Taking Care of Joplin

Freeman West

Ozark Center
Freeman West
Freeman East
Freeman Neosho
20 miles south

Joplin Statistics
• Population – 50,150
• 2 Health Systems Serving Four State Area
• Freeman Health System – 407 Beds
• Mercy St. Johns – Approx. 367 Beds
• Fire Stations – Newton/Jasper Co - 24
• Two Air Ambulances – Eagle Med/ MedFlight
• Two Ground EMS

May 22, 2011
• Typical Sunday
• Family Gatherings
• Lunch/Dinner
• Shopping
• Joplin High School Graduation

Area Tornado Warning Issued

5:13pm
In The Next 28 Minutes The Medical Landscape of Joplin Will Literally and Figuratively Change .......Forever
Units Prepare

- 1724 Overhead Page
- **Tornado Warning**
  - “Routine” Unit Preparation
  - ✓ Inconvenient Time Frame
  - ✓ Delay of Shift Change
  - • Atmosphere/Tone Feels Different
  - • Sense of Uneasiness

Tornado On The Ground

Initial Impact

- Facility Operating On Alternate Power
- Loss of External Landline Communication
- Compromised Internal Communication
- Loss Of Water Pressure
- Computer Systems Inoperable
  - Magnitude Yet Unknown

EMS Response

- Destruction Wide Spread – Schools, Business, Medical And Residential Impacted

Freeman Status

- Unknown
Magnitude
Incomprehensible

First Patients Arrive
- Within Minutes Hundreds of Injured Began Arriving to FHS via Land, Private Vehicles, on Foot-Many Roads Blocked With Debris
- Magnitude of Injuries Incomprehensible
- Evacuees From St. Johns – Many Critical Inpatients - Unknown History

Mass Casualty Incident
- Casualty load exceeds the surge capacity of a single institution
- Typical trauma center routine trauma response envelope is 4-5 critically injured patients arriving simultaneously
- Dependent upon capacity of 5 key facilities: – ED, OR, ICU, blood bank, emergency laboratory
- 10-20% of patients in MCI will be critical
Initial Challenges

- Limited Communications
  - No cell phone service, pagers, internet
- More than 200 patients simultaneously in a 40 bed ED, functioning on Emergency generators
- Equipment sterility and lack of supplies
- Contaminated wounds without antibiotics
  - Wound closure?
- Identifying unresponsive patients
  - 150 numerical bracelets for 500+ patients

EPP Formally Activated

- Incident Command Established
- Facility Damage Assessment/Safety Initiated
- Current Staffing/Census Evaluated
- Triage/Alternate Care Sites Established – Freeman West, East, Neosho
**EPP Activation Continued**

- Assessment Critical Clinical Functions
- Inventory Available Critical Medical Supplies
- Evaluation/Establish Communication Capabilities

**ED Response/Activity**

- Discharge Current Minor Ill and Injured Patients
- Movement of Patients From Halls Into ED Rooms
- Supplies/Equipment Prepositioned
- Transferring/Stabilizing As Possible

**ED Response/Activity**

- Alternate Triage Sites Established
  - EMS Entrance
  - Main ED Entrance
  - Heart Institute
  - Freeman East
- Off Duty/Volunteer Nurses, Physicians, Ancillary Staff Begin Arriving

**Freeman Hospital East**

**Emergency Response Systems Inundated With Calls for Help**
• In The First Hours Over 1,000 Patients Are Treated in the ED and Alternate Care Sites
• Cath Lab, CVOR, OR All Occupied
• 22 Life Saving Surgeries Performed In First 12 Hours
• Over 800 Xray Procedures/Approx 400 CT Scans

Resources Maximized
• ICU At Capacity
• Pre-OP / Post-OP, CV Holding All At Capacity
Staff Working Day/Night

FHS Medical Response

- Approx. 1,000 Patients Within First 12 Hrs.
  - 11 Fatalities
  - 64 transfers
- 888 Freeman Staff
- 100+ Non-Freeman Clinical Staff
- 1200+ Patients Tornado Related Injuries Within 48 hours

Delayed Medical Hardships

- The loss of residential and medical facilities resulted in hundreds of people without essential prescription medications
- Many of the medical offices that remain are not functional for 7-10 days
- In response, a state executive order allows pharmacists to provide emergency medication to people whose medical records are missing or who no longer have a doctor’s prescription on hand

http://www.joplinglobe.com/tornadomay2011/x1612586814/Minor-medical-emergencies-being-addressed
Post-traumatic Mucormycosis

- 18 suspected and 13 confirmed cases according to CDC analysis
- Infection implicated as a contributing factor of fatality in 5 patients
- First outbreak following a tornado, although similar outbreak occurred following the March tsunami in Japan
- Further CDC research underway to elicit etiology

http://www.joplinglobe.com/tornadomay2011/x2057655110/Fungus-cases-first-to-be-connected-to-a-tornado

Lessons Learned

- System Processes Easily Converted To Manual
- Adaptable Disaster Patient ID/Triage
- PAR Level – Supplies/Procedures
- Orthopedic Supplies
- Lighting – Hand Free
- Increase Quantity Radios
Lessons Learned

- Staffing Assignments – Nurse to Physician
- Wallet ID Cards For Staff or Maintain ID Badge In Vehicle
- Pyxis Access Override (Key)
- Transfer Patients Lesser Severity To Other Care Areas
- Practice….Practice….Practice

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Freeman Cardiologist