



## Severe Weather Event April 2023

### Joplin Tornado, Missouri

- May 22, 2011, an EF-5 tornado struck St. John's Regional Medical Center in Joplin, MO
- Winds were greater than 200 mph
- Approximately 1,000 people were injured and 159 died
- About 200 people were in the hospital at the time the tornado hit, 150 of those being patients
- Five people were killed
- Tornado hit around 5:45pm – warning that it was coming was given at approx. 5:30pm
- The whole hospital shook and vibrated, glass shattered, light bulbs popping, walls collapsing, people screaming, ceilings caved in, water pipes broke spraying water everywhere – all in complete darkness, unaware of anyone's status
- Whole process lasted about 45 seconds, but felt like an eternity
- Patients began coming into ED in droves – it was utter chaos – they were limping, bleeding, crying, terrified with debris and glass sticking out of them
- The floor was covered with about three inches of water, no power, not even backup generators, making it completely dark and eerie
- Methane gas was leaking from broken gas lines, leaving the smell in the air
- Flashlights were used to find patients
- Staff from all the different departments, not knowing each other, worked together to treat patients
- Critical patients came in with no power to treat them
  - A man in his early 20's had a large shard of glass in his back causing a collapsed lung
    - Supplies had to be gathered from all over the hospital and the procedure had to be done with no anesthetic since none could be found
  - Asthmatic came in, in status asthmaticus – a flashlight held in physician's mouth was used to intubate
  - 3-4-year-old had a gaping wound revealing his cervical spine and upper thoracic spine bones
    - As they were trying to treat him, water from shattered pipes above were spraying down on them
    - They were able to immobilize him with towels, start an IV with fluids and pain meds, and shipped him out
  - Several critical, and even some dead were outside the hospital, staggering, dazed, and shocked
- No specialists were available
- They just tried to get patients out of the hospital as quickly as possible
- Whole time there was fear that the methane gas leaking could cause the hospital to blow up at any minute

- Within hours approx. 100 EMS units showed up from various towns, counties, and four different states
- They carried patients out of the hospital on anything they could find: sheets, stretchers, broken doors, mattresses, wheelchairs, etc.
- A MASH like field unit was set up miles away from hospital that had supplies, food, drink, generators, exam tables, most things - except no pharmaceutical pain meds (invasive procedures were done without them, until meds could later be brought)
- Within days a tent field hospital was up and running near the battered building

### Impacts:

- No power
- Internal hospital flooding
- Lack of supplies and meds
- Missing/disorganized unfamiliar staff
- High volumes of critical patients
- Death and grieving
- Road blockages for transport; vehicles destroyed
- Staff had personal disasters at home and still needed at work
- Chaos throughout entire community
- Post event medical concerns
  - 13 confirmed cases of a fatal fungal soft tissue infections (cutaneous mucormycosis) from injuries sustained during the tornado (identified about a month after the incident)

### Preparedness:

- Review and update your preparedness and response plans
- Consider:
  - Evacuation
  - Sheltering
  - Power outage
  - Flooding
  - Staff present/bringing staff in
  - Transport
  - Field supplies
  - Staff mental health support
- Staff training

### Sources:

[What Happened Inside the Hospital During the Joplin, MO Tornado](#)

CDC: [Notes from the Field](#)

## Resources:

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- [Utility Failures](#)
- [Natural Disasters](#)
- [Climate Change and Healthcare Systems Considerations](#)