



FEMA



Hospital Haven: Facelift Provides Safe Hurricane Refuge for Young Patients

Miami, FL - The fanciful, brightly colored exterior of the Miami Children's Hospital (MCH) belies the inherent strength of the facility, which can be used as a medical shelter during hurricanes. Beginning in 2001, the building underwent a state-of-the-art retrofit to enable it to withstand a Category 4 hurricane. It is now wrapped in a hurricane-resistant shell.

The hospital serves seven counties in southern Florida, including populous Miami-Dade County, and is the region's only specialty hospital for children. The 268-bed medical facility has expertise in all aspects of pediatric medicine and is an important community resource.

An assessment of the facility's exterior construction, built in the mid-1980s, found that it was unsafe at wind speeds associated with a Category 2 hurricane, which is a common occurrence in southern Florida. Hospital administrators had to solve a two-fold problem: how to fund the renovation project, and how to conduct the retrofit and renovations without disrupting medical services.

MCH received \$5 million through FEMA's Hazard Mitigation Grant Program, administered by the Florida Department of Community Affairs, to help pay for the \$11.3 million project.

The retrofit involved strengthening the building by encapsulating the three-story structure in pre-molded panels of concrete reinforced with glass fibers. The panel system, anchored into the building's existing support structure, forms a protective cocoon around the hospital and, along with impact-resistant windows and a strengthened roof, enables the building to withstand winds of up to 200 miles per hour. The architect's approach of working from the outside to the inside of the building made it possible for surgeries, diagnoses, and nursing care for the hospital's young patients to continue uninterrupted throughout all phases of the renovation.

The project was completed in the spring of 2004. Young patients and their families did not need to evacuate from the hospital when Hurricanes Frances and Jeanne struck. In addition, MCH welcomed over 60 children who live at home but depend on ventilators or other powered medical equipment.

Not only children in need of medical care found refuge at MCH. Kevin Hammeran, MCH's Senior Vice President and Chief Operating Officer, explained that the safety of the medical staff is also a consideration when a hospital is designated as a hurricane shelter. "The strengthened building has enhanced the hospital administration's ability to recruit staff to serve during hurricanes. Many employees feel safer at the hospital during a storm than in their own homes." He continued, "We also have eliminated barriers by providing on-campus shelter for family members of storm-duty staff. Knowing their spouses and children are within the safe confines of the hospital gives peace of mind to those working through the storm."

During Hurricane Frances, MCH was the refuge for nearly 1,000 staff members and their families. The hospital hosted medical evacuees and families during Hurricanes Katrina and Wilma (2005). MCH has proven to be a safe haven for sheltering sick children and those who care for them.

Miami-Dade County, Florida



Quick Facts

- Year: **2000**
- Sector: **Private**
- Cost: **\$11,351,487.00 (Actual)**
- Primary Activity/Project: **Retrofitting, Structural**
- Primary Funding: **Hazard Mitigation Grant Program (HMGP)**