs



Types of evacuation

- Immediate or delayed
- Vertical or horizontal
- Partial or total





Types of evacuation

Immediate

Emergency move-
evacuate immediately or
patients and staffs may
die, not time to prepare

Rapid

Evacuate as quickly and
safely as possible: limited
time to prepare (1-2 Hrs)

Gradual

No immediate danger,
sufficient time for
systematic evacuation
procedures (many hrs to
several days)

Prepare only

Do not move patient, but
begin to prepare for
evacuation



Types of evacuation

Horizontal

Moving patients from the one wing to another adjacent area on the same floor

Vertical

Moving patients from one floor to another or even from upper floors to outside the facility

Partial

The relocation of patients to unaffected areas or removal from the building of only those occupants in affected areas

Total

Removal of all occupants from the building, with the possible exception of emergency team members



1 Hospital evacuation plan

- Integrated with other pertinent protocols EOP, including activation of hospital ICS
- Assigned responsibilities and formal process for review and update of Evacuation Plan (Plan), including incorporation of after-action report results
- Staff training:
 - Plan overview
 - Specific roles and responsibilities
 - Utilization of evacuation equipment
 - Techniques for lifting and carrying patients





2 Hospital evacuation plan activation

- Define criteria and authority for decision to activate the Plan
- Define how the Plan is activated
- Identify alert and notifications
- Define the type/level of evacuation that could occur
- Describe the phases of implementation
- Define routes and exits
- Describe the protocols for accepting and orienting staff and volunteers from other facilities to assist with evacuation



Steps of hospital evacuation in severe damage

**Perform A
Pre-event
Assessment**

infrastructure, layout,
demographic situation

**Estimate Time
Needed To
Evacuate The
Hospital**

**estimate
resources needed
to evacuate the
hospital**



Estimate Time Needed To Evacuate The Hospital

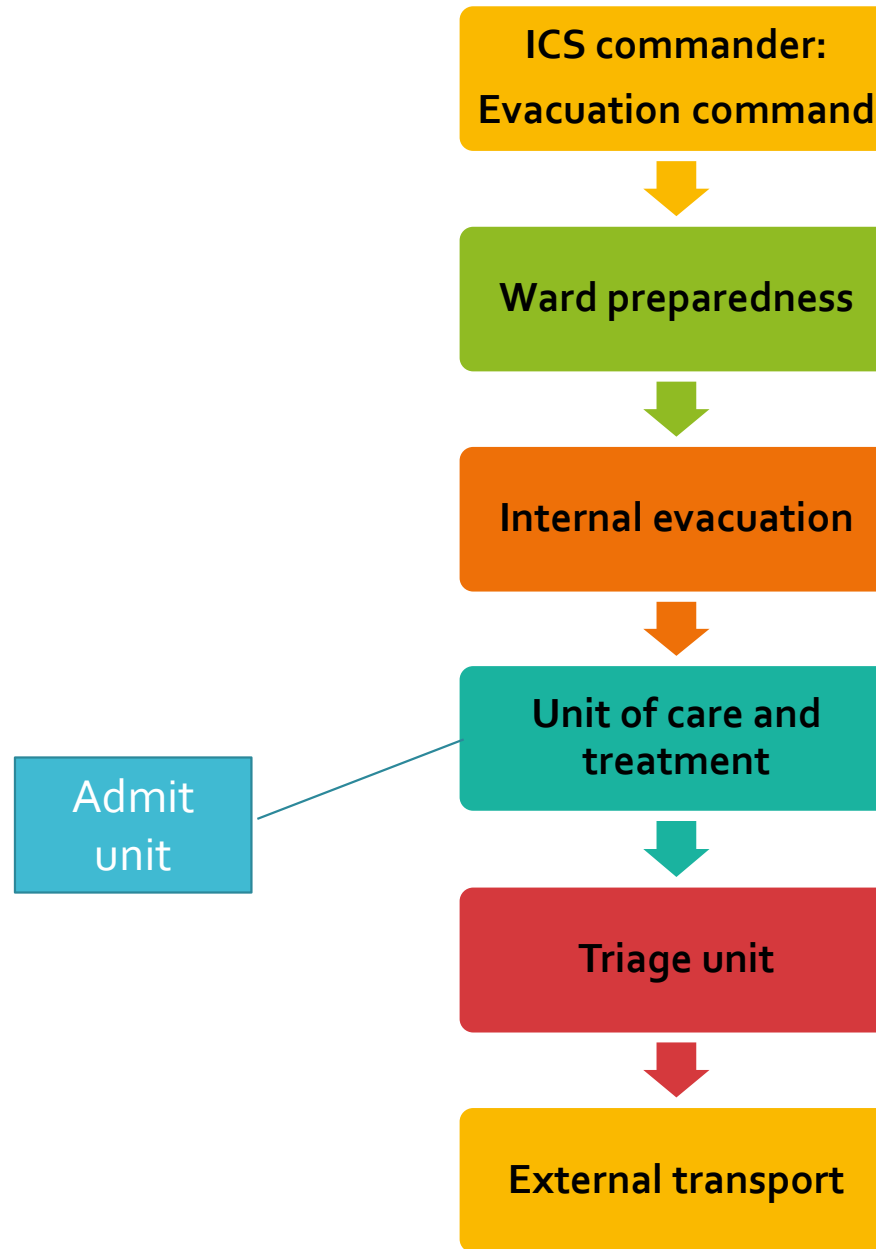
- **Number of patients**
- **Available exit routes**
- **Available resources and staff**
- **Staging area**
- **Distance to the evacuation sites**
- **Traffic conditions**
- **Transport to alternate care sites**

Estimate Resources Needed

- **both to the staging area and to transport to alternate care sites**
- **Staff**
- **Equipment**
- **Vehicles**
- **For both transportation and continuing the medical services in the appropriate environment, considering temperature, air condition, security, and safety.**



Hospital evacuation process





Hospital external evacuation steps

a crucial phase

**Creating a
staging
location**

Hospitals, clinics,
hotels, nursing
facilities

**Patients
categorized**

Green
Yellow
Red

transport



Patient categorise

- (1) ambulatory and self-sufficient patients
- (2) non-ambulatory patients who require medical care and support but are not in critical or unstable condition
- (3) patients who need critical and continuous medical services or are fully dependent on technology (patients in the ICU or isolation rooms)





3 Patient evacuation process

- Specify the protocol to assure that the patient destination is compatible to patient acuity and healthcare needs
- Establish protocols for sharing special needs information, as appropriate, with personnel participating in the evacuation including transport agencies, receiving facilities, alternate care sites, shelters, and others involved in evacuee patient care
- Identify the resources necessary to address patient needs during transport, how to access, and responsibility for acquiring and sending with the patient
- Provide evacuees with standardized visual identifiers, such as a color-coded wristband or evacuation tag, to help personnel rapidly identify special needs for high-risk conditions
- Document staff activities on the traffic flow and the movement of patients to a staging area



4 Tracking destination / arrival of patients

- A patient identification wristband (or equivalent identification) must be intact on all patients
- Describe the process to be utilized to track the arrival of each patient at the destination
- The tracking form should contain key patient information, including the following:
 - Medical Record Number
 - Time left the facility
 - Name of transporting agency
 - Original chart sent with patient (yes/no)
 - Critical medical record information (orders, medications list, face sheet) (yes/no)
 - Meds sent with patient (list)
 - Equipment sent with patient (list)
 - Family notified of transfer (yes/no)
 - Private MD notified of transfer (yes/no)





5

Transport of records, supplies and equipment

- Describe the procedure for transport of Medication Administration Records (MARs) patient care/medical records
- Describe measures taken to protect patient confidentiality
- Describe the process to transport essential patient equipment and supplies
- Define protocol for transfer of patient-specific medications and records to receiving facility
- Protocol for the transfer of patient-specific controlled substances sent with patients and procedure to record





Hospital Evacuation Rules

- Maintaining continuous medical services to non-ambulatory patients
- Triage in evacuation is necessary if it is not possible to evacuate some patients
- Areas and floors in highest danger should be evacuated first
- A top-to-bottom evacuation should be considered if there is no immediate threat to the hospital



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Thanks

