



*Maintaining Operational
Excellence During a Disaster:
Lessons Learned from
Hurricane Katrina*

- Remembering the storms
- Why it was possible
- Major challenges and lessons learned

- Hurricane
- Post-hurricane evacuation and social service needs
- Adjusting to high volume and displaced patients
- Ongoing high census

Our mission found its most complete expression in the days following Hurricane Katrina...

Saturday, August 27th

Woman's Hospital entered storm readiness level one. Katrina quickly strengthened, and a Hospital Emergency Incident Command System (HEICS) meeting is called for the next day. Due to the mandatory evacuation of New Orleans, traffic in the city is at a standstill; evacuees begin presenting for care.

Sunday, August 28

HEICS Command Center is set up, and the hospital quickly moves to Level 4. Decisions are made on emergency pay, child care and arrangements for lodging for staff to work subsequent shifts.

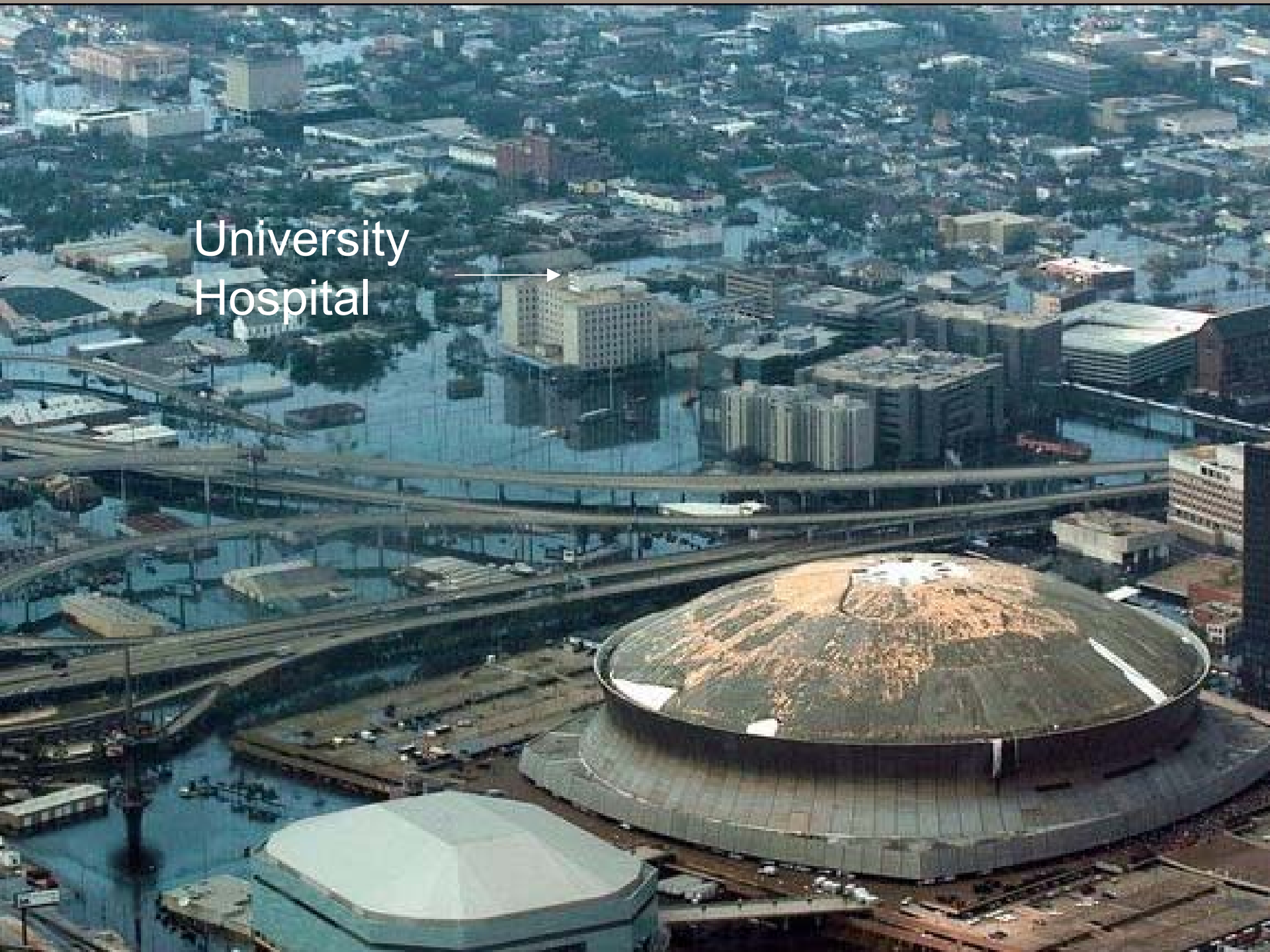
Monday, August 29

Woman's Hospital begins to lose power at 6:30 AM. The storm causes minor damage to the facility. Power outages are widespread in Baton Rouge. Email updates and frequent rounds keep staff informed.

Power is restored at about 7 PM. It appears that normal operations will resume on Monday.

The HEICS Command Center is closed.

University
Hospital









Tuesday, August 30

Large numbers of evacuees begin arriving for care.
Elective surgeries are cancelled.

New Orleans is flooding. Evacuations of hospitals will be necessary. The Command Center is reestablished, and communication with the regional Office of Emergency Preparedness is initiated. A call from a New Orleans hospital for evacuation of neonates is redirected to the OEP per the state's Emergency Preparedness Plan.

All telephone communications are compromised, as are many beeper systems. It becomes clear that the OEP system is time-consuming, cumbersome, and not up to the large numbers of patients in need of evacuation.

Woman's Hospital's management team decides that offering to coordinate the rescues is in order.



Hurricane Katrina

Tuesday, August 30 – Thursday, September 1

Woman's Hospital seeks and is granted designation as the coordinating hospital for evacuation of newborns from New Orleans area hospitals.

Through a combination of transport teams sent out from Woman's, ground ambulances, military helicopters and, in one notable case, river barge, 121 babies are safely evacuated.

In addition, Woman's becomes a shelter for pregnant women and their families. Through coordination with local churches, women over 34 weeks gestation, mothers who had recently given birth, and many family members find refuge.

Wednesday, August 31

Woman's begins receiving all types of patients and other evacuees via its helipad. Men, women, dialysis patients, patients with heart disease, or just people who had spent days awaiting rescue on the interstate in New Orleans – all were received with care, some given showers and meals, and sent on to appropriate facilities in the area. By so doing, Woman's helped preserve precious helicopter time.

Woman's also delivered ice, water, fresh uniforms and food to hospitals in New Orleans.

Woman's – long known as the "Birthplace of Baton Rouge," became a lifeline to New Orleans, its hospitals and the brave men and women staffing them.



Our Mission...

To improve the health of women and infants



Reuniting People

- A Family Center to reunite families and patients was established and fielded thousands of calls. All babies were reunited with families
- A Physician-Patient Connection line was established to reunite patients with their physicians

Other Needs

- A Shelter Shop was set up in the Medical library to receive and distribute donations of clothing and other supplies for evacuees with nothing except the clothes they arrived in
- The Katrina Disaster Relief Fund is established for needs such as transportation to reunite families and special health needs

Woman's employees step up to the task

- Employees drove patients to shelters and took families into their homes
- Fielded over 2,000 phone calls and reconnected 107 families
- Assisted in reconnecting physicians and patients (over 550 calls)
- New Orleans physicians volunteered to triage patients in the Assessment Center and Treatment Room
- Disaster privileges were granted to displaced physicians (8 ob/gyns, 1 pediatrician, 2 MFMs, 1 ped gastro)
- Human Resources hired almost 100 additional staff, most from affected areas

In the 28 days after Hurricane Katrina, Woman's also:

- Performed 1,500 mammograms
- Converted to digital mammography
- Cared for 1,500 patients in the Assessment Center
- Performed 600 outpatient visits
- Delivered 669 Baton Rouge babies; 779 babies in all
- Cared for over 100 Baton Rouge NICU babies

Woman's Hospital's performance during both hurricanes demonstrated the concept that an expert organization with adequate capacity is critical for the emergency management of certain populations of fragile patients.

Combined with the notion of a "surge" hospital whose capacity is designed to expand during emergencies, the expert hospital as the coordinator of care for particular populations is an important lesson of these tragic events.

In the case of Hurricane Rita, evacuations took place **before** the storm.

- 18 NICU patients were evacuated from Lake Charles
- 8 NICU patients were evacuated from Lafayette
- 8 MFM patients were evacuated from Lake Charles (5 by ambulance and 3 by air)



The first Blackhawk lands. This pilot did not know that our helipad was rated for his craft; once pilots found out, they landed there day and night.

One of the
heroic pilots



Social worker
Aimee Moles
works with a
patient.



The former physician lounge becomes a shelter.





Friday morning – September 2



Transport Team member Elodie Chabert, RN made three trips into New Orleans before helping on Friday

CEO Teri Fontenot helps
unload babies, right



VP of Information Systems Paul
Kirk helps also, left



More images of a miraculous day





Heroic staff



Sharing a bassinet

- Mission, Vision and Values
- Focus
- Capacity
- Planning
- Culture
- Habit
- Workforce

Mission

To improve the health of women and infants

Vision

Woman's Hospital will be:

- Nationally known as a leader in women's and children's health
- Regionally acknowledged for its innovative practices and programs
- Locally recognized as the preferred health care workplace.

Values

- **Excellence** – continually improving everything we do
- **Commitment** – showing pride in, loyalty to, and ownership of the mission
- **Innovation** – securing our future through creating new dimensions of performance
- **Mutual Respect** – doing unto others as you would have them do unto you
- **Stewardship** – carefully and responsibly managing the resources of Woman's Hospital
- **Sound Judgment** – making timely decisions based on the information available

Focus

- Focus on the needs of women and children

Capacity

- 225 beds
- 82-bed NICU
- Excellent staffing

Planning

- HEICS structure
- NICU Evacuation Drill
- Integrated planning processes
- Flexible space planning

Culture

- A culture of empowerment that facilitates decision-making at every level
- A culture of caring that led us to always seek to meet the need

Habit

- Well-developed plans, policies and habits in support of patient safety, even in the face of chaos

Workforce

- Staffing levels that meet or exceed national standards
- Low turnover among staff and management
- Stability in senior management; high levels of trust

Workforce

- Emergency pay implemented before the hurricane struck and continued for about two weeks
- Flexible pay incentives
- Free food

Leadership

- The CEO and VPs present throughout

More Change...

- Disaster privileging of physicians
- Participation in residency programs

And More to Come...

- Population estimates indicate that Baton Rouge has grown by 50,000 to 75,000 people.

Outcomes

- All babies survived the evacuation
- All high-risk moms survived the evacuation
- All babies reunited with family
- All postpartal moms placed in shelters that met their needs

- Communication
- Space
- Staffing
- Equipment and supplies
- Security
- Social Services
- Public relations

- Continuous rounds- “situational awareness”
- Nursing management meetings every 2 hours
- VP meetings every 2 hours
- Medical staff meetings daily
- Daily summaries to staff
- Rumor control
- Spectralink phones
- Phone center for evacuee information
- Disaster phone line for employees

- Shelters in conference rooms, lounges and offices
- Created triage center in the lobby
- Expanded Assessment Center into Day Surgery
- Moved Biomed 3 times in 2 days
- Expanded NICU into old well-baby nursery
- Created preoperative c-section space in a physicians lounge
- Housed clothing donations in the library
- Created postpartum discharge lounge
- Offered incentives for early discharge
- Added Mother/Baby discharge nurse
- Utilized real-time bed board report

- OR nurses for triage
- Emergency pay
- Emergency hires
- Volunteer pool
- Non-clinical nurses
- Emergency physician privileging
- Additional nursing supervisor
- 24 Hr Social Services

Food

Food Services sustains patients, families, employees, physicians and others.

Meals were prepared and in many cases delivered to the busy staff.

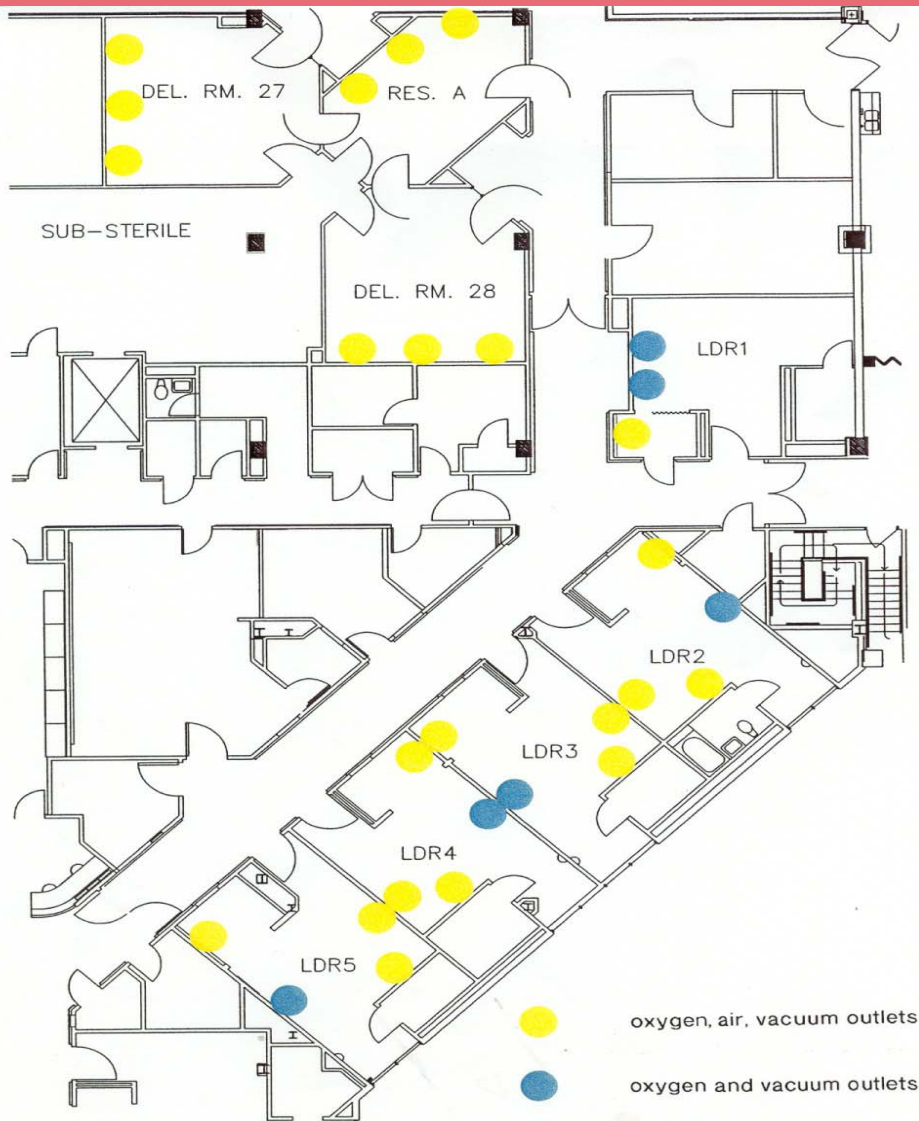


- Standardized equipment
- Strong vendor support
- Transferring facility sent equipment with evacuees
- Storage & tracking

- Helipad and transport team
- Leadership
 - Stability
 - Visibility
 - Mission-focused
- Strong medical staff leadership
- Emergency preparedness
- Knowledge of physical plant

- HEICS (Hospital Emergency Incident Command System)
 - System used to designate staged action plan in response to a disaster
 - Interdisciplinary table top drills were performed
- NICU evacuation drill (prompted by Houston flood)
 - Table tops drills followed by
 - Actual evacuation simulation exercise

Horizontal Evacuation Destinations



- Yellow dots indicate Air, O2 and suction availability
- Blue dots indicate O2 and Suction Only

Delivery rooms 27, 28 Resuscitation Room A, and LDR 1 can hold 3 ventilated patients each.

LDR 2,3,4,& 5 can hold 5 ventilated patients each.

Non O2 dependent infants will be routed to annex

- Approved by the Medical Staff in July, 2005
- RN Bed Coordinator appointed
- Overnight care in Day Surgery Department established
- High Census Alert displays on physician sign-in screens
- Process defined for including the medical staff in prioritizing patient admissions
- Contingency plans for staffing

All Areas

2S	2W	3S	3W	3N	4S	4W	4N	4E	5S	5W	5N	6S	6W	6N	AICU	ASMT	LD				
201	209	300	310	319	400	410	419	430	500	510	519	600	610	619	4201	01	01	13	OR	PRE	
202	210	301	311	320	401	411	420	431	501	511	520	601	611	620	4202	02	02	14	25	36	
203	211	302	312	321	402	412	421	432	502	512	521	602	612	621	4203	03	03	15	26	37	
204	212	303	313	322	403	413	422	433	503	513	522	603	613	622	4204	04	04	16	27	38	
205	213	304	314	323	404	414	423	434	504	514	523	604	614	623	4205	05	TR	05	17	28	39
206	214	305	315	324	405	415	424	435	505	515	524	605	615	624	4206	06	10	06	18	RR	
207	215	306	316	325	406	416	425		506	516	525	606	616	625	4207	07	11	07	19	29	
208	216	307	317	326	407	417	426		507	517	526	607	617	626	4208	08	12	08	20	30	
		308	318	327	408	418	427		508	518	527	608	618	627		09	13	09	21	31	
		309		328	409		428		509		528	609		628				10	22	32	
																		11	23	33	
																		12	24	34	
																				35	

SYSTEM ONLINE

BED BOARD UTILIZATION REPORT

NICC	NICU				NEX-A	NEX-C	NISCN		NSY	NEX-B	DDS		
1	1-A	2-A	05-A	07-A	10-A	A-1	C-1	01	16	01	B-1	01	16
2	1-B	2-B	05-B	07-B	10-B	A-2	C-2	02	17	02	B-2	02	17
3	1-C	2-C	05-C	07-C	10-C	A-3	C-3	03	18	03	B-3	03	18
4	1-D	2-D	05-D	07-D	10-D	A-4	C-4	04	19	04	B-4	04	19
5	1-E	2-E	05-E	07-E	10-E	A-5	C-5	05	20	05	B-5	05	20
6	1-F	2-F	05-F	07-F	10-F	A-6	C-6	06	21	06	B-6	06	21
7	1-G	2-G	06-A	08-A	PL1	A-7	C-7	07	22	07	B-7	07	22
F8	1-H	2-H	06-B	08-B	PL2	A-8	C-8	08	23	08	B-8	08	23
F9	1-I	2-I	06-C	08-C	PL3	A-9		09	24	09		09	24
F10	3-A	4-A	06-D	08-D	PL4	A-10		10	25	10		10	25
	3-B	4-B	06-E	08-E		A-11		11	26	11		11	26
	3-C	4-C	06-F	08-F		A-12		12	27	12		12	27
	3-D	4-D		FAM1		A-13		13	28	13		13	
	3-E	4-E		FAM2		A-14		14	29	14		14	
	3-F	4-F				A-15		15	30	15		15	

	Full	Avail	Total
ADULT ROOMS:	82	58	140
NICU ROOMS:	57	72	129
ASMT:	4	5	9
DDS:	1	26	27
LD:	14	25	39
NISCN:	15		
M/B NURSERY:	47		
ADULT OP:	5		

How Totals are Calculated

ADULT ROOMS = 2-6 Floor + AICU.
 NICU ROOMS = All NI locations except NSY and NEX-B.
 ASMT = 1-9 ASMT rooms.
 DDS = 1-27 DDS rooms.
 LD = 1-39 LD rooms.
 NISCN = Count of babies in NISCN.
 M/B NURSERY = NSY + babies on 2-6 floor.
 ADULT OUTPATIENTS = ASMT + DDS + outpatients (chemo in 2- 6th "pod" rooms).

INPATIENT:
 OUTPATIENT:
 NEED TO CLEAN:
 AVAILABLE:
 UNAVAILABLE:

- Multiple communication problems
 - Cell phones and beeper system
 - Agency coordination
- Lack of medical transportation equipment
- Lack of shelters for pregnant women or discharged patients
- Displaced physicians
- Media coverage
- Donations and volunteers
- Cash flow interruption
- The American Red Cross & FEMA

- A specialized emergency management plan for neonates is needed at the regional level
- Communications methods
 - Internal
 - working alternatives to landlines
 - scheduled staff communications
 - External- inbound communication with helicopters
- HEICS model worked well though the storm, but required a change in focus to deal with continued high census
- Community networking is vital
- Leadership must have some relief
- Rented and loaned equipment must be returned

- Ask employees on the front line how you can help them do their jobs
- Be open and honest in communication
- Manage the rumor mill
- Celebrate!

Thank You