



Mitigation as Foundation for Surge Capacity and Capability

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First 10 years of 21st century

First 6 years produced greatest concentration of major disaster seen by US

- ▶ Floods
- ▶ Terrorist attacks
- ▶ Hurricanes
- ▶ Infectious agent (SARS)
- ▶ Major power outages
- ▶ Wild fires

Debriefed Multiple Hospitals & Communities:

Sample of Debriefings through 2005

Every community struggled

- First - Tropical Storm Allison – June/2001
- **9/11 – September 2001**
- Power Outage – Summer 2003
- San Diego Wild Fires – Summer 2003
- Hurricane Isabel – Fall 2003
- SARS (Asia/Toronto) - Spring 2003
- Multiple hurricanes in Gulf and Florida- 2004-05
- Katrina/Rita - 2005

6 Critical Parameters

Became structure of 2008 standards



▶ Communications

- With staff; suppliers; EOC

▶ Supplies

- Knowledge of inventory, use of reliable supplier

▶ Security

- Protection of assets (drugs, fuel, vaccine);
- Ability to maintain operations

▶ Staff

- Housing; pay; family; mental health; commitment to serve

▶ Utilities

- Fuel; electricity; **water** (potable and others); sewage - others (ventilation, medical gases)

▶ Clinical Activity

- Vulnerable populations, changing patient needs; ongoing assessment;

Mission Critical Systems



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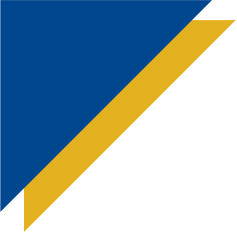
New Emergency Management Standards

January 2008

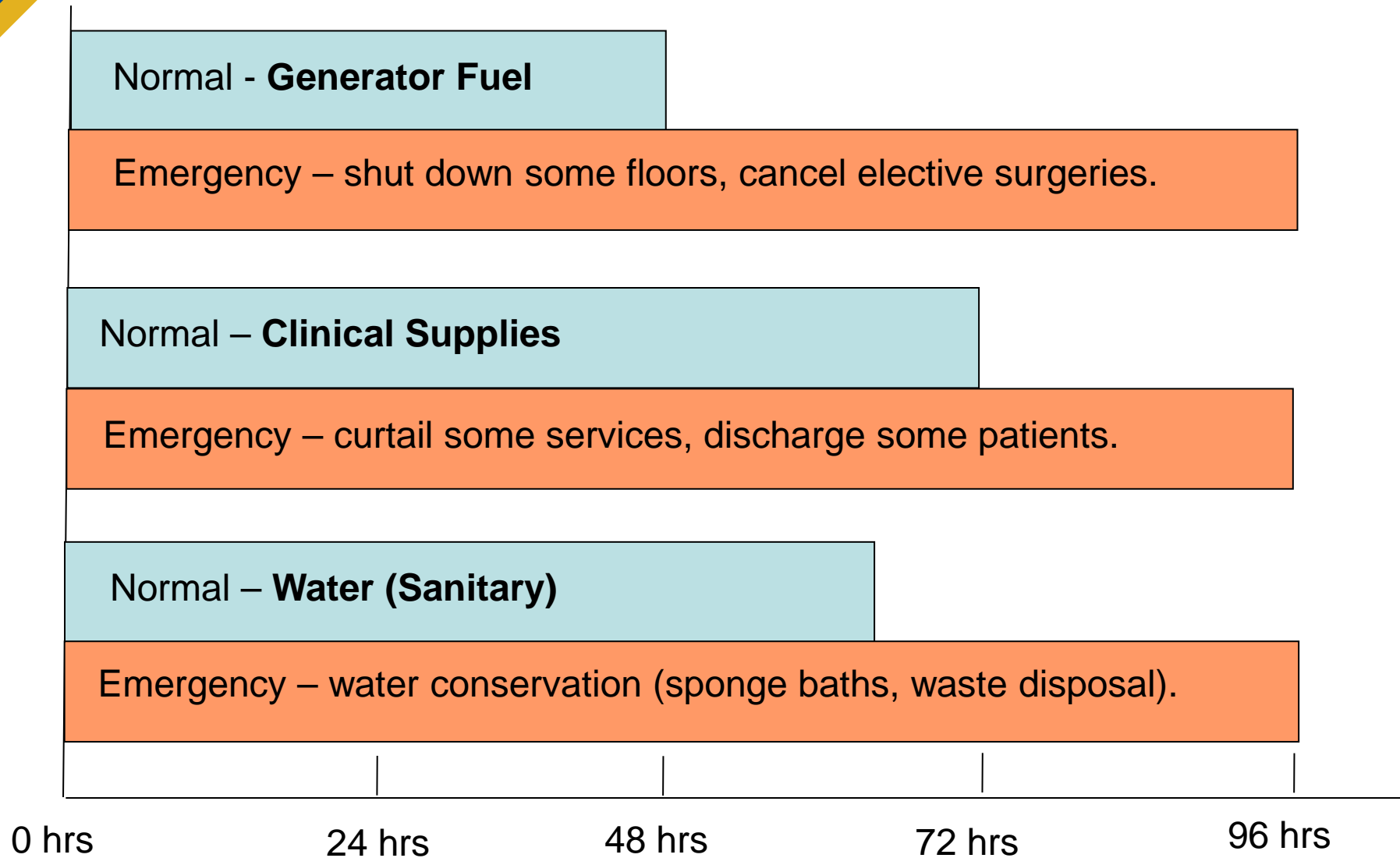
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- ▶ The organization has an Emergency Operations Plan.

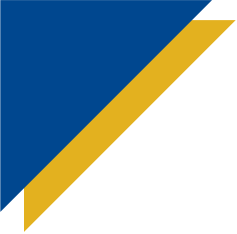
EM.02.01.01 EP3

- 
- Identifies capabilities & establishes response efforts when organization cannot be supported by community for ≥ 96 hours
 - NOTE: This does NOT require stockpiles
 - This does NOT require the ability to stand alone for 96 hours
 - Sliding scale of limitations

Striving for 96 Hours....



Critical Standards



EM 02.02.03

- the hospital prepares for how it will manage resources and assets during emergencies.

EM.02.02.03

(requires community involvement)

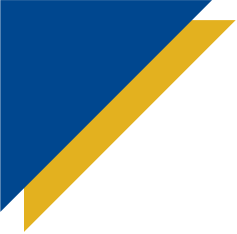
How the hospital will obtain and replenish nonmedical supplies that will be required throughout the response and recovery phases of an emergency.

How the hospital will share resources and assets with other health care organizations within the community

How the hospital will share resources and assets with other health care organizations outside the community in the event of a regional or prolonged disaster.

How the hospital will monitor quantities of its resources and assets during an emergency.

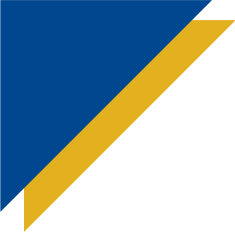
Critical Standards



EM.02.02.09

- the hospital prepares for how it will manage utilities during an emergency.

EM.02.02.09

- 
- ▶ The hospital identifies alternative means of providing the following:
 - Electricity
 - Water – drinking and essential functions
 - Fuel
 - Medical gases and vacuum
 - Utilities hospital define as essential – E.g..
HVAC

Debriefing of 2nd Disasters

Much improved results



▶ San Diego

- Wild fires – 2003
- Wild fires - 2007

▶ Houston

- Tropical Storm Allison – 2001
- Hurricane Rita – 2005
- Hurricane Ike - 2008

Communication Systems:

Significant **Community** infrastructure development

- Reverse 911 – landline
- AlertSanDiego – registration of cell phones
- 211 – where to seek services; could register
- Emergency Alert System (EAS) – ongoing communication to population – when to return home
- Local media
- Internet Communication among hospital and with EOC

▶ By informing citizens, take pressure off hospitals

▶ By opening communication among hospitals and with EOC, can better evaluate current state



How To Improve Preparedness?

Bad experiences are required for
good outcomes

Preparing for Domestic Act of Terrorism

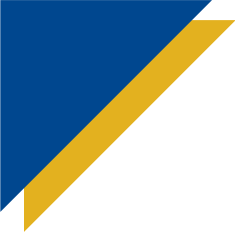
- ▶ 2001 (September 11) – World Trade Center
- ▶ 1995 (April 19) – Murrah Federal Building – Oklahoma City
- ▶ 1993 (Feb 26) - World Trade Center –

And before that?

December 29, 1975 – NYC – LaGuardia Airport

- ▶ Bomb placed in coin operated locker
- ▶ 11 dead, 75 hurt –
- ▶ Responsible party remains unknown

In 35 years, three major domestic events



Deadliest World-Wide Earthquakes Last 21 Years

▀ Fatalities greater than:

– 1K	16
– 10K	8
– 50K	4



Deadliest Earthquakes in Continental US of Last 100 Yrs

▀ Fatalities greater than 150?



NONE



Number of US Disasters > 1000 Deaths? (last 100 years)



4

US Disasters > 1000 Deaths (last 100 years)

- ▶ 2005 - Hurricane Katrina - <2000
- ▶ 2001 - 9-11 - 3000
- ▶ 1980 - Summer heat wave <2000
- ▶ 1928 – Okeechobee Hurricane <3000



Fatalities for **all** Presidential Declared Disasters 1960-2006



26,314*

*Some underreporting of fatalities related Hurricane Katrina and heat events

From SHELDUS

HVRI

Dealing With Gap of Real Experience

- Much greater emphasis on drilling:
 - Individual organizations and
 - With communities



QUESTIONS?
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