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COVID-25??

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

COVID-25 is similar, in some ways, to the "Freshman 20," the 20 pounds gained by many during their freshman year at college.

We started using the term COVID-25, in the clinics I work at, for the weight gain many consumers, ATPs, and clinicians have experienced during the past year. As clinics have slowly begun to open, some consumers have had significant weight gain … enough to make the seating and mobility intervention no longer appropriate.

COVID-25 has also come to describe a myriad of comorbidities. Depression, anxiety, loneliness, apprehension, grief and functional loss. For some consumers, the visit to a clinic is the first human interaction with anyone outside of their PCAs. Many of these consumers have not even seen their family, their children or grandchildren in a year. The uneasiness of coming to clinic is soon replaced by active conversation that is sometimes hard to corral.

WHAT STARTED OUT AS A POTENTIAL CATASTROPHE, ENDS UP AN INCREDIBLE SUCCESS. I DO NOT THINK WE GIVE OURSELVES ENOUGH CREDIT FOR OUR ABILITIES IN PROBLEM- SOLVING AND IN GETTING THE JOB DONE.

Weight gain and functional loss are the most impactful to the provision of the seating and mobility interventions. Fortunately, most Complex Rehab Technology (CRT) has enough flexibility that we can make the necessary changes to ensure a proper fit right in clinic. Except when we cannot. The incredible skill, caring and MacGyver abilities of those of us involved in CRT, come into play and magic happens.

What started out as a potential catastrophe, ends up an incredible success. I do not think we give ourselves enough credit for our abilities in problem-solving and in getting the job done. Most funding sources certainly do not give us any credit for our abilities. After all, it is just a wheelchair, right? It is just a wheelchair until you need the intervention yourself. It seems only then do people outside our very small community realize the value of CRT and the skill behind its application. I do not know how we change the perception, but it's important that we do.

We appear to be moving closer to normalcy. The vaccine efforts are changing the landscape by the hour. While it may be difficult to navigate appointment scheduling, the very important "herd immunity" seems to be within reach.

With closer to normal in mind, I went back in the CRT time machine to pick out another quote from the past. Here it is: "You're fed up, your consumers are fed up, the case manager is under the gun, our state and federal legislators want budget cuts — and seem to believe that rehabilitation technology is the place to find them." The answer is below. It is very, very funny how the more things change, the more they stay the same.

I hope you, your family and all of those you care for, remain safe and healthy.

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Gerry Dickerson, ATP, CRTS® is a 40-plus year veteran of the DME and CRT Industry. 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.

A: Simon Margolis, as president of NRRTS
NRRTS News, Summer 1995

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NEVER GIVE UP

Written by: **ROSA WALSTON LATIMER**

What would you do if after five unsuccessful knee replacements, you face the realization that amputation of your leg might be the final solution? If you are Jason Lilley, a 42-year-old honorably discharged Marine and decorated combat veteran, you embrace the possibility with optimism.

"Of course, the decision to have my leg amputated above the knee didn't come easy," Jason said. "I had been through so many surgeries, I was ready to take this drastic step, but I took some time to discuss the possibility with others." Jason's experience with knee surgeries began during his senior year in high school when he tore cartilage in his knee and underwent surgery.

"Through the past 20 years, insidious pain has been ever present," Jason said. "When I stood up, it was inevitable that I was going to hurt. Now, to be free of that pain it is as though a heavy fog has been cleared from my brain. It is super refreshing to get up in the morning and begin my day without dealing with intravenous antibiotics."

Never allowing the many physical setbacks he experienced to limit him, Jason has led a very productive, fulfilling life. "After I graduated from high school I went to college for a couple of years. Then, I moved to Milan, Italy, and worked in an American restaurant for two years," Jason said. "When I came back to the United States, I intended to go back to college but decided to do something that would give me more direction." In what seems to be typical "Jason style," he chose the Marines, because he felt it was the most demanding military branch.

After a medical separation from the Marines in 2007, Jason went back to school and earned a Bachelor of Science in Professional Aeronautics from Embry Riddle Aeronautical University. Later, Jason earned a master's degree in organizational leadership. He has plans to pursue a doctorate with the hopes of someday leading a corporation. "More education will depend on what my next work situation is," Jason said. "I've been on medical leave from my most recent employer, and they are trying to find a place for me to return. If that works out, I'd be happy as it is a great company, and they have been very tolerant of my situation. But I'll understand if there isn't a place for me, and I'm beginning to look for other possibilities, so I'll be prepared regardless of what happens."

Jason's stint with the Marine Corps deeply affected his life and helped prepare him for crucial decisions that would come. "In 2002, soon after I was stationed with my unit in California, I met Michelle, who would become my wife. My unit was scheduled to go to Okinawa, Japan. Instead, we were sent to start the invasion of the war in Iraq."

Jason Lilley (front) with fellow Marines in downtown Baghdad, Iraq, 2003

At age 22, soon after his marriage, Jason went to war and spent most of his time as a door gunner on a "Huey" helicopter. "We always trained for the fight and readiness for that event was our focus, but now I was facing the real thing. As much as you can practice, it is a different story when you see bullets and RPGs [rocket-propelled grenades] coming at you."

After six months in Iraq, Jason returned home for a few weeks and then spent six months in Japan. "Our first year of marriage was mostly random phone calls and emails," he said. "When I came home, I struggled. I did not experience PTSD, but I had become accustomed to the intense pace of war and always being on high alert. The pace of my life dropped 50%, and still, I continued to overanalyze and overthink because that is the thought process when you are flying a mission." Ignoring the stigma that was prevalent in the military, Jason sought help. "I went through a significant amount of counseling to adjust," Lilley said. "Michelle and I went to counseling together and had to get reacquainted because, in a sense, I wasn't the same person she married. Mentally I became stronger and adjusted into life without firepower. I was happy in my marriage. Within a couple of years, we had a son and a daughter. I had everything I had been looking for when I joined the Marine Corps. Jason used his experience to encourage other Marines to seek counseling. "I continue to attend counseling regularly and am confident it helps me deal with whatever comes my way."

Michelle and Jason Lilley

(l to r) Austin, Michelle, Mackenzie, Jason, and (front) Madison Lilley finish a 5K Fun Run. Because of complications from knee replacements, Jason finished the race using his walker.

"I WANTED THE AMPUTATION AFTER MY THIRD KNEE REPLACEMENT FAILED, BUT THE DOCTORS SAID, 'NO.' THEY BELIEVED THERE WERE STILL THINGS THEY COULD DO WITHOUT REMOVING MY LEG. I HAD TWO MORE FAILED KNEE REPLACEMENTS AND I SAID, 'I'M DONE!' I STARTED DISCUSSING THE POSSIBILITY WITH MICHELLE, ANOTHER DOCTOR AND OTHER AMPUTEES."

"My resilience comes mostly from my time in the Marines. Our motto is, semper fidelis — always faithful. Don't give up," he said. "Military service also gave me more confidence and taught me leadership skills such as how to communicate effectively." That resiliency brought him through 29 surgeries; most were on his knee, and others were on his ankle, both shoulders and an elbow. "I wanted the amputation after my third knee replacement failed, but the doctors said, 'No.' They believed there were still things they could do without removing my leg. I had two more failed knee replacements, and I said, 'I'm done!' I started discussing the possibility with Michelle, another doctor and other amputees." Michelle wasn't initially as comfortable with the decision to amputate as Jason was. "She was seeing it from a different perspective, but she supported my decision."

"Jason's decision to amputate his leg was, as you can imagine, very difficult for me," she said. "I couldn't see how this was going to be a good thing. But Jason felt so strongly about it and comfortable with the outcome that I was certain I could trust his decision. I knew he wouldn't do anything that wasn't good for all five of us as a family.

"I've always known that Jason was mentally strong — more than anyone I've encountered; he has the ability to put mind over matter. So many times, we would go to another doctor's appointment and there would be something else wrong. Still, there he was, smiling and going forward with hope. He was enduring a great deal of pain, but there was very little, if any, complaining from him."

As difficult as it was to choose amputation over another knee replacement, for her the toughest moment was when she first saw him after the surgery. "There was no way to prepare for the results because you don't expect someone you love to lose a leg. Preparing for the surgery was hard and sitting in the hospital waiting was hard. Because of the pandemic, I was alone. But, when they wheeled him into the room and I saw the outline of just one leg under the sheet, that was by far the hardest time for me. I did not even look straight at Jason for a little bit, because I had to keep myself together. Nothing could prepare me for that moment, but I got through it. We got through it."

The couple is emphatic about how helpful, and supportive friends and family have been throughout the hard times. "The help of my parents, Michelle's parents and her sisters were awesome," Lilley said. "When Michelle had to go back to work after my last surgery, members of her family, with no hesitation, came from California and stayed a week at a time to help during my recovery," Jason said.

Michelle also expressed a great appreciation for the help of her family and, in particular, Jason's mother, Ann. "The day before one of Jason's serious surgeries, I got sick with the flu. I was in bed with a fever and could not do anything. Ann took over and made sure everything was taken care of," Michelle said. "There were many friends who helped in so many ways. Three friends — Melissa, Rainnie and Tori — stepped in just when we need them the most. They have coordinated meals for us, collected gift cards to help when we were in Dallas for surgeries, and there are times when they just get me out of the house for a break."

CONTINUED ON PAGE 10

NEVER GIVE UP
(CONTINUED FROM PAGE 9)

Ultimately, the couple found their greatest strength in each other. "Michelle is my strongest support," Lilley said. "Having her beside me is a major part of my successful recovery. She is a quiet fighter with an internal strength unmatched by anyone I've met." She depends on Jason's resiliency and positive attitude to help her through tough times. "I don't know how he has stayed so positive when we kept getting negative news," she said. "Of course, we had our bad days, separately and as a couple, but with Jason it always comes back to mind over matter. He focuses on the positives."

The Lilley Family: (l to r) Austin, Michelle, Jason, and (front) Madison

The Lilleys are mindful of how these difficult years might affect their children. "I hope our kids have gained strength from all we've been through," Jason said. "I believe they realize that even though times get tough, we don't give up. My story is unique, and I am smiling. Does that mean everything is OK? No, but I am better than I was. By our example, I believe they have learned they can get through challenging times and come out on the other side even stronger."

Now that Jason is using his prosthetic efficiently and the couple is looking ahead, they see some things a little differently. "The first thing I want is a boring, normal life," Michelle said. "I want to be 'just' the Lilley family again, not the Lilley family and their situation. I look forward to weekends with nothing to do." She was not surprised that her husband's goals were very different.

"For so long, infections have ravaged my body, and I have been on so many antibiotics; once I am healthy again, I want to get back into the gym. One of my goals is to finish a half Ironman. I want to be more active with my kids and play football in the street." The Lilleys have three children: Austin, 15; Mackenzie, 14; and Madison, 10. "We love to travel and enjoy camping, going to the lake — anything we can do outdoors together.

Jason Lilley leaving the hospital after his leg amputation, September 2020.

Halloween 2020: Jason, Austin, and Michelle Lilley

Just as the couple has navigated successfully together through 18 years of marriage, their commitment to each other will continue to see them through. "He's told me all kinds of things he wants to do, and I look forward to seeing him do it all," she said. "His sense of humor is what first attracted me, and I appreciate his enthusiasm. It is exciting to think about planning a vacation without considering his limitations. We can just do what we want to do. It is amazing there is a light at the end of this long, dark tunnel. It is not really a light. It is a sunburst popping out confetti!"

"The decision to cut my leg off gave me more control over my future," Jason said. "The mental fog that comes from enduring constant pain is lifting away. We have lived with all of this for a long time and now we are near the end. I am close to going back to work. I am walking confidently with the prosthetic and regaining my strength. I am driving and getting out more. Losing my leg created a difficult situation that requires adjustments in my life and the life of my family, but that's not going to stop us from enjoying life."

CONTACT
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Jason Lilley is an amputee who lives in Lubbock, Texas.

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BUILD TO THE NEED

Written by: **ROSA WALSTON LATIMER**

Tom Borcherding, described as a "seasoned" complex rehab executive, brings his experience and expertise to a start-up company based in Nashville, Tennessee. The company, LUCI, developed a hardware/software platform that mounts onto a power wheelchair and prevents tips, collisions and falls. The product also monitors and alerts users and caregivers to situations such as possible tipping or low battery. Inspiration for the technology is very personal to the founders of LUCI, brothers Barry Dean and Jered Dean, who wanted a better, safer and more inclusive wheelchair experience for Barry's daughter, Katherine. Barry is a singer/songwriter who lives in Nashville, and Jered is an engineer who lives in Colorado. Their knowledge of the Complex Rehab Technology (CRT) industry is from the perspective of a parent/caregiver. And that is where Borcherding fits so well into the story and the introduction of LUCI.

TO BEGIN, GIVE US AN OVERVIEW OF YOUR EXTENSIVE EXPERIENCE IN COMPLEX REHAB TECHNOLOGY.

Starting in the mid-1980s, I have spent my entire career in the CRT industry. I had a humble beginning working in the Chicago warehouse and then in customer service for Everest & Jennings, at that time the largest wheelchair company in the world. Within a year, I was promoted to a sales territory position based in Cincinnati, Ohio, and eventually moved to a regional rehab manager position based in southern California. In 1993, I joined ROHO as the western region manager. I held several sales leadership positions with the company and, in 2009, was named president. When Permobil acquired ROHO in 2015, I joined the global management team. After leading the Seating and Positioning Division for five years, I left Permobil in early 2020 and was fortunate to have the opportunity to join LUCI later in the year.

WOULD YOU TELL US MORE ABOUT LUCI AND YOUR RESPONSIBILITIES WITH THIS NEW COMPANY?

The focus of LUCI is to enhance the experience of driving a power wheelchair, allowing the rider to feel safe, secure, independent and confident. Essentially, this product is a new idea for the CRT industry. Some of the technology you see in today's cars, such as lane departure warnings and collision avoidance, is now considered standard in automobiles. Power wheelchairs do not yet have similar safety platforms. If that is the expected standard of safety for modern cars, why wouldn't users of power wheelchairs and their families have that same expectation? As a society, why wouldn't we provide wheelchair riders the same access to technology to protect them and give them a better driving experience? I wouldn't send my teenagers out to drive a circa '80s vehicle without airbags or antilock brakes. However, in a sense, that is what we are doing today in the world of CRT power wheelchairs. The safety mechanism is a seatbelt. There is a need for safety technology. LUCI's goal is to build a product to meet that need.

(l to r) Craig Rowitz, Care Medical; Tom Borcherding, LUCI; and Matt Misali, Ki Mobility

(l to r) Tom Borcherding, Cindy Smith, Pat Cody, Gail Gilinsky, and Barry Dean

(l to r) Tom Borcherding with Larry Jackson and Andy O'Sullivan

Initially, I was consulting with this startup company helping LUCI leadership understand how our industry works and how stakeholders interface with one another. After working with LUCI in this capacity for a short time, they offered me a position on the leadership team as the senior vice president of business development. My responsibilities include developing our "go to market" strategy for the United States and eventually international markets, building and leading a U.S. sales organization, and introducing LUCI and the company leadership to key relationships. We are currently in our commercial launch phase in the U.S. Our sales organization is trained, and we are starting in-services, product demonstrations and building our partnerships with suppliers.

I love being back in sales and helping introduce this new, exciting technology that our field has not seen before. Starting from ground zero in October 2020, LUCI now has a nationally recognized network of independent representatives with coverage across the country almost complete. We have also partnered with Permobil for sales coverage to the VA. We have come a long way in just a few months!

WHAT HAVE BEEN SOME OF YOUR MOST SIGNIFICANT CHALLENGES SINCE YOU BEGAN WORKING WITH LUCI?

My biggest challenge is determining how to introduce a new product effectively in a world impacted by COVID-19. I have gotten lots of practice on virtual platforms, learning the skill of doing product training and demonstrations multiple times each day. The trick has been to bridge the gap between a virtual introduction and finding an opportunity to experience driving a power chair with LUCI, even if it means meeting in a parking lot, hotel lobby or even my back patio.

Another challenge is to quickly, yet professionally, train over 30 independent representatives and the team at Permobil covering the VA market. It is essential for them to understand and buy into the passion that drives the company. We also need to be sure the reps have the technical skills to demonstrate LUCI effectively. Our responsibility is to make sure we are providing them the resources and education needed to feel confident when introducing their customers to this new and innovative product. We are fortunate to have a group of industry-leading representatives. I have known many of them for years, and I have a great deal of confidence in their skill and ability to represent LUCI and support their customers.

WHAT DO YOU CONSIDER A FAVORITE PART OF YOUR JOB OR THE MOST REWARDING?

I really enjoy working with the team at LUCI. The Deans bring a different perspective, and that is refreshing and inspiring. They are focused on improving the experience and independence of the user.

I am excited to be back in sales and sales leadership, especially with this product. I have missed the customer contacts that I had earlier in my career at ROHO. I love to travel and meet with ATPs, clinicians and users to participate in problem-solving. It is rewarding to be personally involved in improving the experience of our user community.

WHAT SIGNIFICANT CHANGES HAVE YOU SEEN IN THE INDUSTRY THAT IMPACT YOUR GOALS AT LUCI?

I want to approach this question from a different perspective. I think the change we see in society around the explosion of technology is starting to impact CRT. That change will alter the dynamics of our industry going forward, including driving critical changes within our funding systems. In turn, those changes will drive innovations based on technology platforms already in use and accepted in other industries but which have not yet come into the CRT industry. We have the capability to integrate the safety and intelligence platforms that are common in modern cars on power wheelchairs and other CRT equipment, but it just has not been done yet. I believe it takes a small company with a special purpose, such as LUCI, to drive that change.

WHAT DO YOU DO TO HELP FIND BALANCE IN YOUR LIFE?

My work is an important, positive part of my life. I do not feel a pressing need to take time away from it to find balance. I enjoy my job and have made many great friendships all over the country and in many other parts of the world. Whenever I am traveling, working on behalf of LUCI, I am doing it alongside friends. I like to play golf and have been known to bring my clubs along when traveling for work. I will always take advantage of the opportunity to have an outdoor meeting with customers I am also proud to call my friends!

Bob Graebe, founder of ROHO (l) and Tom Borcherding, LUCI

Josh Anderson (l) and Tom Borcherding

My wife, Jan, has been a leader in the St. Louis, Missouri, CRT community for over 20 years. That is another way my work intersects with my life. Jan and I have two teenagers who have super busy lives, so we are always trying to keep up with their schedules. Our daughter, Kaelin, 17, is a senior in high school and an avid softball player. Our son, Kyle, 15, is a sophomore. He is all

CONTINUED ON PAGE 14


Tom Borcherding on the slopes in Sweden

BUILD TO THE NEED
(CONTINUED FROM PAGE 13)

about soccer! Being involved in their lives brings balance to mine.

FINALLY, WE MUST ASK. WHY THE NAME "LUCI" FOR THIS COMPANY?

The name is personal and aligned with the purpose of the company. Barry's daughter, Katherine, is the inspiration that drives the company, and her favorite musical group is the Beatles. Her favorite Beatles song is "Lucy in the Sky with Diamonds." This, along with the fact the LUCI platform is connected to the cloud, inspired the brand and company name. It is a creative, meaningful name that pairs perfectly with the purpose of the company.

CONTACT
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Tom Borcherding has spent his career in the CRT industry, working in customer service and sales for Everest & Jennings, sales management, and executive leadership for ROHO, global leadership for Permobil, and now serving as senior vice President of business development for LUCI. Borcherding earned his bachelor's degree from Miami University Ohio and is proud to be a Friend of NRRTS. Borcherding lives in Chesterfield, Missouri, with his wife, Jan, and their children, Kaelin, 17, and Kyle, 15. Outside of work, you will likely find him attending one of his kids' games, working in his yard or enjoying a round of golf.

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THE BIG PICTURE: MAKING A DIFFERENCE

Written by: **ROSA WALSTON LATIMER**

"My father taught me to work with my hands," Darrell Mullen RRTS®, said. "My mother taught me to work with my heart. Both are equally important in my work. They were just parenting, but they were actually preparing me for my life's work."

When Mullen was in his late 20s, his father suffered a stroke that left his left side paralyzed. "I grew up on Prince Edward Island, a small island on the east coast of Canada. My father was a mechanic, and my mother worked at a grocery store. After high school, I was working in Alberta when my father, who was 63 years old, had a massive stroke. I came back home and was with him through his rehab. At that time the therapists were trying to get him to use a manual wheelchair."

Mullen's father was unwilling to accept a manual chair and told his son he didn't want to live if he couldn't have a power wheelchair. "We were told that he wouldn't be safe in a power chair," Mullen said. "I wasn't in this industry at the time, but the medical equipment supplier that we were working with loaned us a power chair for Dad to use. Every day for about five weeks, we practiced going through doorways and down the hall. He learned to stop and scan, and safely maneuver. My father passed the test to qualify to use a power chair, and our rural community held fundraisers to help pay for it."

> "JUST AS I HAD DONE WITH MY DAD IN HIS NEW REALITY, I WANTED TO WORK IN THAT FIELD, BUT I HAD NO IDEA HOW TO DO IT."

After helping his dad through rehab, Mullen returned to Alberta, but he realized he wanted to be closer to home, so he and his wife, Veronique, decided to move. "I also realized I wanted to work, in some way, with wheelchairs," Mullen said. "Just as I had done with my dad in his new reality, I wanted to work in that field, but I had no idea how to do it."

Darrell Mullen with Occupational Therapists Heather Swan, and Tobi Bennett

(l to r) Shawn Leger, Mat Kinnie, and Darrell Mullen

In 2006, the Mullens moved to Moncton, New Brunswick, which is about two hours from his parents. "Veronique got a teaching job and I was pounding the pavement, trying to get a job, in the rehab industry, but no one would talk to me," Mullen said. "During a 'meet the teacher' event at school, a parent asked Veronique what kind of work her husband did and she explained that I was trying to get a job in the rehab field. The parent, who was an occupational therapist, told her about a medical equipment company that was opening in Moncton," Mullen said. "As soon as my wife came home with this news, I Googled the company and was able to get an interview. I explained I wanted to be a technician; that I had learned how to make repairs from being in my father's shop and working on a farm. I also made some switch panels and other things for a friend in Alberta, who uses a wheelchair and owns a company

Darrell Mullen making a custom part using his vintage milling machine.

"I TRY TO MEET THE NEED WITH STANDARD AND STRAIGHTFORWARD SOLUTIONS. IF WE NEED A UNIQUE ANSWER TO A SITUATION, I WILL DESIGN AND BUILD IT MYSELF OR PASS ALONG THE DESIGN TO A MANUFACTURER TO PRODUCE."

that helps design universally accessible housing. And, I got the job! I began as a technician and, before long, I started working more in sales."

Now, Mullen specializes in custom and complex seating. He also occasionally does product development and consulting for manufacturers. "I created a back for a wheelchair years ago that I sold to Dynamic Healthcare in Toronto that is called the Armadillo," he said. "Using the same concepts and principles as with wheelchairs, I've done work for long haul truck drivers and others whose work requires them to sit for long hours." Mullen has provided seating solutions for athletes such as Matt Kinnie, a para-cyclist on the Canadian National team, who also works with him at Tango Medical. "I like to work on projects like this during my free time, especially helping athletes with their seating to keep them healthy."

Darrell Mullen made this custom foot plate for one of his clients who likes bubbles.

Many individuals have encouraged and supported Mullen throughout his career; however, two have been especially influential. "I wouldn't be where I am without Shawn Leger, who was the manager of Tango Medical when I first went to work there. Now he owns the business in New Brunswick," Mullen said. "I always want to learn or try something a different way, and Shawn has always encouraged me. His attitude is if we have the means to help someone, then we do it, and we do it right. I also learned a great deal from Steve Born, who was a rep for Ride Designs during my early years in this business."

Mullen's work with Tango Medical is in complex seating for all ages and needs, although he specializes in pediatrics. "I work with clients from 2 years old to well up into their 90s," he said. "I try to meet the need with standard and straightforward solutions. If we need a unique answer to a situation, I will design and build it myself or pass along the design to a manufacturer to produce. Recently, I have been making things like joystick knobs for kids for their power chairs using a 3-D printer. I do CAD for solution design. This is useful when we are working with a funding agency. Instead of telling them my idea, I can actually do a design and show them exactly what I have in mind." Mullen works primarily in Moncton, 150,000 population, but he also travels throughout New Brunswick to support other Tango Medical sales reps.

I asked Mullen how he stays energized when faced with the persistent responsibilities of service to his clients. "I'd love to tell you it is always easy, but it isn't. Like everyone else, I have some tough times," he

CONTINUED ON PAGE 18

"I'M GOING TO DO EVERYTHING I CAN SO THAT NONE OF MY CLIENTS HAVE TO STAY IN BED BECAUSE THEY AREN'T COMFORTABLE. I WANT THEM TO BE UP AND LIVING THEIR LIFE. I FEEL THAT I AM VERY FORTUNATE TO GET UP EVERY MORNING AND EARN A LIVING DOING WHAT I ABSOLUTELY LOVE TO DO."

Darrell Mullen enjoying life with his wife, Veronique; daughter, Clara; and son, Noah.

THE BIG PICTURE...
(CONTINUED FROM PAGE 17)

said, "However, what energizes me is the results. I know I make mistakes, but the big picture is I am making a difference. If I do not make mistakes, I won't learn and progress. I have other ambitions to accomplish, but I am reluctant to pursue them because I love the outcomes of the work I do. Perhaps I will find a way to have better balance in this respect. I will gladly take on the toughest challenge, especially a seating scenario. I tell my clients I'm theirs until they fire me. I will not quit."

The Canadian Association of Occupational Therapists recognized Mullen with the 2013 Citation Award for his contribution to the health and well-being of Canadians. "The recognition was a great honor since I have so much respect for therapists and enjoy working with them," he said. "The best outcomes are as a result of a healthy team effort where we collectively contribute our strengths in the best interest of the individual."

NRRTS extended registration to Canadian professionals in the industry last year, and Mullen recently became a Registrant. "Tango Medical is a member of a buying group, and we learned about the opportunities with NRRTS through that group," he said. "I'm very excited about the educational opportunities, and I appreciate the advantages of being part of an organization that supports the highest standard of ethical conduct. Funding sources, therapists and clients appreciate this also. I have been taking part in the Wednesday Happy

Hour and other online events. I value the networking opportunities and enjoy the sense of community that it gives me."

Mullen often spends free time in his shop at home, and his projects there intertwine with his work. "I may be aware of something special a child would like for their chair. I can design it, fabricate it in my spare time, and just show up at the next appointment with it." He also enjoys spending time with his children, Noah, 12, and Clara, 10. "As a family we do a lot of cycling and ice skating together," Mullen said. "We also like to be outdoors hiking and camping." A few years ago, He traveled with Team Canada Healing Hands to Haiti to dispense wheelchairs. The experience made a significant impact on him. "In one week, we distributed 100 wheelchairs. That was very fulfilling, and I intend to participate again," Mullen said.

The experience of helping his father with the disabilities caused by a stroke continues to influence Mullen's work today. "I remember the last couple of years of my father's life, he spent most of that time in bed because he couldn't get comfortable in his wheelchair," Mullen said. "That troubled me, and now I keep that in mind. I'm going to do everything I can so none of my clients have to stay in bed because they aren't comfortable. I want them to be up and living their life. I am very fortunate to get up every morning and earn a living doing what I absolutely love to do. When someone asks me how I'm doing, my standard answer is: 'I'm living the dream.'"

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Darrell Mullen, RRTS®, works for Tango Medical based in Moncton, New Brunswick, Canada.

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THE LATEST ON CRT ISSUES AND ACTIVITIES

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

PREVENTING MEDICAID PAYMENT CUTS TO CRT

The potential of Medicaid payment cuts was identified as a 2021 risk to Complex Rehab Technology (CRT) access given the financial impact that the COVID-19 pandemic was projected to have on state budgets. Accordingly, we have been monitoring state budget announcements and working with state associations and other stakeholders to minimize this threat.

To strengthen these efforts, we have developed a "No Cuts to CRT" tool kit for communicating with state legislatures and health departments. The tool kit includes a position paper with key CRT talking points, infographics with state Medicaid information, a summary of the CRT delivery process, and other information supporting the need to protect CRT from rate reductions that would reduce access. For more details, or to request the tool kit for use in your state, email Mickae Lee at mlee@ncart.us.

STOPPING JULY 1 CUTS TO CRT MANUAL WHEELCHAIR ACCESSORIES

As we enter the month of April, the prospect of July 1 Medicare payment cuts to CRT manual wheelchair accessories looms as a threat to reduce access for those individuals who depend on this technology.

We are continuing the dialogue with the Centers for Medicare and Medicaid Services (CMS) to "make permanent" the Congressionally mandated 18-month suspension which stopped CMS from inappropriately applying Medicare Competitive Bid Program payment rates for "standard DME" items to set payment rates for the more specialized items used with CRT manual wheelchairs. To make this suspension permanent, CMS action is needed before the expiration on June 30.

NCART and other CRT industry stakeholders have provided analysis and recommendations to CMS as to the pathway to implement a permanent policy change. Unfortunately, CMS has yet to come to a decision if and when they will take the necessary action. This process has been complicated by the change in administration and the fact that a new Secretary of Health and Human Services and a new CMS administrator (the key decision-makers) have not yet been seated.

As soon as the new secretary and administrator are in place, we will be emphasizing the need for quick CMS action and engaging our Congressional champions to reinforce that request. We will keep the CRT community updated as we move ahead and seek grassroots engagement as needed.

PERMANENT CRT TELEHEALTH SERVICES

On the legislative front, the topic of telehealth is again generating much discussion in the first weeks of the new session of Congress. Of particular significance, on March 2 the House Committee on Energy and Commerce's Subcommittee on Health held an over four-hour hearing entitled, "The Future of Telehealth: How COVID-19 Is Changing the Delivery of Virtual Care." The hearing presented a robust discussion from committee members and invited witnesses regarding making telehealth options permanent beyond the public health emergency (PHE).

Several pieces of telehealth legislation have already been introduced this year. It is expected that a key bill impacting CRT access, the "Expanded Telehealth Access Act (ETAA)," will be reintroduced shortly by Reps. Mikie Sherrill, D-NJ, and David McKinley, R-WVa. This legislation gives CMS specific direction to authorize physical therapists, occupational therapists and speech language pathologists as permanent telehealth practitioners once the PHE expires — a key provision for the CRT provision process.

NCART and other CRT stakeholders continue to meet with Congressional staff to discuss the benefits of telehealth for individuals using CRT and requesting that any final Congressional legislation include language directing CMS to include physical therapists and occupational therapists as permanent authorized telehealth practitioners.

Here is some homework. Congress needs to hear from their constituents. CRT stakeholders are encouraged to use the links at www.protectmymobility.org to email their Members and request that any new legislation include the provisions that are important to maintain CRT access.

On the clinical practice front, new CRT telehealth information is available. Under the umbrella of the CRT Remote Services Consortium, the Clinician Task Force worked diligently to develop a document that offers guidance to clinicians considering telehealth for clients using CRT. We are happy to report the "Clinician's Guide to Use of Telehealth for CRT Service Provision" has been released.

The guide offers a variety of information on determining when telehealth is an appropriate option for CRT. It includes a decision tree, tips for preparing for telehealth visits, sample case studies of the application in the CRT provision process, and other advice for those exploring telehealth.

Special thanks go to the Clinician Task Force for their leadership and development of this document and to the others in the CRT Remote Services Consortium who provided input. The guide can be downloaded at www.cliniciantaskforce.us or www.ncart.us.

ESTABLISHING COVERAGE OF POWER SEAT ELEVATION AND STANDING SYSTEMS

Our work with the Item Coalition led workgroup continues in engaging with CMS regarding the submitted request for Medicare coverage of power seat elevation and standing systems. We have had group discussions with CMS on the detailed information presented and those conversations will continue.

One of the next steps in the process will be CMS publishing a notice that the related National Coverage Determination (NCD) has been opened for reconsideration and seeking public comments. Upon this notice, there will be a 30-day public comment period during which organizations and individuals can provide responses to CMS in support of establishing Medicare coverage.

In addition to encouraging the submission of supportive public comments, the work ahead will involve further dialogue with the CMS review team, responding to questions or requests for additional information.

MONTHLY CRT INDUSTRY WEBINARS

It is important that CRT industry folks stay current on news that impacts the coverage and provision of CRT at the federal and state level. With that in mind, NCART, NRRTS, the Clinician Task Force and U.S. Rehab are continuing their monthly Industry Webinar series that began last year.

Topics are wide ranging, and presenters share timely information on important CRT matters. These webinars are offered at no cost and are recorded to enable the widest distribution. Recordings of past presentations can be found at www.ncart.us or www.nrrts.org. Watch for the monthly announcements or contact one of the organizations to get signed up.

BECOME AN NCART MEMBER

The need for a strong national CRT advocacy association focused on protecting CRT access has never been greater. NCART fills that need. A huge thank you goes out to our supplier and manufacturer members. It is their financial investment that enables us to fight the good fight, but we need others to add their support to meet the growing challenges.

Our mission is laser focused on promoting access to CRT. If you are a CRT supplier or manufacturer, that equates to protecting YOUR business and YOUR ability to serve YOUR customers. For information on becoming an NCART member, please visit the membership area at www.ncart.us

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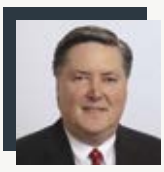
Don Clayback is executive director of the National Coalition for Assistive and Rehab Technology (NCART). NCART is a national organization of Complex Rehab Technology (CRT) suppliers and manufacturers focused on ensuring individuals with disabilities have appropriate access to these products and services. 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 industry as a supplier, consultant and advocate. He is actively involved in industry issues and a frequent speaker at state and national conferences.



TEAM EAKIN: WINNING THE FIGHT WITH "TREATED SMA TYPE 1"

Written by: **COURTNEY YOUNG[1], ROSLYN LIVINGSTONE[2], AND GINNY PALEG[3]**

Spinal muscular atrophy (SMA) is an inherited neuromuscular disease that causes progressive muscle weakness. It affects approximately 1 in 10,000 babies born in the United States and approximately 1 in every 50 Americans is a genetic carrier[1]. Type 1 (Werdnig–Hoffmann disease) is the most common and severe form of SMA, and the untreated child never develops independent sitting[1]. Few children lived past their second birthday only a decade ago. Today, many states test all newborns for SMA.

The main culprit in SMA is a mutation in the survival motor neuron gene 1 (SMN1). As a result, survival motor neuron (SMN) protein is not produced at high enough levels to prevent motor neuron cells shrinking and dying, leading to potentially fatal muscle weakness[2]. Over the past few years SMN-enhancing medications have dramatically lessened the severity of SMA type 1 - Spinraza, Zolgensma and Evrysdi are all currently approved by the Food and Drug Administration (FDA). Infants who receive these medications in the first six months of life often are able to sit, talk, eat, and breath, and some can even take steps.

Once a child with SMA type 1 is treated, physical therapists (PT), occupational therapists (OT) and early intervention providers should work with families and caregivers to increase their participation in family and community routines. The focus should be on fun, child-active and child-directed activities that are delivered by the caregiver including: early supported sitting for reach and grasp (initiated at 3 months old); toys that require kicking and leg movement; early weight-bearing (initiated at 9 months); and early mobility (initiated at 9 months). The whole medical and educational team should monitor the child frequently for contractures, scoliosis and hip health and be proactive in identifying orthotic and equipment needs to enhance participation and promote development.

Bryce and James are superheroes in the fight against spinal muscular atrophy type 1.

A newly published literature review used a case study to highlight how durable medical equipment can enhance quality of life with children with 'treated' type1 SMA[3]. Here we share the equipment journey for Bryce Eakin and James Eakin, twins with SMA type 1.

MEET TEAM EAKIN:

Bryce and James were diagnosed with SMA at the age 6 months and entered a trial for Spinraza at Boston Children's Hospital. The boys remained in the trial, until the drug was approved by the FDA. They remain in the trial and return every four months for Spinraza infusions.

Bryce and James received early intervention service from infancy, through the county and outpatient services. Their transdisciplinary team (including physical, occupational and speech therapists,, orthotists, equipment and mobility specialists, neurology, and orthopedics) worked closely to help the boys access devices that supplemented their physical abilities, enhanced participation, promoted social and emotional development, and ultimately supported developmental progression.

Initially, equipment used was "off-the-shelf,"non-customized toys and positioning aides to promote vision, musculoskeletal health, postural alignment and mobility. As the boys grew, their orthotic and equipment needs increased. The Eakins used social networking within the SMA community, various special needs platforms, community resources and the knowledge of their treatment team to explore appropriate options.

Orthotics were a vital component of the twins early therapeutic intervention and remain a significant aspect of their care. The boys were fit with bilateral solid ankle-foot orthoses (AFOs) and thoraco-lumbar-sacral orthoses (TLSOs) around age 12 months. These promoted alignment in the spine and hips and helped prevent contractures, which are common in SMA[3]. The TLSOs assisted the twins during supported sitting initially and then in achieving independent sitting around 2 years of age.

[1]The Pediatric Movement Center Frederick and Hagerstown, Maryland
[2]Sunny Hill Health Centre, Vancouver, British Columbia, Canada
[3]Montgomery County Infants and Toddlers Program, Rockville, Maryland

TABLE 1 **EQUIPMENT TIMELINE** AFO: Ankle foot orthosis; HKAFO: hip-knee-ankle foot orthosis; TLSO: thoraco-lumbar-sacral orthosis.

Months	0-3	4-6	7-9	10-12	13-15	16-24	25-36	37-60
Night-time positioning		Specialized mattress with nighttime postural management (initiated at 6 months of age)						
Seating	Reclined seating with lateral supports and a tray (adapted seating initiated around 1 year- Rifton activity chair, adapted cube chairs, floor sitters)			Custom seating with curved lateral trunk supports, medial and lateral pelvic and thigh supports, and custom arm supports (initiated at 2 years old- Rifton activity chair, Tumbleform feeder seat, and Leckey activity chair).				
Standing				Stander (HLT Super Stand, Squiggles, Dondolino, Prone Mobile Stander: initiated at 1 year of age)				
Orthotics				Solid AFO's (1 year); Knee Immobilizers (1 year); HKAFOs (5 years old)				
				TLSO (to assist with sitting and positioning initiated at 1 year) Hensinger Collar (used to assist with head control- starting at 2 years)				
							Hand/wrist splints (Benik hand splints- initiated at 2 years)	
Manual mobility		Double stroller with full tilt and recline						
							Lightweight rigid wheelchair with cushion and curved backrest (Panthera and Clik manual wheelchair- initiated at 2 years of age).	
						Modified scooter boards for self-initiated prone mobility (initiated at 2 years of age- playful activity during PT)		
Power mobility				Switch-adapted car (GoBabyGo, Wild Thing adapted car with Stealth Products driving method)				
							Pediatric manual wheelchair with power add-on accessory (EFix system at 2 years of age) Stretto Power Wheelchair with mini proportional joystick, tilt and recline, iLevel, center mount articulated and adjustable footplates (at 5 years)	
Dynamic mobility device				Hands-free supported stepping device (KidWalk, Rifton Pacer, MyWay, LiteGait harness supported treadmill walking)				
Tricycle						Special needs tricycle with high backrest, pelvic and chest harness, and shoe holders.		

Around their first birthdays the twins started trialing different standers including: Prime Engineering SuperStand HLT, Leckey Squiggles, Dondolino and Rifton Prone Mobile Stander. Bryce and James participate in a daily standing program at home, consisting of 45-60 minutes per day at least five times per week. Standers are also used during occupational and speech therapy sessions to provide additional weight-bearing time. Their standing program has positively impacted their endurance, health of vital organs, musculoskeletal alignment, bone mineral density and hip health.

Generous donations from manufacturers and the community allowed the twins to find which equipment that suited them best. Here they are exploring the house in their KidWalks.

Bryce and James have also tried various gait trainers (supportive walkers). Starting around 10 months, the Rifton Pacer provided the forearm support necessary to maintain trunk and head control. As they grew stronger, the KidWalk gait trainer was introduced, providing Bryce and James with the dynamic movement and weight shifting key to pelvic mobility and single limb stance (both of the gait trainers were donations). They also received gait training using the Lite Gait harness

CONTINUED ON PAGE 24

The SMA community is a tight-knit one and often families pass on equipment their children have outgrown. Here the boys are having a special moment in their Panthera chairs, which they were given by other families.

Power chairs mean freedom and fun. Here, the boys are pulling their cousins down the road on the snow. Don't all kids deserve self-directed mobility?

TEAM EAKIN...
(CONTINUED FROM PAGE 23)

support system on the treadmill and overground at the clinic. This further promoted upright standing, postural alignment, musculoskeletal health and typical peer-to-peer play. The boys enjoy many activities in standing and walking, including playing with their cousins, kicking the soccer ball, racing cars, bowling and so much more! Give them the tools to be successful, and they will find a way!

Panthera ultra-lightweight wheelchairs were donated through the SMA community. The boys could propel these wheelchairs on level surfaces, and they provided their first true independent mobility opportunities. However, the twins also needed mobility systems that could be used out in the community and would provide more postural support.

Around age 2, Bryce and James received Ki Mobility Clik lightweight manual wheelchairs fitted with an add-on power system (E-Fix). These provided power mobility at a young age and enabled the twins to explore actively with less energy consumption and increased independence. By 5 years of age, it was determined that power wheelchairs would enable the boys to continue to be independent, both at home and in the community, especially on multiple terrains such as the playground. They were eager to keep up with their family but

Standers are important for kids with SMA to prevent contractures.

had difficulties with fatigue, and their wheelchairs had limitations in battery life and stability over rough terrain.

The Stretto Power Wheelchair by Quantum Rehab had just entered the market at this time, providing a narrow and highly maneuverable base with increased shock absorption. Bryce and James each received their new wheelchairs in September 2020. They independently use all aspects, including iLevel, tilt and recline, power elevating legs rests, and many other features to play and be active members of their world!

James received a "Make a Wish" grant for a therapeutic swim spa that has enabled the boys to kick their legs, work on trunk mobility and promote upper extremity functional reaching. They also ride adapted tricycles to promote their cardiovascular health, and add to their typical play activities. Most recently, the boys have been fit with bilateral HKAFOs to assist with range of motion, and they use their bilateral AFOs when they are not resting or playing on the floor. The boys now sit independently, are able to roll, stand with assistance and walk in their gait trainers. They continue to make gains in strength, endurance and mobility and we have yet to see a plateau!

Bryce and James are pioneers for the SMA community, and true testaments to the successes of early positioning, mobility and orthotics! They have shown consistent progress in all areas of development, including socio-emotional and intelligence, which have been linked to early mobility opportunities. Every child has the right and ability to access our world, and equipment can make that possible. Developing relationships with the equipment suppliers, the special needs community and donation sources in your area is key to having the ability to trial multiple devices. Start early, try everything and anything you can and keep on adapting!

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LIVINGSTONE R AND G PALEG. ENHANCING FUNCTION, FUN AND PARTICIPATION WITH ASSISTIVE DEVICES, ADAPTIVE POSITIONING, AND AUGMENTED MOBILITY FOR YOUNG CHILDREN WITH INFANTILE-ONSET SPINAL MUSCULAR ATROPHY: A SCOPING REVIEW AND ILLUSTRATIVE CASE REPORT. DISABILITIES 2021, 1(1), 1-22.

Roslyn Livingstone is an occupational therapist with over 30 years' experience working with children with significant disabilities. She works on the positioning and mobility and assistive technology teams at Sunny Hill Health Centre in Vancouver, British Columbia. Livingstone has a special interest in the use of power mobility and other assistive technologies and equipment to promote participation and development of young children with disabilities. She has conducted research in this area, presented internationally and published in peer-reviewed journals.

Ginny Paleg is a pediatric physiotherapist from Silver Spring, Maryland. For the past 17 years, she has worked with children aged 0-3 years in homes and childcare. Paleg earned her master's degree in physical therapy at Emory University and her DScPT at the University of Maryland, Baltimore. Paleg specializes in posture and mobility assessment and interventions for children at GMFCS Levels IV and V. She is certified in Prechtl General Movement Assessment (GMA) and the Hammersmith Infant Neurological Exam (HINE) and trained in Routines Based Interventions (McMaster) and coaching (Sheldon and Rush). She has published over 15 peer-reviewed journal articles on standing, gait trainers and power mobility. She is the lead author for the American Academy of Cerebral Palsy Hypotonia Care Pathway. She is the incoming chair of the AACPDM Communications Committee (2021-2023). Her latest publications are a case study on a child with treated type 1 spinal muscular atrophy and a study on weight bearing in various positions in three models of standers.

Courtney Young PT, DPT, has spent over 15 years working as a physical therapist. She has experience in the pediatric rehabilitation field working in a variety of settings including: neonatal intensive care unit, pediatric rehab hospital (focusing on NICU graduates, infants and toddlers with significant medical needs) and in outpatient pediatric clinics. She has a strong interest in the rehabilitation of the medically fragile child and fulfilling equipment needs (wheelchairs, standers, seating systems, adapted bath equipment, specialized tricycles). Young has always had a strong desire to work in pediatrics. She loves the collaboration with families and the motivation children demonstrate. Young believes there is nothing better than seeing a child accomplish a goal and experience the feeling of accomplishment! She enjoys working at the Pediatric Movement Center because "the children I work with continue to teach me new skills every day. I am so thankful for the opportunity to learn from them."

ELEMENTS AND ESSENTIALS OF THE ADA

Written by: **KELLY NAROWSKI, MA, ADAC**

Disability always has been and always will be a natural part of the human condition.

Simply a form of human variation, disability is universally present across racial, gender, age and socioeconomic lines. Moreover, disability represents the only minority group that anyone can join at any time and, when all human impairments are taken into account, people with disabilities by far encompass the largest minority group in the United States. A person's disability is usually not something that defines the individual in any significant way, other than how they may experience stigma, abuse and/or discrimination that pertains to their disability. Actually, many disabilities would not be any more relevant to a person's identity than their eye or hair color if it were not for negative societal experiences. Because of the deep-rooted and pervasive discrimination against individuals with disabilities, the long overdue civil rights legislation of the 20th century was essential.

The first piece of disability rights legislation in the United States was the Architectural Barriers Act of 1968, which required federal buildings to be accessible to citizens with mobility impairments. Next came the Rehabilitation Act of 1973, which ended up being the precursor to the landmark Americans with Disabilities Act (ADA). Passing the Rehabilitation Act was a hard fought battle, particularly the Section 504 regulations, which prohibited discrimination against people with disabilities in any program that received even a dollar from the federal government. This important legislation improved inclusion and accessibility in many places, such as in schools and post offices, at national parks and on military installations. It also opened up job opportunities for individuals with disabilities within the federal government — the largest employer in the world. The Rehabilitation Act, most notably Section 504, was a game changer for Americans with disabilities, and it was a prelude for much bigger things to come (see Figure 1).

Other disability rights legislation followed, such as the Education for All Handicapped Children Act of 1975 which prohibited disability discrimination in education (this was later renamed the Individuals with Disabilities Education Act, IDEA, in 1990). Then came the Air Carrier Access Act of 1986,

FIGURE 1 The Rehabilitation Act of 1973, not the ADA, mandates accessibility in National Parks, and a percentage of the on-park cabins must also be accessible. Here is a picture of me at my rented accessible cabin at the Badlands National Park in South Dakota.

which prohibits discrimination on the basis of disability in air travel, and the 1988 Amendment to the Fair Housing Act, which added people with disabilities to the list of groups that may not be discriminated against in housing practices such as renting or purchasing a home. These laws set the stage for the granddaddy of all disability rights laws: the Americans with Disabilities Act of 1990.

WHAT IS THE ADA?

The ADA is the most far-reaching, comprehensive piece of civil rights legislation in the world and was enacted to protect the basic rights of individuals with disabilities. The ADA is comprised of five titles that will be discussed in this article as each relate to different areas of public life. The legislation prohibits discrimination against people with disabilities in several areas, including employment, transportation, public accommodations, communications, and access to state and local government programs and services.

Thousands of stories were gathered by disability rights advocates and activists and shared with members of Congress in the years prior to the passage of the ADA. As a result, the findings of Congress included: "that physical or mental disabilities in no way diminish a person's right to fully participate in all aspects of society, yet many people with physical or mental disabilities have been precluded from doing so because of discrimination; others who have a record of a disability or are regarded as having a disability also have been subjected to discrimination. Historically, society has tended to isolate and segregate individuals with disabilities, and, despite some improvements, such forms of discrimination against individuals with disabilities continue to be a serious and pervasive social problem" (www.eeoc.gov).

As a wheelchair user, I cannot fully imagine what my quality of life would be like now had the ADA not been implemented 30 years ago. What I do know for sure is that it would not be nearly as good. The ADA of 1990 has undoubtedly helped millions of individuals with disabilities live with more dignity and independence. Before this critical bipartisan legislation overwhelmingly passed in the United States Congress and was signed into law by George H.W. Bush on July 26, 1990, it was perfectly legal to refuse to allow a wheelchair user into a movie theater, and state, "We don't allow your kind in here" (this actually happened in 1988). It was legal for a business owner to tell someone who was blind or deaf they would not be hired because of their disability. Further, there were physical and technological barriers everywhere — a significant lack of access to the community for people with all sorts of impairments. Because there have been countless positive changes regarding accessibility and inclusion as a result of the ADA's passage, every day I feel extremely grateful for those activists who fought the hard fight in the '60s, '70s and '80s to get several disability rights laws passed. As a side note, if you are interested in the historical disability rights movement, I highly recommend researching Ed Roberts, Judy Heumann and the 504 Sit-in, as well as Justin Dart and the Capitol Crawl.

WHO IS PROTECTED UNDER THE ADA?

Generally speaking, the definition of disability is complicated. First, as a universal form of human variation, it exists on a spectrum. Also, some people are born with disabilities while others acquire them during the human lifespan — many not until very late in life. There are several different types of disabilities: mobility-related impairments such as muscular dystrophy or spina bifida; sensory disabilities such as blindness, low vision, hearing or speech impairments; psychiatric disabilities such as schizophrenia or bipolar disorder; learning disabilities like dyslexia or a language processing disorder; and intellectual disabilities that impact life skills. Then you have medical disabilities that do not fit neatly into any typical disability category (but are still usually covered under the ADA), such as cancer, stroke, heart disease and arthritis. One thing is for sure, though who is and is not considered to have a disability cannot be universally agreed upon. Society has its own definition, the Social Security Administration, another, but for the purposes of this article, we will concentrate only on the official definition used by the ADA.

To qualify for protections under the ADA, an individual must: 1) have a physical or mental impairment that substantially limits one or more of the major life activities of the individual; 2) have a record of such impairment; and/or 3) be regarded as having such an impairment

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(ada.gov). While alcoholism is included as a disability (an individual may not be currently using alcohol to be covered), other socially undesirable behaviors, such as pedophilia, compulsive gambling, kleptomania, and pyromania are excluded from the ADA.

As a response to misinterpretation of the ADA's definition of disability by the Supreme Court in several cases during the 1990s, the Americans with Disabilities Amendments Act (ADAAA) was passed in 2008. One important thing the ADAAA accomplished was to clarify and essentially expand the ADA's definition of disability to ensure the protection from discrimination initially intended by Congress. As a result, someone who is HIV positive or who has diabetes is undoubtedly covered. Obesity is also covered as long as there is a secondary health complication such as hypertension or sleep apnea. Because of the ADAAA, there is also no question that psychiatric disabilities such as post-traumatic stress disorder, obsessive-compulsive disorder and generalized anxiety disorder are covered impairments.

THE ADA: DISCUSSION OF TITLE I

Title I prohibits employment discrimination on the basis of disability and applies to any business with 15 or more employees (Gower, 2017). Title I is enforced by the Equal Opportunity Employment Commission (EEOC) and through private lawsuits. Employment practices covered under Title I include application, promotion, testing, medical examinations, hiring, layoff/recall, assignments, termination, evaluation, compensation, disciplinary actions, leave, training and benefits (Gower, 2017). Basically, everything job-related. It is important for employers to remember Title I should not be viewed as affirmative action because it only provides the same access to employment everyone should have. The federal government, including the Department of Defense, are exempt from Title I (and the rest of the ADA). Other legislation addresses protections from disability discrimination within the federal government's agencies, and in the case of employment, Section 501 of the Rehabilitation Act of 1973 applies.

A very important aspect of Title I is that the law requires an employer to provide "reasonable accommodations" to an employee or job applicant with a disability, unless doing so would cause significant difficulty or expense for the employer (eeoc.gov). A reasonable accommodation is defined as any change in the work environment to help a person with a disability apply for a job, perform the duties of a job or enjoy the benefits and privileges of employment. Examples of reasonable accommodations include job restructuring, flexible scheduling and providing a qualified interpreter. Other examples of reasonable accommodations are providing a reader for someone who is blind or adding a power door opener with wall button at a heavy door for a wheelchair user. Examples of accommodations that are not considered reasonable are changing an employee's supervisor or excusing a violation for conduct uniformly applied (Gower, 2017). Moreover, Title I does not expect a business to change production standards, and the same level of performance is required from an individual with a disability as employees without disabilities. According to the ADA, having a disability does not mean an employee can perform at a lower standard.

Under Title I, it is against the law to ask a job applicant if they have a disability or to ask about their disability, even if it the disability is obvious. An employer may not ask questions about an applicant's medical condition or require a medical examination before making a conditional job offer (eeoc.gov). The ADA also does not require applicants to voluntarily disclose they have a disability unless they will need a reasonable accommodation for the application process. For example, someone with diabetes might require a break from an interview to eat a snack or monitor her glucose levels. If a job applicant voluntarily reveals he has a disability, under Title I, an employer may not ask follow-up questions except to ask the applicant if he will need a reasonable accommodation and what type (eeoc.gov). The employer must also keep any information an applicant discloses about his or her medical condition confidential (Gower, 2017).

THE ADA: DISCUSSION OF TITLE II

Title II prohibits discrimination against people with disabilities in all programs and services within state and local governments. The agencies and departments within state and local governments also must abide by Title II. This means that not only is a city or state government office mandated to comply, but also public schools, community colleges, city police departments and public libraries. A Title II entity must reasonably modify its policies, practices or procedures to avoid discrimination. For example, if a person needs and requests a sign language interpreter at a city's town hall meeting, one must be provided (advance notice of 48-72 hours is customary).

While Title II is enforced by the Department of Justice and through private lawsuits, a city's ADA coordinator can also be instrumental in helping with barrier removal and disability inclusion. Any town or city with 50 or more employees must have at least one responsible employee to coordinate ADA compliance. The ADA coordinator is responsible for coordinating the efforts of the government entity to comply with Title II and investigating any complaints that the entity has violated

Title II (ada.gov). Official grievance procedures must be established, and the ADA coordinator's contact information must be provided to anyone in order to file a complaint. The complaint should be submitted by the grievant no later than 60 days after the alleged violation. Within 15 calendar days after receipt of the complaint, the ADA coordinator must meet with the complainant to discuss the problem and possible resolutions. Examples of valid Title II grievances include 1) a wheelchair user comes to the end of the sidewalk and notices a pothole on the curb ramp which blocks their access to cross the street, 2) a student is told they may not bring their service animal to school, and 3) an individual who uses a walker for mobility shows up to their public pool to find the pool's parking lot has no designated accessible parking spaces. If a person runs across a Title II violation, they do not have to file a grievance with the city or state first. They may file a private lawsuit or complaint with the Department of Justice, if they choose.

THE ADA: DISCUSSION OF TITLE III

Title III prohibits discrimination on the basis of disability in the activities of places of public accommodations. Examples of Title III entities include restaurants, stores, salons, health clubs, stadiums, museums, theaters, doctors' offices, shopping malls, recreation facilities and day care facilities. This part of the ADA sets minimum standards for creating physical accessibility features, like wheelchair ramps and accessible restrooms.

There are two ways to enforce Title III of the ADA. One may file a complaint with the Department of Justice or file a private lawsuit. The most common Title III violations can be avoided by using the manual 2010 ADA Standards for Accessible Design, set forth by the Department of Justice (Title II entities must comply with these Standards as well). I keep two copies of this 277-page manual of technical specs in the car with me: one for my own reference and one to share with the business owner or manager who potentially needs assistance fixing one or more ADA violations. While ignorance of the ADA's legal requirements is not a valid reason to be non-compliant, I find helping businesses owners out, sharing concerns and informed suggestions, sometimes does the trick. It is sometimes the easier route to take rather than filing a Department of Justice complaint or private lawsuit.

There are countless examples of Title III non-compliance I have run across in my 22 years as a wheelchair user. Here are just a few personal stories.

FIGURE 2 Roll under sinks are an accessibility feature required in ADA rooms at hotels and in ADA housing. This picture was taken in my ADA home at the military installation, Fort Bragg, in North Carolina. The Department of Defense mandates that 5% of homes on all U.S. military installations must be ADA compliant.

A franchise location of a car rental agency in Huntsville, Alabama, refused to install hand controls in a rental car I had reserved weeks in advance. Knowing it was a clear Title III violation, I filed a complaint with the Department of Justice, who ended up sponsoring mediation. The car rental agency refused mediation, so I went to corporate to settle the matter. As a result, they were forced into compliance by the company's headquarters. As a side note, a 2014 Department of Justice settlement set a precedent for all rental car agencies. The 25 largest airport locations must install hand controls with 24 hours notice, 48 hours for most other locations, and 72 hours for rural locations.

A hotel in San Antonio, Texas, had significant ADA violations in the accessible room in which I was staying. The required shower bench was installed on the wall opposite of where the shower controls were located, so there was no way someone with a mobility impairment could sit on the bench and use the required handheld shower head. The bathroom did not have the required roll under sink (see Figure 2), and the thermostat was not ADA compliant as it was too high. I decided to take the advocacy route and speak with the hotel's manager. Then I found out from the manager that the property did not have the required number of ADA rooms. I contacted an ADA attorney for help, who filed a lawsuit for me. Consequently, the hotel agreed to become ADA compliant without going to court.

I showed up at a doctor's office in Fayetteville, North Carolina, to find out they had no accessible exam table. Since the building was otherwise ADA compliant (e.g., accessible parking, accessible entrance, elevator, accessible restroom), I decided to simply talk to the doctor about getting an accessible exam table since I knew one was required. I did not follow up with legal action. I checked on the situation several months later and the doctor did in fact purchase an accessible exam table. This is an example of successful disability advocacy.

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I recently met a friend at a restaurant in Saint Joseph, Missouri, for lunch and found no accessible parking. With no other option, I parked sideways. Then I realized there were vehicles parked close together in front of the accessible entrance with no room for a wheelchair user to enter or exit. Clearly this business needed accessible parking which was also close to the accessible entrance. After waiting for a car to move so I could enter, I went in and immediately spoke to the owner. His response was, "The fire department was just here, and they didn't say anything about it." I explained that in most municipalities there are no ADA inspectors per se and that it was essentially up to people with disabilities to enforce the ADA through enforcement mechanisms. He said he would look into it. I gave him my card and told him I would help him do the job right, at no charge to him. Even though I should not have to educate a business owner on any business law, especially a 30 year old act, I'll check back on the situation in a couple months to make sure he removed the barrier (see Figure 3 for an additional note on accessible parking).

FIGURE 3 Here is a picture of a truck illegally parked in the access aisle of an accessible parking space in a Kansas City shopping area. It is very important to never park in an access aisle because people with mobility impairments need that extra space to enter and exit their vehicles.

THE ADA: DISCUSSION OF TITLE IV

Title IV prohibits discrimination on the basis of disability in telecommunications. It specifically addresses telephone and television access for people with speech and hearing impairments. The title requires that telephone companies provide telecommunication relay services that allow individuals with speech or hearing impairments to communicate using a TTY (also known as a TDD) or other non-voice device. The telephone companies must have established interstate and intrastate telecommunications relay services 24 hours a day, 7 days a week (relay services may be accessed by dialing 7-1-1). Title IV also requires that all television public service announcements produced or funded in whole or in part by the federal government include closed captioning. The Federal Communications Commission (FCC) enforces Title IV of the ADA.

THE ADA: DISCUSSION OF TITLE V

Title V, the least talked about title, contains several miscellaneous provisions. It covers insurance issues, explains the relationship between the ADA and other previously existing laws and defines explicit restrictions against retaliation or coercion against anyone with a disability who exerts their civil rights. Further, Title V supplies supplemental guidelines pertaining to regulations by the Architectural and Transportation Barriers Compliance Board. Title V also contains provisions that apply to the EEOC's enforcement of Title I (www.eeoc.gov).

COMMON MYTHS ABOUT THE ADA

The biggest myth pertaining to the Americans with Disabilities Act is that some businesses and/or buildings are "grandfathered" and do not have to comply. My late and great friend, Chuck Graham, one of the most knowledgeable disability rights advocates I have ever known, used to explain, "There are no relatives in the ADA. No aunts, uncles, brothers, sisters, grandmothers and nope, no grandfathers!" Further, the U.S. Department of Justice explicitly states, "There is no grandfather clause in the ADA" (U.S. Department of Justice, Civil Rights Division, Disability Rights Section, ada.gov). While I have heard this myth came about shortly after the ADA was passed, I do not have any idea where it originated.

So, are there any entities that are legally able to "get away with" not complying with the ADA? Well, it's a little complicated. First, any building constructed on or after January 26, 1992, must be fully ADA compliant. No excuses. Additionally, any building renovated on or after January 26, 1992, must remove barriers using the ADA Standards for Accessible Design. If a building was constructed before January 26, 1992, and has not been renovated since that date, barriers must still be removed if "readily achievable" (under Title III). Under Title II, barriers must be removed if it will not cause "undue hardship." The verbiage is different for a reason.

Undue hardship requires a higher standard. Title II entities (local and state) are expected to make programs and buildings accessible unless it is impossible without changing the nature of the program, while businesses are given a little more leeway. A Title III entity, such as a restaurant, would be expected to ramp one or two steps at the front of

their old building if there is room to do so (and there almost always is). The court is generally going to view this particular barrier removal as "readily achievable," especially since the ADA is 30 years old. Conversely, let's say the same restaurant has a flight of 10 stairs to enter their establishment, and it's a mom-and-pop facility that is not highly profitable. The court would most likely not expect the establishment to install an expensive elevator (unless it is decided the business can indeed afford it). Having no place to put an elevator is also sometimes a factor.

Another common myth about the ADA pertains to something we disability advocates like to refer to as "historical hysteria." While historical buildings are given more leeway than most places, contrary to (somewhat) popular belief, just because a structure is on the National Historical Registry does not mean it automatically is exempt from the ADA. In fact, it must be made accessible to the greatest extent possible. If it is possible to make a historical place accessible without threatening or destroying its historical significance, then it must be made accessible. For an example of the successful addition of an accessibility feature being incorporated into a historical building, see Figure 4.

The following Title I myth is pretty common: "The ADA forces employers to hire unqualified individuals with disabilities." This is simply untrue. The fact is, applicants who are unqualified for a job cannot claim discrimination under the ADA. Under the ADA, to be protected from discrimination in hiring, an individual with a disability must be qualified, which means he or she must meet all requirements for a job and be able to perform its essential functions with or without reasonable accommodations (U.S. Department of Labor, Office of Disability Employment Policy, www.dol.gov).

The ADA has, in my opinion, been instrumental at not only reducing discrimination towards people with disabilities in many areas of daily life, but it also has contributed to a cultural shift. Though the change in mindset is moving at what seems to be a glacial pace, disability less often evokes pity than it did decades ago. More people are internalizing that disability is a natural human difference, and it is more often viewed as just another aspect of diversity than it used to be. The experience of living with a disability is even seen as inherently valuable by some people. Before the ADA, you did not hear a positive term like neurodiversity in a conversation about autism. You did not hear the term ableism used to describe the marginalization of and discrimination towards people with disabilities. People are getting more comfortable with these topics.

ADA compliance alone does not always result in meaningful inclusion, but it has certainly been helpful. The ADA has essentially allowed millions more people to go out into their communities, and these individuals proved themselves to society, knowingly or unknowingly. When you turn on the television nowadays, you may see a woman who uses a wheelchair as the romantic lead in a movie. You very well may run into a wheelchair-using nurse, doctor, attorney, social worker, teacher, or stockbroker. There are fashion models with Down syndrome, well-known billionaires on the autism spectrum, and comedians with cerebral palsy. At least some of this cultural shift can be attributed to the positive effects of the ADA.

FIGURE 4

Although the ADA does not apply in other countries, some nations do have accessibility legislation they've modeled after the ADA. Here is a picture of a ramp added to Saint Margaret's Chapel at the castle in Edinburgh, Scotland. This is a perfect example of how it is possible to add an aesthetically pleasing accessibility feature to a historical building. Original construction of this chapel took place between the years 1045-1093!

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Kelly Narowski, MA, ADAC, has vast experience as a disability rights advocate, professional speaker and as a subject matter expert on disability law and policy. She is certified as an ADA coordinator from the University of Missouri, holds a Master of Arts in Disability Studies from the City University of New York and is currently working on a master's in psychology from Northcentral University. She currently serves on the board of directors for the Midland Empire Center of Independent Living. Narowski is a military spouse, animal lover and, having visited 47 countries, she is an avid traveler who has a passion for educating individuals with mobility impairments about accessible travel. She frequently speaks about disability-related topics at conferences, schools and for military audiences.

PREMATURITY

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

Premature birth may be triggered by or lead to medical complications. Children with these conditions often require complex medical equipment. In 2019, 1 in 10 babies were born prematurely, and preterm birth and low birth weight accounted for 17% of infant deaths (cdc.gov).

DEFINITION

A premature or preterm birth takes place before the 37th week of pregnancy (typical gestation is 40 weeks). Late preterm occurs between 34-36 weeks, moderately preterm occurs between 32-34 weeks, very preterm occurs less than 32 weeks, and extremely preterm births occur at or before 25 weeks of pregnancy. Most premature births occur at late preterm (MayoClinic.org).

ETIOLOGY

Risk factors include having a previous premature birth, carrying multiple babies (i.e., twins), short time period between pregnancies (6 – 18 months), *in vitro* fertilization, problems with maternal reproductive organs, cigarette or drug use, infections, maternal health or maternal trauma (MayoClinic.org).

Certain pre-existing conditions of the child can trigger premature birth. Many studies have found that the rate of premature birth in babies with birth defects is over twice that in babies born without birth defects (Behrman & Butler, 2007).

PATHOPHYSIOLOGY

Preterm babies, depending on gestational age, may experience the following issues:

- Respiratory: If the respiratory system is immature, the baby's lungs lack surfactant and cannot work properly. Many preterm babies also develop bronchopulmonary dysplasia or apnea. Respiratory issues may persist long term.
- Heart: Many preterm babies have patent ductus arteriosus (PDA), which is an opening between the aorta and the pulmonary artery. Low blood pressure is also common.
- Brain: Preterm babies are at risk of bleeding in the brain (intraventricular hemorrhage), which can lead to permanent brain injury. This risk increases the earlier the baby is born and can ultimately lead to a diagnosis of cerebral palsy.
- Other: Preterm babies may also have difficulty regulating body temperature, digestive issues, blood problems, poor metabolism and an underdeveloped immune system.

Infection, inadequate blood flow or injury to the baby's developing brain during pregnancy or while the preterm baby is immature can ultimately lead to a diagnosis of cerebral palsy. Premature babies are more likely to have learning disabilities, vision (i.e., retinopathy) and hearing impairments, dental issues and chronic health issues.

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Michelle Lange is an occupational therapist with more than 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 DIRECTIONS magazine. Lange is a RESNA Fellow and member of the Clinician Task Force. Lange is a certified ATP, certified SMS and is a senior disability analyst of the ABDA.

NRRTS CE

CONTINUING EDUCATION *WORTH THE INVESTMENT*

WEDNESDAY, APRIL 7, 2021, AT 11 AM ET

Independence Meets Autonomy: Environmental Control Options for Complex Rehab Equipment Users

Speakers: Jay Doherty, OTR, ATP/SMS, and JB Radabaugh, CTRS®, ATP/SMS

Sponsored by Quantum Rehab

ATP/SMS Prep Content, Best Business Practice, Intermediate Level

As the world's dependency upon electronics and environmental control devices has increased over recent years, it is important to meet the needs of Complex Rehab Technology (CRT) end users to enable independence and autonomy within their environments. We must furnish end users the opportunity to participate in, as well as control, their home environments by providing the ability to utilize their electronic smart devices to not only communicate with friends, family and caregivers but also control their home environments to maximize safety, health and independence. This readily available technology can figuratively and literally open doors for a greater level of independence every day. In this course we will be presenting a myriad of options available for end users to enable and increase independence and autonomy when it comes to controlling their own lives and home access through the use of power wheelchair electronics in combination with smart technology available today.

LEARNING OUTCOMES:

- Participants will be able to compare three types of environmental control options.
- Participants will be able to describe how wheelchair electronics can most benefit the individual through control of readily available technology.
- Participants will be able to distinguish three potential positive outcomes from independent environmental control access.

WEDNESDAY, APRIL 14, 2021, AT 11 AM

It's Personal! Programmable Power Wheelchair Driving Controls

Speaker: Lisa Rotelli, Director, Adaptive Switch Labs

Sponsored by ASL

ATP/SMS Prep Content, Seating and Positioning, Advanced Level

Advancements in power wheelchair technology have taken a giant leap forward in the last few years, but when we are in this fast-paced electronic world, not all customizations can be made through the wheelchair electronics alone. This course will discuss some options available to further your user experience and access through power wheelchair driving methods. We will talk about the added benefit of several of the drive controls and their programmability.

LEARNING OUTCOMES:

- The participant will be able to describe the need of programmable drive controls
- The participant will be able to identify types of drive controls that can be programmed.
- The participant will be able to describe reasons why programming the drive control and the wheelchair would benefit a user.

For more information, visit the website www.nrrts.org

NRRTS CE

WEDNESDAY, APRIL 21, 2021, AT 11 AM ET

Features that Foster Functional Independence: Seating Decisions that Impact ADL task performance

Speaker: Alex Chesney, OTR, ATP

Sponsored by Quantum Rehab

ATP/SMS Prep Content, Seating and Positioning, Beginner Level

This course will present seating and wheeled mobility features that have a direct impact on functional independence specifically related to dressing, as well as bowel and bladder management. Many options and selections are made when it comes to manual and power wheelchair frames, bases and seating components, but is consideration being taken on how features help or hinder functional tasks? With length of stays being shorter and limited time frames in outpatient seating clinics, functional considerations for these tasks may not always be assessed in clinic. This course will specifically demonstrate through case studies and experience ways in which a seating and mobility system can assist with increased independence in these daily tasks from a wheelchair level.

LEARNING OUTCOMES:

- Participants will be able to discuss differences in manual wheelchair frame design as it relates to improved independence in positioning for ADL task performance.
- Participants will be able to apply power seating functions with the goal of increasing independence in dressing and positioning related to ADL performance from a power wheelchair.
- Participants will be able to recognize accessory items or positioning components of wheelchair and seating systems that allow for improved functional task performance as it relates to performing activities of daily living from the wheelchair level.

TUESDAY, MAY 18, 2021, AT 7 PM ET

Community Mobility: Shifting Perspectives on Mobility, Technology and Interdependence

Speaker: Heather Feldner, PT, PhD, PCS

ATP Prep Content, Best Business Practice, Intermediate Level

Given the key role of mobility in life, it is no surprise that community mobility is recognized as a human right. Facilitating community mobility is not simply an intervention, or a business transaction, and it is certainly not a "fix" for something lacking at an individual level. Rather, it is an opportunity to design the right tools and technologies, the right environments, and advocate for the right policies to support and empower a diverse community, where people move, think and communicate in different ways. This course compares and contrasts community and clinical mobility, examines how evidence from fields such as neuroscience, psychology and design can support community mobility initiatives, and analyzes the concept of interdependence as a driver of mobility and a means of co-creating our communities through education, employment, social and civic engagement, and recreation. Action items for promoting community mobility at personal and professional levels will be discussed.

LEARNING OUTCOMES:

- The participant will be able to compare two similarities and two differences between clinical and community mobility programs.
- The participant will be able to analyze three contributions from foundational fields (neuroscience, psychology, rehabilitation, design and engineering) that support community mobility initiatives.
- The participant will be able to discuss the principle of interdependence and how it can inform the design and study of community mobility programs.

For more information, visit the website www.nrrts.org

WEDNESDAY, MAY 19, 2021, AT 11 AM ET

Travel for Everybody: How Can Businesses Help?

Speaker: Claire Wellbeloved-Stone, MPH, from Dartmouth; Co-Founder, Vice President, and COO of Blue Trunk

Sponsored by Blue Trunk Foundation

Business Practice, Beginner Level

In this webinar, we will explore how tourism-related businesses (e.g., restaurants, hotels and museums) can be more accessible. We will focus on 1) The why: What drives businesses to be accessible, how can we encourage them to move beyond the ADA?; 2) Obstacles to accessibility: What obstacles (perceived and real) do businesses face when trying to improve accessibility?; and 3) Accessibility solutions: What can businesses do to improve accessibility, including both low-cost/free solutions as well as more substantial and expensive modifications. Throughout this webinar, we will incorporate Blue Trunk's experience working with tourism-related businesses. We will use both case studies from our experience as well as published research findings to enhance our presentation. We will leave time at the end for questions/discussion.

LEARNING OUTCOMES:

- The participant will be able to describe why businesses (e.g., restaurants, hotels and museums) should consider accessibility as a core value.
- The participant will be able to identify obstacles to making a business more accessible.
- The participant will be able to describe the range of modifications businesses can make to be more accessible, from low-cost/free options through more substantial and costly options.

THURSDAY, MAY 20, 2021, AT 5 PM ET

Digital Validation of Design of Interventions

Speakers: Alexander Siefert, PhD, SIMUSERV GmbH, and Bart Van der Heyden, PT, SuperSeating

Sponsored by Bodypoint

Funding and Public Policy, Beginner Level

The variations of wheelchairs, wheelchair seating options as well as seating adjustments provide more options for clients, but it also has made the selection process more difficult. As the prescription process becomes more complicated and funding agencies increasingly demand evidence to support the need for equipment, outcome measurement is becoming increasingly necessary.

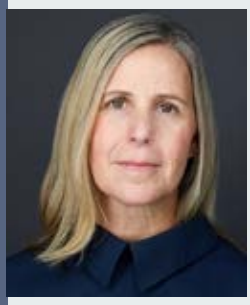
The choice of frequently used seating interventions such as degree of back support recline, cushion angle and foot support height are often based on clinical experience in combination with user feedback about experienced comfort when trialing the wheelchair seating solution. This presentation will examine seating intervention considerations using the numerical Finite Element Analysis (FEA) approach and the Virtual Patient Model (VPM). The following elements will be evaluated — pressure imaging, friction at the cushion, internal tissue strains and postural stability.

LEARNING OUTCOMES:

- The participant will be able to list at least two benefits of using FEA for wheelchair intervention evaluation.
- The participant will be able to list at least three measurable variables when varying the back-support angles, seat cushion angles and back support heights.
- The participant will be able to list at least two consequences when changing the angles of secondary positioning devices supporting the pelvis from 45 degrees to 70 degrees to 90 degrees.

For more information, visit the website www.nrrts.org

NRRTS CE



TUESDAY, JUNE 8, 2021, AT 7 PM ET

Speaker: Mary Forhan, OT Reg (AB), PhD

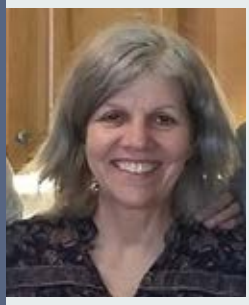
Addressing Weight Bias and Stigma in Bariatric Care

Medical Terminology, Beginner Level

This interactive course will focus on learning more about weight bias in health care settings and its impact on the client/practitioner relationship and the health and well-being of clients with bariatric care needs. Participants will be provided with the most up-to-date evidence about weight bias constructs and ways in which it is evidenced in practitioner's thoughts, actions and ultimately the quality of care and service. Participants will be led through activities and challenges with a goal to identify actionable items to reduce weight bias in their practices and settings. This session will be of interest and use to anyone who works with clients who have been diagnosed with obesity or who live in large bodies.

LEARNING OUTCOMES:

- The participant will be able to describe weight bias origins, perpetuation and impact on health and well-being.
- The participant will be able to identify ways in which to reduce weight bias in current practice settings.
- The participant will be able to identify tools and resources to create safe and accessible spaces and places for clients with bariatric care needs.



WEDNESDAY, JUNE 9, 2021, AT 11 AM ET

Evaluation Criteria and Justification for a Mobile Shower Commode Chair

Speaker: Jessica Presperin Pedersen, OTD, MBA, ATP/SMS, FAOTA, RESNA Fellow

Sponsored by RAZ

ATP Prep Content, Seating and Positioning, Beginner Level

The wheelchair is not the only mobility device needed in the home. A mobile shower commode chair provides mobile assist to get from the bedroom to the bathroom and provides postural stability as well as specific componentry to enhance safe function for the performance of toileting and showering. A clinical evaluation and critical reasoning are highly suggested to make the best match for the person to have an optimally functional mobile commode shower chair. This seminar will demonstrate evaluation considerations for determining the type of commode or shower frame, postural supports and functional components. This webinar will demonstrate the evaluation process as well as describe components that may be medically necessary for safe functional toileting and showering.

LEARNING OUTCOMES:

- The participant will be able to identify three aspects of an evaluation for a determining the type of toileting/bathing equipment to match physical and functional needs.
- The participant will be able to list at least two functional activities performed in an MSCC.
- The participant will be able to describe how the bathroom environment can determine specifics related to equipment recommendation.
- The participant will be able to identify the medical justification for a mobile shower commode chair and componentry for postural or functional needs.

For more information, visit the website www.nrrts.org

WEDNESDAY, JUNE 10, 2021, AT 5 PM ET

How to do more with your power wheelchair – interfacing with the outside world

Antoinette Verdone. ATP

Best Business Practice, Seating and Positioning, ATP/SMS Prep Content, Advanced

The wheelchair is not the only mobility device needed in the home. A mobile shower commode chair provides mobile assist to get from the bedroom to the bathroom and provides postural stability as well as specific componentry to enhance safe function for the performance of toileting and showering. A clinical evaluation and critical reasoning are highly suggested to make the best match for the person to have an optimally functional mobile commode shower chair. This seminar will demonstrate evaluation considerations for determining the type of commode or shower frame, postural supports and functional components. This webinar will demonstrate the evaluation process as well as describe components that may be medically necessary for safe functional toileting and showering.

LEARNING OUTCOMES:

- The participant will be able to list different terminology used by manufacturers for this kind of equipment.
- The participant will be able to describe the basics of interfacing and setting up this equipment.
- The participant will be able to list two items that can be accessed via ECU/IOM devices.

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For more information, visit the website www.nrrts.org

THE DANGERS OF "I'VE SEEN THIS 100 TIMES BEFORE"

Written by: **KRISTEN CEZAT, PT, DPT, NCS, ATP/SMS**

I first encountered this client working as a physical therapist in an inpatient rehabilitation setting. It was a typical busy and hectic day like so many others. I looked at my full schedule and thought to myself, "I need to be on top of my game to get through this busy day efficiently." My 10 o'clock client was a 37-year-old gentleman who had experienced a spinal cord injury three weeks prior. He was an active young man who was a father, worked a full-time job, and loved to fish and be outdoors. I remember as I looked through the client's chart that I had a sense of comfort knowing that I had seen clients with paraplegia hundreds of times in my career. As I first met the client, I thought to myself, "This should be relatively straight forward and easy," and my mind was already moving toward the "go to" things that I often prescribe in clients with this diagnosis.

One common error easily made in our profession is complacency. For those of you who have practiced in Complex Rehab Technology for many years, you know that it is easy to slide into a safety zone despite your best efforts to stay fresh. It is easy to repeat the same process over and over, making decisions based on the hundred other cases that you have seen just like this one. It is essential to stay up to date with an industry of constantly evolving technology. As a physical therapist, I strive to familiarize myself with current literature, products and available technology as a part of my standard practice. What happens when the straight-forward client does not "fit the mold" — responding differently to a seating intervention that has worked for hundreds of clients with a similar diagnosis and presentation? Let's discuss this exact scenario for our 37- year-old client who did not respond to my standard seating interventions.

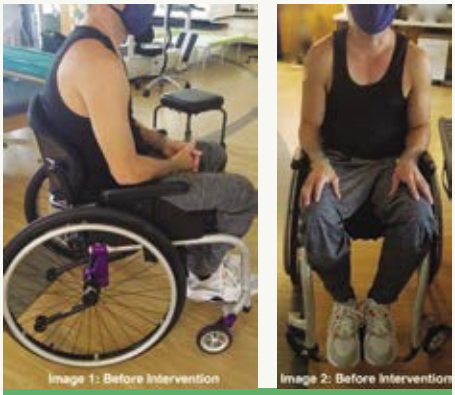
There are over 17,000 new cases of spinal cord injury in the United States each year. Many of these individuals living with a spinal cord injury need to establish a trusted relationship with a clinical team that specializes in seating and wheeled mobility for the rest of their lifetime. This clinical team often consists of a physician, physical therapist, occupational therapist and wheelchair supplier. Each team member plays an integral role and has a unique perspective in understanding the individual client's function, mobility and specialized wheelchair needs.

Spinal cord injury results in a cascade of secondary effects that may result in paralysis, diminished sensation, respiratory complications, neurogenic bowel and bladder, pain, and spasticity. These effects contribute to a laundry list of problems and create major complications for a person living with a spinal cord injury. One common example is skin breakdown due to lack of sensation, mobility, shearing and incontinence. Early intervention through optimal seating, positioning and wheeled mobility is paramount in prevention of long-term complications, especially in those living with paralysis.

Our client presented with a T8 incomplete ASIA Impairment Scale B injury (sensory incomplete) resulting in paraplegia. He did not have any co-morbidities or prior medical complications. His motor complete paralysis was characterized by generalized hypotonicity and neurogenic bowel and bladder. In the three weeks he was hospitalized, he experienced several complications related to his spinal cord injury including pneumonia, a urinary tract infection and a stage 2 pressure wound over his coccyx/sacrum. His functional self-care and mobility were impaired by poor trunk control and decreased balance, which is common in many clients with a new spinal cord injury. He required minimal assistance for sit pivot transfers from his wheelchair to household furniture and was able to perform manual pressure relief techniques including forward and lateral trunk leaning with independence.

When I first encounter a client in the clinic, I often find myself using the International Classification of Function (ICF) Model as a road map to break apart complex cases into a prioritized problem list. The ICF model classifies the individual client's health condition into three main categories: body function/ structure, activity and participation. These categories are interrelated and are uniquely affected by two subcategories including environmental factors and personal factors. By using the ICF model, I not only address the client's medical needs, but also ensure that the client is assessed as an individual, rather than a diagnosis seen a hundred times before.

I found myself creating a prioritized problem list to best address this client's seating and mobility



FIGURES 1 & 2 Before intervention, side and front views

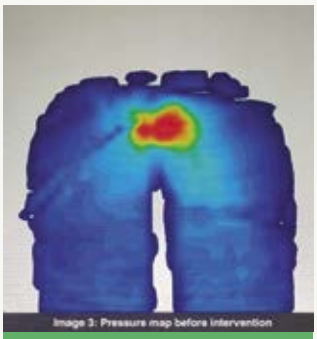


FIGURE 3 Pressure map before intervention

needs based off of the ICF model. He arrived at the appointment to our inpatient seating clinic in a rigid frame, hybrid cushion and an after-market back rest that had been selected by his primary therapy team. This was a trial configuration to determine if these products matched his needs. He demonstrated posterior pelvic tilt, thoracic kyphosis, forward head and rounded shoulders, as well as mild hip abduction of his bilateral lower extremities; however, he was functioning well in the wheelchair (see Figures 1 and 2). The immediate problem list for this client included the stage 2 sacral and coccyx skin breakdown, poor shoulder/trunk positioning, hip abduction and decreased trunk balance.

My initial "go to" seating intervention for a client with T8 paraplegia typically includes a rigid frame wheelchair, some type of hybrid cushion for positioning and skin protection, as well as an appropriate after-market back rest. I usually set up a wheelchair to allow modifications to meet the client's evolving needs when working with someone who has a new injury. For example, a backrest initially positioned higher on back canes to aid in trunk stabilization while the client's postural control is poor but lowered as balance improves. Or arm rests and anti-tippers which may be needed for safety initially but are often not required in the future as wheelchair skills improve. As seen in Figure 1, the client's posture and positioning are not ideal, but did not seem to impede his function. Situations like this can often fall through the cracks because a less than desirable posture does not result in immediate problems. But what would the long-term ramifications for this client be if this "less than ideal" positioning is not addressed?

When paralysis is present, it is common for the client to seek a position of stability. Due to a decrease in trunk control and balance, the client often seeks stability through a posterior pelvic tilt. A posterior pelvic tilt increases the contact area of the pelvis on the seating surface and, as a result, provides a sense of improved stability. Despite the client's increased stability, posterior pelvic tilt contributes to a cascade of negative effects including thoracic kyphosis, forward head/neck positioning and transfer of weight distribution from ischial tuberosities to that of the sacrum and coccyx. Respiratory capacity may be affected by thoracic kyphosis. The long-term effects of posterior pelvic tilt positioning often result in sacral and coccyx deep tissue and pressure injuries, shoulder related pathology including impingement and rotator cuff injury from repetitive use of shoulder with poor mechanics, and neck pain due to the forward head posture and capital extension of the client's neck.

Common interventions depend on whether the client's posterior pelvic tilt is reducible or non-reducible. One of the first lines of defense for correction of pelvic positioning is a positioning cushion. In the case of this client, his posterior pelvic tilt was reducible due to the hypotonic muscle tone and acuteness of his injury. Several different cushion designs made of various materials were trialed to remedy his posterior pelvic tilt while also providing adequate pressure relief including foam, air and fluid. Despite cushion designs aimed at achieving a neutral pelvis, the client's pressure mapping continued to reveal increased sacral pressure (see Figure 3).

I realized that the interventions I traditionally use were not solving this client's positioning problems. A standard rigid frame, positioning cushion and rigid back support were not sufficient to achieve ideal positioning in this client's case. I consulted with the seating team prior to the formal wheelchair evaluation. The wheelchair supplier suggested that instead of trying to neutralize the pelvis and hips through a cushion only, a trial of a more aggressive wheelchair frame design to help capture the client's pelvis was warranted. Our seating team recommended a trial of "Ergonomic Seating" on his TiLite rigid frame. This addition to the frame was selected to provide a pelvic shelf in combination with seat tapering to give further support to the pelvis not achieved through cushion trials alone. The client was measured from the posterior buttocks to the anterior superior iliac spine with an inch added to determine where the wheelchair frame begins to bend upwards to create a shelf. This shelf aids to prevent the pelvis sliding forward into posterior

CONTINUED ON PAGE 40

(CONTINUED FROM PAGE 39)

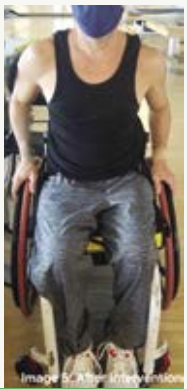
FIGURE 4 TiLite Ergonomic Seating

pelvic tilt positioning (see Figure 4). In this case, the ergonomic frame design achieved the positioning that the client and team desired. To address his hip abduction, seat taper through the frame was used with a back seat width measured at 15 inches and front seat width measure at 13.5 inches. This seat taper provided a more contoured fit to allow for neutral hip position. The tradeoff of seat taper was mild contact of the wheelchair frame against the client's lateral lower leg. Despite this contact, boney prominences of the lower leg such as the fibular head were not impacted. With trial of the frame, skin remained intact without compromise.

The next decision was determining the optimal cushion and back. Air cushions are not always our first choice for aggressive pelvic positioning. However, in this case, an air cushion was trialed to meet the more aggressive bends of the wheelchair frame. A full air cushion molded to the bends of the frame, as well as provided appropriate pressure relief to boney prominences. An immediate improvement of the client's static seated posture was noted: a neutral pelvic position with elimination of his thoracic kyphosis, forward head and rounded shoulders (see Figures 5 and 6). Pressure mapping with this new frame and cushion configuration confirmed that the pressure was shifted off his sacrum and coccyx (see Figure 7). When determining the back support, the team considered height, contour, weight and position. A 10-inch, mildly contoured back was selected and positioned roughly 2 inches below the inferior angle of the client's scapula. This back provided posterior support to the client's pelvis and trunk, allowing for improved balance, alignment and comfort.

As a physical therapist, I was next concerned about the client's posture with dynamic movement in function and mobility. Could the client scoot forward in his seat for transfers in such an aggressive frame? Would his static postural improvements remain during propulsion and other dynamic activities? There are many considerations for wheelchair frame design beyond static seated positioning. In this particular client's case, this intervention worked during dynamic activities. This success helped to seal the deal for wheelchair frame design as it solved our client's priority problem list while providing independent mobility.

As Assistive Technology Professionals, physical and occupational therapists, and wheelchair suppliers, we are very fortunate to work in an era of constantly evolving and improving complex rehab technologies. These improvements allow us to better meet the needs of our clients, but not without challenges. The evolution of our industry requires constant learning to stay up-to-date. There is so much technology available at our fingertips and, as in the case of this client, it takes a combined effort of the entire seating team to match the right technology for each individual client. It is important that we do not fall into the habit of placing a client into the "I have seen this a hundred times before" category. Remember to look at every client as an individual in order to fit them with the best available technology to provide optimal outcomes.



FIGURES 5 & 6 After intervention, side and front views

FIGURE 7 Pressure map after intervention.

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Kristen Cezat is a physical therapist, board-certified specialist in neurologic physical therapy, RESNA certified Assistive Technology Professional, and Seating and Mobility Specialist. She works at Orlando Health ORMC Institute for Advanced Rehabilitation in direct patient care for clients with neurologic conditions. Cezat is on the clinical faculty for the UCF-Orlando Health Neurologic Physical Therapy Residency Program and has received the Clinical Excellence in Spinal Cord Injury Care Service award from the APTA's Spinal Cord Injury Special Interest Group in 2020.

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DOING IT THE RIGHT WAY AND NOT GIVING IN

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

It has been a year since our world changed due to pandemic. There have certainly been some tweaks in the world of funding, but from my vantage point, I continue to see our own industry get in our own way — with or without a pandemic.

How could this be? What does it mean?

There are several key examples that need to be discussed, and for you, the reader, to really consider and understand.

For quite some time coding issues have been a primary discussion topic and amazingly not because of Medicare. The problems primarily stem from other insurers such as various Medicaid programs and United Healthcare. Most insurers properly use what are known as "Medicare" codes. However, their interpretation and understanding of what these codes mean can become a hindrance. Quite honestly, some of these errors affect the insurers while others affect the supplier and, of course, the end-user. A continuous problem with one insurer is the misinterpretation of when expandable electronics (E2377) are to be billed and reimbursed on a power wheelchair. The Medicare Policy Article clearly states the following:

Expandable Controller – An electronic system that can accommodate one or more of the following additional functions:

> *a) Proportional input devices (e.g., mini, compact or short throw joysticks, touchpads, chin control, head control, etc.) other that a standard proportional joystick.*
>
> *b) Non-proportional input devices (e.g., sip and puff, head array, etc.).*
>
> *c) Operate three or more power seating actuators through the drive control (Note: Control of the power seating actuators through the Control Input Device would require the use of an additional component, E2310 or E2311.).*

An expandable controller may also be able to operate one or more of the following:

> *d) A separate display (i.e., alternate control device).*
>
> *e) Other electronic devices (e.g., control of an augmentative speech device or computer through the chair's drive control).*
>
> *f) An Attendant Control.*

The issue with this one insurer is directly with point "c" above. Medicare has always funded the expandable controller/electronics, E2377, when the clinical justification supports the medical need for three or more actuators. As noted above, the Control Input Device (aka thru-drive control — E2310 or E2311), is coded and funded separately. Of course, it should also be separately clinically justified, which makes sense due to the additional cost to the insurers. Quite some time ago this insurer started consistently denying the expandable controller on CRT PWC orders with power tilt, recline and center mount when the thru-drive control was not justified, but the powered seating options were. For some reason, this insurer feels the expandable controller should be standard if a person does not use or qualify for the thru-drive control. This is certainly not the intention of the Medicare policy, which is the same policy the insurer uses. For Group 3 PWCs with multiple power options the Medicare policy states, "An expandable controller, a nonstandard joystick (i.e., non-proportional or mini, compact or short throw proportional) or other alternative control device may be billed separately."

With all this said, why would I start this article by stating our industry gets in our own way? In regard to this coding issue, the insurer is making a mistake, but suppliers are letting it continue by accepting the erroneous denials. Suppliers are either "eating" the loss or asking the manufacturer to "assist" with the charge due to the insurer denial. By consistently accepting the insurers denial, a precedence is set that the decision is acceptable. I know the fight can be long and hard and in some cases you still do not win. However, if it simply continues without any type of appeal, there will never be a reason for a change to be made. The acceptance of the denial just confirms it can continue to happen. This is one example of the industry getting in its own way. Keep in mind, this acceptance also hurts the argument the allowables are too low. Again, if it is accepted the insurers can continue to think things are OK.

DUE TO THE PANDEMIC, THE WORLD OF TELEHEALTH EXPANDED TO INCLUDE CRT WHEELCHAIR SEATING AND POSITIONING EVALUATIONS. OVERALL, I AGREE THAT THIS WAS A GREAT STEP FORWARD, BUT I'M ALSO CONCERNED THAT THE INDUSTRY MAY CAUSE ITS OWN NEW HEADACHE. BOTH SUPPLIERS AND CLINICIANS NEED TO BE CERTAIN THAT THIS DOES NOT SIMPLY BECOME A MECHANISM TO RUSH THROUGH THE PROCESS OR CUT ANY CORNERS.

In my opinion, another category that can get us in trouble is telehealth. Due to the pandemic, the world of telehealth expanded to include CRT Wheelchair Seating and Positioning Evaluations. Overall, I agree this was a great step forward, but I'm also concerned that the industry may cause its own new headache. Both suppliers and clinicians need to be certain this does not simply become a mechanism to rush through the process or cut any corners. By all means, faster delivery of equipment is important, but thorough and proper evaluations and documentation are critical, not only for funding but more so for the end-user.

I have found the Clinician Task Force (CTF) put together a great decision tree when it comes to the use of telehealth. In the current environment there may not be a choice on if a telehealth or in-person visit can be done. But it simply makes sense to run through the decision tree to determine the best option. Simply put, the choice to use telehealth for wheelchair seating evaluations has to be made for the right reasons. My hope is an end-user does not forgo an evaluation for a new wheelchair with a seating therapist that knows them, their history and their needs in order to be evaluated by someone who has never met them all in the name of speed. Don't get me wrong, timeliness is key, but that shouldn't always be the case.

If for some reason the end-user receives equipment that does not meet their needs, then a supplier should obviously not be billing for it — even if they have yet to pick it up from the client. Replacing equipment due to an insufficient seating assessment, is not going to be enough for most funding sources. Again, I do believe telehealth is great in many situations; but not for all. Medicare and other funding sources have already seen a large uptick in potential fraud and abuse cases when it comes to telehealth. Do not let this be you.

Lastly, tools that assist in writing letters of medical necessity (LMNs) or similar continue to pop-up and be promoted by various sources. I'm not saying they are all bad, but be careful. ATPs or any supplier employee should not be writing any part of the documentation, nor can they make any changes. Therapists may have some of their own templates, which is fine, but I still caution people that use these. What I tend to see is that errors are more easily made or worse, critical details are not added. I understand time is limited for all, but a little extra on the front-end should not only provide for faster delivery of equipment but also proper reimbursement and the survival of audits. When I am asked what specific justification is needed for various options, my typical answer is "Why does the individual end-user need it, and what would happen if they did not have it?" There are several codes with distinct policy, but most comes down to basic medical need.

When it comes to the LMN topic and even that of telehealth, the Complex Rehab Technology (CRT) industry needs to remember we fought to convince Medicare and other insurers that CRT is not something just anyone could do. That the end-users have complex needs, are certainly not all the same, and ordering and providing the proper equipment not only takes time but specific expertise. Insurers have noticed certain "cookie-cutter" things in the CRT industry which does not make it easy for us as we continue to fight for more things including the Separate Benefit Category.

My goal with this article was not to start a battle but to open the eyes of many. We need to be sure we continue to move forward and not take ourselves backward in any way. Sadly, the losers in this will be the people we are all truly trying to help.

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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 rehab 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.

NRRTS CONTINUING EDUCATION

"I AM STILL LEARNING." - MICHELANGELO

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

Back in the early days of NRRTS, a group of concerned stakeholders created an organization that would provide a professional identity for individuals providing seating and mobility. To be eligible for inclusion in the Registry, the applicant had to get recommendation letters from three clinicians. The applicant had to show work experience via employer verification. In 1992, there was no other way to determine who was qualified to be a Registrant.

The application process evolved as Complex Rehab Technology (CRT) became a recognized specialty. Some education was available at the few conferences focused on seating and mobility. Companies were formed that only provided CRT. The ATS/ATP certification was introduced by RESNA. New and exciting wheelchair technology and seating products became available. Some manufacturers required suppliers to attend training to provide their products. Getting education involved travel and expense.

NRRTS saw a need to change the application process. No longer requiring the three recommendations, an applicant must have 10 hours of CEU education specific to CRT. The need for high quality education became more and more apparent. The first NRRTS education created were called "teleseminars." Attendees would call in and listen to the presentation. It was accessible education, but, again, the attendees were in "listen only mode" without video.

It was a wonderful day in continuing education when NRRTS rolled out the webinar platform. Now, attendees were seeing a power point as they listened to the presenter. Today, the webinars are much more interactive and engaging. Even in the recorded format, the presentations are an effective means for learning.

DIRECTIONS, NRRTS bi-monthly publication, has always offered great content related to CRT. Each article provides insight through the eyes of CRT consumers, manufacturers, clinicians and suppliers. This publication is considered a "defacto" journal for CRT. In 2018, CEU articles were added as another method of providing quality education. CEU articles can be accessed online.

Access to CRT education has never been easier. The choices of content are diverse. What a benefit to be able go into the course library and choose the topic that is most relevant to the learner.

If you have not taken advantage of NRRTS Continuing Education, you are missing out!

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Weesie Walker, ATP/SMS is the executive director of NRRTS. She has more than 25 years of experience as a CRT Supplier. She has served on the board of directors for NRRTS and GAMES and RESNA's professional standards board. 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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RESNA 2021 CONFERENCE: WELCOME HOME

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

Spring is in the air, as is the promise of post-COVID life returning to some semblance of normal. At RESNA, we are preparing for our next conference. *RESNA 2021: Welcome Home* will take place virtually July 7-10.

Past President Mary Ellen Buning inspired this year's theme, through her coining of the phrase "mother ship" as a shorthand description of RESNA. Last year, we celebrated RESNA's 40th Anniversary, and in finding out more about our own history, we were surprised and delighted to discover deep roots and connections with other assistive technology organizations. As a result, at this conference, we are honored to have the participation of so many fellow AT groups such as the Clinician's Task Force, ADED (Association for Driver Rehabilitation Specialists), NCART, GAATO (the Global Association of Assistive Technology Organizations), and AgrAbility, to name a few.

The RESNA conference offers continuing education and IACET CEUs for ATPs working in all areas of assistive technology. Seating and mobility, as well as complex rehab, are always big topics at the conference. In addition, the conference also provides opportunities for AT practitioners to "stretch," explore other areas of practice, and find out about the latest research and technologies. New this year are three "master class" sessions for advanced practitioners. These 90-minute sessions will include a high level of engagement and discussion. The topics are:

- Ethics for Assistive Technology Practice and Policy
- Overview of NIDILRR DRRP Program: Research on Healthcare Policy and Disability, i.e. 'The Right Wheelchair for the Right Person at the Right Time'
- Full Access: a look into myriad iOS accessibility settings to increase user independence

Also new this year are 30-minute "buzz sessions," based on the belief of NRRTS founder and former RESNA President Simon Margolis that you should be able to get anything across in under 30 minutes. The buzz sessions feature new technologies and provocative topics, such as "Using the "F-Words" to Obtain Funding for Mobility and Standing Devices," "Why It Is Time for a Policy Change on Standing Power Mobility," and "Use of AT to Facilitate Engagement in Sport."

Finally, in keeping with the theme, the conference will also have several sessions on smart home technologies and home modifications. These technologies and areas of practice seem to be a growing trend among ATPs who are seeking to offer more services. After all, what good is a wheelchair if the client is unable to leave the house with it?

Please check out the schedule and sessions at www.resna.org, and feel free to contact me directly with any questions at execoffice@resna.org. Conference registration includes access to the session recordings and CE for up to six months.

NEW RESNA RESOURCES

- New webpage on ATP recertification – review the steps needed to renew your ATP certification, including suggested timelines, CE requirements, and how to send in your application. Go to www.resna.org and click on "ATP Recertification" under the Quick Links.
- AT Forum – RESNA's AT Forum is open to members and non-members, and is now available on RESNA Connect, our new on-line community. Check it out under "Resources" on the website.

Are there other resources RESNA could provide that would be helpful? Let us know!

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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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READY FOR LAUNCH?

Written by: **DARRELL MULLEN, RRTS®**

THE LAND AREA OF CANADA IS SLIGHTLY LARGER THAN THE UNITED STATES, WITH APPROXIMATELY 10% OF THE POPULATION AND A POPULATION DENSITY OF 9.6 INDIVIDUALS PER SQUARE MILE – ONE OF THE LOWEST IN THE WORLD.(1) ALTHOUGH OVER 80% OF THE POPULATION LIVES WITHIN 93 MILES OF THE CANADIAN-AMERICAN BOARDER(1) — THERE IS STILL A SIGNIFICANT AMOUNT OF TRAVEL INVOLVED TO REACH RURAL CLIENTS. IN THIS CANADIAN DIRECTIONS ARTICLE, DARRELL MULLEN, A RECENT CANADIAN NRRTS REGISTRANT, DESCRIBES WORKING WITH THESE CLIENTS.

Sometimes getting ready to travel out of town to provide service to clients can seem like preparing a mission to space.

The delivery of service to clients in remote locations presents several challenges beyond those faced in metro areas. Some of these include travel time, weather variation and the need to have everything on-hand that might be required to complete the task. Suppliers in large metro areas also may face lengthy travel times due to traffic but may not face the weather variations along the route that those in rural areas do. Suppliers often find themselves traveling several hours and hundreds of kilometres to reach their client. Rural clients are often spread out geographically, so it is hard to be efficient, this makes cost of service proportionately higher. Upon arrival in the area, cellular service might be unavailable, nor will there be a hardware store nearby to grab that forgotten 10mm wrench.

Many of these challenges can be addressed by maximizing planning, preparation and communication with the client and clinical team. Suppliers traveling to remote areas are often dealing with a clinic-based therapist advising remotely to a local therapist who works with the supplier on site. Teams may also include, caregivers, manufacturer reps, social workers, translators, respiratory therapists and the list goes on. Although these large teams can be necessary, they significantly increase the complexity of coordination required.

For a variety of reasons, clients are often not able to travel to city centers where they could access services in a clinic, so the service needs to be brought to them. Regardless of the purpose of the remote visit, whether it be a grab bar install, a flat tire repair or the dispense of a fully loaded powerchair with custom seating, the following key elements always apply and need to be considered to ensure a successful mission.

MANY OF THESE CHALLENGES CAN BE ADDRESSED BY MAXIMIZING PLANNING, PREPARATION AND COMMUNICATION WITH THE CLIENT AND CLINICAL TEAM.

COMMUNICATION

Prior to launch, it is vital to communicate with the therapists involved whether they will be attending the appointment and to be clear on roles/responsibilities of each team member. It is also critically important to have well-established goals and a reasonable strategy as to how those goals might be achieved. Having access to pictures regarding the issues to be addressed and advanced video calls can be extremely helpful at this stage. Fortunately, technology is constantly improving, making remote communication and information sharing easier by the day.

PLANNING

Now that the goals have been established with the client/therapist and communicated amongst the team, a plan needs to be established. Perhaps funding approval is required? Does a specific product need to be ordered? Do several pieces of assessment equipment need to be gathered? Are updates required for the power equipment being trialed? Does the schedule allow for travel time and a much-needed lunch break? Are overnight accommodations required and need to be booked in advance? Planning the day around all the variables of travel time, the client's schedule, caregiver access, the clinician's schedule, etc. is often very challenging. Even if all of this scheduling for the initial appointment is possible, it may not be worth doing if you cannot schedule a follow up within an appropriate time.

PREPARATION

It is important to ensure the vehicle (spaceship) to be used is adequate to take everything required and the proper maintenance has been done. Often overlooked but important is having proper PPE, first aid and safety equipment including auto safety kit.

In addition to bringing the products, is critical to have the necessary tools and parts required. The tools and parts should be organized to maximize work efficacy. These days there are an abundance of innovative storage options and cordless tools beyond just drills make working away from the shop much easier.

Even the most thorough communication combined with the most detailed planning and preparation, cannot guarantee a successful mission. Despite this, I would argue it greatly improves the odds of success. When faced with so many factors that cannot be controlled, it is important to maximize the influence on factors that can. Regardless of the outcome, clients and the clinical teams appreciate the effort of a well-prepared and executed mission. When the objectives are successfully achieved, and the client's needs are addressed, it validates all the effort and that feeling of such a success can be "out of this world."

CONTACT THE AUTHOR:

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REFERENCES
1. MIGIRO G. IS CANADA BIGGER THAN THE UNITED STATES? [INTERNET]. WORLD ATLAS. 2020 [CITED 2021 MAR 1]. AVAILABLE FROM: WWW.WORLDATLAS.COM/ARTICLES/IS-CANADA-BIGGER-THAN-THE-UNITED-STATES.HTML

Darrell Mullen's passion for the industry was sparked after his father had a stroke and required the use of a wheelchair. He entered the industry in 2006 as service technician and now specializes in custom seating and solution design/fabrication. In 2013, he received the Citation Award from the Canadian Association of Occupational Therapists for his contribution to the health and wellness of Canadians. Never content with the status quo, he enjoys pushing innovation with product research and development.

NEW NRRTS REGISTRANTS

Congratulations to the newest NRRTS Registrants. NAMES INCLUDED ARE FROM JAN. 20 THROUGH MARCH 12, 2021.

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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 LISTED ARE FROM JAN. 20 THROUGH MARCH 12, 2021.

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NSM-Canada
Burnaby, British Columbia

Calum Nicol, ATP, CRTS®
Agta Home Health Care
Concord, Ontario

Carla Carrico, ATP, CRTS®
HME Mobility & Accessibility
Richmond, British Columbia

Charles Winston, ATP, CRTS®
National Seating & Mobility, Inc.
Pelham, AL

Charlotte Welch, ATP, CRTS®
Browning's Pharmacy & Health Care
Orlando, FL

Steven Asbury, ATP, CRTS®
National Seating & Mobility, Inc.
Oklahoma City, OK

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 JAN. 20 THROUGH MARCH 12, 2021. FOR AN UP-TO-DATE VERIFICATION ON REGISTRANTS, VISIT WWW.NRRTS.ORG, UPDATED DAILY.

Mark Hawkins, ATP
Santa Rosa, CA

John R. Minnick, ATP
McAllen, TX

Tracey Ashley
Doraville, GA


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The following individuals renewed their registry with NRRTS between Jan. 20 through March 12, 2021.

PLEASE NOTE **IF YOU RENEWED AFTER JAN. 12, 2021,** YOUR NAME WILL APPEAR IN A FUTURE ISSUE OF DIRECTIONS.
IF YOU RENEWED PRIOR TO JAN. 20, 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.

Adam Majors, ATP, CRTS®
Anthony J. Soria, Jr., RRTS®
Becky Bertoncino, ATP, CRTS®
Ben Peters, ATP, CRTS®
Bradley S. Hannan, ATP/SMS, CRTS®
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