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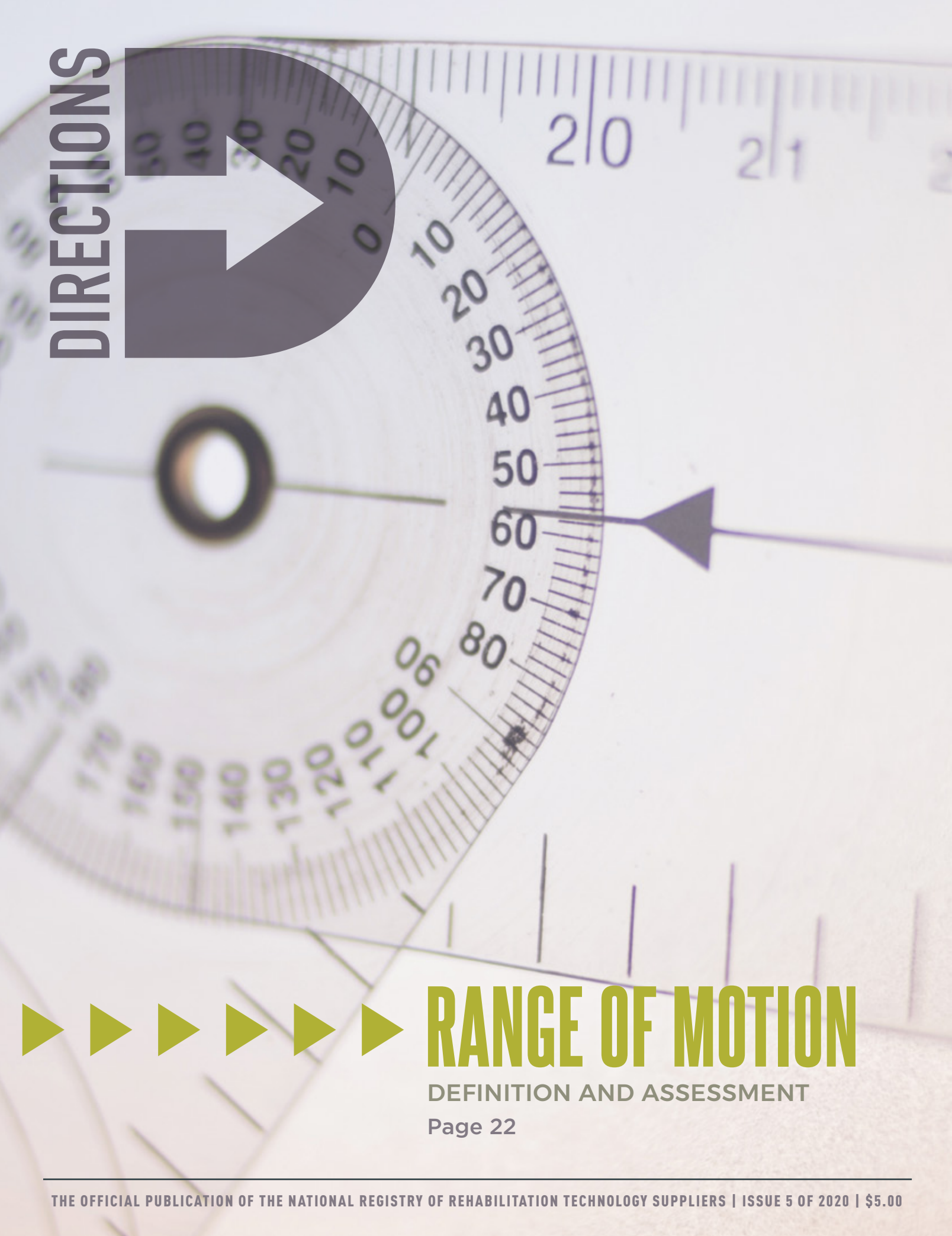

RANGE OF MOTION

DEFINITION AND ASSESSMENT

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REMEMBERING PAT MEEKER

Written by: **GERRY DICKERSON, ATP, CRTS®**

It's September 2020, and we are still in the midst of the COVID-19 pandemic and mayhem in our city streets. Here in the Northeast, the pandemic situation continues to improve and life is slowly, very slowly, returning to some normalcy.

As I watch the news and listen to family and friends with younger children, I thank God every day I don't have school age kids. From day care to college, parents and their children are faced with very difficult decisions that were never part of life just last year. If you are a family in this once-in-a-lifetime predicament, I hope it helps a little to know that your entire NRRTS family is thinking of you.

In my last president's message, I shared the very sad news that Patrick Meeker had passed away.

His obituary can be found here:
https://legcy.co/3iXtg7G

I asked for those who knew Patrick to send me their thoughts on him. Those thoughts follow below. With few exceptions, in either the first or last line of the emails to me, were the words, "I can't tell you how hard it was to write this." So, once again in 2020 we remember a colleague who has left us far too soon. Our profession's tribute to Patrick Meeker:

TOM BORCHERDING:

Pat was passionate about our Complex Rehab industry, thriving on the cultural and social opportunities offered first by national and then by global travel. Pat had friends in every corner of the world who cherished his visits as he would make the most of each and every trip making new friends, learning about local cultures, sampling local foods, discovering local bands, and quite often touring the local lands on his bike. Most know Pat was an avid biker, but what many don't know is he was a world-class biker competing at very high level competitions. On one European trip when Pat and I were staying over the weekend in a major city (I believe it was Copenhagen), Pat joined a premier race as an unregistered participant. There were hundreds of riders, and guess who led coming in to the final stretch? Since he was unregistered he pulled out before the finish line but not before showing the European biking community that a red-haired, red-cheeked boy from Kentucky could beat them at one of their favorite sports!

JESSICA PRESPERIN PEDERSEN:

Pat Meeker's energy was contagious. His passion for the industry of wheelchairs and seating was overtly obvious in his work. I appreciated his sense of fun and ability to laugh at himself while exuding a desire to make sure our interventions were the most optimal for the people we were working with. He will be missed greatly.

JILL SPARACIO:

Years ago when I first got into the realm of presenting, I did some Medtrade sessions in conjunction with him for ROHO. He would always challenge me to use a specific word during my presentation - I, and others, would have to find a way to wind it into our prepared session, complete with slide carousels. The word he assigned me that I will always remember was "conundrum." Whenever I read or hear that word, I always think of him.

JEAN MINKEL:

I always loved to see Pat's big smile. I have fond memories of sharing cold beers and hearing stories of 'Life is Good' adventures, often involving a great bike ride in one of many foreign countries. Pat put a lot into life, and he is missed!

SUSAN JOHNSON TAYLOR:

Patrick always, always had a smile and a kind word.

MIKE BABINEC:

When I think of Pat, there isn't one memory that stands out above the rest, but I do feel a sadness, and awareness, that we have lost one of the great ones who impacted both our industry and those it serves so well. I remember Pat from the many conferences and symposiums over the years where he always had a big smile. You knew was genuine when he greeted you, and he had a willingness to talk about anything, or help if you needed.

LAURA COHEN:

RIP Pat – a good friend, esteemed and respected colleague, devoted Dad and fiancé. You will be missed! You made a difference, mattered and will not be forgotten! After a well-earned rest, please get to work, because we need an angel to take charge and fix things down here.

STACEY MULLIS:

I had the privilege of working with Pat for two years, and he always brought positive energy to the room. I could count on Pat to be open-minded and share his expertise in a way that drew people in. I am thankful I could call him my colleague and friend.

JENNITH BERNSTEIN:

I first met Pat Meeker as a treating physical therapist when he came to Atlanta to run a focus group for ROHO cushions. He was always welcoming, and open to all questions and always made you feel you could ask him anything. Finding out he was also a physical therapist, really peaked my interest to learn more about how our field of study could influence the world of seating and mobility. Fast forward a few years and I was then able to call Pat Meeker a colleague, where I really understood the work he did to educate and provide solutions for clients worldwide. When speaking to Pat on a personal level, hearing about his love for concerts, cycling and his family, showed me that when you are a passionate person, it shows at home and at work, and it is possible to have enjoyment in many different areas of life. Rest well Pat. Enjoy all those concerts that are yet to come.

ALLISON FRACCHIA:

When I think of Pat Meeker, I think of someone who always had a big smile on his face and was eager to listen and to teach others about seating and mobility. Pat had a way of making everyone feel valued. I hope his family can feel some sense of awe and pride in knowing Pat made a positive impact on so many people. His light did shine bright, and this world of seating and mobility is a little dimmer without him in it.

RITA STANLEY:

Every time I saw Pat I was greeted with a warm and genuine smile. He exhibited a commitment and energy to the Complex Rehab Technology (CRT) field that was contagious. There was no doubt Pat was doing what he loved.

LIZ COLE:

I was so sad to hear of Pat's sudden passing. I first met Pat when we were both on the "speaking circuit" for seating and wheeled mobility — he was another rehab warrior on the road! And, as so often happens in this small industry, we eventually ended up working together for the same company. He was a true champion for the seating industry, contributing his clinical background, product knowledge, advocacy and passion with a great sense of humor. It is truly tragic someone so healthy, active and vibrant is gone so soon.

"PAT HAD FRIENDS IN EVERY CORNER OF THE WORLD, WHO CHERISHED HIS VISITS AS HE WOULD MAKE THE MOST OF EACH AND EVERY TRIP MAKING NEW FRIENDS, LEARNING ABOUT LOCAL CULTURES, SAMPLING LOCAL FOODS, DISCOVERING LOCAL BANDS AND QUITE OFTEN TOURING THE LOCAL LANDS ON HIS BIKE."

CONTINUED ON PAGE 8

REMEMBERING PAT MEEKER
(CONTINUED FROM PAGE 7)

JENNY LIEBERMAN:

I met Pat 15 years ago at Medtrade. It was one of the early Medtrade events I had attended, and I didn't know a lot of people. When Pat met me, he treated me like he had known me forever. Thereafter, whenever he was in the city we would grab a drink and catch up. And every Medtrade or ISS, I would intentionally be on the lookout for him. He was such a lovely and welcoming man. He didn't discuss work but wanted to know about me and my life. He was compassionate and larger than life. We have truly lost part of the soul of this industry.

JULIE PIRIANO:

Pat was a terrific lobbying partner, and I was proud to participate in CRT advocacy days side by side with him. He was passionate and always told a compelling story that made people listen. Although my favorite lobby day with him was the day we had some time to kill between appointments and spent the afternoon at the newly renovated Capitol Visitor Center as it really drove home why we were in D.C. in the first place. We will soldier on knowing Pat is there with us in spirit!

AMY ODOM:

Pat was one of the "good guys" in our industry and will be missed greatly. One of my fondest memories of Pat was at a CELA event in 2009. Pat, Tom Borcherding, Leslie Rigg and I went to a Baltimore Orioles baseball game. The evening was full of laughter and fun. Any time I'd see Pat after that, we'd chat about how great the evening was. The greatest thing about our industry is we all work hard and play hard. Pat was a staunch educator and huge supporter of our end users. Our industry will always mourn the loss of this great person. Rev 21:4

WEESIE WALKER:

Having known Pat for over 20 years, it was always a highlight to see him at some CRT event. Most recently, I ran into him at ISS in March. He was excited to be back in the industry representing a German manufacturer of wheelchair components. Anyone who knew Pat, knew his passion was advocacy. As the exhibit hall was closing for the day, Michele Gunn and I talked with him about the upcoming CRT conference. Pat told us CELA was his most favorite conference. He was looking forward to it. As they turned out the lights, we parted ways expecting to see him in a few weeks.

There are many dedicated, passionate people who work in the CRT industry. Pat was a positive and uplifting person who truly cared. He got involved. He knew that actions speak louder than words. That is how he made a difference.

"PAT WAS A STAUNCH EDUCATOR AND HUGE SUPPORTER OF OUR END USERS. OUR INDUSTRY WILL ALWAYS MOURN THE LOSS OF THIS GREAT PERSON. REV 21:4"

JOHN ZONA:

I am writing this about my friend Pat Meeker who passed away unexpectedly in June of this year. We have been friends for decades. Pat was infectious; his passion for life was infectious!

I could write pages, chapters about Pat, but I thought I would write about the last time we met: this last March, just a few months before his passing, at ISS in Vancouver, B.C.

We were having lunch at a restaurant he wanted to take me to on Robson. Pat was his usual self, not talking about himself but others.

He was so happy. He talked about his "bonus" sons as he put it, Arlo and Isaac. How he loved taking them bicycling, climbing and camping and leading them at Boy Scouts. Something he never thought he would do, but loved it.

He talked about his fiancé, Heather, the boys' mom. He loved them and loved being with them.

And he wanted to talk about his friend, my wife, who loved each other.

That was Pat. We have truly lost a great person, a great human being, and a great friend.

MICHELE GUNN:

I was lucky enough to run into Pat this past March at ISS after not seeing him for a few years. He was his usual upbeat self, happy about his new position and looking forward to connecting with old friends that week. He had a smile that could light a room, and I am grateful to have seen it one more time.

FROM ME:

Pat was, and remains in my memory, a kind and gentle man who loved life, loved his family, loved his friends and loved his profession. He cared deeply for those that were in his circle of life and for those that sometimes live in the shadows and need our help.

Pat also had an interesting background. He was adopted as a baby, and in 2016 found his birth family with the help of his fiancé, Heather. The story behind it can be found here: https://dpo.st/2ROwAWR

Rest in gentle peace my friend.

I can't tell you how hard it was to write this.

Stay healthy and safe,

Gerry

CONTACT THE AUTHOR
Gerry may be reached at GDCRTS@GMAIL.COM

"HE CARED DEEPLY FOR THOSE THAT WERE IN HIS CIRCLE OF LIFE AND FOR THOSE WHO SOMETIMES LIVE IN THE SHADOWS AND NEED OUR HELP."

Gerry Dickerson, ATP, CRTS®, is a 40-plus year veteran of the Durable Medical Equipment and Complex Rehab Technology industries. Dickerson, president of NRRTS, works for National Seating & Mobility in Plainview, New York. Dickerson is the recipient of the NRRTS Simon Margolis Fellow Award and is also a RESNA fellow. He has presented nationally at the RESNA Conference, ISS and the National CRT Conference and is a past board member of NCART.

DETERMINATION WITH PURPOSE

Written by: **ROSA WALSTON LATIMER**

After growing up in Pennsylvania, Shannon Calega moved to Florida, and her life blossomed. "I was not a fan of the snow and ice in Pennsylvania, and I also had to contend with the difficult physical terrain," Calega said. "My aunt, Kathie Jenkins, my mother's oldest sister, lives in Tampa, Florida, and, once we graduated from high school, she invited my older sister and me to live with her. She says I exploded in a good way after I came to Florida! I am very appreciative she was supportive of letting us figure out what we wanted to do on our own."

Calega's life drastically changed at 6 years old when she lost her parents. "My mother's middle sister and her husband raised us and were our legal guardians. We grew up in a tiny Pennsylvania town. Our high school was grades 7 through 12 all in one, three-story building," Calega said.

> "I KNEW I HAD TWO CHOICES. I COULD CHOOSE NOT TO PUSH MYSELF AND LIVE WITHOUT GOALS OR DIRECTION. OR NOT! I DON'T REMEMBER EVER THINKING I WOULD STAY IN BED OR GO TO AN ASSISTED LIVING SITUATION. INSTEAD, I BELIEVED IF MY OLDER SISTER COULD DO SOMETHING, I COULD TOO."

"Aunt Kathie had always made it clear we were welcome in her home in Florida. So I came to Tampa between my junior and senior years of high school to take some college tours. I had never lived on my own and was hesitant to attend a large school," Calega said. "I was also concerned about accessibility challenges. Plus, I can get lost in a paper bag! I have zero sense of direction, so that made me apprehensive about going to a college with a large campus."

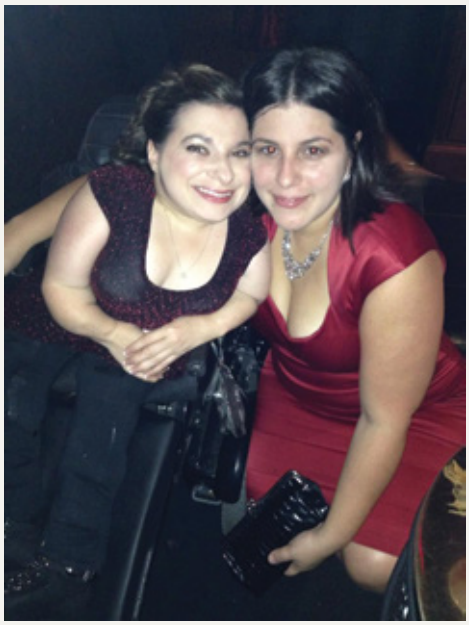
Once she entered the campus of the University of Tampa (UT), Calega declared, "I'm going here!" The beauty of the campus with Plant Hall, the stately, historic administration building, was impressive. "In addition to the campus's physical beauty, the attitude on campus regarding accessibility cinched my decision. UT was the only college I visited where I was assured my physical disability would not be a hindrance to my education," Calega said. "The Dean of Students assured me as long as I put the effort behind the academics, I would have no physical limitations. I visited two other campuses and did not receive anything near that level of assurance and support. I was certain UT would be a campus where I could focus on my education and not worry about barriers. I didn't apply to any other school for my undergraduate studies."

Calega has osteogenesis imperfecta (OI) and uses a wheelchair for mobility; therefore accessibility is a primary concern. "The collagen in my bones doesn't develop correctly, so it is easy for me to have bone fractures and breaks," Calega said. "I was born with OI and, although it is considered genetic, I am the first person in my family to have it." Throughout Calega's life, she has had well over 300 fractures. "Because of weak and soft bones, my arms are curved," she said. "I have rods in my lower legs and wear full leg braces. I never could walk independently due to the risk of fractures." The 39-year-old has used a wheelchair her entire life. "This is my normal, and I try my best not to let it stop me from whatever I want to do. I am fortunate to have inherited my mother's stubbornness," Calega continued. "I have incredibly supportive friends who treat me like a regular person — because I am. When I am with them, I don't think about having a disability."

Calega realized at a young age because of her circumstances, even though her family helped with her care, she and her sister were essentially wards of the court, and they didn't have a secure safety net. "It was up to me, just as it was up to my sister, to develop the kind of life I wanted," Calega said. "I knew I had two choices. I could choose not to push myself and live without goals or direction. Or not! I don't remember ever thinking I would stay in bed or go to an assisted living situation. Instead, I believed if my older sister could do something, I could too."

A pivotal experience occurred in Calega's life after her junior year at UT. "I had gone to college thinking I would be a journalist. I thought I might be the next NBC Nightly News co-anchor," Calega said. "However, that wasn't in the cards for me. I was working in our Student Activities office, as the

Megan Mueller (l) and Shannon Calega after finishing a 5K Color Run at The University of Tampa.



Shannon Calega (l) and Tiffany Garcia at the University of Tampa holiday party.

Shannon Calega (l) and Rebecca Lynn, Wilmington, NC.

student coordinator of leadership programming and began to receive positive feedback from participants acknowledging I was doing a good job. Before this experience, I never knew this type of work existed, but I realized my potential and got excited about the opportunities. I realized I wanted fervently to give back to an institution that helped me truly live for the first time. I am very fortunate to have found a career I love rather than feeling I am just working to pay the bills."

After earning her undergraduate degree at UT, Calega attended the University of South Carolina, where she earned a Master of Education in Higher Education and Student Affairs. "My time in South Carolina was a great experience," Calega said. "With one exception, I served as a Hall Director for an all-female, first-year residence hall during that time. I don't think I slept well the entire year!" After working in her career field at Pasco-Hernando Community College and at the University of North Carolina Charlotte, Calega returned to UT in 2013 as director of leadership engagement in the Office of Student Leadership and Engagement. "My current job is director of orientation and family engagement," Calega said. "This position was created about five years ago, and I am honored to be selected as the first staff member to have the responsibility. At this time, we are contending with modifications required due to COVID-19, and that is a real challenge." Calega's role is critical in getting students back on campus, transitioning to college, and helping them, and their families, understand where to get help if they need it. "I am fortunate to have the capable assistance of five students working with me as interns and student coordinators."

Calega is currently working toward a doctorate in Education for Higher Education Leadership from Maryville University. "This advanced degree is essential for me to continue to move forward in my career," Calega said. "I have been inspired by our current Dean of Students. She is a strong leader and a positive example. I would love the opportunity to give students the same level of support she shows. I am enrolled in a 32-month intensive online program, including my dissertation. There are days when I feel I won't make it, but I'll get through it. I get to sleep in December of 2021 when I'm done!"

"I AM FORTUNATE TO HAVE THE CAPABLE ASSISTANCE OF FIVE STUDENTS WORKING WITH ME AS INTERNS AND STUDENT COORDINATORS."

While Calega may not currently have much time to relax, she knows the day will come when she can again be involved with her friends in activities that she enjoys. "Disney is only about an hour away, and, before going back to school, I enjoyed entering races there," Calega said. "Their races are very organized, and they make sure that you feel comfortable participating as a wheelchair athlete. The races have themes such as Star Wars and Princess Marathon Weekend. I race in my manual wheelchair and have done two 5K races and one 10K. I am looking forward to getting back into racing and hope to purchase a hand-cycle once I am finished with my doctoral studies. I am also an avid movie fan, but that might be mostly because of the theater popcorn."

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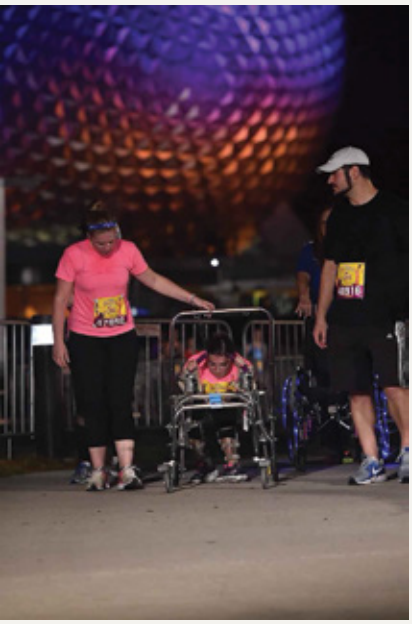


(l to r) Lindsey Scalera, Shannon Calega, and Cameron Scalera, walking towards the finish line of the Disney Princess 5K race.

Tyler Sanders, Ian McGinnity, Lindsey Scalera, and Shannon Calega (front) after successfully completing the Disney Fall Feast 5K race.

Jennifer DelValle (l) and Shannon Calega at the top of 30 Rock during Shannon's first visit to New York City.

"I LIVE ALONE AND DO EVERYTHING THAT I NEED TO DO MYSELF."

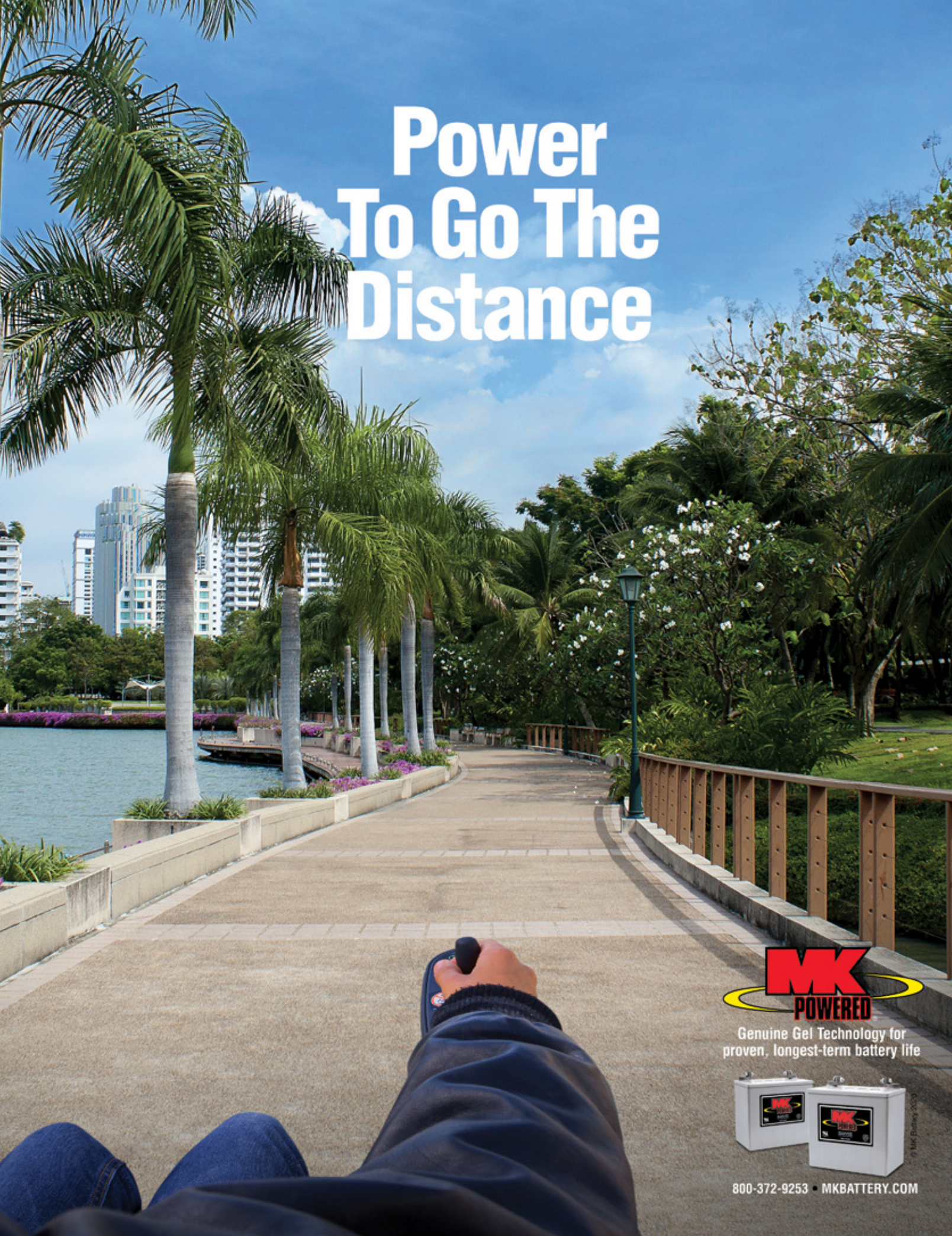
DETERMINATION WITH PURPOSE
(CONTINUED FROM PAGE 11)

For several years Calega has been working with a personal trainer twice a week to try to better maintain strength and build muscle mass. "If I build muscle, it will delay bone mass loss, just as with older individuals," Calega said. "My personal trainer, Abbey Schultz, is amazing and dedicated to helping me be as strong as I can be. If I break a bone, she helps me work around it. When I have a new injury, we just roll with it!"

Calega used a manual wheelchair as long as possible to aid in building up bone and muscle. "The manual would be OK for about four weeks, and then I would break my collar bone, so I had to switch to a power chair, which is critical for my independence," Calega said. "I live alone and do everything I need to do myself. Although I have many friends who are always available and willing to help me, I would rather take care of a situation without asking for help." Calega has the determination to endure the many fractures and broken bones she has experienced yet continues living the life she loves. "I could break a bone sneezing or just sitting, yet I could fall and not break anything. There is nothing that can be done with some broken bones. They just have to have time to heal," Calega said. "In that situation, I practice self-care at home. If I break a shoulder blade or ribs, I have a back brace I can wear, and I take over-the-counter medicine for pain. I always need to be diligent to be sure I am not having trouble breathing. If I break a leg or an arm, I may spend four to six weeks in a cast. I've learned how to shower one-handed or with one leg outside the shower. The only thing that truly slows me down is if I end up in a body cast. With that, I would be lying down, so my choices are limited. This is my life. It is who I am, and I manage it."

CONTACT
Shannon may be reached at SCALEGA@UT.EDU

Shannon Calega is a consumer advocate who lives in Florida.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J.B. RADABAUGH: A PROFILE IN POSITIVITY

Written by: **ROSA WALSTON LATIMER**

Spend a few minutes talking with J. B. Radabaugh, and you quickly uncover the refreshing certainty that family is of foremost importance to him. There is no doubt he considers being with his wife, Shannon, and their two daughters, Charlotte, 9, and Lucy, 4 ½, the very best way to spend his time. "I love camping and fishing with my family," Radabaugh said. "They may be wearing a dress and boots, but they are pretty tough for young ladies. They even bait their hooks. We love being outdoors and anywhere we can go without cell service is perfect. Seeing my girls smile makes me happy!"

Radabaugh is a certified therapeutic recreation specialist and holds Assistive Technology Professional, and Seating and Mobility Specialist certifications, with over 14 years of experience working in the complex rehabilitation equipment field. Currently, he is a clinical education manager representing Pride Mobility Products Corp. in the Eastern Region of the United States.

Radabaugh's family has also played an integral role in his career choice. "My mother, Becky Radabaugh, is an occupational therapist. After working there for more than three decades, she just retired from the school district," Radabaugh said. "My father, Jeff, who recently passed away, was an occupational therapist at United Cerebral Palsy Clinic and Community Hospital Hook Rehab in Indianapolis for many years. Later he was vice president of Ambulatory Care Services and New Business Integration for Indiana University Health." Radabaugh's wife, Shannon, and his sister, Katie, are also occupational therapists.

Radabaugh's father first steered him in the direction of working in this industry, suggesting his son might be particularly suited to serve those with special needs. "It seemed like a natural fit for me, but after I did an internship with National Seating & Mobility in Indianapolis while I was in high school, I was sold," Radabaugh said. "When I started college, I decided it would be great to become a recreational therapist. I would get to have fun, work with people I enjoy helping, and get paid." After earning his degree at Indiana University Bloomington, Radabaugh moved to Chicago to work and be near Shannon, who moved there after completing her undergraduate degree to work toward her master's degree in occupational therapy. "There was no way I was going to let her go! I lived with four or five other guys and slept in a

J. B. Radabaugh and his daughter, Lucy.

(l to r) Lucy, Shannon, J.B., and Charlotte Radabaugh

Jeff Radabaugh, J.B.'s late father, driving the family 1952 Chevy filled with an assortment of children heading to the local fishing hole.

J.B. Radabaugh and his daughter, Charlotte, camping on the family farm near Kokomo, Indiana.

J.B. and his daughter, Charlotte, with her first catfish caught at the dock of her grandparent's home in Westfield, Indiana.

basement closet for about nine months. I soon learned my paycheck didn't go very far in Chicago." Years later, returning to his home state of Indiana, Radabaugh had the opportunity to work to support the children at Riley Children's Hospital where he found his true passion — pediatrics. "I knew I wanted to stay in this industry. There is nothing else as fulfilling."

From the beginning, the personal aspect of the work appealed to Radabaugh and continues today. "The fact I can, hopefully, change the trajectory of someone's life is especially rewarding," Radabaugh said. "I can help give clients mobility, which can give them independence and autonomy. My favorite gig is working with kids. They are always growing and changing, so you get to see them more often and, in many situations, work with them for many years. As an advocate for children with special needs, I believe it is important to look beyond the practical logistics of the equipment and talk about why Jimmy may be sitting alone in the corner. Instead of a child thinking, 'I wish I could,' I try to find a way to instill the confidence and motivation in that child so he can recognize his own, unique potential."

Now that Radabaugh has transitioned into the responsibilities of an educator, he hopes to have a broader impact on clients. "Of course, there are times I miss working directly with clients, but I definitely enjoy teaching," he said. "There may be circumstances when I interact with a student for a short time, he or she earns the required CEUs, and I don't hear from them again. However, now that I've been teaching for more than two years, I experience ongoing interaction with many of my students. I receive text messages or emails telling me someone has tried and been successful using something they learned in my class, or I am asked to help with a particular case study. Through education, I

CONTINUED ON PAGE 16

J.B. RADABAUGH
(CONTINUED FROM PAGE 15)

J.B. "goin' fishing" with his daughters and neighborhood kids.

hope to have a stronger effect on those who need our services than I could if I were working one-on-one with a client. The day I don't feel I'm making that difference is the day I'll be done."

As clinical education manager, Radabaugh works with the Quantum Rehab's Pride Clinical Education Team teaching a variety of continuing education courses such as ATP preparatory classes and seating and positioning. He has gained a positive reputation for teaching from real-world experience he acquired as a supplier in the field. "I understand the frustrations, the documentation and funding issues, and the limitations that come with it," he said. "I teach more to what actually happens in real life rather than to what a textbook might say is likely to happen."

Radabaugh is also keenly aware of the many industry changes, especially the loss of experienced ATPs because of an aging workforce. "The parents of our industry are getting ready to retire, and we need to instill the principles of the more experienced ATPs in those new to the work," he said. "When I first started, I had my ATP certification, but I had a hard time getting a job because I didn't have two or three years' experience as a technician. I'm 36 years old, so that wasn't long ago, but in many circumstances now, if you have the required prerequisites, you can get your ATP certification and be on a fast track to working directly with clients without the benefit of extensive mentorship. Without the opportunity to learn from a seasoned, experienced ATP, I am concerned this next generation, although they have a heart for the work, may not clearly understand best patient care. I try to make it a priority to share the importance of a personal standard of care and emphasize how to make a patient's life better, not sell a certain product."

In addition to demanding job responsibilities and making time to hike and fish with his family, Radabaugh volunteers as a senior ambassador for BACKBONES. This nonprofit organization helps people with spinal cord injury or disease and their families connect with their community. He is also on the advisory board for the occupational therapy program at Indiana University–Purdue University Indianapolis. He is also an acting advisory board member with a group working to establish accessible bike paths for all that thrive for recreation throughout the state.

In all areas of his life, Radabaugh strives to apply the values he learned early. "Dad taught me a simple three-word concept that puts everything in perspective and informs tough decisions: honesty, integrity and trust," Radabaugh said. "Without honesty, you can't have integrity. Without integrity, you cannot build trust, and trust is an essential part of the work we do in this industry."

CONTACT
J.B. may be reached at
JRADABAUGH@QUANTUMREHAB.COM

J.B. Radabaugh is a certified certified ATP and certified SMS through RESNA. He is also a certified Therapeutic Recreation Specialist through NCTRC. He has more than 14 years of experience working in the complex rehabilitation equipment field where he has provided custom solutions to increase mobility independence for children and adults with disabilities and complex medical needs. Radabaugh's current role with Quantum Rehab is to develop education programs on the clinical uses of company products and produce education presentations for therapists and equipment suppliers. He also provides education to field sales staff on the application and clinical benefits of Quantum Rehab products. Radabaugh is a Friend of NRRTS.

EDUCATE EVERYONE ABOUT EVERYTHING

Written by: **ROSA WALSTON LATIMER**

Stefanie Laurence, B. Sc. OT, OT Reg. (Ont.), lives in Toronto and is a clinical educator for Motion (formerly Motion Specialties). She supports sales reps and staff throughout Canada and teaches in various settings across North America and Europe. When we interviewed Laurence for this article, she, along with the entire world, was still experiencing the effects of the COVID-19 pandemic.

VERY FEW, IF ANYONE, SPENT THE EARLY DAYS OF QUARANTINE IN THE SAME WAY AS LAURENCE. SHE GAVE NEW MEANING TO THE TERM "SOCIAL DISTANCING." WE ASKED HER TO TELL US ABOUT HER EXPERIENCE:

When COVID-19 started, at the end of March, my partner, Paul L'Heureux, had a 68-foot sailboat in the Bahamas and the people who were supposed to sail it back to Rhode Island couldn't make the trip. He invited me to take some time off and come to the Bahamas until the pandemic 'blew over,' and I did! At the end of April, nothing was happening to relieve the pandemic. The hurricane season was approaching, so Paul and I ended up sailing the boat from Georgetown, Bahamas, to Newport, Rhode Island. I didn't think I was a sailor — it turns out I'm much better than I thought. It took 73 days, and we had a blast! Other than a couple of nights when I was absolutely terrified, it was a lot of fun. We had sailed together before, but nothing like this. It was a learning experience for Paul, too. We made an excellent team and had a fantastic journey!

I had no problems during the 73 days at sea but slipped on the stairs after we got home and fractured my ankle. I have pins, plates and a cast and am slowly recuperating. For someone who is used to being on the road and meeting people every day, this is torture. I am learning patience and trying to ease back to work.

TELL US ABOUT A TYPICAL WORKDAY WHEN YOU ARE GOING FULL SPEED RATHER THAN CONVALESCING AT HOME.

Other than being on the road every day, my workdays are never the same. I live outside of Toronto, and I might drive to Ottawa, 4 ½ hours to the east or 3 hours the other way to Windsor. Usually I work with one or two sales reps, and we see clients in a clinic, a group home or a private home. That's about 75% of my time — assisting a team in creating a prescription. I am called in when the therapist and sales rep don't know what to do in a specific situation, perhaps with a very complicated client. Occasionally, I am involved because the team has become dysfunctional perhaps because differences of opinion or personalities aren't meshing to find a solution for the client.

The other 25% of my time, I am teaching formally at a group home, or with students or care staff in long-term facilities. The challenge is making the presentation appealing enough so people want to attend and feel as though it will be useful to them and worth their time. I want attendees to retain the information and apply it. I have to be engaging and non-judgmental so whether it is formulating a prescription with a team or teaching a group, people trust me and are willing to hear what I have to say and use it.

WHAT IS YOUR PRIMARY ROLE WHEN YOU ARE ASSISTING A TEAM IN CREATING A PRESCRIPTION FOR A CLIENT?

I am an objective set of eyes coming in to help guide a team and give them training they can apply again and again. I benefit from not being on a time clock or not anticipating the next appointment and can take the time to wade through all the pieces of a problem. I contribute 30 years' experience in the industry to each situation. I know the manufacturers, their reps, and the products because I attend trade shows and stay current with industry publications and webinars. And, sometimes, when things aren't working well, I can call in a favor. I have the 'phone a friend' option and can directly connect with the manufacturer and get the help we need. Manufacturers want their products to perform efficiently. The client will never say, 'That therapist did a lousy prescription.' But, they will say, 'that #$@&%* wheelchair, they don't know what they are doing!' Manufacturers

Stefanie Laurence and Paul L'Heureux enjoying a well-deserved beverage after a day of exploring Jerome, Arizona.

have a vested interest. If things aren't going well with a product, they want to have the opportunity to save the day.

WOULD YOU TELL US SOME OF THE FUNDAMENTALS YOU APPLY WHEN HELPING A CLIENT?

I work by this mantra: educate everyone about everything all the time. It doesn't matter if someone has a long-term disability or this is an unfamiliar situation for the client. I am shocked at the number of times when I explain the reasons behind a particular decision, a client says, 'I've never been told that.' Now, perhaps they have, and they didn't hear it, or maybe they truly haven't had an explanation as to why we are looking at one piece of equipment and not another. I think too often we are quick to say, 'This is what you need,' without an explanation.

I believe it is essential to help people set goals. Clients may not even realize what they wants, and you have to coax that information from them. What does a client want? What are their short-term and long-term goals? How do we make sure the equipment is going to work toward those goals?

A big part of my job is to be a translator within the system. I listen to what the client says, boil it down to the essence of the goals for the equipment, and choose the best match for that individual. People need to have a choice and make decisions for themselves whenever possible. Every choice has a consequence. It is our job to tell a client what the effects might be so they can make an informed decision. I won't live with the results of the decision, but they will. We must respect that, engage the client, and help make them an informed consumer. People want to have control, even if it is only to pick the color of their chair. Allow the client ownership in the process.

Stefanie Laurence and her daughter, Emily, on a mother-daughter cruise.

DURING YOUR YEARS IN THIS INDUSTRY, WHO ARE SOME INDIVIDUALS THAT HAVE HAD A POSITIVE INFLUENCE ON YOUR CAREER?

Sharon Pratt, a therapist who now works in Ireland and is well-known within the industry, is why I am an educator because she provided the opportunity. I love her energy and humor. Her depth of knowledge is vast. I hope to be her when I grow up someday!

I admire Jean Minkel's calm, quiet confidence. She is very knowledgeable and client focused. Anytime I have the opportunity to speak with her, I come away feeling better. I can only imagine how her clients must feel.

Another person who has influenced my career is David Harding. At one time, he was my boss, and he has significant influence in our industry. I'm not sure people realize the observations and evaluations he has given on many products. His motto is 'always do the right thing by the client.'

CONTINUED ON PAGE 20

Stefanie (front) with her parents, Margit and Werner Sukstorf.

Stefanie at the helm of Matawai. "The North Atlantic is cold in May."

Stefanie Laurence and her partner, Paul L'Heureux, on Matawai as they enter New York Harbor on a 73-day journey from Bahamas to Rhode Island.

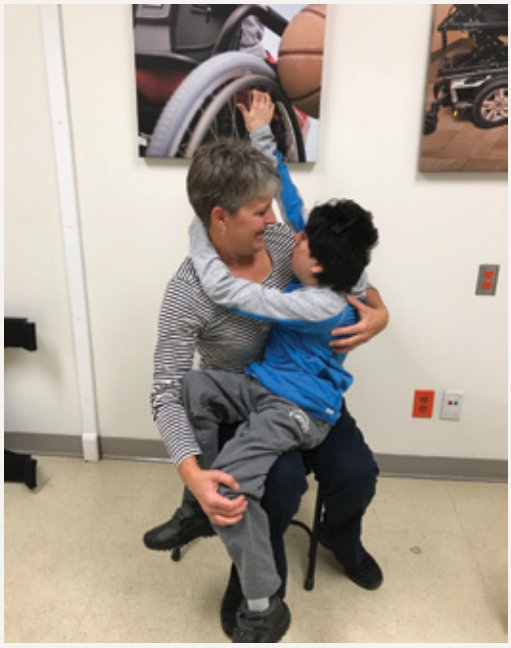
EDUCATE EVERYONE ABOUT EVERYTHING
(CONTINUED FROM PAGE 19)

WHAT ARE SOME AREAS WITHIN OUR INDUSTRY WHERE YOU SEE A NEED FOR CHANGE?

I am concerned about the number of times when a team is trying to find a solution I've had a client say to me, 'They didn't listen to what I told them.' That is very disappointing, and I apologize because our industry has failed them. I also find myself in situations when I scratch my head and ask, 'What were they thinking with that prescription?' This doesn't happen often, and usually, it is a situation where people are afraid to ask for help or, because of a lack of experience, don't know what they don't know. The team may be doing the best they can, but it isn't providing the best service to the client. Then, there are times when someone is merely trying to make a sale. Unfortunately, that is happening more often than I want to see.

Another issue in the industry that concerns me is that we've had so much consolidation, companies getting bought and companies going out of business. I am concerned about what will happen to the smaller, agile companies. Our industry, and our clients, benefit from the innovation of these smaller businesses. They usually do a stellar job of manufacturing and delivering a product. Yet, it is difficult for them to compete in a race to the bottom for price. We benefit from what is often a quicker response to the consumer's needs and problems from the small companies. That is not always possible with a larger company where things tend to move more slowly. I am also concerned we may end up with many 'me too' products if there is too much emphasis on the bottom line and profit margin.

I see good things happening in the industry, but my wish is to go back to the roots of this business. Of course, we have to take care of the bottom line, but we are here to provide a service to our clients. We need to continue to foster the attitude we are going to do right by those who depend on us, and if we make a mistake, whatever it takes, we are going to make it right.



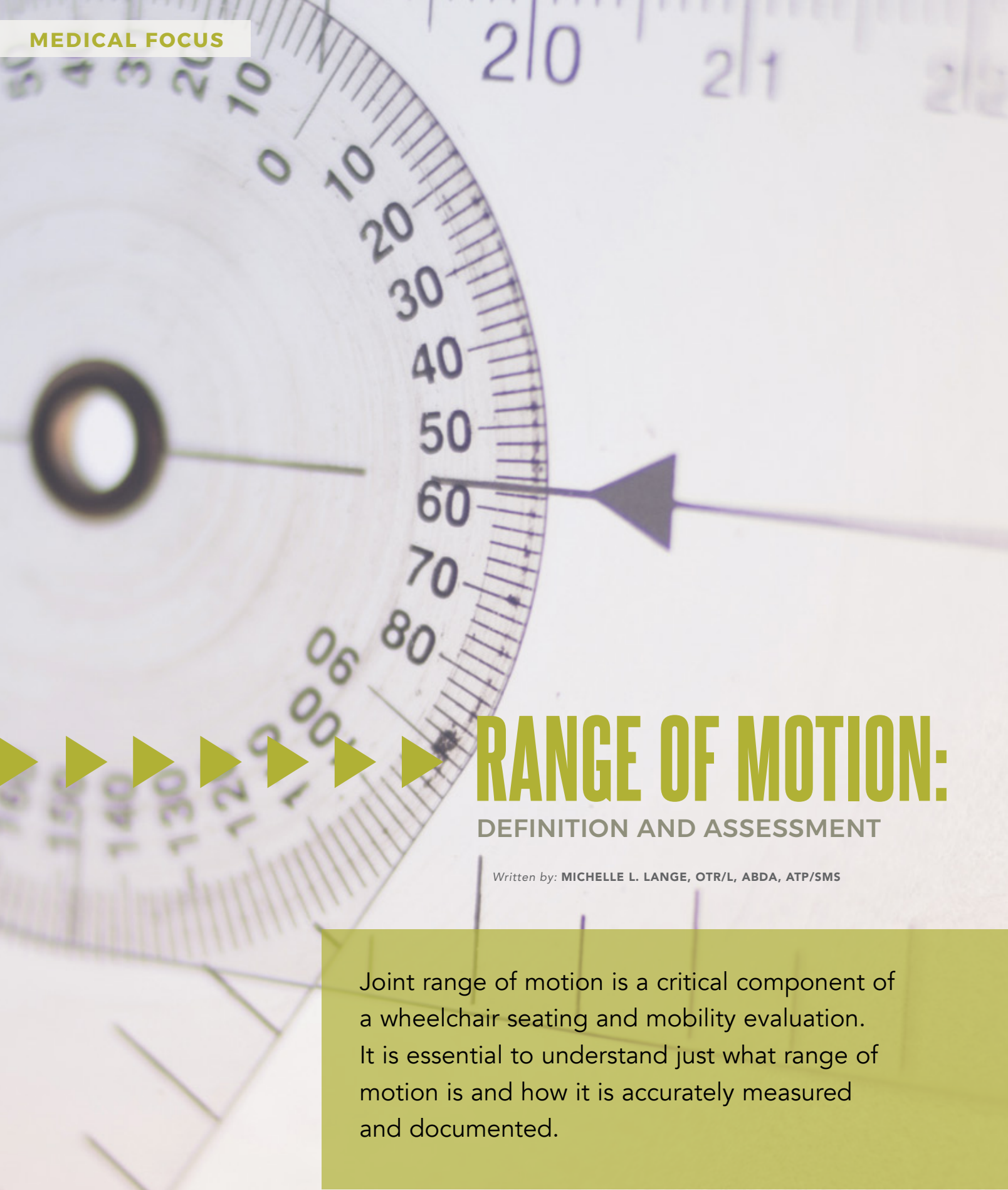
Carter wrapping his arms around Stefanie Laurence, or is it Stefanie wrapping her arms around Carter?

Stefanie Laurence is molding a client in 2005 where everyone is wearing medical masks to protect the client. As much as some things change, others stay the same.

CONTACT

Stefanie may be reached at
STEFANIE.LAURENCE@MOTIONCARES.CA

Stefanie Laurence wants to live in a world where every wheelchair is perfectly fitted, comfortable, functional and used correctly. As an occupational therapist and clinical educator across Canada, she's been on her soapbox for more than 30 years at colleges, universities, group homes, hospitals and conferences across North America and even as far as Europe. When she's not teaching about seating and mobility equipment, you can find her with her arms wrapped around a client helping to create a custom seating system or elbow deep in helping a team unravel the knot of a dysfunctional situation.



RANGE OF MOTION:

DEFINITION AND ASSESSMENT

Written by: **MICHELLE L. LANGE, OTR/L, ABDA, ATP/SMS**

Joint range of motion is a critical component of a wheelchair seating and mobility evaluation. It is essential to understand just what range of motion is and how it is accurately measured and documented.

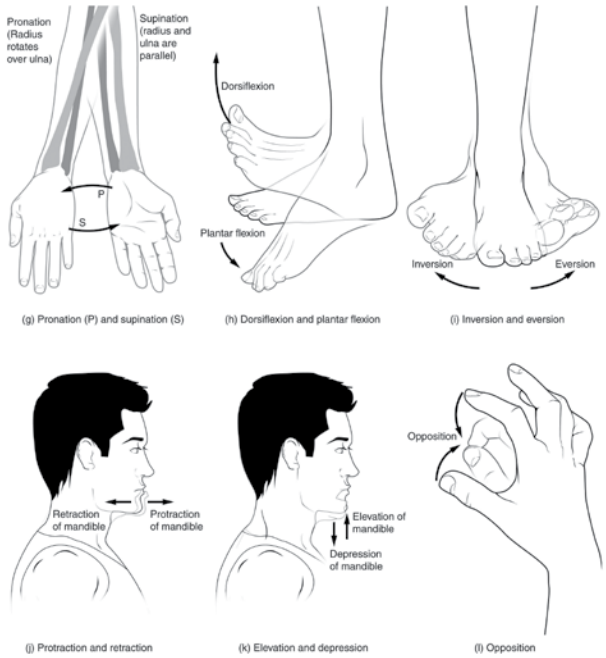
DEFINITION:

Range of motion (ROM) is defined as the full potential movement of a joint1. Available ROM is determined by joint type, articular surfaces and soft tissue acting on the joint - including muscles, ligaments and tendons. Active ROM is joint movement performed by the client within their ability. Passive ROM is joint movement performed by someone else, such as a clinician, and may result in further range of movement beyond the active range.

Types of joint movement include (see Figure 1):

- Flexion and Extension (i.e., elbow)
- Pronation and Supination (i.e., forearm)
- Abduction and Adduction (i.e., shoulders and hips)
- Horizontal Abduction and Adduction (i.e., shoulders)
- Internal and External Rotation (i.e., shoulders and hips)
- Dorsiflexion and Plantarflexion (i.e., ankle)
- Inversion and Eversion (i.e., ankle)
- Opposition (i.e., thumb)

FIGURE 1



MEASUREMENT:

ROM is measured in degrees of a circle. The most common measurement tool is a goniometer. The center of the goniometer is placed over the axis of the joint. A stationary arm remains in alignment with a bone on one side of the joint, and a movement arm remains in alignment with a bone on the other side of the joint as this is moved. It is important to measure accurately. For example, if a client has limited hip flexion, continuing to move the femur into flexion without sufficient ROM will result in the pelvis rocking rearward into a posterior pelvic tilt.

LIMITATIONS:

Limited Active ROM may be due to pain, weakness, paralysis or lack of motor control. Increased muscle tone can impact motor control of a joint. Limited Passive ROM may be due to swelling, muscle shortening, muscle tightness or spasm, or changes to the bony surfaces or capsule of the joint.

WHEELCHAIR SEATING IMPLICATIONS:

ROM limitations may not impact the seated position. For example, lack of full elbow extension will not impact sitting. Other ROM limitations have a direct impact on seating, including hip, knee, ankle movement and available ROM of the spine. If ROM is limited in these areas, the seating system must respect the available movement. For example, if a client lacks full hip flexion, the seat to back angle must be increased to match available ROM.

Range of motion is easy to take for granted. However, accurate measurement can lead to improved wheelchair seating outcomes for the clients we serve.

CONTACT THE AUTHOR

Michelle may be reached at
MICHELLELANGE1@OUTLOOK.COM

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Michelle Lange is an occupational therapist with over 30 years of experience and has been in private practice, Access to Independence, for over 10 years. She is a well-respected lecturer, both nationally and internationally, and has authored numerous texts, chapters and articles. She is the co-editor of Seating and Wheeled Mobility: A clinical resource guide, editor of Fundamentals in Assistive Technology, Fourth Edition, NRRTS Continuing Education Curriculum coordinator and clinical editor of NRRTS DIRECTIONS magazine. Lange is a RESNA Fellow and member of the Clinician Task Force. She is a certified ATP, certified SMS and is a senior disability analyst of the ABDA.

TECHNOLOGY IS OUTPACING FUNDING

Written by: **ROSA WALSTON LATIMER**

Brent Manning, ATP, CRTS®, with MacPherson's Medical Supply in Harlingen, Texas, has worked in the medical business 31 years. His diverse experience in our industry is a good fit for the population he serves in South Texas. "We are a locally owned, vertically integrated medical equipment company serving the Rio Grande Valley residents. We also serve a large retirement community, commonly known as Winter Texans, who temporarily move to this area to escape the winter weather of their place of residence," Manning said. "We are a contractor with the Veterans Affairs and serve Medicare and Medicaid patients. MacPherson's is a small company with 18 employees. My responsibilities require me to wear many different hats, and I am probably the only ATP in a county with more than 400,000."

YOU HAVE BEEN WORKING IN THIS INDUSTRY FOR THREE DECADES. WHAT INFLUENCED YOU TO CHOOSE THIS CAREER?

Originally, after earning undergraduate and graduate degrees in finance and economics from Baylor University, I worked in banking. Ten years in that field, I recognized I didn't enjoy being confined to a closed space and wanted more personal interaction. I realized what I wanted most was to help others have a better quality of life.

In 1989, I left banking and started working as a supplier of orthopedic implants. My family had some experience in the medical equipment business, so this was a natural pathway. Before long, I found myself in an industry that required a strong dedication to serving others, and I knew that is where I wanted to be. You can't tell a doctor you'll be available for him between 10 a.m. and 2 p.m. To this day, all these years later, my work is seven days a week. My phone is always on. I am a certified orthotic fitter and an ATP, plus I still keep my license in hyperbaric medicine and wound care. Every day is a new day, and I love my work!

YOU DESCRIBE YOURSELF AS "WEARING MANY HATS." PLEASE GIVE US AN IDEA OF WHAT THIS MEANS IN A TYPICAL WORKDAY.

This work is a blessing to me, and I enjoy the challenge! I see approximately 50 patients a day, directly or indirectly, 22 days a month, 12 months a year, and this is my 31st year. I've seen a lot, and there isn't much you could tell me today that would surprise me. Most of our clients are 55 years and older, and many are veterans. We are often solving many problems for a singular client. We have a lab and make orthotics, and I do casting and fittings. We serve many who have diabetes, and that usually brings more complex issues.

Because most of my clients' needs for equipment are more dynamic, I don't approach a situation strictly as an ATP. Most situations require me to conduct a full 360-degree assessment of the home environment, transportation availability, and family situation, as well as the specific needs of the client. These considerations are critical in terms of whether the patient can use equipment freely inside and outside of the home. We will not significantly change a patient's living environment, so sometimes we have to modify our thought process.

WHAT DO YOU DO TO GIVE YOURSELF A RESPITE FROM THE PERSISTENT RESPONSIBILITIES OF SERVICE TO YOUR CLIENTS?

First of all, this is a beautiful place to live! Our two children are grown, and my wife and I enjoy living in this subtropical resort climate. There is hardly any crime, and there is no traffic. We are active in our church, and I play tennis, but my primary 'after hours' activity is playing drums with a very good, five-piece dance band called 'Rewind.' We perform over 50 shows a year at weddings and other special events and at many of the hundred-plus RV parks in this Rio Grande Valley region. It isn't unusual for me to see some of my clients at these events, and I enjoy connecting with them in a different way.

WHAT HELPS YOU MAINTAIN THE LEVEL OF KNOWLEDGE AND EXPERTISE NEEDED TO CONTINUE TO MEET YOUR CLIENTS' NEEDS?

I rely heavily on the educational and training opportunities offered by NRRTS. I take advantage of as many conferences, webinars and other opportunities as possible. It is there for the taking, and the organization's benefits make a difference in my ability to meet the demands of my job responsibilities.

Changes in this industry are constant. Perhaps one of the most significant benefits of being an ATP is I am more aware of what I don't know. But I have this great resource. The instructors are the best. Most have forgotten more than I will ever know!

Another consistent, excellent source of information for me has been manufacturers. When dealing with a specific brand of equipment or add-ons, I know what the client needs, but I may not know all I need to know to make a decision. I know I can usually depend on working in tandem with the manufacturer's rep to solve the problem.

ABOVE: Brent Manning, ATP, CRTS®, with MacPherson's Medical Supply, Harlingen, Texas

TOP MIDDLE: Brent Manning, drummer, performing with his dance band, "Rewind."

BOTTOM MIDDLE: The Mannings: Brent with wife, Suzanne (c), and daughters, Emma Kate (l) and Mary Hayden (r).

RIGHT: Brent Manning

WHAT DO YOU CONSIDER THE MOST SIGNIFICANT CHALLENGE YOU FACE TODAY WORKING IN THIS INDUSTRY?

My greatest obstacles today all relate to funding. It is as though I am coming to the plate with three strikes. A home run will not win the game. It has to be a grand slam. It isn't 'how much money can I make' it is 'how do I minimize my losses.' We can't keep going through the increase in paperwork and the decrease in funding. Companies don't have large margins. Our valid costs of doing business, such as paying employees and maintaining service vehicles, are not part of the funding equation.

I must tell you the physician, the patient and the supplier won't have the control today we had in the past. The payer, the insurance companies, are the ones who are making many of the decisions. And with Medicare, to bill something, you must provide something to the patient who takes the asset and leaves.

Part of my frustration as I learn about the advances in technology and the possibilities of improving the quality of life for clients, is the overriding question of who will pay for this? I recently saw a great NRRTS-sponsored webinar by Michelle Lange. I loved learning about technologies such as Bluetooth and GPS tracking, but I realize insurances most likely will not factor these options into their funding decisions. Funding is lagging way behind the development of technology in our industry.

WHAT ARE SOME VALUABLE LESSONS YOU HAVE LEARNED FROM YOUR YEARS OF EXPERIENCE?

I always try to personalize my relationship with my clients. This work is about listening to people - to our patients, their families and the doctors. I have learned if I encourage parental or spousal involvement, I most likely will get a clearer picture of everything that is wrong with a client's current situation and needs. Then, I take what I've learned and try to develop something that will work in terms of an individual's real-life situation.

I have learned even if the answer for a client's request is 'no, for now,' the situation may change, and we could have a different response in the future. Clients often don't understand all of the considerations involved in a decision but taking the time to explain the reasons that support the decision builds respect and trust. Every situation is more complicated than providing what the patient wants.

As difficult as this work can be, nothing makes me feel better than to hear a client say, 'Thank you; this is going to work!' I like to see a smile. It makes me feel good when I see someone do things in their wheelchair they haven't been able to do before, and I have had a part in the experience. I love helping people!

CONTACT
Brent may be reached at
BMANNING@MACMEDSUPPLY.COM

Brent Manning, ATP, CRTS®, is a NRRTS Registrant who works for MacPherson's Medical Supply in Harlingen, Texas. Manning has been a NRRTS Registrant since 2014 and takes more than 25 NRRTS education courses per year.

CRT UPDATE

Written by: **DON CLAYBACK, EXECUTIVE DIRECTOR OF NCART**

CONGRESSIONAL SIGN-ON LETTER

The month of August and through mid-September was focused on getting Members in the House of Representatives to add their signature to a Congressional letter to the Centers for Medicare and Medicaid Services (CMS) regarding Complex Rehab Technology (CRT) manual wheelchair accessories. The bipartisan letter was led by CRT champions U.S. Reps. John Larson, D, CT, and Lee Zeldin, R, N.Y., the authors of last year's related legislation.

The letter urges CMS Administrator Seema Verma to "make permanent" the temporary policy change that was included in 2019 year-end legislation to protect accessories (more appropriately referred to as critical components) of CRT manual wheelchairs from Medicare's Competitive Bid pricing. Just as it previously did for CRT power wheelchairs.

CRT power wheelchair accessories were protected from Competitive Bid Pricing through a CMS policy change in 2017. However, that change did not include accessories used with CRT manual wheelchairs. Accordingly, Congress passed legislation to address this on a temporary basis through June 30, 2021, but CMS must now take policy action to provide permanent equal access to users of either type of CRT wheelchair.

Once the letter is sent, we will be following up with CMS and engaging other Congressional supporters to encourage making the needed policy change this year.

NATIONAL CRT AWARENESS WEEK

This year's National CRT Awareness Week was a big success. The annual event is designed to create opportunities for suppliers, manufacturers, clinicians and consumers to collectively share and promote a better understanding of CRT. That understanding includes the people who use it, how it's prescribed and provided, and why access is so important.

A huge thank you goes out to everyone who participated August 10-14. We doubled our numbers from 2019 with over 65 organizations and thousands of individuals participating by sharing stories, writing articles, posting videos, holding webinars and broadcasting podcasts. It was great to see everyone come together to share the CRT message.

Increasing CRT awareness is a really a year-round mission, but it was motivating to see everyone come together for a nationwide push over one week. We will build on this as we move ahead.

CRT REMOTE SERVICES CONSORTIUM

During the COVID-19 pandemic, temporary policy changes have been implemented to ensure continued critical access to CRT, while protecting the health and well-being of the people who depend on it. The expansion of the use of

> WHEN HAVING DISCUSSIONS ON THIS TOPIC, IT IS IMPORTANT TO USE THE APPROPRIATE TERMS. ONE WAY TO APPROACH THIS IS TO REMEMBER "TELEHEALTH" REFERS TO THE ACTIVITIES PERFORMED BY THE HEALTH CARE PROFESSIONAL (PHYSICIAN, PHYSICAL THERAPIST, OCCUPATIONAL THERAPIST, ETC.).

telehealth and other remote options has shown real benefits. While not suitable for all situations, remote services can be an important option in the provision and support of CRT, and this option should remain available on a permanent basis.

To build on this premise, we have formed a CRT Remote Services Consortium consisting of national organizations representing CRT suppliers, clinicians, consumers, manufacturers and others. These include representatives and members of NCART, NRRTS, Clinician Task Force, APTA, RESNA, U.S. Rehab, United Spinal Association, Christopher and Dana Reeve Foundation, University of Pittsburgh, Ohio State University, and others.

The initial objectives of the consortium are: (a) to establish permanent policies within federal, state and commercial insurance plans to cover remote/telehealth services related to the provision of CRT when appropriate; and (b) to develop clinical and operational guidelines to ensure the best outcomes for the CRT consumer when remote/telehealth services are used.

As part of its work, the consortium conducted a national survey of CRT clinicians, suppliers and manufacturers to collect information about the applications of remote services and telehealth in the CRT provision process. Questions covered the benefits/issues in its use and what needs to be considered as we plan for the future. Responses will be used in discussions with policymakers and to assist with the development of related guidelines.

When having discussions on this topic, it is important to use the appropriate terms. One way to approach this is to remember "telehealth" refers to the activities performed by the health care professional (physician, physical therapist, occupational therapist, etc.). "Remote services" can be used to refer to the remote/virtual activities performed by the CRT supplier or manufacturer. Here is a simple activity list to provide some guidance:

CONTINUED ON PAGE 28

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CONSUMER RELATIONS & ADVOCACY – Andrew Davis

CRT UPDATE
(CONTINUED FROM PAGE 27)

1. Telehealth — Physician- Face-To-Face examination
2. Telehealth — PT/OT- Clinician initial intake
3. Telehealth — PT/OT- Clinical evaluation
4. Telehealth — PT/OT- Fitting and training
5. Telehealth — PT/OT- Ongoing follow-up
6. Other remote services — CRT Company- Supplier initial intake
7. Other remote services — CRT Company- Supplier ATP involvement in wheelchair selection
8. Other remote services — CRT Company- Supplier ATP involvement- other
9. Other remote services — CRT Company- Home assessment
10. Other remote services — CRT Company- Education
11. Other remote services — CRT Company- Repairs/Service troubleshooting and diagnosis
12. Other remote services — CRT Company- Ongoing follow-up

Much work lies ahead, but it is very promising that the various CRT stakeholders have come together under a common umbrella to work on related policy development and advocacy.

MEDICARE COVERAGE OF POWER SEAT ELEVATION AND STANDING SYSTEMS

Progress with this initiative continues. ITEM Coalition workgroups have finalized the formal "Request for Reconsideration of the National Coverage Determination for Mobility Assistive Equipment," will be submitted to CMS by mid-September. The request presents the basis and evidence to support the coverage of these items as a Medicare benefit and will require a formal review and decision by CMS. Related advocacy work will take place during the CMS review process.

NCART MEMBERSHIP

A tough year like 2020 highlights the need for a strong and dedicated national CRT industry advocacy organization. That is where NCART comes in. If your organization provides or manufactures CRT and is not yet an NCART member, please join to support our important work protecting your customers and your business. Check out the membership area at www.ncart.us for details or please contact us to set up a conversation.

CONTACT THE AUTHOR
Don may be reached at
DCLAYBACK@NCART.US

Don Clayback is executive director of NCART. NCART is national organization of Complex Rehab Technology (CRT) suppliers and manufacturers focused on ensuring individuals with disabilities have appropriate access to these products and services. In this role, he has responsibility for monitoring, analyzing, reporting and influencing legislative and regulatory activities. Clayback has more than 30 years of experience in the CRT and Home Medical Equipment industries as a supplier, consultant and advocate. He is actively involved in industry issues and a frequent speaker at state and national conferences.

NRRTS OPEN MEETING

Bill Noelting of TalkRehab presents **Connection**

Wednesday, October 28 at 7 pm ET

- ***Since the discovery of the wheel, humans have been creating and using machines to extend their capabilities, make life's journey easier and increase their productivity. Perhaps nowhere is this more evident than in the relationship that exists between wheelchair users and their wheelchairs.***
- ***Connection is a short story that begins to explore and understand this relationship or connection through firsthand accounts and observations.***
- ***Distinguished Service Award and the Simon Margolis Fellow Award will be presented as well.***
- ***Gerry Dickerson will give an update on the State of NRRTS***

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PROFESSIONAL ETHICS IN THE "REAL" WORLD

Written by: **ANDREA VAN HOOK, EXECUTIVE DIRECTOR, RESNA**

Recently I was on the phone chatting with an Assistive Technology Professional (ATP) candidate. I asked him what he was doing to prepare, and he said: "I'm reviewing my notes and reminding myself the right answer for RESNA is the perfect world answer, not the real-world answer."

Wow. Really? I drew a deep breath and asked what he meant by that. He said, "Well, we can only offer what we know we can get funded."

Okay. I suggested he review the "RESNA Standards of Practice for Assistive Technology Professionals," specifically #10: Individuals shall inform the consumer about all device options and funding mechanisms available regardless of finances, in the development of recommendations for assistive technology strategies. He got quiet, and said "I was just making a point."

Of course it's frustrating. ATPs see so much need, and there is never enough time or money. ATPs are often in the awkward position of knowing more about the possibilities than the client or the client's medical team and caregivers, and certainly more than the client's insurer, whether that's Medicare, Medicaid or private. Who will be the one delivering the bad news when the funder rejects the "perfect" equipment? Who will hear the complaints when the less than optimal equipment breaks down, as predicted? We all know the answer — the ATP.

But let's think of that as "reality," rather than "real-world." Reality can be changed. Reality can be improved. RESNA's Standards of Practice and Code of Ethics exist for that reason – to help lead the way.

Several parts of the Standards of Practice are about client education — making sure they know your credentials and what they mean, who your employer is, and when you need to give a referral because you've reached the boundaries of your expertise. Other parts of the standards are about what you, as an individual, are honor-bound to do — recognizing and disclosing your own limitations, actively cooperating with other professionals who may not be affiliated with you, endeavoring to improve processes to enhance the quality of service, and engaging in your own continuing education to keep up on emerging technologies. Other standards are legal in nature, about not engaging in fraud, adhering to applicable licensure laws and the like. Together, all 22 standards of practice make a powerful statement: ATPs have a higher purpose than selling a piece of equipment. They are helping society, client by client, to become a more perfect world.

If you are an ATP, do yourself a favor and remind yourself of RESNA's Standards of Practice from time to time. They are posted on RESNA's website under "Certification." And on those tough days, when the real world isn't going your way, remember this quote by basketball great "Dr. J" Julius Erving: "Being a professional is doing the things you love to do, on the days you don't feel like doing them."

Notice to those renewing their ATP

Please do not mail or FedEx your recertification paperwork. Due to COVID-19, staff is working remotely and the forwarding of physical mail is causing delays. Please scan and e-mail your paperwork to certification@resna.org. Staff will then set up an invoice for you to pay online. If you need to pay by check, staff will provide the bank address — do not send checks in the mail to the office.

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CONTACT THE AUTHOR
Andrea may be reached at
EXECOFFICE@RESNA.ORG

Andrea Van Hook is executive director of RESNA. She has over 20 years of experience in nonprofit association management. She lives and works in the Washington, D.C., area.

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MASK MATTERS: CREATIVE SOLUTIONS FOR CONSUMERS WITH SPECIAL NEEDS

Written by: **LESLIE JACKSON, OTR/L, OTD, ATP, CEASIII, AND PENNY J. POWERS PT, MS, ATP**

INTRODUCTION

With the increasing prevalence of COVID-19, the Centers for Disease Control and Prevention (CDC) has advised important measures to help control the spread of the virus, including frequent hand washing, social distancing and facial masks (CDC, July 16, 2020). Subsequently, issues have emerged during this public health emergency across rehabilitation settings for pediatric and adult populations with special needs. Consumers with special needs may have motor challenges, respiratory issues, speech and hearing deficits, intellectual and developmental disabilities, or sensory concerns, such as tactile sensitivity, that may impact their ability to apply or tolerate face masks.

Certain populations are particularly vulnerable at times during emergencies. Specifically, the deaf community and individuals with hearing loss encounter challenges during health crises and emergencies, largely due to communication concerns (Engelman, Ivey, Tseng, Dahrouge, Brune, & Neuhauser, 2013). Morris (2020) stated that wearing face coverings can be challenging for individuals with autism who are hypersensitive or resistant to touch, as well as for individuals with post-traumatic stress disorder (PTSD), claustrophobia and other related mental health conditions. In response to these challenges, clinicians across the health care continuum are developing and applying creative strategies to assist consumers. The aim of this article is to highlight how clinicians are applying creative solutions to assist Complex Rehab Technology (CRT) consumers with wearing masks.

CDC GUIDELINES

The CDC's published guidelines advise individuals wear cloth face coverings in public settings to help prevent the spread of the virus, particularly when social distancing is difficult to maintain (CDC, 2020). However, the CDC recognizes special circumstances exist and suggests cloth face coverings should not be worn by children under 2 years of age nor by anyone who has difficulty breathing, is unconscious, incapacitated, or otherwise unable to remove the mask without assistance. Additionally, some facilities are requiring face shields or goggles as an additional layer of protection. The CDC has advised face shields should not be substituted for face coverings nor should they be used during everyday activities (CDC, 2020). Figure 1 depicts a face shield and disposable face masks worn by a CRT supplier while working with a young consumer.

FIGURE 1 A service provider wears his face shield and disposable mask as a young lady wears a sports-themed face mask.

MASK VARIATIONS

Personal protective equipment (PPE) varies in type and material construction. Masks may be secured by tying straps, looping elastic straps over the ears, or adjusting the ear loops or nosepiece. However, health care systems or facilities often determine their specific PPE requirements for the safe and effective delivery of rehabilitation, health care services and interventions. For example, some health care facilities have opted for patrons to wear disposable face coverings, rather than face masks constructed of cloth materials.

CREATIVE SOLUTIONS

Clinicians are developing and utilizing creative solutions to assist consumers with special needs. Face masks with clear plastic inserts can permit lip-reading, support communication and convey positive facial expressions to reduce feelings of anxiety. The ClearMask™ Is a surgical mask with a transparent insert to permit full-face visibility, approved by the Food and Drug Administration

FIGURE 2 A mask with a clear insert permits others to lip-read and see facial expressions

FIGURE 3 A young man and his mother display their masks with movie and sports themes.

(ClearMaskTM, 2020). Custom-made masks with a clear insert are also an option to permit greater visibility of the mouth and lips (see Figure 2). The Shepherd Center has published free, detailed instructions online to assist individuals in creating both masks that permit "lip visibility" and masks to accommodate consumers' access to straw nozzles for power wheelchair sip n' puff control (Alverson, 2020).

Accessories may also be helpful to reduce skin irritation around ears or face and may be purchased or fabricated. Headbands or "ear saver hooks" may be designed from low-temp thermoplastic, splinting supplies or plastic materials from 3D printers. Those with skin sensitivity or limited tolerance to wearing straps on their ears may find it helpful to secure a mask's straps to buttons that have been secured to ball caps.

Chin-control driving methods, such as a mini or compact power wheelchair joystick, may be challenging to use when wearing face masks. Patients may require caregiver assistance to lift the mask away from the chin area to access the joystick then to replace the mask over the chin when in close proximity for consultation or interactions with others.

Creativity also abounds in books and other resources to assist individuals who are hesitant to wear face coverings. Denise Bryant,

FIGURE 4 CRT team members wearing different types of personal protective equipment during service provision.

a pediatric speech and language pathologist and Assistive Technology Professional (ATP) at Vanderbilt University Medical Center suggests parents use books to assist with initiating conversations about face coverings and portray them through positive and lighthearted storylines (D. Bryant, personal communication, August 4, 2020). A quick web search of children's books yields an array of illustrated resources to introduce face masks, such as Walker's (2020) book for children. Additionally, wearing customized face masks to showcase personal interests, such as favorite superheroes, sports teams, or movies, can assist those who may be initially hesitant to wear masks (see Figures 3, 4).

CONCLUSION

To conclude, federal, state and local guidelines have spurred clinicians, suppliers and other team members to develop creative solutions for accommodating consumers' needs and equipment during the COVID-19 pandemic. The Greek philosopher Plato is attributed as stating, "Necessity is the mother of invention." Perhaps this quote captures the spirit and drive of the CRT community as they continue to develop innovative solutions to meet individuals' needs. An array of creative solutions exists to accommodate special circumstances and custom equipment. We hope CRT team members working in both limited and robust settings would find these creative solutions helpful as they continue to meet consumers' CRT needs while adhering to CDC guidelines during the COVID-19 pandemic. Heidi

CONTINUED ON PAGE 34

MASK MATTERS
(CONTINUED FROM PAGE 33)

Kessler, PT, ATP, at Vanderbilt Children's Hospital's Pediatric Seating and Mobility Clinic suggested that reminding individuals and their caregivers about masked characters in Star Wars movies can be helpful. She indicated "Star Wars has helped everyone" (H. Kessler, personal communication, July 30, 2020). By relating masks to movie characters or other interests, for example, CRT members are using creative solutions to promote the safety and health of consumers while providing exceptional services to meet the individualized needs and goals of consumers.

CONTACT THE AUTHORS

Leslie may be reached at LESLIE.JACKSON@INDWES.EDU
Penny may be reached at PENNY.POWERS@VUMC.ORG

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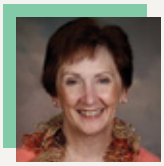
Leslie Jackson has served as a treating occupational therapist for over 20 years. Her clinical experience spans acute care, home health, school-based, long-term care and outpatient settings. She earned her post-professional occupational therapy doctoral degree from Creighton University. In addition to her current practice for a seating and wheelchair clinic, she serves as associate professor at the Occupational Therapy Doctoral Program at Indiana Wesleyan University, where she teaches content about assistive technology, adult intervention and assessments, orthotic fabrication, clinical documentation, and health systems management and policy. Jackson is recognized as a certified Ergonomics Assessment Specialist and is also LSVT BIG® certified. She earned RESNA's Assistive Technology Professional certification in 2008. In 2013, she co-authored a chapter about spinal cord injuries and the brachial plexus in the Hand and Upper Extremity Rehabilitation: A Quick Reference Guide and Review, Second Edition. She has presented at the American Occupational Therapy Association's Annual Conference and continues to be involved in research and grant-related projects.

Penny J. Powers, MS, PT, ATP, is a Level IV physical therapist at Pi Beta Rehabilitation Institute at Vanderbilt University Medical Center. Powers is the lead physical therapist for the Adult Seating and Mobility Clinic. Her practice involves specialty seating for a diverse adult population. She has had presentations accepted at national conferences including RESNA and APTA Combined Sections meetings as well as the ISS. She serves as adjunct faculty at Belmont University, DPT program. She has had IRB-approved research projects in collaboration with Belmont University for the past seven years. Powers sustains membership in APTA, including the Neuro Section, and RESNA. She currently serves on the executive board of the Clinician Task Force.



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WHY WE NEED TO CONSIDER THE DRIVE WHEEL ON A POWER WHEELCHAIR

Written by: **RACHEL FABINIAK, PT, DPT**

NRRTS would like to thank Permobil for sponsoring this article.

CEU ARTICLE REVIEW

CLINICAL PERSPECTIVE - CEU ARTICLE

Did you ever wonder why some power wheelchairs can easily drive over rough terrain while others get stuck? Or why for some individuals, the inside of every door frame is destroyed from the wheelchair running into it? There are many variables on a power wheelchair which can impact the maneuverability, driving technique and even the comfort of the individual. For this article, we will discuss how the configuration of the drive wheel can impact more than just the look of the power wheelchair.

First, we must start at the very beginning. The drive wheel on a power wheelchair is the larger wheel and is connected to the motors. The drive wheel location has a significant impact on how the power wheelchair drives and maneuvers in different environments. There are three main types of drive wheel configurations: front, mid drive and rear-wheel drive (see Figure 1).

This article will explore drive wheel configuration pros and cons, selection considerations and how to teach an individual to drive each specific configuration. The drive wheel is in many cases the first consideration when prescribing a power wheelchair, but do we ask the right questions to really determine which option is best? Then, once the chair is delivered, do we work on the specific driving skills required for that configuration? Or, do we just have our standard driving instructions that we quickly run through? Confidence for an individual driving a power wheelchair was independently associated with less difficulty with activity, participation, increased life space and greater wheelchair skills (Mortenson, 2015). We must remember that each individual will need specific training based on their cognition, learning style, experience and environment of use.

The research available on drive wheel configuration is limited and dated. Previously, we had built a good understanding through other industries of the impact of drive wheel placement. This article may validate your current practice. This information may also challenge you to improve the way in which you work through the procurement of Complex Rehab Technology (CRT) for individuals with mobility impairments. A study by Ward, et al. in 2010 that examined the satisfaction of power wheelchair prescription for individuals with amyotrophic lateral sclerosis found that when an experienced therapist was involved in the prescription process, 87% of the individuals thought no changes were needed. This study also reported 69% of individuals test trialed more than one wheelchair. An individual may be able to use more than one drive wheel configuration and a comparison trial can help make a final determination.

MANEUVERABILITY:

In order to determine which drive wheel configuration would be best for an individual, we have to understand how each configuration drives. The drive wheel is attached to the motors and

Drive Wheel Configuration

FIGURE 1-A Front-Wheel Drive

FIGURE 1-B Mid-Wheel Drive

FIGURE 1-C Rear-Wheel Drive

FIGURE 2 Turning Radius. From Left to Right – Front-Wheel Drive, Mid-Wheel Drive, Rear-Wheel Drive

drives the wheelchair. Just like a vehicle, different drive wheel locations impact driving capabilities on varied terrain, obstacle negotiation, turning and more.

Think about a wheelchair just going forward in a straight line. The location of the drive wheel will affect how it moves the chair forward when the chair is on uneven, soft or challenging terrain. The drive wheel configuration will also impact turning, making a full circle or making course corrections while traveling forward.

When turning, the wheelchair turns on the drive wheel. This is something that I believe we often miss when educating an individual learning to drive a wheelchair. In Figure 2, we can see how the pivot point position of a turn changes based on the drive wheel configuration. In this figure we are seeing the full turning radius of the wheelchair for each configuration. Koontz, et al. in 2010 described how the mid-wheel drive has the smallest overall turning radius, while the rear-wheel drive has the largest. This will also be impacted by the position of the footplate and the overall length of the wheelchair. Having a small full-circle turn is important to indoor navigation, especially in the home.

INDOOR NAVIGATION:

What happens inside the home? For many power wheelchair users, the home can be the deciding factor in the type of drive wheel configuration that is chosen. The home layout and the size of the hallways, kitchen, bathroom and bedrooms can limit the available options not just in the drive wheel, but also in the overall size of the power wheelchair. It is crucial that the home environment is assessed to determine the appropriate options for the wheelchair. When considering the drive wheel selection, we should consider the amount of space and the location of the space as well.

If there are space limitations in bathrooms, bedrooms or even the kitchen, the driver may need to complete a 180-degree turn and hence require a drive wheel configuration that has a small turning radius. However, other individuals might have the skill level to reverse the wheelchair and thus not require a smaller turning radius. Figure 2 illustrates the full turning radius; however we also have 90-degree or L-shaped turns in the home, especially when the individual is driving down a hallway and turning into a bathroom, bedroom or other room.

The 90-degree turn, and how the turn is initiated, is different for each drive wheel configuration. This is where the front-wheel drive performs the best. Because the pivot point is in the front of the wheelchair, the L-shaped turn (or front turning aspect) is small (Koontz, 2010). In a practical example, the individual can travel down the side of the hallway closer to the wall and then make a tight L-shaped turn into the room. This is great for narrow hallways or when someone is walking next to the individual. The mid-wheel drive wheelchair pivot point is in the center so it will have a larger L-shaped turn as it cannot hug the wall as closely. Typically, the individual will travel down the center of the hallway and need to drive just past the entry of the room to turn in. The rear-wheel drive has the largest L-shaped turn (Koontz, 2010). This will create a challenge especially in narrow hallways. If the client is too close to the wall adjacent to the room they are turning into, they will not be able to complete the turn without hitting the doorframe. In this case, the individual will have to swing out wide to begin the turn as the drive wheel is at the back of the wheelchair. As individuals in a rear-wheel drive wheelchair become more proficient, they will learn to utilize less space, but will often still face challenges depending on the home set-up.

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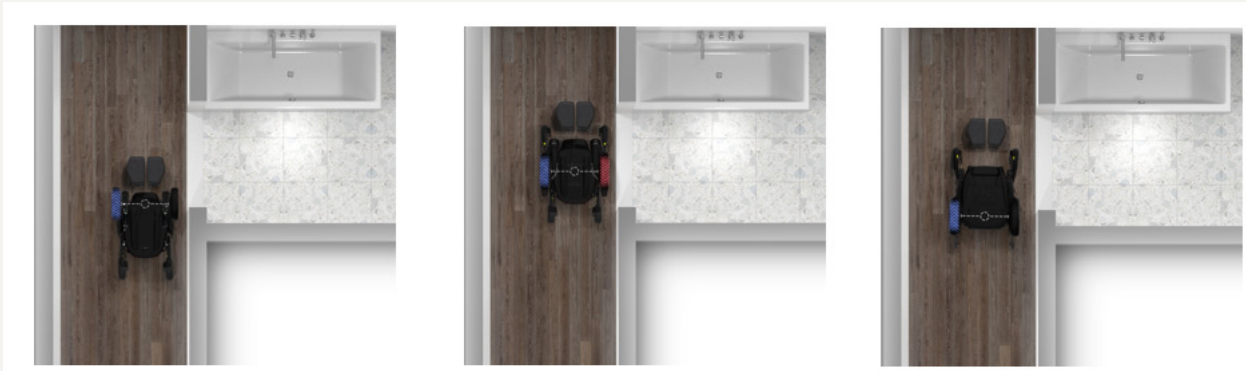

FIGURE 3 Front Turning Aspect. From Left to Right – Front-Wheel Drive, Mid-Wheel Drive, Rear-Wheel Drive

Now, let's look at Figure 3 to help demonstrate L-shaped turns. As we now know, when an individual turns into a room from a hallway, they must understand when and how they can turn based on their drive wheel configuration. An example I often see is when I enter homes in the community and see the doorframe destroyed from the wheelchair scraping during turns. The individual may be turning too soon, creating damage on the inside doorframe or damaging the outside doorframe with the footplate when the wheelchair is not taken out wide enough for the turn. Figure 3 is showing the difference in where the chair is turning and is not a depiction of how we should teach the individual to turn. This figure shows the importance in understanding that each drive wheel configuration drives differently and we should be educating the individual accordingly.

OUTDOOR TERRAIN

Front-Wheel Drive

The front-wheel drive power wheelchair is typically good for maneuverability indoors and optimal for outdoor use. This configuration handles outdoor terrain well for three specific reasons. First, the larger drive wheel is the first wheel to encounter and overcome the uneven terrain or obstacle rather than the smaller casters in the other two configurations. Second, the size of the wheel that is overcoming the obstacle matters. The rule of thumb is that the height of the wheel from the ground to the midpoint of the wheel is the size obstacle that the wheelchair will be able to overcome. Third, the motor, or drive wheel, is in front of the casters. This front drive wheel is moving the wheelchair from the front and pulling the casters behind it. This caster movement is in an upward and forward direction and therefore the casters move up and over obstacles and through various terrains. For individuals looking to go over all terrains, the front-wheel drive wheelchair is often seen as an optimal solution, however suspension is also an important consideration in these environments. Make sure the power wheelchair being considered has adequate suspension for the driver's needs.

Mid-Wheel Drive:

As wheelchairs continue to advance in suspension and design, mid-wheel drive power wheelchairs have improved in navigating outdoor terrain. The mid-wheel drive is known for its ability to navigate in smaller, indoor spaces. This is due to the placement of the drive wheel with the casters in the front and rear. If the casters are the first wheel to contact an obstacle, as the case in mid- and rear-wheel drive, the casters are being pushed forward and downward. This creates a plowing effect and increases the likelihood of becoming stuck in certain situations such as soft ground. Therefore, the wheelchair may have challenges, especially over soft, outdoor terrain. The other challenge with this drive wheel configuration is "high centering." The drive wheel, if not independent from the casters, can lift off of the surface, creating a loss of traction. Once the drive wheel is up off the surface, the wheelchair can no longer move forward. Suspension can drastically change the ability of a wheelchair to overcome obstacles. The problem with high centering has decreased over the years with advancements in suspension but can still be an issue for many individuals utilizing a mid-wheel drive power wheelchair.

Rear-Wheel Drive:

The rear-wheel drive is known for good stability and tracking at high speeds, which makes this a good choice for outdoor mobility.

Because of the large turning radius, the rear-wheel drive may be more functional for outdoor mobility than household mobility. This drive also has casters in front of the drive wheel, however, unlike the mid-wheel drive, the suspension and the position of the drive wheel to the rear of the chair allows for easier navigation over uneven and soft terrain. Obstacle climbing is more challenging. As discussed earlier, the obstacle height that can be overcome is based in part on the size of the front wheel. In the case of the rear-wheel drive, the front wheel will be a caster. The mid-point of the caster from the ground will be about the height that the wheelchair is able to negotiate over obstacles.

COMFORT/DRIVABILITY

For some individuals, the driving performance and ride comfort of the power wheelchair may be more important than navigating through various terrains. This preference may be based on the individual's diagnosis, secondary diagnoses or just personal preference. Factors that can affect the comfort of a wheelchair include the frame set-up, seating system, individual positioning within that seating system, programming, suspension, and more — but for this article we will focus on how the drive wheel configuration can affect the comfort of the individual.

Comfort may be based on the position of the individual in relation to the drive wheel and/or the smoothness of the ride based on only the drive wheel position.

Let's consider how the drive wheel can impact ride smoothness. Although wheelchair suspension will greatly impact the ride smoothness, the drive wheel configuration also has a direct impact. Think about a bump in a sidewalk or a small threshold going into a home. Each of the wheels touching the ground have to go over this bump or threshold. For front- and rear-wheel drive wheelchairs, if the wheels are lined up, this would be two bumps — once for the drive wheels and once for the casters. For the mid-wheel drive, this would be three times that the individual would feel this bump due to two sets of casters. Perhaps for some people this extra bump each time would not make a difference, but for others this could be a deciding factor on drive wheel configuration. Consider an individual that has pain when going over uneven terrain or that has extensor spasms triggered by uneven terrain — we would want to limit the amount of movement the individual experiences with each wheel going over a bump. Now think about the individual that drives with a head array, chin control or sip-n-puff. Perhaps the uneven terrain leads to loss of positioning and loss of access to alternate drive controls. We must consider each person individually, their potential risk for loss of positioning, pain, access to drive controls, etc. … and then decide if the drive wheel configuration needs to be considered to further decrease this risk.

We can address these concerns in other design aspects of the wheelchair. For example, I saw a client who was in a rear-wheel drive power wheelchair. The client was mostly non-verbal and had severe cognitive delays, but he used non-verbal communication and yelled when he was having a negative experience. The client did not want to leave his home. His caregiver reported that each time he went over the front door threshold, he would yell. Once he was over the threshold and outside, then he did not want to go back in. His wheelchair had no suspension and I saw him tossed around with each bump over that threshold. The client trialed a mid-wheel drive power wheelchair and, although this wheelchair had more wheels, it also had appropriate suspension. The client reluctantly attempted the door threshold, but this time without yells of pain. In fact, he turned the chair around and went over the threshold again and again with a smile on his face. We have to consider all the options to achieve identified goals. In this case, the best drive wheel configuration was a mid-wheel drive, however this was primarily due to the available suspension.

TEACHING DRIVING SKILLS

Front-Wheel Drive:

Often, I hear that people stay clear of front-wheel drive because it has a larger turning radius than mid-wheel drive and a higher learning curve. Both of those statements are true; however, there is some research to suggest that front-wheel drive may actually be more intuitive when learning how to drive (Koontz, 2010). The front-wheel drive will have a slightly larger 360-degree turning radius but, as you read above, it has the smallest front turning aspect, which may be utilized more than turning in a full circle. For example, an individual may need to turn into their bedroom from a narrow hallway, but once inside, the room is quite large. The two key points I like to teach someone learning to drive a front-wheel drive wheelchair are:

1. Hug the corner. When going through a doorway the individual will want to "hug" the corner or keep a tight turn.

2. Turn toward the problem. This is my favorite saying I want the individual to remember. For example, when positioned adjacent to a wall/barrier, turn toward the wall/barrier, then slightly reverse to allow the rear casters clearance for turning in the desired direction. This might sound complicated, but if you remember to turn into the problem you will easily maneuver away from the problem.

CONTINUED ON PAGE 40

WHY WE NEED TO CONSIDER THE DRIVE WHEEL ...
(CONTINUED FROM PAGE 39)

Mid-Wheel Drive:

Because mid-wheel drive is often considered more intuitive to drive, we forget that teaching foundational skills is still necessary for driving success. It is important that the driver understand where the drive wheel is located in relation to the themselves. This can help explain turning, where the front-wheel drive may be more intuitive. For mid-wheel drive, it is important to educate the individual on:

1. The front casters. We need to teach the importance of having the casters line up perpendicular, versus parallel, to navigate over an obstacle. When the caster is perpendicular to the obstacle, it can roll up and over, versus if the caster is parallel and can become wedged into the obstacle.

2. Turning with the drive wheel. The individual should line up the drive wheel with the corner for turning around obstacles versus beginning the turn when the front caster reaches the corner or doorway like in a front-wheel drive.

Rear-Wheel Drive:

Rear wheel is challenging when navigating indoors, but it is important to still teach driving in both outdoor and indoor environments. If you have been around wheelchairs for a couple years, you have probably seen drivers who love their rear-wheel drive power wheelchairs and can maneuver in small spaces that would not have seemed possible. Here are a few suggestions when teaching someone to drive a rear-wheel drive:

1. Turning. When turning in a rear-wheel drive, the individual must make a wider turn in order to get around an obstacle.

2. The front casters. Just like with mid-wheel drive, we need to teach the importance of having the casters line up perpendicular versus parallel to navigate over an obstacle.

OTHER CONSIDERATIONS:

Discussing every drive wheel configuration consideration would take several more pages, but here are a few other brief considerations:

Drive Wheel in Relation to the Individual: A person of shorter stature will sit toward the front of the wheelchair, so that a mid-wheel drive may drive like a rear-wheel drive. As the individual grows, their relation to the drive wheel will slowly change. It is important to consider this not only in the initial training, but also when the user is grown.

Transportation Access: I added this one as I see this occur frequently. If the individual has an accessible vehicle and is changing wheelchairs, especially drive wheel configurations, be sure the wheelchair can still be taken in and out of the vehicle before making a final recommendation. If the individual takes public transportation, consider the type of public transportation, the barriers and how to simulate the layout to ensure success. Internal navigation on a public bus has been reported as the biggest challenge for individuals driving a power wheelchair (D'Souza, 2019).

Footplate Size/Position: Caster interference with the footplates is more likely with rear- and mid-wheel drives. The footplate size may be limited as well, to reduce this interference. This will vary by manufacturer; however, some individuals end up driving in a more tilted position or with the legrests in a certain position range for the casters to be able to fully swivel without interfering with the footplates.

Proximity to Surfaces for Function: The casters may prevent the wheelchair from pulling up close to an object for completing functional activities such as transfers or reaching. Front-wheel drive allows for increased knee flexion to move the feet further back and does not have front casters to limit the individual from moving closer to the desired surface (the small wheels present in the front of many front-wheel drive chairs do not extend past the footplates and do not swivel, eliminating any interference).

Power Seat Functions: Not all power seat functions are available on each drive wheel configuration. This will vary from manufacturer to manufacturer, so it is important to determine if a specific power wheelchair supports required functions.

SUMMARY:

Front-Wheel Drive:

The front-wheel drive power wheelchair typically maneuvers well indoors and is optimal for outdoor use. This is because the larger drive wheel is the first wheel to overcome uneven terrain versus the smaller casters. For individuals wanting to drive in all terrains, the front-wheel drive wheelchair offers the strong solution. Front-wheel drive allows the individual to get closer to objects whereas the casters on the mid- and rear-wheel drive will decrease that ability. Another benefit of front-wheel drive is the smoothness of the ride as there are four wheels on the ground versus the six wheels of a mid-wheel drive chair. This is important for individuals

that may easily lose their positioning when going over any uneven terrain. Finally, front-wheel drive has the smallest front turning aspect.

Limitations of front-wheel drive include larger turning radius (as compared to mid-wheel drive), tracking issues (if not addressed through tracking technology), and ensuring proper driving skill training.

Mid-Wheel Drive:

The mid-wheel drive power wheelchair is the most recent option and combines the positive aspects of front-wheel and rear-wheel drive into a hybrid product. Mid-wheel drive has many benefits — the most well-known being a small turning radius and intuitive driving. The mid-wheel drive power wheelchair has the smallest 360 degree turning radius, which can improve maneuverability for many individuals in their home or in smaller spaces. The placement of the drive wheel makes driving more intuitive. Typically, the client will be sitting directly over the drive wheel, which is where the chair will turn/rotate from. However, in some cases the mid-wheel drive may not line up directly below the client and therefore driving may not be as intuitive. Because a mid-wheel drive wheelchair has six wheels on the ground, it offers superior stability including ascending or descending ramps or inclines.

While there are many benefits for mid-wheel drive power wheelchairs, other factors must be considered. Although a superior option for stability, having six wheels on the ground also means that more energy from the ground is transferred to the client in the form of vibration, bumps and jarring. This may reduce ride comfort for the individual. Suspension can decrease these concerns. Finally, mid-wheel drive has the potential for "high centering," particularly on uneven terrain. Newer technologies and suspension can compensate for this risk.

Rear-Wheel Drive:

The rear-wheel drive power wheelchair is known for high performance outdoors and stability at higher speeds due to the driver's weight over the drive wheel in the back. Individuals that use rear-wheel drive often are the strongest advocates for this drive wheel configuration and often experience poor outcomes when changing configurations. Rear-wheel drive is often the easiest option for attendant control as the drive wheel is closest to the attendant in the back of the wheelchair.

While rear-wheel drive has many advantages, the biggest disadvantage is its performance indoors. Due to the large turning radius, rear-wheel drive can often limit access into an individual's home or other indoor environments.

While each drive wheel configuration has its own list of pros and cons, keep in mind that not everyone will benefit from the same drive wheel configuration. It is important to ask questions and complete an evaluation to determine which drive wheel is best for each individual. This includes asking questions about the individual's goals, functional capacity, home environment, community access, vehicle, current wheelchair and a list of requirements for the new wheelchair. Having the individual complete an outcome measure can ensure driver is confident in the use of their power wheelchair. One example is the WheelCon-P, a 59-item confidence questionnaire designed for individuals who drive power wheelchairs (Rushton, 2017). There are many more resources and outcome measures available to help us determine the right solution. Choosing the right drive wheel configuration can further enhance an individual's function, independence and overall quality of life.

CONTACT THE AUTHOR

Rachel may be reached at RACHEL.FABINIAK@PERMOBIL.COM

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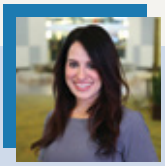
Rachel Fabiniak, PT, DPT, began her studies at the Georgia Institute of Technology, where she graduated in 2009 with her Bachelor of Science in Biology. Fabiniak then went on to receive her Doctorate in Physical Therapy from Emory University in 2013. After receiving her doctorate, Fabiniak went into clinical practice as a physical therapist in the Spinal Cord Injury Day Program at Shepherd Center in Atlanta, Georgia. During Fabiniak's time at Shepherd Center, she developed a passion for seating and mobility, which ultimately led to her career with Permobil. Fabiniak joined Permobil and relocated to Sydney, Australia, in June 2018 as the clinical education specialist for Australia and New Zealand. In February 2020, Fabiniak moved into the role of director of clinical education for Permobil Asia-Pacific.



MAKING THE SWITCH TO A NEW WHEEL CONFIGURATION ON A POWER WHEELCHAIR?

PROCEED WITH CAUTION!

Written by: **BECKY BREAUX, MS, OTR/L, ATP**

The saying goes that sometimes the best lessons in life are learned the hard way. These are the lessons you don't forget and hope not to repeat. Unfortunately, in the field of Complex Rehab Technology (CRT), these "lessons" may also come at a high cost, literally or figuratively, for those team members who participate in the wheelchair provision process. This may include the clinician, the technology supplier, and of most concern, the wheelchair user.

> "THIS TECHNOLOGY ENABLED HIM TO COMMUNICATE WITH HIS EMPLOYER AND HIS CAREGIVERS AND TO BROWSE THE INTERNET FOR SHOPPING AND OTHER HOME MANAGEMENT TASKS."

I was a firsthand party to one of these lessons recently when working as part of an assessment team to help a client determine his best options for a replacement power wheelchair. As a team, we made the risky decision to switch this client from a rear-wheel drive (see Figure 1) to a front-wheel drive (see Figure 2) power wheelchair. Alex (pseudonym) came to our clinic for an evaluation because his existing power wheelchair was very old and requiring expensive repairs repeatedly. In addition, his mouse emulation software was unreliable and failing. In recent years, Alex had come to rely heavily on accessing his smartphone through his joystick. This technology enabled him to communicate with his employer and his caregivers and to browse the internet for shopping and other home management tasks. He hoped to improve his ability to consistently access his smartphone in a replacement power wheelchair.

Alex has a diagnosis of cerebral palsy and has severe muscle spasticity and extensor tone that significantly limits his ability to use his arms and legs. As a result, he operates the power wheelchair with a joystick located at his chin using head movements. Alex used multiple iterations of the same model of power wheelchair for more than 20 years prior to this evaluation. Over the course of those years, he identified very specific seating supports that give him the most control over his head movements, such as custom armrests with upper arm and forearm straps placed at a specific height. Alex also learned how to use the electronic settings on his chair at a highly detailed level.

Given the complexity of his needs and his detailed knowledge of the power wheelchair system, we were hesitant to consider a different wheel configuration. Unfortunately, replacing Alex's chair with the same, but most updated model of power wheelchair would not resolve his problems with mouse emulation. Given

FIGURE 1 Rear-Wheel Drive Configuration: The drive wheels are in the back.

FIGURE 1 Front-Wheel Configuration: The drive wheels are in the front.

FIGURE 3 Mid-Wheel Configuration: The drive wheels are in the middle.

the importance of this goal, we decided to consider other power wheelchair options that also had reliable mouse emulation technology. We considered other models of rear-wheel drive power wheelchairs first, to minimize changes in how the chair would turn, function and travel at high speeds, as well as handle on rough terrain. Unfortunately, we had to rule out all other rear-wheel base options for various reasons, such as an armrest style that would not meet his unique needs or limitations related to power tilt and recline capability.

Next, we considered mid-wheel drive options (see Figure 3) because we believed changing from a rear-wheel base to a mid-wheel base would be less drastic compared to shifting to a front-wheel base. While the rear-wheel and mid-wheel bases certainly perform differently, the differences in turning radius and drive characteristics, particularly at high speeds, would require a smaller learning curve than would a shift to a front-wheel drive. But once again, we had to rule out the mid-wheel options because this wheel base would not adequately navigate the rough terrain Alex regularly encounters.

As a result, we decided to consider a front-wheel drive base, knowing this would require a larger learning curve for Alex, who had used the rear-wheel model successfully for so many years. Our experiences taught us that Alex learns quickly and is very resourceful and adaptive. Alex also expressed a high degree of interest in trying a different wheel base configuration.

Although not easy, we arranged for the wheelchair manufacturer of a front-wheel drive power wheelchair to set up a demo chair for Alex to use on a trial basis. We did our best to simulate his seating, mount a chin joystick in the proper location and give him the armrest support he requires. It was not perfect but approximated his needs for the purpose of a limited equipment trial. Alex took the chair for an extended period and drove it inside the clinic building and also outside in the immediate community. He completed the trial feeling confident that the front-wheel drive base would work well for him. Although we were nervous about recommending a different wheel configuration, we were reassured by Alex's confidence. We proceeded with making specifications for a replacement power wheelchair with a front-wheel drive configuration. The new chair was approved by the insurance provider three months later.

Once the chair was approved and ordered, Alex returned to our clinic for the fit and delivery. This session was very complex and time-consuming, taking nearly six hours to complete. At this session, multiple people were needed to help install the seating system, set-up and program the chin joystick and power seat functions, integrate Alex's smartphone with the Bluetooth mouse emulator, and provide training and support to Alex in the operation of the new power wheelchair. Alex left our clinic very happy and excited with his new device. Unfortunately, his enthusiasm for the new chair was short-lived.

In less than 48 hours, we received a call from Alex that confirmed our worst fears. Alex contacted me and the technology supplier to let us know he could not accept the new power wheelchair. He had tried to use the system in his home and community but identified several problems that he felt were unacceptable. Operating the power wheelchair with this configuration was too difficult in his home given the differences in turning characteristics and the location of the casters. He also complained that he felt very unsafe and unstable when operating the chair at high speeds because he was not accustomed to making course corrections with this wheel base configuration. The chair performed differently, and he realized that these differences were much more significant than he originally recognized. He knew without a doubt that the power wheelchair would not work for him.

Alex was willing to start the evaluation process over again, even though it would be several months before he could receive a replacement device. He wanted to replace his power wheelchair with the same model as his current chair, knowing that he would have to forfeit his goals for mouse emulation. As a result, we started the assessment process over again. It took nearly 18 months after the original evaluation session for Alex to receive his replacement power wheelchair. Unfortunately, he had to endure multiple equipment problems while waiting for a new system. In addition, we spent countless hours as a team engaged in evaluations, equipment trials,

"UNFORTUNATELY, HE HAD TO ENDURE MULTIPLE EQUIPMENT PROBLEMS WHILE WAITING FOR A NEW SYSTEM. IN ADDITION, WE SPENT COUNTLESS HOURS AS A TEAM ENGAGED IN EVALUATIONS, EQUIPMENT TRIALS, AND FITTINGS THAT COULD HAVE BEEN AVOIDED."

CONTINUED ON PAGE 44

MAKING THE SWITCH ...
(CONTINUED FROM PAGE 43)

and fittings that could have been avoided. The technology supplier also incurred the costs associated with taking a power wheelchair back after it is refused. For all parties involved, and especially for Alex, the costs associated with this mistake were significant.

In hindsight, making the shift from a rear-wheel base to a front-wheel base was much more risky than we originally suspected. Based on this experience, I believe we should have made arrangements for a demo chair that Alex could have used beyond just a few hours. He needed a trial device that he could use in all of his home and community environments over an extended period. Using this device in his natural environments was especially important so that Alex could recognize the idiosyncrasies that a change in wheel base configuration could have on his daily functioning. At the time, the thought of setting up a demo chair that would meet his very complex needs for an extended period seemed overwhelming and too difficult.

In the end, we learned that thoroughly exploring the ramifications of a change in wheel base configuration, especially one of this magnitude, is a crucial step no matter how time consuming or challenging it might seem to set up a trial. Ultimately, we were able to get a power wheelchair that meets Alex's mobility needs, but it was disappointing that he could not access his smartphone as he had hoped. Fortunately, smartphone technologies have improved in recent years, and Alex is now able to operate his phone using voice commands for most of his important tasks. Nevertheless, this situation highlights the need for manufacturers to offer reliable mouse emulation technologies on all wheel base styles.

While this was a lesson we learned the hard way, our experience can hopefully help others take pause before recommending a dramatic change in the configuration of a user's wheel base. It is certain that every person is unique, and making this type of change will be much easier for some wheelchair users than others, but the potential negative consequences are not to be ignored. Factors that likely made this shift particularly difficult for Alex include his extensive use of a rear-wheel drive system over many years, and his use of an alternative drive control method.

"FORTUNATELY, SMARTPHONE TECHNOLOGIES HAVE IMPROVED IN RECENT YEARS AND ALEX IS NOW ABLE TO OPERATE HIS PHONE USING VOICE COMMANDS FOR MOST OF HIS IMPORTANT TASKS."

Using neck movements to operate the chair is a challenging task as the user can only make small and unvaried motor movements with these muscles (compared to a more traditional method of driving, such as using the hand). For Alex, learning a new way to turn the chair and correct his course was challenging under these circumstances. Regardless of the complexity of the user, however, I will always strive for an extended trial in the natural environment for all future clients who are considering a significant change in wheel base configuration.

CONTACT THE AUTHORS
Becky may be reached at
BECKY.BREAUX@UCDENVER.EDU

Becky Breaux, MS, OTR/L, ATP, is a senior research instructor and assistive technology specialist with the Center for Inclusive Design and Engineering in the Department of Bioengineering at the University of Colorado Denver, Anschutz Medical Campus. She has more than 25 years of experience as an occupational therapist and educator. She currently works as an assistive technology specialist, providing wheelchair seating and mobility and motor access evaluations for people of all ages with complex rehabilitation technology needs.

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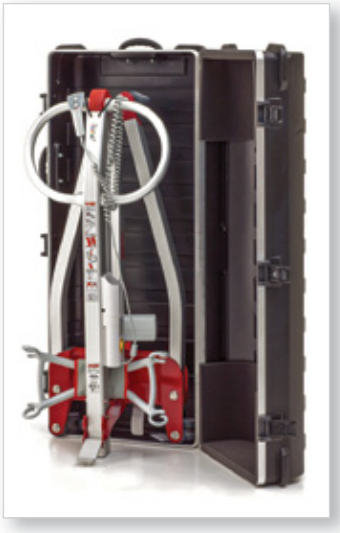

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WHY IS IT NEEDED VS. WHAT DOES IT DO?

Written by: **CLAUDIA AMORTEGUI, PRESIDENT, THE ORION CONSULTING GROUP, INC.**

For more years than I care to admit, I have been training and talking about justification for the appropriate coverage and payment of Complex Rehab Technology (CRT). This has not only been for wheelchair bases, but more importantly for all related components billed separately. However, it seems people still have a hard time understanding why some components are denied on their claims or prior authorizations. My first response to these inquiries is "let me see all of your documentation."

Much of the documentation I see varies; but this response could also change based on the audience. If speaking to one company, or even one ATP, the documentation could look very much the same — especially for similar wheelchair orders. Then again for others, everything differs based on the referral.

For the most part, most people concentrate their efforts on justifying the wheelchair base. This is all well and good, but it is not enough even for the most basic standard wheelchairs. The only time this would be sufficient is if the only item being billed was the wheelchair base itself. As we all know, that is rarely the case. I can honestly say I have never seen this even with a standard K0001 manual wheelchair. There are always at least one or two additional components ordered.

The components, also known as those options/accessories that are separately billed, are where we need to focus. I cannot tell you how many justifications I read that simply tell me what the item does and not why that specific client needs the item. The best example of this is the thru-drive control on a power wheelchair. I see these codes (E2310/E2311) billed on the majority of the Group 2 or Group 3 power wheelchairs with single or multiple power options. The problem is when I read the individual justification it typically states one of two things: 1) this allows the client to operate their power seating system through the joystick/drive control and/or 2) the manufacturer requires this item. If am in the shoes of the funding source, neither of these justifications would be enough to obtain an approval or pass an audit.

I know Medicare currently does not supplier individual line item approvals within their power wheelchair prior authorization process, but this does not mean the supplier is not accountable for having the qualifying justification.

Medicare policy states: "The supplier should also obtain as much documentation from the patient's medical record to assure themselves that coverage criteria for an item have been met. If the information in the patient's medical record does not adequately

> "THANKFULLY, MOST INSURERS DO PROVIDE A LINE-BY-LINE APPROVAL/DENIAL DURING THE PRIOR AUTHORIZATION PROCESS. BUT AS NOTED EARLIER, MEDICARE DOES NOT DO THIS THIS FOR POWER WHEELCHAIRS."

support the medical necessity for the item, the supplier is liable for the dollar amount involved unless a properly executed Advance Beneficiary Notice of Noncoverage (ABN) of possible denial has been obtained."

Not surprisingly, every insurance requires supporting clinical justification for every item billed. Simply put, payment is being requested; therefore, there should be something to support and allow payment. I know there are suppliers and clinicians who cringe at the thought of more paperwork, but quite honestly this isn't any more than what is being done; it is just more detailed. This also doesn't mean it needs to be a mountain of words for each item. Sometimes less is more – again, it's the details that count.

For a couple items I expect to see fairly the same reasoning based on what it does, and why it's needed. These include anti-tips on manual wheelchairs and heel loops on both manual and power chairs.

One other code, E2313 (harness for an upgrade to the expandable controller on a power wheelchair), is really the only "automatic" item that does not necessarily require justification. If an end-user qualifies for the expandable electronics (E2377), they qualify for the harness. The two codes go together. On the initial issue of a power wheelchair you will either have both codes or none at all.

Back to the thru-drive control (E2310/E2311). Most people know what it does; it is even described within the policy. But what the clinician needs to focus on is why an item is being selected for the individual client. In this case, the documentation needs to answer why a separate switch will not meet the end-user's medical needs. Some of these details would likely differ for varying cases. If you are the supplier, please be sure the appropriate person/people in your company are reading all the documentation and verifying each item has detailed justification for the client and they are not just reading about the item itself.

Thankfully, most insurers do provide a line-by-line approval/denial during the prior authorization process. But as noted earlier, Medicare does not do this for power wheelchairs. A supplier can assume if a power base is approved, any associated power options will also be approved. Anything more than those items can be reviewed in a post-pay audit. Suppliers need to protect themselves and verify all justification supports the need for each item. When the supplier bills each line item with the KX modifier, they are telling Medicare the item meets the coverage criteria and they have all the required documentation on hand to support the medical need.

Again, justification cannot be the manufacturer requires the item. In the eyes of the insurers, billing appropriately is the responsibility of the supplier not of the manufacturer.

CONTACT THE AUTHOR
Claudia may be reached at
INFO@ORIONREIMBURSEMENT.COM

Claudia Amortegui has a Master of Business Administration and more than 20 years of experience in the DMEPOS industry. Her experience comes from having worked on all sides of the industry, including the DMEPOS Medicare contractor, supplier, manufacturer and consultant. For many of these years Amortegui has focused on the rehabilitation side of the industry. Her work has allowed her to understand the different nuances of complex rehab versus standard DME. This rare combination of industry experiences enables Amortegui and her team at The Orion Group to assist ATPs, referrals, reimbursement staff and funding sources in understanding the reimbursement process as it relates to Complex Rehab Technology.

ONE PICTURE IS WORTH TEN THOUSAND WORDS

Written by: **WEESIE WALKER, ATP/SMS, EXECUTIVE DIRECTOR OF NRRTS**

The second edition of "COMPLEX" by Mark Sullivan will soon be on the NRRTS Website. Through his camera lens, Mark captures the very essence of Complex Rehab Technology (CRT).

Not only is it an interesting read, it is also a valuable tool to educate people about why CRT is critical. Most RTSs know it is virtually impossible to describe their profession. There are many different challenges in our field. It can be access to the right technology. It can be access to the right clinical team. It can be funding limitations. There are so many barriers but the need for CRT will never go away.

> "THERE ARE MANY DIFFERENT CHALLENGES IN OUR FIELD. IT CAN BE ACCESS TO THE RIGHT TECHNOLOGY. IT CAN BE ACCESS TO THE RIGHT CLINICAL TEAM."

Advocacy and awareness are everyone's responsibility. This book gives you the means to quickly educate anyone about all reasons that we continue to fight!

This is my favorite picture in the book. It is not what we see, but what she sees.

Perhaps, this picture is worth 100,000 thousand words.

CONTACT THE AUTHOR
Weesie may be reached at WWALKER@NRRTS.ORG

Weesie Walker, ATP/SMS, is the executive director of NRRTS. She has more than 25 years of experience as a Complex Rehab Technology supplier. She has served on the NRRTS and GAMES board of directors and the Professional Standards Board of RESNA. Throughout her career, Walker has worked to advocate for professional suppliers and the consumers they serve. She has presented at the Canadian Seating Symposium, RESNA Conference, AOTA Conference, Medtrade, ISS and the NSM Symposium. Walker is a NRRTS Fellow.

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Congratulations to NRRTS Registrants recently awarded the CRTS® credential. A CRTS® receives a lapel pin signifying CRTS® or Certified Rehabilitation Technology Supplier® status and guidelines about the correct use of the credential. NAMES INCLUDED ARE FROM JUNE 27, 2020, THROUGH SEPT. 10, 2020.

Christian Stephens, ATP, CRTS®
Freedom Mobility Center
Mooresville, NC

Jamie Patton, ATP, CRTS®
National Seating & Mobility, Inc.
Earth City, MO

Julie McCallum, ATP, CRTS®
National Seating & Mobility, Inc.
LaCrosse, WI

Kenneth Broz, ATP, CRTS®
Health Aid of Ohio
Parma, OH

Neal Clay Hall, ATP, CRTS®
Central Mobility
Tavares, FL

Nicholas Hayden, ATP, CRTS®
National Seating & Mobility, Inc.
Cincinnati, OH

Scott Duelley, ATP, CRTS®
Health Aid of Ohio
Columbus, OH

Timothy Pavlakovich, ATP, CRTS®
National Seating & Mobility, Inc.
Savannah, GA

FORMER NRRTS REGISTRANTS

The NRRTS Board determined RRTS® and CRTS® should know who has maintained his/her registration in NRRTS, and who has not.
NAMES INCLUDED ARE FROM JUNE 27, 2020 THROUGH SEPT. 10, 2020.

FOR AN UP-TO-DATE VERIFICATION ON REGISTRANTS, VISIT WWW.NRRTS.ORG, UPDATED DAILY.

Randall J. Brethauer
Joseph R. Hein
Robert B. Brewer, ATP
Richard Evan Franklin
Jamie Magar
Candace Poe, MSW, ATP
Anthony Boudreau, ATP
Kevin Morales
Cassie Grimes, OTD,OTR/L

RENEWED NRRTS REGISTRANTS

The following individuals renewed their registry with NRRTS between June 27 through Sept 9, 2020.

PLEASE NOTE **IF YOU RENEWED AFTER SEPT 9,** YOUR NAME WILL APPEAR IN A FUTURE ISSUE OF DIRECTIONS.
IF YOU RENEWED PRIOR TO JUNE 27, YOUR NAME IS IN A PREVIOUS ISSUE OF DIRECTIONS.

FOR AN UP-TO-DATE VERIFICATION ON REGISTRANTS, PLEASE VISIT WWW.NRRTS.ORG, WHICH IS UPDATED DAILY.

Alan Derr, ATP, CRTS®
Albert Alvarado, ATP, CRTS®
Albert Baxter, ATP, CRTS®
Alex Biello, ATP, CRTS®
Amanda Bult, RRTS®
Amy Johnson, ATP, CRTS®
Angela Naranjo, ATP, CRTS®
Anthony B. Nunez, RRTS®
Barney Deichert, ATP, CRTS®
Benjamin Jones, RRTS®
Bennie G. Jones, ATP, CRTS®
Bob G. Poole, ATP, CRTS®
Bradley R. Gooch, MBA, ATP, CRTS®
Brennan Arbogast, ATP, CRTS®
Brett A. Watson, ATP, CRTS®
Brian Bucher, ATP, CRTS®
Brian Coltman, ATP/SMS, CRTS®
Britt Sitzes, ATP, CRTS®
Bryan Benton, ATP, CRTS®
Carlos M. Collazo, ATP, CRTS®
Chad Jones, ATP, CRTS®
Charles E. Pfeifer, ATP, CRTS®
Chris Rogers, ATP, CRTS®
Chuck Harris, ATP, CRTS®
Clayton D. Cole, ATP, CRTS®
Coleman R Mansfield, ATP/SMS, CRTS®
Connie Divine, ATP, CRTS®
Dan Thole, ATP, CRTS®
Daniel Hamel, ATP, CRTS®
David Wix, ATP, CRTS®
David St. Louis, ATP, CRTS®
David Anderson, ATP, CRTS®
David Morasso, ATP, CRTS®
David Bachelder, ATP, CRTS®
David Adcox, ATP, CRTS®
David C. Vaughan, ATP, CRTS®
Dawn Ruth-Larson, ATP, CRTS®
Derek W.M. Ng, ATP, CRTS®
Donald W Callaway, ATP, CRTS®
Douglas Mitchell Livermore, ATP, CRTS®
Dustin Swartz, ATP, CRTS®
Efrain R. Guerrero, QRP, ATP, CRTS®
Eric Sale, ATP, CRTS®
Eric Dion, RRTS®
Eric T. Smith, ATP, CRTS®
Frank A. Lane, ATP, CRTS®
Gerald Erkhart, ATP, CRTS®
Gregg Stevens, ATP, CRTS®
Gregg M. Platis, ATP, CRTS®
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James Blair, ATP, CRTS®
James Hearn, ATP, CRTS®
James C. Bond, ATP, CRTS®
James S. Jones, ATP, CRTS®
Jarrod Rowles, ATP/SMS, CRTS®
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Jason Lang, ATP, CRTS®
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Jason S. Lovato, ATP, CRTS®
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Jeffrey C. Ray, ATP, CRTS®
Jim Royan, RRTS®
Jody Jesus, ATP, RRTS®
Joe Wood, RRTS®
Joe Prieto, ATP, CRTS®
Jonathan C Adams, ATP, CRTS®
Jordan Joslin, ATP/SMS, CRTS®
Jose Escobedo, ATP, CRTS®
Joseph Vance Bryant, ATP, CRTS®
Joshua Janiszewski, ATP, CRTS®
Julian C. Fiske, ATP, CRTS®
Julie McCallum, ATP, CRTS®
K. Brandon Cowart, ATP, CRTS®
Karen Bussey, ATP, CRTS®
Kathryn Roberts, MS, ATP, CRTS®
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Kevin Ross-Jenkinson, ATP, CRTS®
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Kort St. John, BS, ATP, CRTS®
Kristen Maak, OTR/L, ATP, CRTS®
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Lyle Haynes, ATP, CRTS®
Lynn Ferguson, ATP, CRTS®
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Mary Hitt Young, ATP, CRTS®
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Sean Auter, ATP, CRTS®
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Shean Wages, ATP, RRTS®
Stacy Lewis, ATP, CRTS®
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Toby Bergantino, ATP, CRTS®
Walter Myrdal, ATP, CRTS®
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