22 Minutes That Changed Everything
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May 22nd 2011

Freeman Family
- 2 Deaths
- Numerous Family members lost
- 361 Had Significant Losses
- Many dug their way out to take care of the community.

WHAT IF ON A NORMAL DAY?
- You are without normal Electricity?
- You lost your Telephone and internet Service?
- You lose your Water and Sewer?
- A Staff member loses their home.
- No blackberry, smart phone or good old fashioned cell phones
- What if the Roads and Highways around your facility were closed to traffic.
- What if you lost your Cable TV?
- What if you lost your Natural Gas Supply?
- What if you had significant structural damage to your facility.
May 22nd 2011

- The super cell shifts to the south.

Infrastructure Issues

- Primary and secondary electrical feed lines were gone.
- Natural Gas temporarily interrupted
- Water pressure dropped significantly immediately.
- Fiber Optic lines pulled from the ground.
- Roads were blocked with debris
- Backup propane tank was damaged when a security wall collapsed on it.

Electrical

- FHS meets twice each year with Empire District the local electrical utility.
- Main feed line comes from the west with a substation within ½ mile. (Completely destroyed)
- Backup feed line from east with a substation within 1½ miles (Missing)
- Had a worst case plan to run a new line to south to a substation several miles away.

- Empire arrived quickly with 14 trucks and ran a new feed line to restore power within 13 hours.
- FHS has redundant generators with 300 gallon belly tanks and a 10,000 gallon underground tank.
- MOU in place with fuel supplier.

Water and Sewer

- Immediate loss of water pressure.
- FHS has two auxiliary water booster pumps.
- Able to keep 40 pounds in newer sections but dropped to 12 pounds in older areas that included the boilers, sterile processing, OR, ICU, CVICU, NICU, Nutrition,
  - Lost toilets, ice machines, refrigeration, fire protection, dialysis etc.

- MOU in place for potable water tankers and water supplier. (Took 19 hours for tankers to arrive after being cleaned)
- Baxter Springs Ks. Fire Department refilled cooling towers.
- Bucket brigades to flush toilets
- Surgical instruments were sterilized at our Neosho hospital 20 miles away.
- Tank system was setup for dedicated feed to dialysis units.
**Nutrition**

- Ovens and grills are all electric powered and not on emergency power.
- Steam Kettles were not working because of the loss of the boilers.
- No COFFEE, vending machines, soda dispensers.
- Freezers and Coolers were on a cooling water loop that was down because of the loss of water.
- Refrigerated trailers were brought in within 18 hours.

**Emergency Preparedness**

- FHS has an active Emergency Preparedness Committee made up of a Cross Functional Team. Primary committee meets monthly and sub committees meet as needed.
- Joplin and Jasper County Missouri have a group of local Emergency Managers, EMS, Public Health, Home Health, Red Cross, Behavioral Health, Local physicians, clinics and all area hospitals that meet monthly to prepare to respond to events just like May 22nd. Co-Sponsored by the LEPC and Missouri Hospital Association.

**Preparedness**

- Local and Regional planning was crucial.
- We train with facilities inside our region on a regular basis.
- We know the capabilities of one another.
- There is a face and voice to the person who needs help or that I am calling for help.
- Planning and Preparedness reach beyond the walls of your facilities.

**Drills and Exercises**

- Annual State Wide Tornado Drills
- Quarterly Internal Drills
- Minimum of two major exercises per year.

**May 16-May 20th 2011**

48 hours Prior to the Tornado

- NLE Earthquake Exercise.
- 72 Hours without landlines, cell phones, internet. No outside communication!
- Generator Power Only, Loss of water supply.

**Operation Cyclonic Winds**

June 2010

- Regional exercise involving hospitals from Springfield, Monett, Cassville, Carthage, Joplin, Neosho and Branson.
- Objective: St. Johns Hospital in Springfield Mo. Takes a direct hit from an F-5 tornado and must evacuate patients to area hospitals.
- HVA indicated tornado to be the highest risk for the health system.
What Drills Won’t Prepare You For

- Reality of the importance the community has on your ability to provide care during disasters.
- Try having a drill and remove your leadership from the scenario.
- The flood of issues that all come at once.
- The physical and emotional pain of the patients.
- If you would have drilled at the May 22nd level the drill would have failed miserably.

May 22nd

- Tornado touches down approximately 4 miles west of the Hospitals at 5:41 PM
- Main Power is lost-Generators Are Operating
- Generators were started at 5:19 after a warning in SE Kansas.
- Cell Phone and land lines are down
- Really have no idea about the severity or how wide spread the event is.

Hell is Here

Emergency Department

- Within 20 minutes 200+ patients presented themselves to the ED.
- 90 Minutes later that number had increased to 700+
- 3 Hours 1000+
- ED has 41 treatment rooms. All room were either doubled or tripled up with patients.
- ED uses a POD system. Patients lines every wall within the ED

Triage

- Initial Triage started at the ambulance entrance.
- Additional triage centers were established at the ED walk in entrance, main entrance, discharge lounge, Hearts Center Entrance and Freeman East.
- 40 additional ED beds opened in the main conference room. (Surge Protocol)
- 154 Physicians and 883 employees arrived to assist within the first few hours.

Triage Issues

- Much of the triage work was performed outside/street side.
- Exterior lighting is not on emergency power. Took three hours to bring in telescopic generator lights.
- Communication was not available between many of the triage areas and the ED/Surgery
- Supply shortages
Patient Tracking

- Missouri uses a web based program called Emtrack. No internet available and the equipment provided did not store data until the internet was available.
- ASPR grant funding provided two fixed scanner units in the ED. Not practical for low extreme surge.
- EMS does not use this program.
- Freeman is located in the corner of 4 states that all use different programs.

Patient Tracking

- Many critical patients arrived without clothing or ID.
- Physical wounds were so severe that you were unable to recognize family members.
- Used a John Doe number process but became confusing with multiple triage areas.
- Began writing on the bodies where they were found or other data.

ICU

- 40 bed ICU unit.
- 2 Open Beds on May 22nd.
- Additional ICU was open in the Cardiovascular Holding Area.
- 20 Additional Beds were opened in Post Op.
- Did not have an ICU medical surge program. Temporary areas lacked sufficient vents, emergency power.

Radiology

- In 18 hours FHS performed 825 X-ray procedures and 396 CT procedures.
- Lacked adequate charging stations for this level of treatment.
- Extremely difficult keeping patient records organized.
- Currently without EMR.

Incident Command

- Hospital Command Center was established at 6:20 PM.
- Originally staffed with two persons.
- Typical IC staff was either caught in the storm or working in the ED.
- Took two hours for adequate staffing to arrive to setup a command and support staff.
Incident Command

First issue was to determine the condition of the facility and safety of staff.
Second was to identify what communications systems were available.
Third-Estimate inventories of medical supplies, onsite staffing.
Formal HCC was not established for probably 4 hours. Survival Mode

Incident Command

• Events don’t end at 5:00 PM
• Do you have enough staff trained to maintain incident command throughout the nights?
• After 48 hours the most hardened staff member needs to get away.
• The best form of communication is seeing, talking and hearing personally. Use your feet when necessary.

Security

• Three security guards on duty at the time of the tornado.
• Entire Staff consists of approximately 17.
• Numerous Entrances to man.
• Attempted to lock down all entrances but unable to because of the flow of patients and triage areas.
• Instead of concentrating on making a bigger security presence known security concentrated on providing comfort to patients and visitors

Security Responsibilities

• Secure all entrances
• Assist with all helicopter landings
• Assist with patient and visitor shuttles and buses to mass shelters.
• Assist in morgue
• Traffic Control
• Can’t depend on local law enforcement.
• Deputize non clinical staff if needed.

18 Hours Post Tornado

Logistics

• Critical Areas will not have time to go through the HCC
• Pharmacy
• Nutrition
• Equip Triage Areas with a predetermined initial inventory and then constantly resupply
It Can Be WHO You Know

- Empire District ran a new main feed line to FHS and power was restored in 13 hours.
- Construction contractor contacted us and within an hour he had a crew of 15 and a semi load of generators and telescopic lights on scene in 3 hours.
- Freeman Pharmacy Director worked with the St. Johns Pharmacy to obtain supplies.
- FHS pathologist knew the St. Johns pathologist and was able to obtain Blood from the damaged St. Johns Lab.
- Personal contacts are vital during disasters.

Logistics

- How do you determine what you need or if it is adequate if you don’t know the level of need?
- Everyone needed everything and they need it all at once.
- FHS had spent considerable amount of preplanning on identifying 96 hour supplies but had not planned on such a need for orthopedics, laceration kits, pain meds etc. for an event this large and this immediate. Could anyone be properly equipped for this volume of surge.

Logistics

- We survived by using non routine resupply methods. Begged, Borrowed and Stole.
- FHS was fortunate to have numerous clinics and pharmacies within the system.
- MOU and mutual aid agreements were in place.
- Ambulances would return with supplies.
- Regional partners began bringing anything they thought we might need.
- Auto orders had been pre-established with pharmacy and nutrition.

Safety

- During the response it was important to be a resource for the different departments.
- With over 100 physicians, numerous volunteers and countless employees working outside their normal duties, the written and practiced game plan was not going to play like a finely tuned symphony.
- See the big picture and work on the fine tuning afterwards. What is in the best interest of the patient at that time.
- Minutes can make a difference.
Communication

- No ability in the first couple of days of communicating with the City/County EOC without using runners.
- EOC is located across town and through the devastated areas.
- FHS Contacted the SEMA 24 Hour Duty Officer at 6:40 PM. Informed them of our abilities and immediate transportation needs. Didn’t hear back for 48 hours.

- Had to be the biggest challenge. We have became dependent upon having the ability to contact anyone, anywhere at anytime.
- We had the ability to connect with the hospital security cameras and view them in the HCC. Able to see real time ED and Triage Areas.

- Ham radios were used but it took 4 hours before trained operators could arrive. Make sure every shift has adequate operators onsite.
- Radios, Radios, Radios- Only works if you have adequate channels and repeaters.
- FHS had just received a shipment of new radios 5 days before the tornado from ASPR grant funds.

- Texting was the most reliable communication.
- A portable communication trailer was part of the St. Johns and Freeman Communication plan but the trailer was destroyed.
- Established a communication center on the top floor of the hospital. I Phones were able to connect approximately 50% of the time.
- As part of the Earthquake drill a list of emergency contacts for every hospital within 200 miles was placed in a hard file. Previously had been kept in the web based EmResource and would not have been available.

24 Hours and More Weather

- 22 surgeries in the first few hours.
- FHS has multiple OR’s at the West campus. These are divided up in the main OR, Hearts Center and Birthing.
- We closed all but the main OR so staff would be concentrated in the same area to share resources.
- If a patient can be stabilized in the ED and be safely transported out. Do it! Post Op and critical care will require significant resources which will be stretched thin throughout your facilities.
The Local Politician

- Massive amounts of misinformation hit the airwaves immediately.
- Facebook & Twitter Very difficult to manage.
- Media wants to be up close and personal. If they can’t get the story from you they will find someone on the street.
- Have scheduled updates with the media and the Staff.

Fatality Management

- We all have mass fatality plans but how many really understand your plans and State laws.
- Who can view a body?
- Who can the body be released to?
- How do you handle those that can not be saved?
- Pastoral Care should be available at all times to talk with families.
- Worst radio message of the event: We need more body bags.
- Very difficult situation, Family and Friends.

Behavioral Health

- With the loss of St. Johns Inpatient Psychiatric services, Freeman was the only care provider in the region.
- Prior to the Tornado the beds were almost always full.
- Post tornado as many as 16 psych patients had to wait in the ED for rooms to open up either at Freeman or in other facilities across the State.

24-72 Hours

- Staff is exhausted!
- Many of the staff have no homes.
- Still no power to much of the area.
- Shock starts to set in.
- Hospital was normally at 90% of census. OMG
- Electricity had been restored to the Hospital GREAT work by Empire District Electric.
- Water Pressure was still low, boil order in place and no one will give us even an estimate of when it will be restored.
Days, Weeks and Months

- Community still needs care.
- FHS added many beds immediately.
- Singles turned back into doubles
- Immediately created 200 new open positions
- Used traveling nurses but there was no place for them to stay. Every hotel booked within 50 miles. Spent many nights on cots in a conference room.
- ED wait times increase because of increased ED census and waiting on beds to open up. Patient Satisfactions Suffers

Days, Weeks and Months

- Major capital investment has to be made immediately, $25M+
- Patient Satisfaction starts to drop
- Staff starts to get snippy.
- Sleep becomes a memory.
- Business Aspects
  - Depression
  - Counseling
  - Anger

Questions

- There are literally hundreds of other actions that took place that night and the days that followed.

- Everything took effort by a lot of people and decisions had to often be made on the spot without committees, groups or hearing other’s suggestions.