



Welcome to Memorial Hermann Life Flight's quarterly newsletter for first responders. We hope you find the information contained within this publication interesting and informative. Our goal is to provide you with helpful articles about our services, case studies relevant to clinical protocols practiced on a daily basis, information about available educational opportunities, and any other updates that you as a first responder may find useful. We value the work you do and are grateful for your partnership as we work together to serve the people of Houston and its surrounding communities. Thank you.

Memorial Hermann Life Flight's Advanced Capabilities:

- Pre-hospital blood product administration
- LVAD
- ECMO
- Intra-aortic balloon pump
- Portable blood warmers
- Ultrasound diagnostics
- Double-load capability
- Larger cabin (allows for CPR in the aircraft)
- Clot-busting agents for STEMI
- Direct access to Cath Lab for STEMI
- Direct access to CT for strokes
- ISTAT portable blood analyzer
- Video-assisted intubations
- Hemostatic agents for blood clotting
- Direct contact with physicians
- Night vision goggles for all crew members during flight to improve safety
- Twin-engine aircraft for patient and crew member safety and extra weight-loading capabilities
- Pediatric and neonatal transport services

Life Flight® Celebrates 35 Years of Fixed-Wing Service



Memorial Hermann Life Flight, the pioneering critical care air medical transport service that is lauded as the industry leader in aviation safety and clinical care, is celebrating 35 years of providing fixed-wing service to transport critically ill and injured patients around the globe. The adjunct program to the rotor wing service was born out of a need to transport patients from distances farther than 150 miles, according to Georgiann “Georgie” Brown, RN, chief flight nurse, and the specially outfitted jets are capable of going anywhere in the world that is politically safe.

“We turn these aircraft into a traveling ICU complete with ventilators, pumps and monitoring,” said Brown. “We have used the same trusted vendor for years with specially trained pilots who are well versed in our requirements for patient safety.” Most commonly patients are transported by Learjet, but sometimes larger jets are used for trips overseas, she added. The aircraft are

the same used for private charter, but the seats are removed. An apparatus that attaches to the floor accommodates all the necessary equipment for an ICU environment, including oxygen, electricity and suction. A stretcher locks on top of the apparatus so the patient can be easily and safely transported in and out of the aircraft.

The care team on each flight consists of both a registered nurse (all of whom are also trained paramedics) and a paramedic. For left ventricular assist device (LVAD) or balloon pump patients, a perfusionist or other circulatory support professional accompanies the team. In addition, they are fully equipped to transport neonate and pediatric patients, with rotating neonate and pediatric flight nurses on call for those flights.

“Many years ago we owned our own planes, but this is a much more cost-effective way of providing the service,” said Brown. The team averages 20 patients per year

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Memorial Hermann-Texas Medical Center's Hyperbaric Chamber Provides Invaluable Treatment for Broad Range of Conditions

Since the introduction of the first hyperbaric chamber in Houston at the Texas Medical Center in 1991, tens of thousands of patients have realized the benefits of this unique therapy, which is used to successfully treat a variety of serious and even life-threatening conditions.

The chamber is still the largest of its kind in the region, with the ability to treat up to 22 patients at once, and is available 24 hours a day, seven days a week.

“We see a lot of patients with carbon monoxide (CO) poisoning, which makes our hyperbaric chamber particularly valuable to firefighters and victims of fire,” said Laurie Christensen, director of operations of wound care and hyperbarics at Memorial Hermann-Texas Medical Center. “In the summer, we see an increase in SCUBA divers with decompression sickness and also patients with necrotizing infections from swimming in water with bacteria.”

Hyperbaric oxygen therapy, or HBO therapy, enhances the body's natural healing and strengthens the immune system by delivering 100 percent oxygen with increased atmospheric pressure in a specially outfitted chamber in which the patient wears an oxygen delivery device similar to a space hood. Long used to treat SCUBA divers suffering from decompression sickness, HBO therapy has also proven valuable in treating a myriad of health conditions, from diabetic wounds and air



embolisms to crush injuries and brown recluse spider bites.

“We have a three-lock system in which we can treat up to 10 patients at a time in the main area,” said Kristin Smith, RN, manager of wound care and hyperbarics. “We can treat both pediatric and adult patients, even those who are intubated and in critical condition. All of our nurses are ICU-trained and certified in advanced cardiac life support (ACLS) and pediatric advanced life support (PALS).”

As one of the busiest Level I Trauma Centers in the country, they treat many patients with crush injuries, added Smith. “The hyperbaric chamber increases the atmospheric pressure, allowing oxygen to penetrate even the tiniest spaces of your body. This encourages cellular growth, which can be extremely effective for treating trauma patients,” she said. According to

Smith, the team recently treated a 17-year-old who had been in an ATV accident, and they were able to save all of his fingers that were crushed in the rollover. “Without the hyperbaric chamber, he likely would have lost all of his fingers, and maybe even his entire hand.”

Time is of the essence when utilizing the hyperbaric chamber, added Smith, and the ideal window for treatment for those with CO poisoning is within the first two hours of exposure. “The hyperbaric chamber is the only treatment available for decompression sickness, and is certainly the gold standard for CO poisoning. The risk of permanent and irreversible neurological damage increases exponentially after the first few hours, so the sooner we see these patients the better.”

For more information on hyperbaric oxygen therapy at Memorial Hermann-TMC, please visit www.memorialhermann.org/wound-care/hyperbaric-oxygen-therapy/.

Shattered Dreams Program Leaves Lasting Impression on Teens

If you ask a teenager about the dangers of texting and driving, drinking and driving, and other reckless behaviors on the road, they'll tell you all about it – perhaps with an eye-roll or two. They know the risks, and they've seen the commercials and billboards – but do any of these messages really hit home?

“Unfortunately, despite the numerous public service campaigns out there, motor vehicle collisions remain a leading cause of death among teens,” said Cary Cain, RN, B.S.N., M.P.H., pediatric trauma prevention coordinator for the Memorial Hermann Texas Trauma Institute. “We wanted to provide an opportunity for high school students to learn about the hazards of distracted driving due to texting, alcohol and drug use, and also provide education on the prevention of those behaviors.”

Enter “**Shattered Dreams**,” a program that offers high school students the chance to witness first-hand the hazards of distracted driving due to texting and substance use. Memorial Hermann Texas Trauma Institute works with local high schools to coordinate these events. The program's main feature is an elaborate mock traffic accident set up on high school property. Student actors volunteering with the program – each made up with stage-blood and prosthetics to portray various injuries – are placed around a wrecked car donated by a local wrecker service. A Memorial Hermann Life Flight® helicopter is flown in for the critically injured. And there is always a story behind the scene: After a night of partying, high-school students are involved in a bad motor vehicle collision.

One is ejected from the vehicle and dies. Another becomes paralyzed from the waist down. Another is led off in handcuffs by local law enforcement, facing charges of manslaughter. There is even a mock memorial service the next day.

“We want to make it as real as possible,” Cain said. “It's not about scaring the students, but rather having them witness what could really happen to themselves or their loved ones. Ultimately, we want them to understand that these tragedies can be prevented.”

This year, Memorial Hermann worked with four different high schools in the Greater Houston area.

“Shattered Dreams is usually scheduled so that it coincides with the school's prom and graduation, since those are times that teens



“It's not about scaring the students, but rather having them witness what could really happen to themselves or their loved ones.”

CARY CAIN, RN, B.S.N., M.P.H.

may be more apt to practice risky driving behavior,” Cain added.

As part of the program, students and staff members from the various high schools visit the Memorial Hermann-TMC Campus to participate in interactive education and tours of the hospital's trauma facilities.

“The hospital component really works to make

this program an educational experience,” said Kyler Godwin, Ph.D., M.P.H., adult trauma prevention coordinator at Memorial Hermann Texas Trauma Institute. “We have one of our trauma surgeons speak and we talk about how to make smart choices. Our goal is that these teens will start planning ahead so they don't find themselves in a bad situation. We want them to have the education they need to make smart choices so that they always get home safely.”

The **Shattered Dreams** program is a collaborative effort between the Memorial Hermann Texas Trauma Institute and numerous community members including parents, high schools, EMS personnel, local police stations and funeral homes. The Trauma Prevention department would like to thank the nurses, physicians, EMTs, administrators and chaplains involved for going above and beyond in their contributions to the program – it would not be possible without the support of Memorial Hermann-Texas Medical Center's trauma services and the valuable volunteers who gave up their time to make a difference in the lives of these high school students.

PATIENT PROFILE

“It’s Just Better to Be Happy”

Patient James Burke talks about gratitude, pain and moving past trauma

James Burke remembers very little about the accident. He knows it happened on November 2, 2013, and remembers hanging out with his best friend at his parents’ house before he felt a seizure coming on. He can recall leaving the room to get his medicine from the kitchen, but after that, everything went blank.

Two weeks later, he woke up in the John S. Dunn Sr. Burn Center at Memorial Hermann-Texas Medical Center.

“They told me that I’d fallen into the gas stove and my T-shirt caught fire. There were third-degree burns on over 45 percent of my body,” Burke recalled. “At first I was in shock. It was difficult to process all at once.”

A geophysics student at the University of Houston, Burke had grown accustomed to injury by his college years. Growing up, he’d been hurt numerous times playing sports, including getting hit in the head with a fastball during a baseball game, and at one point he was briefly paralyzed after a knockout at football practice. In fact, when he began having seizures at age 17, his physicians looked at those head injuries, which he’d suffered during stages of critical brain development, as possible contributing factors.

In the years that followed, Burke’s seizures grew dramatically, increasing in both frequency and severity. He began suffering secondary injuries during the episodes, mostly from falls. He’d fallen down brick stairs, through a glass store front and once into a lake at a golf course. But he made it through all of them, and after waking up in



James Burke, left, poses for a picture with his occupational therapist Kimberly Walker, OTR, in the rehabilitation gym at Memorial Hermann-Texas Medical Center.

the burn unit, he was determined that this time would be no different.

“The whole experience has really made me think about how much everyone takes life for granted,” Burke said. “You want to know the best part about all of this? I woke up – I’m here. I was critical, but I made it through. I’m lucky my face and hands aren’t burned. And I figured, I could sit here for two months and have a terrible time, or sit here for two months and make the very best of it. No matter what the situation, things could always be worse.”

That optimistic attitude, according to Burke’s occupational therapist Kimberly Walker, OTR, is the reason he’s made such a strong recovery.

“He’s been a wonderful patient because he is so motivated,” Walker explained. “He always finds the positive in everything. Burns are extremely painful, and patients find it hard to be motivated when they are in that much pain. But he’s an exception to that rule – he hasn’t let the pain interfere with his recovery, and he’s made remarkable progress.”

Burke has come a long way since being transported by ambulance to the Emergency Center at Memorial Hermann-TMC where he was triaged, intubated and then transferred to the burn unit. He was placed under the care of a team of clinicians comprised of specialized nurses, therapists and physicians, including Daniel Freet, M.D., plastic surgeon affiliated with Memorial Hermann-TMC and assistant professor of plastic surgery at UTHealth Medical School, who performed Burke's multiple skin graft surgeries.

"James sustained a very substantial burn injury, one that could have been lethal," Freet said. "He was under our care for an extensive period of time and faced a long road to recovery, but he came through it with flying colors and is doing extremely well because he's worked so hard – most of his success is through his own diligence. He was highly motivated even through all the pain from the skin graft surgeries. He really did the work to get himself better."

While Burke acknowledges that his recovery has been anything but easy, he insists that he owes his success primarily to his caretakers.

"The only reason I'm alive is because of the hard work put in by my doctors, nurses, techs and therapists. I wouldn't be here without everything they've done for me," he said. "There's a saying in the burn unit that goes, 'If it doesn't hurt, then you're not doing it right' – that's really helped me put my pain into perspective. The pain meant that I was doing what I needed to be doing to get better, so I had to just put mind over matter and get through it. I remember that whenever my nurses would take my bandages off, I'd tell myself that I was going to endure this pain one step at a time, that

I'm going to endure it knowing that I'm lucky to be alive, that all of this is helping me to live a better life in the future."

Burke's courage and hard work paid off – and not just for his own benefit.

"Our other patients see him as an inspiration – they see the extent of his burns and how far he's come and they think, 'I can do this, too,'" Walker said. "To this day he still comes in early for his appointments and socializes with the other patients. He likes to get a sense of how they're doing, how they're coping, and he'll give them little motivational talks."

Burke says that ever since the accident, he's wanted to give back in whatever way he can. "My attitude changed after getting burned. I realized that I'm not here to just think about myself, I'm here to help others. Whenever I visit other patients, my goal is to always try to make them smile. I want everyone with a disability to feel confident and not shield themselves from others. If you just sit in bed and think about how bad life is, you aren't going to go anywhere. No matter what you're dealing with in life, you have to accept it and move on."

And Burke has done just that. He is now back in school full time, keeping busy with his studies, social life, and squeezing in golf games whenever he can.

"His will to live and return back to his life has inspired all of the staff," said Stephanice Stephens, RN, B.S.N., clinical manager of the John S. Dunn Sr. Burn

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JAMES BURKE

Center. "James looked at every challenge as an obstacle and never as defeat, no matter what the situation. His entire family was unconditionally supportive and appreciative, and I think that had an enormous impact on his spirit, and it helped all of us feel supported and motivated as well."

"It's wonderful to see James back to living his life," Walker added. "As therapists, we become close to our patients and we want them to have an optimal recovery. Working with James has motivated all of us. I can tell you that, personally, working with him has inspired me to continue to raise the bar of my expectations in being the best clinical practitioner I can be."

Looking toward the future, Burke says he doesn't want anything to limit what he's going to be or do. "It's just better to be happy than to be sad, to live in the now than in the past," he said. "Getting burned was obviously a life-changer, but wasn't a change for the worse. Some people look back on a day like that and think that's the worst day of my life, but I think it's just another day in my life. Sure, I got burned and went through numerous surgeries to help repair my body, but I'm repaired. I'm breathing. It feels good regaining all of the skills and basic movements that I took for granted. When I got burned, people would always say 'I feel so sorry for you and I'm sure you went through a lot of pain,' but I had a good time in the hospital. I can honestly say that I found myself in those rooms."

Three Years after the Accident, the Berry Siblings Return to Children's Memorial Hermann Hospital

In July 2011, three young siblings lost their parents in a tragic car accident on the way home from summer vacation in Colorado. The Berry family was traveling back to Houston when their vehicle was struck head-on by an SUV that had veered into their lane. The two brothers, Peter and Aaron, who were 9 and 8 years old at the time, sustained serious spinal cord injuries that paralyzed them from the waist down. Miraculously their younger sister, Willa, was mostly unharmed.

After life-saving surgery at a West Texas hospital, Peter and Aaron were transported by Memorial Hermann Life Flight® to Children's Memorial Hermann Hospital, where they were placed under the care of the pediatric surgery team and closely followed by the trauma nurse practitioners. After weeks of treatment and therapy, they

were both discharged in late July and spent the next several months completing rehabilitation.

Now, nearly three years later, the siblings are thriving. In March they returned to Children's Memorial Hermann Hospital to visit their old nurses and caretakers, most of whom they hadn't seen since being discharged from the hospital. They talked about everything from their basketball team (the TIRR Hotwheels, TIRR Memorial Hermann's junior wheelchair basketball team, who happen to be the 2013 national champions) to their favorite breakfast food (French toast) to girls at school (mum's the word).

"It's weird being back here – everything looks the same," Peter, now 12, explained. Both he and Aaron wanted to see the room where

they'd played video games, and they recalled watching movies, eating popsicles, and the times they'd gotten bored. Willa stood between them and listened as the nurses re-lived their memories with the boys.

"They're truly remarkable kids," said their aunt, Simone Berry, who accompanied them on the visit. The siblings now live with Simone, whom they affectionately call, "Aunt Simmy," their uncle Matt, and their two cousins. "It's a full house, but we're all doing great and are very happy."

The siblings are cheerful, polite and personable beyond their years. They spoke passionately about their hobbies, school, and of taking care of one another.

"They should be so proud of themselves," said their social worker, Kristen Soudelier, LMSW, who was also present for the reunion. "They've had to overcome so many obstacles both physically and emotionally – it's really impressive and inspiring."

When the visit was over, the group headed to the gift shop to buy some water for the drive home. Peter noticed some Dickies Peanut Patties® for sale and asked his aunt if he could get one.

"I remember my Dad used to eat these," he said. Aaron and Willa saw them and remembered, too. They left the hospital with three, talking about how they would save half of each for their cousins.



From left to right, Aaron, Willa and Peter Berry are all smiles at a recent visit to Children's Memorial Hermann Hospital.

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Nation's First Mobile Stroke Unit Successfully Transports First Patient

UTHealth Medical School, in collaboration with Memorial Hermann-Texas Medical Center, is proud to announce that the UTHealth Mobile Stroke Unit has successfully transported and helped save the life of its very first patient.

The unit, the first and only one of its kind in the nation, is a specially equipped ambulance with a CT (computed tomography) scanner that allows a stroke unit team member to quickly assess whether a patient is having a stroke caused by a blood clot. If so, the unit is equipped to administer the clot-dissolving drug tPA (tissue plasminogen activator).

Shortly after becoming fully licensed and ready to go live last May, the unit was dispatched for the very first time to 30-year-old Maureen Osaka's home near downtown Houston after 911 received a call from Osaka's friend that the woman was suffering from stroke-like symptoms.

"I felt so weak, I couldn't use my hand and I was so dizzy," said Osaka. "I couldn't stand up so I started crawling from the living room to my bedroom, thinking I was going to lie down and go to sleep to hopefully feel better – I didn't know what was going on. But before I could make it to my room, the whole left side of my body stopped working and I could no longer see, so I made it to the phone and blindly started dialing the only numbers I knew."

Upon arrival, the mobile stroke unit team assessed Osaka then moved her into



Maureen Osaka, the first patient to ride in the UTHealth Mobile Stroke Unit, walks the hallways at Memorial Hermann-TMC just days after suffering a potentially fatal stroke. She is assisted by Stephanie Parker, RN, who was on the stroke unit team dispatched to Osaka's home and helped save her life.

the ambulance where they immediately started the CT scan. Within minutes, they were able to confirm Osaka was not only suffering a stroke but probably had one of the rarest and most fatal types of stroke, a basilar artery occlusion, which means the blood clot was blocking an artery that provides blood to the brain stem.

Having the critical information they needed from the scan, the team was able to begin administering tPA treatment onsite, before the ambulance even left the scene for the Comprehensive Stroke Center at the Memorial Hermann Mischer Neuroscience Institute at the Texas Medical

Center. "The type of stroke that Ms. Osaka suffered is often difficult to diagnose, so in addition to speeding treatment, the Mobile Stroke Unit brings specialized stroke expertise right to the patient's home at a time when it is needed most," said James C. Grotta, M.D., the neurologist who led the team that treated Osaka that day.

"tPA is the only FDA-approved treatment for an ischemic stroke, but it must be given within three hours of the first signs of stroke to be most effective," added Dr. Grotta, who is also director of stroke research in the Clinical Institute for Research & Innovation at Memorial Hermann-TMC and director

my hand again. It was like a dream! I could even stand up and walk!”

“Now that we quite literally have a mobile emergency room in the ambulance, we are able to assess and treat the patient faster than ever before possible,” said Stephanie Parker, RN, B.S.N., project manager for the UTHealth Mobile Stroke Unit. “Because we were able to arrive so quickly and initiate tPA treatment on scene, we may have not only saved Ms. Osaka’s life, but by cutting down on precious time, we were able to help save millions of her brain cells and minimize any residual disability as well.”

Osaka, who is originally from Nigeria but travels the world doing philanthropic work, feels blessed and thankful that she happened to be in Houston and within the unit’s response radius when her stroke occurred.

Stroke occurs when blood flow to the brain is interrupted by a blockage or a rupture in an artery, depriving brain tissue of oxygen. It is the fourth leading cause of death in the United States and a leading cause of disability. According to the American Stroke Association and the Centers for Disease Control, nearly 800,000 Americans suffer a stroke each year, or one every 40 seconds. The most common symptoms include weakness or numbness of the face or arm, or difficulty speaking.

After observing a similar unit in Germany last March, Dr. Grotta was inspired to bring a mobile stroke unit to Houston to further improve upon the quality of nationally recognized stroke care already delivered at Memorial Hermann-TMC and UTHealth Medical School. He presented the idea to the UTHealth Development Board and partnered with Frazer Ltd., a third-

generation, family-run Houston company that builds emergency vehicles. Then, thanks to many generous donations totaling over \$1 million, the stroke unit became a reality and was officially unveiled this past February.

One of the project’s generous donors is local legend Jim “Mattress Mack” McIngvale, owner and operator of Gallery Furniture. “I donated to the UTHealth Mobile Stroke Unit partly because I’m so grateful to Dr. Grotta for all his help with my many strokes over the years, and also because I wanted to support the important research he’s doing for stroke care,” said McIngvale. “I’m thrilled to hear of the positive outcome for the first stroke unit patient and hope that we will see many more of these outcomes as the team continues its groundbreaking work. This is a priceless and lifesaving service Dr. Grotta and his team are providing the Houston community and it was an honor to be able to contribute to such a cause that is so close to my heart.”

The stroke unit is run in conjunction with the Emergency Medical Services of the Houston Fire Department, Bellaire Fire Department and West University Fire Department. It carries a paramedic, neurologist, nurse and CT technician and currently runs alternate weeks as part of a clinical trial expected to last three years. The trial includes incorporation of the telemedicine program at UTHealth Medical School and Mischer Neuroscience Institute. Researchers are looking at whether the telemedicine program, which physicians across the state use to consult with stroke experts affiliated with Memorial Hermann-TMC, can be applied to the mobile stroke unit. If so, the unit might be able to respond to calls in the future using telemedicine, which could make it more cost effective.



Continuing Education

Memorial Hermann Life Flight® offers the following classes and more. For a schedule, visit trauma.memorialhermann.org/ems-education. For more information or to register, contact Kelly Murphy, Life Flight education coordinator, at 713.704.6151 or Kelly.Murphy@memorialhermann.org.

- Advanced Burn Life Support (ABLS)
- Advanced Cardiovascular Life Support (ACLS)
- American Heart Association Heart Codes
- Aortic Aneurysm Management
- Blood Product Administration
- Cardiopulmonary Resuscitation (CPR) License Provider
- CPR-Heartsaver Non-license
- Emergency Nursing Pediatric Course (ENPC)
- Instruction on Difficult Airways
- Landing Zone classes
- 12-Lead Interpretation Course
- Metabolic Emergencies
- Multi-System Trauma Care
- Neonatal Resuscitation Program (NRP)
- Pediatric Advanced Life Support Course (PALS)
- Pediatric Airway Management
- Respiratory Emergencies
- STEMI Protocol Instruction
- Tourniquet Use
- Trauma Nursing Core Course (TNCC)

Memorial Hermann Heart & Vascular Institute-Texas Medical Center Awarded Mission: Lifeline STEMI Receiving Center Gold Award for Second Consecutive Year

Memorial Hermann Heart & Vascular Institute-Texas Medical Center has been awarded the prestigious Mission: Lifeline STEMI Receiving Center Gold Award for the second year in a row. The award, presented by the American Heart Association, recognizes the Institute's success in implementing the highest standard of care for heart attack patients.

ST-segment elevation myocardial infarction, or STEMI, is the deadliest form of heart attack. Percutaneous coronary intervention (PCI) capable hospitals participating in Mission: Lifeline are referred to as STEMI Receiving Centers and are evaluated on eight performance achievement measures, including the percentage of STEMI patients who received PCI within 90 minutes of first medical contact, a metric that involves collaboration with the EMS agencies that deliver patients to the hospital. To receive an award, the hospital must achieve 85 percent or higher composite adherence on these measures, with no single measure below 75 percent over a number of consecutive

months. Gold is the highest award level, recognizing two consecutive years of achieving these standards.

"The fact that Memorial Hermann Heart & Vascular Institute-TMC has been awarded a second consecutive Mission: Lifeline STEMI Receiving Center Gold Award is particularly commendable given that the Mission: Lifeline hospital recognition program has only been around since 2010," said Nicole Sonnier, vice president of development, Heart Walk, American Heart Association and American Stroke Association.

"Our employees and physician partners work relentlessly to improve the outcomes

of our cardiac patients, and we are always looking for new ways to reduce morbidity and mortality and improve overall quality of care," said Paul O'Sullivan, chief executive officer of the Institute. "This award is an incredible honor and we are proud to be recognized by the American Heart Association and the Mission: Lifeline program."



Members of the Cath Lab at Memorial Hermann Heart & Vascular Institute-Texas Medical Center pose with the Mission: Lifeline STEMI Receiving Center Gold Award on August 12, 2014. This is the second year in a row HVI has been recognized by the American Heart Association with a Gold-level award.

Life Flight has flown SINCE 1976

OVER 140,000 MISSIONS

There have been 4 helicopter models used by Life Flight

Life Flight uses 275,000 gallons of jet fuel each year

EC 145

SA3160 Alouette III Service began on August 1, 1976

AS355F Twinstar

MBB BK117 Space Ship

Dr. Duke Honored with Lifetime Achievement Award by the Houston Technology Center

The Houston Technology Center, a nonprofit business accelerator, honored this year's outstanding Texas biotech pioneers and Houston-area entrepreneurs at its annual gala in May. The event highlights local entrepreneurship, leaders and companies that the Houston Technology Center recognizes as having a substantial impact in the region's economy and in the development of innovative technologies.

At the gala, the Houston Technology Center presented two lifetime achievement awards to distinguished Texas biotech pioneers. James "Red" Duke, Jr., M.D., founder and medical director of Memorial Hermann Life Flight®, professor of surgery and the John B. Holmes Professor of Clinical Sciences at UTHealth Medical School, was honored in the category of Life Sciences for his illustrious career. Dr. Robert F. Curl, Professor Emeritus at Rice University, was chosen for the Nanotechnology category for his efforts in the study and creation of fullerenes.

"Dr. Duke's numerous achievements have not only made an immeasurable impact

on the medical and scientific community, but on the general public as well," said Memorial Hermann-Texas Medical Center CEO Craig Cordola. "He is truly one of a kind, and his unwavering dedication to his work is an inspiration to all of us at Memorial Hermann. We are proud to call him our colleague and friend."



Dr. Duke's legendary reputation as a laureate trauma surgeon with a Texas pedigree is widely recognized. After graduating from Texas A&M University with a bachelor of science degree, he joined the 67th Medium Tank Battalion of the 2nd U.S. Army Division, where he served for two years.

He then went on to earn a divinity degree from Southwestern Baptist Theological Seminary and finally a medical degree from The University of Texas Southwestern Medical School in Dallas. Upon graduation from medical school, he completed an internship in internal medicine and a residency in general surgery at Parkland Memorial Hospital. He was then awarded a prestigious NIH Fellowship at Columbia University in New York. Following four years of research and patient care there, as well as graduate studies in chemical engineering, biochemistry and computer science, he moved to Afghanistan to help establish a fledgling medical school.

Upon returning from Afghanistan, Dr. Duke joined the faculty at UTHealth Medical School and was instrumental in establishing the Level I Trauma Center at Memorial Hermann-TMC and Children's Memorial Hermann Hospital, as well as founding Memorial Hermann Life Flight. Dr. Duke is also a founding member of the American Trauma Society and was named "Surgeon of the Year" by the James F. Mitchell Foundation in 1988.

4 members of the current Life Flight crew
which includes Life Flight Dispatch, Life Flight Mechanics, Life Flight Paramedics, Life Flight Nurses, and Life Flight Pilots.

The crew has given over **650** units of blood since the practice began in 2011.

Life Flight has flown **1,932,000** miles since 1976.

Life Flight has a service area of **150 miles**

80%
Life Flight pilots and mechanics have military experience.

Life Flight Celebrates 35 Years of Fixed Wing Service *continued from cover*

for transport, and has traveled as far as Hong Kong, Croatia, Spain and Brazil. Perhaps most famously, in 2011 the Life Flight crew brought former U.S. Representative Gabrielle Giffords to the neurotrauma intensive care unit at Memorial Hermann-Texas Medical Center from Tucson after she was shot several times at close range by a constituent.

“Our flight team is highly trained in flight physiology, such as how very dry conditions, pressure changes, vibration and noise affect the patient,” said Brown. “Our No. 1 priority is to maintain the integrity of the ICU environment, and that means decreasing the stress of the patient as much as possible. Getting patients in and out is important – extreme pressure changes can make their condition worsen, particularly for the very young, the very old and critical cardiac patients.”

Our No. 1 priority is to maintain the integrity of the ICU environment, and that means decreasing the stress of the patient as much as possible.

Brown, who has been a member of the Life Flight team since 1989, remembers a time in the late 1980s and early 1990s when the fixed-wing service flew three or four missions per week. She credits advancements in health care around the world with making such a large number of trips unnecessary today.

“There are so many things we can do now on an aircraft to create a similar environment to the ICU,” said Brown. “We recently started providing extracorporeal membrane oxygenation (ECMO) on our rotor-wing aircraft, and the goal is to provide the same

service on fixed-wing aircraft soon.” The fixed-wing service is paid for in advance by the patient or family, and the passenger can be transferred to any hospital. “Many of the patients we transfer come to Memorial Hermann, but we also transport patients to other hospitals in the Texas Medical Center,” said Brown.



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Questions, comments or suggestions about this publication? We'd love to hear from you! Email us at lifeflight@memorialhermann.org

To transfer a patient, please contact the Transfer Center at 713.704.2500.

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Upcoming Events

27TH ANNUAL SOUTHERN REGION BURN CONFERENCE

November 14-16, 2014

Royal Sonesta Hotel, Houston, Texas

Hosted by the John S. Dunn Sr. Burn Center at Memorial Hermann-Texas Medical Center. For more information or to register, go to sma.org/burn or call 1.800.423.4992, ext. 620.

TEXAS EMS CONFERENCE

November 23-26, 2014

Fort Worth, Texas

For more information go to texasemsconference.com.

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