DIRECTIONS

TRANSPORTATION SAFETY FOR PEOPLE WHO USE WHEELCHAIRS

Page 30

THE OFFICIAL PUBLICATION OF THE NATIONAL REGISTRY OF REHABILITATION TECHNOLOGY SUPPLIERS | ISSUE 6 OF 2023 | $10.00 USD

IN THIS ISSUE

4 **FROM THE NRRTS OFFICE**
Creating Legacy

6 **MINI FEATURE**
C[10]RT

8 **NOTES FROM THE FIELD**
Decade of Experience Has Helped Parker Fadler Become a Perfect Fit at Alliance

10 **CLINICALLY SPEAKING**
Decades of Dedication to Healing and Hope

14 **INDUSTRY LEADER**
Michael Hughes Has Been Getting Ready to Take on This Role for a Long Time

18 **LIFE ON WHEELS**
Double Blessing: Young Twins With Cerebral Palsy

22 **CRT UPDATE**
NCART Legislative and Regulatory Update

24 **CLINICIAN TASK FORCE**
CTF Joins Advocacy Actions to Impact Denials - A Call to Action for Suppliers

30 **CLINICAL PERSPECTIVE**
CEU ARTICLE
Transportation Safety for People Who Use Wheelchairs

42 **CLINICAL EDITORIAL**
First Things First! Importance of the Initial Therapy Evaluation

44 **REHAB CASE STUDY**
Rehab Case Study: Finding Just the Right Equipment for Adaptive Driving Can Be Tricky

48 **WEESIE'S WORLD**
Looking Back on 2023

50 **UNITE4CRT**
Unite4CRT: Changes to Reach More People

52 **RESNA**
RESNA Certification News

54 **DIRECTIONS CANADA**
NRRTS Canada – A Recap of 2023

IN EVERY ISSUE

56 | New NRRTS Registrants
57 | New CRTS® and Former Registrants
58 | Renewed NRRTS Registrants
Back Cover | Charter Corporate Friends of NRRTS, Corporate Friends of NRRTS, Association Friends of NRRTS

FROM THE EDITOR-IN-CHIEF

As I finish my 21st year with NRRTS, I'm astounded at our organization and its growth. We are international, and people with disabilities and their needs don't change whether they live in the United States, Canada or Australia. I'm proud of our NRRTS Registrants and all they do to serve this population. I want to wish everyone a happy holiday season.

Amy Odom, BS

ADVERTISERS

ALTIMATE ..... PAGE 05
ATLAS ..... PAGE 20
CLINICIAN TASK FORCE ..... PAGE 12
MK BATTERY ..... PAGE 29
NATIONAL SEATING & MOBILITY ..... PAGE 47
PRIME ENGINEERING ..... PAGE 49
QUANTUM ..... PAGE 23
RIDE DESIGNS ..... PAGE 51

THE OFFICIAL PUBLICATION OF
The National Registry of Rehabilitation Technology Suppliers
VOLUME 2023.6 | $10.00 USD

The opinions expressed in DIRECTIONS are those of the individual author and do not necessarily represent the opinion of the National Registry of Rehabilitation Technology Suppliers, its staff, board members or officers. For editorial opportunities, contact Amy Odom.

DIRECTIONS reserves the right to limit advertising to the space available. DIRECTIONS accepts only advertising that furthers and fosters the mission of NRRTS.

NRRTS OFFICE
5815 82nd Street, Suite 145, Box 317, Lubbock, TX 79424
P 800.976.7787 | www.nrrts.org

For all advertising inquiries, contact Bill Noelting at bnoelting@nrrts.org

EDITOR-IN-CHIEF
Amy Odom, BS

EDITORIAL ADVISORY BOARD
Kathy Fisher, B.Sc.(OT)
Bill Noelting
Weesie Walker, ATP/SMS

DESIGN
Reace Killebrew - Hartsfield Design

COVER CONCEPT, DESIGN
Reace Killebrew - Hartsfield Design

PRINTER
FUSED Graphics Group

NRRTS REGISTRANT – RENEWAL FAQS

Renewing your NRRTS Registrant status requires action each year.

I'M A NRRTS REGISTRANT, WHAT NOW?
NRRTS Registration is annual – meaning you will need to complete 1.0 CEU (10 hours) annually, pay the renewal fee and submit a completed renewal form.

IS MY NRRTS REGISTRATION AUTOMATICALLY RENEWED?
No, you will need to complete 1.0 CEU, pay the annual renewal fee and submit a completed renewal form.

HOW CAN I DETERMINE WHEN MY NRRTS REGISTRATION EXPIRES?
You can check the NRRTS website, or you can review your hard copy NRRTS certificate.

WHERE DO I OBTAIN CEUs?
CEUs are readily available for FREE from the NRRTS Learning Portal. We suggest Registrants complete a course each month so when annual renewal comes, all the Registrant must do is let NRRTS know.

CAN I USE THE SAME CEUs EACH YEAR?
No, you must complete new CEUs each year. Once education has been used, it cannot be used again.

WILL NRRTS NOTIFY ME WHEN MY RENEWAL IS DUE?
Yes, NRRTS will advise you via email 30 days before your renewal expires.

DOES NRRTS HAVE ACCESS TO EDUCATION I'VE COMPLETED WITH OTHER ORGANIZATIONS?
No, you will need to submit any education completed outside of NRRTS.

WILL NRRTS ACCEPT CECs FOR RENEWAL BECAUSE RESNA DOES?
While RESNA does allow up to 10 hours of continuing education credits (CECs) for a biannual renewal, the NRRTS board recognizes that continuing education units (CEUs) are a higher standard for education. To be awarded CEUs, the course must meet certain criteria that ensures the material is relevant, learning outcomes are clearly defined, references are current and content is not product specific. The presenter must also meet a certain criterion as a subject matter expert.

There is no standard for a CEC. It can be an in-service, an activity or other event. Because ATP certification covers many different areas of assistive technology, RESNA recognizes that that not all certificate holders have access to CEUs.

Renewal FAQS Continued on Page 59

CREATING LEGACY

Written by: **CAREY BRITTON, ATP/SMS, CRTS®**

Choosing to be an Registered Technology Supplier (RTS) is a calling, a commitment and an awesome responsibility. Our consistent daily preparation leads to behaviors and actions that affect our value, our customers' lives and our referral sources, trust. Our legacy is what we choose to make it, and many people never take the time to think about this.

I challenge all of us to budget time to critically think about what our legacy is or will be. This is not something to wait until the end of your career. Each of us impacts the lives of many customers in our communities, which adds to your legacy. Some RTSs share their time with peers and staff, elevating each team member to achieve their potential. Other RTSs get involved in NRRTS and other organizations, advocating for their customers, their company and within the community, thus improving the industry that gives us the opportunity to make smiles and improve lives.

I am working on building my legacy, raising the bar to make the industry better and always adding value to those I serve. Each week, I review situations where I can improve, what issues arose and how to get better. I look for educational opportunities to strengthen my weaknesses. I prepare and am involved in staff/company meetings to bring value and experience helping to ensure the field I work in exceeds expectations. I make myself available for colleagues when they have questions and concerns. I wake up each day trying to lead by example and do what is right even when nobody's looking.

All of us can say we do not have any more time to commit to making things better. This is indeed troubling, because if we do not allocate time to help improve ourselves, our teams, our companies and industry, we may not have a place to continue to improve our customers' lives and confidently know that what we do makes such a difference in the lives of our customers.

NRRTS too has a legacy, and I am excited as we finish 2023. The following are some areas that have been completed and continue to be a priority to NRRTS.

- Incoming executive director — Andrea Madsen, BS, ATP
- Growing to an International Organization — iNRRTS
- Unite4CRT
- CRT Education Program
- Repair Practices/Guidelines Involvement
- World Class DIRECTIONS magazine
- Exceptional CEU Webinars
- Increased Presence on the Web and Through Social Media
- Easier Renewal Process
- Continued Advocacy, Fly-In, In-Home, Seat Elevation and Standing, Choice in Increase Mobility

I am proud of everyone involved and those supporting NRRTS. I am grateful to be involved and play a role in the direction of our industry. If you have time and want to add to your legacy, ask iNRRTS what you can do to get involved. As we finish 2023, I wish you and your families a happy and safe holiday season.

CONTACT THE AUTHOR

Carey may be reached at
CAREY.BRITTON@NSM-SEATING.COM

Carey Britton, ATP/SMS, CRTS®, is the branch manager and seating and mobility specialist for National Seating & Mobility in Pompano Beach, Florida. He has worked in the Complex Rehab Technology industry for 30 years and previously owned Active Mobility Center. A longtime NRRTS Registrant, Britton is the current president of NRRTS.

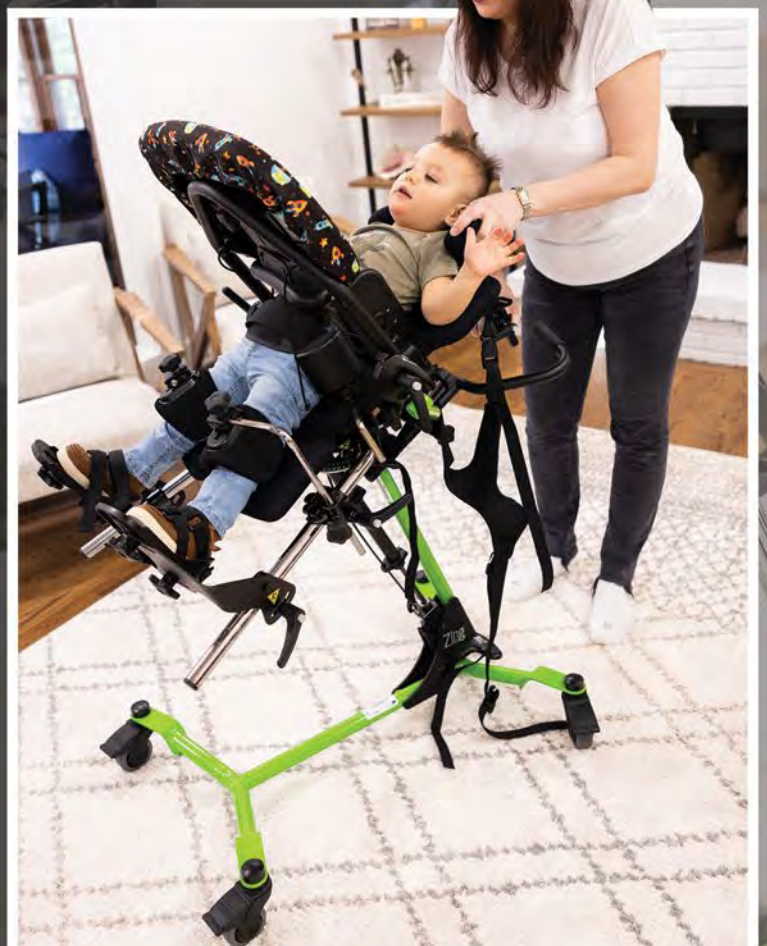
AltimateMedical

Zing

ZINGSTANDERS.COM

FLAT-TO-LOAD SUPINE TO 20 DEGREES PRONE IN ONE MOTION

The Zing MPS is the only multi-position stander that pivots two directions, allowing the unit to go from flat-to-load supine to 20 degrees prone in one motion. There is no need to transfer the user in and out, flip pads, foot plates and trays. This ability provides a therapeutic opportunity not possible with other standing frames. It also features anatomically-correct leg abduction, up to 30 degrees per side, using a single knob.



C[10]RT

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

Is our profession and our industry in trouble?

I think so, and the evidence is all around us.

You may have noticed the title, C[10]RT, instead of CRT. I titled it that way because the 'Complex' in Complex Rehab Technology, refers to the complexity involved in getting seating and mobility interventions to consumers. It is now at least 10 times harder than it's ever been. In fact, getting any intervention has become impossible at times. The process is more complicated than designing the most difficult seating system. Is it covered? Do they have the proper diagnosis? Do we need a prescription? Do we need a face-to-face? Home or community use? And on and on.

All of this leads to a profession in crisis. Seating and mobility clinics have closed or have been greatly reduced. Consumers, clinicians, suppliers and manufacturers are stressed and approaching burnout. The documentation burden is being masked by dedicated people doing their documentation on their own time. Robust product development is stagnant. Coding, policy and pricing creates its own unique set of complexities. A device, a cushion, a back, or a power or manual chair, might be in the development stage somewhere, but the designer needs to ask about the implications of coding, policy and pricing. It might be the most revolutionary device the world of seating and mobility has ever seen, but can it be brought to market? Can it be coded? Is there, or can there be, a policy? Can it be priced accordingly?

I'm writing this more as a stream of consciousness than an article describing one issue. I hope to generate interest and maybe some help in identifying specific issues and potential solutions in future articles. If you have a rant, an infuriating denial or a stunning success, email me so that we can continue to identify the problems and celebrate the successes in a future DIRECTIONS.

Not all-inclusive, a bit of a rant and in no particular order:

There have been attempts over the years to try and improve the situation. One, the Medicare Separate Benefit Category (SBC), introduced by former Congressman Joe Crowley, is now old enough to get a driver's license. It never got anywhere near the needed Congressional support. I'm no longer sure the SBC is really the way to go. A mandated universal disability coverage policy might be the answer. More on that in a future article.

The University of Pittsburgh is a few years along with a grant looking into ways to improve the system. NRRTS, NCART, the ITEM Coalition, the Clinician Task Force (CTF) and many others have worked in collaboration for years trying to improve the complex mechanisms that prevent consumers from getting what they need. One remarkable, recent accomplishment is the recognition from the Centers for Medicare and Medicaid Services on seat elevation. The amount of work done by an amazing group of volunteers, I don't think, is fully recognized.

There have also been numerous other victories over the years. The complete commotion during the first round of National Competitive Bidding when CRT was separated out from the process, but not without more complexities — the permanent exclusion of accessories for manual wheelchairs included in Competitive Bidding in 2021. There are more, and we need to celebrate those accomplishments.

The issue of repairs has now taken on a life of its own, sometimes pitting consumers, clinicians and providers against one another. The solution, at times, seems fairly simple, but like everything in our world, it's complex.

One of my most used expressions over the years, Simon Margolis called them "Gerryisms," was, "It's just a wheelchair." What I meant was that, outside of our very small community, seating and mobility is reduced to "It's just a wheelchair. How complex can it be?" Most of the medical community and most of society is unaware of what is involved in creating successful outcomes.

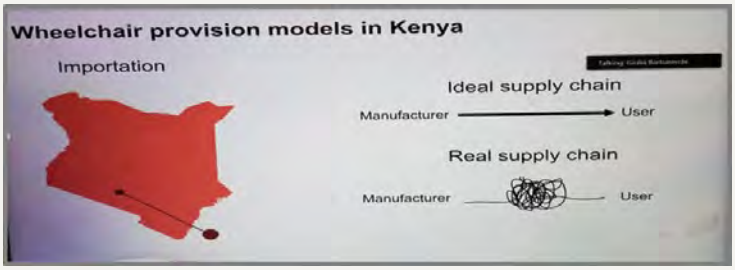
At the annual RESNA conference this year, the keynote speaker was a physician, Dr. Oluwaferanmi Okanlami. He is a captivating speaker. Among the myriad of issues, what stood out most to me was his ability to articulate the problem of "it's just a wheelchair." I'm paraphrasing, but what he said was that most of medicine looks at disability as a pathology, something that needs to be cured or fixed, and when it can't be cured or fixed, medicine moves on. Brilliant!! Even more onerous, there have been published articles about physicians not wanting patients with disabilities as patients. They are too complex, have too many needs/demands and are too time consuming.

Evidence-Based Medicine, while I understand the value, is also a complex issue for us. Gathering evidence is expensive and time consuming. The two things most of us do not have in our professional lives, are time and money. Before the Functional Mobility Assessment (FMA), co-developed by Mark Schmeler, Ph.D., OTR/L, ATP, the University of Pittsburgh, evidence gathering was a bit scattered. The FMA has changed all that. Some remarkable pieces of evidence have come out of clinicians using the FMA.

I know it's oversimplification, but when providing standers and walkers I still don't understand why we must provide evidence to the benefit of standing and walking to someone who stands and walks.

The implementation of Medicaid and Medicare managed care systems present its own unique set of problems. Policies are varied, sometimes difficult to comprehend and profoundly difficult to find. Sometimes these programs adopt the Medicare Local Coverage Determinations (LCD) and sometimes they don't. How many times have you had a Medicaid program cite the in-the-home rule? All of this is maddening. All of this presents an enormous challenge. I've heard some of my friends in the clinical community say that they wanted to schedule meetings with the various Medicaid programs. We, as the community of seating and mobility, do not have the bandwidth to accomplish this. According to the Kaiser Family Foundation, there are 285 Medicaid managed-care programs in the United States. That doesn't include Medicare Advantage Plans or commercial insurance. More evidence that we need a profound change in disability policy.

We aren't alone in our struggles. Our friends and colleagues in Canada and Australia express the very same frustrations. The issue of providing services to people with disabilities is a well-documented worldwide problem. At the RESNA virtual conference, I believe in 2021, a gentleman from Kenya posted this picture during his presentation:



Courtesy of RESNA

That one picture describes everything perfectly!

To be fair, there are pockets of places where, on the surface, things are going well. However, if industry and the profession is in crisis, we are all in crisis.

Let's work on a solution so that what we all do does not become a single generation profession.

All the best for a happy holiday season and a happy new year.

Gerry

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

Statements contained in this document are mine and mine alone. They in no way reflect the opinions of NRRTS, NRRTS Board of Directors or my employer, National Seating & Mobility.

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

DECADE OF EXPERIENCE HAS HELPED PARKER FADLER BECOME A PERFECT FIT AT ALLIANCE

Written by: **DOUG HENSLEY**

Parker Fadler knew he wanted to be an Assistive Technology Professional (ATP), but he wasn't so sure what that really meant.

Almost seven years ago, he joined the team at Alliance Rehab and Medical Equipment, and he's never looked back.

"The first time I interviewed in the complex rehab industry, I knew this is what I wanted to do, but I had no idea what it meant," he said. "There is always a team that makes the outcome happen. It doesn't take place without a good team, but we get to be the quarterback and help lead. We get to be the face of it all while most of it happens behind the scenes. I wanted to be the face who drives that positive outcome."

Now, with a decade of experience under his belt, Fadler knows what to expect – most of the time. Along the way he has added a second important credential, Complex Rehabilitation Technology Supplier® (CRTS®) and is right at home working with virtually anyone in the industry.

"I had no idea I wanted to be a CRTS® until Mike Osborn, ATP, CRTS®, CEO of Alliance Rehab and Medical Equipment, approached me about it," Fadler said. "It was a credential I wanted to obtain, a path I wanted to take, and I'm very excited it happened."

Alliance is based in Missouri and dedicated to providing services and equipment for those with significant disabilities and mobility needs. The company has locations throughout the state and headquarters in Springfield.

Fadler is a Missouri native who holds two undergraduate degrees from the University of Missouri, which is where he was working when the opportunity to join the Alliance team came along.

"I was doing research on trees," said Fadler, whose degrees are in forestry and wildlife management. "Fortunately or unfortunately, our funding got cut, and I had an individual who I had gone to high school with who was in the Complex Rehab Technology industry, and he thought I would really enjoy this kind of work and told me I should get started." Turns out Fadler was a natural fit for the industry and the company. He began his career learning the basics before gradually working his way up the ladder, gaining knowledge and skills along the way.

"Here we are, 10 years later, I'm an ATP and luckily a CRTS®," he said.

Luck has had very little to do with it. Fadler enjoys working for Alliance and a corporate culture that encourages its employees to maximize their potential to help the company move forward.

"The culture is basically what I think almost everybody in our industry has been a part of at one time or strives to be a part of," he said. "It is a very tightknit company where everyone works well together. There are a lot of different ways to reach an outcome you are striving for."

Fadler said the company has a lot of expertise across its locations, and when an employee might need help resolving a challenge, there are ample resources to access. "We talk things through," he said. "I feel like Alliance has the proper structure to encourage people to work together in an ever-changing environment and still create those positive outcomes. We are very fortunate to have leaders who are in tune and up to date about changes. They stay in front and are proactive instead of reactive."

One of the keys to Alliance's success and its appeal to Fadler is its emphasis on clear communication across the organization.

"To be successful, you have to take the team approach," he said. "Whether it's a client and a family

member or a family member and a therapist, doctor, nurse, everyone involved, the communication is the most important thing to provide the tools needed to determine what equipment is needed."

Speaking of tools, Fadler said one of the best pieces of advice he received was to never leave the office without them.

"I still tell people that to this day," he said. "New technician, new ATP, I tell them to never leave the office or get out of your van without your tools. One thing about me and Alliance, we have open communications with technicians and ATPs throughout the company."

The job calls for not only knowledge but also compassion and understanding. "I tell our people to go out there and just try to win the day," he said. "What does that look like? Some days it is different. It could be getting an incomplete overturned and getting the recline for a powerchair funded. Other days, it could be racing to the state school to adjust a headrest. It's a lot of the little things we do to make that positive outcome happen."

Fadler thinks the little things really add up over time, enhancing personal reputations and the company's brand.

"The little things are what you have to search for a lot of times," he said. "It's not always easy. The complex rehab community and the whole industry is difficult and has been difficult; that's why you must concentrate on the small things you can do every day to get those little wins."

What Fadler gets to do brings him joy, and being part of the Alliance team has been especially meaningful.

"I don't want to see our tightknit community start to fade," he said. "The last 10 years had a lot of change, so the next 10 may have just as much. For me, though, 10 years from now I really hope I can still see clients and still be part of a team." In other words, he feels right at home right now and hopes it stays that way for the foreseeable future.

THE COMPLEX REHAB COMMUNITY AND THE WHOLE INDUSTRY IS DIFFICULT AND HAS BEEN DIFFICULT; THAT'S WHY YOU MUST CONCENTRATE ON THE SMALL THINGS YOU CAN DO EVERY DAY TO GET THOSE LITTLE WINS.

"This territory in Missouri fits me well," he said. "I grew up in a small-town doing remodeling work with my dad when I was 12. My wife and I own a goat farm. There have been a lot of different things in my life that help me relate to a lot of different people, which I think helps with communication. Those life experiences hopefully create a dialog that creates a positive outcome."

CONTACT
Parker may be reached at
PFADLER@ALLIANCEREHABMED.COM

Parker Fadler, ATP, CRTS®, is an At-Large Director on the NRRTS Board of Directors. He works for Alliance Rehab and Medical Equipment in Columbia, Missouri.

DECADES OF DEDICATION TO HEALING AND HOPE

Written by: **ROSA WALSTON LATIMER**

Betsy Howell is a physical therapist (PT) at the University of Michigan Health Pediatric Rehabilitation Center, where she has worked for over 40 years. "I chose the University of Michigan, because I always knew I wanted to live and work in Michigan. My grandparents lived in the Upper Peninsula on Lake Michigan, and that was always my happy place. I asked a girl in another PT class who was from Michigan about a good place to work, and she suggested the University of Michigan. Fortunately, they hired me, and I have loved being in a major medical system.

WHAT INITIALLY DREW YOU TO THIS CAREER? IS THERE AN EARLY EXPERIENCE THAT HELPED SHAPE YOUR WORK?

I was initially drawn to this occupation when I was in high school. I knew I wanted to do something that would help people. I visited a lady from our church who was in the hospital, and a nurse came in and gave her a shot. So, here's this little 85-year-old woman crying, and I knew right then I couldn't do that. I couldn't be a nurse.

I was part of an Explorer Group in high school, and our group visited Riley Children's Hospital in Indianapolis, Indiana. We toured the physical therapy department for kids, and I realized that was something I could do and wanted to do. Fortunately, with my first application to PT school, I was accepted, and I haven't looked back!

My work at the University of Michigan began on the cardiopulmonary team treating adults, which I got very little exposure to in college. I proceeded to try to get off of that team as soon as I could! However, I learned a great deal from that problematic experience, and afterward, I never had a patient I couldn't handle because of the difficulty of their medical situation. I worked with some severely sick adult patients, and it shaped my career going forward.

After a year and a half, I did a rotation in pediatrics at C.S. Mott Children's Hospital, and I found my home! Kids are tough. They are fighters no matter what the circumstances. I worked with children after cardiac surgery and any kind of pulmonary condition. I also worked with our children with high-level spinal cord injuries and neuromuscular conditions requiring ventilation. It was challenging to figure out how to help them access power mobility.

TELL US ABOUT YOUR PRESENT WORK SITUATION.

I currently split my time between treating pediatric patients with cerebral palsy, rare genetic conditions, osteogenesis imperfecta and neuromuscular disorders and wheelchair seating, primarily ordering equipment. I also work with children with spinal muscular atrophy who have received gene therapy. PT for these patients involves partial weight bearing activity to strengthen their core and hip muscles. It also entails trialing equipment to see what they can possibly use to move, get stronger and develop some independence. I also get to work with children with "driver's education" to help them use a power wheelchair independently.

WHAT SIGNIFICANT CHANGES HAVE YOU EXPERIENCED IN YOUR WORK SINCE YOU BEGAN?

Thirty-seven years ago, there was very little evidence for anything in pediatric therapy. There was no PubMed or Google. At that time, it was not unusual for me to take current inpatients in our children's hospital in my

Betsy Howell with a patient who is off to college to study engineering. She has worked with this young man for 18 years.

Betsy Howell and her son, Andrew, at a Michigan football game.

Betsy Howell, PT, at the SMA conference 2023. Her poster presented information about equipment and treatment of SMA after gene therapy.

car to a football or basketball game or to a movie. And we could loan a child a piece of equipment if it helped them through a transitional period.

We have so many more equipment options for patients, but getting the equipment has become more and more difficult. When I first began as a PT, we had to explain the equipment, not just why the patient needed it, and we were usually successful. Now, we are questioned by people who have no idea what we are talking about. Of course, technology has changed significantly, providing many more options for how we can help patients. Our kids with high-level spinal cord injuries had to use Morse Code to access a computer. Now, they use their joystick, eyegaze, or many other options.

What hasn't changed is the will of the human spirit, especially with pediatrics. Their desire to live is huge, and their motivation often surpasses ours. When I first began, and the children I was treating weren't expected to live, the parents lived for each day. I've followed one boy, Tony, since he was an infant; he wasn't supposed to live past a year and is now 36 years old. He is the oldest survivor in the world with central nuclear myopathy. Each year goes by, and he's not supposed to live. He's tried to die three or four times. Once, the doctors had the parents in the hallway talking about not doing the next thing to help him, and at the same time, I was in the intensive care unit with him, and he was telling me which Detroit Lions game he wanted to go to in six months. I said, "You get through this, and I'll buy the tickets." Well, we went to the game!

WHAT IS YOUR FAVORITE PART OF YOUR WORK?

I love seeing kids experience accomplishments their parents never thought possible, and often, neither did we. Gene therapy for the kids with spinal muscular atrophy has been unbelievable. Before gene therapy, I was in a meeting where parents were given the option to take their child home and not do any intervention. Or, the child could get a tracheostomy, be on a ventilator and not move for the rest of their life. Those parents opted to take their child home, and six weeks later, we came out with nusinersen, which stopped or slowed the progression, and within two years, we had gene therapy. Before gene therapy, a child with spinal muscular atrophy would have been on their back their entire life, and now we see children with this disorder who are close to walking. I love helping kids get

CONTINUED ON PAGE 12

DECADES OF DEDICATION ...
(CONTINUED FROM PAGE 11)

better or at least figuring out how to help them do more things. Supporting and helping their parents see the possibilities and set different goals for their children is very rewarding.

I enjoy helping younger therapists with complex patients and sharing my experience or empirical evidence at national conferences such as APTA, AAPMR, CF and SMA.

AFTER 40 YEARS AS A PHYSICAL THERAPIST, WHAT KEEPS YOU ENGAGED IN YOUR WORK?

Of course, the positive experiences I see with the kids keeps me coming back excited and motivated. As I've described, gene therapy for our spinal muscular atrophy patients is rewarding, and I like the challenge of figuring out how to help a child do what they want. That may require finding the right equipment or creating something at the clinic the families can replicate at home so a child with limited movement can enjoy a play activity.

In 2015, I began training to be a core specialist in Masgutova Neurosensorimotor Reflex Integration® (MNRI®), which I completed in 2020. This method has allowed me to see more significant results in a shorter period with children with potentially devastating

Betsy Howell, PT, with a pediatric patient at the University of Michigan Health Pediatric Rehabilitation Center.

Members of the University of Michigan wheelchair seating team at ISS 2023.

injuries. The treatment plan calms the patient's nervous system and also impacts decisions with seating and other equipment.

OUTSIDE OF YOUR WORK, WHAT IS IMPORTANT TO YOU?

My family is important to me, as is serving others, such as leading children's classes at my church and coaching boys' basketball. Through the years, I've organized events like an adaptive triathlon for kids with disabilities and a two-mile fun run with kids with asthma.

Outside of work, I enjoy cycling, hiking, rollerblading and paddleboarding. When I travel to Florida to visit family, I often get to paddleboard on the intercoastal waterway and am frequently joined by dolphins.

The significant volunteer commitment I have participated in for 34 years is as activities coordinator for a camp for children dependent on ventilators. We began in 1990 with six members on the planning committee, and now we bring up to 32 kids to camp each year for a week. The camp is at the Fowler Center for Outdoor Learning, a 200-acre, barrier-free site near Mayville, Michigan. We call our camp Trails Edge, which is staffed by volunteers and funded through donations. (https://www.trailsedgecamp.org/) We take the kids tree climbing, adaptive kayaking and horseback riding, and they participate in sports such as archery. It is a fun, fulfilling week!

WHAT ADVICE WOULD YOU GIVE TO SOMEONE JUST BEGINNING IN YOUR FIELD?

Don't be afraid to try something and create evidence. You will see many patients for which there is no applicable evidence for their situation. There is only one person like them. You will have the opportunity to create that evidence.

PT has gone to a very evidence-based curriculum, and, for example, if you consider children with cerebral palsy, no two are exactly alike. You can create pathways, but you may need to develop individual evidence. In the 1980s, we began implementing tilt on a wheelchair instead of recline, especially with children. Because it was new, there was no evidence supporting tilt on a wheelchair, but we used it and created the evidence. Now, it is standard. Be bold and use your experience, knowledge and each patient's values to develop evidence.

The Rodney Howell family at Yellowstone National Park.

WHAT DO YOU CONSIDER A SUCCESS AT THE END OF THE WEEK (OR DAY)?

Many of my patients are children with complex medical conditions who might not have a lot of voluntary movement. If I can figure out a way to help them move a little bit, either with equipment or without, seeing their reaction and that of their parents is especially rewarding. Giving them a little hope, even for today, is a success.

CONTACT
Betsy may be reached at
BHOWELL@UMICH.EDU

Betsy Howell, PT, began her career at the University of Michigan Health Pediatric Rehabilitation Center four decades ago. She has volunteered as activities director at Trail Edge Camp, a one-week summer camp for children dependent on ventilators, for over 30 years. Howell and her husband, Rodney, have been married for 32 years and have three adult children.

MICHAEL HUGHES HAS BEEN GETTING READY TO TAKE ON THIS ROLE FOR A LONG TIME

Written by: **DOUG HENSLEY**

The Hughes family photo from fall 2023.

It's almost as if Michael Hughes had been preparing his entire life for this job.

First there were significant family influences, and then there were open doors at just the right time. When the stars finished aligning, Hughes found himself part of the executive team at Motion Composites, serving as the company's U.S. national sales director.

"I have a couple of family experiences in my life," he said. "I have a second cousin, who I have always thought of as an uncle. He was a Marine and a prisoner of war in Vietnam. Then four months after he got home, he was in a car accident that left him with a T-7 spinal cord injury and using an ultra-lightweight wheelchair for the next 50-something years of his life."

What Hughes saw, though, wasn't someone confined to a wheelchair, but instead someone able to live life to the fullest because the wheelchair opened pathways of accessibility.

"He helped teach me how to swing a golf club, how to shoot a basketball, and he did all from a wheelchair," Hughes recalled. "That ultra-lightweight wheelchair allowed him to live life. He played wheelchair basketball for the Chicago Bulls affiliate. He was extremely inspirational to me."

The same is true for another second cousin, whom Hughes has watched battle muscular dystrophy.

THE CHANGE TO ULTRA-LIGHTWEIGHTS HAS ALWAYS APPEALED TO ME. I HAD MORE OF A POWERCHAIR BACKGROUND BEFORE.

Michael Hughes is coach in the spring of 2023 of his children's T-ball team.

"Just watching him and how he has taken it all in stride and doing the best he can to live a normal life has been remarkable," he said. "Those are two people who have heavily influenced what I do and why."

At my family's ranch in the Texas Panhandle in November 2022

Skiing with my family in Taos, New Mexico, in March 2023.

The opportunity to be part of a company that specializes in ultra-lightweight wheelchairs was something Hughes wanted to be a part of. Motion Composites prides itself on innovation and creativity to bring leading-edge products to its clients. Hughes had been with another company for 10 years and was professionally happy, but everything neatly fell into place about 18 months ago.

"I valued my experiences there tremendously, and I still have a lot of friends there," he said. "The change to ultra-lightweights has always appealed to me. I had more of a powerchair background before."

Product was only part of the company's charm, though. Hughes was also attracted to its culture and people-centered focus.

"It is still a small company with the ability to adapt and do things quickly," he said. "We have not reached a point where I have to go through eight layers to get something done. The overall culture is incredible. Eric Simoneau is our CEO. He is extremely passionate, and that passion runs through the entire company. It's a combination of things, but I have really enjoyed the year and a half that I've been here."

Likewise, part of his job's appeal is how no two days are exactly the same. In addition to his responsibilities as a sales leader, he is also engaged with numerous others who are involved in Complex Rehab Technology.

"One day I may be in my home office in Rockwall, Texas, where I'm behind a computer," he said, "and other days I will be traveling on the road with our sales team. I meet with providers, with Assistive Technology

CONTINUED ON PAGE 16

Going to watch a Mavericks/Bulls game in Dallas in 1992.

Numotion Commercial Growth Summit in Denver, Colorado, in 2022.

Motion Composites sales and education meeting in 2022.

Motion Composites sales and education meeting in 2022.

MICHAEL HUGHES...
(CONTINUED FROM PAGE 15)

Professionals (ATPs) and do presentations for clinicians at major rehab hospitals. It's very different from day to day, and that is one of the reasons I love doing what I do – the constant change of pace."

The chance to help the company continue to grow is something else Hughes leans into in his role.

"One of the reasons I joined Motion Composites is the opportunity it has to grow in the United States," he said. "I wouldn't necessarily say I thrive on it, but I like building something. I don't see myself as a maintainer of crops; I am more of a full-fledged farmer, seeing something from the ground up and seeing it through. I haven't been here from day one, but there is significant potential for growth."

Throughout his career, Hughes has enjoyed building relationships with the various stakeholder groups across the industry. It's not only important for him to get to know people, but he wants them to get to know him as well.

"Ultimately, everything starts and ends with the client," he said. "Everything we do at Motion Composites is done with the idea to become 'everyone's favorite mobility company.' As the manufacturer, I don't necessarily have a lot of interaction with the end user,

> ULTIMATELY, EVERYTHING STARTS AND ENDS WITH THE CLIENT ... EVERYTHING WE DO AT MOTION COMPOSITES IS DONE WITH THE IDEA TO BECOME 'EVERYONE'S FAVORITE MOBILITY COMPANY.'

Team-building event at Motion Composites sales and education meeting in 2022.

Michael Hughes shares product information at the ISS 2023.

but I do with providers, ATPs, clinicians and reps in the field. Building those relationships day by day is important because everything is about building trust."

Hughes said all industries got something of a wake-up call during the COVID-19 pandemic, and an even greater premium was placed on corporate trustworthiness.

"I think every industry can relate that 2020 to 2022 was really challenging," he said. "Being able to communicate accurate and trustworthy information may not have always been what someone wanted to hear, but we always tried to communicate accurately. People can handle bad news as long as they don't think they are being lied to. I've tried to build my career on being trustworthy and being up front with people.

"I like to think I have established a reputation in this industry. It is not about getting the next sale. It is about building trust with someone to keep their business for the next three to five to 10 years."

Those values have also been influenced by his family. Hughes remembers his grandfather gave him some of the best and most practical advice that still guides him today.

"It was more or less, 'Choose your words wisely and watch your tongue because you only get one chance to make a first impression,'" he said. "I try to lead by example in everything I do. People make judgments very quickly, and you must be able to present yourself and your company in a certain fashion very quickly."

Hughes is optimistic about the industry's future, seeing even better days ahead for people who make their living in it – and for those who might one day find their way to it.

"You can enter our industry and make a good living depending on your passion, and you don't have to have a college degree," he said. "I want to see more younger folks in this industry, and I am excited for what we're doing and where it's going.

"I would also like to encourage industry stakeholders to advocate for our industry and the clients we serve. We are more organized and jointly focused than we ever have been, but we need more voices."

CONTACT

Michael may be reached at
M.HUGHES@MOTIONCOMPOSITES.COM

Michael Hughes is the U.S. sales director for Motion Composites and is a friend of NRRTS. He resides in Rockwall, Texas.

DOUBLE BLESSING: YOUNG TWINS WITH CEREBRAL PALSY

Written by: **ROSA WALSTON LATIMER**

Elijah and Zariah Harris are just 5 years old; however, they have quite a story to share. The twins were born at 24 weeks and 4 days, and their combined weight was less than four pounds. The babies were born unexpectedly at home, making the early birth even more complicated, and were flown two hours away to Cook Children's Medical Center in Fort Worth, Texas, for care. Severe complications were expected as micro preemies are at a higher risk for disabilities such as cerebral palsy. Still, the primary concern was whether the twins would live through that first night. Elijah would spend the next seven months in the NICU at Cook Children's, and his sister would stay for nine months.

Elijah and Zariah (3 years, 10 months) with mom, Stephanie and dad, Mike.

When Elijah and Zariah were almost 2 years old, circumstances presented an opportunity for Stephanie and Mike Harris to adopt the twins. There was no hesitation on their part. "I don't know how you can watch tiny babies fighting for their life in NICU, experiencing so many hard things, and not be deeply moved. They don't even know what life holds for them," Stephanie said. "We had no hesitation about bringing Elijah and Zariah into our home. There are no regrets. We just fell in love with them." The couple only had a teenage daughter, Gabrielle, living at home and would have soon been empty nesters. The couple's other children are older and out on their own. Stephanie had plans to go back to school and become a nurse practitioner. "I made peace that I would not achieve that goal and other plans we had. Mike and I both are committed to seeing our children thrive. We are in this together and through this experience, we've gotten closer," Stephanie said. "I believe because we communicate so well, when things get crazy, we can keep each other grounded. Mike is an amazing guy! Most evenings after he gets home from work, if we have nursing coverage and he doesn't have to help with the twins' care, he cooks dinner allowing me time to work on things such as staffing schedules, insurance justification, grant applications and equipment issues. Having a good, strong partnership is the biggest blessing!"

Five years later, each child is developing at an individual rate; however, both are nonverbal. "Life with Elijah and Zariah tends to revolve around one of the more severe forms of cerebral palsy, hydrocephalus, ventriculoperitoneal shunts, epilepsy, feeding tubes, big hearts and smiles," Stephanie said. "Elijah has faced many challenges and will continue to face many changes. He crawls all over the house and pulled to stand about a year ago. He walks with us if we hold his hands. We were told the twins probably would never walk or talk so it is with joy that I say, Elijah is all boy." Zariah's mobility is severely limited. Cerebral palsy is a motor disorder that limits an individual's ability to move independently. "We were using our standing frame with Zariah for an hour and a half each day until her recent bilateral hip surgery."

Elijah Harris, 4 years and 9 months old.

LIFE CAN SEEM REALLY HARD WHEN YOU HAVE SO MANY THINGS TO DEAL WITH. I BELIEVE YOU MUST FOCUS ON JOY.

Zariah Harris, 4 years and 9 months old.

To help better understand the extent of the surgery this 5-year-old girl endured, Zariah's mother provided this complete description: "Our sweet girl had her left hip proximal femoral osteotomy, right hip proximal femoral osteotomy and acetabuloplasty and hip tenotomy abductor release bilateral surgeries. The surgery is behind us now and as usual, Zariah took it all in stride with a smile on her face. However, we have a long road to recovery and five incisions that need to heal."

The Harris family has round-the-clock nursing care for the twins; however, maintaining consistent staffing can be challenging. Stephanie, who is a registered nurse, often steps in to fill the need. "When we first brought the twins home, I continued to work full time for over a year. It was so difficult to keep nursing coverage, I often would work overnight, come home and take over caring for the twins, shower and go back to work. Of course, that routine was not sustainable. We were aware of all of the complications, we knew it was going to be hard and tried to be prepared, but there were so many things we didn't anticipate. Now I work PRN when I'm not needed at home, which means that some months I only get to work 20 or 30 hours and another month it might be 80 to 90 hours. I try to work weekends, because Mike is off work then and helps care for the twins. Having the extra people in our home all of the time to provide care hasn't bothered us, as long as they are good to the twins, we're happy."

Caring for the twins is a complex task, requiring a much higher level of responsibility. "Our situation doesn't allow for having someone come to babysit the twins. For example, when we put them to bed, they don't just go to sleep like other kids," Stephanie said. "We must hook them up to feeding tubes, pulse oximeters, and both wear CPAPs (continuous positive airway pressure machines) because they have sleep apnea. They both have issues with thermal regulations, but Elijah's is worse. He can't hold his body temperature when he is sleeping so we have heated blankets and heated bed pads to keep him warm. Without this, his heart rate drops."

Elijah and Zariah have received home school instruction with a teacher from Wichita Falls Independent School District since they were 3. The four-hour-a-week in-home instruction has helped with the twins' development and provided new experiences. They both have physical, occupational, and speech and feeding therapy for an hour twice a week. "They are both doing well. Zariah has more issues with swallowing, but she likes crunchy stuff and doesn't want us to help

CONTINUED ON PAGE 20

Twins Elijah and Zariah Harris with their dad, Mike and older brother, Andrew.

DOUBLE BLESSING ...
(CONTINUED FROM PAGE 19)

her. Her speech therapist calls her Ms. Independent," Stephanie said. "Elijah is on thin liquids now, drinks from a straw, and can hold his cup. Elijah is beginning to form some words. Slow and steady progress!"

"We are a very busy family. Elijah and Zariah are only in their room for afternoon nap time from 12 to 2 and at nighttime to go to bed," Stephanie said. "The rest of the time, they are in the family room, involved in our lives. They are an important part of our family. Our son, Andrew, attends college at the University of Texas at Arlington and usually comes home for holidays and spends the summers with us. When he is here, he is adept at caring for the twins and sensitive to our situation." The family's road trips include the Dallas World Aquarium and a drive-through zoo. "Elijah likes the sounds of the different animals, and Zariah truly enjoyed the zoo," Stephanie said. "We went to the lake for vacation and visited South Padre. The twins enjoy swimming. Elijah is fearless and can float well, but we

ATLAS TECHNOLOGY GIVES YOU A DIGITAL ADVANTAGE

Does your company have the tools to ensure digital transformation is done successfully for both employees and customers? With ATLAS TECHNOLOGY, organizations can truly accelerate the benefits of their operational transformation by driving the user adoption of digital workflows.

Happy Holidays!

ATLAS TECHNOLOGY

Learn more at www.ATLASTECHNOLOGYLLC.com

must keep him from drinking the water! While Zariah took longer to take to it, she is now floating almost unassisted and will kick her feet."

"Advocating for your child can be hard," Stephanie said. "But because you know them so well, if you feel something is wrong, you must speak up and keep pushing. Trust yourself and trust you know your child and do a whole lot of praying!" The Harris family has a good team of professionals who provide support. "For example, Chris Rosso is a great help to us. He is an ATP, CRTS®, with National Seating & Mobility and is very knowledgeable about available equipment," Stephanie said. "We can depend on his help to make good decisions specific to the needs of the twins. Since Chris has been working with us, our equipment choices have been better and have made a positive impact on their lives." A significant concern for the Harrises is who will take care of Elijah and Zariah if something happens that prevents them from caring for the children. "We're trying to plan ahead and have things in place so someone else would have the resources needed to continue their care," Stephanie said.

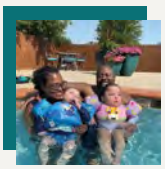
"Life can seem really hard when you have so many things to deal with," Stephanie said. "I believe you must focus on joy. Elijah and Zariah have so many complications, but they are always happy. When I get frustrated, I remind myself that my life is not so bad, and we are blessed to have them in our family to remind us of that daily."

Elijah and Zariah Harris, 2 years and 7 months – their first time finger painting

Twins Zariah (left) and Elijah Harris, 15 months old, the first time they saw each other after being separated for several months. Zariah stayed in neonatal intensive care for nine months; Elijah for seven months.

CONTACT

The Harris family may be reached at SNHARRIS0507@GMAIL.COM



Mike and Stephanie Harris live in Wichita Falls, Texas. Mike has had a long career in the aerospace production industry and works for Howmet Aerospace in Wichita Falls. Stephanie is a registered nurse. You can follow the progress and experiences of their twins, Elijah and Zariah, on Facebook: Elijah & Zariah: Life with the Dynamic Duo.

NCART LEGISLATIVE AND REGULATORY UPDATE

Written by: **WAYNE GRAU, EXECUTIVE DIRECTOR OF NCART**

POWER SEAT ELEVATION- UPDATE

The industry and especially the individuals we serve were delighted the Centers for Medicare and Medicaid Services (CMS) recognized that seat elevation is medically necessary. The coverage effective date was May 16, 2023, and Medicare and the Medicare Advantage plans will cover seat elevation.

NCART worked with manufacturers and our providers to gather and submit the information necessary for CMS to make an informed coding and pricing decision. Both the coding application along with the pricing support request have been submitted. We cannot emphasize enough that coverage without proper coding or pricing will hurt consumers.

As the writing of this article, the industry awaits the preliminary decision from CMS. Once we have this preliminary decision, the ITEM Coalition and NCART will have the opportunity to testify at a public meeting that has been scheduled for Nov. 28-30. We will keep the industry informed as we receive new information.

UPDATE ON COVERAGE FOR POWER STANDING SYSTEMS

The ITEM Coalition held a meeting with CMS officials in September, NCART was in attendance along with consumers, Cara Masselink from CTF, Permobil, and Dr. Shah, a physiatrist from Baylor Medical Center in Dallas, Texas. The CMS staff was attentive and listened as Masselink and Shah presented additional information. The staff from CMS asked if we could forward that information to them for review.

CMS did not confirm a date for opening the NCD at this time. However, we have confirmed the NCD for power standing is on the CMS waitlist posted on the CMS website. We will continue to monitor the website for any changes.

UPDATE ON THE CONSUMER CHOICE BILL FOR TITANIUM AND COMPOSITE WHEELCHAIRS- HR 5371

Rep. John Joyce, R, P.A., introduced HR 5371, a consumer choice bill that will rectify a past misinterpretation of Medicare policy. HR 5371 will offer consumers a choice to decide on the proper manual wheelchair to fit their lifestyle. Should this legislation become law, consumers will once again be able to choose either a titanium or composite manual wheelchair frame and will be allowed to pay for this upgrade using their own funds. Presently, Medicare beneficiaries are prohibited from upgrading to the equipment that will best fit their specific needs.

With the House being focused the last three weeks on electing a new speaker, not surprisingly there were just a couple of co-sponsors: Reps. Glenn "GT" Thompson, R-P.A., and Dean Phillips, D-M.N. We encourage everyone to contact your House member and ask them to co-sponsor the bill. You can find your representative and take action at www.protectmymobility.com.

PARTNERING WITH CTF TO FIGHT IMPROPER MEDICARE ADVANTAGE POWER WHEELCHAIR DENIALS

The Clinician Task Force has launched a website to start accepting data about improper Medicare Advantage denials. The data will be used to evaluate whether the Medicare Advantage plans are following Medicare guidelines when they are prior authorizing power wheelchairs. Any information shared with the CTF will be kept confidential. If your company or a consumer you work with has had a power wheelchair you believe has been improperly denied, please go to https://tinyurl.com/3k5mrvmy and submit your information.

THANK YOU

I would like to take this opportunity to thank all the consumers who are working with the industry to educate legislators, insurance companies, regulators and others. The first level of communication is understanding and that means educating the other party. The consumers whom we have had the pleasure of working with have helped us more effectively

educate legislators and policymakers on the personal importance of appropriate complex rehab policies and make progress in securing meaningful changes.

BECOME AN NCART MEMBER

NCART is the national advocacy association of leading Complex Rehab Technology (CRT) providers and manufacturers dedicated to protecting access to CRT. To continue our work, we depend on membership support to take on important federal and state initiatives. If you are a CRT provider or manufacturer and not yet an NCART member, please consider joining. Add your support to that of other industry leaders. For information visit the membership area at www.ncart.us or email wgrau@ncart.us to set up a conversation.

CONTACT THE AUTHOR
Wayne may be reached at
WGRAU@NCART.US

Wayne Grau is the executive director of NCART. His career in the Complex Rehab Technology (CRT) industry spans more than 30 years and includes working in rehab industry affairs and exclusively with complex rehab companies. Grau graduated from Baylor University with an MBA in health care. He enjoys working exclusively with CRT manufacturers, providers and the individuals we serve who use CRT equipment.

TRU BALANCE® 4
POWER POSITIONING SYSTEMS

FEATURES

- Choice of 10°, 20° or 30° of power anterior tilt
- Up to 8 customizable memory seating positions
- Articulating foot platform that lowers to assist with transfers
- Available on the Stretto, Edge® 3 and 4Front® 2

TB4

SCAN TO LEARN MORE ABOUT TRU-BALANCE® 4

QUANTUM®
#1 FOR REHAB POWER
quantumrehab.com

CTF JOINS ADVOCACY ACTIONS TO IMPACT DENIALS - A CALL TO ACTION FOR SUPPLIERS

Written by: **TABATHA JAMES, ATP/SMS, OTR, TAMARA KITTELSON, MS, OTR/L, ATP/SMS, AND AMBER L. WARD, MS, OTR/L, BCPR, ATP/SMS, FAOTA**

The landscape of Complex Rehabilitation Technology (CRT) is in a constant state of flux and evolution. It is driven forward by innovative technological developments and compassionate individuals who contribute their knowledge and expertise to the practice. For years, clinicians, assistive technology professionals (ATPs) and other stakeholders have dedicated themselves to improving the lives of those with mobility challenges, providing purpose-driven equipment and unwavering support to individuals seeking independence and a better quality of life.

Increasingly, however, there have been formidable challenges with assessments and procedures, equipment selection and authorization, funding procedures, documentation requirements and overall accessibility.

Not only do these challenges cause undue stress to the beneficiary, but they also lessen the resilience of the clinicians involved in their care. The occupational and physical therapists involved in the seating and wheeled mobility industry are at high risk of burnout and compassion fatigue and consistently face an overwhelming workload due to the scarcity of specialized professionals in this niche industry.

The difficulties faced by those we serve can sometimes feel insurmountable, particularly when amplified by our own stress and the intricacies of navigating the health care system, both of which can lead to unmet client needs. Compassion fatigue can affect each person differently and many of us give our all for our clients. Reductions in services and funding further exacerbate the challenges for people with disabilities and add to the complexity of clinical work.

Compassion fatigue is the toll taken on our mental and physical well-being when we constantly bear witness to and support others through their pain and difficulties, often at the expense of our own self-care. It may manifest as feelings of helplessness and powerlessness in the face of our clients' suffering, an overwhelming sense of responsibility due to work demands, a waning interest in personal activities, and an increase in both physical and mental health symptoms, including depression and anxiety (Canadian Medical Association, 2020). One solution is of course, self-care activities which might be a nap, a hike, relaxing with friends, a favorite hobby or things that bring joy, but individual coping skills cannot change the dynamic causing the problem. In addition to self-care, taking steps to improve the situation for our clients and industry could increase feelings of control and positive impact and contribute to a longer-term solution.

IN RESPONSE TO CLINICIAN BURNOUT, AND GROWING CONCERNS ABOUT A PARTICULAR LONG-STANDING DENIALS ISSUE, A COLLABORATIVE INDUSTRY GROUP INCLUDING LEADERS FROM NCART AND CTF ARE LOOKING TO REVIEW DATA AND PROPOSE SOLUTIONS.

In response to clinician burnout, and growing concerns about a particular long-standing denials issue, a collaborative industry group including leaders from NCART and CTF are looking to review data and propose solutions. This task force has developed a comprehensive plan hinging on the collective efforts of the entire industry, yet its design and implementation are smartly simple.

Over the years, numerous clinicians and industry professionals have reported PWC and PWC power seat function denials by Medicare

Advantage plans for complex power wheelchairs. By law, Medicare Advantage (MA) plans must comply with traditional Medicare policies (Medicare program, 2023).

To investigate this issue, the group is requesting participation from the entire industry. CTF Executive Director Cara Masselink, Ph.D., OTR/L, ATP, who is also an associate professor at Western Michigan University, has initiated a formal clinical research study to collect data about PWC orders for Medicare Advantage plan beneficiaries.

This project has been intentionally organized to avoid using any identifiable information and maintain confidentiality of participating organizations. Participating in this effort is an opportunity to ethically and confidentially address inequities in service provision and access to CRT. We request suppliers use the Centers for Medicare and Medicaid Services (CMS) prior authorization process to track MA and Medicare responses to pinpoint where and how denials occur. If stakeholders from around the country help with this project, the data collected will have a greater impact.

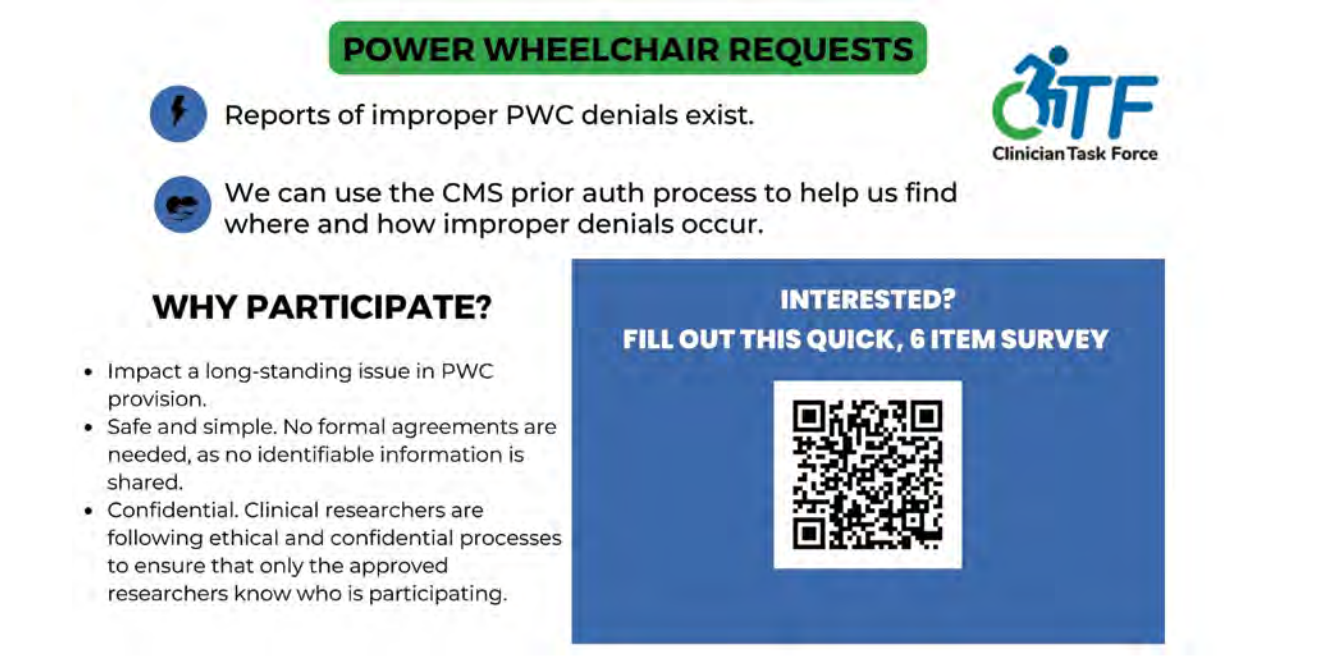
What will happen is:

1. Initial Contact: Interested parties will fill out a quick, six-item survey. The researchers will respond on an individual basis with a template for the supplier to record information on. Each company will maintain their own spreadsheet.
2. Submission of Requests: Suppliers will submit all PWC requests with a primary funding source of a MA plan to both Medicare's MA prior authorization process and the MA plan.
3. Data Logging: Record the client and requested information alone with insurance responses on the spreadsheet.
4. Repeat for Each Claim: Repeat for each request submitted to a MA plan.
5. Monthly Updates: Monthly, email an updated spreadsheet via secure manner to researchers (even if still in process). Keep adding data as more PWCs are in process.

Data Collection Template Fields

- The collection template will request the following information:
- Patient ID (supplier will assign a random number)
- Birth year
- Diagnoses using ICD 10 codes.
- State
- All HCPCS codes in the request
- MA plan name
- MA decision (full or partial denial, or approved)
- Denial reason, if denied
- Medicare decision
- Source/company (only for internal, researcher use. This will be deleted as soon as data collection is completed.)

CONTINUED ON PAGE 26



Interested, fill out this quick, six item survey

CTF JOINS ADVOCACY ...
(CONTINUED FROM PAGE 25)

Participants will send their spreadsheets securely to the research team monthly to be tabulated. Likely, the spreadsheets might be primarily maintained by suppliers and their staff; however, therapists and other stakeholders could encourage participation and spread the word to suppliers. By involving all stakeholders, we aim to rapidly accumulate data that strengthens the case for closer scrutiny of MA plans to ensure they align with Medicare's standards and guidelines. Then, we can identify problem areas and propose solutions to policy makers. Your active participation is essential in this collective effort.

If the entire industry commits to submitting to both agencies simultaneously and providing the resulting data about approvals and denials, we will make an impact. This is a low-commitment, low-effort chance to have a nationwide positive impact on CRT consumers and the PWC process. It's a practical way to address a significant source of stress for clients, caregivers, therapists, suppliers, and others while reducing fatigue, anxiety and defeat associated with the denial process.

We implore you to join us in this urgent exploration of questionable health care practices. These denials have become a silent crisis that threatens the core of our work, the lives of people who don't get the technology they need, and the well-being of our dedicated healthcare clinicians.

CONTACT THE AUTHORS

Tabatha may be reached at
TABATHAOT@GMAIL.COM

Tamara may be reached at
TAMARALKA@GMAIL.COM

Amber may be reached at
AMBER.WARD@ATRIUMHEALTH.ORG

REFERENCES:
CANADIAN MEDICAL ASSOCIATION. (2020). COMPASSION FATIGUE: SIGNS, SYMPTOMS, AND HOW TO COPE. RETRIEVED FROM: HTTPS://WWW.CMA.CA/PHYSICIAN-WELLNESS-HUB/CONTENT/COMPASSION-FATIGUE-SIGNS-SYMPTOMS-AND-HOW-COPE
MEDICARE PROGRAM: CONTRACT YEAR 2024 POLICY AND TECHNICAL CHANGES TO THE MEDICARE ADVANTAGE PROGRAM, MEDICARE PRESCRIPTION DRUG BENEFIT PROGRAM, MEDICARE COST PLAN PROGRAM, AND PROGRAMS OF ALL-INCLUSIVE CARE FOR THE ELDERLY, 81 F.R. 22121 (APRIL 12, 2023) (TO BE CODIFIED AT 42 CFR PARTS 417, 422, 423, 455, & 460).

Tabatha works as a supplier-side ATP/SMS, and is strongly guided by her occupational therapy lens. Since 2014, she has worked with assistive technologies, fully integrating into the practice of seating and wheeled mobility in 2019. A graduate of the University of Illinois at Chicago, Tabatha has consistently worked with diverse populations across the lifespan, providing expertise in physical medicine and rehab for adults and employing hippotherapy and sensory integration techniques with children. She contributes her insights and CRT expertise as a member of the Clinician Task Force and RESNA.

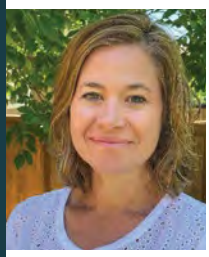
Tamara Kittelson is an occupational therapist and RESNA certified ATP/SMS. She founded Posture 24-7 and Eleanore's Project, promoting 24-hour posture care management and appropriate seating and wheeled mobility provision in low resource settings. She is founding chair of the RESNA 24-7 PCM special interest group, and a member of AOTA, RESNA, CTF and FON. Kittelson has presented and written on these topics nationally and internationally. Kittelson served children and adults with complex neurodisabilities in Montana, 1983-2022. She credits her daughter Eleanore, born with cerebral palsy and profound deafness, as her best teacher.

Amber Ward has been a treating occupational therapist for 29-plus years. She has treated a wide variety of patients, of all ages and functional levels. She currently is an adjunct professor at the OTA and MOT programs at Cabarrus College of Health Sciences in addition to working in the clinic. She received the RESNA Assistive Technology Professional certification in 2004, the Seating and Wheeled Mobility certification in 2014, and became AOTA board certified in physical rehabilitation in 2010. She runs the seating clinic at Neurology Specialty Care, Atrium Health, in Charlotte, North Carolina.

2023-2024 NRRTS WEBINARS

TO LEARN MORE, VISIT:

WWW.NRRTS.ORG/EDUCATION/



THURSDAY, DECEMBER 7, 2023
7:00 PM EASTERN

Person-Centered Care in a Payer-Centered World

Speakers: Becky Breaux, MS, OTR/L, ATP; PhD Candidate

THURSDAY, DECEMBER 14, 2023
4:00 PM EASTERN

What is Sitting Down? Comorbidities and Medical Complexities of Mobility Device Users

Speakers: Ashley Detterbeck, DPT, ATP/SMS, and Nicole LaBerge, PT, ATP

TUESDAY, JANUARY 9, 2024
7:00 PM EASTERN

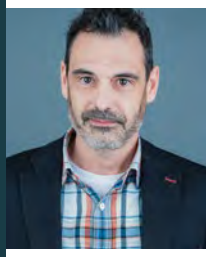
The Impact of CRT: Our Work Matters!

Moderator: Weesie Walker, ATP/SMS

Panelists: Mike Osborn, ATP, CRTS®, Jason Kelln, ATP, CRTS®, and Lois Brown, ATP/SMS, CRTS®

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

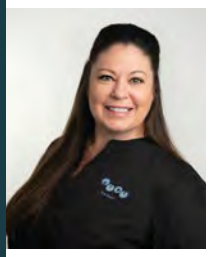
NRRTS WEBINARS



THURSDAY, JANUARY 18, 2024
4:00 PM EASTERN

Community Assessment Toolkit: Part of The Wheelchair Procurement Process

Speaker: Stefan Morin OT Reg./erg. Imm. (NB)



TUESDAY, FEBRUARY 6, 2024
4:00 PM EASTERN

When You Know Better, You Can do Better. A Course Designed to Highlight Key Learning Opportunities Through Less-Than-Ideal Initial Delivery Outcomes

Speaker: Daniella Giles PT, DPT, ATP, SMS

THURSDAY, FEBRUARY 22, 2024
4:00 PM EASTERN

Standing from Toddlers to Seniors

Speaker: Maryann Girardi PT, DPT, ATP

TUESDAY, MARCH 26, 2024
4:00 PM EASTERN

Tailoring Pediatric Power Mobility Interventions for Exploratory, Operational and Functional Learners

Speaker: Lisa Kenyon PT, DPT, PhD, PCS

NRRTS|CE
CONTINUING EDUCATION *WORTH THE INVESTMENT*

THESE LIVE WEBINARS ARE AVAILABLE AFTER THE PRESENTATION DATE IN THE ON DEMAND LIBRARY.

NRRTS recognizes that quality education is critical for the professional rehab technology supplier. We are committed to offering this benefit to NRRTS Registrants, Friends of NRRTS and other Complex Rehab Technology professionals through our NRRTS Continuing Education Program. Our goal is to become a primary source of relevant, cost-effective educational programming and information in the industry and profession.

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

BEWARE OF IMPOSTERS

MK Genuine Gel

The Trusted Choice for Powering Independence

MK POWERED

40 YEARS 1983 2023

800-372-9253 • MKBATTERY.COM

© MK Battery 2023

TRANSPORTATION SAFETY FOR PEOPLE WHO USE WHEELCHAIRS

Written by: **MIRIAM MANARY**

UNIVERSITY OF MICHIGAN TRANSPORTATION RESEARCH INSTITUTE

NRRTS is pleased to offer another CEU article. This article is approved by NRRTS, as an accredited provider, for .1 CEU. After reading the article, please visit http://bit.ly/CEUARTICLE to order the article. Upon passing the exam, you will be sent a CEU certificate.

INTRODUCTION

The U.S. has over 3.6 million people who use wheelchairs (Brault 2012), and that number is increasing as medical interventions improve and longevity increases. Many wheelchair users report difficulties using transportation (Field et al. 2007). Similar challenges in transportation access also exist in Canada and Australia. Ready access to transportation is essential for full engagement in community life, education, employment opportunities and medical care.

When a person who uses a wheelchair is traveling in a motor vehicle, the first consideration is whether it is feasible and practical to transfer from the wheelchair to a conventional vehicle seat, child safety seat or adaptive seat; if so, this is the preferred transport method. Once transferred, the person's wheelchair must be stowed or secured during travel to prevent the unoccupied wheelchair from becoming a harmful projectile. Then the person must use the seat belt or crashworthy harness to reduce the risk of injury during a vehicle sudden stop, emergency maneuver or crash event.

When transferring is not feasible or practical, then the wheelchair becomes the vehicle seat and must be secured to the vehicle. Occupant protection devices (seat belts) must be used in conjunction with the wheelchair. Many characteristics of wheelchairs that are essential for mobility and activities of daily living (lightweight, rolling, folding) are not desirable qualities in vehicle seating. Instead, the vehicle seat needs to stay secured to the vehicle floor, provide a supportive upright seating position and interface with the required seat belt system.

OBJECTIVES

This paper will focus on the situation where people remain seated in their wheelchairs for trips in motor vehicles. Best practices for wheelchair selection and securement will be clarified. A trio of key voluntary industry standards — WC18, WC19 and WC20, and their relevance to wheelchair transportation safety — will be explained. In addition, the paper will address issues associated with wheelchair accessories.

SAFETY DIFFERENCES IN HEAVY AND LIGHT VEHICLES

Motor vehicle transportation has inherent risks that are balanced against the advantages that freedom of travel offers. In the US, motor vehicle crashes are a leading cause of unintentional injury (CDC, 2018). While all risk of injury cannot be eliminated, the ultimate goal of wheelchair transportation safety is that people who are seated in their wheelchairs experience a similar level of safety as those in conventional vehicle seats. The travel situations focused on in this paper are those associated with travel in private vehicles (minivans, vans, SUVs) where the likelihood of a severe crash is higher due to their smaller size and lower vehicle weight versus commercial vehicles. The strategies here will keep people safe in private vehicles but also can work in larger heavy vehicles, such as city buses and other large accessible transit vehicles (LATVs).

TRAVEL FACING FORWARD

In private vehicles, wheelchairs should always be secured in a forward-facing position. This is the direction that wheelchairs (WC), wheelchair tiedowns and occupant restraint systems (WTORS) are tested in and the direction for which the seat belts are designed to be effective. Unlike rear facing child safety seats,

CONTINUED ON PAGE 32

TRANSPORTATION SAFETY ...
(CONTINUED FROM PAGE 31)

wheelchairs are not designed to be used in a rear facing position for travel. The back and head supports of most wheelchairs are not strong enough to stop the occupant from being ejected in during a crash in a private or paratransit vehicle. A large percentage of wheelchairs will experience structural failures if subjected to a severe crash in a private vehicle (Manary et al., 2007).

In contrast when a wheelchair travels on a LATV, like a city bus, where the chances of a crash are much lower and people are allowed to stand during travel, it is possible to achieve an equitable level of safety with a rear-facing passenger station. This is an area in the vehicle where the wheelchair users can back their wheelchair up against a flat padded back board and use hand holds to stabilize themselves during travel. The advantages of these rear facing stations are that they can be used independently, stigma associated with needing driver assistance is reduced and dwell time of the vehicle at the stop is decreased. The disadvantages are that rear-facing travel can increase propensity for motion sickness, inhibit identification of upcoming bus stops and sometimes create stigma if no other passengers are rear facing.

WHAT IS A WC19 WHEELCHAIR?

It is safer and easier to travel while seated in a wheelchair if the wheelchair complies with WC19. WC19 is the short name for voluntary industry standard ANSI/RESNA Volume 4, Wheelchairs and Transportation, Section 19 Wheelchair Used as Seats in Motor Vehicles (RESNA 2017). WC19 was developed by the Rehabilitation Engineering Society of North America (RESNA) in response to the lack of federal standards to address the common situation where people must stay seated in a wheelchair during motor vehicle travel. The standard was first published in 1999 and has been revised and improved in 2012 and 2017. The WC19 standard takes the design and performance requirements for vehicle seats and adapts them to apply to wheelchairs.

A wheelchair that complies with WC19 has features that make it safer and easier to use as a motor vehicle seat, including:

- Four (or sometimes six) easily identifiable, strong securement points that are compatible with commercial strap-type tiedown systems, the most universal and effective wheelchair securement system.
- A proven level of crash performance for a frontal impact test similar in severity to that used to verify that child safety seats are safe to use in passenger vehicles.
- Known performance under crash loads under which the wheelchair has been shown to maintain a stable upright seating for the rider during/after a crash, while also not breaking, collapsing, tipping over, developing sharp edges or releasing broken pieces during impact.
- Compatibility with ease of evacuation. Because a WC19 wheelchair must not inhibit egress from the wheelchair and must be able to be released from the securement straps after the crash without the use of tools, the rider can be easily evacuated from the WC and/or the WC can be easily removed from the vehicle.
- Well-secured batteries. Any batteries must stay attached to the wheelchair, not contact the rider and not move outside of the floor footprint of the wheelchair during the crash.
- The option of a crashworthy, wheelchair-anchored lap belt that provides improved fit of the crashworthy lap belt to the rider and has an interface that works with a vehicle mounted shoulder belt to create a full seat belt system.
- Known lateral stability properties and a stability rating measured during lateral tipping of floor surfaces to 45 degrees.
- Verification that the tiedown paths from the floor to the wheelchair are close to straight line paths that do not contact sharp edges of the wheelchair that may cause fraying or weaken the strap.
- Assurance that the wheelchair is both easy to use with vehicle mounted lap and shoulder belt systems and produces good fit of the seat belt to the body.
- Confirmation that there are no sharp edges on the wheelchair that will fray or weaken vehicle mounted seat belts.
- Verification that the tiedown hooks can be attached to the wheelchair one-handed in less than 10 seconds for each hook.

WC19 DESIGN REQUIREMENTS

A WC19 wheelchair is required to have several key characteristics:

- It must be able to support a person in an upright posture, meaning that the back support surface can be oriented to an angle of 30 degrees or less relative to vertical.
- The wheelchair must be measured for mass, turning radius, length and width.
- If the wheelchair is designed for a person who weighs less than 22 kg (50 lb), then the wheelchair must have a head/back support and a crashworthy wheelchair-anchored five-point harness, like that found in a child safety seat.

- The wheelchair must have four permanently attached securement brackets that have a shape and location compatible with commercial WTORS (if the wheelchair weighs over 125 kg (275 lb) unoccupied, it can have additional securement points if needed to comply with the standard).
- For products designed for use by people who weight more than 22 kg (50 lb), the manufacturer must offer the option of a crashworthy, wheelchair anchored lap belt to which a vehicle anchored shoulder belt can be attached.

The requirement for providing an option to for the consumer to purchase a crashworthy, wheelchair-anchored lap belt originates from issues reported by people who use wheelchairs as well as U.S. crash data. A common issue in real world transportation is misuse and non-use of seat belts. In an University of Michigan Transportation Research Institute (UMTRI) study of people who owned vehicles that had been specifically modified and adapted for their needs when traveling while seated in a wheelchair, a majority of those surveyed used the seat belt in a manner where it is unlikely to provide any protection (Orton et al. 2011). These data are particularly troubling because the vehicle environments observed had been specifically tailored for the individual needs of the subjects. Another study of on-road injury incidents for people seated in wheelchairs, showed that 35% were not using any sort of occupant protection system and only 38% were wearing a seat belt that had both lap and shoulder belts (Schneider et al, 2010). In addition, fitting a seat belt properly to a rider involves routing a lap belt around the hips and pelvis. Sometimes this is done by a transportation provider and can result in an uncomfortable intrusion into the personal space of the wheelchair user. Having a wheelchair-mounted, crashworthy lap belt can improve belt fit, belt use, speed up the belt application process, and does not require intimate contact from a third party. To complete the seat belt system, you just attach the vehicle mounted shoulder belt to the standardized connector on the wheelchair-mounted lap belt.

WC19 PERFORMANCE REQUIREMENTS

To comply with WC19, five performance tests are conducted: frontal crash test, securement point accessibility test, tiedown straight path test, lateral stability test and accommodation of vehicle anchored belts test. In general, it is preferred to have an emphasis on performance requirements in a standard rather than design requirements to allow innovation in the hardware.

FIGURE 1 Peak of action photo for a WC19 wheelchair frontal crash test. (image courtesy of UMTRI)

FRONTAL IMPACT TESTING

Frontal impacts are the most common and most injurious crashes on the road. This is why the federal motor vehicle safety standards prioritized frontal impact protection in standards, followed much later by side impact protection and rollover protection. Child safety seats have required frontal crash testing since 1981 and side impact requirements are a phase planned in a few years. Right now, WC19 also emphasizes frontal crash protection and includes a dynamic laboratory test to prove out impact performance. Rear impact testing is being incorporated in the next version of WC19 as an optional test. Side impact test protocols were recently developed (Klinich 2023) but have yet to be considered for inclusion in the standards. However, many of the countermeasures for frontal impact also provide injury reduction in rear impact, rollover and side impact.

The frontal impact test for WC19 is a dynamic sled test. A sled is a machine that can recreate the crash event indoors to allow detailed documentation and investigation. A commercial wheelchair is tested with a crash test dummy (more formally known as an anthropometric test device or ATD) that is selected based on the maximum allowed occupancy weight

CONTINUED ON PAGE 34

TRANSPORTATION SAFETY ...
(CONTINUED FROM PAGE 33)

rating of the wheelchair. A surrogate WTORS is used so that the outcomes of the test are dependent only on the wheelchair performance. The crash test is run using a 30 mph/22-24 g peak deceleration pulse, which is similar to the crash used to verify performance for child safety seats. Analysis of national crash databases show that this crash is more severe than 96% of tow-away crash events in the United States. Figure 1 shows a peak of action photo for a wheelchair dynamic test.

SECUREMENT POINT ACCESSIBILITY TESTING

The securement point accessibility test measures the time it takes to attach each securement point while using only one hand. This test responds to concerns from transportation providers that securing a wheelchair is too difficult or takes too long. For this test, the wheelchair is put inside an enclosure that only allows access to the wheelchair from one side, as shown in Figure 2. This simulates the situation in many vehicles where the wheelchair station is located next to a vehicle sidewall and the person applying the tiedowns is limited in how they can move around the wheelchair. Then the time for the investigator to attach to each securement point is measured. The wheelchair passes this test if each of the times are under 10 seconds.

LATERAL STABILITY TESTING

This test measures how much lateral "play" the wheelchair frame has when tipped sideways. This requirement responds to concerns from people who don't feel stable in their wheelchair during high-speed vehicle turning. In this test, the wheelchair is secured using a strap-type tiedown to a flat metal plate and the wheelchair is loaded with the same crash dummy (ATD) that is appropriate for frontal crash testing. The dummy is secured in the chair with lap and torso belts. The entire set up is tilted to 45 degrees and the lateral position of a point on the wheelchair frame that is near the occupant hip is measured before the test and at peak tilt. Figure 3 shows a wheelchair in the maximum tilt position. The lateral motion wheelchair is rated as good (0-20 mm), acceptable (20-40 mm) or poor (over 40 mm). This test is not a pass/fail, but the wheelchair manufacturer must report the lateral stability test result in presale literature.

FIGURE 2 Set up for securement point accessibility test. (image courtesy of UMTRI)

FIGURE 3 Wheelchair during lateral tip testing. (image courtesy of UMTRI)

FIGURE 4 Front tiedown strap that does not deviate from a straight path. (image courtesy of UMTRI)

FIGURE 5 Wheelchair testing for ease of seat belt application and quality of fit. (image courtesy of UMTRI)

IT IS PREFERRED TO HAVE AN EMPHASIS ON PERFORMANCE REQUIREMENTS IN A STANDARD RATHER THAN DESIGN REQUIREMENTS TO ALLOW INNOVATION IN THE HARDWARE.

TIEDOWN CLEARPATH TESTING

This test measures wheelchair frame interference with a straight path from the floor anchor to the wheelchair securement point. This requirement responds to concerns from transportation providers that securing the wheelchair should not require snaking a tiedown through wheelchair frame elements. For this test, the wheelchair is secured using a typical tiedown floor footprint and the deviation of any tiedown strap from a straight path is measured. To pass WC19, the strap of the tiedown cannot deviate more than 40 mm from a straight line. Figure 4 shows a tiedown strap that complies with the clearpath test.

ACCOMMODATION OF VEHICLE ANCHORED SEAT BELTS.

Although WC19 wheelchairs must offer the consumer the option of buying a crashworthy wheelchair-anchored lap belt, most people who travel seated in their wheelchairs use a seat belt that anchors only to the vehicle. In real world usage poor fit of seat belts for people in wheelchairs is a common problem (Orton, 2011 and Schneider 2010). This test purpose is twofold. It first rates the ease of applying the lap and shoulder belt, with particular focus on how difficult it is to route the lap belt to the occupant pelvis. Once the lap and shoulder belt is applied, the belt is rated on seven aspects of fit and safety that evaluates at how the lap belt is placed relative to the pelvis, pelvic belt angles, how the shoulder belt routes over the torso and sharp edges on the wheelchair that could cut the seat belt. To comply with WC19, the wheelchair must rate at least an "acceptable" on both ease of application and quality of fit. Figure 5 shows a wheelchair set up for the test for accommodation of vehicle-anchored belts.

CONTINUED ON PAGE 36

TRANSPORTATION SAFETY ...
(CONTINUED FROM PAGE 35)

HOW TO IDENTIFY A WC19 WHEELCHAIR

A WC19 wheelchair is required to be labeled with both words stating compliance with WC19 and the WC19 symbol in Figure 6. Additional information related to the WC19 standard is included in the owner's manual. A list of available commercial wheelchairs that have been tested to WC19 is available at the website travelsafer.org. While over 250 models of wheelchairs comply with the standard, there are still many that do not. Wheelchair manufacturers often express that there is not enough demand for WC19 wheelchairs while prescribers wish that more models were available. Therefore, whenever possible and appropriate, needs for more types of WC19 compliant wheelchairs should be communicated to manufacturers.

FIGURE 6

The WC19 logo used to designate compliance.

A common issue in procuring WC19 wheelchairs is the lack of reimbursement for these WC19 features by insurance companies government programs and third-party payers who are unwilling to pay for the extra charge, usually around $200 to $300 USDD per chair. A sample letter of justification that may assist with reimbursement is available at travelsafer.org and may help promote coverage of the WC19 option. It is important to note that if a wheelchair is not labeled by the manufacturer as suitable for use as a motor vehicle seat and the person in the wheelchair cannot transfer; the best practice method of transport is via ambulance, which can easily cost over $200 USD per trip for the insurer or the individual.

WC20 A STANDARD FOR THIRD PARTY WHEELCHAIR SEATING

WC19 assumes that a wheelchair comes complete from a single manufacturer, but many times a wheelchair is created by combining seating from one manufacturer with a frame from a different manufacturer. Because testing all the combinations of seating and frames as individual wheelchairs would be costly and inefficient for seating manufacturers, a separate seating standard, WC20, was created. WC20 is the short name for voluntary industry standard ANSI/RESNA Volume 4, Wheelchairs and Transportation, Section 20 Wheelchair Seating Systems for Use in Motor Vehicles (RESNA 2017). WC20 allows seating to be tested on a surrogate wheelchair frame (SWCF), shown in Figure 7. The SWCF has been designed to allow mounting of a wide range of seating on various rail/cane configurations and in several wheelchair widths. The surrogate frame has been validated against the performance of a range of manual wheelchairs to make sure the response is realistic (Ritchie, et al. 2006). The SWCF includes deformable elements at the bottom of the seat canes and at the front casters that mimic the deformation seen in commercial frames. These deformable elements are replaced after each test to assure test repeatability. Once attached, the seating and the SWCF create a complete wheelchair that can be tested to the frontal crash requirements and evaluated for compatibility with seat belts in a manner identical to WC19. Seating that meets WC20 can then be paired with frames that have been tested to WC19 to create crashworthy combinations. A list of WC20-compliant seating is available on the travelsafer.org website.

FIGURE 7 The SWCF used for testing third-party seating systems. (image courtesy of UMTRI)

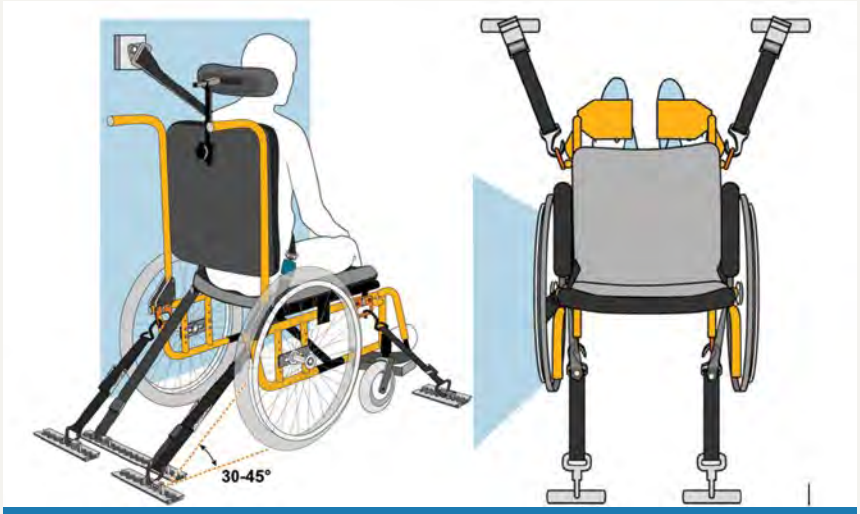


FIGURE 8 Desired rear tiedown angles (left) and desired tiedown configuration (right). (image courtesy of UMTRI)

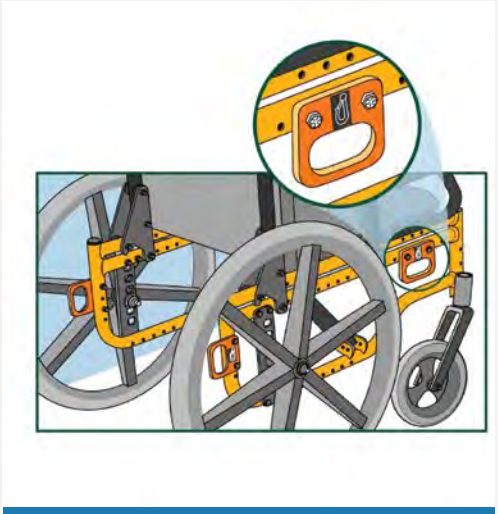


FIGURE 9 Securement points on a WC19 wheelchair. (image courtesy of UMTRI)

WHEELCHAIR SECUREMENT

Wheelchairs should be secured with a complete Wheelchair Tiedown and Occupant Restraint System (WTORS) that complies with ANSI/RESNA WC18. WC18 is the short name for voluntary industry standard ANSI/RESNA Volume 4, Wheelchairs and Transportation, Section 18 Wheelchair Tiedowns and Occupant Restraint Systems (RESNA 2017). To secure a wheelchair using a four-point strap-type tiedown, move the wheelchair to the center of the wheelchair station and apply the rear tiedown straps. Ideally, these straps should be directed straight back from the securement points to the floor anchors and the side view angle of the straps should be about 45 degrees as shown in Figure 8 on the left side. The right side of Figure 8 shows an overhead view of this tiedown configuration. Once the back tiedowns are adjusted, attach the front tiedowns and tighten all straps according to the manufacturer's instructions. The front tiedowns should be spaced wider than the wheelchair to improve lateral stability. Once the wheelchair is secured, the crash safety of the system will not depend on whether the wheelchair brakes are applied, but putting the wheel locks on may make the rider feel more stable and comfortable during the trip.

If you are using a WC19 wheelchair, the securement points will have the required shape and labeling show in Figure 9. If you are not using a WC19 wheelchair, first contact the WC manufacturer to determine the best places on the wheelchair frame to attach the tiedown hooks. In general, the best places are welded junctions on the main frame of the wheelchair or frame junctions connected by hardened fasteners. Hook tiedown straps to the frame as close to the seat as possible while staying below the seat surface. Never hook tiedown straps to removable parts of the wheelchairs, such as wheels, armrests and footrests, because these parts can easily detach during a crash and leave the person in the wheelchair unsecured and at high risk of being ejected from the vehicle.

WC19 wheelchairs can also be used with docking systems. In this situation, the wheelchair is tested with a specific docking system that has been adjusted for one specific model of wheelchair. Docking systems can also comply with WC18. Docking a wheelchair usually involves adding special hardware or brackets to the bottom of the wheelchair. This is a good solution for people who own their own vehicle and/or want to drive their own vehicle. A docking system offers a higher level of independence for the person in the wheelchair. Wheelchair-mounted and vehicle-mounted docking hardware must be closely aligned, so a single docking station in a private vehicle cannot secure a variety

CONTINUED ON PAGE 38

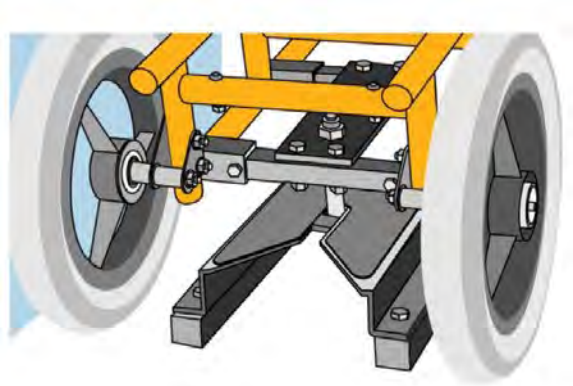


FIGURE 10 A rear view of a wheelchair secured with a docking securement system. (image courtesy of UMTRI)

TRANSPORTATION SAFETY ...
(CONTINUED FROM PAGE 37)

of wheelchairs, only the one it is adjusted to accept. Another drawback of the common commercial docking systems is the added hardware that must be attached to the bottom of the wheelchair. This hardware reduces the ground clearance of the wheelchair and can cause difficulty crossing uneven surfaces and doorway thresholds. Figure 10 shows a common wheelchair docking hardware configuration.

OCCUPANT PROTECTION

Just like other passengers in the vehicle, the person in the wheelchair must be protected by seat belts or a child restraint harness. Many times, postural belts attached to the wheelchair are mistaken for crashworthy seat belts. These postural belts are only designed to help stabilize and position the wheelchair user during propulsion (active or passive) and activities of daily living and are not strong enough to provide protection in a crash. Straps that can be used as seat belts will be labeled as compliant with WC19, as shown in Figure 11. Since it is essential to provide both upper and lower body crash protection, a lap and shoulder belt or a crashworthy five-point harness should be used.

HOW TO FIT THE SEAT BELT TO THE RIDER

The purpose of the seat belt is to protect the rider during a motor vehicle crash by performing five key functions:

- Preventing head strike during impact. Contact of a rider's head with other surfaces or objects is the number one cause of injury during motor vehicle crashes.

FIGURE 11 An example of a seat belt label that indicates compliance with WC19 through text and the logo. (image courtesy of UMTRI)

- Preventing ejection from the vehicle. People who are thrown from the vehicle are four times more likely to die and 14 times more likely to sustain a cervical spine injury (Esterlitz, 1989).
- Applying the short-duration, high-magnitude occupant protection loads to the strongest parts of the rider's skeleton.
- Distributing the restraint load across a wide area of the body.
- Extending the stopping time for the rider during the crash. The longer time a person has to stop, the lower the crash forces. By wearing a seat belt, the passenger begins to stop when the vehicle does.

For seat belts to work well, they must be fit to the body properly. The lap belt should fit low on the torso, touch the top of the thigh and wrap around the hips of the rider. If possible, the side view angle of the lap belt should be between 45 and 75 degrees from horizontal. The shoulder belt should cross the clavicle and sternum and then connect to the lap belt by the opposite hip. The shoulder belt should either anchor, or be routed through a guide that is, behind and above the shoulder. Shoulder belts should never be routed over the shoulder and directly to the floor, since this causes potentially harmful compressive spine loading. Figure 12 shows good seat belt fit and angle.

The main challenge to good seat belt fit for someone seated in a wheelchair is making sure the lap belt fit is not compromised by the wheelchair features. Often armrests or lateral supports direct the lap belt high on the abdomen where there are no skeletal features to take the load. It is often necessary to route the lap belt between or under wheelchair features to achieve good fit.

OTHER IMPORTANT ISSUES

Using a wheelchair as a seat in a private vehicle is an area where no federal laws directly dictate the process or equipment. It is important to read and follow all manufacturer's instructions. In addition, many wheelchair manufacturers underestimate the need for wheelchairs that can perform as vehicle seats, so please take any opportunity to offer feedback to them on this issue.

Motor vehicle crash data shows that people are less likely to be injured when riding in an upright seated posture. WC19 requires compliant wheelchairs to be able to attain a seated configuration where the back support is 30 degrees or less from vertical and to recommend use of these upright seated postures for travel. However, there may be times when a person's medical needs require them to be more reclined. For this situation, the best practice choice is to use ambulance transport. If that is not possible, then adjust the wheelchair to the most upright posture that the rider can tolerate and adjust the seat belts to get the best fit possible per the instructions above.

Occupant head strike is the leading cause of injury and death in motor vehicle crashes. To avoid head contact, maximize the clear space around the wheelchair station to reduce the likelihood of contact with vehicle surfaces or other passengers. The recommended clear area extends 650 mm (25.6 in) forward of the center of the forehead and 450 mm (17.7 in) back from the most rearward point of the back of the head (RESNA, 2017). Elements within this zone that cannot be eliminated should be covered with energy absorbing material such as padding that complies with FMVSS 201.

Wheelchairs and WTORS should be checked for physical damage and signs of wear, like fraying of belts or hairline cracks in hardware. If the equipment has been involved in a motor vehicle crash, check with the Complex Rehab Technology Supplier and manufacturer to see if replacement or repair is needed. Anchoring tracks for WTORS should be keep clean and free of dirt buildup that can compromise the effectiveness.

Whenever possible, hard trays should be removed and secured elsewhere in the vehicle for the duration of the trip. If a tray is essential during travel for

CONTINUED ON PAGE 40

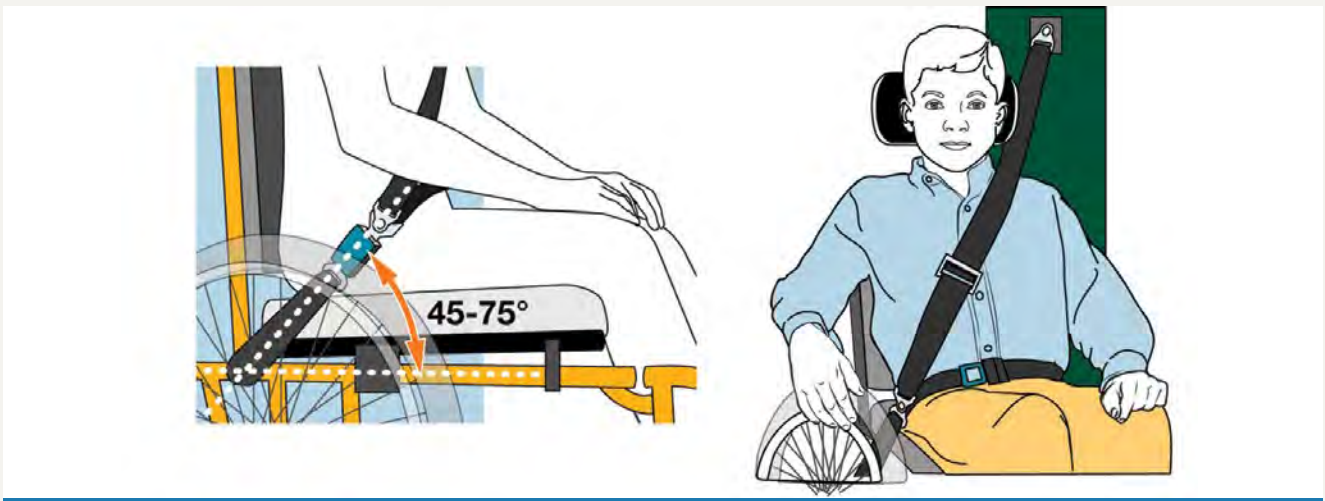


FIGURE 12 Target seat belt angle range (left) and proper seat belt fit (right). (image courtesy of UMTRI)

CREATING SAFE TRANSPORTATION POSSIBILITIES FOR PEOPLE WHO USE WHEELCHAIRS REQUIRES COOPERATION, ACTION AND AWARENESS FROM MANY STAKEHOLDERS, INCLUDING CONSUMERS, CLINICIANS, MANUFACTURERS, VEHICLE MODIFIERS, VEHICLE ADAPTERS AND TRANSPORTATION PROVIDERS.

TRANSPORTATION SAFETY ...
(CONTINUED FROM PAGE 39)

medical and positioning needs, consider a foam tray or pad the surfaces of the tray that the occupant can contact, particularly the top surface and the gap between the torso and tray. A common problem is the tray detaching under impact loads and becoming a projectile within the vehicle, so trays must be well secured to either the wheelchair or in a storage area. A common rule of thumb is that straps used to secure items should be rated to a weight of 10 to 20 times the items weight (NCST, 2015). For example, a tray that weighs 2.3 kg (5 lb) should be secured with straps rated to loads of 23-46 kg (50-100 lbs).

While WC19 does not require a head support feature on the wheelchair, it includes limits for rearward head motion that are easier to meet with a head support in place. For travel, head supports should be tightly attached to the wheelchair and should NOT include any elements that traverse the anterior side of the head (i.e., no head straps). To have potential for aiding in occupant protection during a crash, the head support should be padded and positioned to align vertically with the center of the head occiput (or approximately centered with the tops of the ears) and have a gap of less than 2 inches (50 mm) between the back of the head and the head support. If a neck collar is used but is not necessary for travel, then remove it for the trip. If a neck collar must be used, then the lightest and softest collar that meets the medical need should be used.

CONCLUSIONS

Creating safe transportation possibilities for people who use wheelchairs requires cooperation, action and awareness from many stakeholders, including consumers, clinicians, manufacturers, vehicle modifiers, vehicle adapters and transportation providers. Crashworthy products, like WC19 wheelchairs, WC20 seating and WC18 WTORS, are designed to mitigate several of the common safety and usability issues seen in the real world. Understanding and promoting the use of compliant products when possible and appropriate can improve outcomes for people who use wheelchairs as motor vehicle seats.

CONTACT THE AUTHOR

Miriam may be reached at
MMANARY@UMICH.EDU

REFERENCES
BRAULT, M. W. (2012). AMERICANS WITH DISABILITIES: 2010 (PP. 1-23). WASHINGTON, DC: US DEPARTMENT OF COMMERCE, ECONOMICS AND STATISTICS ADMINISTRATION, US CENSUS BUREAU.
CENTERS FOR DISEASE CONTROL (2018) LEADING CAUSES OF DEATH IN THE US HTTPS://WWW.CDC.GOV/INJURY/WISQARS/PDF/LEADING_CAUSES_OF_INJURY_DEATHS_HIGHLIGHTING_UNINTENTIONAL_2018-508.PDF
ESTERLITZ, J. R. (1989). RELATIVE RISK OF DEATH FROM EJECTION BY CRASH TYPE AND CRASH MODE. ACCIDENT ANALYSIS & PREVENTION, 21(5), 459-468.
FIELD, M. J., JETTE, A. M., & INSTITUTE OF MEDICINE (US) COMMITTEE ON DISABILITY IN AMERICA. (2007). TRANSPORTATION PATTERNS AND PROBLEMS OF PEOPLE WITH DISABILITIES. IN THE FUTURE OF DISABILITY IN AMERICA. NATIONAL ACADEMIES PRESS (US).
KLINICH, K. D. (2023). DEVELOPMENT OF SIDE IMPACT TEST PROCEDURES FOR IMPROVED WHEELCHAIR TRANSPORTATION SAFETY. UNIVERSITY OF MICHIGAN TRANSPORTATION RESEARCH INSTITUTE.
MANARY, M. A., BEZAIRE, B. A., BERTOCCI, G. E., SALIPUR, Z., & SCHNEIDER, L. W. (2007, JUNE). CRASHWORTHINESS OF FORWARD-FACING WHEELCHAIRS UNDER REAR IMPACT CONDITIONS. IN PROCEEDINGS OF THE RESNA 30TH INTERNATIONAL CONFERENCE ON TECHNOLOGY AND DISABILITY (PP. 15-19).
NATIONAL CONGRESS ON SCHOOL TRANSPORTATION (2015) NATIONAL SCHOOL TRANSPORTATION SPECIFICATIONS AND PROCEDURES, WWW.NCSTONLINE.ORG.
ORTON, N. R. (2011). SUMMARY OF OCCUPANT, WHEELCHAIR AND WHEELCHAIR TIEDOWN AND OCCUPANT RESTRAINT SYSTEM CONFIGURATION DATA FOR WHEELCHAIR-SEATED DRIVERS AND FRONT-ROW PASSENGERS IN PRIVATE VEHICLES. UNIVERSITY OF MICHIGAN, ANN ARBOR, TRANSPORTATION RESEARCH INSTITUTE.
RESNA REHABILITATION ENGINEERING AND ASSISTIVE TECHNOLOGY SOCIETY OF NORTH AMERICA (2017), AMERICAN NATIONAL STANDARDS FOR WHEELCHAIRS – VOLUME 4: WHEELCHAIRS AND TRANSPORTATION, SECTION 18: WHEELCHAIRS TIEDOWNS AND OCCUPANT RESTRAINT SYSTEMS. WASHINGTON DC: RESNA.
RESNA REHABILITATION ENGINEERING AND ASSISTIVE TECHNOLOGY SOCIETY OF NORTH AMERICA (2017), AMERICAN NATIONAL STANDARDS FOR WHEELCHAIRS – VOLUME 4: WHEELCHAIRS AND TRANSPORTATION, SECTION 19: WHEELCHAIRS USED AS SEATS IN MOTOR VEHICLES. WASHINGTON DC: RESNA.
RESNA REHABILITATION ENGINEERING AND ASSISTIVE TECHNOLOGY SOCIETY OF NORTH AMERICA (2017), AMERICAN NATIONAL STANDARDS FOR WHEELCHAIRS – VOLUME 4: WHEELCHAIRS AND TRANSPORTATION, SECTION 20: WHEELCHAIR SEATING SYSTEMS FOR USE IN MOTOR VEHICLES. WASHINGTON DC: RESNA.
RITCHIE, N. L., MANARY, M. A., BERTOCCI, G. E., & SCHNEIDER, L. W. (2006, JUNE). VALIDATION OF A SURROGATE WHEELCHAIR BASE FOR EVALUATION OF WHEELCHAIR SEATING SYSTEM CRASHWORTHINESS. IN PROCEEDINGS OF THE RESNA 29TH ANNUAL CONFERENCE, ATLANTA, GA, USA (PP. 22-26).
SCHNEIDER, L. W., KLINICH, K. D., MOORE, J. L., & MACWILLIAMS, J. B. (2010). USING IN-DEPTH INVESTIGATIONS TO IDENTIFY TRANSPORTATION SAFETY ISSUES FOR WHEELCHAIR-SEATED OCCUPANTS OF MOTOR VEHICLES. MEDICAL ENGINEERING & PHYSICS, 32(3), 237-247.

Miriam Manary is a lead research engineer at the University of Michigan Transportation Research Institute and conducts biomechanics and human factors research for the automotive industry and the federal government. Manary holds bachelor's and master's degrees in biomedical engineering and has over 30 years of experience in research and development. Currently her work focuses on wheelchair transportation safety, autonomous vehicles, wheelchairs used as seats on aircraft and child passenger safety. Manary served on the National Academies expert panel who assessed and documented the technical feasibility of use of a personal wheelchair as a commercial airline seat. She conducts and supervises sled impact evaluation of child restraints, transit wheelchairs, wheelchair securement systems and wheelchair-occupant restraint systems. Manary is actively involved in national and international standards writing groups and currently chairs the RESNA Committee on Wheelchairs and Transportation.

FIRST THINGS FIRST! IMPORTANCE OF THE INITIAL THERAPY EVALUATION

Written by: **KELLY WAUGH, PT, MAPT**

As a physical therapist involved in wheelchair service provision for 40 years, I have witnessed a shift from the clinician-driven process that was typical 20 years ago, to a supplier-driven process more prevalent today. We all agree there is a lack of clinicians experienced in wheelchair assessment who are available to participate in this process. I both value and rely heavily on the expertise and opinion of my (Assistive Technology Professional) ATP Supplier partners. However, like all other health care services and products, I believe wheelchair service provision should be both clinically driven and client centered. So, how do we promote a more experienced workforce of physical therapists (PTs) and occupational therapists (OTs) who understand their critical role as the expert on the person's body structures and functioning? I would like to propose one simple thing that may help to reverse this trend: encouraging therapists to do a separate initial therapy evaluation prior to meeting with the ATP Supplier for the wheelchair assessment.

Referring to the specialty assessment as "The Wheelchair Evaluation" implies a one visit session requiring knowledge of wheelchair equipment. Instead, let's teach (and practice) a different model, where the PT/OT evaluation is a separate but critical first step of the wheelchair assessment process. To this end, it is useful to think of the wheelchair assessment process in two primary parts:

- The initial PT/OT evaluation.
- The technology assessment.

These are billable services for a therapist, using PT/OT evaluation and treatment codes. The ATP Supplier does not need to be present at the initial evaluation, as the therapist can summarize assessment findings at the beginning of the technology assessment.

The primary benefits of completing the PT/OT evaluation prior to the technology assessment with the ATP Supplier are:

1. Allows the therapist to do what they are good at regardless of their experience and knowledge of equipment options and features. This makes the process less intimidating for therapists and facilitates their skill development. In a recent clinical editorial, Susan Johnson Taylor, OTR/L (2023), reminds us that therapists already have most of the knowledge and skills needed to participate in a wheelchair assessment:
   - The process for the therapist is the same as for any other (PT or OT) evaluation: evaluation, goals, treatment plan and follow up. (The treatment plan is the application of technology to address clinical objectives.) The therapist's unique set of skills for assessing people's impairments, activities and participation leads to problem-solving and clinical reasoning. (p. 32)

   A therapist's primary role and responsibility is to bring this expertise to the wheelchair assessment process. After a thorough evaluation, the therapist is well-positioned to help educate the consumer on the pros and cons of different equipment features and options (as presented by the ATP Supplier during the technology assessment) and relate those pros and cons back to client's impairments, abilities, goals and priorities.
2. Establishes a client-centered approach and process that is clinically driven. A separate initial session allows the therapist time to really listen to the client, and they in turn feel heard. When a therapist goes into the wheelchair technology assessment without having completed the therapy evaluation ahead of time, the process is more likely to become product driven with insufficient time for listening, feature matching, product trials and team problem-solving. The therapist's responsibility is to ensure the client's goals and priorities are honored during the assessment. In this way, the clinician becomes the driver and protector of this client-centered approach throughout the wheelchair service delivery process.

I WOULD LIKE TO PROPOSE ONE SIMPLE THING THAT MAY HELP TO REVERSE THIS TREND: ENCOURAGING THERAPISTS TO DO A SEPARATE INITIAL THERAPY EVALUATION PRIOR TO MEETING WITH THE ATP SUPPLIER FOR THE WHEELCHAIR ASSESSMENT.

3. Client gains trust in the process leading to improved satisfaction and outcomes. When the client's first encounter is focused solely on them, it sets a tone for the entire process. The client trusts that the therapist understands their problems and needs and will advocate for them throughout the process. The client feels empowered to participate in problem-solving and decision-making, while also trusting the clinician's opinions. I believe this helps the client have realistic expectations and make better choices. This results in increased client satisfaction with both the process and final outcomes.

CONTACT THE AUTHOR

Kelly may be reached at
KELLY.WAUGH@UCDENVER.EDU

REFERENCES:

TAYLOR, SJ. (2023). OBSERVATIONS FROM THE FIELD: THE THERAPIST IN THE SEATING EVALUATION. ARE WE STILL TALKING ABOUT THIS? ISSUE 1 OF 2023, DIRECTIONS (PP 32-33)

Kelly Waugh, PT, MAPT, is a licensed physical therapist with 40 years of clinical experience in Complex Rehabilitation Technology for people with significant mobility impairments. She currently works at the Center for Inclusive Design and Engineering (CIDE) in Denver, Colorado, providing direct service in the CIDE Assistive Technology Clinic. She has published and presented nationally and internationally. Waugh has also served on ISO Wheelchair Seating Standards Committees for over 20 years, with a focus on the development of standardized measures of wheelchair seated posture. She authored and published a Clinical Application Guide to this international standard in 2013.

REHAB CASE STUDY: FINDING JUST THE RIGHT EQUIPMENT FOR ADAPTIVE DRIVING CAN BE TRICKY

Written by: **BARRY DOYLE, MSOTR/L, CDRS**

There are various levels of complexity with a driving evaluation, and when it comes to a high-tech evaluation, no two will ever be the same. If you sit down with a Certified Driver Rehabilitation Specialist (CDRS) who has experience with high-tech evaluations, they likely will be able to tell thrilling stories of accomplishment that both excite the listener and convince them they never want to do that job. For those of us who are fortunate enough to complete these types of evaluations, yes, there are adrenaline-filled thrills, but it gives us the best opportunity to tap into our clinical and creative selves.

The following case study is an example of utilizing clinical reasoning and creativity to determine and execute a plan to facilitate independent driving with high-tech equipment. It is also an example of why it is necessary for a CDRS to be open to changing the plan and willing to discover options for equipment one would never have thought to use.

Tyler is a 27-year-old male injured in a motor vehicle accident at the age of 15 as a restrained passenger. He was originally diagnosed with a motor complete C4 ASIA B spinal cord injury. Following cervical fusions and tethering surgery, as well as a long inpatient rehabilitation course, his discharge diagnosis was a motor incomplete C4 ASIA C spinal cord injury. He was first referred to the driving program at Craig Hospital two years post injury with an interest in pursuing independent driving.

Tyler was experiencing significant spasticity in bilateral upper extremities (BUE) affecting function, coordination and fluidity of movement. He was seen in a high-tech training vehicle with equipment called electronic mobility controls (EMC) to determine his ability to utilize various input devices for gas/brake and steering. The demands of the task for independent operation of the primary controls were too great, and he did not demonstrate readiness to pursue an evaluation. Spasticity was observed to be the biggest barrier at that time.

At the time of his second referral, one year later, Tyler was able to complete stand pivot transfers into a standard minivan and able to ambulate short distances with a front wheel walker. He utilized a power chair for community access as well as public transportation. He had a central cord presentation. Tyler still experienced spasticity in his upper extremities, but demonstrated more coordination and fluidity of movement indicating a potential readiness to pursue a driving evaluation. The clinical assessment indicated the potential to utilize his right lower extremity (RLE) for operation of the original equipment manufacturer (OEM) gas and brake pedal and a high-tech input device for operation of steering with his right upper extremity (RUE).

THE FOLLOWING CASE STUDY IS AN EXAMPLE OF UTILIZING CLINICAL REASONING AND CREATIVITY TO DETERMINE AND EXECUTE A PLAN TO FACILITATE INDEPENDENT DRIVING WITH HIGH-TECH EQUIPMENT.

Tyler's physical reaction time for use of his RLE on the gas and brake was tested as well as observed in the vehicle during a stationary evaluation. His average physical reaction time was below the expected level. His movement between pedals and ability to grade pressure was observed to be inconsistent. Strength, range of motion, coordination and difficulty with proprioception were barriers at that time for use of the

RLE on the OEM gas and brake pedals. Tyler was able to operate steering successfully with his RUE using the EMC two-way joystick. However, spasticity remained a barrier to readiness. Disappointment ensued, but the door was not shut. Based on his prognosis and trend of improvement, there was still hope.

Tyler returned one year later to try again. He was now four years post injury. He worked extremely hard to overcome the barriers identified during his previous assessments and consequently, demonstrated improvements in all areas. Tyler's functional picture and readiness were beginning to look much better. He was able to complete a stand pivot transfer inside the training van simulating the use of a six-way transfer seat with standby assistance. This became our first crossroad — to transfer inside a modified minivan, or not to transfer and attempt to drive from his power wheelchair instead. Tyler always intended to improve enough physically and functionally to access the community as normally as possible. And for him, that meant driving from the standard driver's seat. He was capable and with time may be able to achieve independence with that transfer. However, Tyler's performance with transfers is safest and most consistent when he can stand up with full extension prior to pivoting. Just because someone "can" complete the task, doesn't mean they "should." Should he or should he not complete the transfer multiple times a day? It was determined, with Tyler's acceptance, that conservation of time and energy would win out after repeated attempts and observation of clinical judgment. We decided to move forward with driving from the power wheelchair.

Unfortunately, this decision created our second crossroad – now his RLE would be in a different position relative to the gas and brake pedal, and he would not be able to utilize his wheelchair footrest as a base of stabilization. The foot rest would be too low even if we could get it close enough. And I had never heard of anyone driving from their power wheelchair and using their RLE to operate the OEM gas and brake. Looking back on this crossroad, I realized I jumped to a decision without completing a full task analysis. If I had, I do

CONTINUED ON PAGE 46

PHOTO 1 Joysteer Steering Input Device called the "Pistol Grip"

PHOTO 2 Spec switch activated by Tyler's head for access to secondary controls

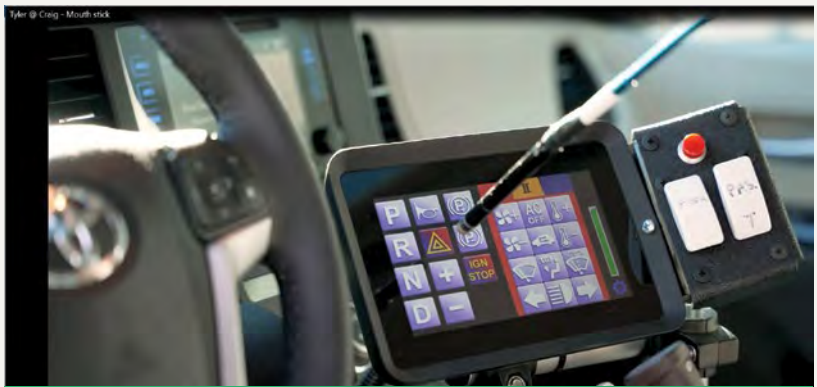


PHOTO 3 Touch Screen accessed by a mouth stick for starting, stopping the vehicle and changing gears

REHAB CASE STUDY ...
(CONTINUED FROM PAGE 45)

believe I would have discovered the solution at that time. Luckily, Tyler is a good advocate for himself, and we didn't waste too much time before he sparked the just right solution.

The conclusion I jumped to was that Tyler would need to operate gas/brake and steering using a four-way joystick, similar to his power wheelchair joystick. He initially agreed, and we began the evaluation. However, while I was making adjustments to the system, sitting in a parking lot, Tyler helped us both see the solution to the barrier of positioning. He elevated his RLE from his foot rest and was able to access the OEM gas and brake pedals. At first glance, the position did not appear to be appropriate as he would need to hold his foot in the air to use the pedals. But as he continued to demonstrate the ability to move between pedals with good coordination and accuracy, the picture of independence became clear. I simply needed to provide a platform, secured to the vehicle floor that would be his base of stabilization. I proceeded to mock-up the platform using my old occupational therapy text books, duct tape and dycem. I knew I kept those textbooks, for a good reason! The high-tech input device was switched to a two-way joystick for operation of steering only, and Tyler quickly progressed through the evaluation.

I evaluated Tyler using the EMC system but prescribed a system called Joysteer due to increased safety with a high-tech steering input. My prescription included a low-force joystick, like what we used during the evaluation and requiring the same functional skills. However, the manufacturer recommended also attempting to use a forced feedback joystick with a "pistol grip" that required more supination and pronation (Photo 1). I had never thought to use this device with Tyler because his functional grasp was limited to his thumb and pointer finger. But this time I did complete a more thorough task analysis. The suggestion from the manufacturer, the task analysis and my openness to alternative options paid off. Tyler performed well with the low force joystick, but he absolutely took off with the pistol grip input device for steering.

The final setup is very unique and very cool. Tyler uses a head switch for secondary controls (Photo 2), a touch screen accessed with a mouth stick for ignition, transmission and other various vehicle functions

PHOTO 4 Removable platform to provide foot stability while accessing gas and brake

(Photo 3), and a quick release platform for stabilizing his right heel, just to name a few of the cool things (Photo 4).

Being open to alternative options, task analysis, clinical reasoning and listening to my patient resulted in a consistent and safe opportunity for access to the community and, ultimately, a more productive life. Tyler has been an independent driver without incident for nearly seven years now. And he loves his ride!

CONTACT THE AUTHOR
Barry may be reached at
BDOYLE@CRAIGHOSPITAL.ORG

Barry Doyle has been an occupational therapist for 18 years. He obtained a master's degree in occupational therapy from Colorado State University in 2005. He has one year experience working with children in a sensory integration clinic and 10 years of experience working in acute rehab for neurological injuries at Spalding Rehabilitation Hospital. Doyle began the process of obtaining supervised experience in the field of driving rehabilitation the final two years at Spalding Rehabilitation Hospital. He became certified in 2014 and accepted a full-time position in the Adaptive Transportation/Driving Department at Craig Hospital in 2015. Doyle has 10 years of experience as DRS/CDRS completing evaluation and training for return to driving with low-tech controls and modifications and return to driving following traumatic brain injury as well as acquired brain injury. He has eight years of experience with evaluation for return to driving with high-tech controls and modifications following spinal cord injury. He completed a EMC high-tech training course in 2016, DSI training in 2017 and Joysteer training in 2021. Doyle accepted the position of supervisor for the Community Reintegration and Adaptive Transportation programs at Craig Hospital in 2021 and is excited to help both programs continue to grow and maintain their excellence.

We're more than a mobility company.

WE'RE A MOBILITY PARTNER.

For more than 30 years, our primary focus has been on customizing chairs to meet the unique needs of our clients. However, we know that mobility goes beyond the chair. That is why we have expanded our mobility solutions to serve more people whose mobility needs range from simple to complex.

At NSM, we honor our clients' journeys of independence, and help them get where they deserve to go; at home, in their community, and throughout their lives. Let's get moving.

LEARN MORE AT NSM-SEATING.COM

NATIONAL SEATING & MOBILITY

LOOKING BACK ON 2023

Written by: **WEESIE WALKER, ATP/SMS**

Here we are at the end of 2023. It's always hard to believe that another year has passed. They say that time flies when you are having fun. Well … this year has been a total blast!

Here are some of the highlights:

- With Registration going strong in Canada, suppliers in Australia are now joining our organization. The benefits of sharing concepts, processes and ideas is unmeasurable. In October 2023, the NRRTS Board of Directors voted to approve the tradename iNRRTS to recognize the multi-country make-up of the Registry.
- The Complex Rehab Technology (CRT) Supplier Education program is up and going. Having this foundation of knowledge available to any willing person creates a pathway for new people to enter this very rewarding field. Having a standardized education program is a big step toward professional recognition.
- NRRTS/University of Pittsburgh project on Repair Practice Guidelines has developed a great tool to share with funding agencies and/or policymakers to outline the required service and maintenance required to keep CRT mobility systems in good working order. This is a commonsense approach to address the current issues surrounding access to repairs in a timely manner.
- NRRTS was represented at over 20 different industry events. That must be a record! This is one of the very best ways to increase awareness of the organization and its mission.
- Two Registrants earned the Simon Margolis Fellow Award. Elaine Stewart, ATP, CRTS®, and Carey Britton, ATP/SMS, CRTS®, were named in 2023. Both of these individuals have led NRRTS and set an example for all CRT Suppliers. Not only are they highly regarded for their service provision, but they are also giving back to the industry their time and effort to make a difference. There will never be a time when this is not necessary.

NRRTS WAS REPRESENTED AT OVER 20 DIFFERENT INDUSTRY EVENTS. THAT MUST BE A RECORD! THIS IS ONE OF THE VERY BEST WAYS TO INCREASE AWARENESS OF THE ORGANIZATION AND ITS MISSION.

- NRRTS has many other volunteers who work on specific goals. The Canadian Advisory Committee steers the organization to meet the specific needs in Canada. The NRRTS Education Committee works together to identify relevant topics and expert presenters. Unite4CRT is devoted to sharing what it means living with a disability.
- NRRTS Continuing Education has awarded CEUs for over 10,000 seat hours of continuing education in the past 12 months. That is another way NRRTS is fulfilling its mission of improving access and services to people who rely on CRT.
- DIRECTIONS magazine is the only publication focused on the provision of CRT. Through the regular features, DIRECTIONS promotes the idea that it takes a village. There is much to learn from each story of the person who relies on CRT, the clinician who recommends CRT, the supplier who provides, fits and maintains CRT, and the manufacturer who offers product choice, innovation and solutions.

- NRRTS held its open meeting in early November. If you were unable to attend, we encourage you to watch the video of the open meeting at https://nrrts.org/2023-open-meeting/.

There is still a long way to go to overcome the obstacles and roadblocks that create delays, denials and endless documentation. CRT Suppliers must be recognized for the value they bring to the process. Lawmakers, funding agencies and CRT consumers must be able to rely on CRT Suppliers and have trust in the system.

Who is ready to step up and get involved?

Here's to a more exciting 2024 for NRRTS!

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

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

UNITE4CRT: CHANGES TO REACH MORE PEOPLE

Written by: **JENNY SIEGLE AND JEN MENDENHALL**

Unite4CRT is changing things up to reach a wider audience and learn more from others who believe Complex Rehabilitation Technology (CRT) is a MUST, not optional. We will now offer our informative discussions in a podcast format that can be listened to at our audience's convenience. Our mission is to have discussions as we share our lived experiences. Through our discussions we learn, laugh, collaborate and educate each other.

Each issue of DIRECTIONS magazine will include a Unite4CRT conversation regarding a CRT topic. Our hosts Jenny Siegle and Jen Mendenhall will share their lived experiences as well as topics from others. If you have any topics you would like to see in our discussions, please send us an email to UnitefourCRT@gmail.com.

Please be sure to read the Unite4CRT article in the next DIRECTIONS magazine as we discuss topics such as utilizing caregivers, traveling with adaptive equipment, employment assistance programs available to people with disabilities, etc.

WHAT IS UNITE4CRT?

UNITE4CRT is a small group with an extra loud voice. We want the community to appreciate CRT is medically necessary and individually configured equipment. It can be manual wheelchairs, power wheelchair systems, adaptive seating systems, alternative positioning systems and other mobility devices that require evaluation, fitting, configuration, adjustment or programming.

> **EACH ISSUE OF DIRECTIONS MAGAZINE WILL INCLUDE A UNITE4CRT CONVERSATION REGARDING A CRT TOPIC.**

We want insurance companies, Medicare, Medicaid and the general population to understand our equipment is customized for the individual user and must be funded.

Our equipment is essential for independence and opportunities for a happy, healthy life.

Essential. Vital. Not Optional.

OUR BELIEFS

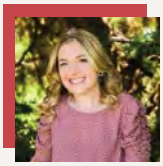
We believe that Mobility is a Human Right.

We believe Mobility is Independence.

We believe a customized wheelchair seating system is essential.

We believe we can influence policy change with OUR VOICE. OUR STORIES.

CONTACT THE AUTHORS
Jenny and Jen may be reached at
UNITEFOURCRT@GMAIL.COM



Jenny Siegle is a producer for Altitude Sports in Denver, Colorado. After working in this industry for over a decade, she knows that sports fans want to get the headlines, but have it delivered in a unique and entertaining way. Siegle was paralyzed at 9 of months age from transverse myelitis. She is an incomplete C4/C5 quadriplegic and uses an electric wheelchair for her daily mobility. She was the first child in the state of Colorado to get an electric wheelchair when she was just 2 years old. She was originally paralyzed from the neck down but has regained partial use of her upper body after many years of physical and occupational therapy. Siegle currently drives and lives independently in her own home.

Jen Mendenhall is mom to a determined and sassy 17-year-old daughter, Codi. Codi has cerebral palsy and uses many forms of assistive technology and Complex Rehab Technology. Mendenhall is a disability advocate and public speaker. Codi and Jen were presenters for TEDx Grand Junction in March 2020. Their talk, "Codi's Life: From Coding to Communication Technology," was selected to be on TED.com. Both are current members of the Colorado Assistive Technology Coalition. Mendenhall advocates for families and students with disabilities to assist in navigating the world of assistive technology, transition services and Real Work for Real Pay employment for real pay. She has a Bachelor of Science in Natural Resource Recreation and Tourism from Colorado State University and a Master of Science in Public Administration from the University of Alaska.

RIDE®

Ride - Fast!

Orders are currently shipping within 12 business days.

Ride - Soft!

Ride® Custom AccuSoft® Cushion

While our belief in the benefits of firm support is unwavering,we recognize that there are times when a softer cushion material may be what's needed for a more forgiving sitting surface.

Ride - With A Leader!

Ride® Custom Back

Our exciting NEW manufacturing method is leading the way in custom seating technology.

Contact Us: 866.781.1633
Visit us at www.ridedesigns.com

RESNA CERTIFICATION NEWS

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

SMS EXAM NOW ON HIATUS UNTIL FEBRUARY 2024

The SMS exam is on hiatus for the remainder of the year. RESNA will launch an updated SMS exam form in February 2024. The new SMS exam blueprint is available on the RESNA website for those who would like to take the updated exam starting next year.

The SMS is a specialty certification for those working in seating and mobility. Eligibility requirements include holding an Assistive Technology Professional (ATP) certification in good standing, work experience in seating and mobility, and involvement in specific professional activities showing leadership in the field.

RESNA will announce a discounted exam fee for the first test takers of the new exam. Stay tuned for more updates.

ATP CONTINUING EDUCATION REQUIREMENTS FOR RENEWAL

Now is a good time to review the requirements for ATP certification renewal and plan for next year. Recertification is required every two years to ensure that ATPs keep knowledge and skills current through relevant work experience and ongoing education. Renewing your certification requires documentation of ongoing professional development in two areas:

1. Ongoing, relevant work experience.
2. Continuing professional education.

WORK EXPERIENCE

To meet this requirement, you must document work experience of 25% full-time equivalency (full-time is 36 to 40 hours a week) in assistive technology-related services during the two-year certification period. Work experience can include one or more of the following activities:

1. Evaluations, assessments and other direct-to-consumer/student services for assistive technology (AT) (needs assessment, physical/functional/sensory assessments, educational assessments, site assessments, simulations and product trials).
2. Fitting, adjustment and readjustment services for AT (fine tuning of equipment to meet the consumer/student's needs and reflect changes in the consumer/student's status).
3. AT implementation and individualized training for consumers/students and their caregivers or students/support personnel (training in use of AT or strategies to maximize function and interface with the environment(s) of use, instruction in use and/or maintenance).
4. Teaching and professional development in AT (e.g., pre-professional or post-professional courses, seminars or workshops for consumers, families, clinicians, AT providers, support staff).
5. Management, supervision, mentorship, consulting for direct-to-consumer service providers or within an organization (e.g., professional societies, state AT programs, private companies) that supports AT practice, principles, advocacy, provision and/or reimbursement.
6. Product development, reimbursement strategies, management, consulting, government affairs for a manufacturer of AT products.
7. Consulting/advising related to AT and policy development, government affairs, advocacy, claims review.
8. Empirical or experiential research in the field of AT.

CONTINUING EDUCATION

Additionally, you must submit documentation for 20 hours of continuing education in AT, earned during the two-year period.

- 10 hours, or 1.0 CEUs, must be from a recognized CEU provider or equivalent. Recognized CEU providers are generally IACET-accredited (such as NRRTS and RESNA), and the IACET logo and statement will be on the course certificate. Professional associations, such as AOTA and APTA, and courses from government agencies and state licensing boards also meet this requirement.
- 10 hours of contact hours or continuing education credits can be from providers that are not recognized CEU providers. A maximum of three hours of in-service product training per year (six hours total) will be accepted.

RESNA also accepts up to 10 hours per renewal cycle

for AT industry support activities, such as serving as an exam development subject matter expert for the Professional Standards Board or participating in the development of an AT standard. In addition, if you teach an AT course, you can submit contact hours credit the first time you teach it. See the website for more information.

Need continuing education hours? Check out the on-line offerings from NRRTS and RESNA.

PLAN FOR YOUR END-OF-THE-YEAR RENEWAL

If you are renewing at the end of the year or early in 2024, make sure to take the holidays into account. Submit your complete paperwork at least 4 weeks before your expiration date. Forgetting to attach your CE certificates or filling out your work experience will cause delay.

RESNA will be closed on Thanksgiving, the day after Thanksgiving, Christmas Day and New Year's Day, and the entire last week of December. We will reopen on Tuesday, Jan. 2, 2024. Happy Holidays!

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

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

MEET YOUR BOARD AND STAFF

NRRTS BOARD MEMBERS

PRESIDENT – Carey Britton, ATP/SMS, CRTS®
PRESIDENT ELECT – Jason Kelln, ATP, CRTS®
VICE PRESIDENT – Tom Simon, ATP, CRTS®
TREASURER – Andrea Madsen, ATP, CRTS®
SECRETARY – David Nix, ATP, CRTS®
US REVIEW CHAIR, DMAC A – Jeff Decker, ATP, CRTS®
US REVIEW CHAIR, DMAC B – Katherleen Fallon, ATP, CRTS®
US REVIEW CHAIR, DMAC C – Mike Seidel, ATP, CRTS®
US REVIEW CHAIR, DMAC D – Brian Coltman, ATP/SMS, CRTS®
AT-LARGE DIRECTOR – Chadwick Filer, CAPS, ATP/SMS, CRTS®
AT-LARGE DIRECTOR – Parker Fadler, ATP, CRTS®
AT-LARGE DIRECTOR – Chris Savoie, ATP/SMS, CRTS®
AT-LARGE DIRECTOR – Anne L. Kieschnik, ATP, CRTS®
AT-LARGE DIRECTOR – Denise Harmon, ATP, CRTS®
AT-LARGE DIRECTOR – Stefanie Laurence, B.Sc. OT, OT Reg. (Ont.), RRTS®
CA REVIEW CHAIR, REGION A – Darrell Mullen, RRTS®
CA REVIEW CHAIR, REGION B – Michelle Harvey, BSC HONS OT, RRTS®
CA REVIEW CHAIR, REGION C – Bernard "Bernie" Opp , RRTS®

U.S. ADVISORY COMMITTEE

GERRY DICKERSON, ATP, CRTS® – Past President
ELAINE STEWART, ATP, CRTS® – Past President
MIKE OSBORN, ATP, CRTS® – Past President
MICHELE GUNN ATP, CRTS® – Past President
JOHN ZONA, ATP, CRTS® – Past President
MIKE BARNER, ATP, CRTS® – Past President

CANADIAN ADVISORY COMMITTEE

STEVE CRANNA
JUDY ROWLEY
CHRISTIEN ALLEN
MICHELLE HARVEY, BSC HONS OT, RRTS®
CHER SMITH BSC OT, MSC
LINDA NORTON, M. SC.CH, PHD, OT REG (ONT.)
JASON KELLN, ATP, CRTS®

NRRTS STAFF MEMBERS

EXECUTIVE DIRECTOR – Weesie Walker, ATP/SMS
INCOMING EXECUTIVE DIRECTOR – Andrea Madsen, BS, ATPS
DIRECTOR OF OPERATIONS – Amy Odom, BS
DIRECTOR OF MARKETING – Bill Noelting
EDUCATION MANAGER – Kathy Fisher, B.SC.(OT)
CUSTOMER SUPPORT – Lois Bodiford
LMS ADMINISTRATOR – Sandi Noelting
CONSUMER RELATIONS & ADVOCACY – Andrew Davis

NRRTS CANADA – A RECAP OF 2023

Written by: **KATHY FISHER B.SC. (OT), LINDA NORTON, B.SC.OT, MSC.CH, PHD, OT REG (ONT), AND WEESIE WALKER, ATP/SMS**

In the last issue we want to share why, as the Canadian Advisory Committee, we dedicate time to NRRTS. This issue we are focusing on our accomplishments this year. As a committee we have focused on three objectives:

1. Provide a Canadian context to issues related to the provision of Complex Rehab Technology (CRT) to the NRRTS leadership.
2. Ensure the participation of Canadians in DIRECTIONS, clinical webinars and NRRTS leadership (participation on the board and various committees.)
3. Promote the value and importance of NRRTS Registration in Canada.

PROVIDING A CANADIAN CONTEXT

In Canada, the health care budget is managed at the Provincial level. This contributes to very different funding and service delivery models for CRT delivery across the country. As a committee we have been able to provide input specific to each province for issues such as blind bidding, funding agency contacts and strategic initiatives.

ENCOURAGING PARTICIPATION OF CANADIANS

To encourage participation of Canadians in the NRRTS education program, NRRTS ensures that Canadian speakers are featured as subject matter experts. Some Canadian speakers also collaborate with US counterparts to promote sharing of resources and representation of issues from both sides of the border.

Webinar content for the year is developed by a group comprised of NRRTS staff, board members and advisors equally represented by both Canadians and U.S. educators. This ensures we can identify topics applicable to Canadian CRT suppliers and highlight issues not solely focused on a U.S. funding model. In 2023, there were nine Canadian presenters and topics ranged from clinical approaches to equipment prescription to justification for funding.

NRRTS monitors all feedback from the course participants to guide the selection of content for the upcoming year.

> **THE VALUE OF NRRTS IS NOW RECOGNIZED BEYOND THE BORDERS OF NORTH AMERICA WITH AUSTRALIA HAVING JOINED NRRTS!**

Each DIRECTIONS publication has a regular column written by Canadians (DIRECTIONS Canada) to highlight issues on the agenda of the Canadian Advisory Committee and others brought up by Canadian Registrants. In addition to DIRECTIONS Canada, over eight Canadians were involved in developing CEU articles, case studies, clinical editorials and feature articles.

Canadians are represented not only on the NRRTS Board of Directors but also now on the NRRTS staff. Kathy Fisher joined NRRTS in September 2022 as the education manager and the first Canadian staff member. With a background in occupational therapy, Fisher has worked as a CRT rep and clinical educator for 34 years. Her involvement in both the provider and manufacturer sectors of the industry combined with speaking at numerous conferences across North America and in Europe have given her exposure to the needs of the industry globally.

Jason Kelln, the first NRRTS Registrant in Canada, has been elected as the president elect. Jason has been a champion for the Registry in Canada and is now the first Canadian president elect for NRRTS. He will begin his term as board president in August 2024.

PROMOTING THE VALUE AND IMPORTANCE OF NRRTS

NRRTS was represented at a variety of conferences attended by Canadians including the International Seating Symposium, the Canadian Seating and Mobility Conference and the Canadian Association of Occupational Therapists Conference and was highlighted at each of the 14 Rehab Expos hosted by Motion over the past year.

At the International Seating Symposium, Weesie Walker, Gerry Dickerson and Linda Norton facilitated a workshop entitled, "The Client's Pelvic Obliquity Shifted as They Crossed the US/Canada Border." The focus of this session was exploring all the areas Canadian and American CRT providers have in common. Just as it is ridiculous to think that a client's pelvic obliquity would shift as they cross the border, it is also ridiculous to think that Canadian CRT providers have nothing in common with American CRT providers. In fact, we can, and have learned from each other.

On display at the Canadian Seating and Mobility Conference was an impressive list of the number of Canadian NRRTS Registrants. At the time of writing, there are 249 Canadian RRTS® representing 26% of the total number of registrants. At CSMC, NRRTS talked with therapists and funding staff who stopped by the booth to learn more about our organization. We received support for the mission of raising the bar for CRT Suppliers.

EXPANDING THE BORDERS OF NRRTS

The value of NRRTS is now recognized beyond the borders of North America with Australia having joined NRRTS! There are currently 15 Australian Registrants with several more applications in progress. Given this year's expansion of Registrants and focus on industry wide issues, NRRTS announced at the Open Meeting on Nov. 1, 2023, that it will be officially changing its name to iNRRTS (international Registry of Rehabilitation Technology Suppliers).

CONTACT THE AUTHORS

Kathy may be reached at
KFISHER@NRRTS.ORG

Linda may be reached at
LINDA.NORTON@MOTIONCARES.CA

Weesie may be reached at
WWALKER@NRRTS.ORG

Kathy Fisher has a background in occupational therapy and has worked as an assistive technology provider and clinical educator over the past 32 years. Fisher has been involved in the provision of high-tech rehabilitation equipment with clients in a variety of diagnostic categories including pediatrics and bariatrics. Fisher is the education manager for NRRTS and resides in Ontario, Canada.

Linda Norton, B.Sc.OT, MSc.CH, PhD, OT Reg(ONT), is an occupational therapist who is passionate about the provision of appropriate seating and mobility equipment and the prevention of chronic wounds. Her diverse experience in various settings including hospital, community and industry and in various roles including clinician, educator, manager and researcher, gives Norton a unique perspective. Wound prevention and management are also Norton's passions. She has completed the International Interprofessional Wound Care Course (IIWCC), a master's in Community Health focusing on pressure injury prevention, and a PhD in Occupational Science focusing on chronic wounds.

Weesie Walker, ATP/SMS is the executive director of NRRTS. She has more than 25 years of experience as a Complex Rehab Technology Supplier. She has served on the NRRTS Board of Directors, the GAMES Board of Directors and the Professional Standards Board of RESNA. Throughout her career, she 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.

NEW NRRTS REGISTRANTS

Congratulations to the newest NRRTS Registrants. NAMES INCLUDED ARE FROM SEPT. 16, 2023, THROUGH NOV. 10, 2023.

Adam Dunbar, RRTS®
Better Healthcare Options
2521 Technology Dr
Elgin, IL 60124
Telephone: 630-220-1202
Registration Date: 09/27/2023

Alex Lequillo, ATP, RRTS®
Reliant Medical Group DME
42 Southbridge St
Auburn, MA 01501-2582
Telephone: 508-407-7702
Registration Date: 09/26/2023

Andrew Lawrence, RRTS®
Independent Living Specialists
2/5 Scotland St
Bundaberg East, Queensland 4670
Telephone: 0415-412-025
Registration Date: 09/18/2023

Anton Chapman-Smith, RRTS®
Independent Living Specialists
17 Lindsay Ave
Edwardstown, South Australia 5039
Telephone: 0452-160-106
Registration Date: 10/20/2023

Catherine Michielin, RRTS®
Independent Living Specialists
11 / 428 Old Geelong Rd
Hoppers Crossing, Victoria 3029
Telephone: 0434-032-375
Registration Date: 09/19/2023

Chad Amen, ATP, CRTS®
National Seating & Mobility, Inc.
502 Rudder Rd
Fenton, MO 63026
Telephone: 833-386-9235
Registration Date: 10/26/2023

Chance Baumann, RRTS®
National Seating & Mobility, Inc.
8666 Huebner Rd, Ste 200
San Antonio, TX 78250
Telephone: 210-520-6481
Registration Date: 09/19/2023

Christina Roadknight, RRTS®
Motion
1380 Victoria St N
Kitchener, Ontario N2B3E2
Telephone: 519-807-6344
Registration Date: 10/25/2023

Corey Rautman, RRTS®
Independent Living Specialists
12 Mars Rd, Unit 1/12
Lane Cove West, New South Wales 2076
Telephone: 0478-354-384
Registration Date: 10/16/2023

David Arnold, ATP, RRTS®
Rehab Medical Inc.
2700 Northeast Expy, Ste C650
Atlanta, GA 30345
Telephone: 470-757-2634
Registration Date: 10/23/2023

Derrick Dobbs, ATP, RRTS®
National Seating & Mobility, Inc.
1103 W Adams Ave
Temple, TX 76504
Telephone: 254-598-1738
Registration Date: 09/18/2023

Dylan Ricks, RRTS®
National Seating & Mobility, Inc.
13 Power Ln
Hattiesburg, MS 39402-8563
Telephone: 601-402-8648
Registration Date: 09/20/2023

Hayden Peake, RRTS®
Independent Living Specialists
2037 Sandgate Rd
Virginia, Queensland 4014
Telephone: 0447-776-206
Registration Date: 09/19/2023

Heather Worley, OTR/L, ATP, RRTS®
Freedom Mobility Center
110 Talbert Pointe Dr.
Mooresville, NC 28117-1120
Telephone: 704-658-0817
Registration Date: 09/26/2023

Jolinn Rogers, RRTS®
National Seating & Mobility, Inc.
4515 S B St
Stockton, CA 95206
Telephone: 209-954-9311
Registration Date: 10/07/2023

Joshua McQuarrie, RRTS®
Independent Living Specialists
2037 Sandgate Road
Virginia, Queensland 4014
Telephone: 0422-092-815
Registration Date: 10/07/2023

Julie Taylor, RRTS®
Independent Living Specialists
1/2 Mars Rd, Lane Cove West
Sydney, New South Wales 2066
Telephone: 0429-979-551
Registration Date: 10/04/2023

Justin Boulos, RRTS®
Independent Living Specialists
2/45 Eastern Creek Dr
Eastern Creek, New South Wales 2766
Telephone: 0413-432-330
Registration Date: 09/27/2023

Karen Honey, RRTS®
Motion
3-3100-35th St
Vernon, British Columbia V1T9H4
Telephone: 250-309-2774
Registration Date: 10/02/2023

Lindsay Vazquez, ATP, RRTS®
Reliable Medical Supply, Inc.
8249 Parkline Blvd, #200
Orlando, FL 32809
Telephone: 407-720-0512
Registration Date: 09/27/2023

Lissa Pether, RRTS®
Independent Living Specialists
239 Dalrymple Rd
Townsville, Queensland 4814
Telephone: 0477-777-595
Registration Date: 09/27/2023

Michael Ford, RRTS®
Independent Living Specialists
70 Connords Rd, Unit 5
Paget, Queensland 4740
Telephone: 0422-443-279
Registration Date: 10/11/2023

Nadege Visseyrias, RRTS®
Independent Living Specialists
11/428 Old Geelong Rd
Hoppers Crossing, Victoria 3029
Telephone: 0423-714-122
Registration Date: 10/11/2023

Pablo Tancredi, RRTS®
Independent Living Specialists
12 Mars Rd, Unit 1
Lane Cove, New South Wales 2066
Telephone: 0401-429-658
Registration Date: 10/20/2023

Patrick Sullivan, RRTS®
National Seating & Mobility, Inc.
6553 S. Cottonwood St.
Murray, UT 84107
Telephone: 385-420-3362
Registration Date: 10/11/2023

Quarmaine Richardson, RRTS®
National Seating & Mobility, Inc.
4300 Fort St, Unit 101
Fort Myers, FL 33916
Telephone: 239-409-2978
Registration Date: 11/01/2023

Sarah Uncle, Occupational Therapist, RRTS®
Independent Living Specialists
12 Mars Rd, Unit 1/12
Lane Cove West, New South Wales 2066
Telephone: 1300-516-174
Registration Date: 10/07/2023

Timothy Bowling, RRTS®
M.R.S. Homecare, Inc.
712 E 2nd St
Tifton, GA 31794-4508
Telephone: 229-387-0009
Registration Date: 10/05/2023

CRTS®

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 SEPT. 16, 2023, THROUGH NOV. 10, 2023.

Chad Amen, ATP, CRTS®
National Seating & Mobility, Inc.
Fenton, MO

David Namehas, ATP, CRTS®
Rehab Support Systems
Pomona, CA

John Phillips, ATP/SMS, CRTS®
National Seating & Mobility, Inc.
Franklin, TN

John West, ATP, CRTS®
Universal Med Supply
Irving, TX

Kristen Decker, ATP, CRTS®
Handi Medical Supply
St Paul, MN

Timothy Shaner, ATP, CRTS®
Rehab Support Systems
Pomona, CA

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 SEPT. 16, 2023, THROUGH NOV. 10, 2023. FOR AN UP-TO-DATE VERIFICATION ON REGISTRANTS, VISIT WWW.NRRTS.ORG, UPDATED DAILY.

Mark A Tucker, ATP
Baton Rouge, LA

Charles E. Pfeifer
Franklin, MA

Amy Johnson, ATP
Redmond, OR

Douglas Dulin, ATP
Tampa, FL

Marc Bailey
Chattanooga, TN

Jonathan Jesme, ATP
Fresno, CA

Danny Ward, ATP
Earth City, MO

Charles Santiago, ATP
Pompano Beach, FL

Joshua Luke Hogan
Tifton, GA

Colin Fairley, ATP
Mobile, AL

Gerald Evans
Calgary, Alberta

Luc Perron
Ottawa, Ontario

Nicholas Garber, ATP
Tampa, FL

James Taylor
Winnipeg, Manitoba

BE SURE TO FOLLOW NRRTS ON SOCIAL MEDIA!

RENEWED NRRTS REGISTRANTS

The following individuals renewed their registry with NRRTS between Sept. 16, 2023, and Nov. 10, 2023.

PLEASE NOTE **IF YOU RENEWED AFTER NOV. 10, 2023,** YOUR NAME WILL APPEAR IN A FUTURE ISSUE OF DIRECTIONS.
IF YOU RENEWED PRIOR TO SEPT. 16, 2023, 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.

Ian Channin, ATP, CRTS®
Alan Derr, ATP, CRTS®
Amanda Medeiros, RRTS®
Andrew Robinson, ATP/SMS, CRTS®
Andrii Gumeniuk, ATP/SMS, CRTS®
Ann Rodrigue, ATP, CRTS®
Avery Smith, ATP, CRTS®
Bob G. Poole, ATP, CRTS®
Brad Unruh, ATP, CRTS®
Brian Byler, ATP, CRTS®
Brian Marshall, ATP, CRTS®
Brian M. Crenna, ATP, CRTS®
Cameron Russelburg, ATP, CRTS®
Charles W. Smock, ATP/SMS, CRTS®
Christopher J. Henrichon, ATP, CRTS®
Claude R. Levesque, ATP, CRTS®
Cody Hattery, ATP, CRTS®
Corey Clonts, ATP, CRTS®
Craig MacMillan, RRTS®
Cyle Cook, ATP, CRTS®
Dan Thole, ATP, CRTS®
Daniel Glazer, ATP, CRTS®
Darren J. Roberts, ATP, CRTS®
David Lucero, RRTS®
David A. McNair, ATP, CRTS®
David C. Vaughan, ATP, CRTS®
Dennis Paul Yurt, ATP, CRTS®
Erik Lindblad, ATP, CRTS®
Glenn Hales, ATP, CRTS®
Ian Kingscote, ATP, CRTS®
Ilan Michael Breiner, ATP, CRTS®
James Arsenault, RRTS®
James Hearn, ATP, CRTS®
James E. Cage, Jr., ATP, CRTS®
James L. Ingraham, BBA, ATP, CRTS®
Jane McNay, ATP, CRTS®
Jeff Bour, BA, ATP, CRTS®
Jeff Harbert, ATP, CRTS®
Jeff Kersey, ATP, CRTS®
Jeffery Castle, ATP, CRTS®
Jeffery A. Hennessee, ATP, CRTS®
Jeremy Paules, ATP, CRTS®
Jesuric R. Federico, RRTS®
Jim Howe, ATP, CRTS®
Jodi Baumgard, ATP, CRTS®
Joe Prieto, ATP, CRTS®
John Phillips, ATP/SMS, CRTS®
John Leibach, ATP, CRTS®
John West, ATP, CRTS®
John E Culpepper, Jr, ATP, CRTS®
John E. Morse, ATP, CRTS®
John R. Campbell, ATP, CRTS®
Jonathan Threlkeld, ATP/SMS, CRTS®
Joseph L. Kelley, ATP, CRTS®
Joshua Bryant, ATP, CRTS®
Justin Whittington, ATP, CRTS®
Justin Keith O'Young, ATP, CRTS®
Kendall Wilmore, ATP, CRTS®
Kenton W. Randolph, ATP, CRTS®
Kort St. John, BS, ATP, CRTS®
Kristen Decker, ATP, CRTS®
Mark D. Patten, ATP, CRTS®
Matt Fremont, RRTS®
Michael Oliver, ATP, CRTS®
Michael Provines, ATP/SMS, CRTS®
Michael Joyce, RRTS®
Michael A. Bales, ATP, CRTS®
Michael Kristopher Ledford, ATP/SMS, CRTS®
Michael P. Seidel, ATP, CRTS®
Mike Eden, RRTS®
Mike Osborn, ATP, CRTS®
Patricio Zaragoza, RRTS®
Ramey House, ATP, CRTS®
Raoul K. Harlan, ATP, CRTS®
Raul Saldivar, RRTS®
Richard Alonzo, ATP, RRTS®
Richard M. Graver, Jr., ATP, CRTS®
Rick Williams, ATP, CRTS®
Rob Kriebel, ATP/SMS, CRTS®
Robert Kavish, ATP, CRTS®
Robert Brown, ATP, CRTS®
Robert B. Brewer, ATP, CRTS®
Ryan Strap, RRTS®
Samantha Audy, RRTS®
Sandro Leone, ATP, CRTS®
Shadrach Lee, RRTS®
Tammy Lynn Rosemoore, B.Ed, ATP, CRTS®
Terry Buetow, ATP, CRTS®
Thomas Chad Bowling, ATP, CRTS®
Thomas E. Adams, ATP, CRTS®
Timothy Spaulding, ATP, CRTS®
Todd Freitag, ATP, CRTS®
Tom Simon, ATP, CRTS®
Tracy Luedtke Sveum, ATP, CRTS®
Tyron Boswell, ATP, CRTS®
Walter Myrdal, ATP, CRTS®
Warren Stuart, RRTS®
William C. McKeon, ATP, CRTS®
Zach Stewart, ATP, CRTS®

NRRTS REGISTRANT – RENEWAL FAQS

Renewing your NRRTS Registrant status requires action each year.

HOW DO I ACCESS THE FREE NRRTS EDUCATION?
If you need your login information, please contact Amy Odom at aodom@nrrts.org.

HOW DO I RENEW MY REGISTRATION?
All renewals can be completed online at https://nrrts.org/registrant-renewal/

WHAT IF MY MANAGER IS NOT IMMEDIATELY AVAILABLE TO SIGN THE RENEWAL?
Please complete the renewal and include his/her contact information on the form, and NRRTS will obtain your manager/supervisor's signature on your behalf.

CAN I UPLOAD CEUs WHILE COMPLETING THE RENEWAL ONLINE?
Yes, but you must choose you didn't complete education with NRRTS.

I DIDN'T GET MY EDUCATION UPLOADED, SO CAN I REDO THE ONLINE RENEWAL FORM?
No, or you'll be charged again. Simply email the CEUs to Amy Odom at aodom@nrrts.org.

IS THERE A LATE FEE?
Yes, if you renew 30 days past your renewal due date, you will be charged a late fee. Renew at https://nrrts.org/renewal-with-late-fee/.

HOW LONG DOES IT TAKE FOR NRRTS TO COMPLETE MY RENEWAL?
The renewal process takes approximately three business days.

CAN MY NRRTS CERTIFICATION BE REVOKED?
Yes, if you are more than 60 days past your renewal date, your name will be presented to the board of directors for non-renewal. If you have extenuating circumstances, please contact Amy Odom at aodom@nrrts.org.

WHAT IF I HAVE CHANGED EMPLOYERS?
Please complete a change of employment form using this link: https://nrrts.org/change-of-employment-form/

WHAT IF I HAVE EXTENUATING CIRCUMSTANCES REGARDING MY RENEWAL?
Please contact Amy Odom at aodom@nrrts.org. Our goal is to work with you, but you must communicate with us.

Renewal FAQS Continued from Page 3

NRRTS National Registry Of Rehabilitation Technology Suppliers

www.nrrts.org

5815 82nd Street, Suite 145, Box 317
Lubbock, TX 79424

P > 800.976.7787

PRESORT
MARKETING
STANDARD
US POSTAGE
PAID
LUBBOCK TX
PERMIT #49

FRIENDS OF NRRTS [FONS]

As Corporate Friends of NRRTS, these companies recognize the value of working with NRRTS Registrants and support NRRTS' Mission Statement, Code of Ethics and Standards of Practice.

CHARTER CFONS

FREEDOM — Our kids are our passion.™
MK POWERED — 40 YEARS
NATIONAL SEATING & MOBILITY
permobil
SUNRISE MEDICAL
U.S. REHAB®

CFONS

ALLIANCE REHAB and MEDICAL EQUIPMENT 800-613-1656
AMYLIOR
merits
Axiid Rehab
Bodypoint
EasyStand
etac
LUCI
METALCRAFT
MOTION
MOTION COMPOSITES
Motion Concepts
numotion
PRIME
PRM THE POWER OF PRECISION
QUANTUM
RAZ
RIDE
rifton
SEATING DYNAMICS
Stealth Products Solutions For Life
SUNRISE MEDICAL
Therafin Corporation
TOLT TECHNOLOGIES
VARILITE

AFONS

AAHOMECARE American Association for Homecare
ADMEA
A.E.S.
als | sla
BIG SKY
Children's Specialized Hospital
Center for Inclusive Design and Engineering (CIDE)
Easter Seals Timbres de Pâques New Brunswick Nouveau Brunswick
G·A·M·E·S Georgia Association of Medical Equipment Suppliers
HOMES
HOPE HAVEN
MAMES
momentum wheels for humanity
NCART
OHMEPA
PAMES
RESNA
Shepherd Center
United Spinal Association
UNIVERSITY OF MICHIGAN HEALTH MICHIGAN MEDICINE