

# Perspectives

Summer 2021

# A message from our CMO

*Thank you.* Two simple, but meaningful words that only begin to express our appreciation for the overwhelming response to the first issue of our new quarterly newsletter, *Perspectives*. It was gratifying to hear that you found the content to be interesting, informative and useful – and we welcome your continued feedback. Our goal is for this publication to be a valued resource for you.

Thank you, too, for placing your trust in Baylor Scott & White Institute for Rehabilitation. We are honored that our Dallas hospital has been ranked one of the nation's best by *U.S. News & World Report* for 2021-22. This recognition is testimony

to our unwavering commitment to patient care excellence – not only at our Dallas campus, but our Fort Worth, Frisco and Lakeway hospitals and across our entire continuum.

In this issue, we highlight some of many programs and services that reflect this commitment. From innovative brain health, assistive technology and driving programs to a thought-provoking COVID-19 case study, we offer our perspective on the trends and issues that are making a difference in our patients' lives – and the field of medical rehabilitation.

Rita Hamilton, D.O.  
Chief Medical Officer



# Helping people thrive after brain injury

Traumatic brain injury (TBI) affects all facets of life, from physical, functional and cognitive abilities to managing relationships and responsibilities at home, work or school. For many individuals with TBI and their families, adjusting to these changes can be overwhelming. However, a new program developed through Baylor Scott & White Research Institute (BSWRI), in collaboration with Baylor Scott & White Institute for Rehabilitation (BSWIR), is helping to ease the transition to life ahead for those living with brain injury.

Long recognized for its expertise in treating TBI, Baylor Scott & White Health's network provides a highly specialized continuum of care that supports individual recovery and enables TBI survivors to regain their highest level of independent living. Starting in the trauma unit at one of our BSW Medical Centers, patients will progress to BSWIR's slate of comprehensive programs and services, depending on their needs: inpatient rehabilitation, outpatient therapy, day neurological rehabilitation and neuro-transitional rehabilitation. Inherent in all of these programs is a shared commitment to helping every patient go beyond their goals – to thrive, not simply survive.

## More than a support group

That commitment led to the creation of the Brain Health Group, a unique year-long, 22-session educational support group for adults living with TBI. Developed by a team of Baylor research scientists and brain injury rehabilitation specialists under the North Texas TBI Model System,\* this innovative program provides instructional seminars, group discussion and structured tasks that may improve overall well-being. It is at the center of a clinical study exploring and identifying healthy lifestyles following a TBI.

According to Donna Noorbakhsh, MS, CCC-SLP, CBIS, clinical liaison, BSWIR-Frisco, the program “focuses on ways to improve brain performance from the inside out. The first step is deciding to appreciate, protect and nourish one's brain with knowledge, nutrition and self-love, leading to a healthier and happier one.”

The group's motto is: Starting today, I will acknowledge what's gone, appreciate what remains and look forward to what's coming next.

The World Health Organization defines brain health as a “concept that encompasses neural development, plasticity, functioning and recovery across the life course.” The team has measured how the Brain Health Group’s support and education impacted participants’ mental and physical wellness, quality of life and progress towards individual goals. In addition, they tracked the use of the group’s “Brain Health App” that provided reminders, health tips, fun facts, strategies and encouragement to the participants.

During the COVID-19 pandemic, the group shifted from in-person to online Zoom meetings. This was yet another adjustment for participants, but one that helped provide consistency and continuity of care, support individual progress and maintain social connectedness in a time of social distancing.

An unexpected benefit of moving to a virtual platform was the research team’s confirmation of the feasibility and effectiveness of creating large-scale, online, group-based educational support.

### What’s next for brain health?

As this important research study concludes, a key takeaway is the importance of community in dealing with TBI. Neither patients nor families need to face this journey alone. To that end, BSWIR is implementing a modified version of the Brain Health Group that will be a free resource for this patient population. The goal of this program remains - helping those with TBI learn the strategies they need, find new hope and ultimately thrive.

### Our participants say it best

“One thing that I really like about this group is that it’s small and very informational. Instead of talking about how terrible this or that symptom is, I have been encouraged to do healthy and productive things, which has been empowering.”  
– Heather

“This group is better than all of the others I’ve been to because of the teaching methods, conversations and the fact that we’re helping each other work towards goals.”  
– Paulo

“This whole experience has helped me to understand ‘me’ and realize that I can and will continue on. I just have to believe in myself. I was in a different support group, and remember feeling like it was too soon after the accident to open up and trust anyone. It just didn’t feel good. This has felt good, like what we needed.” – Cheryl

# Driving Program Growth



The ability to drive is considered a basic freedom, one that is often taken for granted. For many, getting to work, school or even the store is difficult, if not impossible, without a driver's license or vehicle.

When that skill is impacted by a medical condition, what options exist? The Adaptive Driving Program at Baylor Scott & White Institute for Rehabilitation (BSWIR), run by driver rehabilitation specialists (CDRS), assists patients in getting back behind the wheel.

## Driving growth

Driving is one of the most complex activities of daily living (ADLs) to perform after extended illness or injury, requiring the expertise of a driver rehabilitation-certified occupational therapist.

Working in tandem with BSWIR's specialized Day Neuro Program, the Adaptive Driving Program provides an essential opportunity for survivors of stroke, brain or spinal cord injury or those dealing with other neurological conditions.

“The excitement when an experienced driver learns how to safely drive again using specialized equipment is fulfilling for the person and family. The other aspect that resonates with me is when a new driver learns to operate a vehicle - with or without special equipment - through individualized training techniques. We continue to be thankful for the success stories,” said Stephen Adams, an occupational therapist and driver rehabilitation specialist at BSWIR - Dallas.



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## Expanding fleet

Our program includes an evaluation by specialists to identify the best modifications based on personal and vehicular needs. They also recommend and procure the correct equipment.

Most vehicles can be adapted to suit individual needs. Stroke survivors may need hand controls, pedal modifications or steering attachments to compensate for weakness on one side. Reduced steering effort, ramps and adjustable seats can help spinal cord injury patients.

In June 2021, a new, fully customized adaptive training vehicle, a 2020 Chrysler Pacifica, was put into service at BSWIR - Dallas. It was designed to give Adaptive Driving Program participants the opportunity to learn what is possible following an injury. This SUV is equipped with a six-way transfer seat, variable steering wheel, hand controls, steering attachments, pedal and secondary control extensions and special attachments for individuals with limb loss.

Additionally, the program's fleet includes an adaptive minivan and two sedans used for student driver training.

## Assessment is key

Accurate assessment is vital for a successful, safe return to driving. Several occupational therapist-guided possibilities exist, including on-road experiences and digital simulations. A driving simulator at BSWIR-Frisco evaluates patient readiness through motor reaction time assessment

of braking and steering, visual scanning, divided attention, spatial reasoning and hazard perception skills. It provides a safe, virtual environment for practicing entering and exiting a vehicle and a variety of real-world driving scenarios.

This technology is especially helpful to patients with hemispatial inattention or visual field cuts, allowing them to practice hazard scanning and proper lane positioning. Typically, the simulator is used as a pre-assessment tool to identify whether patients can advance to the Adaptive Driving Program. Poor simulator performance can strongly indicate safety risks that preclude driving resumption.

## More than just driving

Due to the nature and extent of their disability, not every individual is a candidate for driving. The BSWIR driver rehabilitation specialists frequently must make tough decisions for the safety of both the patient and the public, and recommend against driving resumption. In that case, the Adaptive Driving Program offers resources and education on accessing public transportation. The end goal is to help patients succeed in regaining independence, whether behind the wheel or through other transportation methods.

# Assistive Technology

Opening the door for people with disabilities

Since the Industrial Revolution, technology has transformed how we live, work and communicate. For people with disabilities, it has helped to improve or restore function while increasing independence at home and in the community.

Baylor Scott & White Institute for Rehabilitation (BSWIR) – Dallas has long been at the forefront of therapeutic technological advancement. In 2018, the hospital launched a formal Assistive Technology Program designed to promote early device adoption. Led by Occupational Therapist Jill DeHamer and Rehabilitation Engineer Rex Moses, the program has enhanced patient engagement, improved functional independence and facilitated the transition to life ahead.

## About the program

“This innovative program is an adjunct to the array of therapy services we provide, serving as a bridge from hospital to home,” said DeHamer. “We know patients want to maximize independence and regain control over their environment. They want to feel safe, comfortable and confident at home, work or in the community. Technology is making that happen.”

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During their stay, patients may use robotics, virtual reality and other technology-based platforms in conjunction with evidence-based therapies to improve skills and function. DeHamer and Moses collaborate with the therapy and nursing teams to identify patients who could benefit from the assistive technology program, particularly those recovering from a stroke, brain injury, spinal cord injury or amputation or managing a progressive neurologic condition. The program is then tailored to the individual’s needs, functional abilities and rehabilitation goals.

“Most patients today are familiar with smart phones and computers. Many also have a smart speaker, like Google or Amazon’s Alexa, at home. What they typically don’t realize is that these devices and other consumer electronics can be adapted or programmed to improve their independence and quality of life,” said Moses.

## Opening new doors

Education is a key program component. With a large and ever-changing product inventory, the program team allows patients to trial various devices during their stay, from low-tech items, such as phone mounts or lap boards, to advanced tools like visual tracking and augmentative communication systems. Among the most popular are the endless variety of applications – “apps” – for phones, tablets and computers. These can be used to manage medications, better communicate with family and friends, and control environments, including opening doors, turning on lights and operating equipment.

“There is nothing better than entering a session with an individual, showing them the technology that’s available and leaving with them floored by the impact these small devices have on their quality of life,” said DeHamer.

Keeping up with evolving technology is the biggest challenge. The team conducts extensive research and explores advances from companies such as Amazon, Apple, Google and Samsung, in addition to medical equipment developers. By introducing these apps and assistive devices, BSWIR continues to improve patient outcomes and literally helps open new doors to independence.



Adaptive video gaming device.



Phone mount and head controls.



Saebotronics mobile arm support device.



# Leading the way in Lakeway

## An interview with Medical Director Dr. Farheen Khan



At a national medical conference in late 2018, Dr. Farheen Khan met Dr. Amy Wilson, then-chief medical officer for Baylor Scott & White Institute for Reha-

bilitation (BSWIR). Their conversation revealed a shared passion for medical rehabilitation and vision for advancing the field. When Dr. Khan subsequently mentioned she and her family planned to relocate from Louisiana to Austin, Texas, Dr. Wilson knew she had the ideal candidate for the position of medical director at BSWIR-Lakeway.

**Perspectives: It sounds like you were in the right place at the right time.**

**Dr. Khan:** It really was a serendipitous meeting, or maybe just fate. I was born and raised in New Orleans, did my residency at Louisiana State University Medical Center and became medical director at Christus St. Frances Cabrini Hospital in Alexandria, about three hours north of my hometown. My husband, who is an ophthalmologist, received an exceptional career offer in Austin. We discussed the pros and cons, including having to uproot our three young children, and realized that

while we would miss family and friends, this was too important an opportunity to pass up.

**Perspectives: You joined BSWIR-Lakeway in January 2020 – just prior to the COVID-19 pandemic spreading across the county. How did that impact your initial goals?**

**Dr. Khan:** I was looking forward to building a strong, collaborative team to drive delivery of safe, high-quality patient care at our 36-bed hospital. I wanted them to be responsive to the needs of our diverse patient populations and lead the way in innovative treatment and outcomes. I also sought to expand BSWIR's exceptional reputation across central Texas.

Fortunately, I had a few weeks to settle in, work with the team and set some goals before COVID took root. We quickly switched gears to adopt the necessary practices, implement new processes and follow CDC, Baylor Scott & White Health and Select Medical guidelines.

**Perspectives: Did you have any particular concerns?**

**Dr. Khan:** My first concern was, of course, the health and safety of our patients and staff – especially since so much about the virus was unknown. We were tasked

with meeting the unique needs of COVID survivors, continuing to manage the complexities of our other patient populations – and, of course, keeping everyone safe. With our ‘Safe Care’ protocols in place, we were able to mitigate any concerns patients and families had about receiving the inpatient rehabilitation services they needed.

On another level, I hoped that the level of collegiality and team spirit we had begun to experience wouldn’t falter under the weight of PPEs and other mandates. I wondered how we would come to know the face – the person – behind the mask, which is so important to fostering trust with patients and across the entire medical, clinical and administrative team.

We came to understand that we were in this together and by remaining united we would overcome COVID’s challenges. Communication was key.

### **Perspectives: When did you see things turnaround?**

**Dr. Khan:** When masking and social distancing started to become the new norm. It became apparent that we would have to find a way to treat patients with precautions in place, keeping the safety of patients, staff and families top of mind.

### **Perspectives: You bring a wealth of knowledge to your role. How did you decide to specialize in medical rehabilitation?**

**Dr. Khan:** Like many med school students, I wasn’t sure what direction I wanted to go. [Dr. Khan graduated from Western University of Health Sciences, Pomona, California] An internal medicine rotation at Rancho Los Amigos in Los Angeles introduced me to rehabilitation. I found working with patients with brain, spinal cord and other neurologic injuries, stroke and orthopedic trauma to be both challenging and gratifying. I completed my academic training, became board certified in physical medicine and rehabilitation and later earned certification in pain management.

### **Perspectives: What is your vision for BSWIR-Lakeway going forward?**

**Dr. Khan:** The Lakeway/Austin area is experiencing remarkable growth and the demand for quality rehabilitation programs and services is expected to expand as well. We’ve been building strong relationships with acute care providers throughout the region, including BSW Medical Centers. Although we’re located about 20-25 miles outside Austin, our scope of services, including specialized day neuro and new wound care center programs, contribute to our burgeoning reputation as a rehab provider of choice.



### **A surprising background**

Dr. Khan is an accomplished Bollywood dancer, choreographing for and performing at cultural and social events. She finds dancing to be “a great stress reliever,” especially in these challenging times.

# COVID-19: A survivor's case study

The COVID-19 pandemic presented a global medical challenge. At the onset, acute care hospitals were overwhelmed as they tried to address the complex needs of patients diagnosed with this virus that had no widely accepted treatment. In those early months, each patient became a case study, especially as the virus' symptoms and severity grew increasingly more challenging.

By April 2020, COVID-19 survivors began to emerge, requiring comprehensive patient rehabilitation to rebuild their strength, abilities and independence. At Baylor Scott & White Institute for Rehabilitation (BSWIR) – Fort Worth patient Benjamin Cromwell is one of those many individuals.

## **An unlikely COVID journey**

Mr. Cromwell, a 41-year-old financial advisor from Burleson, Texas, who has diabetes, high blood pressure and other co-morbidities, was diagnosed with COVID-19 in July 2020. His symptoms appeared mild and he was advised to quarantine at home. Two weeks later, however, Mr. Cromwell began to experience steadily increasing leg pain and numbness.

When the pain became unbearable, Mr. Cromwell was taken to Texas Health Huguley Hospital in Fort Worth. Scans revealed bilateral blood clots: a complete occlusion of his left leg and partial in his right. He was transferred to Texas Health Harris Methodist Hospital, where his condition worsened. His legs, cold to the touch, showed decreased pulse activity. Doctors ordered further testing, performed clot-removal surgery and began intravenous blood thinners.

Four days later, Mr. Cromwell received convalescent plasma to aid in the viral fight. On the fifth, he underwent a below-knee amputation of his left leg.

Doctors attempted to save his right limb through additional plasma therapy, clot removal surgeries and a catheter of the clot-busting drug tPA and heparin placed directly to the site. Unsuccessful in the efforts, doctors performed the above-knee amputation of Mr. Cromwell's right leg.

Several days after his second surgery, Mr. Cromwell faced yet another medical crisis – a stroke – that left him with weakness, speech and memory impairments.

After a month-long battle, Mr. Cromwell tested negative for COVID-19 and was removed from isolation. But his war was far from over. He faced a long road to recovery and his medical team recommended specialized inpatient rehabilitation.

### Accepting a “new normal”

Upon admission to BSWIR- Fort Worth, Mr. Cromwell underwent an extensive medical and multidisciplinary therapeutic evaluation. He presented with decreased strength, endurance and balance, limited mobility and significant pain that made even simple tasks challenging. Furthermore, he had mild cognitive linguistic impairments, which limited information recall and detailed task performance.

“We saw Benjamin Cromwell at a point in the pandemic when everyone was still coming to terms with what COVID was and how to effectively manage patients. Things were still changing almost daily in terms of how to treat the disease and its resulting complications,” said Dr. Asher Light, attending physician at BSWIR-Fort Worth. “We found his case to be one of the more severe and noteworthy. He had been taking hormone replacement at home, which we think coupled with the virus created a severe hyper-coagulative state causing arterial clotting in the bilateral lower extremities and a deep vein thrombosis (DVT) in an upper extremity.”

Mr. Cromwell struggled to adjust, physically and emotionally. In a matter of weeks, he’d gone from being a relatively healthy, active and independent individual to a bilateral amputee and stroke survivor.

“I lost both of my legs. I was in excruciating pain and had to relearn how to do everything... to care for myself, maneuver around,” he said. “My goal was to get back to normal or as normal as I possibly could.”

Given how quickly that his life had been turned upside down, Mr. Cromwell had yet to be able to process what had happened or what his future would look like. According to Dr. Light, “he was frustrated, upset and mourning the loss of his limbs, but he somehow managed to maintain a positive attitude. Our neuropsychologists worked closely with him to help him deal with his emotions and he received amazing support from his therapy team who helped him build his physical strength and skills.”

Participating in more than three hours of therapy a day, Mr. Cromwell focused on improving his upper body strength, balance and endurance to be able to transfer, sit comfortably and eventually stand with the help of his physical therapists. In occupational therapy he focused on safely performing self-care and daily activities. Speech-language pathologists led Mr. Cromwell in exercises to enhance his speech, critical thinking and attention and in recreation therapy, he worked to reinforce the skills he gained. As he progressed, so did his outlook.

Physicians provided daily medical oversight, while nurses provided residual limb care and pain management. As the surgical sites healed, Mr. Cromwell donned shrinkers to prepare his limbs for prostheses. Finally, on August 31st, he was discharged to home, using a wheelchair for mobility and a sliding board for transfers.

### Owning his future

Four months later, Mr. Cromwell was fitted for his two prostheses. He returned to BSWIR - Fort Worth to participate in its Day Neuro Program, receiving five hours of intense therapy each weekday for about nine weeks. Sessions concentrated on helping him overcome anxiety, further improve balance and mobility and increase his confidence and independence. With the specialized training he received, Mr. Cromwell was able to resume driving and return to work. He was also eager

to take part in modified CrossFit classes and join the Adaptive Training Foundation, a local non-profit organization that advances post-rehabilitation fitness.

“Mr. Cromwell has had a positive outcome, in part because of the level of care he received from his surgery to his rehabilitation, in addition to his own determination and perseverance. He also had the support of his wife who did everything possible to create a smooth transition home,” noted Dr. Light. “When he later came in for a follow up appointment, just seeing him walk with his new prostheses with such self-assuredness was exceptionally gratifying.”

Having survived the odds and overcome so many challenges, Mr. Cromwell is ready to set new goals, knowing there’s no limit to what he can accomplish.



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[BSWRehab.com](http://BSWRehab.com)

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