

CONQUEST

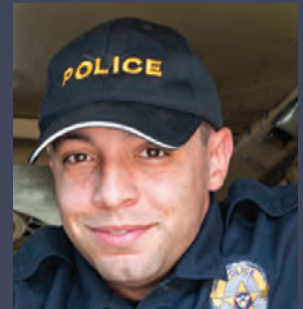
THE UNIVERSITY OF TEXAS
MD Anderson
Cancer Center
Making Cancer History®

FALL 2017

VOL 32 ISSUE 2



**Their response
to epic flooding
and record levels
of rainfall?**



**An unsinkable
commitment
to patients
and each other**



MISSION

The mission of The University of Texas MD Anderson Cancer Center is to eliminate cancer in Texas, the nation and the world through outstanding programs that integrate patient care, research and prevention, and through education for undergraduate and graduate students, trainees, professionals, employees and the public.

VISION

We shall be the premier cancer center in the world, based on the excellence of our people, our research-driven patient care and our science.

We are Making Cancer History®.

CORE VALUES

Caring

By our words and actions, we create a caring environment for everyone.

Integrity

We work together to merit the trust of our colleagues and those we serve.

Discovery

We embrace creativity and seek new knowledge.



On the cover: Employees from every department at MD Anderson showed their complete dedication to caring for patients through their solidarity and sacrifice before, during and after Hurricane Harvey. Their selfless acts and complete cooperation throughout the emergency were truly inspiring.

Join our community



MD Anderson Cancer Center



MDAndersonCC



@MDAndersonNews



+MDAnderson



MDAnderson



MDAndersonCancerCenter



mdandersoncc

#endcancer



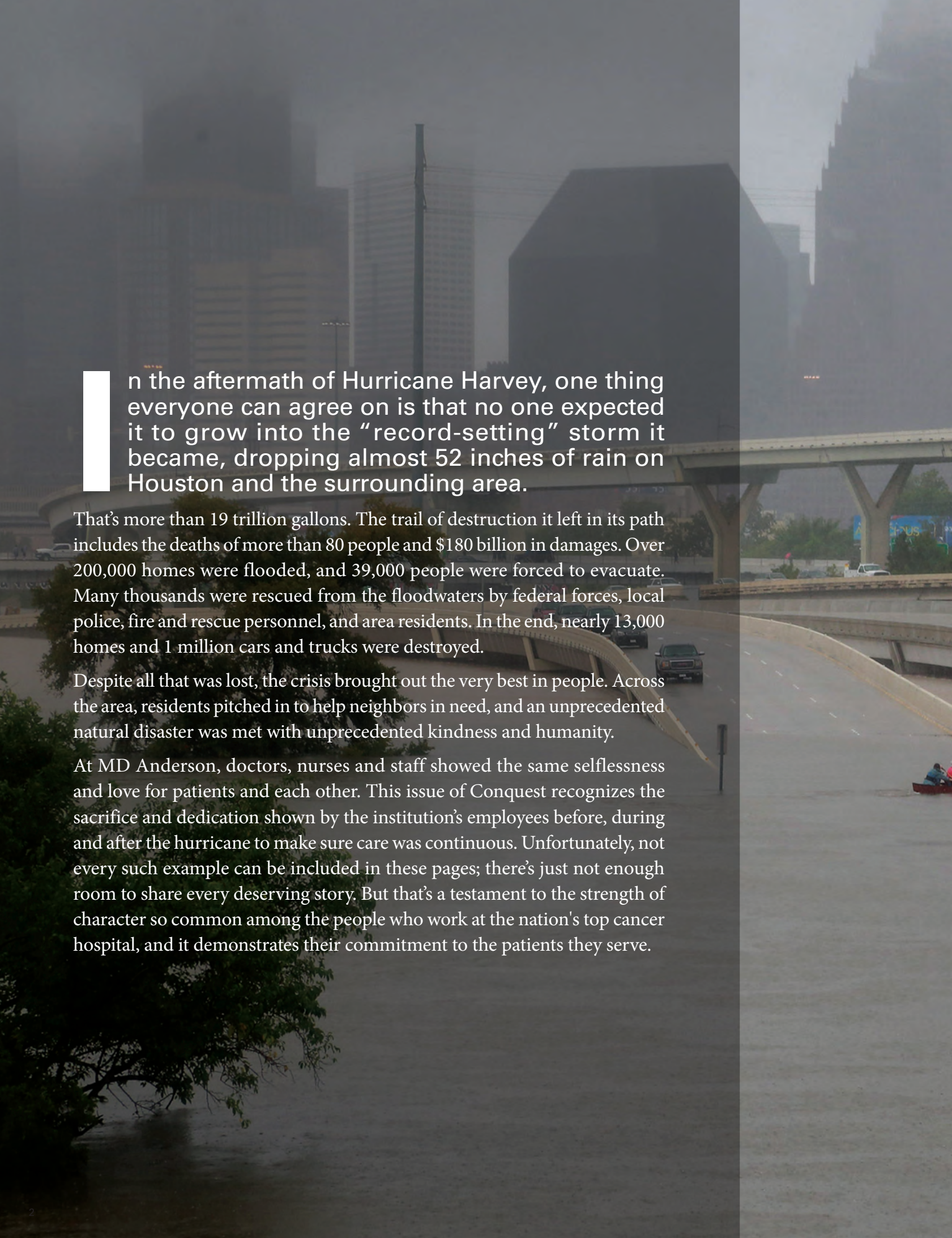
A Comprehensive Cancer Center Designated by the National Cancer Institute

VISIT THE CONQUEST WEBSITE
AT WWW.MDANDERSON.ORG/CONQUEST



FEATURES

- 2 AN EMERGENCY BROUGHT OUT THE BEST**
Messages from Marshall Hicks, M.D., president *ad interim* of MD Anderson, and Peter Pisters, M.D., the institution's incoming president, following Hurricane Harvey.
-
- 5 HEROICS DURING THE DELUGE**
While the record-setting storm flooded many parts of the Houston area and the Gulf Coast, MD Anderson's workforce showed the power of teamwork by stepping up and doing whatever it took to maintain continuous care for patients.
-
- 6 QUICK DECISIONS**
Marian Von-Maszewski, M.D., is no stranger to emergency situations. She trained under legendary trauma surgeon James "Red" Duke, M.D.
-
- 8 INNOVATIVE SOLUTIONS**
University of Texas Police Department Assistant Police Chief Vicki King called on the Houston Police Department and the City of Houston for help in transporting vital blood donations and staff through the floodwaters.
-
- 10 A VETERAN OF EMERGENCIES**
In her 40 years of nursing experience, Chief Nursing Officer Carol Porter, D.N.P., has cared for patients through blizzards, hurricanes and 9/11. Her training was valuable during Harvey.
-
- 11 DISHING OUT PRAISE**
Karen Lu, M.D., chief medical officer *ad interim*, credits teamwork and some unsung heroes with seeing the cancer center through the crisis.
-
- 12 'WHATEVER IT TAKES'**
Jose Cortes, M.D., made his way through eight miles of flooded streets to care for patients in the intensive care unit of the Children's Cancer Hospital.
-
- 14 PLANNING FOR THE WORST**
Extensive emergency planning, collaboration and a strong commitment to patients were crucial to the cancer center maintaining operations during the unprecedented event.
-
- 15 STRENGTH FROM EXPERIENCE**
How storms of the past led to improvements that helped the institution weather Hurricane Harvey.
-
- 18 COURAGE FROM THE KITCHEN**
Meet the two small teams that kept everyone in the hospital fed and comforted through the ride-out.
-
- 24 STORM STORIES**
There was an outpouring of heroics from across the cancer center during the epic flooding. Read some of those stories.

The background image shows a city skyline obscured by a thick layer of fog or rain. In the foreground, a multi-lane highway bridge spans across a wide, flooded area. The water is murky and reflects the overcast sky. A few cars are visible on the bridge, and a small boat with people is in the water to the right. The overall atmosphere is somber and desolate, reflecting the aftermath of a major disaster.

In the aftermath of Hurricane Harvey, one thing everyone can agree on is that no one expected it to grow into the “record-setting” storm it became, dropping almost 52 inches of rain on Houston and the surrounding area.

That’s more than 19 trillion gallons. The trail of destruction it left in its path includes the deaths of more than 80 people and \$180 billion in damages. Over 200,000 homes were flooded, and 39,000 people were forced to evacuate. Many thousands were rescued from the floodwaters by federal forces, local police, fire and rescue personnel, and area residents. In the end, nearly 13,000 homes and 1 million cars and trucks were destroyed.

Despite all that was lost, the crisis brought out the very best in people. Across the area, residents pitched in to help neighbors in need, and an unprecedented natural disaster was met with unprecedented kindness and humanity.

At MD Anderson, doctors, nurses and staff showed the same selflessness and love for patients and each other. This issue of Conquest recognizes the sacrifice and dedication shown by the institution’s employees before, during and after the hurricane to make sure care was continuous. Unfortunately, not every such example can be included in these pages; there’s just not enough room to share every deserving story. But that’s a testament to the strength of character so common among the people who work at the nation’s top cancer hospital, and it demonstrates their commitment to the patients they serve.



A powerful storm brings out the power of people and teamwork

A message from the acting president

When more than 50 inches of rain fell across the Houston area in just a few days at the end of August, traffic came to a standstill, streets turned into rivers, and schools and businesses closed their doors. Thousands of residents had to be rescued from rising floodwaters, and even more were forced to flee to emergency shelters.



While we could not control Hurricane Harvey, we could control our response to it as an institution. And our response at MD Anderson was remarkable. Our emergency preparedness teams have trained and prepared for almost every emergency, and our Incident Command Center was up and running days before the hurricane made landfall in Rockport. By the time the storm regained strength and headed to Houston, we were prepared. Our floodgates were in place, and many of our teams were in-house or on standby.

The floodwaters were historic, on the scale of what might be expected once every 1,000 years. At our Texas Medical Center campus, more than 1,000 employees rode out the storm on-site for several days to provide exceptional care for 538 patients in the hospital, 15 patients in the Emergency Center and nearly 300 patients' family members. Those on campus included not only physicians and nurses, but also teams from Facilities Management, UT Police, Dining Services and so many others. During our recovery, many more of our dedicated people made it in, eager to help however they could.

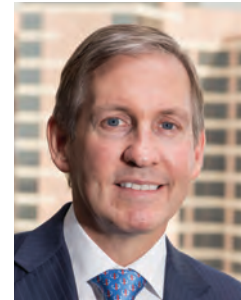
We estimate 35% of our 21,000-strong workforce was severely impacted by this storm. We've heard countless examples of how people witnessed our culture of caring in action. It has filled me with pride in our MD Anderson community to hear over and over the common offer: "What can I do to help?" We've heard stories of employees wading, kayaking and even swimming to work out of concern for colleagues and patients. We've heard about employees rescuing their co-workers from rising water or arriving at colleagues' flooded homes to rip up carpet and sheetrock. Some of our faculty and staff volunteered at emergency shelters, too. There are so many heroes of Harvey across MD Anderson, and I thank you for your dedication to caring for our patients and each other.

We weathered this storm together. We persevered and demonstrated our resiliency. Although Mother Nature brought out her worst for those days in August, we continually we saw the best in our people. And we demonstrated that together we can do great things. It's the same drive we have toward our bold mission to end cancer. It's who we are. We truly are MD Anderson Strong.

Marshall E. Hicks, M.D.
President ad interim

A message from the incoming president

Although more than 1,500 miles away in Toronto, Canada, at the time of Hurricane Harvey's landfall and subsequent inundation of southeast Texas, I watched with rapt attention the media coverage of the catastrophic storm and the awe-inspiring response of those in its destructive path.



As the storm churned and the floodwaters rose to historic depths, what I witnessed from afar were Texans and their neighbors banding together and helping each other in ways that not only buoyed those in need at a most desperate time but also served as an example for the world of what togetherness really means.

The same can be said of MD Anderson. Having been named by UT Board of Regents as the sole finalist for the MD Anderson presidency just one day before the storm arrived, I was able to receive from Dr. Marshall Hicks and other leaders and former colleagues firsthand accounts of the above-and-beyond, heroic efforts taking place to keep the institution secure and its more than 500 inpatients safe during and immediately after the storm.

Even as floodwaters overtook the Texas Medical Center's streets and lapped at MD Anderson's doors, the employees who served as the institution's ride-out team over several days epitomized resilience. Beyond protecting patients and property in extremely trying circumstances, the team also positioned the institution to pivot quickly to a recovery phase that enabled clinics to reopen and patient appointments to be rescheduled with minimal delay.

Thanks largely to a 20-year term as a member of its faculty, I was already well-aware that MD Anderson is a special place, and I was struck once again by just how special it is. In good times and in bad, people make the difference, and in the face of this epic storm, MD Anderson's people did more than that. They, along with their friends and neighbors across the region, helped restore hope.

A special place indeed.

Peter WT Pisters, M.D.
President

THE HOSPITAL'S HEROES



On the morning of Sunday, Aug. 27, as Hurricane Harvey continued to batter the Houston area, Karen Lu, M.D., senior vice president and chief medical officer *ad interim*, and her husband made their way through eight flooded blocks from their home to a high-water vehicle driven by University of Texas Police Department Officer Carl Willis.

Willis then took Lu to MD Anderson where she joined faculty and staff members on the ride-out team that was caring for approximately 530 inpatients, along with some 300 of the patients' family members. UTPD also picked up Carol Porter, D.N.P., vice president and chief nursing officer, and delivered her to the hospital. Porter and Lu, along with Marian Von-Maszewski, M.D., assistant professor of Critical Care and Respiratory Care, who was serving as the incident commander, led those on-site, as well as the entire institution, through the unprecedented storm and into the recovery period that followed.

These leaders' readiness to step up and do whatever necessary to ensure patients were cared for and safe was mirrored by many during the crisis. Since the storm, stories of MD Anderson doctors and employees who put their own needs and safety aside have been circulated and shared. These include many from the cancer center's nurses, pharmacy technicians, laboratory technicians, food services employees and UTPD staff, whom Lu described to NPR as the "unsung heroes" during the emergency.

Many of these inspiring stories are featured in the following pages.



Marian Von-Maszewski's Houston home flooded while she was at MD Anderson during Hurricane Harvey. *photo by Nick de la Torre*

During the weather emergency, she emerged as a key leader

Marian Von-Maszewski's training and experience in crisis situations proved very valuable in her role as an incident commander during Harvey

By Laura Harvey

Anticipating heavy rains from Hurricane Harvey, Marian Von-Maszewski, M.D., tried to prepare her house for the worst. She moved her most important possessions upstairs and put tarps over furniture downstairs, in case any windows were to break. Her son was at her parents' house. Her dog was at a co-worker's house.

Armed with snacks and clothes, the assistant professor of Critical Care and Respiratory Care headed to MD Anderson on the Friday that the storm made landfall near Rockport, Texas.

"When it looked like there was a possibility the storm might come to Houston, I moved into my office, equipped to stay for a week," she says. "The forecasts were changing, and we didn't know what weather would come in at that point."

An unexpected duty

When the storm arrived in Houston on Saturday night, Von-Maszewski wanted a closer look. From the hospital lobby, she could see the storm drains were backing up inside the floodgates. Record-setting rainfall was coming down, and there seemed to be no end in sight.

She took a video and sent it to Paul Mansfield, M.D., vice president for Acute Care Services, and Matt Berkheiser, Dr. PH, chief safety officer and associate vice president of Environmental Health Safety and Corporate Services, two members of the Incident Command structure, which makes high-level decisions during emergencies. Since earlier in the week, the group had been meeting several times a day via conference call to monitor the shifting forecasts. Now that the weather emergency they had planned for was a reality, they needed someone on-site to take the lead during the ride-out.

Von-Maszewski was in the right place at the right time.

"They both said, 'It's going to be you – you're the incident commander – so you better start documenting,'" she says. "So I grabbed a notepad and started writing."

For the first in-person meeting at the Incident Command Center, Von-Maszewski says there were six people in the room. They took stock of the situation – "here's where we are, we take care of patients, we take care of each other" – and no one hesitated, she says. They had to think ahead about what resources were available and who was on hand to help if there were power losses or a need to evacuate anyone.

They had to make decisions quickly.

Emergency training

Fortunately, Von-Maszewski had trained for emergency situations. It was an area of interest for her, and she was eager to respond when needed at MD Anderson. In medical school, she worked under legendary trauma surgeon James "Red" Duke, M.D., at UT Health and Memorial Hermann's Level 1 trauma center.

"Dr. Duke was my mentor. I'd walk the hospital with him at all hours," she says. "He taught me to be calm, remember what I know and move on. And to be kind under pressure, because yelling at someone during a crisis isn't going to make things better. It's all about the teamwork – and that's what I saw here during Harvey."

Her familiarity with MD Anderson also helped. Working in critical care and in intensive care has meant lots of emergency drills. In addition, she moonlighted with the institution's Nocturnal Program, so she was used to working with the off-shift administrators and others who keep the place running overnight and on the weekends.

"I may have been incident commander, but I was not alone. The off-shift administrators, teams from Facilities Management, Materials Management, UT Police – they're indispensable in an emergency like this, and they were all hands on deck," she says. "Everyone helped as part of one team."

Help at home

Teamwork got Von-Maszewski through the crisis she faced after returning home as well.

While she was busy at the hospital, her house had taken on a foot of water. Like so many people in the Houston area, she had to rip out sheetrock, deal with the insurance company, find contractors and determine how best to move forward.

"I saw such kindness with people offering to do whatever they could to help," she says. "Friends from high school showed up. My co-workers showed up. Some people took home dishes to sanitize them for me. Things you need but don't think about."

Reflecting on the storm, Von-Maszewski says the experience was a reminder that staff at every level of the institution play a vital role in making MD Anderson successful.

"It was amazing to see our teams in action," she says. "It's so much more than taking care of patients. There are people who are here to take care of other employees and our buildings and so much more that you might not think about until you see it up close. What a great opportunity I had."





(Clockwise from the back) Houston Police Department Sergeant Timothy Zaragoza, Metro Senior Mechanic Carlester Chatmon, UT Police at Houston Assistant Chief Vicki King, HPD Sergeant George Schaudel and HPD Officer Marcos Betancourt worked together to make sure vital supplies and staff made it to MD Anderson during Harvey. *photo by Adolfo Chavez III*

UTPD served and protected by bringing in crucial supplies, staff and blood donations

By Ronda Wendler

Tough problems require tough solutions.

So when MD Anderson became isolated by the rising waters and swift currents brought by Hurricane Harvey, strong and sturdy heavy-duty trucks were called into action to forge floodwaters.

Rolling along on gigantic wheels, the elevated trucks delivered much-needed medical supplies, pharmaceuticals, blood donations, linens and food to the hospital. They even picked up stranded doctors, nurses, and other health care professionals from their homes, then delivered them to MD Anderson to care for patients.

"We kept 'em rolling 20 hours a day for four days," says Vicki King, assistant chief with The University of Texas Police at Houston. King was alerted to MD Anderson's need for high-water vehicles during a daily hurricane briefing at MD Anderson's Emergency Operations Center.

"We learned that a courier delivering donated blood from Dallas was stranded in the Gallery Furniture parking lot on the North Freeway," she says. "He drove as far as he could, but flooded streets made it impossible for him to continue."

MD Anderson's leukemia patients greatly needed platelets from the blood, which expire after 72 hours. The clock was ticking.

"We called Harris County's Catastrophic Medical Operations Center to request a boat or high-water vehicle to retrieve the blood, but all were busy rescuing citizens from their flooded homes," says Matt Berkheiser, Dr.PH, chief safety officer and associate vice president for

Environmental Health and Safety at MD Anderson.

That's when King's previous experience working in emergency management with the Houston Police Department kicked in.

"I remembered that during Hurricane Ike, which wasn't nearly as bad as Harvey, the City of Houston's Public Works Department loaned us some nontraditional vehicles that could handle high water," she says.

King called a former colleague at HPD, and the two came up with an innovative solution: a garbage truck or a dump truck from the Public Works Department could retrieve the blood and deliver it to MD Anderson.

"For obvious reasons we chose the dump truck," King says.

The city supplied not only the truck, but also a public works employee to drive it and two Houston Police Department officers to ride along and offer assistance.

"We dispatched it to pick up the donated blood, and then we kept it busy for days," King says.

The dump truck met delivery vehicles that were stopped by floodwaters on their way to the hospital.

"We'd tell them to pull over, wait where they were and we'd meet them with our dump truck," King explains. "They'd hand us medicine, supplies, whatever, then we'd steer through flooded streets back to the hospital with deliveries in tow."

Eventually, water seeped into the headlights and the truck became inoperable. To replace it, the Houston Police Department sent MD Anderson a high-water, two-and-a-half-ton military cargo truck, aptly nicknamed a "deuce and a half."

The "deuce" could navigate through six feet of water, so MD Anderson used it to pick up essential personnel who needed to get to work. Employees were grouped in clusters by zip code to make the route more efficient.

"We'd collect them at home, give them a UT Police raincoat, put them in the open bed of the vehicle, cover them with a tarp, and off we'd go," King says.

The deuce's maximum speed was only about 50 miles per hour, so when it reached higher ground, employees would hop off and load into waiting UT Police SUVs, which would complete the trip to MD Anderson.

A second military vehicle originally designed to withstand land mines soon arrived. Owned by The University of Texas System in Austin, the Mine Resistant Ambush Protected (MRAP) vehicle navigated flooded streets with ease and doubled deliveries to and from the hospital.

By the time floodwaters receded and operations returned to normal, UT Police had facilitated the transport of 68 physicians, nurses and other health care professionals, and transported countless medical supplies, pharmaceuticals, blood donations, linens, food and water.

"Harvey was my fourth hurricane, and by far it was the worst," King says. "It's humbling to see how we all worked together and just kept rolling."

Nurses care for patients and each other during Harvey

No stranger to crises, chief nursing officer emphasized the value of rest during the ride-out

By Ronda Wendler

Blizzards. Blackouts. Hurricanes and floods. Carol Porter, D.N.P., has seen them all.

As a New York City nurse trained in emergency management and preparedness, she's helped hospitals navigate a series of catastrophic events – some natural, some man-made. Porter was on duty when Hurricane Sandy ravaged the Northeast in 2012. She cared for victims on and after 9/11, and was a director of emergency services during the New York City electrical blackout of 2003.

"I've been in nursing for more than 30 years," she says. "I've seen a lot."

In 2016, Porter left New York and joined MD Anderson as senior vice president and chief nursing officer. Once again, her emergency management skills came into play when Hurricane Harvey flooded much of Houston.

"Who knew I'd be handling another crisis so soon?" she says.

With other MD Anderson leaders, Porter helped guide the institution as it fought through and recovered from the devastating storm.

Porter awoke the morning of Aug. 27 to find her quiet street had become a raging river.

"My first thought was 'I have to get to work,'" she recalls.

But the floodwaters that submerged the city had cut off access to MD Anderson. So Porter placed a call to the University of Texas Police Department.

"As a former trauma nurse, I formed close bonds with police officers who were on the scene during emergencies," she says.

The police chief sent a high-water truck and two officers to get Porter.

"I'm only 5' 2", but I climbed up, and away we went," she says.

More than 130 nurses were on duty when Porter arrived at the hospital. They'd worked



Carol Porter, D.N.P., has a lot of experience working through emergency situations. That experience benefited MD Anderson during the storm. photo by Adolfo Chavez III

the night shift and couldn't leave due to flooding. Porter made sure they ate and alternated rest periods. She asked them to stay until flooding subsided.

"They were all on board," she says.

Most had packed extra clothes, toiletries and snacks in anticipation of the hurricane.

"Nurses know that when bad weather is coming, they may need to remain at the hospital. They realize they can't get home safely and the next shift can't make it in," Porter explains. "That's the nursing mindset. You think ahead. You pack a bag. You prepare to stay."

To care for those who rode out the storm, darkened sleeping areas with cots, pillows and blankets were designated throughout the hospital. While some worked, others slept. Then they reversed roles. Porter and her team made sure everyone rested.

"During a disaster, clinical staff are intense and adrenaline-driven," she says. "I had to ask them to rest, because they wanted to

keep working. I'd look them in the face, see how exhausted and stressed they were, and tell them 'You can't function and make good decisions if you don't sleep.'"

By day three of the ride-out, many roads had cleared. Doctors, nurses and others departed the hospital as new staff arrived.

A young, newly graduated nurse exited the hospital, pushing a cart stacked high with bedding, clothes and other items she'd accumulated during Harvey duty. Smiling, she waved to her father who was parked outside, waiting to take her home.

Porter greeted the man as he stepped out of his car to help his daughter load her things.

"He was beaming," she says, "and so proud."

Porter thanked him for his daughter's service.

"Then he thanked me for taking care of his daughter and giving her this opportunity," Porter recalls. "I was thanking him, he was thanking me ... so much kindness, caring and gratefulness. That's what being a nurse is all about."

Chief medical officer sings the praises of the unsung heroes and a united effort

Hurricane Harvey hit Houston just six weeks after Karen Lu, M.D., assumed the role of MD Anderson's chief medical officer *ad interim*. The new position meant she was the "go-to" person for ensuring quality of care and patient safety at the hospital. So on the morning of Aug. 27, as the storm was wreaking havoc on the city and surrounding area, she made her way to the cancer center – a trip that included wading eight blocks through floodwaters and a ride in a high-water emergency vehicle.

Lu joined 1,000 doctors, nurses and staff from all areas of the institution who were on-site to make sure there was no interruption or compromise in care for the hospital's 538 inpatients during the storm. More than ever, Lu, who's been with the cancer center for 18 years, saw the important role each and every member of the MD Anderson team played in helping the cancer center weather the storm.

"This emergency ride-out team included employees from clinical, housekeeping, facilities, dining services, security and so many others," Lu says. "They coordinated efforts to deliver safe, quality care despite being on an island surrounded by floodwaters."

While patients in the hospital were safely cared for, Harvey's record-breaking rainfall was shutting down Houston and the surrounding area. Deep water cut off access to the hospital for many employees and patients in the days following the storm, and the institution was forced to suspend outpatient care for a few days. Lu explains this meant the approximately 13,000 weekly appointments – including those for surgeries, chemotherapy and radiation treatments – were put on hold.

But the transition from ride-out to recovery didn't take long. Under Lu's leadership, the return to normalcy began long before the rain even stopped. By Monday, less than one day after Harvey blew into Houston, physicians who could safely make it to the hospital were asked to join the other members of the team on-site. And critical staff arrived the next day to help relieve the ride-out team. Treatments for patients needing urgent care



Karen Lu, M.D., senior vice president and chief medical officer *ad interim*, made it to the hospital in a high-water vehicle sent by UTPD. photo by F. Carter Smith

and crucial surgeries were slowly begun on Wednesday. And just over a week after the storm, the institution was both fully staffed and operational.

"We were very proud of how quickly we were able to get back up and running following the storm, thus getting our patients back on track with their treatment," Lu says. "This was only feasible because of the outstanding teamwork and constant refinements we made to our emergency procedures and protocols."

She credits MD Anderson employees' team effort and lessons learned from emergency weather events in the past, such as 2001's Tropical Storm Allison, in keeping facilities safe and ensuring a smooth recovery.

"Following Allison, we evaluated our needs and devised a plan that led to several important upgrades, such as adding more than 75 floodgates, relocating electrical equipment and installing submarine doors," she says.

As with every storm, Harvey presented new opportunities to improve and refine response plans. With approximately 35% of its workforce impacted by storm-related damage, Lu says the institution saw the importance of supporting employees.

"MD Anderson worked hard to be caring and supportive to its employees personally impacted by Harvey, including financial support through the Caring Fund, having FEMA on-site and offering alternative day care through Bright Horizons when so many Houston-area schools were closed following the storm," says Lu. "Past storms have harmed MD Anderson's facilities and research; this one affected our people. I am so grateful to our committed staff for their dedication to our patients and for doing everything possible to ensure a safe recovery."

Pediatric oncologist trudged, waded and swam 8 miles to care for patients

By Ronda Wendler

Back on Aug. 26, Jose Cortes, M.D., was looking forward to a relaxing Saturday evening at home. First he'd enjoy dinner with his family. Then he'd watch the highly anticipated boxing match between Floyd Mayweather and Conor McGregor.

The pediatric critical care doctor had spent the previous night at MD Anderson's Children's Cancer Hospital in anticipation of potential flooding.

"Weather forecasters were predicting that Tropical Storm Harvey would deliver torrential downpours," he explains, "so I wanted to stay close to my patients throughout the night, in case there was an emergency."

But on Saturday the streets were still clear and the rain was light, so Cortes headed home for a break. By 8 that evening, however, rain began to fall and his street filled with water.

"I wasn't too concerned because when my street floods, the water recedes quickly," says Cortes. He continued watching the boxing match.

By midnight, Mayweather was declared the winner and Cortes prepared to head back to the hospital, where he'd again spend the night. As he stepped outside, he saw water, lots of water.

"It was all the way up my driveway and covering my yard," he says. "I knew driving to the hospital would be impossible, but I needed to get to work. Patients and their parents were depending on me."

So Cortes decided if he couldn't drive, he'd walk.

"The only way to reach the hospital," he says, "was with my own two legs."

To avoid worrying his wife, Cortes waited until she fell asleep, then quietly retrieved a hooded raincoat and water shoes from the hall closet.

As he exited the front door, his daughter handed him a lantern.

"What a sight I must have been," Cortes chuckles. "I was wearing shorts and a T-shirt, a long raincoat and swim shoes."

In one hand he clutched a plastic garbage bag containing dry clothes. In the other he gripped the lantern, which he held high above his head as he set out after midnight on the 8-mile trek to the hospital.

Cortes walked slowly through flooded residential streets, scooting his feet along the pavement to feel for hidden dangers like uncovered manholes.

"I didn't want to be swallowed into the sewer," he says.

Wading through an unending stretch of dark water, Cortes couldn't tell where streets ended and yards began, so he hugged the curb for guidance. A curve to the left or right meant he'd reached an intersection.

Houses he passed appeared to be floating on an ocean. Every so often, he'd see a homeowner curiously gazing at him from a dimly lit window, "probably wondering what on Earth I was doing."

Eventually, Cortes emerged onto Chimney Rock Road, a typically busy Houston thoroughfare. He pressed forward through waist-high water, straddling the highest point, the middle. He marveled at how strange it felt to "own" the road that normally hosts nonstop, fast-moving traffic.

Turning onto Bissonnet, then Bellaire – two more main arteries – brought him closer to MD Anderson, and nearby Brays Bayou. He worried about snakes.

"I don't like snakes," he says, "especially water moccasins and copperheads."

Nervously, he stole quick glances at the draining battery on his cell phone as his daughter repeatedly called, frantic for updates. He assured her he was OK, and trudged forward.

When he arrived at Interstate 610, he half-walked, half-swam under the freeway. He counted seven cars that had stalled in the

high water below the underpass. They were now flooded and abandoned by their owners.

For another hour, Cortes continued his waterlogged hike until finally he could see the lights of MD Anderson two blocks ahead. Just as he entered the home stretch, a terrifying lightning bolt ripped through the sky, followed by a roar of thunder and a torrential downpour.

"I could barely see," he recalls.

Two-and-a-half hours after he left home, Cortes walked into the hospital, drenched from head to toe.

Heading straight for the pediatric floor, he slogged through the hallways and ignored the stares of curious onlookers. When he arrived, nurses were shocked, then relieved, to see him.

"I told them, 'Sometimes you have to do whatever it takes,'" he says.

After a shower and a change of clothes, Cortes entered the pediatric intensive care unit where he checked on patients, reviewed their latest lab results, answered questions from parents, and worked with nurses to develop a plan of care designed for each hospitalized child for the remainder of the night. The next morning, he and his colleagues attended a group meeting. A fully assembled team of doctors, nurses and other health professionals was on hand to care for the 17 hospitalized pediatric patients during the flood. The team included pediatric oncologist Cesar Nunez, M.D., hematologists-oncologists Nidra Rodriguez, M.D. and Jessica Foglesong, M.D., medical resident Tomaj Alban, M.D., and Cortes, a critical care physician.

"All areas were covered," says Cortes, who remained at the hospital three more days until he was relieved on Tuesday night.

When he finally returned home, his wife, Fiorella, greeted him at the door.

"When I heard what my husband had done, I was relieved he'd made it, but I wasn't surprised," says Fiorella, who's known her husband since high school. "Medicine is his calling. He's totally dedicated to his patients."



Jose Cortes, M.D., set out after midnight on an 8-mile trek from his home to MD Anderson. *photo by Nick de la Torre*

Past weather emergencies have strengthened the storm-tested cancer center

By Jacqueline Mason

Floodgates are in place to protect MD Anderson's Main Building from high waters.

photo by Adolfo Chavez III



Sixteen years before rain from Hurricane Harvey formed a moat around MD Anderson, Tropical Storm Allison changed how the cancer center thought about natural disasters.

That storm dumped 5 feet of water on the Texas Medical Center, where MD Anderson is located, causing nine nearby hospitals to flood or lose power. MD Anderson remained operational during Allison but sustained damage to electrical systems and medical equipment in the basement of the Main Building, which houses the cancer center's inpatient hospital and some outpatient clinics and research labs.

"I don't remember anything that changed the way we thought about our facilities like Allison did," says Janet Sisolak, director of MD Anderson's capital projects. "For one, we had to think differently about where we put critical equipment."

Elevate and barricade

Of all of MD Anderson's facilities, the Main Building is the most vulnerable to flooding from nearby Brays Bayou. The institution's South and Mid Campus buildings are situated on higher ground, and Mays Clinic and the Cancer Prevention Building were built with elevated foundations following Allison.

The institution ultimately received more than \$30 million in Federal Emergency Management Agency (FEMA) grants to relocate emergency power equipment, water pumps and medical gas systems to the second floor of the cancer center's Lutheran Pavilion, 45 feet above sea level and well above the 500-year floodplain.

The Main Building's first-floor façade was replaced with a 47-inch concrete floodwall that includes aquarium-grade windowpanes.

"People wonder why the windows are so high up in the Main Building's Clark Clinic. That's why," Sisolak says.

Externally, floodgates that automatically rise when filled with rainwater surround the floodwall. FEMA funds also were used to double the size of storm drains running beneath Bates Street in the Texas Medical Center to nearby Brays Bayou.

"Should floodwaters breach the floodgates or floodwall, the basement is compartmentalized," says Greg Hudgins, facilities project director. "One area may be sealed from another with a submarine-grade steel door."

Mitigating damage before it occurs

When Houston took a direct hit from Hurricane Ike in 2008, the floodgates performed well, but wind and debris broke windows across the city.

That's when MD Anderson installed shutters outside the intensive care unit and placed a protective film on the windowpanes of all patient care rooms.

"Each of these disasters brings new considerations," says Richard Fitzgerald, architecture services director.

Real-time damage assessment and strong teamwork helped contain Harvey-related damage, says Tim Peglow, associate vice president for patient care and prevention facilities, who's grateful that inpatients and families didn't feel the impact of this most recent storm.

"They felt safe, knowing they were being taken care of."

How a hospital is prepped for the worst

By planning, preparing and working together, MD Anderson is ready to handle extreme situations such as Hurricane Harvey

By Katie Brooks

Like city officials, MD Anderson's Incident Command team began preparing for Hurricane Harvey long before it hit the Texas coast.

Extensive emergency planning, collaboration and a strong commitment to patients, were crucial to the cancer center maintaining operations during the unprecedented event.

Matt Berkheiser, Dr.PH, chief safety officer and associate vice president for Environmental Health, Safety and Corporate Services, says the institution has a plan for responding to many emergencies.

"We actually have 18 incident-specific emergency plans that account for bad weather, fires, acts of violence and more," Berkheiser says, "and teams of people who monitor various dangers so we can activate our plans as soon as a threat is imminent."

When that time comes, MD Anderson opens its Incident Command Center (ICC), as it did for Hurricane Harvey on Aug. 23. The ICC is led by an appointed incident commander, who is accountable for final decision-making. Other ICC leaders who represented key areas focused on patient safety and experience, staffing, security and maintenance of all campuses, and coordinated operations and communications during the emergency.

While it may seem counterintuitive, the goal is to have as few people as possible on-site during an emergency. This reduces risk, cost and strain on already limited resources such as food and water. That's why providers were encouraged to discharge hospital patients, if clinically appropriate, ahead of Harvey. At the same time, staff members in critical areas were asked to report to work with an overnight bag in tow – just in case.

Typically, the biggest threats in a hurricane are damaging winds and power outages. But Harvey was different. Because it made landfall south of Houston, winds weren't as bad as they could've been.

"The danger in this event was really the rain-fall," Berkheiser explains. "This was the first time MD Anderson activated a ride-out team for a flooding event and the first time we've formally designated staff already on-site as incident command and ride-out team members."



Chief Safety Officer Matt Berkheiser says the institution is prepared to respond to many types of emergency situations. photo by F. Carter Smith

As heavy flooding turned streets into rivers, the ICC closed the institution due to unsafe travel conditions. The 1,000 faculty and staff on-site became the ride-out team, caring for more than 500 patients in the hospital and about 300 guests who were family and friends of patients.

"By Monday morning, roads near the hospital were passable but our people couldn't leave their homes," Berkheiser says. "So we had to get creative." He says he's grateful to UT Police for bringing in critical clinical care providers in high-water vehicles. (Read the story on Page 9.)

ICC leaders communicated frequently on-site, and via conference call, to evaluate weather conditions, operations and resources. Managers and clinical teams making local-level

staffing and operational decisions shared information with their leaders who updated the ICC.

From Facilities, Dining Services, the Welcome Center and UT Police, to clinical care providers, pharmacists and lab technologists, employees aligned around shared ride-out and recovery goals and stepped up to help. They sacrificed sleep to cover an extra shift or floated between inpatient units to make sure every patient was safe.

"Sometimes it's hard to explain the bond an emergency can create," Berkheiser says. "An effective response requires a solid plan, adrenaline, innovation and trust that everyone is working toward the same goals and making the best possible decisions, given the information they have in that moment."



Leukemia professor William Wierda, M.D., and his department's staff quickly developed a plan to phone outpatients who were at home but needed care during the flooding. *photo by F. Carter Smith*



MD Anderson was fully operational 10 days after the storm. *photo by Adolfo Chavez III*

MD Anderson's team of teams ensured continuous patient care throughout the storm

By Ronda Wendler

As floodwaters rose outside, doctors, nurses, and other caregivers inside MD Anderson maintained a laser-sharp focus on their No. 1 priority: patients. A dedicated group of nearly 1,000 employees remained on-site for several days to ensure consistent and quality care for the more than 500 patients and their families inside the hospital. Following are a few examples of how health care providers delivered timely treatments without missing a beat.

Radiation Oncology

Patients who miss radiation therapy sessions during cancer treatment face the increased risk that their disease will return.

"Even if they eventually complete their course of radiation treatment, their cancer is still more likely to return if they miss scheduled treatments," says Joe Herman, M.D., Radiation Oncology division head ad interim. "Some cancer cells multiply very quickly. Time is of the essence."

Herman and his team knew that despite the Houston flooding caused by Hurricane Harvey, they had to continue radiation treatments for those patients who could safely reach the hospital.

MD Anderson's outpatient services were suspended the week of the flood, but because of the urgent nature of radiation treatments, Radiation Oncology staff who could physically reach the hospital drove in and spent long hours on-site providing treatment to patients.

Fifteen to 20% of the department worked at Mays Clinic, the Main Building, the Proton Therapy Center and MD Anderson outpatient clinics in The Woodlands, Bay Area and Katy, providing an average of four radiation treatments to each patient during the week.

"Our staff left their own families and homes and braved high water and uncertain travel conditions out of dedication to our patients," says Albert Koong, M.D., Ph.D., chair of Radiation Oncology. "Some had homes that flooded, but they came to work and provided care to our patients."

"It's very important that radiation therapy be delivered frequently and regularly. The staff mobilized and joined forces to ensure that happened," says Herman, whose wife gave birth a week before the storm.

Starting Tuesday, Aug. 29, the team treated all hospitalized inpatients who required palliative radiation treatment to ease the symptoms and pain caused by their cancer. A larger team

provided limited outpatient radiation treatment services on Wednesday, triaging patients according to clinical need. By Thursday, the Radiation Oncology Division was back to full service, offering care to all radiotherapy patients. Additional clinics were held on Saturday for those patients who couldn't get to the hospital during the week.

Despite the disruption of Hurricane Harvey, more than 500 patients were treated at the Mays Clinic, the Main Clinic, the Proton Therapy Center and at MD Anderson Houston-area locations in The Woodlands, Bay Area, and Katy.

"We operated at full service the week of the flood, even though only 15 to 20% of our department members were able to physically make it on-site," says Koong. "Those who couldn't come in worked from home and contributed in whatever way they could."

Investigational Cancer Therapeutics

A program that enrolls cancer patients in first-in-human trials of experimental medications faced tough challenges in the aftermath of Harvey.

The Investigational Cancer Therapeutics Department and its Clinical Center for Targeted Therapy rallied to reschedule appointments for all its 200 patients when floodwaters made roads impassable and prevented some patients and staff from reaching the hospital.

The problem was made worse when team members learned that the Clinical and Translational Research Center, where dosing takes place, was damaged by floodwater and declared unusable.

Over three days, a of team physicians, coordinators, schedulers, nurses, and support staff gathered in MD Anderson's Faculty Center, where they reviewed each patient's medical records and developed plans to ensure that all received their medications when and how the drug trials' protocols dictated.

"Our team contacted all of our patients to determine where they could be moved to meet the constraints of the current situation, the available institutional resources and the protocol specifics of the clinical trials in which the patients were enrolled," says David Hong, M.D., professor and deputy chair of Investigational Cancer Therapeutics and associate vice president for Clinical Research. "We opened extra Sunday clinics, found creative solutions to dosing oral patients, and worked closely with our colleagues in Diagnostic Imaging, the Clinical and Translational Research Center, and Ambulatory Treatment Center to make the process as seamless as possible."

Hong says the effort to ensure trials stayed on track and patients got their medications

required "a lot of coffee, pizza, and Chinese food, but it was a great demonstration of what teamwork can accomplish."

Leukemia, Lymphoma and Stem Cell Transplant

Timing is everything for patients with blood cancers like leukemia, which can prevent the body from producing an inadequate number of platelets – cells in the blood that help it clot. Without regularly timed infusions of donor platelets, patients can experience uncontrolled bleeding.

So despite Hurricane Harvey, Leukemia professor William Wierda, M.D., knew there could be no interruption in care for his patients.

Wierda spent nights at the hospital, handling clinical operations for his department during the challenging time, "just like the days when I was a medical resident," taking care of hospitalized patients.

He and the department's staff also quickly developed a plan to phone outpatients who were at home but needed care, mainly those who had acute leukemia or a recent stem cell transplant.

"We knew these patients likely needed blood or platelet transfusions so we scheduled them to come in on Tuesday, two days after flooding began, for labs and transfusions," he says. "Many had difficulty getting to the hospital because of flooded streets, but about 35 made it in. Nearly all of them received transfusions."

On Wednesday, Wierda and his team members treated more than twice that number, as more patients and staff were able to make it in.



They opened a Hematologic Malignancy outpatient clinic on Thursday to care for critical patients who needed transfusions, IV fluids and antibiotics.

By Friday, the department's regular clinics – Leukemia, Lymphoma, and Stem Cell Transplant – were open for all patients who could get to the hospital.

"From the time the storm began, we were able to maintain an exceptional level of care for our hospitalized patients, says Wierda, a veteran of three Houston hurricanes.

"This experience has highlighted for me the critical importance of everyone who works in the hospital, including housekeeping, phlebotomists, laboratory and radiology technicians, pharmacists, nurses, clerical staff, physician assistants, and doctors," he says. "We can't take good care of patients without *everyone's* support."



Nearly 1,000 employees remained on-site to ensure consistent and quality care for the patients inside the hospital.



The ‘heart and SOUL’ during the storm

Meet the people who made sure the patients and employees who rode out Harvey at the hospital didn't have to worry about what was for dinner ... or breakfast or lunch

By Claudia Feldman

photos by Nick de la Torre

As the threat of Hurricane Harvey intensified over southeast Texas, so did the efforts of the MD Anderson Cancer Center staff to serve and protect patients. Among those providing crucial but sometimes overlooked support were a few dozen food service employees.

Eleven members of the Room Service team made sure the 538 patients staying in the hospital for treatment were fed and fed well. At the same time, a slightly larger group of Dining Services staff members prepared and served meals and snacks for more than 1,300 doctors, nurses, employees and patients' family members.

“The kitchen served as the hospital's heart and soul during the storm,” says Khalil Saadiq, senior executive chef of Dining Services. “We were dealing with guests in stress, whether they were patients or staff. What everybody wanted was a meal, which provided their relief, their sense of normalcy, their comfort. And the entire food service staff came together and did what was necessary to provide that.”

Over five days in late August, everyone worked multiple shifts, pausing only for a few bites to eat, a few minutes to check in with their families, a few hours sleep. Kelly Shattuck, who supervised the Room Service team, learned by text message that on Sunday morning her home had washed away in the storm. All her possessions were gone.

“I had to put that in the back of my mind,” she says. “We just had to keep everyone fed, and live in the moment. Our motto was, ‘Ain't nothing to it but to do it.’ We just kept saying that for five straight days.”

A skeleton crew of food-service employees cooked enough meals to feed more than 500 patients and more than 1,300 employees and visitors who were stranded but safe at the hospital.

Breakfast, lunch and dinner were served, plus a fourth meal between 10:30 and 11:30 p.m.

“People often poke around in their refrigerators for a late-night snack,” says Carol Porter, D.N.P., chief nursing officer. “That fourth meal satisfied nighttime cravings. It was a real crowd-pleaser.”



Just before the hurricane tore into Houston, the weather was eerily calm. That Friday night, Shattuck, evening sous chef Jeremy Coons and nine other Room Service staffers decided to spend the night at the hospital anyway. They knew they could get home, Shattuck explains. But making it back to work the next day was iffy.

As Coons says, “This job is about taking care of someone who can’t take care of himself.”

From Saturday through Wednesday, the hardy crew fed hundreds of patients three to four times a day. That involved cooking, cleaning up and making sure the patients received their prescribed diets on trays that were as close as possible to perfect. The team also coordinated with the call center staff, which took calls from patients ordering their meals for the day. Two other groups, the transporters and the wait staff, delivered the trays to the appropriate floors, then served them to the patients. Four captains supervised that process, then pitched in to do a host of other jobs, too.

“What people did was just phenomenal,” Shattuck says.



Jay Veeraraghavalu
Food Operations, manager

The kitchen manager during the storm notes that all he had to do when he began to feel stressed during the ride-out was think of the patients upstairs in the hospital.

“We may have had stress, but it’s nothing compared to what you go through when you have a cancer diagnosis.”



Both Shattuck and Coons came of age in the food service industry. Shattuck, 57, started working at McDonald's right out of high school, but slowly made her way to hospital kitchens within the University of Texas System.

Patients needed her time and attention, she figured, and she enjoyed working with other food service pros who felt the same desire to serve.

She will always be grateful to the MD Anderson team that performed so well under such difficult circumstances. She also remembers their responses when she told them she'd lost her home.

"Don't cry, Miss Kelly," they said, wrapping their arms around her.

Coons, 34, started out at Sonic restaurants after high school, joined the Army, then went to work in the Texas Department of Criminal Justice's Estelle Unit in Huntsville, Texas. His next stop was MD Anderson, which he much prefers.

It's not just that the cancer patients are more likely to be law-abiding, a fact he appreciates. Sometimes, with food, he can ease their pain.

Take a little thing like a banana split. It's not much in the scheme of things, Coons says, but in a day filled with cancer treatments, it looms large.

"If they want a banana split, then they're getting that banana split," he says.

Kelly Shattuck

Room Service, supervisor

"We just had to keep everyone fed and live in the moment. Our motto was, 'Ain't nothing to it but to do it.' We just kept saying that for five straight days."

Jeremy Coons

Room Service, sous chef

On the work of the ride-out team: "This job is about taking care of someone who can't take care of himself."



Charles Smith

Dining Services, production cook

During the height of the storm, Smith focused on getting “in the zone” to work for patients and tune out what was happening outside the hospital.

For the Dining Services team, the Friday building up to the storm was a fairly normal day. So was Saturday. But Sunday, when many parts of the Houston area were flooding, Saadiq was grateful that 12 members of his staff had decided to spend the night at the hospital.

To make the best use of their supplies, the team closed all the cafes around the hospital except the main dining room. They pooled all the groceries and started planning meals that could stretch.

They served a lot of pasta dishes, a lot of casseroles, lasagna, and rice dishes, all comforting and delicious.

“The cooks deserve a great amount of recognition, but I don’t want to overlook the chasers, receiving clerks and many others who went above and beyond their job descriptions to help,” Saadiq says.

Like Shattuck and Coons, Saadiq, 42, has also spent most of his professional life in the food service industry. The Florida native, who is no stranger to hurricanes, served four years in the military, then attended culinary school.



Michael Chrisp

Dining Services, production cook

“We were prepared to have to stay, but we didn’t realize just how bad the storm was going to be. I’d packed a bag for three days, thinking I’d only be here for two, and I ended up being here for five.”

A lot of people are critical of hospital food, he says. “They think of it as not flavorful and not creative. But flavorful and creative – those are the things we do well.”

As soon as Frank Tortorella was able to leave his flooded neighborhood, he made his way to the cancer center, headed for the kitchen and pitched in. The vice president for Clinical Support Services says he wasn’t alone – other employees from various departments were offering their assistance, too.

“We were so honored to help the food service staff in any way we could,” Tortorella says. “The teamwork was amazing and the self-sacrifice was truly inspirational. I told them, ‘You guys are the real heroes. Thank you so much.’”





Chef Khalil Saadiq


Dining Services, administration

“Titles didn’t matter during the storm. Everyone from Room Services, Dining Services and Clinical Nutrition was willing to help in any way they could to make sure our patients and staff were fed. Our VP, Frank Tortorella, even came down to help package meals, and that really helped reduce our stress.”



STORM STORIES:



An aerial, black and white photograph of a wide river with turbulent, white-capped water. A large, solid black circle is superimposed in the center of the image, containing white text. The text reads: "An outpouring of heroics in the face of Hurricane Harvey's epic flooding".

**An outpouring
of heroics
in the face of
Hurricane Harvey's
epic flooding**

There are countless examples of sacrifice and solidarity shown by the MD Anderson team before, during and after Hurricane Harvey that underscore the complete dedication of the institution's doctors, nurses and employees to caring for patients. There are many more stories than can be printed here, but the following are just a few reports of the selfless acts and complete cooperation shown across the workforce during the storm.



John Heymach, M.D., Ph.D., took this photo of himself outside of the hospital.

Chair couldn't drive to work, but was driven to help patients

John Heymach, M.D., Ph.D., awoke on Aug. 27 to an unsettling sight. His street was filled with knee-deep water.

"Newscasts were reporting that much of Houston had flooded overnight," he says.

Heymach, chair of Thoracic Head and Neck Surgery and a leader of the Lung Cancer Moon Shot™, loaded a backpack with a change of clothes and headed to MD Anderson on foot.

"I live nearby," he says, "but driving was out of the question."

As he walked, the water level went from knee-deep to thigh-deep. By the time he made it to MD Anderson, it was chest-deep.

Water sprayed high into the air from drains that had lost their manhole covers. Heymach was careful to make his way around them.

Once inside, he showered and began working around the clock with colleagues to care for patients. After three days and nights on duty, he finally was able to return home for a full night's sleep



Heymach after the storm. photo by Nick de la Torre

Lights out!

Even a power outage couldn't stop patient care during Harvey.

When an electrical outage shut down MD Anderson's Bay Area location southeast of Houston, employees quickly arranged for patients to receive care at the cancer center's Sugar Land campus, just southwest of the city.

After relocating, the Bay Area team contacted patients to reschedule appointments. Those with critical conditions were seen at the Sugar Land location, and appointments for those with non-urgent needs were pushed back a few days until power was restored.

"It was amazing to see how all our employees worked closely with the Sugar Land team to continue caring for our patients," says Joan Farmer, operations coordinator at MD Anderson's Bay Area location. "We're grateful to Sugar Land for welcoming us and making us feel at home."

The week following Hurricane Harvey's unwelcomed arrival, Stephen Hahn, M.D., deputy president and chief operating officer, visited the institution's Houston-area locations in the Bay Area, Sugar Land, The Woodlands, and Katy to thank employees for their support, dedication and hard work.

"Our Houston-area locations have really stepped up to help provide uninterrupted care for our patients, particularly knowing how difficult it's been for some patients to travel to the main campus," said Hahn. "We thank them for their tremendous support, even when so many of their own staff have been impacted by the storm."



Kapil Mahajan, M.D. photo by Adolfo Chavez III

A lone nephrologist in the storm

Kapil Mahajan, M.D., a rotating fellow in Nephrology, moved to Houston from Cleveland in July and had been working at MD Anderson for just a month when Hurricane Harvey hit. Paged on Sunday morning about a patient who was seriously ill and needed dialysis, Mahajan left his home in Sugar Land, just southwest of Houston, and headed to the hospital.

As he approached MD Anderson, Mahajan's Honda CRV began taking on water and he had to abandon his vehicle.

"I grabbed a small bag with some important papers and my passport, but I didn't have time to get my stethoscope, phone charger and credit cards," says Mahajan, who arrived on campus soaked and barefoot, having lost his shoes during his swim to safety.

An Emergency Center nurse found him a dry set of scrubs and a pair of socks meant for patients, which Mahajan wore until Monday afternoon when he was able to catch a ride home. In retrospect, he remembers the biggest challenge he faced was having to constantly borrow a phone charger so he could keep in touch with his supervisors.

"I had some 35 to 40 patients on my list and about 20 of them needed dialysis between Sunday and Monday," says Mahajan. "So, in a way it was good I was there because no other nephrologist was able to make it into the hospital."

Luckily, Mahajan's wife had evacuated to Dallas to ride out the storm with family, and their home didn't flood. However, the young family's unpacked possessions, which were in a storage unit that flooded, didn't fare so well.

Mahajan remains philosophical about his adventure and the material things he lost in the flood.

"Being new, it was challenging, especially at a time like this emergency, but everyone was very nice and supportive while helping the patients," Mahajan says. "Other than that, the rest of our things can be bought again."

Most importantly for the young doctor, the patient he originally had been paged about was doing better after dialysis.

Nurse finds comfort zone in caring

Leukemia nurse Simon Coronado knew if he went in to work the night Hurricane Harvey arrived in Houston, his house on Brays Bayou might flood while he was gone. But with his wife's encouragement, he packed a bag and reported to the hospital to care for the patients who needed him.

The next day he got the phone call he'd feared: Water had invaded his house.

"At that point, I just wanted to crawl out of my skin because I couldn't get to my family," he says. Fortunately, he was able to connect with a neighbor, who rescued Coronado's wife and four sons from chest-deep water.

"Once they were safe, it lifted all the weight off my shoulders," Coronado says. "Caring for patients put me back into my comfort zone."

After working 12-hour shifts for the next few days, Coronado finally made it home to begin gutting his house.

"It's going to take a little bit of work," he says. But we can get through anything."



There was flooding in and around the Texas Medical Center after the storm pushed Brays Bayou over its banks.



Pharmacy Technician Van Ly photo by Adolfo Chavez III



Tim Ford, patient services coordinator

From kayaking to calming nerves

When Tim Ford saw the floodwaters rising, he knew it wouldn't be easy to get to MD Anderson for his shift as a patient services coordinator. But the South Houston resident suspected it would be even harder for many of his co-workers, so he strapped his kayak to his truck and drove as far as he could. Parking on Main Street, he began kayaking toward the hospital, picking up a Memorial Hermann doctor on the way. The two battled currents from the bayou but eventually arrived safely. Ford – shown here with Patient Services Coordinator Gigi Taylor – pitched in where he could, making sure care teams had everything they needed, and talking to patients.

“Patients were understandably nervous. They were watching the news and seeing what was happening around Houston,” he says. “I wanted to make sure they knew we were here for them and could take good care of their needs.”

Braving the floodwaters to help his co-workers

On the morning of Aug. 27, Pharmacy Technician Van Ly realized his co-workers needed help. So he loaded his bicycle into his minivan and set out for MD Anderson from his home in northwest Houston.

Though there had been a break in the rain, many roads and bridges between Ly's home and the hospital were impassable, and he ran into high water near the Interstate 610 and Highway 290 interchange. He couldn't drive any farther, and his bike was useless, so he waited. Eventually, a large truck driven by some good Samaritans stopped and offered him a lift.

Rather than turn back, Ly grabbed his bike, hopped into the back of the truck and asked for a ride to the hospital. About two miles from MD Anderson, they encountered waist-deep water that proved too much for the truck.

So Ly got out and rode or pushed his bike the rest of the way, arriving around 3 p.m., much to the surprise and relief of his concerned co-workers. Wasting no time, Ly changed into dry scrubs and began a 12-hour shift.

“At the top of my head at the time, I was thinking about my co-workers and our patients,” Ly says. “I just wanted to contribute my little effort to help. We are MD Anderson, right?”



Raymond Greenberg, M.D., Ph.D., executive vice chancellor for health affairs at UT System, and UT System Chancellor Bill McRaven visited MD Anderson after the storm. photo by F. Carter Smith

UT leaders inspired by teamwork during storm

The University of Texas System Chancellor Bill McRaven visited MD Anderson on Sept. 6 to express his admiration and to thank the MD Anderson community for pulling together to care for patients and each other during Hurricane Harvey.

“I can’t help but be inspired,” he said as he met with leaders who manned the Incident Command Center, applauding the “remarkable diversity of background, talent and experience” that shaped MD Anderson’s response to the crisis.

He urged leaders to build upon the dedication shown by teams that “stepped up in the middle of disaster, and will stand up again ... give them the opportunity to showcase their skills and talents and you will take this institution in a direction you’ve never seen before.”

Raymond Greenberg, M.D., Ph.D., executive vice chancellor for health affairs at UT System, also expressed his gratitude as he presented a poster signed by UT System employees in Austin to show their support for MD Anderson, one of UT System’s 14 institutions.

“How you handled the situation under these circumstances was beyond belief,” Greenberg said. “You make us so very proud.”

Karen Lu, M.D., senior vice president and chief medical officer *ad interim*, told the UT System leaders that pushing decision-making to the local level contributed to the successful response and a quick return to normal operations in most areas 10 days after the storm.

By that time, operating rooms were functioning at 80% capacity, Radiation Oncology was at 100% and the Ambulatory Treatment Center was at 110%.

“It’s important to get these three theaters back and operational” for the sake of the 13,000 patients we see each week, Lu added.

On call: Employees volunteer to answer phones during hurricane recovery

Realizing how important it is for patients to hear a reassuring voice, more than 30 employees from MD Anderson’s Patient Access Services department volunteered to man phones in the days immediately following Hurricane Harvey.

The dedicated team answered more than 3,100 calls from worried patients and family members who were trying to determine whether they should reschedule appointments, how they could get needed medications, whether clinics were open, and more.

“It was important to patients to get their questions answered,” says Jennifer Kennedy-Stovall, director of Patient Access Support Services.

Staff members taking calls also were surprised at patients’ concerns for staff members’ well-being.

“Patients were asking, ‘How are you?’ which is funny because normally our calls are all about the patient and what we can do for them,” says Kennedy-Stovall, who pointed out that such care and concern rallied employees and reinforced the importance of the extra service they provided to patients.





Yun Shin Chun, M.D. photo by Nick de la Torre

There are no 'trivial' acts of kindness

All 5 feet of Yun Shin Chun, M.D., turned frustration into action with a waterlogged bike ride to the MD Anderson campus.

At home and feeling powerless to help in the aftermath of Harvey, Chun, an associate professor of Surgical Oncology, volunteered on Tuesday, Aug. 29, to join the cancer center's ride-out team. This gave her the opportunity to deliver much-needed supplies to co-workers and to see a patient she was concerned about.

"On Sunday, I spoke with Erica Nichols in the Welcome Center and knew they'd been without safe access to cooked or fresh food since Friday," Chun says. "I also knew the nurses and patient service coordinators on P6 had stayed in the hospital for more than 96 consecutive hours to care for patients. Their director had waded in on Sunday."

So Chun packed a backpack with chicken nuggets, nutrition bars, apples, underwear and socks. Having narrowly missed damage to her car trying to get to work during 2016's Tax Day Floods, Chun was reluctant to drive to campus, and instead chose to ride her bike the four miles from her home to MD Anderson.

She found the water level low on Holcombe Boulevard, and up to her knees on side streets, but she was able to make it to the hospital.

"My actions were trivial compared to so many others," says Chun of her efforts.

Still, for her patient recovering from extensive surgery, and the Welcome Center staff, her thoughtfulness meant a great deal.

Blue jackets and black coffee lift spirits during recovery

Coffee was a hot commodity the week after Hurricane Harvey.

A cadre of 20 MD Anderson volunteers – known for their trademark blue jackets and friendly service – provided coffee cart service to patients, their families and employees as the cancer center worked to regain full operational status.

"Coffee was one of the most sought-after items during ride-out and recovery," says Brandon Floyd, director of Volunteer Services and Merchandising. "Patients and staff were excited to see the volunteers offering complimentary coffee, hot chocolate, tea and lemonade in clinic waiting areas and on some hospital floors."

Nearly 1,000 on-site, trained volunteers donate their time to MD Anderson each year.





MD Anderson's Incident Command center was activated Aug. 23, bringing together leaders responsible for coordinating emergency operations and communications. photo by F. Carter Smith

How MD Anderson responded to an unprecedented storm

With an estimated 35% of MD Anderson employees affected by flooding and hundreds of inpatients requiring care, Hurricane Harvey required teamwork and dedication on a scale few hospitals have ever delivered.

Here's how events unfolded:

Preparations

Aug. 23: MD Anderson's Incident Command Center is activated Wednesday, Aug. 23, bringing together leaders responsible for coordinating emergency operations and communications. The team meets four times before Hurricane Harvey's landfall.

Aug. 24: Delivery of 1,000 cots begins.

Aug. 25: Crews begin installing 79 floodgates.

Hurricane Harvey highlights

Aug. 25: Hurricane Harvey makes landfall near Rockport as a Category 4 hurricane around 10 p.m., then stalls over Texas.

Aug. 26: Its outer bands continue to produce significant rain for areas east of the eye. The most devastating impact to the Houston area begins. Record-breaking amounts of rain fall quickly, as much as 5 inches an hour in some places.

The Harris County Flood Control District estimates the county received 1 trillion gallons of water in just four days.

The storm moves back into the Gulf of Mexico and eventually makes landfall again in Cameron, Louisiana, on Aug. 30.

MD Anderson highlights

Aug. 27: When the extent of the flooding becomes apparent, about 1,000 faculty and staff are on-site. Because it's deemed unsafe to travel, they're designated as the ride-out team.

As the floodwaters rise around the Houston area, about 530 patients and 300 family members or guests are in the hospital.

Aug. 28: Physicians are asked to come in to join the ride-out team. Managers are assessing the ability of critical staff to make it to the hospital.

Aug. 29: Critical staff arrive to supplement the ride-out team.

Aug. 30: The institution begins to slowly start key operations, including treatments for patients needing urgent care and critical surgeries.

Aug. 31 – Sept. 4: The institution continues to restore more operations and treat rescheduled patients.

Average inpatient census: 439 patients

Outpatients treated: Over 1,200

Patients receiving chemotherapy in the Ambulatory Treatment Center: 857

Surgeries: 32

Sept. 5: The institution returns to normal operations.



UTPD used high-water vehicles to bring critical staff to the hospital.

photo by Adolfo Chavez III

Unprecedented storm leads to unprecedented support for the people who make MD Anderson great

By Michelle Yelton



Employees were given MD Anderson Strong T-shirts as a thank-you for their dedication and teamwork during Hurricane Harvey and throughout Fiscal Year 2017. *photo by Adolfo Chavez III*

Miriam Estrada, a research data coordinator in Head and Neck Surgery, was watching TV with her husband the night Hurricane Harvey reached Houston, unaware that their street had turned into a river and their backyard was filling with water.

So when water started coming into the house, they couldn't believe what they were seeing. Within a couple of hours, the water was 4 feet deep inside her home.

"All my belongings were floating, and my dog was having to swim," Estrada says.

They made it to a neighbor's two-story house and waited without food for two days before they were rescued. They had no car, no house and very little clothing, but all Estrada could only think about was the patients participating in a study she managed.

"I needed to be there to help them continue treatment, but I didn't know how I could get to them," she says.

Support

As word began to reach MD Anderson's Incident Command team that many employees had stories similar to Estrada, leaders from Human Resources, Facilities, UT Police and Clinical Operations began mobilizing.

"We wanted to put together as many resources as possible and then see what was needed," says Shibu Varghese, senior vice president for People and Business Operations. "It turns out we needed all of them."

Among the resources made available to employees:

Pay: No employee missed a paycheck due to the disaster, and those who worked during the ride-out received a stipend.

Caring Fund: More than \$1 million has been raised for this financial assistance program, which offers \$1,000 grants to eligible employees displaced from their homes.

Lyft: Employees who lost vehicles in the flood could get free transportation to and from work during a transitional period after the storm.

Bright Horizons: On-site daycare was provided for 188 children of employees during the week that most Houston-area schools were closed. The company also waived employee co-pays for in-home or center-based child and elder care.

FEMA: Two days of on-site, one-on-one consultations were set up in partnership with UT Health to assist employees who needed the Federal Emergency Management Agency (FEMA) to help

them sort through resources and benefits available from the federal government.

And the support continues.

"It's going to be a long process, and we want people to know that they're not alone in rebuilding their homes and their spirits," Varghese says.

Making a difference

Estrada is grateful for the services that have allowed her to find some normalcy. A month after the storm, her home was gutted and drying out as she and her husband waited for insurance, waited for FEMA – waited for her home to become her happy place again.

She feels fortunate that she hasn't had to wait to return to work.

"When my department told me about the Lyft service, I cried because I was so relieved," Estrada says.

Estrada also applied for financial assistance through MD Anderson's Caring Fund and met with FEMA when they were on-site.

"I feel blessed to work for an institution and a department that shows how much it cares about its employees," says Estrada.

Caring Fund bolsters flood-impacted employees in need

By Allison Schaffer



Tiffanie Powell is among the 35% of MD Anderson's workforce that experienced flooding from Hurricane Harvey. photo by Adolfo Chavez III

As a member of MD Anderson's Facilities Management team, Tiffanie Powell schedules and plans construction, renovations and repairs for a dozen buildings on the institution's campus.

In the aftermath of Hurricane Harvey, she's now dealing with the extensive repairs needed to make her flood-damaged house livable again.

"This wasn't my first hurricane," says Powell. "I live in a house on a hill, so I didn't think anything was going to happen."

Powell and her son prepared anyway. They stocked up on groceries and supplies. They built a fort around their front door with sandbags.

But when Powell walked into her son's room to wake him on Aug. 26, she stepped into ankle-deep water. She quickly discovered the entire house had flooded.

The two waded through chest-deep water to a neighbor's home, where they waited several hours to be rescued by boat and evacuated to a shelter.

During the following weeks, Powell relied on co-workers for day-to-day needs like shelter and showers.

Powell is among the estimated 35% of MD Anderson's workforce that experienced flooding from Hurricane Harvey.

To help impacted employees, the cancer center offered support through its Caring Fund, which provides financial assistance to employees who lost their homes or have been temporarily displaced by state or federal government-declared disasters.

Donations from employees, patients and their families, the MD Anderson Cancer Center Board of Visitors (BOV) and Advance Team advisory board, as well as several members of the MD Anderson Cancer Network® – a network of community hospitals and health systems throughout the nation that collaborate with MD Anderson to bring quality cancer care to their communities – brought the fund to over \$1 million the flood.

Donations from Cancer Network members came from MD Anderson Cancer Center at Cooper in Camden, New Jersey, Community Health Network in Indianapolis, DCH Regional Medical Center in Tuscaloosa, Alabama, and Summit Medical Group MD Anderson Cancer Center in Berkeley Heights, New Jersey. The fund also benefited from sales of MD Anderson Strong T-shirts, which were created to applaud the team spirit shown throughout the cancer center before, during and after the storm.

Powell is grateful for the help.

"To have this source of hope, it really means a lot," she says. "It touches my heart, and I just want to say thank you."

Help comes from miles away

More than 160 health care workers from outside the Houston area came to town in the aftermath of Hurricane Harvey to supplement MD Anderson's staff. Their support allowed MD Anderson to quickly return to full operations, and enabled MD Anderson employees affected by the storm to focus on their personal recovery. About 35% of the cancer center's 20,000 employees were forced to evacuate their flooded homes or experienced flood damage to their homes.

Doctors, nurses, technicians and support staff arrived from The University of Texas Southwestern Medical Center in Dallas, Banner MD Anderson Cancer Center in Phoenix, OhioHealth – an MD Anderson Cancer Network® certified member in Columbus, Ohio, and Northwell Health, a network of health care facilities based in New York.

"We're focused on meeting the needs of our patients, but also we're focused on meeting the needs of our staff," says Carol Porter, D.N.P., senior vice president and chief nursing officer. "Our faculty and staff have been so devoted to MD Anderson, and this external supplemental staff allowed our teams who were affected to take care of themselves, their families and their personal property."

Additionally, more than 20 police officers from UT Police at Austin, UT Health Science Center at San Antonio, UT San Antonio, UT Police at Arlington and UT System Office of the Director of Police were sent to Houston to ensure the safety of patients and employees, and help with rescue vehicle transports.



Lean team that cared for 'animal patients' rallied like family

By Mary Ann Hellinghausen

On a typical day, a 100-member team cares for the 'animal patients' that are vital to MD Anderson's discovery of new cancer treatments.

As rising water from Hurricane Harvey threatened the institution's North and South Campuses, a dedicated lean team of about a dozen people worked long hours over several days at both sites to make sure the animals were fed, watered, cared for and clean.

"Despite not knowing what their personal circumstances might be at home, the people here were 100% focused on getting the job done," says Peggy Tinkey, D.V.M., chair, Veterinary Medicine and Surgery, who headed the recovery team. "We've planned and drilled, and I'm so relieved and proud that no harm came to any of our 'animal patients' during the storm."

Sense of urgency

According to Tamika Collins, an animal resources manager in Veterinary Medicine and Surgery who was on the ride-out team on the North Campus, many days started at 7 a.m. and ended at midnight.

"We had a sense of urgency to care for the animals and check the facilities," she says. "We really worked together like a family. We were grateful for the meals we received, but we did raid the vending machines a couple of times to keep us going!"

Animal Resources Supervisor Arturo Barrera was stationed on the South Campus, and says some staff members came in on foot when they couldn't drive through high water.

"It was hard not to be with our families or to help our community, but we were where we needed to be," he says.

Moving research forward

Vanessa Jensen, D.V.M., deputy chair and associate professor of Veterinary Medicine and Surgery, led the ride-out team. Although no one knew how many days they would need to be on-site, there were no complaints, and everyone had smiles, says Jensen, whose husband and daughter had to evacuate their home while she worked through the storm.

"Everyone pitched in, no matter what their role or title," she says.

When she wasn't involved in direct care of animals, Jensen was busy sharing information and reassuring concerned researchers.

"We take pride in what we do," she says. "These animals are the source of what could be new discoveries, new treatments for patients – we're all here to support our mission and to move research forward. I'm very happy to be part of this team called MD Anderson."



Animal Resources Supervisor Arturo Barrera says some staff members came in on foot when they couldn't drive through high water. photo by Nick de la Torre



Social media kept everyone posted throughout Harvey

By Sunday, Aug. 27, Hurricane Harvey's record-setting rainfall had effectively shut down the city of Houston and much of the surrounding area. The flooding cut off access to MD Anderson for most outpatients and many employees, nurses and doctors. Those on-site at the time became the crucial ride-out teams that continued to care for patients in the hospital.

But even before the storm's arrival, Strategic Communications' Integrated Media team was using social media to make sure the institution's followers were aware of Harvey's potential and preparing for the storm, and to assure them MD Anderson was monitoring the situation.

Posts on Facebook, Twitter, Instagram and LinkedIn were a crucial source of real-time information and updates on the status of the institution as it weathered the emergency, entered the recovery phase, then returned to fully operational status Sept. 5. The team responded to hundreds of questions and comments from patients and their families via

social media throughout the event. Facebook and Twitter proved to be an effective and timely way for those seeking answers to get responses.

Employees concerned about the status of patients and the hospital, and those with questions about reporting to work, found the updates they needed on Facebook, Twitter and LinkedIn. Those platforms also were used to share information about resources for employees in need such as the Caring Fund.

MD Anderson's strong connection to the Houston-area community was apparent on social media, as questions came in from people who wanted to help out through donations and volunteer work. The team fielded these queries and was able to direct them to the Caring Fund, as well as alert them to the need for blood donations.

Social media's benefits as a communications tool during a disaster were also seen in the high level of engagement from faculty members, leadership and staff who shared updates and encouragement.

"Our faculty and staff who were on-site were sharing photos, praise and insight that enabled us to better tell and humanize MD Anderson's story during the storm and show our ride-out and recovery teams in action," says Laura Nathan-Garner, who heads the social media team.

Nathan-Garner points out that photos shared by the ride-out and recovery teams received exceptionally high levels of engagement, demonstrating the appetite of employees, patients and Houstonians in general for information about the cancer center's status.

"What we saw on social media during Hurricane Harvey was a good demonstration of community," says Megan Maisel, director of Integrated Media. "Our faculty and staff interacted and engaged with each other online more than we had seen before. And this heightened engagement and sense of team spirit has continued beyond the storm. I think this is a pivotal moment in MD Anderson's digital transformation."



Facebook

- 24 posts
- 2,297,657 reached
- 44,215 interactions
- 3,521 comments
- 17,810 shares

Twitter

- 285 tweets
- 1.54 million impressions
- 1,124 link clicks
- 3,000 re-tweets
- 6,606 likes
- 296 replies

LinkedIn

- 6 posts
- 125,022 impressions
- 1,153 likes
- 31 comments

Instagram

- 8 posts
- 44,195 reached
- 4,436 likes
- 136 comments

**THE UNIVERSITY OF TEXAS SYSTEM
BOARD OF REGENTS**

Sara Martinez Tucker, *Dallas*
Chairwoman

R. Steven Hicks, *Austin*
Vice chairman

Jeffery D. Hildebrand, *Houston*
Vice chairman

Ernest Aliseda, *McAllen*

David J. Beck, *Houston*

Kevin Paul Eltife, *Tyler*

Paul L. Foster, *El Paso*

Janiece M. Longoria, *Houston*

James Conrad Weaver, *San Antonio*

Jaciel Castro, *San Antonio*
Student regent

Francie A. Frederick
General counsel to the Board of Regents

**THE UNIVERSITY OF TEXAS SYSTEM
ADMINISTRATION**

William H. McRaven
Chancellor

Raymond S. Greenberg, M.D., Ph.D.
Executive vice chancellor for Health Affairs

**MD ANDERSON CANCER CENTER
BOARD OF VISITORS OFFICERS**

James J. Mulva
Chair

Marsha Shields
Chair-elect

Donald L. Evans
Vice chair

Melvyn N. Klein
Immediate past chair

LOCATIONS

MD Anderson has Houston-area locations in the Texas Medical Center, Bay Area, Katy, Sugar Land, The Woodlands, Bellaire and West Houston (diagnostic imaging), Memorial City (surgery) and The Woman's Hospital of Texas (gynecologic oncology). MD Anderson physicians also provide cancer care to Harris County's underserved patients at Lyndon B. Johnson Hospital. In addition, there are two research campuses in Bastrop County, Texas. The institution also has developed a network of national and international locations.

MD ANDERSON CANCER NETWORK®

www.mdanderson.org/cancernetwork

PARTNER MEMBERS

- Banner MD Anderson Cancer Center (Gilbert, Arizona)
- MD Anderson Cancer Center at Cooper (Camden, New Jersey)
- Summit Medical Group MD Anderson Cancer Center (Berkeley Heights, New Jersey)
- Baptist MD Anderson Cancer Center (Jacksonville, Florida)
- Scripps MD Anderson Cancer Center (San Diego, Calif.)
- UT Health San Antonio MD Anderson
- UT Health Northeast MD Anderson

CERTIFIED MEMBERS

- 16 health systems and hospitals in 13 states

ASSOCIATE MEMBERS

- Hospital Israelita Albert Einstein (São Paulo)
- MD Anderson Cancer Center Madrid
- Vehbi Koc Foundation American Hospital (Istanbul)

AFFILIATE MEMBERS

- MD Anderson Radiation Treatment Center at American Hospital (Istanbul)
- Presbyterian MD Anderson Radiation Treatment Center (Albuquerque, New Mexico)

EDITOR

Andy Olin, *program director, Public Relations*

DESIGNER

Michael Clarke

Conquest is published by the MD Anderson Cancer Center Board of Visitors on behalf of MD Anderson.

All correspondence should be addressed to the Public Relations Office – Unit 700, MD Anderson Cancer Center, 6900 Fannin St., Houston, Texas 77030-3800, 713-792-3457.

Email: ConquestMagazine@mdanderson.org.

Articles and photos may be reprinted with permission.

For information on supporting programs at MD Anderson, please contact Patrick Mulvey, vice president, Development, 713-792-3450, or visit the myGiving website at www.mdanderson.org/SummerConquest.

For information on patient services at MD Anderson, call askMDAnderson at 877-632-6789, or log on to www.mdanderson.org/ask.

© 2017 The University of Texas MD Anderson Cancer Center
Not printed at state expense. Printed with soy-based ink.

Visit the Conquest website at www.mdanderson.org/conquest.

The University of Texas
MD Anderson Cancer Center
Communications - 600784-30-107175-55028-21
PO Box 301439
Houston TX 77230-1439

CONQUEST

FALL 2017

Address Service Requested

- Please change my name or address.
- I received a duplicate copy. Please make the necessary correction.
- Please remove my name from the Conquest mailing list.
- Please check the appropriate box and return this page to the address above.

NONPROFIT
U.S. POSTAGE
PAID
HOUSTON, TX
PERMIT NO. 7052