

A PUBLICATION FOR THE FRIENDS OF MEMORIAL HERMANN

ADVANCING THE

VISION

Memorial Hermann Foundation / Fall 2018

Spotlight

Rehabilitation breakthroughs
for patients and the world

Robotics

The new standard of
human rehabilitation

One step at a time

An experienced scuba diver's walk
back from the bends



Dear Friends,

I'm constantly inspired by TIRR Memorial Hermann.



Houston Mayor Sylvester Turner celebrates with athletes from the TIRR Memorial Hermann Junior Hotwheels basketball team, the 2018 national champs.

Every day, physicians, therapists and researchers there take on complex cases other hospitals aren't equipped to handle. They give hope to patients and help them find courage they probably never knew they had. And their work directly influences the way patients are treated around the country and the world.

The ongoing support of generous donors plays an integral role in TIRR Memorial Hermann's

success. So does a culture that gives those physicians, clinicians and researchers the freedom to provide the best care to patients.

Many people are responsible for shaping that culture, including, of course, Memorial Hermann President & CEO Chuck Stokes. I'd like to congratulate Chuck on being named a *Houston Business Journal* Most Admired CEO. It comes as no surprise to any of us who have seen his dedication firsthand.

Remaining one of the top rehabilitation hospitals in the country year after year is no small feat. I want to thank all of you for helping make sure that's what we have here.

I also want to recommend that you go take a tour. You'll be amazed.

I know I am.

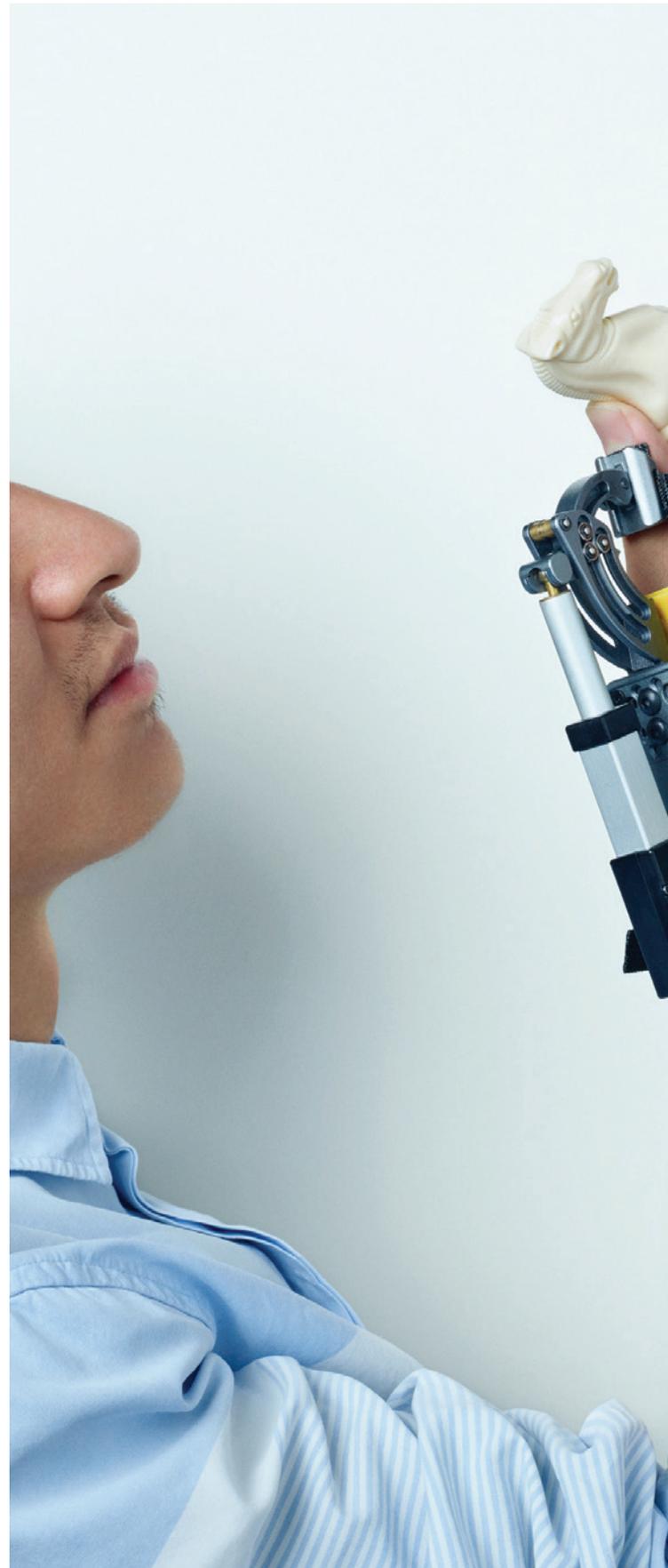
A handwritten signature in black ink that reads 'Anne'.

Anne E. Neeson

Executive Vice President & CEO
Memorial Hermann Foundation

Cover photo The joy of walking again, as demonstrated at the 2017 TIRR Memorial Hermann International Symposium on Wearable & Rehabilitation Robotics

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TIRR Memorial Hermann

A one-time polio treatment facility now handles the most complex brain and spinal cord injuries

When William A. Spencer, MD, opened a clinic to treat polio patients in 1959, he couldn't possibly have imagined what it would ultimately become. Or that the polio vaccine would come along so soon after, all but eliminating the need for a facility like his.

Still, Dr. Spencer was convinced that the rehabilitation and therapy techniques that improved the lives of his polio patients would help other people as well. And so began the practice that eventually became TIRR Memorial Hermann, his work essentially establishing the approach that would define TIRR's success.

Consistent excellence

Today, TIRR Memorial Hermann is a global leader in rehabilitation and research, attracting physicians, therapists and patients from around the world and taking on challenges other facilities simply can't.

The most recent *U.S. News & World Report* rankings name TIRR Memorial Hermann the #3 rehabilitation hospital in the nation. That makes it #1 in Texas and the southern region of the country. TIRR Memorial Hermann has been at the top of the list every year since the first one in 1989.



Complex cases drive research

The patient stories are unique and remarkable, and they come from people who have experienced traumatic brain injury, stroke, spinal cord injury, amputation, multiple trauma, multiple sclerosis, Parkinson's, other neurological and neuromuscular disorders, and complex orthopedic injury.

The advancements are just as remarkable. TIRR Memorial Hermann is leading the charge to make life-changing technology like lower extremity robotic exoskeletons available to more people, in new and surprising ways. And they proudly share their discoveries with the world.

Beyond recovery

TIRR Memorial Hermann's triumphs are the result of thousands of passionate physicians and therapists whose tireless dedication sets the institution apart. They save lives. Then they restore quality to those lives. Then they do it again the next day.

None of this would be possible without the continued support of philanthropists who understand the importance of this exceptional team to Houston, to Texas and to the world.





The People Behind the Best Rehabilitation Hospital in Texas

A conversation with two champions of one world-class institution

One was sure that working in a research and rehabilitation center wasn't for him. The other had no desire to leave the East Coast to practice in Houston, Texas.

“It takes people who believe in what we’re doing and willing to invest in what we’re doing.”

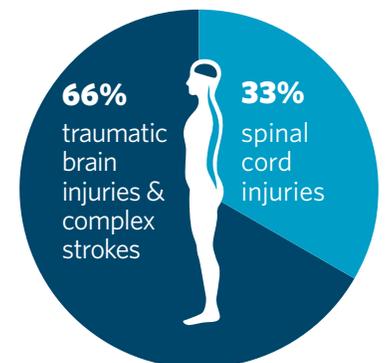
Jerry Ashworth

Today, these two men are certain there's no place they'd rather be than TIRR Memorial Hermann, where they're leading the way to some of the most exciting discoveries in rehabilitative medicine.

Jerry Ashworth brings 25 years of healthcare experience to his role as senior vice president and CEO of TIRR Memorial Hermann. Gerard E. Francisco, MD, a physiatrist who is world renowned in spasticity management, is the chief medical officer. He joined TIRR in 1995.

We had an opportunity to talk with them recently. Here are highlights from the conversation.

TIRR MEMORIAL HERMANN HIGHLIGHTS



42,000
square-foot research center

10-15%
international patients

1,600
patients treated per year



“We see some of the most complex rehab patients in the country.”

Jerry Ashworth, Senior Vice President & CEO, TIRR Memorial Hermann

TIRR MEMORIAL HERMANN HIGHLIGHTS

- 1** neurological sleep medicine center
- 1** diagnostic imaging center
- 1** outpatient medical clinic for adults + children
- 3** TIRR inpatient facilities
- 4** affiliated inpatient facilities
- 6** outpatient rehabilitation clinics for adults + children

So, once again, U.S. News and World Report has named TIRR one of the nation’s top rehabilitation hospitals. How important is that?

Dr. Francisco: I know it sounds very arrogant, but this just validates what many people already know. This is an outstanding facility for recovery.

Jerry Ashworth: It’s very much a part of our identity to be one of the top rehab hospitals in the country.

What makes TIRR Memorial Hermann unique?

Jerry Ashworth: We see the most complex patients in the country, patients that only one or two other places could treat.

Dr. Francisco: And we are still able to deliver high-quality outcomes. The people at TIRR really make a difference. They add years to people’s lives—and quality to those years.

Jerry Ashworth: There’s a spirit here that makes this place different than anywhere else I’ve been, and I’ve toured some of the top rehab hospitals.

When you say complex patients, what does that mean?

Jerry Ashworth: Our patients have spinal cord injuries or traumatic brain injuries or complex strokes, and then some are very complicated multi-trauma type patients. And many people choose TIRR over other facilities for our expertise in disorders of consciousness.

Dr. Francisco: Those are patients with brain injuries, usually after surgery, in a vegetative or minimally conscious state—they’re awake but they may not be able to interact with people.

Jerry Ashworth: Several other places have these programs, but they don’t see the volume and they definitely don’t have the outcomes that we do.

Dr. Francisco, what was it like to be chosen to treat Congresswoman Gabby Giffords?

Dr. Francisco: It was a surprise and a delight. I thought she’d go to Arizona because that’s where she’s from and they have very good facilities. One of the best things to happen is that it put TIRR in the spotlight, nationally and internationally people saw that you can still be an active contributor to society in spite of a catastrophic brain injury as long as you receive excellent rehabilitative care.

What has you most excited on the research side right now?

Dr. Francisco: A lot. We’re continuing our robotic exoskeleton work because of the support of the Memorial Hermann Foundation and the neuroscience campaign. We’re discovering how people with complete injuries from the neck down and others can benefit from robotics. And we’re doing research on non-surgical brain and spinal stimulation and stimulation of the vagus nerve to help recovery of the arm and hand following a stroke.



“In the near future, robots are going to be the standard of care in rehabilitation.

And we’re doing robot research others have not done.”

Gerard E. Francisco, MD, Chief Medical Officer,
TIRR Memorial Hermann

What’s the biggest challenge you face in the next decade?

Jerry Ashworth: The uncertainty of healthcare, especially reimbursement. Our complex patients are very resource intensive, which means we have a higher cost of providing care.

Dr. Francisco: I’ll be more explicit. We need money. We have physicians and therapists who are willing to innovate and continue doing the good work that they have been doing. But without the financial infrastructure, we will not be able to do many of those things.

Is there anything we haven’t talked about that you want people to know?

Jerry Ashworth: I would encourage people to come visit us sometime. We can tell you a lot, but it doesn’t do it any justice until you see it.





Solving Rare, Mysterious Symptoms

**Katie Sorrentino: A long recovery
from a diver's nightmare**

Katie Sorrentino has been a scuba diver most of her life. It's an interest she shares with her family. Her most recent dive was over Mother's Day in the Bahamas with her husband, brother, mother, sister-in-law and niece. She described it as a beautiful dive.

Ten minutes after she got back on the boat, the beautiful dive turned into excruciating pain in her upper abdomen. Her brother, a well-prepared dive master, quickly gave her oxygen and got her back to his house on the island. The pain grew worse. Katie began to feel tingling in both legs.

Nothing unusual about the dive

Katie and her family had done everything by the book on the dive, including making all the safety stops on the way back to the surface. Yet now Katie was being airlifted to a Miami hospital to be treated for decompression sickness—the bends—and a complicated case at that. The sickness is fairly rare in general, and Katie's case was among the very small percentage of those that cause a potentially crippling spinal cord injury. "I had no feeling or movement from my navel down," Katie said. "It was terrifying."

Doctors in Miami told Katie she might never walk again. Katie wasn't willing to accept that news. Neither was TIRR Memorial Hermann, which has built its reputation on defying long odds.

After spending most of the next month in a hyperbaric chamber and regaining some sensation in her legs, Katie was airlifted to Texas and admitted into TIRR Memorial Hermann-The Woodlands.

Looking back, Mary E. Russell, MD, the center's medical director, says, "This isn't something we normally see here, but the therapists were really excited in learning about it."

Katie adds, "They would come in every day and say, 'Hey, I read another article last night' or 'I saw another story.' Because they were constantly coming in with different ideas, I felt very safe."

Intense therapy, a painful setback

Three weeks of intense physical and occupational therapy under Dr. Russell's care brought some progress. But Katie was still experiencing a lot of pain. Then her condition took a turn for the worse.

About the bends Decompression sickness is a result of a rapid decrease in pressure surrounding someone who's underwater. If the body can't eliminate the excess inert gas caused by the pressure decreases, bubbles develop in veins and tissues. If the bubbles overwhelm the tissues, a person can develop decompression sickness.

Katie's case was a rare one. Of the 1,000 people who experience decompression sickness each year, only 25 develop spinal cord issues.

Out of nowhere, the excruciating pain she had felt on the boat returned. While recurring pain is common with decompression sickness, Katie's doctors were so concerned about severe neurological issues they transferred her via Memorial Hermann Life Flight to the Neuro ICU at Memorial Hermann-Texas Medical Center.

Ten agonizing days later, that pain subsided. She returned to TIRR Memorial Hermann-The Woodlands, where she continued her therapy. "I marveled when I returned because I could move my legs even more than before I left," Katie says. "I cried when I saw my care team, and from there it felt like an accelerated path to walking on my own."

Moving forward

Katie was finally able to walk out on her own after 76 days with Memorial Hermann. She credits her friends, her family, her faith and Dr. Russell's team of therapists, nurses and patient care assistants for her recovery.

Not surprisingly, Katie's doctors have recommended she not dive again. Also not surprisingly, at least to everyone who knows Katie, she has no plans to give up the diving trips with her family. "I'll just be up on the boat," she says. "Or maybe snorkeling."



From Katie's Journal

July 3 / *I am back safe and sound in the rehab hospital in the Woodlands [TIRR Memorial Hermann], and I was greeted with smiling faces and welcoming shouts of joy by the nursing staff at this hospital. I can't tell you what a relief it is to be back here in the place where I have received such incredible care.*

July 6 / *Today is my 3rd day back in the Woodlands at TIRR at Memorial Hermann and I am so happy. I was lucky enough to get my same OT and PT therapists, Ashley and Mithu, who are truly wonderful.*

July 25 / *After this long of a stay these people really do become your family. Although I would never wish this length of hospitalization on anyone, I have to say that the care and the love and the kindness that I have been shown by the wonderful people here at TIRR Memorial Hermann truly got me through this.*

Adaptive Sports

Independence, inclusion and some serious hoops

“When I saw my first practice, I was blown away by the athleticism, the skill level, the competitiveness,” says TIRR Memorial Hermann Senior Vice President & CEO Jerry Ashworth, who loves that “they let me hang out with them.”

The TIRR Memorial Hermann Hotwheels wheelchair basketball team has that effect on people. Hotwheels is just one part of a thriving adaptive sports program that gives athletes with disabilities a chance to compete at a high level.

Developing Houston champions

TIRR Memorial Hermann has three wheelchair basketball teams—the Junior Hotwheels, for high school-aged athletes, and two Adult Hotwheels teams. The high school team just won the national championship in Louisville, Kentucky. Several players have gone on to Division 1 colleges on scholarships over the years.

Adaptive Sports also fields Houston’s only quad rugby team and a wheelchair Ultimate Frisbee team.

“The two main goals for our patients are independence and inclusion,” Mr. Ashworth adds. “Adaptive sports is a great way to promote both.”

Challenge Program

Learning skills beyond layups and bounce passes

Regardless of any prior athletic abilities, people need specialized training to live independently after a brain injury or stroke.

The TIRR Memorial Hermann Challenge Program is an outpatient treatment that addresses physical abilities, memory strategies, communication and problem solving. It builds confidence, teaches integration skills and prepares patients for long-term success.

And it works. In 20 years, on average:

93%
of those completing the program met their independence and personal safety goals

90%
met volunteer or work goals

100%
of adolescents met their independence and personal safety goals

80%
of adolescents returned to school





Research and Rehabilitation Go Hand in Hand



Advancing technology to get people back to the life they love

The Institute for Research and Rehabilitation may shorten its name to TIRR, but no one, from the doctors and therapists to the patients themselves, ever loses sight of what this extraordinary place is all about. Together they are all working with the latest technology and sharing their triumphs and challenges in a never-ending quest to help others achieve a higher quality of life.

ReWalk Exoskeleton

TIRR Memorial Hermann was one of the first in the nation to have access to the ReWalk.

This game-changing rehabilitation device mimics the natural gait of an able-bodied person to help those with lower-limb disabilities caused from stroke, spinal cord or traumatic brain injury and paraplegia experience controlled, independent walking and exercising, which provide both physical and psychological benefits.

Nexstim Stroke Case Study

TIRR Memorial Hermann, in conjunction with UTHealth Department of Physical Medicine and Rehabilitation, is one of just 12 hospitals in the country and the only hospital in Texas participating in a national stroke trial by Nexstim.

Researchers use a noninvasive device capable of mapping the human brain to deliver targeted magnetic stimulation to suppress or enhance specific brain activity, such as arm or hand movements that have been lost after a stroke.

Ekso® Exoskeleton

The Ekso® is an innovative battery-powered robotic exoskeleton that helps survivors of spinal cord injuries and others with weakened arms and legs regain their ability to walk and feel freedom.

The device has three modes that guide them in progressive stages to a point where they can not only walk comfortably, but also relearn gait patterns and weight shifts.

Helping TIRR Give More People The Gift Of Mobility

“Lokomat is now the standard of care for kids and adults alike. We treat with this machine every day and have many more patients who might benefit if we could accommodate them.”

Dr. Francisco

Pictured below: Using a special harness to suspend patients over a treadmill, the Lokomat helps adults and children learn to walk again by robotically moving their legs in a natural walking pattern



Ongoing philanthropic support is vital to TIRR Memorial Hermann’s ability to provide the latest rehabilitative therapies. To make a gift, please mark “TIRR Memorial Hermann” on the enclosed envelope or donate online at memorialhermann.org/donate.

New Lokomat® \$450,000

This revolutionary adaptive technology helps people regain mobility lost from a stroke, spinal cord injury, traumatic brain injury, multiple sclerosis or other neurological issues. A pediatric version allows locomotion therapy for children with cerebral palsy, spina bifida, cancer or other neurological disorders.

WHAT YOUR GIFTS MADE POSSIBLE

Today’s uncertain healthcare climate forces vital community institutions like TIRR Memorial Hermann to lean on the generosity of those who appreciate the value of continuous research and innovation.

Here are just a few recent examples of how patients are benefiting as a result of our Revolutionizing Neuroscience capital campaign.

Completion of a freestanding Rehabilitation Research Center

to accommodate researchers, scientists and collaborators from TIRR Memorial Hermann, McGovern Medical School at UTHealth, Baylor College of Medicine, Rice University and the University of Houston

Expansion of the Neurorecovery Research Center

and the adaptive technology program

A new 15-bed, private-room inpatient unit in an existing vacant hospital space

Opening of a new outpatient medical clinic and diagnostic imaging suite

NOTABLE PATIENTS



**Former U.S.
Congresswoman
Gabby Giffords**

Her recovery was not only death defying, but truly miraculous. Suffering a bullet to her head at near point-blank range, Gabby Giffords was brought to Memorial Hermann-Texas Medical Center's Neuroscience ICU at her husband's request. She started rehabilitation at TIRR Memorial Hermann where her traumatic brain injury team developed personalized physical, occupational and speech therapies. Gabby became a national inspiration as she demonstrated the power of the human spirit and a dedicated team of specialists at your side.



**Governor
Greg Abbott**

At 26 years old, Greg Abbott was out jogging when he was struck by a falling tree that crushed his spine, leaving him forever paralyzed from the waist down. After multiple surgeries, he was transferred to TIRR Memorial Hermann to begin his rehabilitation. Through hard work and intense TIRR therapy, he regained his independence and eventually went on to become the Governor of Texas.

Caroline Miller

A stronger body and a personality to match



“She absolutely loved going to therapy because the therapists customized her treatments to be fun.”

Claudia Miller, Caroline's mom

This was just before Caroline's third birthday. At the time, she was having trouble standing up straight on her own.

“She tended to arch her back a lot, so we worked on balance and gait training,” says Jan Kugelmann, PT, DPT, Physical Therapist at TIRR Memorial Hermann Pediatric Outpatient Rehabilitation. That training and a lot of kinesiology tape helped improve Caroline's posture and alignment.

What stood out to everyone about Caroline was the positive energy she brought to the other kids and to the clinic staff at TIRR. “She absolutely loved going to therapy because the therapists customized her treatments to be fun,” says Claudia, who describes her young daughter as a fearless social butterfly.

Caroline sticks to her exercise regimen at home. Her legs and core are stronger now. She's also more independent, which is a big help around the house and with her baby brother. And while she likely faces more treatment as she grows up, nobody's worried about how she'll handle herself.

The first day of school makes a lot of five-year-olds nervous. But not Caroline Miller. Her mother, Claudia, isn't worried about how she'll do, either. She's seen her daughter's personality bloom during her physical therapy sessions at TIRR Memorial Pediatric Outpatient Clinic.

Caroline was born with spina bifida, a birth defect that keeps the spine and spinal cord from forming properly. Claudia brought her to TIRR Memorial Hermann two years ago to work with physical therapists on her legs, her core muscle strength and her walking.

Memorial Hermann Highlights



Chuck Stokes Most Admired CEO for 2018

Joining the inaugural class of Houston Business Journal's 2018 Most Admired CEOs is Memorial Hermann President & CEO Chuck Stokes.

The program honors local leaders who have shown a commitment to establishing workplace culture and made a significant contribution to the community.

Memorial Hermann Rehabilitation (Outpatient, Pediatric + Adult)

- Kirby Glen
- Memorial City
- Greater Heights
- Sugar Land
- The Woodlands Medical Center
- West University

MEMORIAL HERMANN IN 2018

111 years
of serving the community

26,000+
employees

2.3 million
patient encounters

Memorial Hermann Rehabilitation (Inpatient)

- Rehabilitation Hospital-Katy
- Greater Heights
- Southeast
- Southwest
- TMC
- The Woodlands Medical Center



TIRR Memorial Hermann *U.S. News & World Report's*

Top Hospitals List of 2018

- #1** in Texas
- #3** in the U.S.



MEMORIAL HERMANN Foundation

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VISION

Memorial Hermann Foundation

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Mark Your Calendar

President's Club Reception

November 28, 2018

CEO Circle Dinner

January 30, 2019

Circle of Life Gala

May 4, 2019

*Co-chaired by Jerry & Lisa Simon
and Gregg & Jo Lynn Falgout*

Photo: Jerry Ashworth with Bethany and Ben Buchanan touring TIRR. For your own behind-the-scenes view of the facility, call Memorial Hermann Foundation at 713-242-4400.