

Robot with superpowers? Maybe not, but this Exoskeleton helps patients gain ability to walk again

A few months ago, Luis de la Torre, Jr. was in his front yard when he had a stroke. Neighbors quickly ran to help and called 911.

“I was very scared. I was deathly afraid my wife and kids would find me dead on the front yard,” he said.

He was taken to Tampa General Hospital. The stroke was caused by a right brain bleed that made him lose function on his left side.

But physical therapists at Tampa General Hospital’s Rehabilitation Center had a new tool to help de la Torre – the Ekso Bionics Exoskeleton.

The Exoskeleton is a gleaming black robot-like contraption that fits over a patient’s body with small motors at the hips, ankles and knees. The Exoskeleton’s frame helps stabilize patients, so they can walk. It can assist patients who have had strokes, spinal cord injuries or neurological conditions.

Physical therapists must evaluate each patient and measure their leg length and hip width and set those measurements on the Exoskeleton. The motors can be customized to provide less or more assistance to patients at each joint depending on their individual needs.

Doctor of Physical Therapy Manuel Garcia-Gaona adjusts the straps on the Exoskeleton before patient Marie Celormy gets up to walk around the Rehabilitation Center.



Marie Celormy walks in the Rehabilitation Center with the aid of the Exoskeleton and her physical therapists, Mary Wesley Garner and Manuel Garcia-Gaona, both Doctors of Physical Therapy.

“I was too big for it, but they were able to cram me in. It looked like I was an invasion of Ironman,” said de la Torre, who is an engineer at TECO Energy.

After using the Exoskeleton de la Torre said he was getting closer to being able to walk without assistance. He recently was able to move his leg up and down on his own.

The hospital began using the Exoskeleton in April, making it the first Tampa Bay hospital to offer the Exoskeleton to the general public. The Rehabilitation Center at the TGH Brandon Healthplex also has one.

“The Exoskeleton is such a new innovation we’re able to get patients walking faster than with traditional technologies or treatments,” said Mary Wesley Garner, a TGH physical therapist and Doctor of Physical Therapy. “It allows us to get patients up and mobile almost on day one.”

“We have at least 40 patients who have used it during their treatment time,” Garner said. “It’s a great training tool that assists patients with walking goals and provides supplemental assistance when patients need it,” she said.

Patients using the device put their feet in the walking device that’s secured by straps that go up their legs.

“When we start patients, we can initiate their steps.

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Coping Clinic helps children deal with serious health issues

Twelve-year-old Mackenzie Tyler has diplegic cerebral palsy that has caused her to be hospitalized many times.

While coping with the disease has been difficult, Mackenzie has regular sessions with Clinical Psychologist Dr. Nicole Williamson, who founded Tampa General Hospital's Outpatient Pediatric Medical Coping Clinic.

Mackenzie first met Williamson during her hospitalization in the pediatric unit. She has continued outpatient psychotherapy sessions with Williamson since being discharged.

"After my first surgery I met her, and we just started talking. I continued to talk to her after I got out of rehab," Mackenzie said.

The sessions have been a godsend for Mackenzie.

"A lot of the time school is bothering me, and medical stuff is bothering me," said Mackenzie. "When you have a person you're comfortable with you can tell them everything, I feel it's more private in a way. It's in an enclosed room where no one can hear us."

Mackenzie's mother, Danielle Duell, has seen her daughter improve since she started sessions with Williamson.

"Now, if there's something that isn't right, she speaks up. That was huge," said Duell. "In the past she'd send me text messages or call me. Now she does it by herself."

The clinic helps children, young adults, and families adjust to a medical diagnosis, cope with stress



During a session with Clinical Psychologist Nicole Williamson, 12-year-old Mackenzie Tyler mentioned some anxiety about getting a port. Williamson used a doll with a port to help ease Mackenzie's concerns.

of a chronic illness, and reduce illness-related depression or social withdrawal. It also prepares children and siblings for medical and surgical procedures and helps reduce anxiety related to medical procedures and hospitalizations.

"Managing a chronic illness can result in children having to endure many challenging, and at times, traumatic experiences," said Williamson. "My goal for the clinic is to be an additional resource for children who are navigating such difficult life circumstances," she said.

Williamson says it's important to seek mental health services early. Psychotherapy helps children learn new strategies and stress management tools. It encourages them to think about problems in a

new way and move in different directions, she said.

After intestinal issues caused Mackenzie to lose a great deal of weight, she got a port that allows her to get essential nutrients. Williamson used a book about ports and a doll with a port to help Mackenzie understand how it works.

"I feel more energized," said Mackenzie, who has gained 14 pounds since she got the port.

Mackenzie is thankful she can have confidential talks with Williamson about some of the issues that bother her.

"It's important to feel good on the inside," she said. "If you get really down you can get upset. It's important to fix it. You want to be happy and achieve goals." **EM**

TGH opened outpatient rehabilitation center at the TGH Brandon Healthplex

Tampa General Hospital (TGH) opened a new outpatient rehabilitation center at the TGH Brandon Healthplex in fall 2018.

Therapists at the new location specialize in orthopedic and sports injury, stroke rehabilitation, rehabilitation for neurological injuries and illnesses, and pelvic floor therapy.

Pediatric patients up to 16 years old can receive treatment for birth injuries, feeding and oral motor difficulties, developmental delay, complications of prematurity, and brain injury and trauma.

The 6,160-square foot center is open weekdays from 7:30 a.m. to 6 p.m. Its team of

rehabilitation therapists provide occupational, speech and physical therapy to adult and pediatric patients. A physician referral is needed for all therapy services.

The Brandon Healthplex is located at 10740 Palm River Road, next to Top Golf.

Outpatient rehabilitation is also available on the hospital's main campus on Davis Islands, and at TGH Outpatient Rehabilitation Services at 509 South Armenia Ave. and at the TGH Medical Village at 2333 West Hillsborough Ave. in Tampa.

The adult and pediatric rehabilitation programs are accredited by the Joint Commission. **EM**

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When they can achieve more independence later, we can build strength, endurance and balance," Garner said.

"Our goal is for every patient to be up and walking using a walker or a cane, said Doctor of Physical Therapy and TGH physical therapist Manuel Garcia-Gaona. Patients who use the Exoskeleton during therapy can gain independence and quality of life, he said.

"It was a super cool piece of equipment to help me get walking again," de la Torre said. "Early on I wasn't sure what my limitations would be. Thanks to the therapists I made progress. I got better and better. I was able to adapt." **EM**

TGH Neurologic Physical Therapy Residency Program earns accreditation

Tampa General Hospital's Neurologic Physical Therapy Residency Program recently received a five-year accreditation from the American Board of Physical Therapy Residency and Fellowship Training.

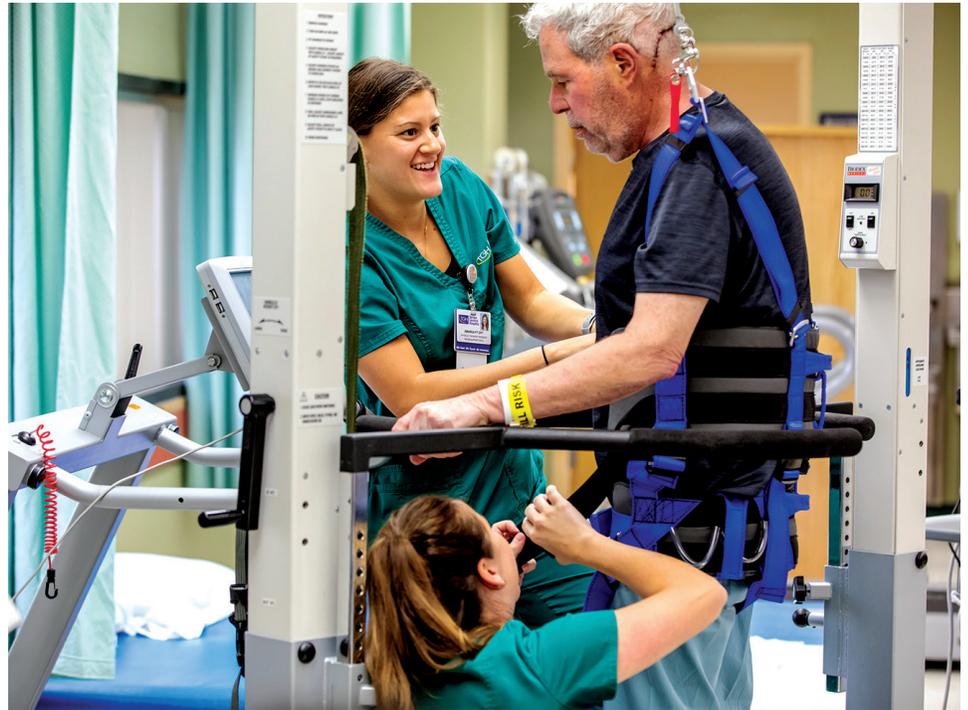
It is one of 53 such programs in the nation and one of six in Florida to earn the accreditation.

During their 13-month residency the two physical therapist residents in the hospital's program rotate working in several areas, including the Neuro ICU, the Outpatient Neuro Clinic, Pediatrics, Inpatient Stroke, Inpatient Brain Injury, and the Spinal Cord Injury Unit.

Physical therapy resident Amanda Feldstein said she's able to follow patients through the full continuum of care. Most of them are inpatients with brain or spinal cord injuries or stroke.

"The residency program is improving the level of care we provide patients. Through the mentoring process we are accessing literature and looking at our treatments critically and revising to make sure we are achieving the best outcome for each patient," said Jamie Dietrich, the program's director. "In addition, we are making sure we are assessing the outcomes with the appropriate test and measures."

The physical therapy residents also take on leadership roles by creating patient education materials, speaking at support groups, and providing in-service programs for patients



Physical therapist resident Amanda Feldstein, top left, and Kelsey O'Donnell work with patient Jeffrey Albin on the Biodex weight-assisted treadmill.

and their family members. They participate in weekly educational work and are also working on developing an adaptive sports injury site for patients, Dietrich said.

Each resident must also participate in a scholarly

project. Physical therapy resident Kelsey O'Donnell has developed a comprehensive adaptive sports reference with local and national opportunities and funding to educate patients, families and staff. Feldstein has worked on resources for overcoming barriers to physical fitness for people with disabilities.

The physical therapist residents are mentored by the program's faculty members: Rehabilitative Services Coordinators Mary Wesley Garner and Emily Holmer, and Physical Therapists Viviane Chahine, Linda Lipman, Manuel Garcia-Gaona, and Jessica Clarkson.

"The Neurologic PT Residency Program is an esteemed addition to Tampa General Hospital's Rehabilitation department," said Garner. "It is an accelerated program that elevates the level of knowledge that we teach, and in turn elevates the level of evidence-based clinical care that we provide to each patient we treat. It is my pleasure to be the brain injury faculty member with this newly accredited Neurologic PT residency program."

"I've learned a whole host of things," Feldstein said. "They assign us mentors who have helped me grow as a physical therapist, and that helps my professional growth. It's really neat to see patients grow as well." RM



Physical therapist resident Amanda Feldstein assists patient Jeffrey Albin during his physical therapy.

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About Tampa General Hospital Rehabilitation Services

Rehabilitation Services at Tampa General Hospital is accredited by the Commission for Accreditation of Rehabilitation Facilities (CARF) for the following:

- Comprehensive Integrated Inpatient Rehabilitation – Adult and Pediatric Rehabilitation Patients

Rehabilitation Services is also designated by the Florida Department of Health as a provider of services to both adult and pediatric Brain and Spinal Cord Injury Program (BSCIP) patients. Our services are accredited by The Joint Commission, and TGH is proud to be a Magnet hospital.

In addition to inpatient programs, the continuum of care includes services provided by hospital-based rehabilitation therapists, outpatient rehabilitation services, and physician services for new and follow-up patients in the Rehabilitation Medical Clinics.



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