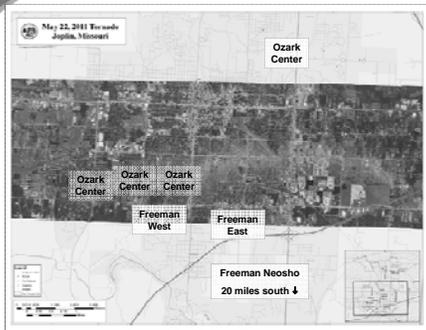


Taking Care of Joplin



Freeman West



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 ChangeForever



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

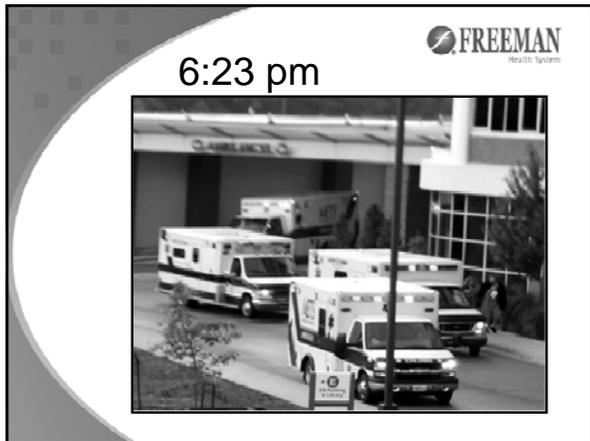
- Within Minutes Hundreds of Injured Began Arriving to FHS via Land, Private Vehicles, on Foot- Many Roads Blocked With Debris
- Magnitude of Injuries Incomprehensible
- Evacuees From St. Johns – Many Critical Inpatients - Unknown History



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





Approx. 100 Ambulances



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/tornadomay>
2011/x1612586814/Mhor-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

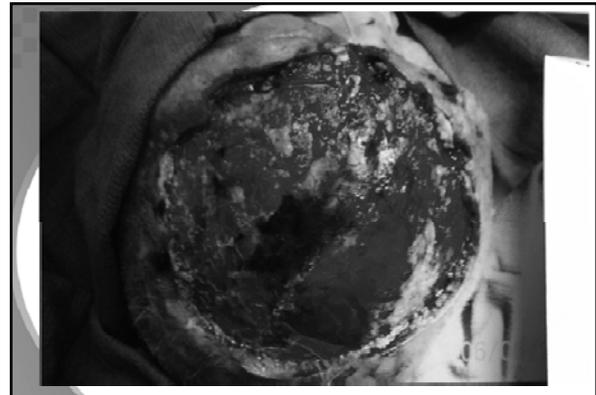
<http://www.joplinglobe.com/tornadomay>
2011/1/20/57655110/Fungus-cases-first-to-be-connected-to-a-tornado



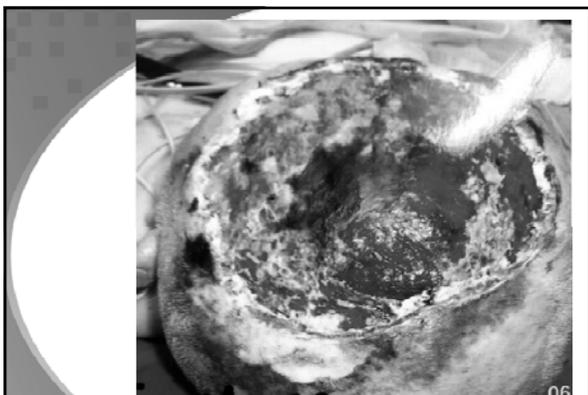
Wound 4 days after initial presentation. Primary wound involved penetrating trauma superior to the right orbit.



48 hours after initial debridement



Immediately following 2nd debridement



24 hours following 2nd debridement

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

Freeman Health System Your Complete Source for Patient Identification Solutions!

Emergency Department & Disaster Wristbands

Emergency Departments are used to dealing with large numbers of acutely ill and often anonymous patients (also seen above). When anonymous patients arrive in the emergency department, caregivers need a quick, easy and effective way to identify them and accurately link their belongings, forms, lab specimens and other related items to them correctly.

Emergency Department and Disaster Response wristbands help you:

- Identify patients who need the most immediate medical attention
- Triage patients to various areas of the hospital
- Clearly and easily link lab specimens and forms to individual patients
- Reduce identity problems without requiring registration of John/Jane Does that result in duplicate active, repeating ID#s
- Account for the personal belongings of acute patients

The John Bio-Logics wristband is the only ID (Emergency Department) band that offers a unique wristband that is perfect for emergency department use. These wristbands enable quick and easy assignment of unique, pre-registered patient ID's from which labels can be generated on demand directly from the patient's ID band.

Labels are generated directly from a pre-embossed cap on the wristband using a small label printer that is not dependent on wireless systems or electricity and that is transparent enough to keep handy throughout the department. The labels create an easy and accurate way to attach a patient's belongings, forms and lab specimens are properly linked to the correct patient.

For a complete solution of patient identification solutions, including barcode thermal and laser products, visit us online at www.patientid.com

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FREEMAN Health System

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

FREEMAN Health System

Dr. John Cox Freeman Cardiologist

