

BROOKS[®]
Rehabilitation

BEYOND



FALL/WINTER 2023

CANCER REHABILITATION
at each stage of *recovery*



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Doug Baer



Doug Baer, President and CEO at Brooks Rehabilitation, kicks off the American Heart Association Heart Walk with stroke and cardiac survivors, Sebastian Baker and Michael Greene, PTA.

At Brooks Rehabilitation, we have much to be thankful for this time of year. For more than 50 years, we've been known for our cutting-edge technology, advanced clinical research, and – most importantly – our exceptional patient outcomes. We're thrilled that the dedication and commitment from our staff to enhance our programs and services has been recognized by U.S. News & World Report, who ranked Brooks the No. 1 rehabilitation hospital in Florida and one of the top 20 in the nation!

We continue to innovate with new programs and services to meet the needs of our patients. Our Cancer Program and Eric Sorensen Motor Speech Program were both developed to help those with very specific rehabilitation requirements. Ideas are continually generated from our frontline staff who see firsthand the needs of our patients and any gaps in services we provide. We embrace their ideas and suggestions to provide the best, most comprehensive care for our patients.

We are also honored to announce a collaboration with Mayo Clinic in Florida on a new comprehensive physical medicine and rehabilitation (PM&R) residency program. Our Institute of Higher Learning has been providing exceptional

residencies and fellowships for our therapists and nurses, and we're excited to provide this new residency opportunity for physicians interested in our field.

None of the above would be possible without help from our team of exceptional employees. This year, we selected 10 Stars and two teams who went above and beyond to serve our patients, families and fellow colleagues.

The honoree for Rehab Champion, Michael Greene, PTA, was also an exceptional employee who went through extraordinary medical circumstances. I've known Michael as a therapist for 20 years and consider him a friend. I'm incredibly thankful to our staff and those at Mayo Clinic in Florida for helping Michael celebrate the holidays with his family this year and for many years to come.

On behalf of all of us at Brooks, I would like to wish you and your families a safe, happy and healthy holiday season.

A handwritten signature in cursive script that reads "Doug Baer".

Q&A

Bianca Tribuzio, DO



Bianca Tribuzio, DO, is a Brooks physiatrist focusing on stroke, neuro rehab and musculoskeletal medicine and currently serves as the Associate Director of the new Mayo Clinic Physical Medicine & Rehabilitation (PM&R) Residency Program in Collaboration with Brooks Rehabilitation. (See related article on p. 16.) Dr. Tribuzio is board certified in Physical Medicine & Rehabilitation and its subspecialty of Pain Medicine. She earned her Doctor of Osteopathy (DO) from the Lake Erie College of Osteopathic Medicine in Bradenton, Fla. and interned at Palmetto General Hospital in Hialeah, Fla. She completed her residency in PM&R at the University of California, Irvine, where she served as Chief Resident. She subsequently completed a fellowship in Interventional Pain Medicine at the University of California, Los Angeles/Greater Los Angeles Veteran Affairs and practiced in Southern California before moving back to Florida and joining Brooks in 2022.

YOU'RE A NORTHEAST FLORIDA NATIVE AND GRADUATED FROM STETSON UNIVERSITY IN DELAND, FLA. DID YOU KNOW EARLY ON THAT YOU WANTED TO BE A PHYSICIAN?

Both my parents are in healthcare. My father is a physician and my mother is a nurse. Growing up, we were focused on health and wellness. I also witnessed firsthand the profound impact my father had on our community, but I never realized how significant an impact it would have on my career until years later. Now, I'm grateful to practice medicine in the same community, impacting patients and the community overall in a similar way.

WHEN DID YOU GET INTERESTED IN PM&R?

Sometimes I think that my path to PM&R was fated. At first, I was considering other specialties, such as neurology or orthopedic surgery, but it wasn't until my rotation as a medical student with Dr. Howard Weiss at Brooks that I knew PM&R was my calling. (Howard Weiss, DO, is Brooks Rehabilitation Medical Director, Orthopedic/Trauma Program and Amputee Program.) Dr. Weiss showed me the entire breadth of PM&R and how broad of an impact the specialty can make on patients and their lives. He taught me lessons that I will never forget, but the most important lesson is that it's essential to listen to your patients.

During this rotation, I developed a core philosophy to my practice that I've been honing throughout my career. My philosophy is to focus on an individualized and also holistic, approach for each patient, because everybody's path to recovery is different. As a physician at Brooks, it's essential that I carry this idea forward with every patient that I see, so we can help patients get back to their optimum function and highest level of recovery.

AS ASSOCIATE DIRECTOR OF THE NEW MAYO / BROOKS PM&R RESIDENCY PROGRAM, WHAT WOULD YOU LIKE TO BRING IN FROM YOUR BACKGROUND AND EXPERIENCES?

Ideally, I would like the residents of the Mayo / Brooks program to place an emphasis on taking a holistic approach to patient care. This is an important lesson I would like to share with future generations of PM&R physicians. I believe a patient is not just a diagnosis or a room number or a medication that we prescribe, they are the full totality of their life experiences, support system, personal goals and more. Using this approach, the residents will see that each treatment plan and path to recovery should be tailored and customized to the patient and their life.

WHAT DOES IT MEAN TO BROOKS TO HAVE THIS NEW MAYO / BROOKS PM&R RESIDENCY, IN YOUR OPINION?

To Brooks, it means two big things. First, Brooks is a huge proponent of giving back to our community. Many physicians stay and practice where they train. This residency will be a big win for Jacksonville and the Northeast Florida community as it will bring an influx of PM&R physicians to the region. Second, Brooks is a phenomenal place for residents to learn and they will have access to a wealth of resources to be a part of a larger team. In addition to physicians, there will be a whole healthcare team including nurses, therapists and case managers contributing to these residents' education. The future residents are going to thrive here and they will become a part of the continued progress of Brooks Rehabilitation in providing a system of world-class rehabilitation solutions and advancing the health and well-being of our communities.

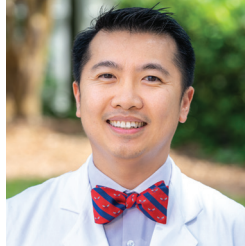
BROOKS REHABILITATION PHYSICIANS



Trevor Paris, MD
System Chief Medical Officer



Kerry Maher, MD
Senior VP, Physical Medicine
and Rehabilitation (PM&R)
Consulting and Education



Kenneth Ngo, MD
Medical Director, Brooks
Rehabilitation Hospital -
University Campus

Medical Director, Brain Injury
Program & Brain Injury Day
Treatment Program



Parag Shah, MD
Medical Director, Brooks
Rehabilitation Hospital -
Bartram Campus

Medical Director,
Data Solutions



Jorge Perez Lopez, MD
Medical Director, Halifax Health
| Brooks Rehabilitation Center
for Inpatient Rehabilitation



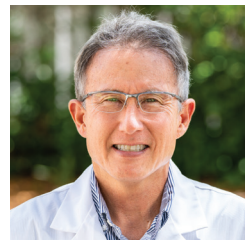
Rebecca Andrew, MD
Internal Medicine



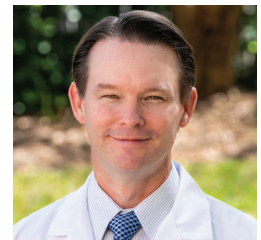
Mabel Caban, MD
Staff Physiatrist



Virgilio de Padua, MD
Internal Medicine



Charles Dempsey, MD
Staff Physiatrist



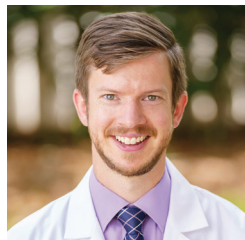
Jantzen Fowler, MD
Internal Medicine



Pierre Galea, MD
Associate Director
of Admissions

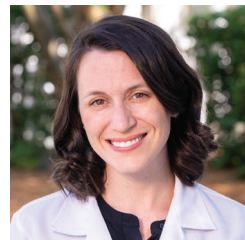


Ivy Garcia, MD
Staff Physiatrist



Brian Higdon, MD
Associate Medical Director,
Spinal Cord Injury Program

Medical Director, Spinal Cord
Injury & Related Disorders Day
Treatment Program



Katelyn Jordan, DO
Low Vision Optometrist|
Director, Vision
Rehabilitation Program



Trevor Persaud, DO
Associate Medical Director of the
Brain Injury program

Medical Director of the Brain
Injury Day Treatment program



Keisha Smith, MD
Staff Physiatrist



Sarala Srinivasa, MD
Staff Physiatrist



Geneva Tonuzi, MD
Medical Director, Spinal Cord
Injury Program



Bianca A. Tribuzio, DO
Associate Director, Mayo
PMR Residency Program in
Collaboration with Brooks
Rehabilitation



Howard Weiss, DO
Medical Director,
Orthopedic/Trauma Program
and Amputee Program

Celebrate the Stars and Teams



2023 REHAB CHAMPION

Congratulations Michael Greene

Each year, we accept nominations from our employees for a person who has met the challenges of physical rehabilitation and whose courage and tenacity has been a source of inspiration to others. This person is determined never to give up despite their challenges and supports others who may be facing similar trials along the way. We are pleased to announce that this year's Rehab Champion is Michael Greene, PTA.

Michael has been inspiring patients at Brooks Rehabilitation Hospital – University Campus for the past 20 years. As soon as he finished school, he was hired at Brooks as a physical therapy assistant for the stroke and cardiac unit.

Michael treats each patient as if they are a member of his own family. Patients and families alike praise him for the impact he had on their recovery. Michael would work tirelessly, during breaks and after hours, to ensure his patients had the best recovery possible. He would visit each of his patients before leaving for the night to highlight their successes during the day and thank them for working so hard with him.

This dedication led to excellent patient outcomes and earned him his own Brooks "Celebrate the Stars" award in 2013.

Then the unthinkable happened, and Michael became a patient himself. On Oct. 11, 2022, Michael had a massive heart attack. While in the ICU, he recognized the symptoms so many of his patients experienced and knew he was now having a stroke. Since he was already in the hospital, they were able to rush him in to surgery, saving his life. The day after being discharged from the hospital, he had a second heart attack. The damage was so extensive, the only option was a heart transplant. On March 12, 2023, Michael was given the tremendous gift of a new heart. If anyone deserves a second chance at life, it is most definitely Michael Greene. The countless patients he's helped with their second chances in his 20-year career would whole-heartedly agree.

Throughout his tenure at Brooks, Michael was a champion in raising funds and support for the American Heart Association (AHA) each year. He will now continue to be an advocate for AHA, this time as a survivor.

CELEBRATE THE STARS & TEAMS



CELEBRATE THE STARS WINNERS



Andrew Babcock
University Crossing
Physical Therapist Assistant



Heather Dangman
Neuro Recovery Center
Assistant Manager



Amber Leech
Halifax|Brooks Center for
Inpatient Rehab Lead Therapist



Luz Locquiao
Aging Services, Bartram Crossing
Licensed Practical Nurse



Noah Masters
Outpatient, St. Augustine Pediatrics
Patient Services Technician



Brandy Palmer
Hospital, University Campus
Certified Nursing Assistant



Melissa Plumey
Corporate
Human Resources Recruiter



Ann Popik
Corporate & Community
Programs Program Assistant



Chandler Rice
Home Health
Occupational Therapist



Jennifer Volz
Outpatient, Ormond Beach
Center Manager

Each year, Brooks honors select staff members and teams of colleagues for exceptional performance above and beyond job requirements. These stars truly exemplify the Brooks Values in all they do, exceeding the expectations of coworkers, patients and families.

CELEBRATE THE TEAM WINNERS



Home Health Business Office



Admissions Coordinators



BROOKS REHABILITATION SYSTEM OF *Care*

For more than 50 years, Brooks Rehabilitation, headquartered in Jacksonville, Fla., has been a comprehensive system of care for physical rehabilitation. Not only can we provide seamless transitions for our patients between levels of care, we can also effectively treat patients in the right setting for their individual needs at the right time in their recovery resulting in the best possible outcomes.

Brooks also provides many low- or no-cost community programs and services to improve the quality of life for people living with physical disabilities for years after an illness or injury. The depth and breadth of the Brooks system makes care truly unique for each patient we serve.

Throughout our integrated system of care, we treat more than 60,000 patients annually.

REHABILITATION HOSPITALS



5,000+ ADMISSIONS

- Two freestanding hospitals in Jacksonville, Fla. (University & Bartram Campuses) totaling 230 beds
- A 40-bed unit within Halifax Health in Daytona Beach, Fla.

SKILLED NURSING FACILITIES



2,600+ ADMISSIONS IN 2 LOCATIONS

- Bartram Crossing SNF (100 beds)
- University Crossing SNF (111 beds)

HOME HEALTH



250,000+ VISITS IN 23 FLORIDA COUNTIES

In addition to home care nursing and therapy services, Custom Care services provide personal and companion care with 240+ clients served monthly

PHYSICIAN PRACTICE



- **20** employed physicians, most specializing in Physical Medicine & Rehabilitation
- **40+** employed advanced practice practitioners
- **125+** physicians and 90+ advanced practice practitioners with practicing privileges



OUTPATIENT THERAPY & SERVICES



500,000+ VISITS AND 50+ CLINICS

Specialty clinics include sports therapy, balance, amputee, low vision, motion analysis and day treatment programs in brain injury, spinal cord injury and pediatrics



ASSISTED LIVING & MEMORY CARE



A 61-UNIT ASSISTED LIVING FACILITY (BARTRAMM LAKES)

Two 12-unit memory care homes focusing on Alzheimer's and other dementias (The Green House® Residences)



COMMUNITY PROGRAMS & SERVICES



Brooks provided more than \$3 million of charitable care to its patients and gave back \$12 million to the community.

NEARLY 2,000 COMMUNITY PROGRAM PARTICIPANTS SERVED

Adaptive Sports & Recreation, Aphasia Centers, Brain Injury Clubhouse, Contract Therapy Services, Helen's House, Institute of Higher Learning, Neuro Recovery Centers, Pediatric Recreation, Research, School Re-Entry Program, Support Groups, Wellness



The Brooks Rehabilitation Cancer Program

Brooks Rehabilitation clinicians are experts in rehabilitation who are ready to meet the unique needs of cancer patients at any stage of their journey. The Brooks Rehabilitation Cancer Program takes an interdisciplinary approach to address the specific needs of patients before (pre-rehabilitation), during and after cancer treatments.

The goal of the program is to mitigate the effects of cancer treatment and to help patients achieve their highest level of recovery. Clinical evidence indicates that rehabilitation intervention at any phase during cancer treatment reduces impairments and improves a patient's quality of life.



WHY HAVE A SPECIALTY CANCER PROGRAM?

For decades, the focus of the medical community has been keeping cancer patients alive. Fortunately, the medical profession has become very good at this, with early diagnosis and new treatments and therapies. Today, if you get cancer, the odds that you're going to live a fairly long life are pretty high, with some cancers having a 98 percent survival rate. The question changes from survival to, "Now what?" That's where a cancer rehabilitation program comes into play. Such programs are rare across the country, and the Brooks program is on the leading edge. A unique facet of the Brooks program is our Rehabilitation Oncology Patient Navigator, Ashley Perry, PT, DPT, MTC.

THE ROLE OF THE REHABILITATION ONCOLOGY PATIENT NAVIGATOR

As oncology rehabilitation programs themselves are rare, the concept of the rehabilitation oncology patient navigator is even more rare. Perry is one of only two in Florida, with very few across the country.

"Navigation itself is a very common practice in the cancer world," said Perry. "A cancer navigator's whole job is to help remove any barriers to care and help make sure things get

done quickly and smoothly, because a lot of times cancer is time dependent."

As she explained, however, these cancer navigators are not trained in rehabilitation and related issues like functional declines, so integrating a rehabilitation professional into that model was the next logical step when looking at improving quality of life.

Perry said, "I'm here to provide support so a cancer patient never feels alone on their journey."

"The inclusion of a Cancer Rehab Navigator in the Brooks Cancer Rehabilitation Program enhances both the program itself and our collaborations with acute care partners. This development is highly advantageous for patients, as it ensures they receive more advanced care while also facilitating seamless transitions between many care settings," said Parag Shah, MD, medical director at Brooks Rehabilitation Hospital – Bartram Campus.

HOW IS CANCER REHABILITATION DIFFERENT?

Perry said, "Modern medicine has given cancer patients options like surgeries, chemotherapies, radiation to keep people alive. And this is wonderful, but it has also led to weakness, tiredness and being sedentary for a long time. What do the next 20 years of their life look like? What is the quality of that life? That is where cancer rehab comes into play, and why it's a newer area of rehabilitation – because it's a newer need. Cancer rehab is different than other rehab practices because you have to understand the treatments that the patients receive – what do those treatments do to their body? How does it affect their musculoskeletal system? How does it affect their cardiovascular system? And you have to be able to make adjustments in diagnosing or prescribing activities and exercise for them. If you treated a post-mastectomy patient like a regular shoulder patient or regular rotator cuff injury patient, you're going to miss a lot of the details and specifics that patient needs."

REHABILITATION AT ANY POINT, AT ANY PLACE

Whether a patient needs inpatient, outpatient or home health services, our clinicians complete a thorough evaluation and collaborate with patients to design an individualized treatment plan to address functional goals. Our clinicians also partner with the patient's oncology team to ensure seamless delivery of care.

The Brooks program specializes in seeing patients as early as initial diagnosis to years after their final treatment.



Rehabilitation can take place in the care setting most appropriate for their needs, which may change during the course of treatment:

- **Inpatient Rehabilitation within Brooks' Hospitals** - We treat patients who require hospital-level care due to cancer or cancer-related treatments, and we manage any related complex medical issues. Inpatient rehabilitation is shown to improve independence, increase ability to complete everyday activities and support a safe return home.
- **Home Health** - This option is designed to treat the cancer patient in the home setting. Together and in partnership with the oncology physician, our team of therapists, nurses and support staff will conduct a complete evaluation and then develop a treatment plan that is individualized for each patient's needs, in the comfort of their own home.
- **Outpatient** - The outpatient cancer team specializes in restoring function during and after cancer treatments. Patients often experience fatigue, decline in balance, generalized weakness and range of motion deficits that affect daily function. Our therapists understand the importance of getting each person back to their highest level of recovery.

Physical therapy patient Cyndi Parker shares the benefits she's experienced. "A month after finishing seven months of chemo and a bilateral mastectomy and lymph node removal, I was still in massive pain and unable to raise my arm. I knew something was not right. Thankfully, I was referred to rehabilitation and it changed my life. I was not only taught to understand the reasons and physicality of my condition, but received precise specialized physical therapy that has allowed me to resume my life nearly pain free. I am forever grateful and thankful for the opportunity I was given to receive this critically needed care in my cancer journey."

THE OFTEN OVERLOOKED BENEFITS OF CANCER "PRE-HABILITATION"

In general, the majority of rehabilitation medicine is reactive – you sprain an ankle and go in for physical therapy. However, with a specific diagnosis and cancer treatment plan, the understanding of what the patient will be going through can be fairly well predicted – and can be addressed beforehand to mitigate the effects. Yet, this can be overlooked, or a "hard sell," because with the shock of a cancer diagnosis and the patient's cancer team jumping into action, the idea of proactive physical, occupational or speech therapies may be low on the discussion list. However, more and more oncologists understand the benefits of pre-habilitation and are implementing referrals into their practice.

"In our 'prehab' evaluations, we spend a good majority of our time educating the patients," said Perry. "This is what's going to happen and this is what you can do to prepare for this. I think that's the part the patients find most valuable, because in this time of chaos and turmoil they have so many questions, and they don't know who to ask. We're not oncologists, but we can say, 'You know what? With this treatment there's a good possibility you'll get some numbness in your fingers and toes, and this is what we're going to do to prepare you for that.' It helps them identify potential challenges and gives them a way to deal with a situation where they otherwise have no control."

"The standard of care in cancer rehab is a model called 'prospective surveillance,'" said Perry. "The idea is we see the patient periodically throughout their cancer journey, and so if we start to see functional declines from the baselines, we catch them sooner rather than later. At any time, if a patient shows a change or decline in function then they would start a traditional rehabilitation plan of care where they are seen regularly to address impairments."

Brooks Rehabilitation, Mayo Clinic to Collaborate on *New* Comprehensive Physical Medicine & Rehabilitation *Residency Program*



Brooks Rehabilitation continues to provide world-class educational opportunities for the next generation of rehabilitation professionals. Brooks and Mayo Clinic in Florida are collaborating on a new comprehensive residency program designed for medical students interested in pursuing careers in physical medicine and rehabilitation. The Mayo Clinic PM&R

Residency Program in Collaboration with Brooks Rehabilitation offers an opportunity to train in a world-class medical institution while gaining hands-on experience in one of the top rehabilitation hospitals in the region.



In the four-year program, medical students will learn how to provide exceptional rehabilitative care for patients through clinical and research training. Residents will complete their first year in the Internal Medicine Preliminary Year Program at Mayo Clinic in Florida. The next 12 months will consist of inpatient rehabilitation rotations at Brooks' inpatient hospital, including a pediatrics rotation. In the final 24 months, residents will be back at Mayo for outpatient musculoskeletal and neurologic clinics, electromyography and acute hospital consults.

"This collaboration represents a major step forward in providing comprehensive rehabilitation care to patients in

our region, while also training the next generation of PM&R physicians," said Trevor Paris, M.D, system chief medical officer, Brooks Rehabilitation. "We look forward to working together with Mayo Clinic to continue to deliver the most innovative care of the highest standard while advancing the field of physical medicine and rehabilitation."

PM&R RESIDENTS CAN EXPECT:

- a diverse curriculum and learning environment that will develop clinical skills and academic abilities in all areas of rehabilitation medicine
- the collaborative relationship between Brooks and the Mayo Clinic, providing a balance between outpatient and inpatient rehabilitation experiences, including subspecialty inpatient rehabilitation programs, electromyography, neurology, rheumatology and research
- Extensive musculoskeletal, spine, and pain medicine training, including the use of diagnostic ultrasound, and ultrasound guided joint, nerve and tendon procedures
- a broad, varied patient population and close working relationships with a large staff of PM&R physicians (physiatrists) at both institutions
- the opportunity to network with internationally recognized experts in many related medical and surgical specialties

The program has received initial accreditation from the Accreditation Council for Graduate Medical Education and will welcome its first class of students on July 1, 2024. Students in their final year of medical school can apply through the Electronic Residency Application Service. Successful candidates will be accepted through the National Resident Matching Program.

"We are excited to collaborate with Brooks Rehabilitation to launch this new PM&R Residency Program in Florida," said James Atchison, D.O, chair of PM&R at Mayo Clinic and PM&R residency program director. "This accreditation demonstrates our shared commitment to providing exceptional care and training to our patients and residents. Our goal is to provide our residents with an outstanding educational experience that prepares them to become leaders in physical medicine and rehabilitation and enhance the overall quality of care for patients."

Springing into Action: The Ekso UE in Occupational Therapy

Brooks Rehabilitation is known for employing the latest technologies to help our patients reach their recovery goals quicker and more completely. One of these technologies, in use at the Neuro Recovery Center (NRC) at Brooks Rehabilitation Hospital – University Campus and our outpatient clinic at World Golf Village in St. Augustine, Fla, is the Ekso UE from Ekso Bionics.

The Ekso UE (upper extremity) is a wearable, spring-operated, anti-gravity vest / exoskeleton that assists a patient's affected arms and shoulders during rehabilitation sessions. The springs come in a wide range of settings to provide the right level of support for the session's activities.

Marissa Curro, OTR/L, CHT, who works at Brooks Rehabilitation - World Golf Village, describes how Brooks first used the Ekso UE in trial sessions with a patient with Facioscapulohumeral Muscular Dystrophy (FSHD), which affects motion in the shoulders and upper arms. "I collaborated with our neuro rehab lead and assistive technology director to arrange a demonstration with Ekso. During our therapy sessions with the Ekso UE, our patient was able to reach overhead for the first time in more than 20 years. It was an amazing feeling, for both of us."

Gianna Neutts, OTR/L, Brooks Neurologic Fellow, uses the Ekso UE in her work with patients at the NRC.

"What's really nice about the Ekso upper extremity is that you can use it in different functional positions such as standing or sitting. It gives a person an extra assist to be able to get their arms over their head. We use it for activities of daily living (ADLs) that occupational therapists work on. For instance, if someone is trying to put their shirt on but having a hard time getting their arms over their head, this will give them an extra assist to get their head into their shirt."

Neutts explained that many of the patients at the NRC are working on balance issues as well as functional activities. With the Ekso UE assisting with the arm function, Neutts can more easily help with balance, coordination and motor planning. Curro pointed out that Brooks has not only utilized the Ekso UE for neurological patients, but has had great success with Brooks' orthopedic population as well. The Ekso UE helps patients achieve a higher, more desirable, range of motion that is pain-free.

Both Curro and Neutts discussed that a very important benefit of Ekso UE is that it provides for higher repetitions

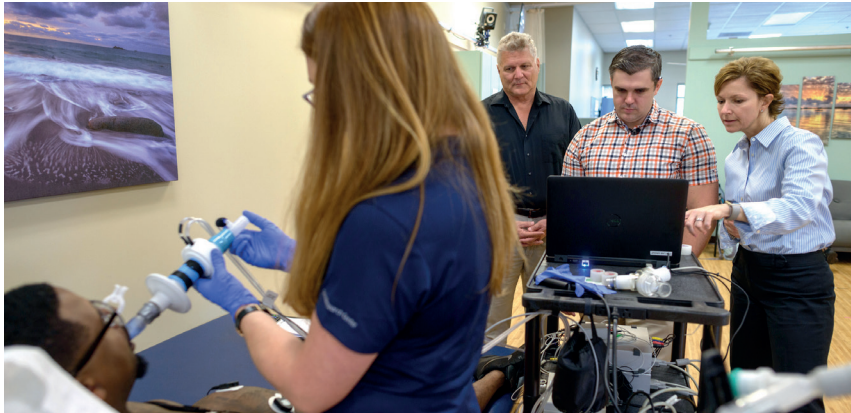


and therefore a more intense therapy session. After a health incident or injury, connections in the brain can be lost. To help patients recover, therapists tap into neuroplasticity, the brain's ability to return from damage and adapt to new situations. A key to neuroplasticity is mass practice – lots and lots of repetitions. The Ekso UE facilitates this with its varying springs that increase or decrease assistance as needed. A patient gets more repetitions and more intensity by using it in an exercise or with a functional task than without it. So, instead of 10 reps in a set without the Ekso UE, the extra assistance could get the patient to 50 reps.

When using the Ekso UE, a cognitive rehabilitation factor is also at work. If the most difficult part of a task is raising an arm, a patient is going to have problems focusing on the other parts of the task. With the Ekso UE providing arm assistance, the patient can now direct more focus to other parts.

With the Ekso UE as an example, one of the big benefits of working at Brooks is access to a variety of different cutting-edge equipment and the many opportunities to learn and use technology and equipment in different settings and in different ways. "One of my favorite things is that Brooks provides so many learning opportunities and so much time for you to learn and be trained on the equipment so that you can help your patients," said Neutts. "I think that's one thing that's very special about Brooks, that other places don't have, is that our technology really helps patients regain a lot of function."

Emily Fox Leads Brooks/UF-PHHP Research Collaboration Into the Future



Members of the Brooks-UF PHHP Research Collaboration work together to develop new methods to conduct a Department of Defense-funded clinical trial to test new treatments for people with spinal cord injuries.

As its new director, Emily Fox, DPT, MHS, Ph.D., is leading the Brooks/UF-PHHP Research Collaboration, a formal partnership between Brooks Rehabilitation and the University of Florida College of Public Health and Health Professions (UF-PHHP), as they continue to provide interdisciplinary research that connects the research experience of UF-PHHP and the rehabilitation expertise at Brooks. A member of the Collaboration since its inception in 2013, Dr. Fox is also the director of neuromuscular research at Brooks, the director of the Brooks Motion Analysis Center, and an associate professor in the Department of Physical Therapy at the University of Florida.

Merging the strengths of a major academic research institution with those of a comprehensive rehabilitation system serving a large, diverse patient population is a rare, but powerful, combination; one that is a driving force in our research today. In its 10-year existence, Brooks/UF-PHHP Collaboration researchers have garnered multi-million-dollar grants from the National Institutes of Health (NIH), the Department of Defense, and the U.S. Department of Veterans Affairs, received national awards for research and leadership, and generated more than 100 publications in leading scientific journals.

Dr. Fox's clinical expertise is in motor control and neurologic rehabilitation, and her own research focuses on new approaches to recover walking and breathing functions. This includes a multi-million-dollar grant for research into

"therapeutic acute intermittent hypoxia," a novel therapy for patients with spinal cord injury.

"Therapeutic acute intermittent hypoxia is an approach that has been developed over many decades and shown to be safe and therapeutic in humans," said Dr. Fox. "We're now bringing that to people with spinal cord injury and the serious condition of breathing impairment. This is a great example of the need to have academic scientists partnered with clinical experts in spinal cord injury."

As director, Dr. Fox provides strategic leadership and vision to the Collaboration, growing joint opportunities across Brooks and UF-PHHP and bringing together faculty and clinicians in new and innovative

ways. Looking forward, she sees the need for expertise in computing and big data to serve future rehabilitation populations. Mark Bowden, PT, PhD, is vice president of clinical integration and research at Brooks Rehabilitation. "The Collaboration is a critical aspect of the research infrastructure here at Brooks, enabling us to advance our vision of providing world-class rehabilitation solutions," said Dr. Bowden. "Dr. Fox has been dedicated to the development of this collaboration since its inception, and Brooks' research would not be where it is right now without her contributions."

For Dr. Fox, it's important to highlight those from Brooks and UF-PHHP that first initiated the Collaboration. She said, "Without their leadership, this wouldn't be possible. It really was the vision of the leaders who saw the value and importance of bringing our institutions together and the work of so many individuals along the way, that laid the foundation of this important research."

"Brooks is growing as a learning health system, and that means the systematic collection and retrieval of data to ask important questions and improve care," said Dr. Fox. "So, a long-term view is one that will require increasing expertise in artificial intelligence, biostatistics and epidemiology, as well as expertise in the science of clinical implementation. In that way, as we advance and innovate, we have the capacity to learn, make changes and evolve in how we deliver our services."

Bob Rowe Receives Honor as Catherine Worthingham Fellow of the American Physical Therapy Association

Bob Rowe, PT, DPT, DMT, MHS, FAPTA, FAAOMPT, executive director of the Brooks Institute of Higher Learning (IHL), has been named a 2023 Catherine Worthingham Fellow of the American Physical Therapy Association (APTA).

The Catherine Worthingham Fellow of the American Physical Therapy Association (FAPTA), the association's highest membership category, is also recognized as the highest honor among APTA's membership categories. The FAPTA designation serves as inspiration for all physical therapists to attain professional excellence. This honor is eligible to APTA physical therapist members or life member physical therapists who have demonstrated unwavering efforts to advance the physical therapist profession for more than 15 years, prior to the time of nomination. Only a handful of physical therapists nationwide are named as fellows each year and only 319 individuals have received this distinction since its inception 41 years ago.

"It is an incredible honor and privilege to be recognized as an APTA Catherine Worthingham Fellow and I couldn't be more thankful to those who nominated me as well as those who supported the nomination," said Dr. Rowe. "To be considered in the same category with so many of the APTA historical leaders that have come before me is an absolute honor."

Throughout his career, Dr. Rowe has made substantial contributions to the physical therapist profession, and is a recognized national leader in physical therapy education and practice. For more than 17 years, Dr. Rowe has served as the executive director of the Brooks Institute of Higher Learning. Under his leadership, Rowe is responsible for developing and managing the current and future residency and fellowship programs, as well as assists in coordinating and promoting professional development opportunities for the Brooks clinical staff.

Dr. Rowe has also made significant contributions to the physical therapist profession through his service in leadership positions in the APTA and other organizations. Dr. Rowe has served for 23 consecutive years as a delegate to the APTA House of Delegates, representing the Louisiana Physical Therapy Association, Florida Physical Therapy Association and the Academy of the Orthopaedic Physical Therapy. He served as the President of AAOMPT from 2009 - 2014 and served on the APTA Board of Directors from 2015-2021. Dr. Rowe has served on the FPTA Board of Directors as a Regional Director from 2007 to 2010 and from 2010 to 2014 as the speaker to the FPTA Assembly of

Representatives. Currently, Dr. Rowe serves as the President of the Academy of Orthopaedic Physical Therapy (AOPT).

Dr. Rowe was previously recognized by the APTA in 2011 with the Lucy Blair Distinguished Service Award. This award honors physical therapist members or physical therapist life members whose contributions to APTA are of exceptional quality.



"To be considered in the same category with so many of the APTA historical leaders that have come before me is an absolute honor."

 **BROOKS**
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Eric Sorensen works with Ryan Hughes, PT, DPT, of Brooks Home Health on his strength and balance.

A Patient's Severe Apraxia Inspires New Brooks Program

Patients are at the center of everything we do at Brooks Rehabilitation. We strive to provide every rehabilitative option they might need after a disabling illness or injury. Sometimes patients and staff help us identify a gap in those services that we quickly work to fill. This was the case with the creation of the Eric Sorensen Motor Speech Program.

The Sorensen family is well acquainted with major medical events and with Brooks Rehabilitation. Puschel Sorensen came to Brooks after spending 54-days in intensive care paralyzed from Guillain-Barre Syndrome. Puschel credits everyone she worked with at Brooks for her full recovery and says that she would 100 percent recommend Brooks anytime someone needs rehabilitation. "I know where you need to go and it's Brooks, it's always going to be Brooks for me."

Little did she know that just two years later, her son Eric would need Brooks' services. Eric was standing near his mother in January 2020 when he had a seizure and fell, striking his head on the ground. He suffered a major traumatic brain injury (BI) requiring a hemicraniectomy, a surgical procedure where part of the skull is removed to reduce the intracranial pressure. Five and a half weeks later, Eric was transferred to Brooks Rehabilitation Hospital - University Campus, where his mother was previously a patient.

Less than four months after his injury and during Covid-19 shutdowns, Eric began home health services with Brooks. Eric had severe swallow, voice and communication needs and started working with speech-language pathologist, Jackie L. Hurst, MS, CCC-SLP. Within moments of seeing Eric for their first home health visit, it was clear to Hurst that Eric could understand, but had no means of functional communication at that time.

Eric also had significant physical needs as he returned home in a wheelchair. He worked closely with Ryan Hughes, PT, DPT, of Brooks Home Health and the Brooks Neuro Recovery Center using Cyberdyne and receiving occupational therapy (OT) services.

Eric's team thought he'd be able to transfer to another Brooks care setting for more specialized, intensive speech therapy services, however he did not meet the criteria for the Brooks BI Day Treatment Program, the BI Clubhouse or the Aphasia Center (BRAC). Eric had severe apraxia and needed intensive treatment that neither our outpatient nor our home health therapists were able to provide. Apraxia is a motor speech disorder caused by a neurological event. The brain is unable to plan and deliver correct movement instructions to the body. One type of apraxia affects the brain's ability

to organize and sequence lip, jaw and tongue movements necessary for speech. Another type of apraxia inhibits the coordination and timing needed for swallow. Additional types of apraxia affect the motor planning needed for limb movements/gesturing, the ability to respond to verbal commands, the motor program needed for forming written words and the soft palate function needed for voicing. Eric was suffering from all of the above.

Eric continued to make progress nonetheless. Within five to six months of his initial injury, Eric began voicing to the sound of familiar music consistently in speech therapy sessions with Hurst. He also made great progress with both his physical and fine motor abilities as well, despite the unexpected setbacks from a second seizure and two hip replacements. He continued weekly physical, occupational and speech services along with Brooks Wellness programming at a local YMCA.

In May 2022, with the help of Jodi Morgan, MS, CCC-SLP, manager of the BRAC, Eric and Hurst were connected with an apraxia expert in Orlando, Fla. Lauren Bislick, Ph.D., CCC-SLP, CBIS, from the University of Central Florida evaluated Eric, confirmed his apraxia diagnoses and agreed that he would need intensive speech treatment. Moving to Orlando was not an option, so Dr. Bislick provided a plan of care that she would oversee and Hurst would carry out. Hurst began implementing phonomotor treatment and Eric's speech therapy sessions were increased to eight hours per week. His progress has been tremendous. Today, Eric is able to communicate by using gestures appropriately, writing or typing his wants and needs and using some words. He is able to play golf, play guitar and walk the beach without any assistance.

However, Eric's injury identified a gap in Brooks' speech therapy services that we knew we needed to fix immediately. Chris Sorensen, Eric's father, proposed the development of an intensive program for adults with acquired apraxia of speech, so that Brooks will be able to better serve future patients and families living with Eric's diagnosis.

Thanks to the generous support of the Sorensen family, the Eric Sorensen Motor Speech Program was developed. Hurst was promoted to manager of the program and a team of home health and outpatient speech clinicians were identified to receive extensive training, standardized assessments and evidence-based therapy equipment for managing motor speech impairments.

The Eric Sorensen Motor Speech Program will ensure increased access to research-based services for patients with motor speech disorders. In order to reach more members of our community, this program will benefit not



Eric has made tremendous progress with his speech-language pathologist, Jackie L. Hurst, MS, CCC-SLP.

only adults with apraxia, but also adults living with any motor speech disorder such as dysarthria, or slurred speech caused by muscle weakness. Phase I of the program also includes the development of a motor speech support group, which held its first session recently and a formal partnership with universities in north and central Florida.

"I could never truly put into words just how amazing Eric is or just how honored I am to be a part of the Eric Sorensen Motor Speech Program," said Hurst. "Eric has taught me so much about apraxia, neuroplasticity and the power of a positive attitude. I am beyond proud of his continued progress, and so hopeful for the many other people who will now have direct access to the best motor speech treatment options thanks to Eric Sorensen's legacy."

Reducing Opioid Use – an Award-Winning Brooks Project

The opioid epidemic has long been a public health crisis, characterized by the widespread misuse and addiction to opioid drugs, including prescription painkillers and illegal substances. To address this issue, physicians have been tasked with limiting the duration and dosage of opioid prescriptions and exploring alternative pain management options.

Parag Shah, MD, MBA, FACHE, is medical director of Brooks Rehabilitation Hospital – Bartram Campus, as well as Brooks Rehabilitation's medical director of Data Solutions. "The physician has to be the one who takes ownership, being held to higher standards and understanding patient safety. In the context of opioids, how can we track its usage effectively, or what is the best way to track it? And then by having an effective way to track it, how can you reduce its use?"

Mindi Manes, PhD, is director of the Brooks Center for Outcomes Analytics and Research (COAR) and one of the members of the team tasked to answer that question. "Dr. Shah and the Brooks multimodal pain team needed a tool that allowed physicians to effectively monitor opioid usage and reduction among patients in our inpatient rehabilitation facilities."

Brooks COAR is a new center, formed to take on tasks like the opioid project, as part of the Brooks learning health system model. A learning health system aims to continually improve care by integrating research, data and clinical practice.

TACKLING THE PROJECT

This was new ground for the Brooks team, as there was limited guidance on how to effectively track and aggregate opioid administration among patients admitted to an inpatient healthcare facility. The entire Brooks data solutions team, made up of data management, integration and analytics were all highly involved in this opioid project.

The Brooks teams employed SAS tools and a multi-faceted data strategy. They extracted data from the Brooks electronic medical records (EMR) and used SAS Enterprise Guide to standardize opioid dosages. This standardization was an important point.

SAS (Statistical Analysis System) is a prominent software company known for its analytics and data management solutions. Their software is widely used to analyze large datasets, derive insights, and make data-driven decisions.

"We generated morphine milligram equivalents (MMEs)," said Dr. Shah. "There are different prescribed opioids, such as codeine, hydrocodone, oxycodone, fentanyl – to name a few. We converted them all to morphine with milligram equivalents. So, for the project's purposes we were comparing apples to apples across the board."

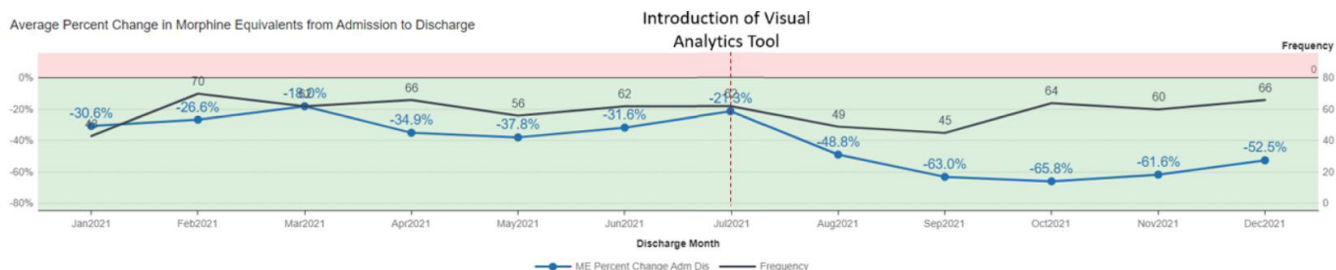
The team used SAS Visual Analytics to create an interactive dashboard to visualize trends in opioid administration and alert healthcare teams. Additionally, they used the SAS Enterprise Guide to automate daily email notifications to physicians.

Mathew Raters is a Brooks data analyst who was integral to the project. "We worked with the physicians to see how they wanted to view the data. We needed to track opioid usage at admission compared to discharge and their overall net decrease. We found that the dashboard we created was very useful, but physicians are on the go so they needed an option that they could easily access. We developed the email process so physicians received timely data for their rounds every day and could make real-time changes when needed."

"This was a very big undertaking," said Dr. Manes. "The data, research and clinical teams collaborated at every step of the way to ensure the dashboard was validated and presented in the way physicians would be able to use it to inform their clinical decisions."

IMPRESSIVE RESULTS

The SAS Visual Analytics dashboard became a vital part of the clinicians' pain management discussions and contributed significantly to opioid reduction. The teams compared the six months before and after implementing the tool and saw a substantial reduction in opioid administration, with physicians actively using the email alerts for better patient care.



“We want to affect change, in real-time, and for it to be valuable to the patient, provider and community.”

- Mathew Raters, *Brooks Data Analyst*

“Opioid use is trending down,” said Dr. Shah. “Physicians are looking at other non-opioid options for managing pain. It could be simple things like heat, ice, stretching, other medications, other modalities. That’s what the team and the physicians are doing – how can we manage pain other than with opioids? That’s part of the reason we’re seeing the reduction.”

Dr. Shah presented the project at a recent American Medical Rehabilitation Providers Association (AMRPA) meeting, raising awareness and getting some great feedback from other physicians on how it would be helpful to them.

“This project highlights the importance of using data to generate knowledge to inform practice,” said Dr. Manes. “And that’s where healthcare organizations really need to be going – and a lot of them are. It can’t just be the data team or clinical team or research team. Everybody needs to work together on projects like these to get the best results and improve patient outcomes and care.”

A WELL-DESERVED AWARD

On behalf of the Brooks teams, Mathew Raters submitted the opioid project to the 2023 SAS Customer Recognition Awards, which “recognize customers and partners for their standout contributions over the past year.” The Brooks entry was in the international and highly competitive “Innovative Problem Solver” category whose 20 entrants included heavy hitters like Delta Airlines, T-Mobile, and CNO Financial Group. The Brooks project took 2nd place.

“It speaks to the judging panel really finding value in what we are doing,” said Raters. “It speaks highly of Brooks, our project and the way we think. We like to approach all of our problems like this. We want to affect change, in real-time, and for it to be valuable to the patient, provider and community. I think it’s great recognition for us and a great achievement.”

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