



Joint Commission–accredited San Juan Capestrano Hospital in San Juan, Puerto Rico, is a 172-bed private psychiatric center offering inpatient and outpatient services to adolescents and adults dealing with addiction and behavioral health issues. PHOTO COURTESY OF SAN JUAN CAPESTRANO HOSPITAL. USED WITH PERMISSION.

All Hands on Deck

San Juan Capestrano Hospital in Puerto Rico relied on people power during the devastating back-to-back hurricanes in 2017, with staff at all levels pitching in to keep the facility up and running. The lessons learned helped prepare the organization for subsequent disasters such as a series of earthquakes in 2020 and the COVID-19 public health emergency

Angel Amaral never expected to be crawling through 18-inch-deep water atop a hospital building under the eye of a hurricane, plucking debris with his bare hands from clogged roof drains.

But that's where the plant operations director and safety officer for 172-bed San Juan Capestrano Hospital (SJCH) found himself on September 20, 2017, as Puerto Rico was reeling from its second major hurricane in less than two weeks. Category 5 Hurricane Irma had passed close to the main island on September 7, resulting in several days of widespread power outages and interrupted water service. Then on September 20, category 4 Hurricane Maria directly hit Puerto Rico for 16 hours, bringing top wind speeds of 155 miles per hour and dumping at least 26 inches of rain that day.

During the first hours after Maria made landfall, Amaral remembers, the roof of the San Juan–based hospital's three-year-old, 24-bed private short-stay psychiatric center (an addition to the main hospital building) began leaking water through the ceiling. The staff tried to remove the water, but when it continued to flow, they moved the 24 patients to another unit of the hospital. The hospital had prioritized hurricane risks in its hazard vulnerability analyses (HVAs) and took part in community-based, hurricane-scenario full-scale emergency management exercises in accordance with The Joint Commission's Emergency Management (EM) standards (see page 8).



Maria uprooted trees and dumped a deluge of water on the roof of San Juan Capestrano Hospital's psychiatric center, which resembled a swimming pool during the storm. Shown here after being drained, the roof experienced significant damage, as did other structures on the hospital's campus.

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“When the hurricane was quiet during the eye of the storm, I went outside with the director of nursing to see why so much water was falling inside the building,” says Amaral. “The roof looked like a swimming pool. There is a four-foot-high cinder block parapet around it, the water was not draining through the drains, and the overflows were clogged. I thought, ‘This can collapse because the building is not designed to hold this much weight.’ So we got into the water and unclogged the drains without gloves or any equipment, removing leaves and branches.”



“We learned that we cannot wait for help to come—we are the help.”
—Ixza Casillas González, MPHE

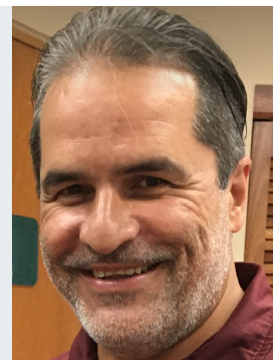
Amaral was just one of the many SJCH staff who pitched in during the storms and their aftermath, including the CEO in boots and raincoat clearing debris, finance employees doing laundry, occupational therapists stacking sandbags, and doctors clearing fallen trees blocking the entrance road. Even the 163 patients

were eager to get involved and asked for brooms and mops to help with cleanup, says Ixza Casillas González, MPHE, director of quality and compliance for the hospital, which is owned by Franklin, Tennessee-based Acadia Healthcare.

“Hurricane Maria changed Puerto Rican history,” says Casillas González. “It struck at night when we had 95% bed occupancy. We learned that we cannot wait for help to come—we are the help.”

“You can prepare for being without water or power,”

“If the emergency lasts longer than a 96-hour shelter-in-place, that’s when you have to reinvent yourself. Everyone needs to pitch in.”—Angel Amaral



adds Amaral. “But if the emergency lasts longer than a 96-hour shelter-in-place, that’s when you have to reinvent yourself. Everyone needs to pitch in.”

Getting power to the people

Prior to the 2017 hurricanes, SJCH—which also has nine outpatient clinics on the island—had put in place an incident command system that required preparations to begin as soon as an atmospheric phenomenon is announced. Before Hurricane Irma, hospital leadership held emergency planning meetings and were able to maintain all hospital core services throughout that storm.

But Hurricane Maria overwhelmed Puerto Rico, with 100% of the power grid, 95% of cellular sites, and 43% of wastewater treatment plants inoperable in the immediate aftermath. More than 97% of roads were impassable, and more than 95% of Puerto Ricans did not have drinking water. Even as services were restored, the effects of prolonged periods without electricity, fresh food, and clean water lasted for months.

Thanks to the hospital building’s 70,000-gallon water tank, SJCH never faced a shortage of drinking water and was even able to provide water to its nine clinics. But SJCH could not access a working power grid for a year, relying on generators instead.

“We didn’t have generators that could run continuously, and none of the outpatient clinics had generators,” says Amaral. “We spent a year running on generators from FEMA [Federal Emergency Management Agency]. Acadia sent a continuous generator that can be rolled in and out, and it is big enough to cover the demands of the hospital. So today we have three generators—two standby and one on a moving platform.”

A lifeline from Acadia

SJCH CEO Marta Rivera Plaza, MHSA, explains that patient care was uninterrupted during the prolonged emergency. “We maintained constant communication with leadership and employees, and informed the corporation daily of our status, needs, and work plans,” says Rivera.

The hospital’s corporate parent provided both moral and economic support and a vital link to supplies. Medication supplies were a major concern immediately after Hurricane Maria struck. The hospital normally kept enough medication on hand for four days, but the ongoing disaster led to worries about maintaining an adequate supply of controlled medications and insulin for both current and future patients.



“We maintained constant communication with leadership and employees.”
— Marta Rivera Plaza, MHSA

“Acadia flew in supplies a few days after the hurricane, including medications, an antenna for communication, a satellite phone, food, and water,” says Rivera. “They arranged for generators, ice machines, and parts for the generators, and ensured that all employees were paid.”

Clear communication benefits

Frequent communication played a big role in SJCH's emergency management plan, including daily and even twice-daily meetings during the hurricanes' aftermath. But the all-encompassing nature of the catastrophe meant staff often had to think creatively during those first post-hurricane days, says Casillas González.

The hospital had a radio that connected it with local emergency and utilities agencies. However, during Hurricane Maria, the radio was not accessible because it was in an office separate from the main hospital building. Cell phone service also was sporadic.

"A housekeeping employee had the only cell phone with a steady signal and lent it to the administration to coordinate with agencies," says Amaral. "Landline phones had collapsed, and the only satellite phone available had an unstable signal. We learned the importance of text messaging."

To communicate with patients' families, the hospital's CEO spoke on local radio, letting them know that all patients were fine and that the hospital was open if they wanted to pick up their loved ones.

The hospital's longtime efforts to maintain strong community partnerships made it easier to keep the lines of communication open with external organizations and government agencies, explains Rivera. SJCH regularly participates in emergency exercises and seminars with the local Department of Veterans Affairs, the Association of Hospitals of Puerto Rico, and the Puerto Rico Health Care Coalition–Metro Region, along with providing free education to the community and companies. "In times of emergencies, good partners answer our calls, collaborate, and help," says Rivera.

Lessons learned

After Hurricane Maria, the hospital made a number of changes to its physical environment and emergency management procedures, including the following:

- ▶ Anchoring air conditioners to the structure beams of the roof
- ▶ Enlarging roof overflow drains
- ▶ Constructing new, wider storm drains around the swimming pool
- ▶ Acquiring two 6,000-gallon diesel fuel tanks, doubling the facility's capacity to 192 hours
- ▶ Purchasing water extraction machines that can both vacuum and pump
- ▶ Removing the basketball court roof's skylights and installing a steel roof
- ▶ Resealing all windows to strengthen them against water
- ▶ Storing the emergency radio in a location with 24-hour access
- ▶ Maintaining a medication inventory sufficient for 45 patient days

- ▶ Providing all nine ambulatory clinics with their own generators and water tanks
- ▶ Preparing a list of staff, including the CEO and other leaders, who commit to staying on-site during an emergency

Recovery involves more than repairing and coping with physical damage, says Casillas González, even though that is usually the focus of emergency planning. “It’s important after an emergency to take care of the mental health of your staff and community,” she says. “A year after Hurricane Maria, we were still dealing with employees with PTSD [post-traumatic stress disorder], especially when hurricane season started again.”

The resilience San Juan Capestrano Hospital built up as a result of Hurricane Maria was tested in January 2020, when the southern part of Puerto Rico experienced several significant earthquakes. Though they did not structurally damage the hospital or its clinics, “the whole island was in shock and you can imagine the trauma that people were experiencing,” says Casillas González.

Setting up an outpost on a baseball field, San Juan Capestrano Hospital and its clinics brought food, water, and mental health services to people directly affected by the earthquakes, many of whom were afraid to return to their homes.

Related Joint Commission Requirements

The Joint Commission’s revised “Emergency Management” (EM) chapter had not yet been implemented at the time San Juan Capestrano Hospital (SJCH) in Puerto Rico confronted Hurricanes Irma and Maria. However, the Joint Commission–accredited psychiatric hospital had been complying with the EM standards in effect at the time, which helped it survive—and cope with the aftermath of—the storms. The following EM requirements, from the current *Comprehensive Accreditation Manual for Hospitals* (or its E-dition® counterpart), were among those particularly relevant to SJCH’s hurricane response and recovery. (Notes from the standards are not included.)

- ▶ Hospital leadership provides oversight and support of the emergency management program (EM.10.01.01).
- ▶ The hospital conducts a hazard vulnerability analysis utilizing an all-hazards approach (EM.11.01.01).
- ▶ The hospital has a communications plan that addresses how it will initiate and maintain communications during an emergency (EM.12.02.01).
- ▶ The hospital has a staffing plan for managing all staff and volunteers during an emergency or disaster incident (EM.12.02.03).
- ▶ The hospital has a plan for managing resources and assets during an emergency or disaster incident (EM.12.02.09).
- ▶ The hospital has a plan for managing essential or critical utilities during an emergency or disaster incident (EM.12.02.11).
- ▶ The hospital has an emergency management education and training program (EM.15.01.01).
- ▶ The hospital plans and conducts exercises to test its emergency operations plan and response procedures (EM.16.01.01).
- ▶ The hospital evaluates its emergency management program, emergency operations plan, and continuity of operations plans (EM.17.01.01).

And barely two months after the earthquakes came the COVID-19 pandemic. San Juan Capestrano Hospital erected an air-conditioned tent outside for screening and set up an isolation unit at the back of the hospital for patients with COVID-19 symptoms. “The whole world was affected by COVID-19. But one of the good things about Puerto Rico is that when vaccines became available, we had one of the highest rates of vaccination,” notes Casillas González. “Because we had a high vaccination rate, it wasn’t as bad as in many other places. We encouraged people to be vaccinated here at the hospital. We brought our families to get vaccinated here, and we opened our doors for the community to get vaccinated.”

The organization knows how to cope with crises. As Casillas González puts it, “If we survived hurricanes, earthquakes, and a pandemic, we can manage anything!” 