

## Preparing for and Rebuilding from a Natural Disaster in Graves County, KY

On Friday, December 10, 2021, the deadliest tornado outbreak on record, for the month of December, thundered across the southern United States, producing catastrophic damage. More than 15,000 buildings were destroyed. Up to 81 deaths including 24 in Graves County have been attributed to the surprising, late-season storm and the scene of a massive emergency response.

At 9:26 p.m. CT, the National Weather Service issued a tornado emergency for Mayfield as the massive wedge tornado approached the town from the southwest. As the tornado entered the southwest side of Mayfield, it gained EF4 intensity. An EF4 tornado, characterized by wind speeds between 116 and 200 mph, is the second most intense on the Enhanced Fujita Scale. The strength, path, and duration of the December 10th event were also surprising. It was on the ground for nearly three hours; tracking 160 miles in total.



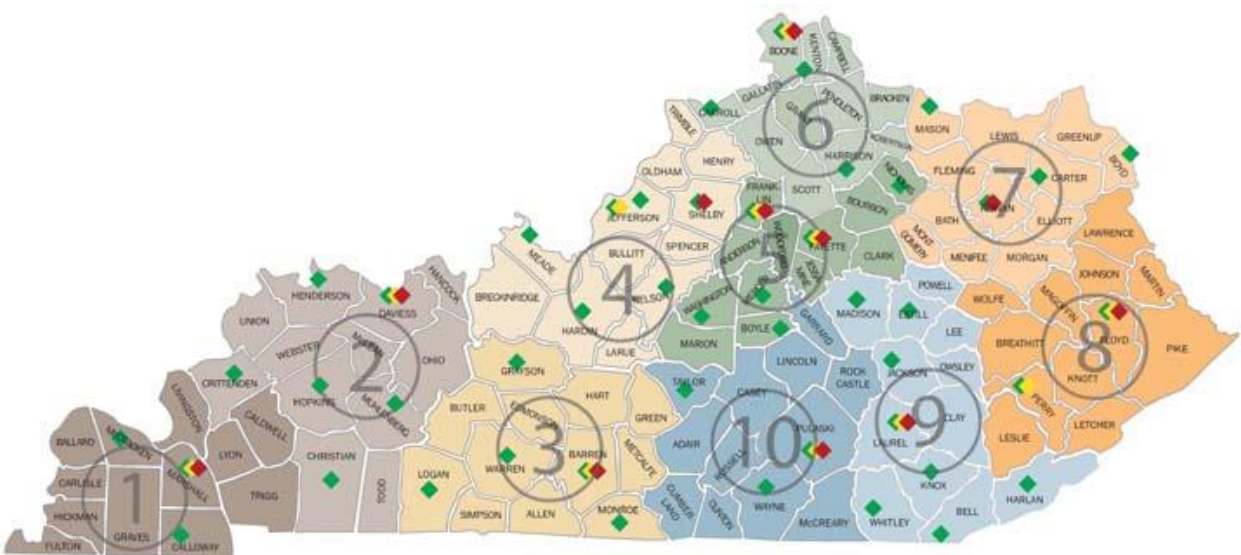
What was different about this experience was not only the ferocity of the storm, but the areas that were hit, were very rural. The violent, nighttime tornado rumbled across Western Kentucky, producing severe to catastrophic damage in numerous towns, including Cayce, Mayfield, Princeton, Dawson Springs, Bremen, and Bowling Green. There was widespread damage to

communications infrastructure. Adding to the chaos, Graves County's emergency medical services (EMS) headquarters, which doubles as the Mayfield Fire Department, was demolished by the tornado.

David Anderson, CEO, Jackson Purchase Medical Center (JPMC) immediately sprang into action upon hearing of the tornado's touchdown in Mayfield, KY. On Friday night, JPMC activated its emergency response plan to ensure the hospital was well-equipped to serve the community during this critical time of need. JPMC is a 107-bed facility and the sole provider of acute care in Graves County and serves patients from the eight counties of the Jackson Purchase. It is owned by LifePoint Health and this affiliation proved to be very helpful in the aftermath of the tornado.

JPMC had prepared for an emergency well in advance of the tornado. They routinely reviewed their plan, led table top exercises and conducted drills. However the magnitude of this emergency was a regional disaster affecting multiple counties in western Kentucky. Fortunately there was an infrastructure in place built around the COVID-19 pandemic to assist them.

The Kentucky Department for Public Health Division of Emergency Management is designed to coordinate a system of mitigation, preparedness, response and recovery and protect the lives, environment and property of the people of Kentucky. The Department divides the Commonwealth into 10 areas and area 1 in western Kentucky bore the brunt of the tornado.



Region 1 is under the direction of Billie Jay Newbury, Readiness and Response Coordinator, Kentucky Department for Public Health. She oversees the West Kentucky Healthcare Coalition (WKYHCC), which is a collaborative

of the 24 counties in the far west part of Kentucky. It has participation from 24 emergency managers, 24 EMS services and 16 local hospitals including JPMC and their partners in Marshall and Graves Counties. On the night of December 10, 2021, WKYHCC assisted in the coordination of the healthcare response across the region using appropriate response protocols and a communications and disaster plan that was prepared in advance.

The premise of the plan is that a county emergency manager (EM) would contact the coalition coordinator who would then send out a ReadyOp Alert letting the hospitals, EMS and Emergency Managers know that something was wrong. During this event, the coordinator received a call from McCracken Co. EM at 9:40pm and an alert went out to all coalition members at 9:53 pm. This notified the coalition that there was a major storm event, fatalities are expected, and all hospitals needed to do a bed update in WebEOC and prepare for a medical surge.

This regional approach toward disaster planning and preparedness proved very effective in responding to the needs of the residents of the communities in the path of the tornado. Even under the pressure of a COVID-19 surge, twelve of the 16 regional hospitals in the WKYHCC received 470 tornado victims, and a Tennessee hospital received 7 additional victims.

In the immediate hours following the storm, JPMC saw 85 patients from 9 p.m. Friday to 9 a.m. Saturday - the majority of whom had suffered storm-related injuries. Of these patients, the majority were treated and released from the Emergency Department. Nine of the patients were admitted to the hospital, while five were transferred to other facilities. As many as 200 additional staff at JPMC mobilized over the first 24 hours to implement the disaster plan and treat patients with direct care, lab, radiology, diagnostics, dietary, environmental and security services. Throughout the disaster JPMC cared for more than 110 patients who suffered storm-related injuries.

In the months following the disaster, in addition to the physical trauma it is evident that the experience had left an indelible mark on the psyche of the community. Even now, ominous clouds or electrical storms can trigger fear and anxiety especially in children.

With assistance from LifePoint Health, JPMC was able to expand its employee assistance resources and behavioral health services to meet the community's need. JPMC is there to manage the stress and anxiety inflicted on the community and hospital staff as a result of the trauma. In addition, Anderson and his team joined efforts led by Federal Emergency Management

Agency to establish a health and wellness committee and support an initiative to rebuild the community.

The community has combined its assets to create a long-term recovery group. "Recover Mayfield Graves," is a long range initiative led by local leaders who work with the Red Cross, county, state and federal government authorities and others in the effort to rebuild.

Mayfield is not only a community tasked with rebuilding, but also focused on the well-being of those who call the small western Kentucky town home. While resources are limited and rebuilding takes time, there is progress and hope for those hardest hit and the team at JPMC is doing its share and then some to care for the health of its community.

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