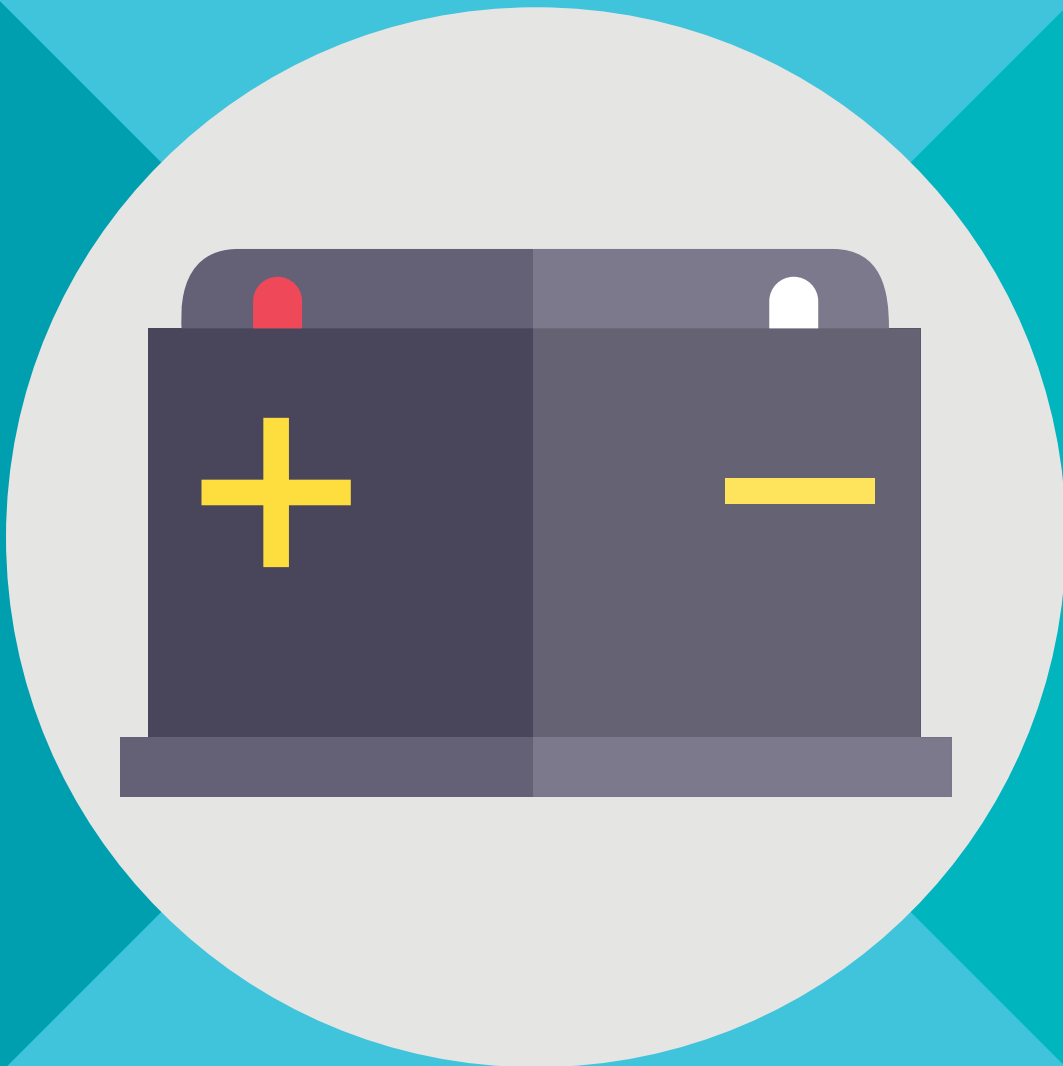




## BATTERIES FOR POWER MOBILITY EQUIPMENT

Page 26



## 4 FROM THE NRRTS OFFICE

Doing the Right Thing

## 6 NOTES FROM THE FIELD

Michelle Harvey Enjoys Moving at the Speed of Business

## 10 LIFE ON WHEELS

A Challenging, Happy Life

## 14 CLINICALLY SPEAKING

Fisher Says Vendors' Strength Found in Education, Organization

## 16 CRT UPDATE

CRT Update

## 18 CLINICIAN TASK FORCE

An Interview with Mike Babinec

## 20 INDUSTRY LEADER

Different Perspectives Provide Brislin with More Robust View of CRT Industry

## 26 CLINICAL PERSPECTIVE

CEU ARTICLE  
Batteries for Power  
Mobility Equipment



## 36 CLINICAL EDITORIAL

Fitting and Training with  
Supplier and Therapist

## 38 REHAB CASE STUDY

Battery Life

## 42 WEESIE'S WORLD

"Where Can We Go Now?"

## 44 RESNA

RESNA Update

## 46 DIRECTIONS CANADA

How to Use Social Media to  
Reshape Education for Clients,  
Fundors, Therapists

### IN EVERY ISSUE

48 | New NRRTS Registrants

49 | New CRTS® and Former Registrants

50 | Renewed NRRTS Registrants

Back Cover | Charter Corporate Friends of NRRTS,  
Corporate Friends of NRRTS, Association Friends of NRRTS

### FROM THE EDITOR-IN-CHIEF

"Do the best you can until you know better. Then when you know better, do better."

- Maya Angelou

My hope is after you read this issue of DIRECTIONS, you will be able to apply the knowledge to both your personal and professional lives. Beginning with Carey Britton's article and ending with Michelle Harvey's article, volume two is jam packed with valuable and applicable information.

Amy Odom, BS

### ADVERTISERS

ALTIMATE ..... PAGE 05

ATLAS..... PAGE 08

CLINICIAN TASK FORCE ..... PAGE 07

MK BATTERY ..... PAGE 09

PRIME ENGINEERING..... PAGE 17

QUANTUM ..... PAGE 22

RIDE DESIGNS ..... PAGE 43

US REHAB ..... PAGE 19

### THE OFFICIAL PUBLICATION OF The National Registry of Rehabilitation Technology Suppliers VOLUME 2023.2 | \$5.00 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.nrnts.org](http://www.nrnts.org)

For all advertising inquiries, contact Bill Noelting at [bnoelting@nrnts.org](mailto:bnoelting@nrnts.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

Weesie Walker, ATP/SMS

#### PRINTER

Craftsman Printers, Inc.

# 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 30 days before your renewal expires via email.

## **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 CECs for a biannual renewal, the NRRTS' Board recognizes that 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 not all certificate holders have access to CEUs.



# DOING THE RIGHT THING

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

I am sure many of you are like me, always struggling with the pressures of Complex Rehab Technology (CRT) provision to always do the right thing. In the ever-changing funding world combined by market pressures, we are the director of the process. We need to keep in mind as we interact with the customer, their caregivers, the clinician and the company we work for the customer remains at the center of the process.

I believe it is critical we are always learning to ensure we are choosing the correct equipment by interviewing and listening to the customer, caregivers and clinician(s) on the list of needs and desires for the equipment. It is vital we use a form to document the answers, dimensions and needs of the client so we can best match equipment to most of their needs. Life is not perfect, and there's always compromise; however the attention to detail will provide the best outcomes.

During the assessment, we should be showing clients all the options, letting them trial equipment when appropriate, and explaining to them what their insurance covers and what can be upgraded. It is important to show them options that will improve their quality of life, at the same time educating them on what their plan covers. We need to remember that the people we serve could be our families, and it should not always be about the best margin, a relationship we have with a manufacturer representative, or corporate pressures.

It is important to be actively working with clinicians to ensure we get the entire picture of what is needed, have a team in place to ensure we are seeing everything and ensure the best outcomes at delivery. As we are all busy, having an extra set of eyes will ensure nothing is missed.

In the ever-changing world, we are seeing rehab technicians performing deliveries. We need to guarantee there are safeguards in place to ensure quality when a certified rehab technology supplier is not present, ensuring the customer is not disadvantaged or put in harm's way.

We all make mistakes or have missed something in our evaluation, assembly or delivery. The only way we learn is to take responsibility for and learn from these errors.

I tell customers every day that what I learned from them is carried on to the next client/family I serve. It's important to take this part very seriously as that's the only way that we improve our skills.

As a professional, we should be involved in national organizations that promote professionalism and high standards. We should be involved in advocacy, helping our customers understand how they can voice their concerns to the right people. We need to take the time to educate our customers on how they can advocate for themselves. We cannot wait and allow/depend on others to pave the way. We should be lobbying local, state and federal governments to ensure they understand the value of the CRTS® and how it directly impacts the customer and their community.

As a leader and a professional, the assistive technology professional (ATP), needs to ensure they are always teaching and mentoring. Continue teaching the customer what options are available, providing resources for community access and alternative funding options. Empower and support clinicians and understand they may not have had much education on CRT through their education. Mentor customer service and funding specialists on questions and solutions to help customers on the phone. Mentor technicians so they understand the importance of quality service and proper equipment setup. Mentor the companies we work for on our value and why it makes such a difference to ensure we are always improving our skills and knowledge. Share our knowledge and experience with our peers, which is the only way the next generation of ATPs will be as successful, and leave our industry better than when we started in it. It is important to remember people are always watching; therefore, we need to ensure that we're always doing the right thing.

It is important to remember that ATPs are only as good as their support system and the company we work for allows. It is easy to get caught up in titles and accolades; however, at the end of the day, an ATP is only as good as their CSR, funding specialist, their technical staff, and the company structure that moves obstacles out of the way so they can perform at their highest levels.

---

## CONTACT THE AUTHOR

Carey may be reached at [CAREY.BRITTON@NSM-SEATING.COM](mailto: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' executive committee.



# Zing

Portable



Standing made possible  
anyplace, anytime.

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

AltimateMedical



# MICHELLE HARVEY ENJOYS MOVING AT THE SPEED OF BUSINESS

Written by: DOUG HENSLEY



Michelle Harvey is vice president of sales and product for HME Home Health, which has six offices and 115 staff members in British Columbia.



HME Home Health supports the British Columbia care providers association, which supports long-term care communities in British Columbia.

In Michelle Harvey's world, no two days are the same, and she wouldn't have it any other way.

Harvey serves as vice president of sales and product for HME Home Health, which is based in and has offices throughout the Canadian province of British Columbia.

"For me, the part of what I do that is super exciting is this industry is very different from any other industry," she said. "I have an entrepreneurial spirit, so I enjoy that side of it. It allows you to support your family and help people as well as help your community."

HME has grown steadily through the years, offering its clients products, services and solutions while never losing its focus on local people and the local market. The priorities of the business are enhancing mobility and accessibility for clients.

"All of the owners of this company are from British Columbia," Harvey said, "and it has grown within British Columbia. Being out in the community and seeing clients in our chairs, the community I

live in, means we're helping families right here. These are people I know when I'm out shopping or going to dinner, and I find that part of it really cool."

Harvey is originally from Ireland and started out as an occupational therapist there before moving to Canada 11 years ago. Her first job here was in a vendor's pediatric division.

"I've always enjoyed the equipment side," she said. "So, it was natural to me to move from the product side to something new."

After four years in that role, Harvey accepted a position with HME and has played a key part in the company's growth as she worked her way from sales representative to senior sales rep to sales manager and finally into her current position, where she has been the past year and a half.

"One of the things I've always enjoyed in this world is the opportunity to present at conferences and joining organizations and progressing in the occupational therapy field," she said. "I've also enjoyed research, looking at new products and case studies, so moving to the management side has been rewarding in many ways."

Harvey has seen a lot throughout her career, but the varied experiences have prepared her for almost anything she might face.

"In this job there's a nice balance of sales and new products," she said. "Things are constantly changing, but you see that what you do really makes a difference for people. I've been in the pediatrics space a lot and seeing a kid get a walker and the difference that makes is cool. Now I see clients that I started with when they were 2 or 3 or 4 years old who are now teenagers and maybe on their third or fourth chair and in high school."

She also worked through the COVID-19 pandemic, which brought its own challenges to the industry through its impact on the supply chain.

"We really had struggles with getting products into Canada during COVID," she said. "The thing that did, though, was it forced us to take the tact of designing our own products. With my occupational therapist background, getting to work on projects like



Michelle Harvey (second from right) is shown at one of the local charity events, Kids with Cancer, that HME Home Health supports.

designing mattresses so they'd be readily available for our market was cool. It gave me the chance to take the experience of being a sales rep while also knowing what works for clients and using that knowledge in real-life examples."

Because Harvey has a deep background of experience, she brings unique insights to her role in sales. She can combine product knowledge with specific cases to educate and inform clients.

"I think there is something unique about being able to be there with the product they need," she said. "You may not necessarily want to be a consultant, but you can still tell the client about the options, the pros and cons, share your recommendation for their unique situation and tailor your service to them. Ultimately, you must realize you are entering their life in a tough situation in terms of a diagnosis or disability, but you can provide comfort."

Harvey also explained how people in sales can also bring stability to the client.

"Health care is constantly changing, and usually everything needed to be done two months ago," she said. "So, when the client comes to see you, everything is needed quickly, and you have to realize choosing a product is a little of your recommendation combined with a prescription from the therapist combined with the limitations of the product combined with what works for the client."

To thrive in a rapidly changing environment requires product knowledge, market knowledge and people knowledge – not necessarily in that order.

"One of the best pieces of advice I received came from my first sales manager who said to know your market, know your clients and know your funding," Harvey said. "I thought that was interesting. Knowing the client is key because one person with cerebral palsy is totally different from another with cerebral palsy. You must know what's available so you can help the client. You need good relationships with funders and being able to push them to invest in therapies."

CONTINUED ON PAGE 8



Michelle Harvey was a 2021 finalist for the Women in Sales Awards for North America.

**ONE OF THE BEST PIECES OF ADVICE I RECEIVED CAME FROM MY FIRST SALES MANAGER WHO SAID TO KNOW YOUR MARKET, KNOW YOUR CLIENTS AND KNOW YOUR FUNDING.**

Unbiased Therapist  
Passionate  
Experienced  
Consumer First  
Respected  
Best Practice  
Advocacy  
Seating and Mobility  
Serve Educate  
Specialist  
Engaged  
Assistive Technology  
Clinician Task Force  
Learn more at [www.ClinicianTaskForce.us](http://www.ClinicianTaskForce.us)



**MICHELLE HARVEY ...**  
(CONTINUED FROM PAGE 7)

Harvey is a successful woman in an industry largely dominated by men, but she sees paths of opportunity for those willing to step in, balance their priorities and put in the effort.

"It's hard for women because a lot of physical equipment is involved," Harvey said. "It's hard to balance life and family with a super fast-paced sales industry. I don't think of myself as a role model, but 50% of our sales force is women. That's unique to us. Half of our management team is women. I like to grow the number of women within the organization. They bring unique qualities to the industry that make it a little more client-centered and family-centered, and those are positive things."

## CONTACT

Michelle may be reached at  
[MICHELLE.HARVEY@HMEBC.COM](mailto:MICHELLE.HARVEY@HMEBC.COM)



Michelle Harvey, BSC HONS OT, RRTS®, is vice president of sales and product for HME Home Health. Harvey is a NRRTS Canadian Review Chair, serves on the Canadian Advisory Committee and became a NRRTS Registrant in July 2021.



Michelle Harvey and her husband of 6 years. They met at college when she was studying occupational therapy.



**BOOTH  
#301**



**International  
Seating  
Symposium**

*Provider Report Card*

**A+LAS**

*Making the Grade*

*Analytics A+*

*E to D Process A+*

*Workflow A+*

*Margins & Reviews A+*

*Process Controls A+*

*ATP & Clinician  
Collaboration A+*

**USERS MEETING ROOM 329**

**APRIL 12, 2023 2 - 3 PM**

- ATLAS features update
- Statistical process mgmt.
- Ramp up with market data

*ATLAS CLIENT  
USERS MEETING*

**(3 - 4 PM)**

*OPEN INVITE  
PROVIDER ECO  
SYSTEM EDUCATION*

- Increase process efficiency
- Increase clinical access
- Service department profitability
- Increase ATP, & PT/OT collaboration

**POWERED ATLAS STRONG**

**REGISTER TODAY**  
[ATLASTECHNOLOGYLLC.COM](http://ATLASTECHNOLOGYLLC.COM)





# BEWARE OF IMPOSTERS



## MK Genuine Gel

The Trusted Choice for Powering Independence



800-372-9253 • MKBATTERY.COM



# A CHALLENGING, HAPPY LIFE

Written by: ROSA WALSTON LATIMER

Twenty-year-old Rylan has a winning personality and an engaging smile. In Saskatchewan, Canada, where he lives with his mother, Jacqui, and Ryan, his mother's fiancé, this young man reached the age of majority two years ago, earning him the right to serve in the military and vote in federal elections. However, Rylan won't be doing those things or other activities considered a right of passage for young adults. Rylan has a severe form of epilepsy known as Lennox-Gastaut Syndrome and seizure encephalopathy.

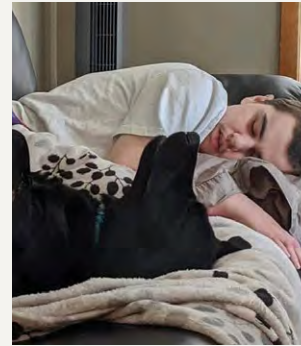


Rylan, 20 years old.

The impact of thousands of seizures during his lifetime and the side effects of over 20 different drugs have left Rylan with the cognitive capability of a toddler. "He is at about a 15-to-20-month level for most of his skills," his mother said. "He can still walk and can be very determined, but he has no sense of fear or danger. Rylan is a happy kid, but he is nonverbal, has a feeding tube and requires complete personal hygiene care. My fiancé, Ryan, and I have been together 14 years, and he has never heard Rylan speak."

The family shares in activities that bring Rylan joy. An accessible, rear-entry van makes travel possible. "We can go to one of our national parks, and the trails around the lake are wonderful. We can take his wheelchair everywhere. We all enjoy being outdoors," Jacqui said. Make-A-Wish Canada provided Rylan with a Duet tandem bicycle. "This bike is great. It is a combination wheelchair and specialty bicycle. Once we get to our destination, it is easy to disconnect the bike part, lock it up and use the wheelchair to transport Rylan wherever we need to go."

While Rylan's life can be challenging at times, the family has thoughtfully modified their home to accommodate his needs through the years. Renovations to Rylan's bathroom converted it into a complete wet room equipped with a Raz shower chair. The enclosed front entry to their home provides protection for Rylan and



Rylan and Ernie napping.

houses a wheelchair lift. Adding a deck to their home with multiple gates allows Rylan more freedom to move around. "One gate leads to a trampoline, and he loves playing on that. He doesn't jump on it he walks around or plays with balls. All

three of us and our dog, Ernie, can lay in the sun on the trampoline and enjoy some peaceful times," Jacqui said. Ernie, a 4-year-old "Bassador" (Labrador Retriever/Basset Hound mix), has been part of the family for three years. "When Ernie first met Rylan, we knew immediately that he was the dog for us," Jacqui said. "Ernie went up to Rylan, put his paws on Rylan's knees and looked into his face. Rylan pushed him away, so Ernie put his paws up on the couch where he could still see Rylan's face. He didn't lick him and wasn't aggressive. Ernie is just the right size, too. He looks like a black lab with very short legs."

When Rylan was 26 months old, he began having seizures. "Within the first week after the seizures began, we thought he was having seven to 10 seizures a day," Jacqui said. "At our first appointment with the doctor, we learned Rylan was having seven to 10 clusters of 15-20 seizures. From the beginning, he was having hundreds of seizures a day." Up until this time, Rylan was a typical 2 year old. He talked, walked, put short sentences together, and knew his numbers and colors. "We got the diagnosis of Lennox-Gastaut early. After his first EEG, the pediatrician noticed a distinct pattern of slow spike wave complexes unique to Lennox-Gastaut Syndrome." At one time, Rylan averaged 250 seizures a day. "Now he usually goes 10-14 days without any big seizures and then in a 24- to 48-hour period he has up to four big seizures," Jacqui said. "Then he usually returns to the baseline for a couple of weeks."





Ernie doing anything he can to get closer to his kid.

"Rylan loves music, so we always have music in the house and enjoy the many concerts we can access online. He doesn't talk anymore, but he can express his feelings," his mother said. "Last summer, when he went to day camp, one of the bus drivers asked if Rylan would be noisy the whole way. The camp nurse said, 'Yes because he's happy.' It is comforting to know some individuals will advocate for your child and appreciate him for the great kid that he is." Occasionally, Rylan visits the pediatric respite unit at Wascana Rehabilitation Centre. "There are five beds in the unit with a dedicated nursing staff," Jacqui said. "He has excellent care, and the staff watches television with him and takes him for walks. He usually stays for five days, and this opportunity provides a good reprieve for Rylan and for Ryan and me.

Rylan also attends a developmental class at a high school near his home. "He enjoys this class. He is with other children who have complex medical needs," Jacqui said. "They have a therapy room, a sensory room and a classroom with educational assistants and a teacher. He can attend there until he is 22 years old." Jacqui is considering the options that will be available at that time. "We have some day programs here in the city, and we are applying for one of those," she said. "I have realized I should have begun this process when he was 15." There are also group homes nearby where Rylan could go to live, and there is a possibility of receiving individualized funding to allow the family to have staff in the house. "It would be very nice if our home could continue to be Rylan's home, and he would have roommates and staff live with him. Ryan and I would move to a smaller place near here.

CONTINUED ON PAGE 12



Ryan, Rylan and Jacqui.

**RYLAN LOVES MUSIC, SO WE ALWAYS HAVE MUSIC IN THE HOUSE AND ENJOY THE MANY CONCERTS WE CAN ACCESS ONLINE. HE DOESN'T TALK ANYMORE, BUT HE CAN EXPRESS HIS FEELINGS.**





Rylan making art with one of his counselors during day camp at Summer Program for Special Children.



Swimming is one of Rylan's favorite activities, as long as the water is warm.

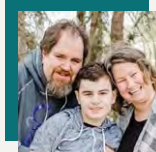
#### **A CHALLENGING, HAPPY LIFE** (CONTINUED FROM PAGE 11)

Organizations within the city of Regina, Saskatchewan, where the family lives, have provided meaningful support to Rylan and his family. Inclusion Saskatchewan (<https://www.inclusionsk.com/>), a nonprofit organization that supports citizens of Saskatchewan who have intellectual disabilities and their families, offers a variety of retreats for families, siblings and parents. "We had our first mom's retreat since COVID about a month ago. This was an awesome opportunity for mothers of children with disabilities and complex needs to get together," Jacqui said. "We had activities, speakers and informational sessions. We also had the opportunity to connect with the other moms where we could talk without explanation. We all speak the same language, just different dialects depending on each situation, and we can discuss difficult things without anyone freaking out. It is also a great opportunity to meet many people with common life situations. Our support for each other extends beyond the retreats."

One of the most significant events in Rylan's life is a day camp organized by Summer Program for Special Children (<https://summerprogramregina.wixsite.com/home/copy-of-home>). Campers pay a registration fee and through grants, fundraising, and donations; registration fees are about one-fifth of the actual cost per camper. "The camp is five weeks in the summer. Participants are age 9 to 22, and Rylan has attended for 11 years," Jacqui said. "The attendees have the benefit of one-to-one counselors who adapt the activities to the individual needs of the campers and help them experience everything you would normally do at a summer camp." Jacqui recalled the first year she considered sending Rylan to the camp. "The cost was around \$700. I remember thinking, 'You want me to pay that much money, and you're taking my kid away from

me?' Of course, when I broke it down and realized it was for 25 days of camp, I understood it was very inexpensive. Then when I saw the pictures and heard the stories of all the things the kids did, I knew it was a wonderful opportunity for Rylan. Campers are treated like normal kids, and it is tremendous fun for them. At the end of each camp, they have a family fun day. One of the activities is a dunk tank. Counselors and any campers that want to participate go in the dunk tank, and they think it is hilarious." Some camp counselors become family caregivers when camp is over, and many have an interest in related careers. The camp experience provides a good foundation for these young people who will work with kids with disabilities and complex needs as a career.

"Lennox-Gastaut has changed Rylan's life significantly in every way imaginable. Although there is a risk of sudden unexpected death by epilepsy, Rylan should have a normal life expectancy," Jacqui said. "He is a happy kid with the best smile."



Jacqui lives in Regina, Saskatchewan, Canada. She is the primary caregiver and advocate for her son, Rylan and serves on the volunteer board of the Summer Program for Special Children.



# Discover What NRRTS Can Do For You

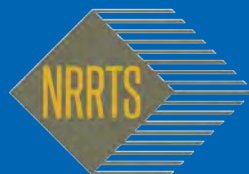
## NRRTS CEU Education Is Always Free for Registrants

Live Webinars

On-Demand Webinars

CEU Articles

Visit the Education Page on the NRRTS Website  
Discover What NRRTS Education Can Do For You



[www.nrrts.org](http://www.nrrts.org)

# FISHER SAYS VENDORS' STRENGTH FOUND IN EDUCATION, ORGANIZATION

Written by: DOUG HENSLEY

Kathy Fisher has a bold idea and a big plan. She wants to see vendors across the complex rehabilitation community work collaboratively to establish consistency in standards and education to produce a higher level of professionalism within the industry. Prioritizing these efforts should in turn attract more people to explore the many career opportunities the Complex Rehab Technology (CRT) space has to offer.

That is not to say the current situation is negative, but rather to suggest that — like anything else — there is room for improvement, which is best initiated from within.

"The goal is to try and create levels of measurable competence and accreditation by which vendors will be seen as professional service providers," she said. "I worked as a supplier for 33 years, and there will always be people who think we're just trying to push a product on them."

Fisher has recently taken on the role of education manager for NRRTS. She brings a unique range of experience to the position; she is an occupational therapist who achieved a successful track record in complex rehab sales in addition to focusing on educating colleagues and clinicians.

"Joining NRRTS gives supplier representatives the opportunity to be part of an independent professional registry and take advantage of ongoing industry leading development and education programs."

she said. "These initiatives assist in allowing them be seen as a professional, trustworthy resource for the clinicians and clients they serve."

She said she joined the NRRTS staff as the education manager last September. One of her biggest responsibilities is helping to choose the NRRTS webinar presentations. "We want it to be creative. We're in the process of engaging speakers to address topics that are of interest to our constituents, with an emphasis on some of the more recent trends, technologies and accompanying

KATHY HOPES ONE OF THE RESULTS OF HER FOCUS IS A NEW GENERATION OF PEOPLE WILL BE DRAWN INTO THE INDUSTRY. "THERE ARE A LOT OF US AROUND THE SAME AGE," SHE SAID. "SOME OF THE QUESTIONS WE'RE ASKING IS WHO IS COMING BEHIND US?"



Kathy Fisher with Charles Harrison and Taku at the Canadian Spinal Research Organization "Resiliency in Motion" walk. Kathy is a current board member of CSRO.



Kathy Fisher with Gerry Dickerson and Carey Britton at the 2023 NSM Symposium





Kathy Fisher, Weesie Walker and Michelle Lange at the 2022 Canadian Seating & Mobility Conference.



Measurements are key to a successful wheelchair prescription.



Kathy Fisher with longtime friend, client and entrepreneur, Maayan Ziv Founder, CEO Access Now.

therapeutic applications. We also want to create awareness among the clinical community of the benefits of working with registered professional, educated CRT suppliers.

In addition to building contacts, registered suppliers become part of a network where they can interact and share experiences and work collaboratively to tackle common problems and best practices. The timing couldn't be better as the global community continues to emerge from the COVID-19 pandemic. As in person product education reemerges, we have a great opportunity to connect/reconnect with colleagues old and new now," she said.

Fisher hopes one of the results of her focus is a new generation of people will be drawn into the industry. "There are a lot of us around the same age," she said. "Some of the questions we're asking is who is coming behind us? How do we create greater awareness that this industry exists and it offers exciting career opportunities? Like any profession that involves dealing with people, it takes time, effort and commitment to become successful.

"I've always said stepping into the role of a CRT supplier, involves a two-year learning curve at the minimum before you will really feel confident," she said.

Access to health care is changing and as such the expectations and responsibilities of the vendor must evolve and incorporate a more clinical approach. It can be challenging to keep pace with technology and product development so focusing on education must become a priority. Increasingly, it falls upon the vendor to guide therapists both inexperienced and tenured as to product capabilities and applications

with the ultimate goal being selection of the most clinically beneficial equipment.

As she goes about advancing her vision, Fisher can reflect on one of the first pieces of advice she received and remember how it applies today. "You don't have to know everything, but you need to know who knows, and you need to be able to plug into those resources."

"All of this may sound rather daunting, but I am excited about the opportunity to make a positive contribution to the efforts that the team at NRRTS has initiated."

## CONTACT

Kathy may be reached at  
[KFISHER@NRRTS.ORG](mailto:KFISHER@NRRTS.ORG)



Kathy Fisher has a background in occupational therapy and has worked as an Assistive Technology Provider and clinical educator over the past 33 years. Fisher has been involved in the provision of high technology rehabilitation equipment with clients with a variety of diagnostic categories including pediatrics and bariatrics. Fisher is the education manager for NRRTS and resides in Ontario, Canada.



# CRT UPDATE

Written by: WAYNE GRAU, EXECUTIVE DIRECTOR OF NCART

## MEDICARE COVERAGE OF POWER SEAT ELEVATION

The industry was pleased to see a positive response from the Centers for Medicare and Medicaid Services (CMS) about coverage for power seat elevation released Feb. 15, 2023. This is an important part of a multistep process, which means our work is not done. CMS wants to hear comments about their proposed decision that would provide coverage when the following conditions are met:

- The individual performs weight-bearing transfers to/from the power wheelchair while at home, using either upper extremities during nonlevel (uneven) sitting transfer and/or their lower extremities during a sit-to-stand transfer. Transfers may be accomplished with or without caregiver assistance and/or the use of assistive equipment (e.g., sliding board, can, crutch, walker); and
- The individual has undergone a specialty evaluation by a practitioner who has specific training and experience in rehabilitation wheelchair evaluations, such as a physical or occupational therapist, who assesses the individual's ability to safely use the seat elevation equipment in the home.
- CMS is also specifically looking for comments on whether power seat elevation equipment on group 2 power wheelchairs serves a medical purpose and thus also falls within the benefit category for durable medical equipment.

This publication will be released after the March 17, 2023, deadline. NCART would like to thank all of you who submitted comments, and we will keep you updated as we learn more.

## COVERAGE FOR POWER STANDING SYSTEMS

NCART and all the stakeholders are extremely disappointed that CMS "delayed" the review of Medicare coverage for power standing systems to a later date. The ITEM Coalition along with NCART and NRRTS have questioned CMS about when we could expect the 30-day comment period for power standing to open. CMS has been unwilling to provide information on a potential release date. NCART continues to urge CMS to open the comment period for coverage of power standing systems.

## IT TAKES A VILLAGE WEBINAR

NCART was honored to share the webinar stage with NRRTS, the Clinician Task Force and RESNA for the It Takes a Village webinar. The group did a great job discussing the importance of advocacy

and what each organization can bring to the table. Each organization represents a different part of the Complex Rehab Industry (CRT) and by working together we can effect positive change for the industry and patients we serve. I encourage everyone to listen to the recorded broadcast and share with your teams.

## EXPIRATION OF THE PUBLIC HEALTH EMERGENCY

The Health and Human Services secretary has indicated that the Public Health Emergency will end May 11, 2023. CMS issued guidance in August, entitled "Creating a Roadmap for the End of the COVID-19 Public Health Emergency." CMS is encouraging agencies and health care providers to prepare for the end of these flexibilities as soon as possible and to begin moving forward to reestablish previous health and safety standards and billing practices.

## STATE LEGISLATION — REPAIR, SERVICE REFORM

Eight states have introduced "right to repair" legislation so far this year that they hope will shorten the repair process for consumers using complex rehab power wheelchairs. The proposals, however, will not speed up the process and in some cases could create more obstacles that providers and manufacturers will have to navigate.

- Right to Repair — This legislation was introduced and passed in Colorado last year. The legislation requires that manufacturers directly sell repair items to consumers so they may repair their power wheelchairs. There have not been many inquiries to manufacturers yet, and we know this will not fix the overall repair process problems.
- The CRT industry is committed to addressing the problems with repairs, and we have solutions that highlight this is a multifaceted problem that cannot be solved by one change to the process. The industry is proactively working with stakeholders to address the issues so that we can end up with real service and repair reform.

## THANK YOU

NCART would like to take this opportunity to thank an incredible group of volunteers who are engaged in helping us respond to the multiple issues we face each day. I am not going to name everyone because that would take up most of this magazine. I would like to thank the NCART board of directors and executive committee for your commitment and willingness to offer solutions to the issues we face as an industry. I would like to thank our committee members for their tireless work putting together the position papers. I would like to thank our clinical and consumer group friends as we work together to create better opportunities for the industry and the consumers we serve. There is one person I am going to name — Mickae Lee. For those of you who don't know Mickae, she is a rockstar and a person that works tirelessly every day to represent NCART and the CRT industry. THANK YOU, Mickae!! To everyone — for all you do for your companies, this industry, our shared consumers and NCART, I would just like to say THANK YOU!

## BECOME AN NCART MEMBER

NCART is the national advocacy association of leading 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](http://www.ncart.us) or email [wgrau@ncart.us](mailto:wgrau@ncart.us) to set up a conversation.

### CONTACT THE AUTHOR

Wayne may be reached at  
[WGRAU@NCART.US](mailto: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's excited to be working exclusively with CRT manufacturers, providers and the individuals we serve who use CRT equipment.

### KidWalk® connections

Like nothing before it – KidWalk encourages key steps through independent hands-free exploration...supporting vital childhood development.

With KidWalk hands free means holding hands...

See where KidWalk can take your child



ph. 1.800.827.8263 | fax 1.800.800.3355  
[www.primeengineering.com](http://www.primeengineering.com) | [info@primeengineering.com](mailto:info@primeengineering.com)

Visit YouTube and type in KidWalk to see our kids developing, learning, and going places.







# AN INTERVIEW WITH MIKE BABINEC

Written by: AMBER WARD, MS, OTR/L, BCPR, ATP/SMS, FAOTA

The Clinician Task Force (CTF) is a member organization with a long and rich history of advocacy and work with clients who need Complex Rehab Technology (CRT). Recently, we spoke with one of the charter members of the CTF, Michael Babinec. Babinec, a retired occupational therapist and a senior diplomate of the American Board of Disability Analysts, and a former Assistive Technology Professional. He notes the CTF was started in part to “circle the wagons” and get clinicians together on concerning issues in the industry and with Centers for Medicare and Medicaid Services’ (CMS) code changes in the early 2000s. Babinec was initially on the CTF executive board for many years, continued as a CTF member, and has returned to the board again for the past four years. He notes the early days were very busy with advising, advocating, writing papers, creating comments and helping to develop consistent process to determine and document medical necessity for CMS, coding, competitive bidding and reimbursement, as well as many other processes over the years (Greer, et al., 2012).

When asked what has kept him involved for so many years, Babinec said teasingly, “Insanity? Glutton for punishment?” and then noted his passion for the industry, colleagues, and seeing changes for the better. He notes that some of the industry’s gains for clients have been both rewarding to be a part of and certainly life-changing for clients.

Babinec noted he graduated from occupational therapy school in 1978, and his first job included clinic treatment and wheelchair evaluations. At that time, “There were possibly only two cushion choices and a few wheelchair codes and, as a rookie, I had lots to learn, but I liked it and enjoyed making an immediate difference.” From 1985 to 1995, he participated in, and eventually ran, a seating clinic in a large rehabilitation hospital. In 1995, he went to work for a wheelchair manufacturer in an educational role and then product management. He worked in various roles for this manufacturer for 22 years and retired in 2017.

**BABINEC NOTES THE CTF WAS STARTED IN PART TO “CIRCLE THE WAGONS” AND GET CLINICIANS TOGETHER ON CONCERNING ISSUES IN THE INDUSTRY AND, IN PARTICULAR, WITH CENTERS FOR MEDICARE AND MEDICAID SERVICES’ (CMS) CODE CHANGES IN THE EARLY 2000’S.**

Although his passion for the CRT industry has not subsided, Babinec feels it is time to rotate off the executive board and leadership as he is retired and not in the clinic — the executive board needs a person with boots on the ground and who deals with the issues every day. He has led the CTF Medicaid workgroup, which has a focus on problem solving state Medicaid issues, offering resources and helping based on similar issues occurring in other areas. As a retired person participating in a CTF workgroup, he will have more time to assist, research and pull together resources than other CTF clinicians who are working full time.

Babinec noted his personal priorities for 2023 include volunteering and consulting. He also wants to get back to CRT conferences and seminars as he misses learning from and talking to, all the industry “rock stars.” His advice to newer clinicians or those wanting to start in the industry is to attend a conference. He notes people will learn more than expected, create relationships and friendships, and start on the CRT journey; everyone must start somewhere, and there is often as much learning outside the classrooms as within, talking to people in the halls, booths, while waiting for a coffee, etc. Babinec says he was intimidated at first, but he learned everyone is open and willing to help and educate. He wished he had learned earlier the importance of relationships and getting involved; Babinec never sought a job after his first one but was always sought out by others or heard via word-of-mouth of various opportunities.

Babinec feels that the biggest issues in CRT now are some of the same as in the past:

- There is not enough time to complete all the necessary work.
- There is a need to educate and inspire more clinicians.
- There is a need to obtain reimbursement for technology that people need in a timely manner.

He hopes the industry will find a way to get users more involved and to continue knocking down roadblocks that come up.

For the CTF, Babinec hopes the group will continue to get stronger and grow. There is "great leadership, great members, continuous growth, and we make a difference." Joining this group doesn't just "build a resume." Members get to work with a committee within the CTF and with other industry leading groups to make a difference. He hopes the CTF will continue to be an industry resource where people turn to listen and learn about CRT.

Babinec notes there is room for clinicians at all experience levels to be on the CTF, as the group is welcoming and always needs "boots on the ground." CTF has lots of free and other education available, many learning and mentoring opportunities, and most all in the group "just love to watch learning and lightbulbs come on."

Please consider joining the CTF if you are a clinician who loves advocacy and learning. After all, the CTF mission is to provide clinical based expertise to inform and promote public policy, best practices and positive outcomes regarding people with disabilities who require CRT products and related services. Join us!

## CONTACT

Mike may be reached at  
[BABINEC.DAD@HOTMAIL.COM](mailto:BABINEC.DAD@HOTMAIL.COM)

Amber may be reached at  
[AMBER.WARD@ATRIUMHEALTH.ORG](mailto:AMBER.WARD@ATRIUMHEALTH.ORG)

## REFERENCES:

1. GREER N, BRASURE M, WILT TJ. WHEELED MOBILITY (WHEELCHAIR) SERVICE DELIVERY. TECHNICAL BRIEF NO. 9. PREPARED BY THE UNIVERSITY OF MINNESOTA EVIDENCE-BASED PRACTICE CENTER UNDER CONTRACT NO. 290-07-10064-1.) AHRQ PUBLICATION NO. 11(12)-EHC065- EF. ROCKVILLE, MD: AGENCY FOR HEALTHCARE RESEARCH AND QUALITY. JANUARY 2012.



Michael Babinec, OT, retired senior diplomate of the American Board of Disability Analysts (ABDA), former RESNA Certified ATP, is currently semi-retired with both clinical and manufacturing experience. As a licensed occupational therapist, he has more than 40 years of experience in rehabilitation, seating and mobility, marketing and product management; 17 years as a practicing occupational therapist, 22 years employment with a durable medical equipment manufacturer, and five years as a consultant.



Amber Ward has been an occupational therapist for 29-plus years, with inpatient rehabilitation, outpatient with progressive neuromuscular diseases, and in a wheelchair seating clinic. She is an adjunct professor in the OTA/MOT programs at Cabarrus College of Health Sciences in addition to working in the clinic full-time. She received her Assistive Technology Professional certification in 2004 and Seating and Mobility Specialist in 2014. She is the author of numerous articles and book chapters, as well as speaking and presenting locally, regionally, nationally and internationally. As a part of the Clinician Task Force, she most recently ended her term with the executive board and remains an active member.

**U.S. ★ REHAB®**  
A Division of VGM & Associates

## Looking for Hands-On Wheelchair Repair Training for Your Technicians?

**U.S. Rehab has  
the solution.**

*Check out our upcoming  
Tech Training dates and  
locations for 2023!*

May 2-3, 2023  
Salt Lake City, UT  
Oct. 3-4, 2023  
Detroit, MI  
Nov. 7-8, 2023  
Dallas, TX



Scan the QR code to  
learn more about these  
trainings that feature the  
top manufacturers in complex rehab!



# DIFFERENT PERSPECTIVES PROVIDE BRISLIN WITH MORE ROBUST VIEW OF CRT INDUSTRY

Written by: **DOUG HENSLEY**

In almost a quarter-century of experience, Jay Brislin has seen the world of Complex Rehab Technology (CRT) industry from several perspectives. All have enriched and informed his view, giving him a fuller appreciation of what he gets to do and who he gets to work with.

"I never thought it would all lead to this," said Brislin, vice president of Quantum Rehab. "Being able to understand from a perspective of how our products help people and having a chance to be on the road with multiple duties, spend time with patients, just help where I can step in and help. I've been blessed and lucky to balance the business and clinical aspects."

Quantum Rehab is based in Duryea, Pennsylvania, and it has operations in Australia, Canada, China, France, Germany, Italy, the Netherlands, New Zealand, and the United Kingdom. Its focus is on listening to and responding to customer needs in terms of providing power wheelchairs and related technologies that improve the client's quality of life.

Brislin earned a master's degree in physical therapy and began his career with Quantum Rehab as a rehab specialist. The role gave him early insights into how client needs could be addressed.

"When I first started, the therapy job market was scarce," he said. "I joined Quantum in 2000 as we began doing some rehab power chairs. I became quickly acclimated to the complex power market. From there, I started traveling and training and things really blossomed."

Within four years, Brislin had moved up the company ladder and become general manager of rehab applications. In this role, he had oversight of products, services and custom applications. His success led to his becoming director of product and clinical development and ultimately as vice president.

All along the way, he has been quick to share credit with the Quantum Rehab team, starting with the company's CEO, Scott Meuser, who has cast a vision and then empowered the team with resources to see that the job gets done.

"One of the things that sets us apart, and this starts from the top and works its way down, is Scott's vision for us has been amazing,"

Brislin said. "If you went back and looked 15+ years ago, he realized we were just starting to scratch the surface of doing good rehab work, and he committed lots of resources to that effort which has got us where we are today."

That commitment continues to drive the company today with a continued focus on developing and creating innovative products that increase the independence and functionality of clients. "That's one of the many things I like about where I work," he said. "We wouldn't be here if not for people telling us what we needed to develop. Scott gave us a nice, level foundation where we listen to everyone's concerns and develop products that allow clients to reach another level and be able to do a lot of things."

The company is focused on delighting clients but doing so in a way that allows it to stay humble. Keeping accomplishments in check means always being able to zero in on the next challenge.



Jay Brislin with two of his nieces (Juliet in the power chair and Lucy in the background). Jay and his family were not going to let a broken leg ruin this little girl's family vacation at the beach.





Jay Brislin with Alex Jaffe, owner of Penn Furniture in Scranton, Pennsylvania, after the fitting and delivery of Alex's new Q6Edge with TRU Balance Power Positioning and iLevel Technology.



Jay Brislin alongside Bryson Foster, Quantum Ambassador and consumer advocate Bryson's parents and members of the Quantum rehab team enjoying a night at an MDA event where Bryson was honored.

**WE WANT OUR PRODUCTS TO ADVANCE TECHNOLOGY FROM A FUNCTIONALITY PERSPECTIVE.**

"We work really hard to create one of the most reliable powerchairs on the market," he said. "We were one of the first power-positioning systems (TRU Balance) that allowed for the majority of adjustments to be made with a loosen and slide technology, which allowed us to fully dial the chair into the specific individual and in many cases while the client is still in the chair. That was a real breakthrough for us."

That is just one of the game-changers the team has brought to the market. Along that same line has been Quantum Rehab's line of iLevel Power Wheelchairs that allow clients to perform everyday chores they might not have been able to previously because when the chair's seat is fully elevated, the chair can still move at 4.5 mph.

"If you just think about some of the benefits," Brislin said. "When you get into a crosswalk and have cars able to see you, that's a big deal from a safety perspective. When you can do any of your mobility-related activities in your own home, that's a big deal as well. The iLevel chairs turned out to be one of the best moves ever made in our company, and that's a credit to Scott and his vision."

Traditionally, wheelchairs users have not been able to do a lot of tasks when seated. iLevel enhances safety and allows for greater access in a multitude of settings, including grocery stores and restaurants.

"The iLevel chairs reinvigorated us," Brislin said. "We want our products to advance technology from a functionality perspective. If something makes sense, that's what we need to do. It gave us a

greater mindset in terms of developing products to the client and not just to us.

"That was the result of a lot of hard work by people in the industry. We sat in a think tank and started with consumer advocates and answering questions and developing around that. It was an incredible process. The word game changer doesn't really do it justice. You knew it was going to be something special and make lives easier."

Still, Brislin knows there will always be at least one more challenge to be addressed.

"Our industry is a small piece of the puzzle when it comes to insurance and targeting different things, and we're always under some kind of scrutiny," he said. "But we have done a good job coming together as a group and advocating and lobbying for the patient. Consumer groups are more organized, too, and that's where it really helps."

Despite a greater collective effort, funding remains a significant priority.

"Really, funding is our biggest challenge now and will always be our biggest challenge," he said. "There is a fine line, and I get it. But if you look at denials and

CONTINUED ON PAGE 22



# TRU BALANCE® 4

POWER POSITIONING SYSTEMS



Chest Bar

Knee  
BlocksDual-  
Actuator AFP

TRU-Balance® 4 with 10°, 20° and 30° anterior tilt and memory seating is now available on the Edge® 3, 4Front® 2 and Stretto. Scan the QR code to learn more.



**QUANTUM®**  
#1 FOR REHAB POWER

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



Jay Brislin with (right) Bryan Anderson, veteran, Quantum Ambassador consumer advocate; and (left) Hailey Bianco, host of PA Live Local News, doing a segment on the Complex Rehab Technology industry and talking about the benefits of power mobility for people

## DIFFERENT PERSPECTIVES ... (CONTINUED FROM PAGE 21)

justification for them, it can be a hard pill to swallow. We have to fight back in a lot of cases, the client doesn't have a chair, and time keeps going by."

That's just one of the practical realities of the world where Brislin has concentrated his time and effort. That's not going to change.

"From the Quantum perspective, we are 100% committed to moving the Complex Rehab Technology industry to the next level," he said. "We have a dedicated team. We're privately owned, and that allows us to be versatile. We have an extremely involved CEO committed to doing everything we can. There are a lot of good things going on in this industry, and we do a lot of great work. The more we can band together, the better off we will be to help people."

## CONTACT

Jay may be reached at  
[JBRISLIN@QUANTUMREHAB.COM](mailto:JBRISLIN@QUANTUMREHAB.COM)



Jay Brislin, MSPT, is a 22-year veteran of the Complex Rehab Technology industry. As vice president of Quantum Rehab, a global leader in high-end power mobility products, Brislin applies crucial market understanding to the strategic processes of clinical development, sales, research and development, marketing, technical service and customer relations. Holding a Master of Science in physical therapy degree, Brislin has a special awareness of clinically focused, client-based, quality-of-life innovations and outcomes. As an industry leader, Brislin is a RESNA member, Friend of NRRTS, NCART participant and member of the board of directors at Allied Services.

# 2023 NRRTS WEBINARS

TO LEARN MORE, VISIT:

[WWW.NRRTS.ORG/EDUCATION/](http://WWW.NRRTS.ORG/EDUCATION/)



## COMING SOON

### ***A Whole New World — Balancing Cost Management and Quality Service Delivery: A Panel Discussion***

**Speakers:** Susan Johnson Taylor, OTR/L, RESNA Fellow, International Society of Wheelchair Professionals (ISWP) Certified; Rita Stanley, RESNA Fellow; and Tom Whelan

**Intermediate Level, Funding and Public Policy, Best Business Practice and Ethics**

Providing quality services and products drives professionals who are dedicated to the field of Complex Rehab Technology (CRT). Providing these services has become increasingly difficult with financial stressors from all angles, affecting therapists, suppliers, manufacturers and ultimately consumers. We can't stop providing services — the need is great; so how do we continue to do this with these very real financial issues? This course will provide a brief overview of these issues from all viewpoints. It will then proceed with a guided discussion among the panel with questions and comments from the audience.







**THURSDAY, APRIL 27, 2023**

**3:00 PM EASTERN**

***The Secret Sauce for Funding Justification: The Therapist and CRT Supplier Working Together***

**Speakers:** Linda Norton, B.Sc.OT, M.Sc.CH, PhD, OT Reg.(Ont), and Cathy Carver, PT, ATP, SMS

**Intermediate Level**

Funding denials continue to frustrate therapists and suppliers. They know the client needs the equipment, and believe the client is eligible, but are surprised by funding denials. Reviewing the letters, they are unable to see why the client has been denied. From an adjudicator perspective, the therapist has not made the connection between the clinical assessment results, the funding eligibility criteria and the final prescription. The supplier may also have missed details in coding and obtaining proper documentation. This workshop targets this knowledge gap.



**THURSDAY, MAY 18, 2023**

**4:00 PM EASTERN**

***What Field-Generated Data Tells Us About Wheelchair Repair, Maintenance, Failure and Best Practice***

**Speakers:** Jack Fried, M.S.

**Intermediate Level**

The maintenance and repair of Complex Rehab Technology (CRT) like manual and power wheelchairs are vital to assure users maintain mobility and access to home and community resources as well as prevent increased pain, pressure sores and lack of function. A cross-disciplinary team lead by researchers at the University of Pittsburgh has analyzed large datasets of wheelchair component repair data to understand failure and repair trends and translate them into best practice. In this course, users, clinicians, technicians and manufacturers alike will be able to learn about these trends and recommendations and how to apply them into their own work.



**THURSDAY, JUNE 8, 2023**

**4:00 PM EASTERN**

***Custom Seating Anonymous – Understanding the Seven Step Process***

**Speakers: Stefanie Sukstorf Laurence, B.Sc. OT, OT Reg. (Ont.), RRTS®**

**Beginner Level, Seating and Positioning**

Seating needs to fit the user to be safe, functional and comfortable. But what happens when off-the-shelf products aren't enough? There are many options available for custom molded seating. The success of any system is dependent on involvement by an entire team. This session will focus on the seven steps that are involved in the creation and delivery of custom seating, who is responsible for each step and why the onus for success is not dependent on who the manufacturer is. The steps and principles presented can also be applied to the prescription of modular seating systems.



**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.

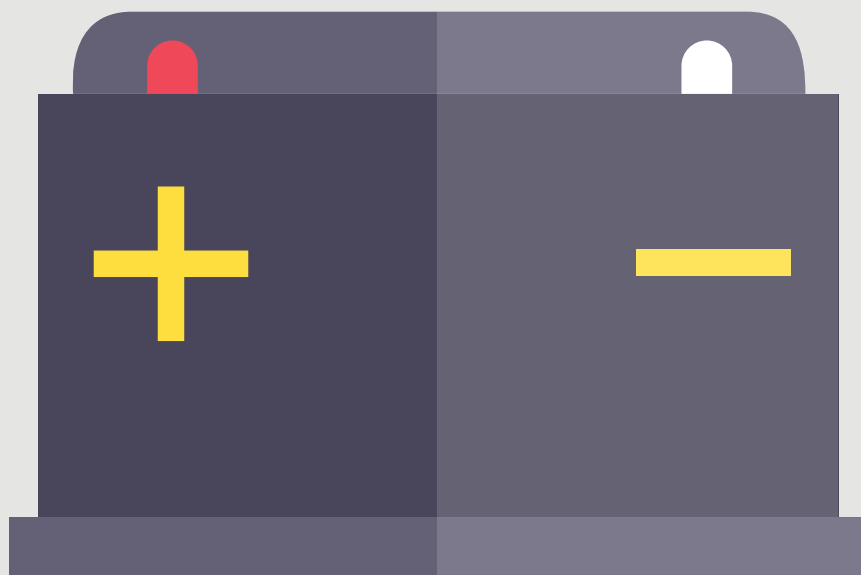
# BATTERIES FOR POWER MOBILITY EQUIPMENT

Written by: **LARRY CARTER AND STEPHEN BURKE**

*Thank you, MK Battery, for sponsoring this article.*

## Article Objectives:

- Maximizing battery performance and longevity.
- Managing battery charging requirements.
- Understanding battery testing and diagnostic procedures.



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.



In today's world of active consumers, many of whom depend on their equipment for daily activities and long-distance use, a technician's job can be quite challenging. Supplying the correct battery for the consumer's equipment can make all the difference in how the equipment will operate, its dependability and how long the batteries will last.

## CHOOSING THE CORRECT BATTERY

This article will provide information to help you make a more informed decision when selecting batteries and chargers for your mobility application. It will also offer insight into the proper use of batteries used in mobility equipment, while addressing some of the most common battery issues and how to properly diagnose them.

As a provider of power mobility solutions, one must keep in mind that mobility equipment will only work to its optimum design with an efficient and reliable power source. Consumers depend on the performance of their power mobility equipment for independence, and when all components are working properly, the most cost-effective use of power mobility is achieved.

This results in reduced service calls, longer battery life and an improved consumer experience.

Although there are many varieties of batteries available, some are not designed to be the most reliable when installed into mobility equipment. The statement "all batteries are the same" is incorrect, especially when it comes to batteries used in power mobility equipment.

Power mobility applications require the use of deep cycle or cyclic batteries. This type of battery is specifically designed to be discharged and recharged on a daily basis. The longevity of this type of battery is based on cycle life. A cycle is one discharge (to any depth percentage) and one complete recharge.

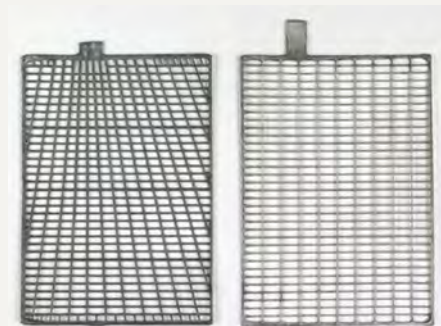
## BATTERY CONSTRUCTION

Many lead batteries may look similar on the outside, however it is the internal components like the grids and plates that make a battery function as a deep cycle or cyclic battery. There are two primary plate designs used in lead batteries: one design is for supplying a large burst of power over a short period of time, generally for just a few seconds. The grid pattern design allows the battery to push high current out at a fast rate. These are used, for

example, in starting and ignition applications such as for starting automobile engines (See Figure 1).

The grids/plates found in deep cycle batteries are designed to provide a lower current for a longer period of time, based on their thickness and grid pattern design.

To fully understand why lead batteries lose voltage and capacity and eventually need to be replaced, you must understand the chemical process that occurs inside the battery during each discharge and recharge.



**FIGURE 1** Starting Lighting Ignition (SLI) vs. Deep Cycle Grid/Plates

It is important to note that the construction of a Valve-Regulated Lead Acid (VRLA) battery reflects not only how reliable the battery will be, and how long it may last in the equipment, but also how the battery performs under situations such as vibration, being placed on its side, temperature extremes and other factors that can impact a battery's ability to travel as a "non-hazardous" product by air.

The valves are a critical component of a VRLA battery and must work properly for air travel certification. The valves provide one-way venting for the battery, releasing excess hydrogen gas as needed during recharge. The valve must remain reliable throughout the battery's life for a VRLA battery to function

CONTINUED ON PAGE 28



## BATTERIES FOR POWER MOBILITY ... (CONTINUED FROM PAGE 27)

appropriately, allowing it to maintain a safe hydrogen gas level in each cell and regenerate its own water, a process known as recombination.

Remember, not all VRLA batteries are certified for air transport. Those that are must have verifying documentation attesting that the battery being installed into the mobility device has been approved for air travel.

### BATTERY CHEMISTRY

In a fully charged lead battery, energy is produced by the movement of ions between two dissimilar metals in an electrolyte environment. The two dissimilar metals consist of the positive plates of lead dioxide and the negative plates of sponge lead. The electrolyte environment is a mixture of sulfuric acid and water. When fully charged, the electrolyte mixture consists of 45% sulfuric acid and 55% water for optimum life.

As the battery discharges, several changes occur inside the battery. The most significant difference is that lead sulfate is formed on the positive plates. This is called sulfation.

These sulfates are released from the electrolyte as the battery discharges. The positive and negative plates, dissimilar at first, now become similar, both becoming lead-sulfate. The more sulfated and alike the two plates become, the lower the battery voltage.

While plate sulfation is a natural process as the battery discharges, it can become a permanent issue if it is not recharged soon after it is discharged. If a battery sits in a discharged state for long periods, sulfation will become permanent. It will affect the battery's ability to fully recharge and/or hold a charge for extended periods

(See Figure 2). For this reason, it is important that a lead battery be returned to a full state of charge after each discharge.

While sulfation is occurring, a second chemical process is taking place: Oxygen recombines with hydrogen to form H<sub>2</sub>O (water). This is called recombination and is why VRLA batteries never need water or electrolyte added to them since they create their own water.

As the battery recharges, lead sulfate/sulfation is broken up into lead and sulfate. The water becomes two parts again: hydrogen and oxygen. The sulfates then recombine with hydrogen to re-form sulfuric acid, and the oxygen recombines with lead to re-form lead dioxide.

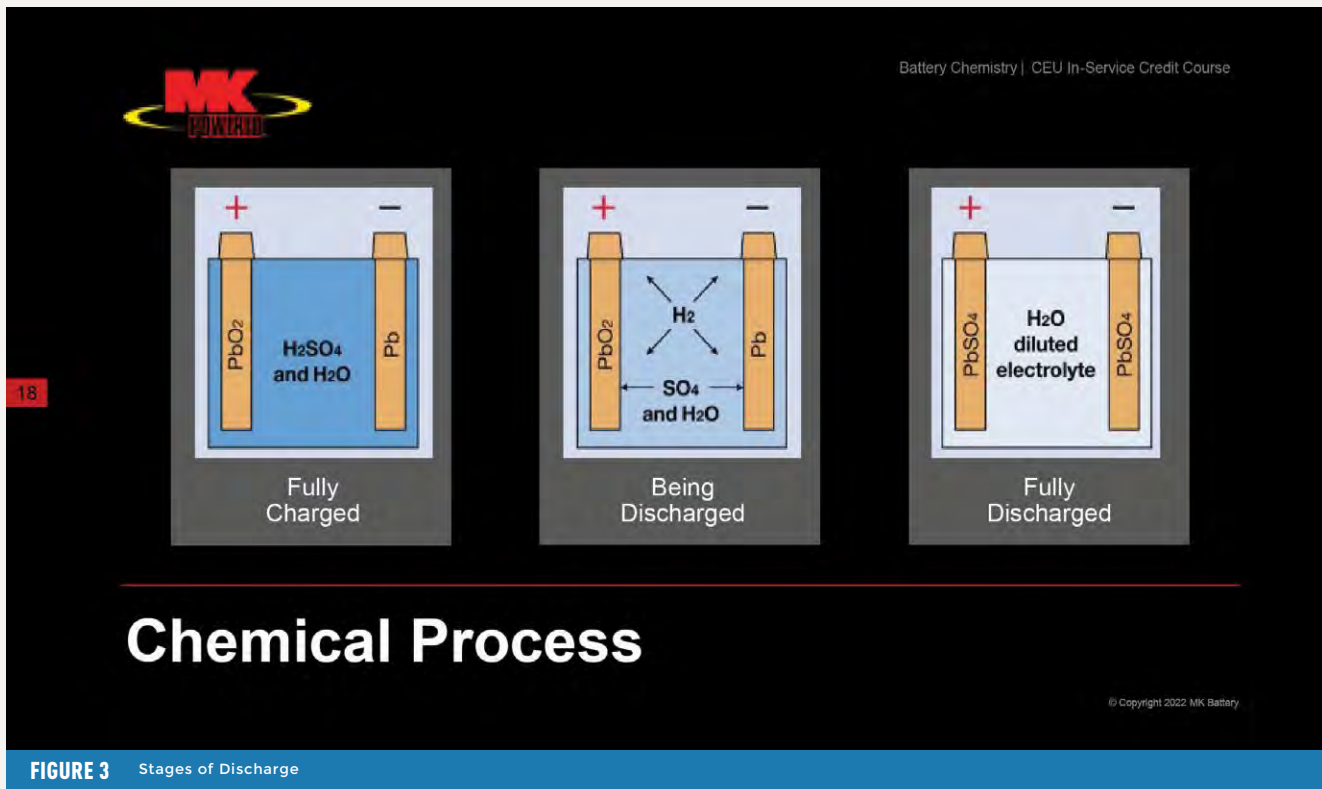
This recharge process returns the plates to their original opposite material, and the electrolyte reverts to its original 45% sulfuric acid/55% water ratio, and you once again have a fully charged battery (See Figure 3).

### GEL VS. ABSORBED GLASS MAT (AGM)

When deciding the best VRLA battery to use to power mobility equipment, two choices are commonly used today: gel and absorbed glass mat (AGM).

The first battery we will discuss is the gel product. This battery's electrolyte starts as a liquid electrolyte but becomes a non-flowing, petroleum jelly-like substance. The thick mass of electrolyte aids a gel





battery by providing a long cycle life and a safe, reliable product for many deep cycle applications. The gel battery is a non-spillable battery and can be approved for air travel.

**Note:** Not all gel batteries are created equal.

There are multiple international standards that define the construction of a gel battery as having an electrolyte that has been immobilized by the addition of a gelling agent.

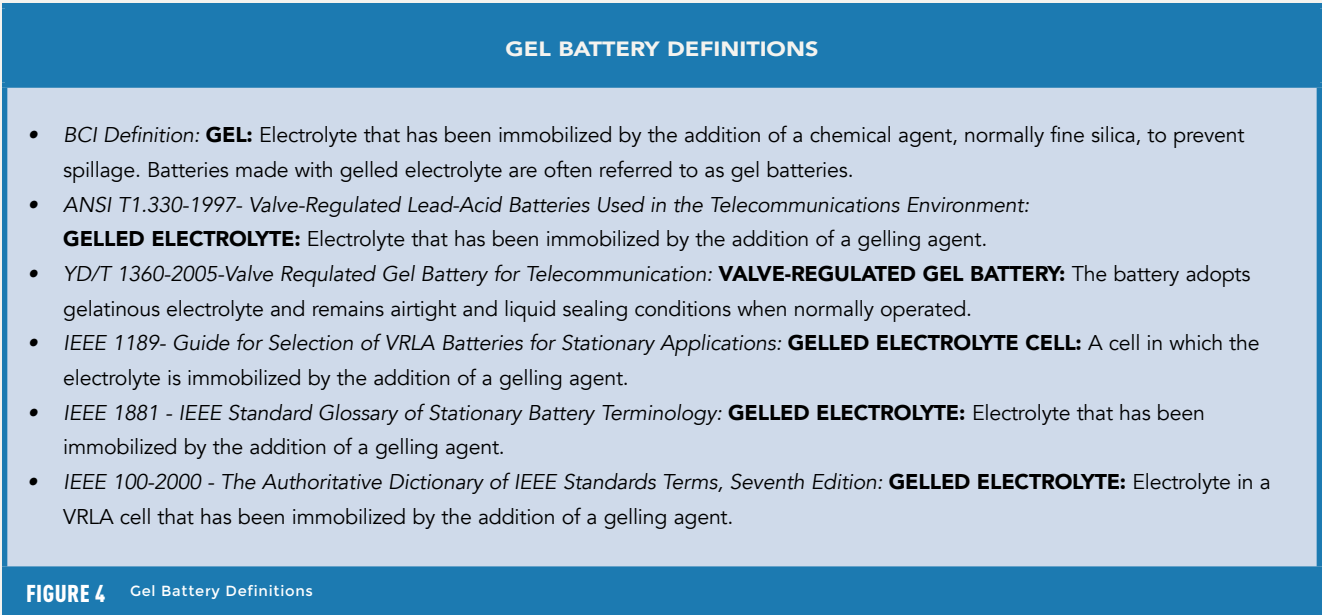
(See Figure 4). Genuine gel batteries used in power mobility equipment are typically selected for the full-time Complex Rehab Technology (CRT) power mobility user because they perform better and last longer.

Equipment more suitable for gel batteries generally have additional functions other than the powertrain, such as seating systems, tilt (both posterior and anterior), recline, elevating legs, seat elevation, auxiliary ports, Bluetooth functions, auxiliary drive controls and other power accessories. This ancillary equipment places additional demand on batteries that are already being deeply discharged on a daily basis.

CONTINUED ON PAGE 30

THERE ARE MULTIPLE  
INTERNATIONAL STANDARDS  
THAT DEFINE THE  
CONSTRUCTION OF A GEL  
BATTERY AS HAVING AN  
ELECTROLYTE THAT HAS BEEN  
IMMOBILIZED BY THE ADDITION  
OF A GELLING AGENT.





**BATTERIES FOR POWER MOBILITY ...**  
(CONTINUED FROM PAGE 29)

Other factors for gel battery consideration would be the user's weight, if they are in their chair for over six hours per day, and/or they travel at least eight (8) miles per day in their chair. A user with a progressive condition may not initially require gel but should be planned for as their needs develop.

The second type of battery is the AGM battery. This battery's electrolyte is in liquid form and absorbed into a special separator between the positive and negative plates. The AGM battery is also non-spillable and can be approved for air travel.

Due to the lesser amount of electrolyte in an AGM battery, it is more susceptible to dry-out during charging than a genuine gel battery and will have approximately half of the cycle life as compared to the gel battery. AGM batteries are generally used for Group 2 essential consumer power, such as scooters and other light-duty applications. This product

works best in less demanding mobility applications with lower usage and shallower battery discharges.

Other factors for AGM consideration would be the user's weight, the use of the mobility device is less frequent, or if the user normally travels shorter distances (See Figure 5). The cycle life chart (See Figure 6) reflects the relationship between the depth of discharge (DoD) and the cycle life of the battery. The green (gel) bar represents usage in a CRT application when most batteries will be discharged to around 80% DoD daily. As you can see, the AGM battery used in the same application as a genuine gel battery would provide about half of the cycle life of the gel product when frequently discharged to 80% or more. The harder you work the battery, the sooner it will need to be replaced.

EQUIPMENT TYPE	USER PROFILE	AGM	GENUINE GEL
Standard Power (captain seat with/without solid seat pan)	Weight	Under 300 lbs.	Under 300 lbs.
	Daily Usage	Under 6 hrs Under 8 miles	Under 6 hrs Under 8 miles
	Diagnosis	Non-Progressive Disease	Progressive Disease*
Scooters	Weight	Under 300 lbs.	Over 300 lbs.
	Daily Usage	Under 8 hrs	Over 8 hours

**FIGURE 5** Gel vs. AGM: Battery Tech Selection Guide

## CHARGING YOUR BATTERY

There are standards that battery chargers used in mobility equipment must meet to ensure proper battery charging. These standards are established by the American National Standards Institute (ANSI), the governing body of RESNA (Rehabilitation Engineering and Assistive Technology Society of North America).

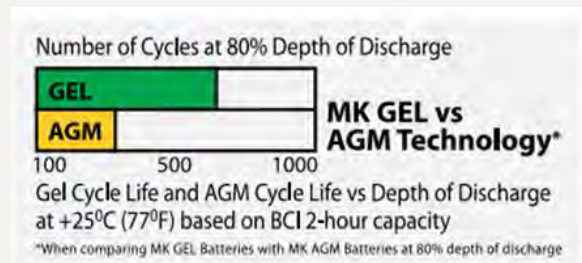
This standard requires that the battery charger have a suitable output current to charge a fully discharged battery to at least 80% of the energy that was removed.

- If the charger was not supplied with the wheelchair, a replacement charger is needed, or if a second charger is desired, the following factors must be considered.
- The charger should be a voltage regulated charger designed to charge AGM and gel batteries in mobility applications.
- An automotive "trickle" charger should not be used.
- The charger should have a maximum charge current output of no more than 30% of the C20 rating of the batteries used in the mobility device and at a minimum a charge current output equivalent to the original charger supplied with the wheelchair.
  - Example: An AGM U-1 battery rated at 33ah @ C20 should not be charged with a charger larger than 9.9-amps output (33Ah x 0.30).
- The charger should have the proper charge voltage settings as recommended by the battery manufacturer.
  - AGM and gel batteries should have a charge voltage no higher than 29.20V for a pair, or 14.6 individually.
- The charger should be compliant to the following standards:
  - RESNA Volume 2 Section 21 and Section 25
  - UL Listed
  - CE Listed
  - RoHS compliant\*\*

Using the correct charger for VRLA batteries will not only extend battery life but will enhance the daily use and reliability of the power chair.

Proper charging habits are vital in keeping batteries used in mobility equipment fully charged.

As stated earlier, the RESNA standard requires the battery charger to recharge the battery to at least 80% of the energy that was removed within 8 hours. It will take approximately 12 hours to fully charge a lead battery. If 12 hours of charge cannot



**FIGURE 6** Gel vs. AGM DoD Chart/Cycle Life Chart

be achieved daily, then at a minimum the battery should be allowed to be charged for 12 hours, once a week. If this recommendation is not followed, the battery will experience chronic undercharge. This is the most common occurrence found in power mobility equipment. Chronic undercharging is defined as a battery continuously failing to receive a full charge after usage. The sign of this occurrence is diminished runtime.

If diminished runtime is observed and charging habits are not corrected, the battery can become permanently sulfated which, as stated earlier, will affect the battery's ability to fully recharge and/or hold a charge for extended periods, which will result in shortened battery life.

If the charger specifications detailed earlier are not followed, the charger will be insufficient to properly charge the battery. This too will cause chronic undercharging.

Chronic undercharging can sometimes be physically noticeable by the battery case appearing concaved or sucked in.

If a pair of batteries on a charger that has just completed a charge cycle reads less than 29.2V, the charger may still need to complete the charge cycle, and therefore both the charger and batteries should be reviewed/tested for possible concerns.

*\*\*product has been tested for 10 banned substances*

CONTINUED ON PAGE 32



### BATTERIES FOR POWER MOBILITY ... (CONTINUED FROM PAGE 31)

*by an independent authority*

There is new technology available to determine if a battery failure is due to chronic undercharging. For example, many new power chairs have built-in systems that allow the user and the supplier to review the battery charging history remotely.

In addition, consumers of some equipment can now monitor charging habits via a wireless connection through a phone app. This helps technicians quickly diagnose battery problems associated with chronic undercharging vs. possible issues with the chair's electrical components.

A charger that is too large in output voltage can also be problematic. Although there may be a reduced recharge time when using a larger amperage output charger than originally provided with the equipment, this can cause permanent internal damage to the batteries that can drive out all the electrolyte permanently destroying the battery. This damage is irreversible. This occurrence is most often noticeable by the smell of sulfur while charging and the battery case's expansion or appearance of being "bloated" (See Figure 7). Upon observing either or both of these conditions, the wheelchair should not be operated, and the batteries should be removed. The cause of this condition should be investigated and changes made before a replacement battery is installed. If changes/corrections are not made, the replacement battery will

most likely experience the same conditions.

Additionally, abuse of equipment (utilizing a light-duty scooter for long-distance outdoor use) and exposing VRLA batteries to high heat can cause a battery to fail. It is important to know that after 30 cumulative days of exposure to temperatures of 92°F or higher, a lead battery's cycle life is reduced by half. Using the wrong batteries for the application can also cause battery life to be reduced — i.e., using a smaller capacity battery than the chair requires or using an AGM battery when a more robust gel product may be more suitable for the application.

### FREQUENT CONSIDERATIONS:

#### HOW OFTEN SHOULD I CHARGE MY BATTERIES?

If the chair is used daily, batteries should be charged for a minimum of 8 hours every night. For daily and/or long-distance users, a 12-hour charge at least once a week is recommended to prevent potential sulfation buildup on the plates due to chronic undercharging. If the power chair is only used occasionally, the batteries should be fully charged after each use. For a power chair in storage, the batteries should be charged once each week. Remember that most power chair chargers will completely shut off after each charge cycle and will not re-start a new charge cycle until they are "reset" by unplugging the charger from the power source and re-plugging to begin a new charge cycle. Therefore, it can be misleading to assume that if a power chair is plugged in, it is being charged.

#### BATTERY CHARGER NOT OPERATING

The charger has built in protections that will limit its ability to begin a charge cycle if the batteries are at a very low voltage, generally under 19.0 volts for a pair or 9.50 volts individually. This will cause the charger to appear to be charging when, in reality, nothing is happening. Batteries that are severely discharged can often be recovered but may require individual charging with a charger not designed with a low voltage cutoff, but that is something only a trained technician should undertake.

When using a non-VRLA specific charger on gel or AGM batteries, the voltage should be carefully monitored, and the batteries should be returned to the chair's charger to finish the charge cycle once the voltage of each battery reaches around 11 volts.

#### BATTERY STORAGE

When storing your batteries, it is essential to keep them fully charged and, if possible, it is best to keep them disconnected from the chair. New batteries on a shelf have a 6-month shelf life before



**FIGURE 7** Bloated battery examples



a maintenance charge is required. If the batteries are stored outside or in a cold environment, they can freeze at low temperatures of just -5° F if left in a discharged state. However, a fully charged lead battery will not freeze until as low as -90°F. (A discharged battery contains mostly water instead of electrolyte).

New batteries should be stored in climates under 92°F to minimize risk of lowering the cycle life due to high heat exposure. The rule of thumb is that for every 15 degrees above 92°F, a lead battery will lose half of its cycle life after 30 cumulative days of about one hour per day exposure. Therefore, consumers who spend much of their day outdoors and live in warmer climates may need to replace their batteries more often than those who stay indoors more or reside in cooler areas.

## PROPER BATTERY DISPOSAL

When it comes to disposing of lead batteries, it is the law that they must be returned to an EPA-approved recycling facility. You may be surprised that all VRLA batteries are nearly 100% recyclable.

It is important to remember that you are responsible for ensuring your spent lead batteries end up in an EPA-permitted facility. Your battery recycler should supply a receipt that shows they assume liability and will properly dispose of your spent batteries. Improper disposal of spent batteries can result in fines and criminal prosecution.

## TROUBLESHOOTING BATTERY ISSUES

Troubleshooting can be a daunting exercise with many factors that can cause battery failure. Troubleshooting should only be performed by qualified mobility technicians.

There are several probing questions and things to consider when troubleshooting a potential battery problem in a power wheelchair:

- What is the make and model of the chair? It is essential to know the make and model just in case of a problem trend with a specific chair.
- What is the battery size and technology that the power chair manufacturer recommends? You need to know if the correct size and type of batteries are in the chair, or if someone has substituted them with batteries that are too small or perhaps with an AGM battery when a gel battery would be a better choice.
- When were the batteries purchased and placed into service, and what is the age of the batteries? The current issue might be that



**FIGURE 8** Rippled battery example

the batteries have reached the end of their cycle life, and there is no need to do additional testing or troubleshooting on the equipment.

- Proper battery charging is the key to long battery life. Inquire if the customer has replaced their charger or if they own a second charger you may not know of.
- Confirm that the charger is on the correct setting. Some chargers have a switch that may reflect various technologies such as gel, AGM or flooded. Ask the customer what their specific concern is, such as is the chair slowing down or stopping, or are the batteries not fully charging. Enquire how often and for how long they charge their batteries. If the user regularly charges for less than 8 hours, sulfation could be building up and causing issues like a short and/or lower runtime.

After answering these questions, if the batteries are not at the end of their life cycle, you are now ready to assess and test them.

The first step is to evaluate the outside of the batteries and the battery cable connections. Look for a bloated, rippled or concaved case, as well as cracks or damage to the case (See Figure 8).

CONTINUED ON PAGE 34



### BATTERIES FOR POWER MOBILITY ... (CONTINUED FROM PAGE 33)

Next, check the initial individual battery voltage using a voltmeter or multimeter. If the battery voltage is below 12.70 volts, the batteries should be charged before continuing with additional testing. If charging is necessary, the next step is to check the individual voltage after charging has been completed. The difference in voltage between the two batteries should not exceed .5 volts. Note: You cannot properly test and diagnose a discharged battery.

If a battery is not reading at least 12.70 on a voltmeter, charge the battery before completing any additional testing. There is only a one-volt difference between a fully charged and wholly discharged lead battery, so any degree of discharge below 12.80 would indicate a discharged state (See Figure 9).

You will want to verify the charger's rated amps output. Is the charger the proper size, or is it too small or too large for the batteries?

Then, you may perform additional testing if both batteries are charged to at least 12.70 on a voltmeter. Two standard methods for testing batteries used in power mobility equipment are load and capacity testing.

Hand-held load testers are specifically designed to test the cold cranking amps of starting, lighting and ignition (SLI) batteries, most used in automobiles. When this type of testing equipment is used for deep

cycle batteries, it will only determine if the battery has a short. A capacity test is the only method that will provide exact results that reflect the current capacity or life left in the battery. An example of a capacity tester is shown here with the MK70 capacity tester (See Figure 10).

This machine will test a deep cycle battery by putting a 25-amp load on the battery over an extended period. This type of testing simulates how a battery used in power mobility equipment is discharged. The average test time, depending on the size of the battery, is 30 minutes to 2 hours. The results of a capacity test will determine if the battery has sulfated due to improper charging or if it is at the end of its cycle life.

During a capacity test using the MK70, the tester will reflect on the LED screen: elapsed time since the beginning of the trial, battery voltage drops (down to 9.5 volts), and the battery's capacity progress reflected as a percentage of remaining capacity — increasing as the testing continues. Upon completion, test results can be seen with a minimum of 60% used as a benchmark for passing. Anything below 60% will reflect a failed test and a potentially faulty battery. If a battery falls below 60%, it is recommended to recharge the battery and repeat the test. If the second test reflects a passing grade, it is likely that the battery is sulfated and may be recoverable. The results of MK70 tests may be downloaded and printed for consumer communication about their batteries' health.

Knowing how long the batteries have been in service, the customer's daily use and the charging routine will help determine if the batteries have reached the end of their useable life.

If your battery testing results determine the batteries are, in fact, still in good condition, now is the time to speak with the user about their daily driving routine. For example: Are they now using a ramp to access their home when they were formerly only driving on a level surface? Are they now leaving the house daily or more often than before? Are they now traveling further and using more of the battery power than before? Are they driving in extreme cold or heat, (driving in extremely cold conditions under 40°F can cause a reduction in battery capacity/runtime by up to 20%)?

Besides the extreme cold, several factors can impact run time in batteries used for power mobility equipment: incorrectly sized batteries (specifically, using a battery too small); batteries that are not at a full state-of-charge before use and/or are chronically undercharged; extra features added to the chair such as seating systems including, posterior and anterior tilt, recline, power legs, seat elevation and power standing. Also, USB charging ports, lights, ventilators or any other additional load on the batteries will cause a reduction in runtime.

%	GEL	AGMS
100%	12.85	12.80
75%	12.65	12.60
50%	12.35	12.30
25%	12.00	12.00
0%	11.80	11.80

**FIGURE 9** Open Circuit Voltage Chart



**FIGURE 10** MK70 Capacity Tester

Other factors that can reduce runtime include the weight of the user, which may increase from the initial fitting of the chair; the type of terrain the customer is operating their power chair on (steep inclines and rough surfaces will place a heavier load on the batteries which can cause a drop in voltage and lower runtime).

Examples that can cause batteries to fail are using an incorrect battery size; using an AGM vs. gel in a CRT application; electrical issues such as improperly adjusted brakes and electrical shorts. Wheelchair batteries not being adequately grounded will drain the batteries prematurely and drastically shorten the life of the batteries.

Most lead battery warranties are written around manufacturing defects and do not cover abuse of equipment, equipment failure or improper charging-related issues.

## BATTERY SAFETY

Batteries can be dangerous and should not be taken lightly when working with them — safety glasses or face shields should always be worn when servicing the batteries and service should only be performed by qualified mobility technicians. NEVER smoke around batteries; always remove any metal that could cause a spark or electrical burn, including rings, watches and bracelets.

Batteries expelling hydrogen gas (the smell of sulfur present) could result in an explosion with even a tiny spark. Any noticeable sulfur odor may result from a battery excessively gassing from being overcharged or going into thermal runaway due to other internal or external issues. A battery omitting hydrogen gas can be hazardous. If you smell sulfur from the chair, immediately stop

charging the batteries and allow the batteries to cool down for at least 30 minutes before going ahead with their removal.

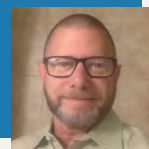
## CONCLUSION

It is important to understand that a battery is not just a battery. Ensuring that qualified mobility technicians match the correct battery size and chemistry to the correct application, whether it be CRT or scooter applications, can make all the difference in reliability, longevity and how well the equipment will perform. As stated above, only qualified technicians should be testing and servicing batteries used in power mobility equipment.

## CONTACT THE AUTHORS

Larry may be reached at  
[LARRYC@MKBATTERY.COM](mailto:LARRYC@MKBATTERY.COM)

Stephen may be reached at  
[SBURKE@MKBATTERY.COM](mailto:SBURKE@MKBATTERY.COM)



*Larry Carter has held several positions with MK Battery since joining the company in 1995. He currently serves as MK's eastern regional sales manager and national sales training manager. Carter has worked within the battery industry for more than 39 years with experience in all aspects of lead battery applications and technologies, including but not limited to sealed VRLA (valve regulated lead acid) batteries used in mobility and other critical power applications.*



*Stephen Burke is the northeast sales representative for MK Battery. He has worked in the Complex Rehab Technology industry for over 25 years, first as a medical sales representative with Sunrise Medical and later as an Assistive Technology Professional (ATP) for Permobil.*





# FITTING AND TRAINING WITH SUPPLIER AND THERAPIST

Written by: **BARBARA CRUME, PT, ATP**

Several experienced clinicians have addressed the importance of a full person-centered evaluation and delivery process for Complex Rehab Technology (CRT) in previous NRRTS DIRECTIONS articles. This evaluation usually requires more than one visit to fully assess and determine the CRT recommendations. We all agree the team approach including the therapist, supplier and most importantly the valuable input from the client and/or their caregiver(s) is paramount in the provision of CRT.

The fitting/delivery visit is a continuation of this evaluation and a very important and valuable step in the process.

## THE ISSUE

When clients are referred to the clinic (MountainCare Services and previously CarePartners), I often discover their current wheelchair was provided without the evaluating clinician and/or the evaluating supplier present for the fitting and equipment training. This can happen for several reasons.

The evaluation took place as a team but ...

- The therapist discharged the client while awaiting funding approval. A new (physician) referral is not received in time for the supplier to provide the fitting with the therapist within the prior authorization period.
- The evaluating therapist doesn't regularly see clients for the fitting due to limited appointment availability or for other reasons.
- The client cancels the fitting appointment due to weather/transportation/illness requiring a rescheduled date that may be past the prior authorization.
- The recommendations were completed by a therapist during an inpatient or community visit. The therapist is expected to discharge the person prior to receipt of the wheelchair.
- The supplier sends a technician (for various reasons) to the home to deliver the wheelchair, and the supplier rep who was present at the evaluation has not followed up nor scheduled a visit for fitting with the therapist.

Do these scenarios sound familiar?

## ISSUES THAT CAN OCCUR

Clients often have a complaint of discomfort, postural instability, inability to transfer into and out of their wheelchair, inability to propel/drive their new wheelchair and/or they have developed a pressure injury. A therapist and supplier's worst nightmares can occur when their good intentions result in a new problem.

The reason for these issues may be that what they received is not exactly what was recommended due to various reasons (potentially funding related) or the seating and positioning components have not been appropriately adjusted.

## THE SOLUTION

Prior to the ordering of equipment, the evaluating therapist, supplier and client need to discuss and develop the service delivery plan. The team should review the importance of the fitting taking place with

**PRIOR TO THE ORDERING OF EQUIPMENT, THE EVALUATING THERAPIST, SUPPLIER AND CLIENT NEED TO DISCUSS AND DEVELOP THE SERVICE DELIVERY PLAN.**

# WITHOUT THIS FITTING VISIT, THE CLIENT COULD POTENTIALLY USE THEIR SEATING AND WHEELED MOBILITY SYSTEM WITHOUT OPTIMAL SET UP LEADING TO POSSIBLE NEGATIVE OUTCOMES.

all team members present for this final step of the evaluation/delivery process.

Recommendations for a successful delivery, include:

- Review the details of the equipment received in comparison to what was recommended. Did the consumer receive the appropriate wheelchair model and components?
- Adjust components to ensure optimal positioning, pressure distribution and function of the client.
- Hands-on clinical assessment by a therapist to ensure new equipment set up meets the original goals.
- Pressure mapping of the new seating for objective data to help ensure the new seating provides optimal immersion/offloading/pressure distribution and positioning of the client for skin/tissue protection.
- Education and training on correct use and maintenance of the new wheelchair.
- Determine if additional therapy visits are required for further training or follow up.

Should all team members not be available, prior to an expired prior authorization, a follow-up visit should be scheduled a few days or weeks later to achieve improved outcomes.

If the prescribing therapist is no longer available, a plan for a new referral should be initiated. In some cases, this may fall on the client or the supplier rep.

Without this fitting visit, the client could potentially use their seating and wheeled mobility system without optimal set up leading to possible negative outcomes.

---

## CONTACT THE AUTHOR

Barbara may be reached at  
[BARBARACRUME71@GMAIL.COM](mailto:BARBARACRUME71@GMAIL.COM)



Barbara Crume is a physical therapist with 40 years of experience in the provision of Complex Rehab Technology (CRT). She is currently employed with MountainCare Services as a seating and wheeled mobility specialist. Crume provides evaluation, fitting and training for clients of all ages and all diagnoses to obtain CRT manual and power wheelchairs with complex seating. She has presented courses at Medtrade, ISS, RESNA and the APTA CSM. She has also taught several webinars through NRRTS, RESNA and Allied Health Education. She is a member of APTA, RESNA, Friend of NRRTS and a board member of the Clinician Task Force.

# BATTERY LIFE

## EXPLORING (SOME) IMPACTS OF LIMITED BATTERY CAPACITY IN POWER WHEELCHAIRS

Written by: JEFF PRESTON, PHD

I was an active child growing up in a rural Ontario town where kids invented their own fun. Playing sports, going on hikes, building forts – I was always happiest ripping around outside with friends. Contrary to a medical prognosis of a sedentary life due to a profound congenital physical disability, I was determined to be in perpetual motion. This defiant spirit was fueled by an array of mobility devices that augmented my near non-existent physical strength, with everything changing when I received my first battery-operated scooter. Where previously I relied on others to push my manual wheelchair, suddenly I was given the power to chart my own path forward ... even if I was still (significantly) slower than kids without disabilities. “You might be faster than me, but you’ll get tired before my batteries die!” I would bellow when playing tag, determined to overcome my speed limitations with a longitudinal zombie-inspired strategy. It is hard to articulate the impact of transitioning to full-time use of an electric wheelchair (sometimes called powerchairs) but nearly three decades later I can no longer imagine a world without it.

While my powerchair opened a world of possibilities it was, ultimately, an imperfect solution. Aside from the speed deficiencies, breakdowns and limited battery capacity would plague my early years — the devices were simply not capable of keeping up with my childish exuberance. When the batteries would die, I was left reverting back to my manual chair and, once again, reliant on those around me. Frustrated by the near

constant interruptions, my family reached out to specialists, technicians and manufacturers only to receive the same explanation: despite being made for children, these wheelchairs were expected to be used in institutional settings and were not designed to handle road hockey, muddy forests or salt- and snow-covered playgrounds. Ultimately, my playful spirit was bound by the comparatively narrow imaginations of the wheelchair industry. While the construction and technology of powerchairs has evolved over the decades, along with enhanced durability of adult chairs, I continue to live a life bound by the technical limits of the powerchair, with days sometimes cut short by dwindling battery power.

### EXPLORING BATTERY LIFE

Something I learned early on in my time as a powerchair user is there is a certain level of unpredictability in how long a battery charge will last. While most powerchairs can all but guarantee a full day use on a single charge, meaning you can remain in motion so long as you are able to charge the batteries every night, there can be huge differences in functional distance between powerchairs. Part of the variance from chair to chair is derived from the different sizes of batteries — some chairs will use a small single dry cell battery while others will use two large car batteries. But even when comparing chairs that use the same type of battery there can be broad differences. An Invacare Storm I used in my early 20s was able to drive nearly 50km on a single charge whereas my current Permobil F3 has a range of approximately 25km. These batteries are often buried within the chairs, making it difficult to “swap” batteries, and funding programs in Ontario do not generally cover multiple sets. And, like people, batteries grow old and no longer hold the same level of charge, meaning one must monitor their batteries to time replacement — not too soon, before funding programs will cover replacement, but not too late and risk lacking enough power to

**CONTRARY TO A MEDICAL PROGNOSIS OF A SEDENTARY LIFE DUE TO A PROFOUND CONGENITAL PHYSICAL DISABILITY, I WAS DETERMINED TO BE IN PERPETUAL MOTION.**



Dr. Jeff Preston delivering a keynote at a national conference of Motion in 2018, using the seat elevation feature on his (habitually muddy) Permobil powerchair to reach the lectern.

make it through a day. In my experience, powerchair controllers offer woefully simple battery gauges that rarely offer nuanced accounts of remaining battery function. These gauges often feel more like a simple binary of “everything is fine” or “you are moments from (battery) death.” I live by the dichotomy: when fully charged there is enough battery to get through the day but too much usage could bring everything to an abrupt halt. I must then cautiously allocate my precious electricity usage wisely to have enough power for the day.

When everything goes to plan, my life is not interrupted by battery issues. But when things do go wrong, or the battery is not properly managed, my life becomes inextricable from the battery’s life. What is typically an invisible, but necessary, force of life becomes the first domino in a chain of failures that leave me both immobile and irritable. To better understand the role batteries play in the life of a

powerchair user, I thought it best to share two examples of how things can (and have) gone wrong and the resulting cascade of disabling effects.

### EXAMPLE 1: HOLDING A CHARGE

There is nothing more frustrating than waking up in the morning to discover your batteries were not charging during the night. Perhaps with pre-bedtime routines your support worker forgot to plug it in, or the charger was unplugged by a different worker who needed the outlet and no one noticed. Maybe the charger itself has malfunctioned or the power went out. My powerchair can typically survive two days without charging, but it means carefully rationing the battery that remains. I must strategically plan necessary movements and potential times of stasis to recharge throughout the day. When plugged in, my powerchair cannot move and features like automatic tilt and recline are disabled, meaning I must find the perfect position to sit still for as long as possible. To do this, I must reorganize my day on the fly to minimize moving around and find support workers who might be available later in the day should the battery die — an already complex and intersecting schedule system grows ever more cumbersome. It also means determining and eliminating all non-essential movement: while I cannot skip class, as the professor, I can sacrifice going on a walk with my partner after dinner. In a world shaped by neoliberalism, priority has always gone to life sustaining activities, like hygiene and labour, as opposed to life enriching activities, like athletics or socializing.

Should my strategic planning fail and my powerchair dies during the day, the only way to remain mobile is to switch over to a back-up manual wheelchair, as the extreme weight of my powerchair, which weighs over 350 pounds without me in it, is difficult for others to push. Switching to my manual chair comes with other challenges, including becoming fully dependent on others to move and the musculoskeletal pain from not using the highly customized seating and recline package on my powerchair. While switching over to another chair makes the most sense, giving my powerchair time to recuperate, it has generally been an option of last resort for these two key reasons.

CONTINUED ON PAGE 40



# THE PHRASE “CONFINED TO A WHEELCHAIR” HAS ALWAYS SEEMED ANTITHETICAL TO ME AS A WHEELCHAIR-USER. IN MY EXPERIENCE, MY POWERCHAIR DOES NOT “CONFINE” ME BUT, RATHER, PLAYS A CENTRAL ROLE IN MY EMANCIPATION.

**BATTERY LIFE ...**  
(CONTINUED FROM PAGE 39)

## EXAMPLE 2: MISSED THE BUS

During my undergrad, I was given a unique opportunity to complete a practicum with the communications department of a local rehabilitation facility. Excited to start applying some of my learning in the “real” world, I accepted the position without considering how I would get to my placement —



Dr. Jeff Preston overlooking the water beside Cincinnati's baby blue John A. Roebling Suspension bridge while on vacation.

the facility was on the other side of the city. Because I could not afford an accessible vehicle of my own, I was dependent on the municipal transit system, which offered both specialized and semi-accessible conventional bus services. Unfortunately, neither of these services could reliably get me to work on time and after a first week marred by late arrivals and concerns of getting in trouble, I made the determination to start driving myself to work in my powerchair. While I had enough battery to get me there and back, approximately 60 minutes of driving through the city one way, I quickly discovered this left me with little battery in the evenings to venture far from home. Like days when my powerchair has failed to charge, I was again faced with a difficult decision: prioritize work and professional development over socializing during the week. While I was able to get out of the house on weekends, my social bonds withered that summer. Aside from activities on campus, which were sparse in the summer, most of the restaurants, clubs or theatres were well beyond the range of my remaining battery life, meaning I was spending more and more time at home. It likely goes without saying that this disrupted my work/life balance and made me seriously question how I would manage after graduation.

## CONCLUDING THOUGHTS

The academic field of disability studies, a space I call home as an associate professor at King's University College, ostensibly originated several decades ago with the articulation of the social model of disability, a counter-hegemonic perspective that draws into question the dominant medical definition of disability that centers impairment and bodily difference. British scholars like Mike Oliver and Colin Barnes explain that under the medical model, which continues to dominate our understanding of disability, disability is largely seen

as an individual problem found within dysfunctional bodies. Under this zeitgeist, terms like “confined to a wheelchair” emerge, with the device becoming the manifestation of a sinister bodily corruption that disables people. On the contrary, social model proponents argue that external factors, such as architecture or discriminatory attitudes, can also be disabling and are perhaps even more important to ameliorate. The social model playfully probes, “is Jeff disabled by his diagnosis or by the stairs leading to the lectern at the front of the classroom?”

Applying the social model, I believe we must increase our complexity of thought when it comes to batteries and adaptive devices. Rather than seeing batteries as an afterthought, we must understand that they can play a vital role in (dis)abling users. This could mean, at the design and manufacturing level, striving to gather better data on how long batteries typically last and developing more detailed information, such as accurate charge readings or how many kilometres of charge remain, on controller displays. We should invest in ‘fast-charging’ battery technology and facilitate quick swapping of batteries to provide for better redundancy, effectively doubling the range of a powerchair. Finally, none of these changes will matter if we don’t also reimagine policies that currently stifle innovation in powerchair technology, such as common government or insurance company policy that opt for cheaper, albeit heavier, dry cell batteries over lithium batteries that could charge faster and last longer.

The phrase “confined to a wheelchair” has always seemed antithetical to me as a wheelchair user. In my experience, my powerchair does not “confine” me but, rather, plays a central role in my emancipation. Without my powerchair I am static, dependent, immobile. In my powerchair I am dynamic, self-determining, in motion. For me, my powerchair is central to my life, a kind of Swiss army knife with multiple functions that go way beyond promotional

materials or therapist definitions. Most obviously, it is a tool of mobility and access for me and others, be it friends who would ride on the back when I was young or dogs that are led by it on walks. It is sports equipment, for playing hockey or going on hikes and a social enabler, when going to the movies or hitting the dance floor. It augments my limited strength, used to push doors open, move furniture around the house or assist in pulling off heavy jackets. It is a part of me, both literally and figuratively, in that people recognize it as mine but also how its movements reflect me, from speeding around campus to my slow deliberate pacing back and forth while delivering a lecture. Like the clothing I wear, my powerchair is an embodiment machine that manifests “me.” We bring each other to life: without it, I could not live; without me, it would be inanimate.

---

## CONTACT THE AUTHOR

Jeff may be reached at  
[JEFF.PRESTON@UWO.CA](mailto:JEFF.PRESTON@UWO.CA)



*Jeff Preston, Ph.D., is an associate professor and acting chair of Disability Studies at King's University College at Western University where he teaches classes on disability, popular culture and policy. Born with a rare neuro myopathy, Preston is a long-time advocate and motivational speaker, giving talks across the country focused on the intersection of disability, subjectivity, biopower and culture. His first book, "The Fantasy of Disability," was published in 2016 by Routledge.*



# "WHERE CAN WE GO NOW?"

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

Reports keep coming in regarding the closing of seating clinics all over the country.

Back more years than I can remember, I met with a lady who had been recently diagnosed with amyotrophic lateral sclerosis, or ALS. Her physician had given her a prescription (written on a prescription pad) that said, "Dispense 1 Wheelchair." She went to a local pharmacy and received a very basic manual wheelchair. As we talked about her needs for a power mobility, I shared my concerns that her insurance might deny it since they had just paid for a wheelchair. I wanted to prepare her, but instead, I upset her greatly. I will never forget how that all went down.

After sharing this with the head of the therapy department, we came up with a plan to create a clinic that would be staffed by a therapist who could evaluate for seating and mobility. As the clinic began to take shape, suppliers started referring their clients to the clinic. Reps and suppliers provided demo equipment, tools and literature. In-service training on different equipment and technology were commonplace.

**REPORTS KEEP COMING  
IN REGARDING THE  
CLOSING OF SEATING  
CLINICS ALL OVER  
THE COUNTRY.**



The clinic thrived for many years and served countless people with varying disabilities. Many of them were multiple repeat customers. They knew their best interest would be of primary concern, and they knew the documentation challenges would be met.

NRRTS is writing content for a Complex Rehab Technology (CRT) Supplier Education Program and requested to be present at this clinic to take pictures and videos. I looked forward to being there to photograph the clinician and supplier working together to evaluate people for CRT.

Then came the news. The clinic was going to be closed. The clinician was retiring, and no one wanted to step in and take over. There were several other factors, including the low reimbursement for evaluations. The prior approvals and billing cost more than the amount being reimbursed.

Why did we let this happen? Did we not talk about gaining better outcomes when a person can be evaluated in a clinic with products to try? Could we lobby for higher reimbursement? Did the clients who were being served by that clinic ever have a voice?

So, on the very last day of seating clinic, I was there. The questions asked many times that day was, "What do we do from here? Where will we go, and who will take care of us?" This is what it means

when seating clinics disappear. CRT users will have to find another resource that will meet their needs. This means longer wait times for an appointment at another seating clinic and/or travelling further.

We, as an industry, have taken a giant step backward. Access to proper evaluations is now just another hurdle for consumers to overcome. The needs of people who rely on CRT will remain and must be met.

What are we doing about it? What are you doing about it?

And, where will they go?

---

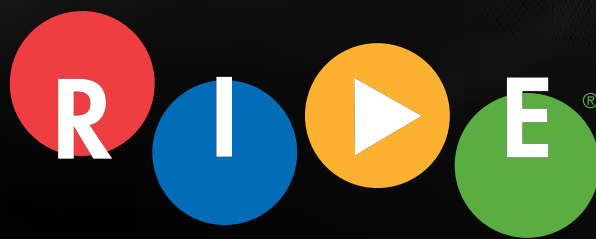
#### CONTACT THE AUTHOR

Weesie may be reached at  
[WWALKER@NRRTS.ORG](mailto: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.



## ***Leading The Way In Custom Seating Technology!***

**Learn About Our  
Exciting New  
Manufacturing Method**



**ride**designs.com





# RESNA UPDATES

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

## RESNA: SEE YOU AT ISS

Once again, RESNA is sponsoring a track at the 2023 International Seating Symposium (ISS). RESNA is proud to collaborate with ISS to develop sessions that focus on technology convergence. This trend is affecting seating and mobility professionals, who now need to know “more than wheelchairs” to best serve their clients. Thank you to our RESNA member presenters, who will be offering the following sessions:

- Seat Yourself with K-12 School Teams: Collaboration is Key!; Daniel Cochrane, MA, MS, ATP, and Sheri Lenzo, PT, ATP,
- Standards: It's Not About Where We Are, It's About Where We Are Going!; Patricia Karg, MSBME
- RESNA Certification Town Hall; Julie Piriano, PT, ATP/SMS
- RESNA Position Paper on the Application of 24-7 Posture Care Management; Patricia Toole, OTR/L, MAT, MS OT
- AAC for the ATP; Beth Speaker-Christensen, MA/CCC-SLP/L, ATP, and Sayard Bass, SLP, ATP
- Rehabilitation Engineers: Who We Are and What We Do; Kaila Ott, ATP, RET
- A Review on the Update of the RESNA Position Paper for the Application of Tilt, Recline and Elevating Legrests; Jilliam Stametelos, OTR/L, ATP/SMS

RESNA will also have a booth in the exhibit hall. Make sure you stop by and say hello. I will be there, along with my colleague, RESNA Operations Manager and Standards Secretary Doug Weinbaum. We look forward to seeing you in Pittsburgh!

## MEET THE RESNA CONFERENCE KEYNOTE: DR. O

The RESNA conference is back, live and in-person, July 24-26 in New Orleans, Louisiana. With the theme “Move to the BeAT of Innovation,” the focus is on what's new and emerging, with the opportunity to see, touch, feel and try out the latest assistive technology products in the new “Experience Hall.”

Dr. Oluwaferanmi Okanlami, otherwise known as “Dr. O,” is the conference keynote. Not only is Dr. O a proud wheelchair user and an internationally-recognized athlete, but for his day job he leads the Adaptive Sports & Fitness program at the University of Michigan as director of Student Accessibility and Accommodation Services.

## WE LOOK FORWARD TO WELCOMING DR. O AND OUR ENTIRE COMMUNITY TO NEW ORLEANS.

A medical doctor with a specialty in orthopedic surgery, Dr. O also holds a master's degree in engineering, science and technology entrepreneurship from Notre Dame. He has been featured on CBS News, PBS News Hour and MSNBC's Morning Joe and is passionate about adaptive sports and fitness, striving to provide access to physical fitness and inclusive recreational and competitive sports for all.

We look forward to welcoming Dr. O and our entire community to New Orleans. Registration is open now. This year's registration fee is value-packed, and includes all continuing education sessions and special sessions, meals (breakfasts, lunches and coffee breaks), the opening reception and free WiFi in the guest rooms and conference space. With a low hotel room rate of \$149 per night and a location with a major international airport hub, RESNA 2023 is shaping up to be more affordable than ever. Register early to get the lowest registration rate!

## CTF AND RESNA POSITION PAPER NOW AVAILABLE

The Clinicians Task Force and RESNA are pleased to offer our first joint position paper, “Position on the Application of Standing Devices: Current State of the Literature,” free to the community. This paper updates previous position papers on standing devices published by RESNA and expands the previous focus on wheelchair standing devices to all standing devices.

RESNA has supported the appropriate application of standing devices since the publication of our first position paper in 2009. We are hopeful that the Centers for Medicare and Medicaid Services will, as previously promised, open a public comment period this year on consideration of these devices for Medicare coverage. We believe the current state of evidence overwhelmingly shows the health and medical benefits of standing devices.

### CALL FOR ATP AND SMS EXAM VOLUNTEERS

Dozens of RESNA-certified ATPs and ATP/SMS certificate holders volunteer every year to help maintain and update both exams. If you are a certified ATP or ATP/SMS in good standing and would like to volunteer for short exam maintenance projects, we would love to have you. Contact hours for certification renewal are available!

If interested, please fill out our volunteer interest form (on the website under Membership, Volunteer and Leadership Opportunities) and upload your CV, or e-mail [certification@resna.org](mailto:certification@resna.org). Please note, "Fundamentals in AT" instructors are not able to participate, due to the obligation to keep RESNA's education and certification programs separate.

### CONTACT THE AUTHOR

Andrea may be reached at  
[EXECOFFICE@RESNA.ORG](mailto: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®  
VICE PRESIDENT - Tom Simon, ATP, CRTS®  
TREASURER - Andrea Madsen, ATP, CRTS®  
SECRETARY - Jason Kelln, ATP/SMS, CRTS®  
PAST PRESIDENT - Gerry Dickerson, ATP, CRTS®  
US REVIEW CHAIR, DMAC A - Jeff Decker, ATP, CRTS®  
US REVIEW CHAIR, DMAC B - Doug Crana, ATP, CRTS®  
US REVIEW CHAIR, DMAC C - Mike Seidel, ATP, CRTS®  
US REVIEW CHAIR, DMAC D - Brian Coltman, ATP/SMS, CRTS®  
AT-LARGE DIRECTOR - Tim Robinson, ATP/SMS, CRTS®  
AT-LARGE DIRECTOR - David Nix, ATP, CRTS®  
AT-LARGE DIRECTOR - Chris Savoie, ATP/SMS, CRTS®  
AT-LARGE DIRECTOR - Stefanie Laurence, RRTS®  
CA REVIEW CHAIR, REGION A - Darrell Mullen, RRT -S®  
CA REVIEW CHAIR, REGION B - Michelle Harvey, RRTS®  
CA REVIEW CHAIR, REGION C - Bernard "Bernie" Opp, RRTS®

### U.S. ADVISORY COMMITTEE

ELAINE STEWART, ATP, CRTS® - Past President  
MIKE OSBORN, ATP, CRTS® - Past President  
MICHELE GUNN, ATP, CRTS® - Past President  
JOHN ZONA, ATP, CRTS® - Past President  
DENISE HARMON, ATP, CRTS® - Past President  
MIKE BARNER, ATP, CRTS® - Past President

### CANADIAN ADVISORY COMMITTEE

STEVE CRANNA, DIR. BUSINESS DEVELOPMENT & GOVT RELATIONS, VGM GROUP  
MICHELLE HARVEY, BSc. HONS OT, RRTS®  
LINDA NORTON, B.Sc.(OT), M.SC.CH, PHD, OT REG. (ONT.)  
JASON KELLN, ATP, CRTS®  
JUDY ROWLEY, VICE PRESIDENT, MATRX SEATING  
CHER SMITH, BSc.OT, MSC

### NRRTS STAFF MEMBERS

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



# HOW TO USE SOCIAL MEDIA TO RESHAPE EDUCATION FOR CLIENTS, FUNDERS, THERAPISTS

Written by: **MICHELLE HARVEY, BSC HONS OT, RRTS®**

Social media has revolutionized the way we connect and communicate with each other. TikTok, Facebook, Twitter and Instagram are everywhere, and we participate with these platforms every day in our professional and personal lives.

It's how we celebrate our wins and losses, get our news and communicate with each other. The potential of using social media to educate and empower clients, funders, therapists and our colleagues is boundless.

In different industries, the best educators are embracing social media's role in education, and we all should jump on and begin exploring and using it.

## HOW TO START?

The first step is to look at ways to increase digital content.

I've explored three ways everyone can use to get started.

### 1. IN-SERVICE TRAINING

We do many in-service trainings with clients, funders, manufacturers and therapists each year. Offering these in-services, both in person and digital, allows you to reach a bigger audience. What if we recorded these sessions? Recording sessions would allow you to send this content out again and again. After the in-services, you can then send out the content on your social media channels and run a simple contest with a few questions, and therapists and clients can submit their answers for a prize.

Additionally, you can add the In-service recordings to your website to allow clients, staff and therapists to use it as a reference. Your company can also use the recordings as a training guide for new staff members.

IN DIFFERENT INDUSTRIES, THE BEST EDUCATORS ARE EMBRACING SOCIAL MEDIA'S ROLE IN EDUCATION, AND WE ALL SHOULD JUMP ON AND BEGIN EXPLORING AND USING IT.

### 2. QR CODES

Post-COVID, QR codes are everywhere. What about using them to add to products and marketing brochures? It is easy for therapists to download a digital copy to their phone, making all your brochures easily accessible. What about recording a video on a common product like a manual wheelchair, and then adding the QR code as a sticker on the chair? That way, when the client hovers their phone over the QR code, a video of how to fold the wheelchair or simple wheelchair maintenance checks pop up.

These QR codes help empower therapists and clients and reduce frustrations and endless online "how to" searches.

### 3. INSTAGRAM AND FACEBOOK

These platforms are perfect for sending out quick one to two-minute clips on topics such as battery maintenance, how to adjust a positioning belt, how to adjust your hospital bed, and how to adjust your wheelchair brake.

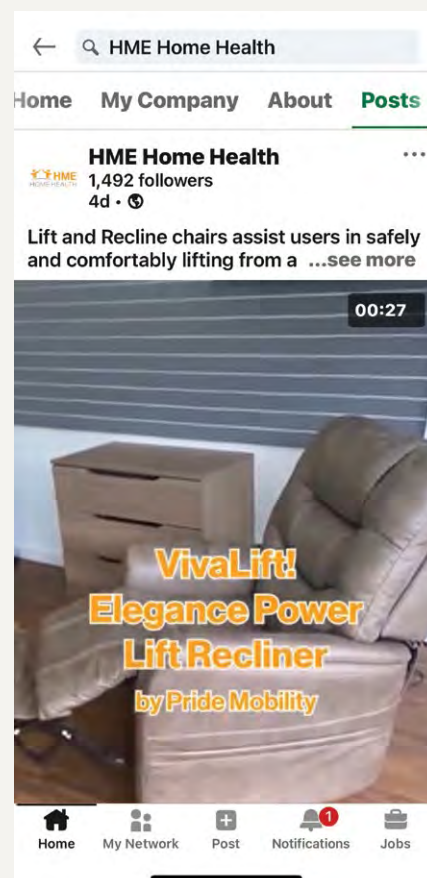
These platforms also allow you to upload pictures for clients and therapists on the latest products, cool customization work you might have done, an incredible product you saw at a tradeshow, and fun videos "day in the life" videos of techs and sales reps in the field.



Sample of an Instagram post



Sample of a Facebook post



Sample video posted to Facebook

## ADVANTAGES OF USING SOCIAL MEDIA IN EDUCATION

One of the most significant advantages of using social media is engagement, which is critical to success. It aids clients with vendor and product selection, creates a cool community and allows for sharing of content. In addition, social media provides opportunities for active and passive learning. Social media can connect us all, whether you are in Canada, Australia or America. It allows you to connect with resources and experts around the world. It facilitates communication and collaboration and provides a platform for sharing of ideas. I personally follow many companies, therapists and clients and have shared and learned so much while watching their social media.

Integrating social media into your company or business can bring your educational material to life.

## CONTACT THE AUTHOR

Michelle may be reached at

[MICHELLE.HARVEY@HMEBC.COM](mailto:MICHELLE.HARVEY@HMEBC.COM)



Michelle Harvey, BSC HONS OT, RRTS®, is vice president of sales and product for HME Home Health. Harvey is a NRRTS Canadian Review Chair, serves on the Canadian Advisory Committee and became a NRRTS Registrant in July 2021.



---

## NEW NRRTS REGISTRANTS

Congratulations to the newest NRRTS Registrants. NAMES INCLUDED ARE FROM JAN. 21, 2023, THROUGH MARCH 10, 2023.

**Allain Pelletier, RRTS®**

Tango Medical  
100 Woodside Ln, Unit B103  
Fredericton, New Brunswick E3C2R9  
Telephone: 506-854-8842  
Registration Date: 02/27/2023

**Kalen Fischer, RRTS®**

Adapt Mobility  
1023 Trans Canada Way SE  
Medicine Hat, Alberta T1B1H9  
Telephone: 403-529-6020  
Registration Date: 02/28/2023

**Samuel Goff, RRTS®**

National Seating & Mobility, Inc.  
3401 N May Ave Ste C  
Oklahoma City, OK 73112  
Telephone: 405-896-8630  
Registration Date: 02/10/2023

**Bhavin Joshi, ATP, RRTS®**

Rehab Medical Inc.  
2700 NE NE Expy NE Ste C800  
Atlanta, GA 30345  
Telephone: 470-922-0859  
Registration Date: 03/08/2023

**Katherine Slusarski, MBA, ATP, RRTS®**

Rehab Medical Inc.  
8564 Hwy 85  
Jonesboro, GA 30238  
Telephone: 678-201-4345  
Registration Date: 02/24/2023

**Victor Camara, RRTS®**

Mobility Professionals  
12 Rancho Cir  
Lake Forest, CA 92630  
Telephone: 844-865-2814  
Registration Date: 02/27/2023

**Brian Quach, RRTS®**

HME Mobility & Accessibility  
4011 Viking Way #130  
Richmond, British Columbia V6V2K9  
Telephone: (604) 362-9943  
Registration Date: 01/27/2023

**Luis Navarro, RRTS®**

Prime Medical  
1600 S Gaffey St  
San Pedro, CA 90731  
Telephone: 310-548-0201  
Registration Date: 03/06/2023

**Wayne Kuroda, RRTS®**

HME Mobility & Accessibility  
4011 Viking Way #130  
Richmond, British Columbia V6V2K9  
Telephone: 604-821-0075  
Registration Date: 02/01/2023

**Christina Natale, DPT, ATP, CRTS®**

Numotion  
6404 216th St SW  
Mountlake Terrace, WA 98043  
Telephone: 206-204-3330  
Registration Date: 02/09/2023

**Marco Vega, ATP, RRTS®**

Respiratory & Medical Homecare Unlimited, Inc.  
9801 Carnegie Ave #98  
El Paso, TX 79925  
Telephone: 915-595-3356  
Registration Date: 02/23/2023

**Zachary Myers, RRTS®**

National Seating & Mobility, Inc.  
6501 Angola Rd, Unit P  
Holland, OH 43528-9651  
Telephone: 973-536-6248  
Registration Date: 03/07/2023

**Christopher Rosso, RRTS®**

Adapthealth  
1901 N Glenville Dr #501  
Richardson, TX 75081  
Telephone: 972-499-4564  
Registration Date: 02/14/2023

**Paul "Logan" Adcock, ATP, RRTS®**

National Seating & Mobility, Inc.  
108 N Layfair Dr  
Flowood, MS 39232  
Telephone: 601-874-3513  
Registration Date: 01/27/2023

**Jennifer Baulke, RRTS®**

Motion  
122 Commerce Park Rd, Unit L  
Barrie, Ontario L4N8W8  
Telephone: 705-241-8339  
Registration Date: 02/21/2023

**Renee Ridolfi, ATP, CRTS®**

Numotion  
2440 North America Dr Ste 40  
West Seneca, NY 14224  
Telephone: 716-983-5083  
Registration Date: 03/10/2023

---

## 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 JAN. 21, 2023, THROUGH MARCH 10, 2023.

**Christina Natale, ATP, CRTS®**

Numotion  
Mountlake Terrace, WA

**Lea Loree, ATP, CRTS®**

Reliable Medical Supply, Inc.  
Cincinnati, OH

**Raymond Serafini, ATP, CRTS®**

National Seating & Mobility, Inc.  
Savannah, GA

**Heather Bailey, ATP, CRTS®**

National Seating & Mobility, Inc.  
Abilene, TX

**Michael Bolton, ATP, CRTS®**

CareLinc Medical  
Grandville, MI

**Renee Ridolfi, ATP, CRTS®**

Numotion  
West Seneca, NY

---

## FORMER NRRTS REGISTRANTS

The NRRTS Board determined RRTS® and CRTS® should know who has maintained his/her registration in NRRTS, and who has not.

NAMES INCLUDED ARE FROM JAN. 21, 2023, THROUGH MARCH 10, 2023. FOR AN UP-TO-DATE VERIFICATION ON REGISTRANTS, VISIT [WWW.NRRTS.ORG](http://WWW.NRRTS.ORG), UPDATED DAILY.

**Kevin Hams**

Mobility Professionals  
Lake Forrest, CA

**Daniel Phillips**

National Seating & Mobility, Inc.  
Greenville, WI

**Troy Lapp, ATP**

Numotion  
Bismarck, ND

**Charles Mitchell**

National Seating & Mobility, Inc.  
Dunbar, WV

**Thomas H. Linder, Jr., ATP**

Numotion  
Baltimore, MD

**Deon Prinsloo**

Brookstone Home Medical  
Valdosta, GA

**Jeffrey Christianson, ATP**

Southwest Medical & Rehab  
Phoenix, AZ

**BE SURE TO FOLLOW NRRTS ON SOCIAL MEDIA!**



---

## RENEWED NRRTS REGISTRANTS

The following individuals renewed their registry with NRRTS between Jan 21, 2023, and March 10, 2023.

PLEASE NOTE IF YOU RENEWED AFTER MARCH 10, 2023, YOUR NAME WILL APPEAR IN A FUTURE ISSUE OF DIRECTIONS.  
IF YOU RENEWED PRIOR TO JAN 21, 2023, YOUR NAME IS IN A PREVIOUS ISSUE OF DIRECTIONS.

FOR AN UP-TO-DATE VERIFICATION ON REGISTRANTS, PLEASE VISIT [WWW.NRRTS.ORG](http://WWW.NRRTS.ORG), WHICH IS UPDATED DAILY.

Adam Sliwon, MScPT, RRTS®	Emma McCormack, RRTS®	Marcus Parris, RRTS®
Adam Majors, ATP, CRTS®	Erin Cummings, ATP, RRTS®	Michael Yates, RRTS®
Anthony Hendricks, ATP, CRTS®	Eugene Salisbury, PTA, ATP, CRTS®	Michael Bolton, ATP, CRTS®
Becky Bertoncino, ATP, CRTS®	Frank T. Zugovitz, ATP, CRTS®	Michele A. Froehlich, ATP, CRTS®
Ben Peters, ATP, CRTS®	Gene Uweh, ATP, RRTS®	Nicholas Hura, ATP, CRTS®
Bradley S. Hannan, ATP/SMS, CRTS®	Gene Engelhardt, ATP, CRTS®	Omar Rozo, RRTS®
Brenda L. Roehl, ATP, CRTS®	Gerald Tisdale, RRTS®	Pam Yates, ATP, CRTS®
Brian Gough, ATP, CRTS®	Gregory Allan Moorhouse, ATP, CRTS®	Peter R. Webb, ATP, CRTS®
Brian Perkowski, PT, ATP, CRTS®	Gregory M. Fleming, ATP/SMS, CRTS®	Piers Davidge, RRTS®
Brian McKenzie Shoemaker, ATP, CRTS®	Heather Bailey, ATP, CRTS®	Rafael Rivas, RRTS®
Butley J. Mahler, Jr., ATP, CRTS®	James Drechsel, ATP, CRTS®	Rafael Ibarra, ATP, CRTS®
Caleb Prall, RRTS®	James E. Waldrop, Jr., ATP, CRTS®	Randall Keith, RRTS®
Carla Carrico, ATP, CRTS®	James Randall Blackwell, ATP, CRTS®	Randall D. White, ATP, CRTS®
Carol Gilligan-Chack, ATP, CRTS®	Jason Eubanks, RRTS®	Randy Malcolm, ATP, CRTS®
Casey Peterson, ATP, RRTS®	Jeannine Jackson, R. Kin, RRTS®	Richard Gross, RRTS®
Chad E. Hayes, COF, ATP, CRTS®	Jeff Cook, RRTS®	Robbie Scott, RRTS®
Charles Edward Nichols, ATP, CRTS®	Jeff Burns, RRTS®	Robert C. Bleil, ATP, CRTS®
Charlotte Zulawski, PTA, CLT, ATP, CRTS®	Jill Porter, OTR, ATP, CRTS®	Roger Dabbs, ATP, CRTS®
Charlotte Skelton, RRTS®	Jocelyn Fast, RRTS®	Ron Spenst, RRTS®
Cheryl Henckel, OTR, ATP, CRTS®	Joel C. Maxey, ATP, CRTS®	Ronald D. Hejna, ATP/SMS, CRTS®
Chris Cooke, RRTS®	John Petter, ATP, CRTS®	Shelby Bass, ATP, CRTS®
Christian Beaman, RRTS®	John Kevin Conley, ATP, CRTS®	Shelby Leveille, RRTS®
Christopher Boyd, ATP, CRTS®	John P. Zambotti, ATP, CRTS®	Stephane Robichaud, RRTS®
Christopher Savoie, ATP/SMS, CRTS®	Johnathan Grimes, ATP, CRTS®	Stephanie Jane Longden, RRTS®
Dan Nederhood, ATP, CRTS®	Jonathan Hyzak, ATP, CRTS®	Steven Edwards, ATP, CRTS®
Danielle Ebel, RRTS®	Jorge Cabrera, RRTS®	Steven Francis Bennardo, RRTS®
Darice Cochrane, RRTS®	Joseph Marina, ATP, RRTS®	Steven J Carpenter, RRTS®
Darrell Mullen, RRTS®	Joseph Smith, RRTS®	Susan Sutter, RRTS®
David Glancy, ATP, CRTS®	Karl Thomas Eklund, ATP, CRTS®	Tim Newman, RRTS®
David Rowland, MBA, ATP, CRTS®	Katrina Yeoman, RRTS®	Timothy Andrews, RRTS®
David Gurganus, ATP, CRTS®	Kenneth Livengood, ATP, CRTS®	Timothy Shaner, ATP, RRTS®
David Namehas, ATP, RRTS®	Kevin Peterson, RRTS®	Tina Kriegel, RRTS®
Dawn Havrilla, ATP, CRTS®	Kurtis L. Schmidt, ATP, CRTS®	Tracie Morales, ATP, CRTS®
DeAnna Potts, RRTS®	Leander Nelson, RRTS®	Vann Johnson, ATP, CRTS®
Dena Paxton, ATP, CRTS®	Leigh Ann Matthews, RN, MSN, ATP, CRTS®	Walter Tejada, ATP, CRTS®
Derek Register, ATP, CRTS®	Leslie Benjamin Todd, ATP/SMS, CRTS®	Willis Smitherman, ATP, CRTS®
Dewey L. Seagraves, ATP, CRTS®	Linda Donaldson, ATP, CRTS®	Xavier Harrison, ATP, CRTS®
Edward C. Lipositz, ATP, CRTS®	Lisa Powell, PT, ATP, CRTS®	
Emily Vennor, RRTS®	Lois Mombourquette, RRTS®	

# 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](mailto: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](mailto: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](mailto: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](mailto:aodom@nrrts.org). Our goal is to work with you, but you must communicate with us.





5815 82nd Street, Suite 145, Box 317  
Lubbock, TX 79424  
P > 800.976.7787

## 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



### CFONS



### AFONS

