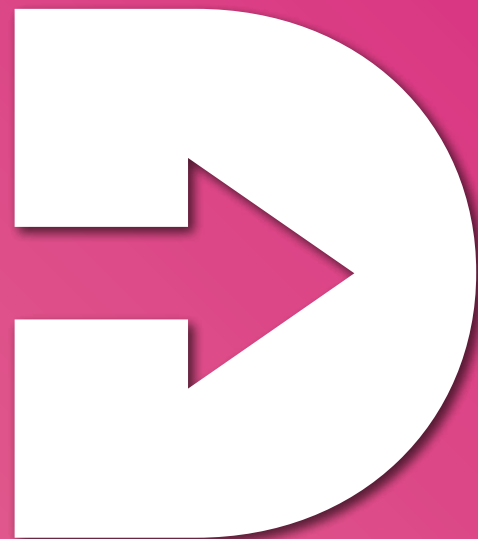


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ON THE COVER

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All participants must score a 70% on the post-test assessment to receive CEU credits.

TUESDAY, JUNE 16, 2015 | 7PM - 8PM (ET)

Power Wheelchair Access: Switch Assessment

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MICHELLE L. LANGE, OTR/L, ABDA, ATP/SMS



Power wheelchairs can be accessed by joystick or alternative access methods. Most of these alternative methods are switches. This webinar will present assessment strategies to determine the optimal switch location and switch type to provide access. A switch site hierarchy will be presented along with clinical indicators for a variety of potential switch locations. A wide array of mechanical and electrical switches will also be discussed.

Michelle L. Lange OTR/L, ABDA, ATP/SMS, is an occupational therapist with 25 years of experience and former clinical director of the assistive technology clinics of the Children's Hospital of Denver. She is a well-respected lecturer, nationally and internationally, and has written four book chapters and nearly 200 articles. She is the editor of "Fundamentals in Assistive Technology, 4th Ed.," and clinical director of NRRTS DIRECTIONS magazine. Lange is on the teaching faculty of RESNA. She is on the RERC on Wheeled Mobility Advisory Board. Lange is a credentialed ATP and SMS and is a senior disability analyst of the ABDA.

THURSDAY, JUNE 18, 2015 | 5PM - 6PM (ET)

Spinal Cord Injury: Balancing Pressure Relief and Postural Support

ANGELA DILLBECK REGIER, OTD, OTR/L, ATP



For individuals with spinal cord injury (SCI), adequate postural support serves as a foundation for participation in functional activities. Without appropriate support, function and posture often become compromised. Due to the limited mobility and lack of sensation that often accompanies SCI, pressure relief is an equally important consideration. This course will review properties and application of primary and secondary support surfaces with the goal of promoting optimal postural alignment while maximizing support surface contact in order to prevent peak pressure areas and reduce risk of skin breakdown. Application of powered seating functions and client education strategies will also be discussed.

Angela Regier, OTD, OTR/L, ATP, is an occupational therapist with a clinical doctorate from Creighton University in Omaha, Nebraska, and is a RESNA-certified assistive technology professional. Her career has focused on spinal cord injury rehabilitation in inpatient and outpatient settings. She is currently supervisor of the Wheelchair Seating and Mobility Clinic at Craig Hospital in Englewood, Colorado. She provides comprehensive seating and mobility intervention for individuals with traumatic brain and spinal cord injury. Regier has published on the topic of seating and mobility for acquired brain injury and spinal cord injury.

TUESDAY, JULY 21, 2015 | 7PM TO 8PM (ET)

"Seeing" Positioning From a Different Angle: Functional Vision Considerations in Seating and Positioning

KATHERINE L. CLARK, MOT, OTR/L, AND ERIN M. POPE, PT, MPT



Functional vision plays a crucial role in successful set up and use of adaptive equipment for seating, positioning, and mobility. Visual assessment is a key component of the

equipment evaluation, particularly for patients with a history of neurological impairment and/or complex physical needs. Given the high incidence of cortical visual impairment (CVI) and visual processing delays among this population, understanding functional vision can dramatically alter the set-up of positioning systems. It is crucial that evaluators recognize characteristic behaviors of CVI. Modifications, supports and set up considerations can result in significant changes in a patient's ability to tolerate and function within a positioning system.

Katherine Clark MOT, OTR/L, is a lead occupational therapist at the Perlman Center at Cincinnati Children's Hospital Medical. The Perlman Center is a specialty center designed to address the complex therapy, developmental, assistive technology and care coordination needs of children, youth, and adults with cerebral palsy and other complex conditions. Her background includes experience with cerebral palsy, neuromuscular disorders and complex conditions throughout the life span. Her experience includes the evaluation and integration of assistive technology systems including augmentative communication, computer access, and seating and positioning. She has specialty training in Kinesio® Taping, neurodevelopment treatment, and cortical visual impairment.

Erin Pope PT, MPT, is a lead physical therapist at the Perlman Center at Cincinnati Children's Hospital Medical Center. Pope has experience and training in sensory integration, orthotics and bracing, Kinesio® Taping, assistive technology, and adaptive equipment. Her specialties include early mobility, body weight support training, and seating and positioning.

THURSDAY, JULY 23, 2015 | 5PM TO 6PM (ET)

"I Have a Product Idea!"

LESLIE JOHNSON FITZSIMMONS, PT



Have you created a prototype and successfully used it with your clients or have an idea for a product that you would like to see manufactured to help others? Then this webinar may interest you. I will give my personal accounting of the steps that I took to bring my product (the i2i) to market

as well as alternate routes that you may consider pursuing for your own ideas. Topics covered will include provisional patents, patents, nondisclosure forms, the value of establishing a Limited Liability Company (LLC), prototypes, and advice from others who now

have had their products manufactured. Also a big healthy dose of encouragement! If at first you don't succeed try, try again – I had to!!

Leslie Fitzsimmons PT, is a licensed physical therapist with more than 38 years of treatment experience working with clients from birth to geriatric in a variety of settings including hospital, rehab, school, orthopedic office, homecare and hospice. For the past 20 years, she has been a treating therapist at New Jersey Institute of Disabilities (formerly known as Lakeview School) in Edison, New Jersey. She developed a special interest in seating and adaptive equipment and received her ATP. In an effort to improve the quality of life for her clients with poor head control, she created the i2i head and neck positioning and support system, which is now manufactured by Stealth Products. She was named the ASAH 2007 Related Services Provider of the Year for the state of New Jersey. Fitzsimmons has had the pleasure of presenting throughout the U.S. and internationally about the issues related to the importance of good seating and how this affects improved head position and control.

TUESDAY, AUGUST 18, 2015 | 7PM TO 8PM (ET)

Encouraging Consumers to Become Advocates

JENN WOLFF, OTR/L



After participating in this webinar, you may want to change your wheelchair evaluations. By preparing the consumer for the evaluation (self-evaluation form, guidance on medical history), showing equipment options for inclusion in decision making, and describing the insurance process (including why you may not be able to provide the equipment he or she chooses), you will develop well-informed consumers and create advocates who will potentially gain self-confidence and self-worth and make positive policy change that will benefit everyone. By empowering consumers, you benefit them, and you might create an extremely loyal customer base. Resources will be provided to assist you with this process.

Jenn Wolff, OTR/L, began advocating in 2010 when Medicare denied coverage of a recommended wheelchair. She became a "roller" in 2003 because of a spinal cord tumor and earned a Master of Arts in Occupational Therapy in 2005 from the College of St. Catherine. She advocates in Washington, D.C., several times a year and as manager of UsersFirst, tries to educate and motivate wheelchair users, friends and family to join the fight. She is also a board member of the Spinal Cord Injury/Disease Association of Iowa, a member of the IA Olmstead Consumer Task Force, and helps facilitate support groups for stroke, Parkinson's and SCI/D.

THURSDAY, AUGUST 20, 2015 | 5PM - 6PM (ET)

New RESNA Standard for Postural Support Devices: What Should I Know?

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KELLY WAUGH, PT, MAPT, ATP, MEMBER OF CTF



In this webinar, participants are introduced to two RESNA Standards related to postural support devices (PSDs): the RESNA WC-3 Part 1 standard on body and seating measures and a newer Part 3 standard on PSD strength testing. The selection of the most appropriate PSD for a client should be partially dependent on the quality, design, safety and durability of the product. The new Part 3 standard, a PSD performance standard, specifies test methods that provide this important information. Utilizing the knowledge gained from both of these standards can improve outcomes for your clients, and help to elevate the level of professionalism in our field.

Kelly Waugh, PT, MAPT, ATP, is a senior instructor and the clinic coordinator at Assistive Technology Partners at the University of Colorado in Denver. She is a physical therapist with more than 30 years of experience as an educator and clinician, specializing in the areas of wheelchair seating and alternate positioning. Waugh has participated in the development of wheelchair seating standards since 1998 as a member of ISO and RESNA standards committees. She has lectured extensively on the topics of wheelchair seating assessment, standardized seating measurement, custom contoured seating and nighttime positioning, to varied audiences nationally and internationally. She received her Bachelor of Arts in Human Biology and her Master of Arts in Physical Therapy from Stanford University in Stanford, California.

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CLAUDIA AMORTEGUI



Amortegui has her Masters of Business Administration and more than 20 years' experience in the DMEPOS industry. Her experience comes from having worked in various aspects of the industry, including the DMEPOS Medicare contractor, supplier, manufacturer, and consultant. For many of these years Amortegui has focused on the rehab side of the industry. Her work has allowed her to understand the different nuances of complex rehab versus standard durable medical equipment. This rare combination of industry experience enables Amortegui and her team at The Orion Group to assist Assistive Technology Professionals, referrals, reimbursement staff and funding sources in understanding the reimbursement process as it relates to complex rehab. [SEE PAGE 52](#)

ALEXANDRA (ALEX) BENNEWITH



Bennewith is vice president of government relations for United Spinal Association. Bennewith advocates for legislation and regulations regarding disability and health policy at the federal and state level. She works closely with a range of stakeholders in the durable medical equipment and supplies, prescription drug, public health and disability communities. She graduated from Brandeis University and received her Master of Public Administration from American University. [SEE PAGE 50](#)

DON CLAYBACK



Clayback is executive director of the National Coalition for Assistive and Rehab Technology (NCART). He has more than 25 years of experience in the Complex Rehab Technology and Home Medical Equipment industries as a provider, consultant and advocate and is actively involved in industry issues and a frequent speaker at state and national conferences. [SEE PAGE 32](#)

ROSEMARIE COOPER, MPT



Cooper is a RESNA-certified Assistive Technology Professional (ATP). She is currently employed at the University of Pittsburgh in the School for Health and Rehabilitation Science as assistant professor and instructor within the Department of Rehabilitation

Science Technology. She is the director of the UPMC Center for Assistive Technology and works as a clinical instructor/wheelchair seating clinician at the center. [SEE PAGE 44](#)

RORY A. COOPER, PH.D.



Cooper is the FISA and Paralyzed Veterans of America (PVA) chair and Distinguished Professor of the Department of Rehabilitation Science and Technology, and professor of Bioengineering, Physical Medicine and Rehab, and Orthopedic Surgery at the University of Pittsburgh. Cooper is founding director and VA Senior research career scientist of the Human Engineering Research Laboratories, a VA Rehabilitation Research and Development Center of Excellence in partnership with the university. Cooper is a former president of RESNA and a member of the RESNA/ANSI and ISO Wheelchair Standards Committees, and IEEE-EMBS Medical Device Standards Committee. [SEE PAGE 44](#)

JIM FISS, ATP, CRTS®

Fiss is a NRRTS Registrant who works for Alliance Rehab in St. Louis, Missouri. [SEE PAGE 66](#)

SHELLY GRAY



Gray is a consumer advocate who is also Ms. Wheelchair Texas. [SEE PAGE 16](#)

MICHELLE L. LANGE, OTR/L, ABDA, ATP/SMS



Lange is in private practice, Access to Independence, in Arvada, Colorado. She is a Friend of NRRTS and is the DIRECTIONS Clinical Editor. [SEE PAGES 38](#)

ROBERT "JOE" MCKNIGHT, ATP, CRTS®



McKnight is president of Clinical Development for Access Medical Inc. in Carlsbad, California. He has been a NRRTS Registrant since 2013. [SEE PAGES 24](#)

MIKE OSBORN, ATP, CRTS®



Osborn is president of NRRTS. Osborn has been a NRRTS Registrant since 2000 and is part owner of Alliance Rehab and Medical Equipment in Ozark, Missouri. [SEE PAGE 14](#)

IAN M. RICE



Rice is an assistant professor in the Department of Kinesiology and Community Health Sciences at the University of Illinois, Urbana Champaign. [SEE PAGE 40](#)

LAUREN ROSEN, PT, MPT, MS, ATP/SMS



Rosen is a physical therapist and seating and mobility specialist at St. Joseph's Children's Hospital in Tampa, Florida. She is the program coordinator for the Motion Analysis Center, a three-dimensional motion analysis lab where she also runs a pediatric and adult seating and positioning clinic. Rosen is a

Friend of NRRTS. [SEE PAGE 28](#)

ANDREA VAN HOOK



Van Hook is the communications and marketing manager at RESNA. She has more than 18 years' experience working on successful, award-winning campaigns that promote equal access to health care, education and employment of diverse populations, including people with disabilities. [SEE PAGE 58](#)

JILL S. VOGEL, JD, RN



Vogel is a health care attorney at Brown & Fortunato, P.C. She represents home medical equipment companies, pharmacies, hospitals, and other health care providers. She is Board Certified in Health Law by the Texas Board of Legal

Specialization and the New Mexico Board of Legal Specialization. [SEE PAGE 36](#)

TOM WHELAN



Whelan is vice president of product development at Ki Mobility and president of WoundZoom Inc. He is also a Friend of NRRTS. [SEE PAGE 20](#)

JENNIFER WOLFF, OTR/L



Wolff is the manager of United Spinal Association's Advocacy Alliance. Wolff is an occupational therapist and wheelchair user from Waverly, Iowa. [SEE PAGE 50](#)

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MANUFACTURERS' REPRESENTATIVES AND CRT PROVIDERS

Complex Rehab Technology (CRT) is not easy to provide. I have often written over the past couple of years about quality outcomes and the difficulties or obstacles that we face on a regular basis to obtain those outcomes. I have tried to stress the importance of those outcomes and the high standards of the individuals that work in the CRT arena seeking to do things to make a difference. One of the relationships that is extremely important for a CRT provider to achieve high quality outcomes in today's environment is the basic relationship we have with our manufacturers' representatives. I think this relationship is at times overlooked in our daily work life. I have done it myself. However, when I have a need for demo or trial equipment, my manufacturer's rep is the first person I call.

Early in my career with CRT, I was fortunate enough to have a great mentor to ask questions of and look to for assistance when I was in need. I also had a very strong manufacturer's representative at the time who I called upon on a regular basis for guidance as well. That relationship with my manufacturer's rep turned into not only a strong working relationship, but a friendship that helped me learn about respect for the representatives that I worked with. Many times we need to put our hands on a piece of equipment, so it can be trialed. In some cases trialed over a long period of time. It is difficult in some cases to try a mobility device one time and have full confidence that you are making the correct selection. Many times it can take several attempts with multiple items to find the perfect fit. Without a manufacturer's rep you can count on, these trials can be extremely difficult to make happen.

The industry has changed and evolved, and with it our manufacturers' reps have also. I know for my company and our staff, the reps have become not only knowledgeable about equipment they represent but they also have to be well-versed in parts, returns, contracting and even take calls at times about where we might be able to find something the company they represent doesn't handle.

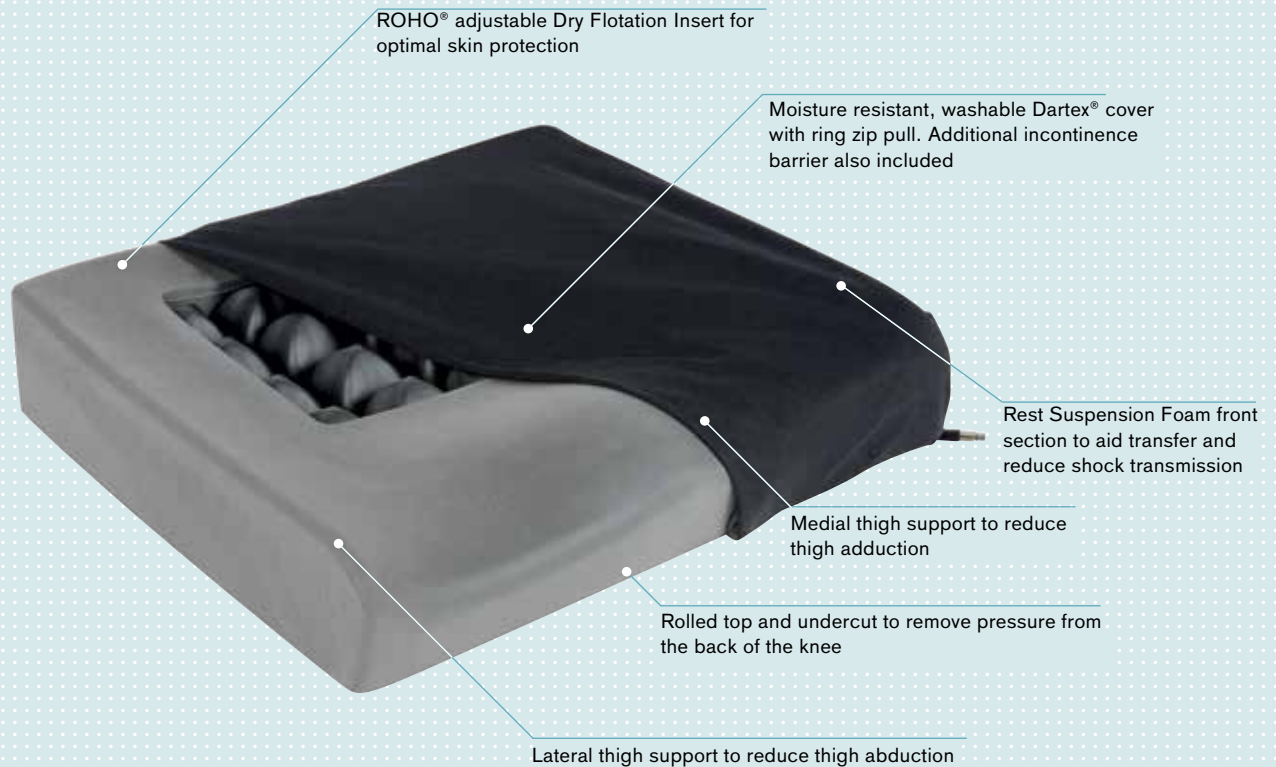
Typically, when we contact them about a need it isn't a need we have in a week or two. It is something we need now or yesterday. The relationship between a CRT provider and manufacturers' representatives is as important to quality outcomes as any relationship we have in our industry today – at least for me. As I thought about this article I realized within a three-day period, I talked to six reps and one customer service person. The manufacturers' representatives are not just folks we call when there is a need. The CRT provider and the manufacturer's representative is a vital relationship to the success we have as CRT providers seeking quality outcomes.

Thank you to the manufacturers' reps for the work you do and for making a difference.

THE RELATIONSHIP BETWEEN A COMPLEX REHAB PROVIDER AND MANUFACTURERS' REPRESENTATIVES IS AS IMPORTANT TO QUALITY OUTCOMES AS ANY RELATIONSHIP WE HAVE IN OUR INDUSTRY TODAY – AT LEAST IT IS FOR ME.

CONTACT THE AUTHOR

Mike may be reached at mosborn@alliancerehabmed.com.



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IF YOU ARE LUCKY, YOU WILL GET OLD

When Shelly Gray was diagnosed with multiple sclerosis (MS) 16 years ago and began to consider what this would mean for her life going forward, being Ms. Wheelchair Texas 2015 was not on her list. And yet, now she has earned this title and is gladly fulfilling the responsibilities that come with it.

A friend of Gray's had mentioned the Ms. Wheelchair of Texas event more than a year ago, but at the time Gray felt she was too busy to consider it. "Then I did some research and talked to former winners," she explained. "I like that this pageant does not take outward appearance into account." Contestants are between the ages of 21 and 60 and utilize a wheelchair for 100 percent of their daily mobility. Each selects a disability issue to support during her reign if chosen. Judges look for a woman who radiates beauty and poise because of her accomplishments, speaking skills and personality.

"IT IS DIFFICULT TO
KNOW WHEN I
WILL NEED ADDITIONAL
HELP. SOMETIMES
I NEED HELP, BUT
OTHER TIMES I CAN
DO FOR MYSELF."

In her capacity as Ms. Wheelchair Texas, Gray is expected to make public appearances and visit major cities in the state. She will also represent Texas at the Ms. Wheelchair America pageant in Des Moines, Iowa. Gray's experience with the Texas event, the largest Ms. Wheelchair pageant, has prepared her for the weeklong national event. "The local pageant was great," Gray said. "The whole weekend was wonderful. I learned about other advocates, and the speakers were very good."

The disability issue Gray has chosen to highlight is disabled parking access. "This affects many people: the disabled, the aging population and those with temporary disabilities. If you don't need it, someone you know will." Gray also pointed out that anyone can participate in improving disabled parking access. "Many don't know that state law allows certain government units such as county law enforcement to enlist volunteers to enforce handicapped parking (Texas Transportation Code Chapter 681:0101)," she said. "Specific training is required, but this is a way to involve more people in enforcing misuse of disabled parking privileges." Gray believes abuse of this privilege is due to a lack of education. "For example, not everyone understands the extra space needed for a ramp van."

At the time Gray was diagnosed with MS in 1999, she was living in another state, had just finished her second year of law school, and was interning with a large law firm. The disease in which an abnormal response of the body's immune system is directed against the central nervous system is unpredictable. Gray's experience has

been similar to that of a paraplegic. "This disease has given me solidarity with others," Gray said. "I advocate for all disabilities, not just MS."

The first symptom Gray experienced was fatigue. Immediately following her diagnosis, her life didn't change much. "I had to get a disabled parking permit, because I couldn't walk very far," she explained. "I couldn't pick up my feet, so walking was tough. Going forward I've experienced the problems that anyone in a wheelchair has." Gray lists spasticity as her biggest problem. "It can be very painful." Approximately five years after learning she had MS, Gray was still walking unassisted. However, within two years she was using a walker, and since 2008 she has been dependent on a wheelchair for mobility.

"My experience is that just when you get used to something, it changes," Gray said. "You never know what your life is going to be like when you wake up." This uncertainty makes it difficult to schedule outside help to provide the assistance she might require for daily needs. "It is difficult to know when I will need additional help. Sometimes I need help, but other times I can do for myself," Gray said. "It can be really frustrating." She explained that getting dressed for work in the morning usually takes an hour. "There are wardrobe challenges." Gray usually shops for clothes online and used a local personal shopper at a national department store to select appropriate clothes for the Ms. Wheelchair of Texas event.

Even though she was on a waiting list for a long time, Gray certainly feels that having the service dog was well worth the wait and recommends this option for others with disabilities. “There are organizations in every state that train dogs.” If someone is interested in pursuing this, Gray recommended contacting an organization for your particular disease or Assistance Dogs International, an organization whose

(CONTINUED ON PAGE 18)

IF YOU ARE LUCKY, YOU WILL GET OLD
(CONTINUED FROM PAGE 17)

purpose, according to its website (<http://www.assistedogsinternational.org>) is “to improve the areas of training, placement and utilization of assistance dogs” as well as educate the public about assistance dogs and advocating for the legal rights of people with disabilities partnered with assistance dogs.

Gray realizes the importance of taking care of herself and exercises regularly on an autoambulator which she describes as a treadmill with a harness and robotic legs. The machine simulates walking and helps Gray’s posture, improves her circulation and helps maintain bone density. Gray explained her commitment to this therapy, “If there is a miracle and I am cured of multiple sclerosis, I want my legs to remember how to walk.” Occupational therapy on horseback helps Gray with balance and “teaches my body to pay attention.”

“IF THERE IS A MIRACLE
AND I AM CURED OF
MULTIPLE SCLEROSIS,
I WANT MY LEGS TO
REMEMBER HOW TO WALK.”

In addition to the day-to-day difficulties that MS has brought to Gray’s life, there are concerns about the future. “With MS if you are lucky, you get old. I had not anticipated retiring from work as early as may be necessary and did not expect that I would need so much to pay for retirement,” Gray said. “It will be difficult to work long enough to get my pension. With the responsibility of a child, I am facing a real challenge of meeting future needs, such as long-term care.”

Regardless of these uncertainties, Gray recognizes positive aspects of

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her disability. "I am grateful to MS in the sense that it has made me a better person. For everything I can't do, there are many more things I can do. I concentrate on making the glass half full. It is an effort, but if I don't do that it will be easy to fall into depression."

With this positive attitude Gray is a sincere, effective advocate for all disabilities and will certainly make her home state proud at the Ms. Wheelchair of America event in July, 2015.

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More information about the Ms. Wheelchair Texas event can be found at www.mswheelchairtexas.org.



SUPPORTING EVIDENCE

PRODUCT DEVELOPER EMPHASIZES
IMPORTANCE OF UNDERSTANDING
THE SCIENCE BEHIND DESIGNS

INDUSTRY LEADERS

WRITTEN BY: DANETTE BAKER

Tom Whelan has come full circle in his 35-year career, having started in the Complex Rehab Technology industry as a technology supplier. His passion, however, has always been product development — and he has done well in that area. Whelan is an inventor on more than a dozen U.S. patents for assistive technology, including the Quickie® IRIS™, Jay® J3™ Back, Jay® J3™ Cushion, and Focus CR.

DIRECTIONS recently had the opportunity to visit with Whelan, vice president of product development at Ki Mobility and president of WoundZoom Inc. to discuss his start in the industry and his accomplishments.

HOW DID YOU BECOME INTERESTED IN THE MEDICAL EQUIPMENT INDUSTRY?

It was a little random, but Jeff Shugarman's — my best friend in high school — dad owned a surgical supply company in Toledo, Ohio. As a part-time job while as I was going to school, I was helping them remodel the pharmacy and business location. I moved on to other things, but Jeff always wanted to get into complex wheelchairs — this was back in the '70s — and had asked me to come work with him, but I kept turning him down.

For personal reasons, I ended up having to go back to Toledo, Ohio, and finally took Jeff up on his offer and together we opened his rehab department. Back in the '70s, there weren't really any tilt-in-space wheelchairs, so we built our own tilt-in-space frames, and we did our own custom seating as well as van modifications and home modifications.

This has been an industry I feel like I was meant to be in and one I certainly feel a privilege to be in. Toledo is a big automotive town, and the goal for a lot of my friends in high school was to get a job at the Jeep or the Chrysler plant. So to be able to have a career without having to have a lot of the traditional education and then get to help people and make a good living and get all the amazing things out of this career that I've gotten out of it, for me was just incredible when compared to working in an automotive plant.

I started out in college as a pre-med major. Back then, one of the things you had to have to be in a medical school was diversity. So I was actually in a pre-med program and majoring in theater, but I was on the technical side of the theater. I had been a stage manager in high school and an assistant stage manager at the University of Toledo. I was really into stage lighting, set construction and set design, but I had a counselor who basically spent all day telling me no theater major was going to get into medical school. After a year and half I believed him and decided to do something else.

I had a couple of different career paths before I got into this industry. One of those was working in a business where the owner was interested in me eventually taking over the business. He had me go back to school and take a couple of years of accounting, basically just a core set of classes in business. Everybody should do that if you are going to be in business to learn how business works. I studied accounting, some statistical business analysis, the core math for business.

WHAT ARE SOME OF THE MOST SIGNIFICANT MILESTONES IN YOUR CAREER?

I measure the milestones in my career by products — the Zippie GS, Joerns UltraCare Bed, Folding Zippie TS, Quickie® IRIS™, Jay® J3™ Back, Jay® J3™ Cushion, the Focus CR, and the New Little Wave Click — and the education that has gone along with them both in terms of applying true science to meet the needs of the market as well as sharing the knowledge with clinicians to get the right assessment to accomplish the goal for the patient.

Also, coaching the Toledo Marathon Silver Streak wheelchair basketball team and then the Charlotte Cyclones, which we were able to establish an affiliation with the Charlotte Hornets, which became one of only five U.S. wheelchair teams affiliated with an NBA team. In 1996, one of the coolest things ever happened to me. Sunrise Medial

sponsored the Paralympics, and I got to spend a month in Atlanta building and managing the Paralympic Village wheelchair repair center for all of the athletes.

WHO HAS BEEN INSTRUMENTAL IN THOSE ACCOMPLISHMENTS?

I was lucky because back in the day at Shugarman's, there was also Miller's in Akron, Ohio, and Hamilton's in Cincinnati, and they were all huge in the emerging industry called rehab equipment. I met Adrienne Bergman, who started me out with an understanding of biomechanics and the goals of seating, at a weekend seminar at Hamilton's. Simon Margolis was also one of those I learned a ton from. The folks at Miller's were doing some neat things in custom work. After being an ATP for Shugarman's, I got the opportunity to work for Meyra, a German wheelchair manufacturer, in Charlotte, N.C., developing their first powerbase for the U.S. market. Norm Scott and Kirk McKenzie were running the office in the U.S. for them. On the side, they had also started a business called Snug Seat, and I got to work with them on the original Snug Seat development. Those were my first experiences at product development — and I fell in love.

Rita (Hostak) Stanley was also somebody that influenced me a lot. She got me started in a lot of coding and legislative work and that is something I really attached myself to. That's just the way I am; I tend to get involved in something, and I go all the way. It becomes not just my job, but also my life as well.

That is what led me into coaching wheelchair basketball. I showed up one day at wheelchair basketball practice, because one of the players had gotten a new chair and I was delivering and adjusting the chair for him. I started to look at the technology

I GOT THE OPPORTUNITY
TO WORK FOR MEYRA, A
GERMAN WHEELCHAIR
MANUFACTURER, IN
CHARLOTTE, N.C.

they were using and realized it wasn't that good. I quickly went from being the guy hanging around at practice tweaking wheelchairs to putting together a full wheelchair basketball program while managing my own company in Charlotte.

When Meyra's shut down the Charlotte office, I opened my own business, Functional Rehab Equipment with the help of my friend Jeff Auter. So now I'm running a complex business and being head coach of the Charlotte

(CONTINUED ON PAGE 22)

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SUPPORTING EVIDENCE (CONTINUED FROM PAGE 21)

Cyclones wheelchair basketball team. That led me into starting to build stuff like a throwing platform for one of the players who was also a Paralympian. Learning about wheelchair basketball made me have a better understanding of wheelchair propulsion and design ergonomics. It got me started on seating, because we would have a guy on the team who go down with a pressure ulcer. I wanted to try to figure out why that happened. Seating for orthopedic reasons was also part of my early work at Shugarman's, which is what Adrienne and Simon also focused on, but seating for tissue integrity became a big part of what I wanted to study and understand. I eventually sold Functional Rehab Equipment to Charlotte Rehabilitation Hospital and went back to Shugarman's to help with a contract as the in-house supplier at Rehab Institute of Michigan (RIM).

I met Tom O'Donnell, president of Sunrise Medical, while at RIM and was asked to interview for a product manager position at Quickie. I got to work with Doug Munsey, who I followed to Joern's, the long term care division of Sunrise. I returned to the Quickie/Jay side of Sunrise in growing to a global position, which exposed me to a much larger world of complex rehab. It was great seeing how the industry operated in other countries as well as variances in the product

I GRILL A LOT OF MY ENTREES
AND DO A LOT OF SAUCES, AND
I HAVE 10 PREPS FOR MASHED
CAULIFLOWER TO SUBSTITUTE
FOR TRADITIONAL STARCHES
— ONE OF WHICH TASTES JUST
LIKE A LOADED MASHED POTATO.
MY TASTE TEST IS SIMPLE:
'WOULD YOU HAVE PAID FOR
THIS MEAL AT A RESTAURANT
AND LEFT HAPPY?'

offering. Five years ago, I started WoundZoom Inc. We market a low-cost, easy-to-use, non-contact wound measurement device, based on technology licensed from the Georgia Tech Research Corporation. We have developed it into a complete technologies for the wound care market. WoundZoom came out of my interest in tissue integrity and working with Dr. Stephen Sprigle from Georgia Tech. He's the one who got me started on taking more of a true research approach to product design and development, proving with science that the concepts we knew to work actually do.

After my year of no-compete with Sunrise ended, Doug Munsey, who was now with Ki Mobility, called me again and wanted me to develop the next generation of adult tilt-in-space chairs, so I went to work with Ki Mobility in product development.

I've continued my interest and involvement in complex rehab as a consultant with Ki Mobility's research and development of wheelchairs and wheelchair seating, initiating a new product for the adult tilt-in-space market. That led to me accepting a position as their vice president of product development and, subsequently, the co-location of WoundZoom with Ki Mobility in Stevens Point, Wis., so I can manage my responsibilities for both companies.

WHAT AREAS IN THE INDUSTRY HAS WOUND ZOOM INC. TAKEN A LEAD IN?

WoundZoom is a digital documentation system for wound care. Wound care is a \$22 billion industry in the U.S., but it is so fragmented over so many points of care and medical specialties that it's relatively unknown. Half of all wound care is pressure ulcers.

WHAT'S ON THE HORIZON FOR WOUNDZOOM?

We have some exciting new products on our roadmap, and we are growing a great team to make them happen. Medical software and imaging technology is exploding, and it's really exciting working with big companies in the industry. The opportunity to learn is very stimulating.

WHAT ARE THE FUTURE CHALLENGES FOR KI MOBILITY AND THE COMPLEX REHAB INDUSTRY AS A WHOLE?

For the industry as a whole, it along with the entire world of medicine is changing. CMS (Centers for Medicare and Medicaid) and the government have cracked down on payments and are looking at the least costly effective treatment — and we are becoming part of this. Eventually data will drive all of health care, because decisions will be based solely on efficacy.

I want to prove our industry can support innovation and still be cost effective. If we really want to improve how our industry is perceived, we have to look at it in a different way. We have made great strides in establishing the ATP, but we have to keep the hammer down and get more science involved and more research and professionalism. That is how complex rehab will get the recognition it deserves and will be preserved as an industry of importance.

This is not unusual, it's the same path toward professionalism taken by prosthetics and orthotics industry.

WHAT CHANGES WOULD YOU LIKE TO SEE IN THE INDUSTRY?

We need to become a collective industry. We need to be one not of manufacturers and complex rehab suppliers, but one that encompasses both as well as all of the support groups and end user groups. We have to all come together to fight for complex rehab, and we all have to be on the same page in that fight with a collective voice and a collective push.

People such as Rita Stanley and Marcia Nussgart have been so influential, because of how they look at the world. They look at it from the perspective of 'How do I deal with the realities of the politics and legislative and administrative bureaucracies?'

We are an industry tainted by fraud and abuse, and so education will be key in the approach. I've had the opportunity to present to CMS on a number of occasions. They are an organization that needs a lot of education when it comes to CRT, but for the mean time, we have to be brave enough to be our own police.

We should be doing a little more in coordinating research in our industry, spending a little money out of the pool that we have to get recognition for what we do that is positive, and we can prove it.

WHAT HAS KEPT YOU WORKING IN THE INDUSTRY?

Having been a wheelchair basketball coach, I can't remove myself from the industry. It has never been just a job, because there are too many people relying on us to continue with the technology to level the playing field. Too many of those people are not just customers, they have become my friends. There are too many moms who have been told their children will never walk again. I could give you endless stories. But once you touch someone's life and improve their quality of life, talk about runner's endorphins. The more Stephen Sprigles out there advancing the science of our technology and the more Rita Stanleys leading for policy changes, gives me no other choice but to continue.

WHAT OTHER ROLES DO YOU HAVE IN THE MEDICAL EQUIPMENT/COMPLEX REHAB INDUSTRIES (BOARDS, ASSOCIATION MEMBERSHIPS, ETC.)?

I was on the initial board of directors for NRRTS, serving as a regional director until 1995. Additionally, I have presented at various regional and international education venues on wheeled mobility and seating including the International Seating Symposium, RESNA's Annual Conference and the European Seating Symposium. I am also active in several work groups for NCART including government relations and reimbursement policy development, and I've coached wheelchair basketball for 12 years. I have had the opportunity to present at the Symposium on Advances in Wound Care and been a guest lecturer at Georgia Tech.

WHAT DOES A TYPICAL WORK DAY/ WEEK LOOK LIKE FOR YOU?

My job is unusual in that I have two part-time jobs, yet do both of them almost full time. My work, with WoundZoom and Ki Mobility is non-stop interaction with teams of great people. For me, it's a lot of mentorship and practicing servant leadership — sharing the knowledge I've gained over the past 35 years in the industry. I blessed with an understanding wife who values what I do.

WHAT'S LIFE OUTSIDE OF THE 9 TO 5 LIKE FOR TOM WHELAN?

Work for me is not work; I love what I do, and I get to work with outstanding people. Outside of that, I love to cook, and I have a passion for pairing foods and wines. I fancy myself a decent cook and create a lot of my own recipes. I grill a lot of my entrees and do a lot of sauces, and I have 10 preps for mashed cauliflower to substitute for traditional starches — one of which tastes just like a loaded mashed potato. My taste test is simple: ‘Would you have paid for this meal at a restaurant and left happy?’ Additionally, my wife is addicted to all of the home improvement shows, and the result is that my skills have become forced to be top notch. We recently bought a new construction home that wasn’t finished all the way, and we are finishing it suite our style and needs. We live on a small lake in town, and our home sits on the channel. Once spring sets in, I’ll spend a lot of evenings in the canoe and hopefully get out on the golf course more.

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MCKNIGHT FINDS GREATEST REWARD IN DEVELOPING CLINICIANS, BUSINESS LEADERS

As a vice president of Clinical Development for Access Medical Inc. in California, Robert J. (Joe) McKnight finds himself wearing many hats. His favorite solutions are teaching, developing the staff and serving his patients. All in a day's work. In Southern California, another ho-hum day in paradise.

Joe McKnight, ATP/SMS, CRTS®, spends a good amount of time training ATP, SMS, RTS and tech staff, as well as providing in-service education training for payers, therapists, rehab facilities, hospitals and more.

"We currently have three branches in California, soon moving to four with some others under way," McKnight said. "I help oversee clinical development where we strive for best outcomes and ideal patient product matches where our patients have the best products and services currently available. We strive to assist our clients as they prioritize their needs and goals to help them gain the best benefit from the technologies we offer.

McKnight has come to believe people and companies work best with prudent and lean management, ongoing clinical education, repeating business analysis and employee development. He is a strong proponent of continuing education to increase the stature of the profession. In our everyday operations, we are all teachers and students and should never forget how important learning is.

McKnight observed: "Those who really enjoy seating and positioning should take the time to study, go out, and get their SMS certification." He noted that only a handful in the country carry the specialty designation. "They should get credentialed and be proud of it. It creates stature in our field and with payer sources. We're

not going to get any further increases in payments for what we do unless they understand they are paying credentialed people to do it."

Moreover, he noted they should also join NRRTS and become RRTS® certified and eventually CRTS® certified showing that they are competent and credentialed as suppliers understanding the complexity of our industry, its rules, laws and demands.

McKnight said in addition to teaching about new products and opportunities and offering ATP and SMS prep courses, another hat he enjoys is working as an ATP

in the field, particularly with more complex cases including MS, ALS and other neuromuscular diseases. It keeps him balanced in the field and his skills current.

"ALS is a tough, tough disease," he said. "It's tough on families, tough on clients. Anything we can do to help manage them, get equipment under them as soon as possible we strive for. Their chairs are modified quite a bit through the disease process, and goals in seating for ALS patients are very different than for a lot of other patients. We must care for them very carefully."

McKnight's medical background is extensive. He began working for an oxygen company at age 16 and later became an EMT and paramedic. After attending Deaconess School of Nursing and training at St. Mary's Medical Center, he worked in the ER, OR, and critical care setting and ortho - neuro, but always had a foot in home care.

"I evolved through home care," he said. "Back in those days, we did everything - all the durable medical equipment and custom rehab." In the '90s he continued to work in rehab, then sold his Nevada home care company in 1996 and started doing purely rehab, which he's been doing ever since.

"It wasn't hard to move into the field of custom rehab," he said. "Half of my family is in engineering, the other half is in medicine. It's a good background for what we do, gives a good clinical understanding of what patients need."

"IT'S ALREADY HAPPENING - THERE ARE A LOT OF OPPORTUNITIES TO IMPROVE PATIENTS' LIVES, AND STILL I THINK THERE ARE GOOD OPPORTUNITIES TO BUILD GOOD BUSINESSES, THERE ARE GREAT MANAGEMENT OPPORTUNITIES."

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CHALLENGES AND OPPORTUNITIES

Like so many industry professionals, McKnight finds diminishing reimbursements to be one of the biggest challenges.

“Provision of good clinical care, good clinical outcomes in light of diminishing reimbursements is certainly the No. 1 challenge,” he said. “Another issue is educating payer sources on what we do as an industry. They need to understand we are Complex Rehab Technology; we need to become a separate rehab benefit. We need to educate on this. Many of us have been doing this a long time, working hard at it, and we’re tired of diminishing reimbursements, of the cuts and changes and embezzlement from CMS, from what we do for patients. We are tired of being unable to provide the level of care complex rehab patients need. It’s not cost effective to do so, because patients wind up back in the hospital.”

“WE CAN TAKE ATPS TO THE NEXT LEVEL BY PROVIDING GOOD MANAGEMENT TRAINING, AND BUSINESS SENSE WITH GOOD MEDICAL TRAINING TO HELP ATPS ON THE SUPPLIER SIDE SO THEY CAN PROSPER FINANCIALLY AND BE SUCCESSFUL AND DELIVER GREAT CARE WITH GOOD OUTCOMES.”

Despite ongoing funding challenges, McKnight believes the opportunities in the field to be tremendous. “You can see where assistive technologies are expanding at such a rate into so many different fields, where ATPs have

(CONTINUED ON PAGE 26)

MCKNIGHT FINDS GREATEST REWARD ...
(CONTINUED FROM PAGE 25)

opportunities to do more than rehab,” he said. “It’s already happening – there are a lot of opportunities to improve patients’ lives. I still think there are good opportunities to build good businesses, and there are great management opportunities.”

McKnight thinks with proper training, the sky’s the limit for ATPs. “We can take ATPs to the next level by providing good management training and business sense with good medical training to help ATPs on the supplier side so they can prosper financially and be successful and deliver great care with good outcomes,” he said.

“WHAT IS TECHNOLOGY WITHOUT SOMEONE TO MAXIMIZE ITS BENEFIT TO PEOPLE WHO NEED IT MOST?”

Moreover McKnight noted that an ATP can move to the automotive industry, education sector or augmentative and assistive fronts.

“They can teach computer science, move into seating, sales, manufacturing, engineering or any number of applications of assistive technology with this credential. Just look at all the different things they can do. You want to talk about a field with unlimited opportunities, this is it. This is the wave of the future.

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PERSON FIRST. DISABILITY SECOND.

CLINICALLY SPEAKING

WRITTEN BY: ROSA WALSTON LATIMER

Lauren Rosen, PT, MPT, MS, ATP/SMS has been a physical therapist for almost 20 years and is currently a physical therapist and seating mobility specialist at St. Joseph's Children's Hospital in Tampa, Florida. She is the program coordinator for the Motion Analysis Center, a 3-D gait lab that analyzes how children with disabilities walk. In addition, Rosen oversees a wheelchair seating and positioning clinic for children and adults. She also serves on the board of directors of the Rehabilitation Engineering and Assistive Technology Society of North America (RESNA). "Throughout my career, I have always worked with people who use wheelchairs," Rosen explained. "I really love what I do, and I love this industry. I hope we can get past some of the barriers, so we can move forward. Nothing makes me happier than to help make a difference in someone's life."

A well-respected professional, Rosen is eager to continue learning to better serve her clients, and she is generous with her time to help other professionals when possible. She offers these overriding principles that guide her work:

- Work with others who are knowledgeable;
- Listen to your clients;
- Don't "seat" from the text books;
- Understand people with disabilities.

"I AM AS GOOD AS I AM,
BECAUSE WHEN I WAS
IN PT SCHOOL I WORKED
WITH ATHLETES WITH
DISABILITIES. EVERY
SINGLE PERSON TOLD ME
HOW BAD THEIR FIRST
CHAIR OUT OF REHAB
WAS, AND I LISTENED AND
LEARNED FROM THEM."

Rosen gains knowledge from others in the industry and often leaves a conference with valuable, practical information. "Just talking to others in this industry at conferences I frequently come away with things that I'm going to change in my practice." She considers the professional socialization aspect of these gatherings very important in providing an opportunity to interact with others in the industry. "I'm in a department of one, so I need others to discuss complicated cases when I'm not sure of the best equipment to choose," Rosen said. "Or maybe I'll ask, 'I'm going to lobby my congresswoman – what would you say?' I've developed meaningful friendships through chatting outside the educational format or the organized meeting, although those certainly also serve a valuable purpose."

Affiliation with professional organizations and individuals who share her professional goals are important to Rosen. She views NRRTS as "the only group that lobbies with NCART for our industry as strong as it does." This commitment drew Rosen to NRRTS, and she views her opportunities to lecture and participate in CELA as being especially beneficial to her and to the industry. "I attend the International Seating Symposium almost every year and that is where I usually get the most practical information."

Rosen strongly encourages developing effective interpersonal skills and values the personal aspect of her work. "I am as good as I am, because when I was in PT school I worked with athletes with disabilities," Rosen explained. "Every single person told me how bad their first chair out of rehab was, and I listened and learned from them."

"I live for those 'aha' moments," Rosen said. "I love finding solutions and being a part of experiences such as seeing a 19-year-old operate a power chair for the first time. It is important to be personally involved with your clients."

Rosen adheres to the philosophy that the better you can get to know the lives of people with disabilities the better you can help them. All deliveries for Rosen's clients happen in the clinic, so she can be sure the equipment is right with the individual. "If you don't see the end point of what you are doing, then you don't know what is right or wrong,"



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“IN MANY CASES, THE PROFESSIONALS INVOLVED DIDN’T NECESSARILY HAVE THE KNOWLEDGE AND EXPERIENCE TO PROVIDE THE EQUIPMENT, YET OFTEN I HAVE TO TELL THE CLIENT THERE’S NOTHING I CAN DO.”

Rosen explained. “Even with the best intentions and planning, some things turn out to be the wrong choice for a client and need to be changed.”

It is no surprise that Rosen counts funding as the greatest challenge she faces. “Knowing someone needs a piece of equipment, but not being able to get it for them is a difficulty with which I’m familiar,” she said. “Rules have tightened, and it is harder and harder to get the equipment a client needs.”

Unfortunately, because Rosen is considered an expert in wheelchairs in the area where she works, she often gets the wheelchairs that were “done wrong.”

“I spend a lot of time trying to ‘fix’ what well-meaning therapists and suppliers have done,” Rosen continued. “In many cases, the professionals involved didn’t necessarily have the knowledge and experience to provide the equipment, yet often I have to tell the client there’s nothing I can do.” This happens frequently because if a chair is wrong, it is very difficult to get funding for a new and/or different chair. “These situations make me very frustrated and sad,” she said. “The chair isn’t wrong because the therapist followed the basic seating rules, but it is just wrong for that client.”

(CONTINUED ON PAGE 30)

PERSON FIRST, DISABILITY SECOND (CONTINUED FROM PAGE 29)

Rosen believes that regrettably many PT programs don't teach a lot about wheelchairs. "I was fortunate to learn the wheelchair component from industry leaders. I was very lucky."

Rosen does perceive some positive movement in the industry to impact funding problems. "This will be the third year for legislation to come before both Houses of Congress regarding funding," she said. "There is some acknowledgement now in Congress that this is a specialty area. I believe it has a chance of passing."

She also has observed more recognition of the challenges faced by clients by the media and the public in general. However, Rosen takes issue when athletes who use wheelchairs are not recognized as athletes and

reporting tends to be feel good stories rather than focusing on the individual. "I wish the guy who has a disability who wins a marathon would be in the sports section rather than the lifestyle one," Rosen said. "I consider myself a challenged athlete because I'm not in the best shape; however, if I were to win a marathon I'm pretty sure the story wouldn't be in lifestyles." Rosen concedes that regardless of how these stories are reported at least the information gets to the public and helps them realize the human side of people with disabilities. "There should always be more focus on them as a human and not on the disability. Person first, then disability," Rosen emphasized.

Rosen's dedication to her profession was evident when she was asked recently what she did for fun. She answered with a laugh, "I've heard that people have free time and hobbies, but most of what I do relates to my work." She did admit that she tries to get outdoors as much as possible and enjoys paddle boarding; however, she doesn't do that as often as she'd like. Her dedication to the tasks at hand and the fulfillment from helping her clients keeps her motivated. "I love the moments of people crying from happiness in my office," Rosen said. "I get to surprise people all the time with what they are capable of doing. I especially like it when I surprise parents with what their children can do." Clinically speaking, it doesn't get any better than that.

CONTACT

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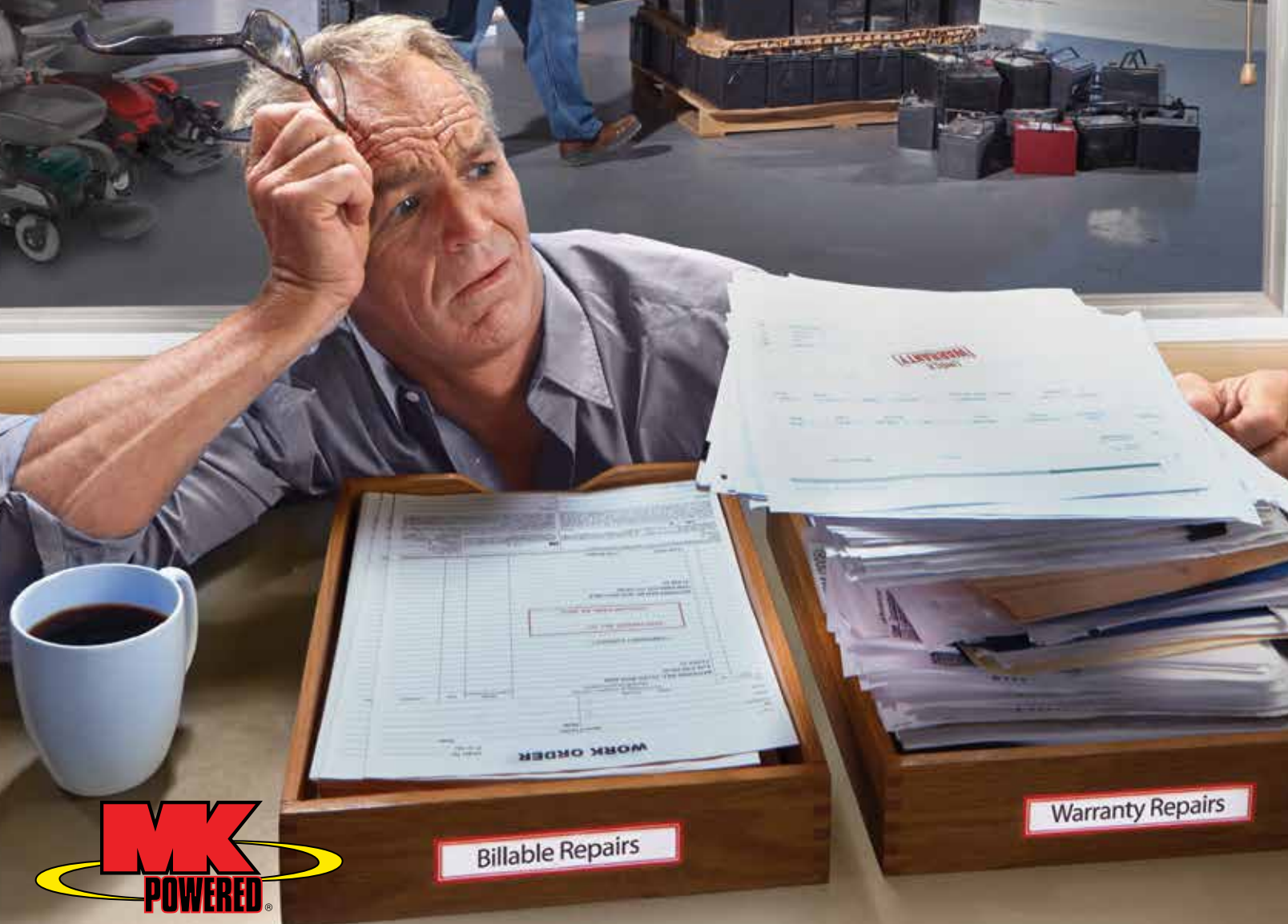
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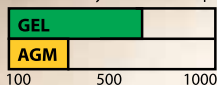
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NATIONAL CRT CONFERENCE

CRT UPDATE

WRITTEN BY: DON CLAYBACK

The third annual NCART/NRRTS National CRT Leadership and Advocacy Conference was held in Washington, D.C., from April 21 to 23. We're happy to report it was a big success.

The conference brought 190 attendees together in one place for education, advocacy and networking, all focused on promoting and protecting access to Complex Rehab Technology (CRT). Attendees included providers, manufacturers, consumers, clinicians and other advocates. The energy and commitment to advocacy was very high and translated to a record of 260 Congressional office visits during Capitol Hill Day.

The Leadership Day provided a forum for excellent business speakers and dialogue. The sessions covered: dealing with and building through change; alternative payment systems that are competing with the fee-for-service model; the direction and needs of the industry as seen by an industry CEO panel; and open discussion through an old-fashioned town hall meeting. A fun-filled, casino-themed evening "CRT United Reception" capped the day.

A SUCCESSFUL EVENT LIKE
THIS DOES NOT HAPPEN
WITHOUT A LOT OF
SUPPORT. ON BEHALF OF
NCART AND NRRTS,
WE WANT TO EXTEND OUR
SINCERE THANKS TO THE
ORGANIZATIONS AND
PEOPLE WHO PROVIDED
THAT SUPPORT.

The Advocacy Day featured a variety of excellent speakers covering: the Americans with Disability Act – past, present, and future; CRT from the consumer's perspective; Medicaid issues and advocacy; and a CRT legislative and regulatory update. All topics were CRT focused and the information was current and useful. We ended with a Congressional orientation and review for the next day.

The Capitol Hill Day was focused on two key CRT issues: (1) preventing CMS from applying competitive bid pricing to CRT wheelchair accessories in 2016; and (2) gaining co-sponsors and passing the reintroduced "Ensuring Access to Quality Complex Rehabilitation Technology Act" (HR 1516/S 1013). As mentioned, the day

included a record 260 visits to Congressional offices. The teams making these visits included 22 people who use wheelchairs. They were able to deliver their personal message directly to Congress and truly describe what CRT is all about. And what a great job they all did!

MESSAGE TO CONGRESS

The CRT message and "ask" to Congress was focused on two key CRT issues. These are the issues and background information that was shared during the Congressional visits:

Issue 1: Stop Application of Competitive Bid Pricing to Complex Rehab Wheelchair Accessories

CMS plans to inappropriately apply competitive bid pricing to complex rehab wheelchair accessories beginning in 2016. This violates the intent of 2008 federal legislation (MIPPA) and subsequent CMS policy that excluded individually configured complex rehab wheelchairs and accessories from competitive bidding. Accessories are key components such as seat/back cushions, recline/tilt systems, specialty controls, etc. This inappropriate application would eliminate access as payment rates would drop 20 percent to 50 percent and the negative impact would extend well beyond Medicare beneficiaries to also hurt people with disabilities in Medicaid and private insurance programs. Thankfully, on April 20, the House of Representatives sent a 101 signature bipartisan letter led by Reps. Bill Johnson R-Ohio, and Diana DeGette D-Colorado, to CMS requesting it rescind this change.

THE ASK: Now that the House letter has been sent, we need Congress to push CMS to rescind its plan to apply competitive bid pricing to complex rehab wheelchair accessories. If CMS



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does not honor the letter’s request (by May 31) we will need Congress to pursue legislation to address the issue.

Issue 2: Co-Sponsor CRT Separate Benefit Category Legislation and Pass It This Year

The “Ensuring Access to Quality Complex Rehabilitation Technology Act” has been reintroduced this session as HR1516 and S1013 by Reps. Jim Sensenbrenner, R-Wisconsin, and Joe Crowley, D-New York, and Sens. Thad Cochran, R-Massachusetts, and Chuck Schumer, D-New York. The bill will create a separate category for CRT within the Medicare durable medical equipment benefit like the one that exists for orthotics and prosthetics (braces and artificial limbs) and provide needed coverage, coding and safeguard improvements focused on the needs of people with disabilities. The legislation ended last year with strong bipartisan support – 168 members in the House and 22 members in the Senate. More than 50 national consumer/clinical organizations have also signed in support.

THE ASK: Please sign as a co-sponsor to HR1516 or Senate bill S1013 and help get it passed this year.

THANKS AND POST-CONFERENCE

A successful event like this does not happen without a lot of support. On behalf of NCART and NRRTS, we want to extend our sincere thanks to the organizations and people who provided that support.

Thanks to the conference sponsors who provided financial assistance for consumer attendance and made the conference program possible. If you are a provider, please remember them when you make your purchasing decisions.

(CONTINUED ON PAGE 34)

NATIONAL CRT CONFERENCE
(CONTINUED FROM PAGE 33)

Thanks to all the speakers who did an excellent job sharing their knowledge and advice.

And most importantly, thanks to all the attendees, especially consumer attendees, who traveled great distances to carry the CRT message to their Members of Congress. The commitment and participation from everyone was amazing and provided a solid foundation for the whole conference.

Attendees are continuing to follow up on their Congressional visits, and we expect to see many legislation co-sponsors coming on board in the weeks ahead. If you weren't at the conference, now is the time to pursue your own Members of Congress. You can see the current list of who has signed by state and access information and tools to connect with your Members at <http://www.access2crt.org>.

As for 2016, we announced some very big news. Next year we are going to be combining the NCART/NRRTS CRT Conference with RESNA's Assistive Technology Conference. The goal is to take the best of both conferences and produce a high-value event for attendees and exhibitors with the theme of promoting and protecting access to all assistive technology. It will be held July 12-15 at the Hyatt Regency Crystal City in Arlington, Virginia. More details will follow, but save those dates!

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DOCUMENTATION FOR “LOANER EQUIPMENT”

Q. You just loaned someone equipment. What documentation should you have to prove it was appropriate, safe and maintained?

Just about everyone who has worked in the health care field has faced the situation in which needed equipment is unavailable or inoperable. As a result, the practice of loaning equipment to other institutions and businesses is common. Because of the risks involved, the process of loaning and borrowing equipment should be properly documented.

For example, businesses that anticipate borrowing or loaning equipment to another business frequently enter into a formal “Equipment Loan Agreement” outlining the process so each party (“lender” and “borrower”) can agree on the process before the need arises. The Equipment Loan Agreement should describe who will be the primary point of contact for the lender, which party is responsible for delivering or picking up the equipment, and who will be responsible if the loaned equipment malfunctions. The maximum number of days equipment may be borrowed should also be specified to help ensure that the “loan” is just that.

Equipment Loan Agreements typically provide that the lending business will inspect the loaned equipment before it is released to the borrower to ensure that it is clean and in proper working order. The borrower is usually responsible for picking the equipment up from the lender’s place of business, and it is customary for the lender to require the borrower to sign documentation acknowledging receipt of the equipment. It is advisable for the borrower to also inspect the borrowed equipment for cleanliness and serviceability before placing the equipment into use. Any defects or

other issues should be identified and documented (photographs are helpful).

The same process occurs in reverse when returning the equipment. The borrower should clean and inspect the equipment before returning it. If the equipment needs repair, the borrower should notify the lender. It is customary for the borrower to pay for any required repairs if the equipment develops issues while in the borrower’s possession.

The borrower also customarily delivers the equipment back to the lender. Upon receipt, the lender should inspect the equipment for cleanliness and serviceability. The lender should also sign the equipment back in to the facility and provide the borrower with a copy of the documentation for the borrower’s records. Equipment that is in need of repair or maintenance when it is returned (e.g., under lender’s service warranty) should be clearly marked as “out of repair” so it is not inadvertently placed back into service in disrepair.

Equipment-specific checklists are helpful in this process. The checklist should include the model and serial number of the loaned equipment, as well as any other identifiers assigned by the lender (e.g., a bar code). Both parties should keep a copy of the checklist and other documents addressing the condition of the equipment before, during and after the loan period.

AS A RESULT, THE PRACTICE
OF LOANING EQUIPMENT TO
OTHER INSTITUTIONS AND
BUSINESSES IS COMMON.
BECAUSE OF THE RISKS
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EQUIPMENT SHOULD BE
PROPERLY DOCUMENTED.

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SPINAL CORD INJURY

MEDICAL FOCUS

WRITTEN BY: MICHELLE L. LANGE, OTR/L, ABDA, ATP/SMS

Spinal cord injury (SCI) may seem fairly straight forward to the average “Joe on the Street.” The spinal cord is severed and the person is paralyzed below that level, right? SCI is actually more complex. In this column, we will explore the most current definitions, treatments and research.

DEFINITION:

In the United States, 1.28 million people have a spinal cord injury. Spinal cord injuries usually begin with trauma to the spine that either fractures or dislocates vertebrae. Displaced bone fragments, disc material and/or ligaments may compress (bruise) or tear the spinal cord itself. Most injuries do not completely sever the cord, but the damaged vertebrae may crush and destroy axons that communicate between the body and brain. SCI can damage a few or almost all of these axons. In incomplete injuries, some motor and/or sensory function is maintained below the level of injury.

Spinal cord damage can also occur from hyperflexion or hyperextension and even from tumors or blood clots.

TREATMENTS:

Steroids are given as soon as possible following injury to reduce swelling which could worsen damage to the cord. Some clients see as much as a full level (measured by level of the vertebrae) of recovery after steroid treatment. Decompression surgery may be required. Electrical stimulation is sometimes provided to assist certain

functions such as bladder, breathing and cough. Therapies are critical to optimize recovery and to regain independence, often through seating and wheeled mobility technologies.

RESEARCH:

According to the U.S. National Institutes of Health (NIH), 696 studies relating to spinal cord injury are currently underway or have been completed. These range from medications to clear scar tissue to stem cells to therapeutic interventions. Many Spinal Cord Centers of Excellence participate in these studies. The Paralyzed Veterans of America (PVA) conducts numerous studies as well.

One recent project restored control of movement in four men with complete paralysis after intense locomotor training using epidural stimulation. (<http://www.christopherreeve.org/site/c.ddJFKRNoFiG/b.9071871/k.E3D5/FourParaplegicMenVoluntarilyMoveTheirLegs.htm>). An easy to read summary

of SCI research projects in 2014 can be found at <http://www.spinalcordinjury-paralysis.org/blogs/18/2349>.

THE CONTROVERSY:

At the International Seating Symposium in March, Michael Boninger, MD, of the University of Pittsburgh Medical Center shared his thoughts on the recent advances in providing walking through exoskeletons. Many people with a new SCI are anxious to return to walking, if at all possible. More and more rehab centers are using some form of exoskeleton to get those clients into a standing position and even “walking.” The challenge here is two-fold. First, some clients will shun seating and wheeled mobility and only focus on walking. This could result in decreased function. Second, research dollars may be mostly focused on this goal of walking, rather than other SCI related research. Our goal isn’t a tool. Our goal is optimal functioning in as many environments as possible.

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RESOURCES:

UNITED SPINAL ASSOCIATION
[HTTP://WWW.SPINALCORD.ORG](http://www.spinalcord.org)

NATIONAL INSTITUTE OF NEUROLOGICAL DISORDERS AND STROKE (NINDS) SPINAL CORD INJURY INFORMATION PAGE
[HTTP://WWW.NINDS.NIH.GOV/DISORDERS/SCI/SCI.HTM](http://www.ninds.nih.gov/disorders/sci/sci.htm)

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MANUAL WHEELCHAIR PROPULSION BIOMECHANICS AND UPPER LIMB PAIN, EXPLORING INJURY MECHANISMS AND PREVENTATIVE STRATEGIES

WRITTEN BY IAN RICE

PAIN & INJURY

Individuals with mobility limitations are shown to have reduced opportunity for participation in social and community activities compared to their ambulatory peers. Although many will utilize mobility technologies like manual wheelchairs, large health and participation disparities remain. For example, although manual wheelchair propulsion offers numerous benefits^{1,2} it often contributes to upper extremity pain and injury³⁻⁶. Carpal tunnel syndrome has been observed in up to 73 percent of manual wheelchair users, while pain has been reported in up to 59 percent of individuals with spinal cord injury (SCI). Because a majority of these individuals are reliant on their upper limbs to perform nearly all activities of daily living, the emergence of pain can have devastating consequences. For instance, pain and injury in manual wheelchair users has been shown to adversely impact quality of life and dramatically increase health care costs⁷. The far reaching effects have been compared to sustaining a second SCI at a higher level, both functionally and economically⁸. Furthermore, there is evidence that once upper extremity pain occurs, treatments like surgery are extremely disruptive and minimally effective. Consequently, researchers have made great efforts to understand the underlying causes of upper limb pain and injury as well as exploring strategies to prevent their occurrence all together⁹.

(CONTINUED ON PAGE 42)

WHEELCHAIR PROPULSION TECHNIQUE AND INJURY?

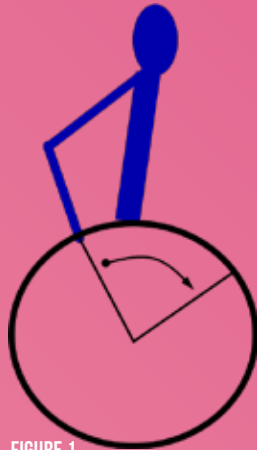


FIGURE 1
CONTACT ANGLE (CA) - maximizing CA can help improve biomechanics and reduce pain & injury

Wheelchair propulsion and transferring are inherently repetitive activities, having the potential to overwhelm the upper limbs both acutely and over time¹⁰. In fact, the average wheelchair user takes one stroke per second which far exceeds what the literature considers to be a repetitive task. Even more striking, it has been estimated that merely 16 minutes of propulsion a day exceeds the number of repetitions experienced by a factory worker performing a high frequency task in an 8-hour work day¹¹. Not surprisingly, the literature specific to wheelchair propulsion indicates: 1) stroke frequency (cadence); 2) high forces; and 3) rate of loading (impact), all relate to injury development and should be minimized when possible⁴. For example, a wheelchair user misjudging his or her hand speed relative to

the rotational speed of the wheel can impart large nonproductive forces that exacerbate all three parameters. In contrast, a more ideal stroke is one in which a wheelchair user lets the hands drift below the pushrim during the recovery phase of propulsion, allowing gravity to assist the arms swinging back in preparation for contact. Referred to as a semicircular pattern, this technique allows a wheelchair user to take less strokes and spend more time in propulsion relative to recovery¹². In basic terms, it is ideal for a wheelchair user to minimize forces, taking as few strokes as possible to maintain a given speed, using as much of the handrim as possible (maximizing contact angle, see figure 1). Factors like body mass, wheelchair fit and configuration, disability type, and education can profoundly influence propulsion technique and overall mobility independence. Although we can't reverse most disabilities, a vast majority of the factors influencing propulsion technique are modifiable^{13,14}.

WHEELCHAIR FIT AND CONFIGURATION



FIGURE 2
REAR AXLE POSITION (RAP) - Moving RAP up and forward relative to shoulder can improve propulsion biomechanics

improve mobility and reduce upper limb stress. In essence, a properly configured

While exotic frame materials like titanium, carbon fiber, and magnesium can be seductive to active wheelchair users, the benefits of proper match, fit and configuration far exceed those anticipated by a wheelchair selected for its weight or materials alone. Although a wheelchair should be as light as possible, an improperly configured ultra-lightweight adjustable chair can easily be configured to perform as poorly as a hospital/depot wheelchair. Not surprisingly, the literature has reported numerous aspects of wheelchair configuration to

wheelchair allows the user to more easily achieve ideal stroke technique. For example the rear axle position (RAP) of the user's wheel relative to their shoulder has profound effects on ease of propulsion^{1,15}. A forward axle position (more tippy chair), reduces rolling resistance, and lends to improvements in stroke frequency, stroke time, rate of loading, contact angle and mechanical efficiency(see figure 2)¹⁶⁻¹⁸. A more aggressively configured or tippy chair also offers less caster flutter, decreased turning radius, and decreased downhill turning tendency than a chair set up for rearward stability¹. These benefits must, however, be weighed against a stable chair that will tip less but may facilitate the development of repetitive strain injuries and eventually lead to a more sedentary lifestyle. Clearly rear axle placement should be balanced with an individual's functional abilities, access to training, use environment, and desired goals. Other wheelchair factors like tire pressure, back angle, seat drop, and castor wheel diameter (just to name a few), are well represented in the literature and influence propulsion biomechanics. It is important to note, however, that many wheelchair users receive little education regarding chair maintenance or configuration and commonly propel with axle positions directly under or behind the shoulder (out of the box configuration) even when the chair is easily adjustable.

CHALLENGES AND HOPE

With Medicare and other insurance companies interpreting regulations for wheelchair eligibility more strictly, individuals increasingly receive deficient technologies, such as less adjustable, heavier manual wheelchairs that are simply inappropriate for long-term use. Furthermore, manufacturers are often forced to reduce their product

lines, removing once great technologies and building wheelchairs based on what insurance companies will pay for rather than on performance. Compounding the problem, individuals with traumatic injuries are spending far less time in rehabilitation, receiving less training and being discharged before receiving a wheelchair. Needless to say, few will ever receive formal wheelchair training in propulsion, skills, or equipment. Ultimately, many will experience a downward spiral of diminishing activity and deconditioning, threatening quality of life. Consequently, motivation and the need to self-educate becomes imperative. For many, adapted athletics and wheelchair sports can fill the gap. In this context, those with newer injuries or who have less experience can witness persons with disabilities who have mastered techniques of efficient body movement both in and out of a wheelchair. While the formula for success may differ based on the individual, both technology and training are critical components. As a wheelchair athlete myself for more than 20 years, I have personally experienced the benefits of wheelchair sports trickling down to every aspect of life. Similarly, I have had the opportunity to witness “the new guy or girl” timidly roll in to watch a practice, start asking questions, and not long after become a wheelchair user who “gets it” and goes on to save the next person. It’s also common to encounter wheelchair users who have drifted from sport and become devastated with health problems associated with aging that could have been avoided had they been aware of readily available technologies and simple adaptive behaviors. Prevention is key!!

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THE FOLLOWING ARE EXCELLENT RESOURCES FOR MORE DETAILED INFORMATION ON THESE TOPICS:

Rehabilitation Engineering and Assistive Technology Society of North America (RESNA) Position on the Application of Ultralight Manual Wheelchairs, 2012

¹⁴Preservation of Upper Limb Function Following Spinal Cord Injury: A Clinical Practice Guideline for Healthcare Professionals, 2005

¹¹Push/strim biomechanics and injury prevention in spinal cord injury: Recommendations based on CULP-SCI investigations, 2005





PROPER SET-UP AND TRAINING TO OPTIMIZE SELF-PROPULSION OF MANUAL WHEELCHAIRS

Appropriate wheelchair selection and application of seating and mobility technology has the potential to contribute to and improve the quality of life of people with medical diagnoses that result in mobility impairments. Understanding the physical presentation, diagnosis, prognosis and expected progression, if any, will allow the clinician to select the wheelchair and seating system. Because we will focus on the proper set-up and training to optimize self-propulsion of manual wheelchairs, it is important to introduce the concept of “static” versus “dynamic” and how it relates to the characteristics of the wheelchair and seating system and the user’s physical functioning. Since the seating system is integral to a manual wheelchair, it is considered to be “static” – meaning that all seat angles of the system are fixed. The end user has to be a “dynamic” sitter – meaning that he/she is able to conduct independent weight shifts to change body position for effective pressure relief and to improve comfort. In addition, a “dynamic” sitter is also able to transfer from one surface to another independently and safely.

Since manual wheelchair propulsion is like “walking on your hands” and therefore not a natural phenomenon, people who propel manual wheelchairs are known to have very high incidences of upper extremity repetitive strain injuries that significantly impair function and may require costly medical interventions. The Clinical Practice Guideline, Preservation of Upper Limb Function Following SCI published by Paralyzed Veterans of America focuses on the use, stress and strain of upper limb function inherent to those with spinal cord injury (SCI) wishing to maintain mobility using a wheelchair or similar assistive technology. The guideline clearly states that only ultralight manual wheelchairs (K0005) allow for adjustment of axle position, camber

and seat angle needed to fit a user and optimize propulsion mechanics to preserve the upper extremities and reduce the risk of repetitive strain injuries (RSI) associated with wheelchair propulsion. Research indicates that reducing the weight of the wheelchair, as well as proper fit and positioning of the rear axles, can significantly reduce the potential for RSI. In comparison, a lightweight wheelchair (K0004) is designed with only minimal adjustments and has limited or no adjustable axle components. Therefore, the use of a lightweight manual wheelchair may have a negative impact on propulsion mechanics that will expose the user to an increased risk for RSI, pain and

dysfunction in both upper extremities that may lead to the need for power mobility. This is especially relevant for continual, energetic and long-term manual wheelchair users. Based on good clinical practice guidelines and sound standards, an ultralight manual wheelchair is the most reasonable and cost-effective alternative in meeting the needs of a client who has to rely on active, independent fulltime manual wheelchair propulsion.

Ultralight manual wheelchairs are available in three types of frames: rigid, suspension and folding. Each type of chair offers adjustability to the user’s lifestyle, whether providing better propulsion, ease of transport or durability when performing wheelies and jumping curbs. The forward-aft adjustment of the rear axles calibrates the user’s center of gravity in direct relationship with the wheels and is based on the anatomy, mobility skills and balance of the end user. Proper clinical evaluation of the chair requires that the end user, together with the clinician and the supplier, evaluate these benefits during the initial clinical assessment, during the final fitting, and when providing training. The clinician and/or supplier should be a RESNA-certified assistive technology professional (ATP).

THE FINAL FITTING PROCESS CAN BE BROKEN DOWN INTO FOUR STEPS:

STEP ONE: “TIPPY-TEST”

Description: The user is asked to sit

THE END USER HAS TO BE A “DYNAMIC” SITTER – MEANING THAT HE/SHE IS ABLE TO CONDUCT INDEPENDENT WEIGHT SHIFTS TO CHANGE BODY POSITION FOR EFFECTIVE PRESSURE RELIEF AND TO IMPROVE COMFORT.

in the chair with hands above their head. The chair should not tip during this maneuver and all four wheels should remain stable in the floor. With a trained person providing safety “spotting” from behind (See Picture 1), the user is then asked, still holding hands above head, to lean slightly back into the backrest.

CAUTION: A sensitive (tippy) chair set-up may respond quickly with the front casters lifting off the floor. An experienced user would probably prefer and would be able to control the chair; however, a less experienced user may prefer a more stable and less responsive set-up. On the other hand, a conservative and very stable set-up will cause the chair to remain “solid” and could only be disturbed with the clinician pushing down on the backrest posts (See Picture 2) with enough force to “tip” the chair and achieve a slight lift off of the casters. Depending on the amount of force and effort, a determination can be made in how functional, responsive and safe the set-up is.

CAUTION: A conservative and very stable chair set-up, marked by increased weight load onto the casters, may contribute to a higher risk of falls and injuries when traversing over small obstacles, such as door thresholds, as casters may get “stuck” and cause the chair to “flip” forward.

What does it measure? The Tippy Test measures the occupant’s Center of Gravity (COG) distribution in relationship to the rear axle set-up and its effect on the stability and responsiveness of the chair.

The goal of the “tippy test” is to evaluate the individual user’s COG distribution, its effect on safety, and optimal performance of the chair and the user comfort level. The goal is to achieve optimal stability and loading of the casters with minimal shift of the user’s COG. The end user has to be educated and trained on the effects of the individual COG calibration and set-up of the chair. Rear anti-tip wheels can be used to help reduce the risk of rearward falls and assist the user in becoming more comfortable with the wheelchair set-up.

STEP TWO: “HORIZONTAL” WHEEL ALIGNMENT (See Picture 3)

Description: The user is asked to sit in the chair with hands at his/her sides touching the spokes of the wheel. Ideally, with the shoulder joint in a neutral position, the tip of the middle finger should be aligned with the center of the rear axle. A simple method for setting the rear axle position is to set it slightly forward (anterior) from the rearmost position and ask the user to balance on the rear wheels only (wheelie). If the person is unable to balance on the rear wheels, an assistant can tilt the user and wheelchair backwards to find the balance point. The axle should continue to be moved forward so that the front casters are between 2 and 3 inches above the ground while balancing. If the user feels uncomfortable in this position, the rear axles can be moved rearward a fraction of an inch.

CAUTION: A highly sensitive (tippy) chair set-up correlates with the center of the axle in front of the hand and results in the chair responding immediately by tipping back and the front casters lifting off of the floor. On the other hand, a conservative and very stable set-up correlates with the axle behind the hand and the chair remaining “solid” and limits access to the push rim.

What does it measure? The rear axle position near the COG reduces the effort required for propulsion and turning, and decreases the tendency to veer off course on a cross slope. In addition, it tends to make a larger portion of the pushrim accessible for propulsion. With an ideal set-up the user should have functional access to the push rim of 90 to 100 degrees, which will have a positive effect on the COG distribution and caster loading.

The goal of an appropriate “horizontal” wheel alignment is to assure functional and safe access

PICTURE 1



PICTURE 2



PICTURE 3



Picture 1: Tippy Test: the user is asked to sit in the chair with hands above head and lean slightly into the backrest

Picture 2: Tippy Test: Clinician pushing down on backrest posts to test center of gravity distribution

Picture 3: Horizontal Wheel Alignment

(CONTINUED ON PAGE 46)

PROPER SET-UP AND TRAINING ... (CONTINUED FROM PAGE 45)

to the push rim, decrease the number of pushes, and reduce the forces required to push – all of which reduces the strain on the upper extremity joints. It will contribute to optimal stability and loading of the casters to allow the chair to maneuver more easily by reducing the turning radius, the downhill turning tendency and caster flutter.

STEP THREE: “VERTICAL” SEAT POSITION (See Picture 4)

Description: The user is asked sit in the chair with his/her hands at top of the center of the push rim. The position of the hand in relationship to the elbow will show how “low” or how “high” the user is sitting in the chair.

What does it measure? Vertical seat position measures how low or high the user is sitting in the chair. The seat should be high enough to perform typical activities of daily living, but low enough to fit under desks and tables and to efficiently propel the wheelchair. To determine the best seat height, the user should be able to comfortably touch the rear axle with arms at his side and, at the same time, the elbow angle should be 90 to 120 degrees with the upper arm along the trunk and the hand at top dead center on the push rim. Selection

of rear wheel size can provide a wider range of positions, as wheel diameters of 22” to 26” are commonly available.

CAUTION: A “low” vertical chair set-up would result in elbow angles of less than or equal to 90 degrees, so called “chicken winging,” and contributes to poor and inefficient propulsion biomechanics, thereby increasing the risk of upper extremity repetitive strain injuries (RSI) with prolonged usage. A “low” vertical position can be corrected by adding an appropriate height cushion, and/or reducing the seat dump (i.e. raising the rear floor to seat height), and/or adjusting the wheel size. On the other hand, a “high” vertical chair set-up would result in elbow angles of greater than or equal to 120 degrees and the user sits “on-top” of the wheels. This also contributes to poor push rim contact and inefficient propulsion biomechanics. A “high” vertical position can be corrected by using an appropriate height cushion, increasing the seat dump and/or increasing the wheel diameter. The seat dump is the angle of the seat with respect to horizontal. About five degrees of posterior tilt is common, yet a larger seat dump helps to increase pelvic stability by pushing the pelvis into the backrest.

CAUTION: a larger seat dump may:

- 1) increase risk of pressure ulcers on the sacrum;
- 2) affect the COG distribution as dump may decrease the rearward stability and increase tipping of the chair;
- 3) make transferring out of the wheelchair more difficult.

The goal of an ideal “vertical” seat position is to improve adequate functional reach, allow access to work surfaces, reach the push rim, decrease the number of pushes and reduce the forces required to push – all of which reduces the strain on the upper extremity joints.

STEP FOUR: “SEAT WIDTH” AND “SEAT-DEPTH” (See Picture 5)

Description: The user is asked to sit in the chair with hands down at his/her sides touching the spokes of the wheel. Typically, the seat width should be as narrow as possible.



The seat depth is selected by providing 2" to 3" space between the front edge of the seat and the popliteal area behind the knees. Excess depth of the seat contributes to a posterior pelvic rotation, increasing risk for sacral pressure ulcers and back pain.

The goal of a snug and well-fitted seat allows the shoulder joints to be in a neutral minimal stress position when accessing the push rims during self-propulsion, therefore reducing the risk of repetition strain injuries. The chair will also respond to the user shift in COG and will “stay” with the user during quick turns and lateral movements, especially when operating in tight, narrow and uneven environments.

Once the chair is adjusted and the final fitting is completed, it is important to verify the effect of the chair set-up and optimize the propulsion biomechanics by:

- The “semi-curricular” (SC) propulsion technique is most preferable as it corresponds to a reduced stroke frequency. More time is spent on the rim (90 to 100 degrees rim access) and this correlates with increased efficiency.

- a. At 2 o'clock, release hand from the push rim (See Picture 8).
- b. Allow gravity to lower hand below the rim and then naturally swing back (See Picture 9).
- c. Start the next propulsion phase with hand contact at 10 o'clock (See Picture 10).



PICTURE 8



Picture 10: next propulsion phase hand contact

PROPER SET-UP AND TRAINING ...
(CONTINUED FROM PAGE 47)

PROPULSION TRAINING SUPPORT TOOL:

The Smart Wheel examines manual wheelchair use by analyzing each push on the handrim. It measures push forces, frequency, length, smoothness and speed. It is available in 22, 24, 25 or 26" sizes and creates automated reports that allow therapists to optimize wheelchair set-up and push style to reduce repetitive stress and optimize efficiency. It mounts to most manual wheelchairs with quick release wheels. It has on-board memory and wireless Bluetooth which enables data collection in the clinic, the hallway, or outside. It provides data such as:

- 1) average force it takes to propel a wheelchair,
- 2) length of each push on the handrim,
- 3) how often the person is pushing, and
- 4) how smoothly the person is pushing.

The clinical application of the Smart

Wheel has been demonstrated to be a valuable and effective tool to clinicians, ATPs and end-users to ensure proper set-up and training to optimize self-propulsion of manual wheelchairs.

CASE STUDY:

Katie is a 23-year-old female with tetraplegia following a C5-C7 spinal cord injury as a result of a motor vehicle accident in December of 2010. Katie's first introduction to our assistive technology team involved modifications to her 16(w) x 16(d) ultralight manual wheelchair equipped with push-rim activated power assist wheels (PAPAW) for mobility. Since she moved into campus housing, she experienced difficulties in maneuvering this chair through her apartment, door frames, small aisles in the library, narrow hallways and small elevators. She felt that the "width" of the seat could be smaller, as she had multiple inches of extra space between the frame and her hips. Because her chair was only two years old, she assumed that she would not qualify for a new chair now, but she wanted to see if her chair could at least be modified to allow her to get around and maneuver better at home and in school. The physical therapist, together with the rehabilitation technology supplier (ATP), discussed possible options with Katie. Only a smaller sized 14(w) x 16(d) wheelchair frame would meet her needs. It was important to let Katie evaluate the effect of a different frame size before making a final decision. Katie was asked to transfer into one of the "demo" 14(w) x 16(d) ultralight manual wheelchair and immediately she reported increased comfort (because the seat fit her like a "good shoe") and she experienced significant ease with self-propulsion (because the axle position and the smaller space between the wheels aligned with

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BY SIGNIFICANTLY REDUCING THE WEIGHT OF THE WHEELCHAIR, KATIE HAD ENOUGH STRENGTH TO SELF-PROPEL THE CHAIR, TRANSFER INTO A SMALLER VEHICLE AND EVEN LOAD AND STOW THE SUPER LIGHTWEIGHT CHAIR INTO A VEHICLE CABIN.

her shoulder). Based on the outcome of the evaluation, a letter of medical necessity was submitted to Katie's insurance and a month later Katie was seen for a final fitting and delivery of her new 14(w) x 16(d) ultralight manual wheelchair equipped with her own power assist wheels. The client has been using her new 14 x 16 sized chair successfully for the last year and the narrow adjustable ultralight wheelchair allows her to use appropriate biomechanics during self-propulsion, exposing her shoulders to less stress that in turn preserves her upper limbs and is in compliance with the recommendations as outlined in the PVA upper body preservation guidelines. Katie has been very satisfied with the combination of an ultralight weight manual wheelchair and the push rim activated power assist wheels as she feels this is an ideal set-up, as it allows her to continue with active self-propulsion of a manual wheelchair and incorporate the benefits of an ultralight weight manual wheelchair into her active and independent lifestyle.

However, Katie returned to our center in December 2013 to find out if there was a "super lightweight" manual wheelchair on the market that she could possibly lift into a sedan type vehicle. Although Katie was independent in driving her minivan, she was considering obtaining a smaller vehicle to use on campus and for local outings with her friends or boyfriend. She recognized her independence and degree of adaptive technology requirement is directly related to the overall weight of a manual wheelchair that she would be able to independently lift and load into a smaller vehicle of her choice. Because she is not able to lift her 14 x 16 ultralight manual wheelchair frame, she is limited in her transportation options to large modified vehicles, such as her own lowered floor minivan. Additionally, she dislikes having to always rely on friends and

family to store and secure her wheelchair when traveling in a vehicle other than her own.

With her goal in mind, we introduced Katie to a super ultralight weight carbon fiber manual wheelchair (8 pounds total weight with wheels), which she used for a "car shopping" afternoon. Katie was very pleased with the "shopping" experience. By significantly reducing the weight of the wheelchair, Katie had enough strength to self-propel the chair, transfer into a smaller vehicle and even load and stow the super lightweight chair into a vehicle cabin. These justifications were used to secure funding. This chair has achieved Katie's goal to simplify her reliance on auto-adaptive equipment and vehicle modifications and potentially reduce the need for costly vehicle technology for immediate and future purchases.

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CRT: THIS NEEDS TO CHANGE

The CRT Congressional bill, Ensuring Access to Quality Complex Rehabilitation Technology Act of 2015/ HR 1516 was re-introduced into Congress last month and the Senate bill is not far behind. Personally, I'm done playing nice and trying to explain why people with complex health conditions need, not want, more complex mobility equipment, to stay active, healthy and have a good quality of life. I'm irate with those who have committed fraud, milked the system and simply made insurance policies nearly impossible for people like me to maneuver, and still get denied.

Suppliers are frustrated. A fellow board member for a state SCI/D chapter was the proud owner of a successful wheelchair business and has been a wheelchair user for many years. Unfortunately, due to all the denials, poor reimbursement for equipment and repairs, and competitive bidding, he has had to sell to a larger company. He is bitter because he had employees who valued their jobs and their customers and understood the importance of getting the right equipment and services to his customers and now service will be more delayed and less personal. But he has been burned by the policies and is burned out.

Clinicians are fired up. Endless documentation needs to be completed for medical necessity that not even the ordering physicians truly understand. Many seating and positioning clinicians are seeing consumers come in with ill-fitting wheelchairs, which if received within a five-year time period, have no hope of getting improved equipment any time soon. Knowing that the people you are seeing are dealing with health complications due to having the wrong equipment is frustrating for you as well.

Then there are wheelchair users – angry, like me – who have been educating Congress, in multiple ways, with personal stories. The cost to the system when we don't receive the right equipment may result in pressure sores, infection or worse. Last year, at Roll on Capitol Hill, we focused on helping people with disabilities get access to transportation and jobs with the right equipment.

This year, added to the pile of barriers to access is the notification in late 2014 from CMS that the pricing of Complex Rehab Technology (CRT) accessories will be given competitive bidding pricing currently set for standard wheelchair accessories beginning in 2016, even though this is counter to Congressional intent. With the reintroduction of CRT in the House of Representatives and the Senate legislation not far behind, it is time to mobilize.

I encourage suppliers to think of the people you have provided equipment for – is there someone who particularly sticks out in your mind who did not

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THOSE OF YOU WHO READ
THIS MAGAZINE HAVE
ALREADY BEEN INVOLVED
WITH ADVOCACY. SPREAD
THE WORD IN YOUR
COMMUNITIES, BOTH
IN-PERSON AND VIA
SOCIAL MEDIA. HELP
PEOPLE UNDERSTAND
THAT OUR CHAIRS ARE
NOT A LUXURY BUT A
NECESSITY TO LIVING
THE LIVES WE CHOOSE.

receive the chair they really needed? Ask him/her to share their story in a blog or video that they can share with policymakers. Encourage him/her to make phone calls and/or write e-mails to Congress with the message: "THIS NEEDS TO CHANGE."

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<http://www.unitedspinal.org/advocacy-alliance/>

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REPAIR PART PAYMENTS & AUDITS ON POWERED SEATING... WHAT'S THE LATEST?

As summer gets closer, it seems the heat is being turned up in the Medicare world (again) and it is affecting Complex Rehab Technology (CRT) providers. So, what's the latest?

If you have been keeping up with these articles in DIRECTIONS, then you will remember the everlasting saga regarding proper payments for CRT options on non-competitive bid wheelchair bases. It does appear the overall main issue has been corrected. However, one issue CMS did not address is the payment on the replacement/repair parts for CRT equipment. When Medicare published CR8864, it appeared our troubles would go away – that was wishful thinking. What we have now learned is that although Medicare updated their systems to handle the KY modifier appropriately, they did not include or take into account the claims for repairs and replacements. These claims require the normal modifiers, but they also require the addition of the RB modifier to inform Medicare that the specific claim line is a replacement part.

What we now have learned and what you need to look for in your accounts receivable, is that those claim lines billed with the RB and KY modifiers are

QUITE HONESTLY, SINCE
THE POLICY ON THESE
CHANGED (NOW MANY
YEARS AGO), I HAVE TO
BELIEVE THE CLAIM
SUBMISSION INCREASED
RAPIDLY AND BY A
GREAT AMOUNT.

still being paid at the competitive bidding single payment amount (SPA). This is not correct for those items being placed on non-competitive bid bases or in non-competitive bid areas. Unfortunately, it does not appear many providers have realized they are being short-paid. My assumption is for some parts, this could be a rather small dollar amount difference and it is not being caught on your “radar.” The issue is when you have a lot of these claims, those small dollars add up. These days, it is not something you just want to simply give away.

Now that we know the issue, is there a resolution? CMS has been made aware, and some of the upper levels within the Medicare MAC jurisdictions are also aware. The bonus is they have already admitted this is an error, but now we are just waiting for the “fix” or resolution. Unfortunately, to date we have no timeline on when this will be corrected and how previous claims will be adjusted. It is your job to track all these orders to ensure that once the fix is completed, all of the appropriate claims and the monies due to you are properly paid.

Something else to look forward to, if you have not experienced it yet, is the review of powered seating on Medicare claims. Needless to say, I was not shocked when I heard the announcement. Quite honestly, since the policy on these changed (now many years ago), I have to believe the claim submission increased rapidly and by a great amount. When I review orders, I do see many that qualify, but in the same breath, I see many that appear to be a stretch based on the documentation. At times our industry can be our own worst enemy.

Medicare's DME Jurisdiction C recently announced they would be auditing specific claims with powered seating. I would bet the other jurisdictions will quickly follow, so do not think you can simply relax.

The policy for power tilt, power recline and power combination systems (tilt and recline) is the same for each. In my opinion, this was Medicare's error, and this demonstrates their lack of knowledge and understanding of many of our products. When it comes to your CRT orders and Medicare, a specialty seating evaluation is required. Obviously, this is a good thing. However, we need to be sure both the referral and the ATPs understand when the products should be ordered and ultimately billed. What I tend to see for many, is the same order over and over again.

As an industry we have stressed how different our clients can be, which necessitates individualized equipment.

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With that said, I strongly suggest that during the seating evaluation, the therapist thoroughly documents why that individual client needs the specific item. When it comes to powered seating, if they need both power tilt and recline, then they should explain why only one system would not meet their medical needs. This not only ensures the client is going to receive the correct equipment, but also protects the providers during these (or any) audits. Keep in mind, that simply “checking a box” on a seating evaluation form will not be sufficient.

WE SADLY KNOW
WHERE THEY WILL
LIKELY END UP ONE DAY,
BUT WE NEED TO LOOK
AT TODAY. REFERRALS
ALSO NEED TO REMEMBER
THAT MEDICARE WANTS
OBJECTIVE INFORMATION.

Something else to keep in mind is the physician chart notes (from the face-to-face encounter) should support the seating evaluation. By all means, I know the chart notes can be very slim in some cases, however there is normally enough to get somewhat of a picture. More importantly, the chart notes should not contradict what the therapist documents. Unfortunately, I see this more often than I care to. Another point to cover is that different types of weight shifts should be considered, including the client leaning his/her body. I tend to see many people rule out push-ups, but not body leans. Of course this will be different for each client, dependent on his or her condition, but it should not be forgotten. This really brings us to the key

(CONTINUED ON PAGE 54)

REPAIR PART PAYMENTS & AUDITS ON POWER SEATING ... (CONTINUED FROM PAGE 53)

point – everyone is different. We have been pushing for this understanding from CMS, the government, and anyone who would listen. This is how the completion the documentation needs to be viewed.

It also needs to be understood that we cannot just lump people in categories based on their diagnosis. Remember, Medicare looks at what they need today, not what they may need down the road. Therefore an ALS client, who was just diagnosed and is still ambulating without many issues, will not qualify for the full-blown system. We sadly know where they will likely end up one day, but we need to look at today. Referrals also

I TEND TO SEE MANY PEOPLE RULE OUT PUSH-UPS, BUT NOT BODY LEANS. OF COURSE THIS WILL BE DIFFERENT FOR EACH CLIENT, DEPENDENT ON HIS OR HER CONDITION, BUT IT SHOULD NOT BE FORGOTTEN.

need to remember that Medicare wants objective information. This includes, but is not limited to strength and ROM tests – they want to see the numbers.

All of these things will help safeguard the providers and also ensure the clients receive the proper equipment. These days we need a win-win. If providers cannot survive the audits, everyone will lose.

Whether there were audits or not, be sure you and/or your team truly reads all of the documentation. This will protect you from surprises during an audit and will keep the money in your business.

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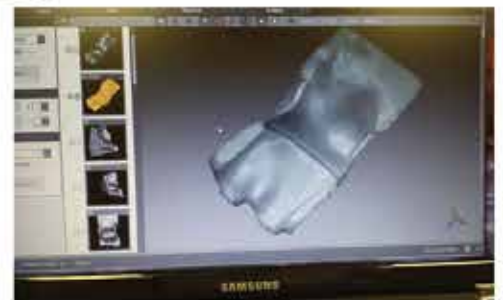
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HOW CAN CLINICIANS EDUCATE PHYSICIANS ON THE DOCUMENTATION MAZE FOR ACQUIRING DURABLE MEDICAL EQUIPMENT?

“Dear Doctor So and So, you have an appointment with Mister/Misses Such and Such tomorrow. They will require a face-to-face for the mobility device in order for us to process their equipment needs through insurance.”

And so proceeds the email to the referring physician regarding the face-to-face documentation for a new mobility device. In an attempt to curb fraudulent practices, CMS elected to put the responsibility on the physician in the provision of Complex Rehab Technology (CRT). Initially, these requirements covered power wheelchairs and scooters. Over time, however, these requirements have spread to include ultra lightweight wheelchairs and manual tilt-in-space wheelchairs. Though the rationale for each device differs, the documentation needs of the face-to-face do not, and these requirements have spread not only to Medicare supplement plans, but Medicaid ones as well.

Since initially implemented in 2007, clinicians in the field who evaluate patients for these devices have been responsible for facilitating the completion of the necessary paperwork to ensure patients can get their much-needed CRT. CMS created documents intended to educate physicians, but most physicians are unaware of these documents. Whether not received or bypassed as one of many emails from CMS regarding documentation, they state they are unaware of the specific paperwork needs.

So, how do we attempt to educate our physicians on the requirements? The answer to this question is dependent on the practice, as there are different levels of interaction between physicians in private practice and those working in institutions. Like many physical therapists and occupational therapists on the Clinician Task Force, I am an occupational therapist running a seating and wheeled mobility clinic in a large hospital system and am faced with educating referral sources on the Medicare Local Coverage Determinations for Durable Medical Equipment. This article illustrates a successful model that has improved physician adherence with face-to-face examination requirements through in-services and direct communication. What follows is how I was able to achieve effective completion of documentation, and may be a good model to institute in other settings. Examples of other settings include:

EMAILS

I initially emailed my referral sources with the information provided by CMS as an attachment and summarized it for an easy read. I informed them on why the changes occurred and how to identify equipment needs by progressing through the paradigm of walking with and without assistance to propelling a

manual wheelchair, using a scooter and then ultimately a power wheelchair.

IN-SERVICES

After emailing all my referral sources I reached out to the heads of the departments to schedule an in-service, providing them with examples of why one device would be recommended over another. They were also provided with the CMS documents as well. In-services were scheduled with various departments, training both residents and attending physicians.

FACE-TO-FACE VISIT

Prior to each face-to-face visit, I email the physician, explaining what equipment was selected and why, providing them with the information on the necessary documentation again. Since creating this plan, fewer patients have had to return to the physician for multiple face-to-face visits due to proper completion of paperwork. In addition, since I have begun working with my physician groups they have reached out to me during their face-to-face visits to discuss their paperwork prior to completion.

POWERED MOBILITY DEVICE (PMD) PACKET

After completion of the face-to-face by the physician and of the letter of medical necessity by myself, I print out

the letter, chart notes, face-to-face note and our seven-element form. To ensure the paperwork is completed properly, we hand deliver it to the physician.

All of this has led to a successful completion of the PMD pack. However, it is very time consuming and reinforces the need for open communication with the clinical team. Education is the key component for proper completion of all the necessary documentation when processing CRT. Clinician Task Force (CTF) members can serve as a resource to ensure that physicians and eligible referring professionals are knowledgeable and up to date on funding and documentation requirements. Our members do this by preparing and presenting educational materials to be used with referral sources. Currently, the CTF is working on developing materials to make available for clinician use in their facilities.

This is another area the CTF has been actively involved with in the attempt to promote our profession.

CONTACT THE AUTHOR

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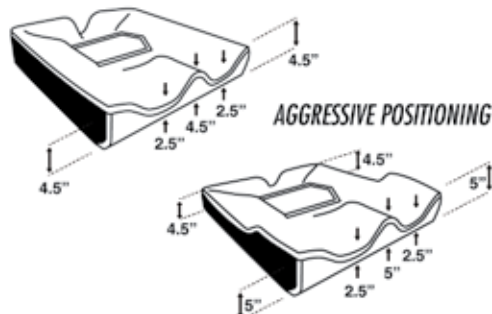
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RESNA

WRITTEN BY: ANDREA VAN HOOK

TEN TIPS FOR A STRESS FREE ATP RECERTIFICATION

Judging from the volume of phone calls and emails that the RESNA Certification Office receives, the next most stressful experience for professionals, after taking the ATP exam, is renewing the certification every two years. Here are some tips and suggestions to help make the next time you recertify easy and stress free!

1. KNOW YOUR RECERTIFICATION DATE.

It helps if you know your recertification date, so it doesn't creep up on you. There are two easy ways to find out: look yourself up on the "Find an ATP" tool on the RESNA website; or, check your ATP certificate (which, of course, you have framed and proudly displayed in your workspace).

2. KEEP YOUR CONTACT INFORMATION UP TO DATE WITH THE RESNA OFFICE.

RESNA sends out helpful 90-, 60-, and 30-day reminder notices to all ATPs to remind them to recertify. If you don't keep your contact information current, you won't receive these reminders. Whether it's a company merger, a job change, or a physical move, always let us know your current mailing address and e-mail address. You can e-mail updates to certification@resna.org, or update your information yourself by logging into the RESNA website and clicking on "Edit My Information."

3. START EARLY.

Don't wait until the last minute! The most common reason for lapsed certifications is that people wait ... and wait and wait and then panic. Set a goal to submit your renewal application 30 days prior to your certification expiration date. That allows plenty of time for the office to process your application and if there are any issues, resolve them.

4. KEEP UP WITH YOUR CONTINUING EDUCATION – AND TRACK YOUR CEUS AND CONTACT HOURS.

Another common reason for lapsed certifications is that people don't keep track of their continuing education, and come renewal time can't find the course documentation, or they realize they don't have enough continuing education hours. Then it's a mad dash to take more courses in time. Remember, you have two years to meet the continuing education requirements. Use that time wisely and space out your continuing education. Get organized and set up a file folder in one designated spot, either at home or at the office, and train yourself to put all of your certificates in that folder. Alternatively, each time you receive a certificate, scan it and keep it in a file on your computer (and then keep a backup).

5. MAKE SURE THE CONTINUING EDUCATION IS IN ASSISTIVE TECHNOLOGY.

This seems like a no-brainer, but many certified professionals take courses outside of assistive technology, and then try to submit those for their renewal. These courses may be job-related, but have nothing to do with assistive technology. Remember, it's an assistive technology certification. "Growing Your Business" may be a great course, but it's not going to be accepted for your ATP renewal.

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6. DON'T KNOW WHAT TO SUBMIT FOR RENEWAL? CHECK THE WEBSITE.

The office receives many phone calls from certified professionals who are wondering what they need to submit for renewal. We've made it super easy and convenient for you to find that information yourself. It's all on the website (<http://www.resna.org>), in the "Get Certified" section, on a page called "Certification Renewal." This page also has the renewal application available for easy downloading.

7. READ THE RENEWAL APPLICATION AND SUBMIT WHAT IS REQUIRED.

Sure, go ahead and laugh. But every day, the certification office receives renewal applications from people who clearly didn't read it, and as a result, are missing parts of their application. Usually, it's the continuing education certificates that people forget to attach. So slow down, read the application, and submit what's required. Heck, read it twice, then read it again just for kicks.

8. NOT SURE IF YOUR CONTINUING EDUCATION QUALIFIES? SUBMIT YOUR APPLICATION.

Unsure about whether the CEUs you've earned over the two years will qualify for certification renewal? First, read tip #5. Then, count up the courses that you've taken. You need a minimum of 1.0 CEU and 10 contact hours. The course certificates will specify how many CEUs and/or contact hours you've earned. If all the courses were in assistive technology, and everything adds up but you're still unsure, go ahead and submit your application. If there is a question, the office will contact you, and since you submitted your application at least 30 days in advance (tip #3), it will all be worked out before there's even the hint of an issue!

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TEN TIPS FOR STRESS FREE ...
(CONTINUED FROM PAGE 59)

9. ALLOW 10 BUSINESS DAYS FOR THE OFFICE TO PROCESS THE APPLICATION BEFORE YOU FOLLOW UP.

The first notice that you will receive is an email that your renewal payment has been processed, usually within 24 to 48 hours. Your payment is processed first, then the certification staff begins your application review. Allow at least 10 business days before you follow up. During busy seasons (such as holidays), it can take longer.

10. NEED TO TALK TO SOMEONE? TRY E-MAIL FIRST.

Sometimes, you just have to connect with a live body. We understand. Phone calls are fine, but due to the small staff size and high volume of calls, you may receive a faster response by emailing certification@resna.org. Either way, please allow 72 hours for staff to get back to you.

ALLOW AT LEAST 10 BUSINESS DAYS BEFORE YOU FOLLOW UP. DURING BUSY SEASONS (SUCH AS OVER HOLIDAYS), IT CAN TAKE LONGER.

And here's an extra tip for free:

11. DON'T HAVE ENOUGH WORK EXPERIENCE HOURS? ASK ABOUT "INACTIVE STATUS."

Life happens. If you find that over the past two years you did not accumulate enough AT-related work experience, due to medical or family leave, a change in work responsibilities or hours, etc., you don't have to let your hard-earned certification lapse. Contact the Certification Office while you are still in good standing and request inactive status. It puts your certification "on hold" temporarily and allows you to recertify when you're able.

Have your own tips or suggestions for a stress-free certification renewal experience? We'd love to hear them and will consider posting them on the website.

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HOW IMPORTANT IS IT TO PROVIDE COMPLEX REHAB TECHNOLOGY THAT IMPROVES PEOPLE'S LIVES?

Written by Rita Stanley, VP Government Relations Sunrise Medical, (US) LLC

HOW LONG YOU HAVE BEEN IN THE COMPLEX REHAB TECHNOLOGY (CRT) INDUSTRY IS A KEY FACTOR.



Several factors may influence how you answer the question that is the title of this article. How long you have been in the complex rehab technology (CRT) industry is a key factor. There are other factors of course, such as where you live, whether you primarily work with adults or children, if you work with major rehabilitation centers, or possibly the size company you work for. These are all factors that might influence your exposure to technologies, disabilities and ultimately your opinions about improving people's lives by the provision of this technology. I believe the key factor is how long you have worked in this industry and how well you understand its history.

To a certain extent, this article is a history lesson, one that offers more than the facts if you have the stomach to see its power to change people's lives. If that sounds a bit dramatic to you, you are possibly a new comer to CRT.

I had the good fortune of entering the durable medical equipment industry in 1982 when I was hired by Guardian Products, subsequently acquired by Sunrise Medical. My sales territory was North Carolina and South Carolina. Less than two years later, Congress passed legislation that moved Medicare payment from a rental amount paid monthly for the duration of medical need to six payment categories. Looking back, I am not sure whether changes in product selection

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HOW IMPORTANT IT IS TO PROVIDE ...
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and provision merely reflected the payment changes, or if it was possibly equally impacted by the immediate reaction from the industry.

What I can share with absolute certainty is that with every significant change in payment, there has been a change in either product selection or services provided. This is not because companies don't consider the needs of their customers. Actually, it is the total opposite. It is the desire to continue to provide something that motivates these decisions – the desire to keep people out of their beds and continuing to live their lives.

In 1986, I had the opportunity to move to a new division at Sunrise Medical that was formed after the acquisition of Motion Designs, later known as Quickie Designs. Ultra lightweight wheelchair technology was considered innovative and life

**AS I RESEARCHED THE MULTITUDE OF CHANGES
TO ENSURE I CAPTURED AS MANY AS I COULD
AND THAT THE FACTS REGARDING EACH WERE
ACCURATE, I WAS STUNNED.**

changing for people with disabilities who used manual wheelchairs. Rehab clinics were anxious to see the new products, and people were anxious to try them out.

The enthusiasm over how this innovative technology improved people's lives carried over to funding sources. During this period, Medicare utilized carriers rather than DME MACs to review and process claims. Each carrier had the authority to develop their own policies regarding coverage, and payment was based on supplier's billed amounts. Access to this new technology was not an issue.

During the 1980s innovation was advancing. Products manufactured by major companies were still primarily designed and intended for the larger market of Medicare eligible adults with a few products focused on children. But, the need for products that allowed people with disabilities to be more independent, work, attend school, be involved in their communities, and live active and fulfilling lives provided the motivation for family members and friends to turn their garages and basements into places to modify, customize existing products or create new technologies. It is from these places and the products that they produced that the CRT industry emerged. Throughout the '80s and into the '90s innovation continued and large manufacturers bought patents and rights to manufacture CRT products, and more and more lives were improved due to increased access to technology.

Things started to change in the mid '90s. Durable Medical Equipment Regional Carriers replaced the local carriers for purposes of processing Medicare claims, as well as developing coverage policies and revising codes and code definitions. No one could have predicted how this single move coupled with legislation mandating a national code set would ignite change to come. The change did not happen all at once; it has been insidious and over many years.

A few years ago, I started trying to keep track of the various changes that have

impacted access to CRT. Some of the changes were significant, like the dramatic changes in coding, coverage and payment for power mobility devices in 2006, while others appeared to almost go unnoticed, like the elimination of the ability to bill for projection handrims at initial issue of a manual wheelchair. But, it is the cumulative effect of years of change that has truly altered access.

Observing the cumulative impact coding, coverage and payment changes have had on access to CRT for people with disabilities led me to a want to shine a light on the myriad changes that have brought us to where we are today. This prompted me to write an article "Medicare and Complex Rehabilitation Technology: A 20-Year Review, The Impact of Medicare Legislation and Regulation on Complex Rehabilitation Technology Access and Innovation" which was published in the January-March 2015 edition of Topics in Geriatric Rehabilitation.

As I researched the multitude of changes to ensure I captured as many as I could and that the facts regarding each were accurate, I was stunned. When you consider the convoluted documentation requirements, face-to-face requirements, and various audits, and add these issues to the coding, coverage, and payment changes, it is a wonder CRT is provided at all.

**DRAMATIC CHANGE IS
NEEDED TO ENSURE
THAT WE CAN RETURN TO
IMPROVING PEOPLE'S LIVES
THROUGH INNOVATION AND
APPROPRIATE PROVISION
OF CRT PRODUCTS AND
RELATED SERVICES.**

Something must change and it must happen quickly. In fact it was the realization that trying to work within a mechanism designed to meet the needs of frail aging or acutely ill elderly simply could not meet the needs of people with disabilities that led to the idea of seeking a separate benefit category. Current DME policies are simply not conducive to ensuring adequate and appropriate access to CRT for people with disabilities. I strongly believe and others agree, that the separate benefit category initiative, being led by the National Coalition for Assistive and Rehab Technology (NCART) with support from a stakeholder steering committee is the only opportunity to start with a clean slate. Starting with a clean slate is our best hope of improving access, and improving the lives of people with disabilities.

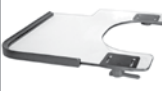
In order to know what must change, we must first understand the root cause of our current reimbursement pain. It is important to acknowledge that very few policymakers or legislators know the full history. Without an understanding of the cumulative effect of changes, and an understanding of why the current level of funding is inadequate, it is difficult for decision makers to believe that another reduction, small or large, has the potential to block access to CRT, halt innovation,

and cause CRT businesses around the country to close their doors.

To develop a good understanding of why we are where we are, I routinely use the analogy of a three-legged stool to describe reimbursement: coding, coverage and payment. If any one of these three elements of funding is inadequate or inappropriate, access will be reduced or denied.

Coding is one of the most complicated components of funding. The Health Insurance Portability and Accountability Act of 1996 mandated the use of the Healthcare Common Procedure Coding System (HCPCS) for all payers. This was not fully implemented until 2003 when the use of local codes by non-Medicare payers was eliminated. Non-Medicare payers (Medicaid and private insurers) routinely created local codes for items such as pediatric or bariatric equipment, custom equipment, or for items that they covered, but Medicare did not. There have been many efforts to obtain adequate HCPCS codes to define and group technology in ways that would facilitate sound coverage policies and reasonable payment amounts. Alternatively, CMS has increasingly grouped heterogeneous products into a single HCPCS code that results in overpayment for some items and underpayment for others, and ultimately impacting access to necessary equipment for those that need the most complex and configurable products.

In today's funding environment, it is very rare for a payer to develop his/her own fee schedule. The Medicare fee schedule is the basis for virtually every payer. Moreover, it is usually some discount off of Medicare. If 100 percent of the fee schedule prevents access, it is unreasonable to think that 20 percent less will improve the result. I once co-authored an entire article regarding how Medicare develops its fee schedule for new HCPCS codes. For purposes of this article, it is important to understand at least a few facts that result in inadequate payment for CRT.

HCPCS Code	Long Description	Fee Schedule	SPA Pricing	Example 1 DME	Example 2 CRT	Example 3 CRT
E0950	WHEELCHAIR ACCESSORY, TRAY, EACH	FLOOR \$83.28 KE \$96.63 CEILING \$97.98 KE \$113.68	\$64.00 \$86.00	Wood, plastic, Acrylic  MSRP \$98 - \$210	Viewline+, Top Drop Clamps, PVC Rim, Controller Cut-out  MSRP \$399 (X-Large)	Padded, Upholstered Tray w/Cut-out  MSRP \$374 - \$430 (w/Hardware)
E0955	WHEELCHAIR ACCESSORY, HEADREST, CUSHIONED, ANY TYPE, INCLUDING FIXED MOUNTING HARDWARE, EACH	FLOOR \$161.98 KE \$187.94 CEILING \$190.57 KE \$221.10	\$104.55 \$150.00	Whitmyer® Single Pad Headrest  MSRP \$205 - \$450	Whitmyer® Heads Up  MSRP \$355 - \$675	Whitmyer® Dual Sub-Occipital Headrest  MSRP \$415 - \$715
E0995	WHEELCHAIR ACCESSORY, CALF REST/PAD, EACH	FLOOR \$24.35 KE \$28.26 CEILING \$28.65 KE \$33.25	NA NA	Calf Rest Pad  MSRP \$36	Single Calf Pad  MSRP \$130	Divided Footbox  MSRP \$400
E0978	WHEELCHAIR ACCESSORY, POSITIONING BELT/ SAFETY BELT/PELVIC STRAP, EACH	FLOOR \$34.35 KE \$39.70 CEILING \$40.23 KE \$46.71	\$16.80 \$27.67	Pelvic Belt  MSRP \$25 - \$85	Padded, Push-Button Pelvic Belt  MSRP \$87 - \$92	4-Point, Padded, Push-Button Pelvic Belt  MSRP \$112 - \$116
E0951	HEEL LOOP/HOLDER, ANY TYPE, WITH OR WITHOUT ANKLE STRAP, EACH	FLOOR \$15.21 KE \$17.65 CEILING \$17.89 KE \$20.76	\$10.94 \$14.70	Heel Loop  MSRP \$30	Ankle Strap  MSRP \$130 - \$138	Shoe Holder, Ankle Holder  MSRP \$265
E0960	WHEELCHAIR ACCESSORY, SHOULDER HARNESS/STRAPS OR CHEST STRAP	FLOOR \$72.89 KE \$84.57 CEILING \$85.75 KE \$99.49	\$48.85 \$80.00	Chest Belt  MSRP \$64 (Non-padded) \$80 (Padded)	Anterior Trunk Support, Contour-Style, Dynamic  MSRP \$130	Anterior Trunk Support, Zipper-Open, Dynamic  MSRP \$150

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HOW IMPORTANT IT IS TO PROVIDE ...
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In any existing code there may be standard DME items as well as complex, and highly featured CRT items. The fee schedule is based on the pricing of the median product within a code. The median product is almost never a CRT item merely due to the fact that many more products are on the market to meet the needs of the elderly Medicare beneficiary than for people with disabilities. This is primarily driven by the size of each group. The net effect of the product grouping and the use of the median price results in reimbursement that will be too low to ensure access to the more complex items.

What is harder for the average person to see is the change in reimbursement that has resulted from years of legislation mandating reductions or freezes in the CPI-Update factors used to adjust the Medicare fee schedule each year (See Table 4 below). Between 1999 and 2014 the cumulative impact reduced the Medicare fee schedule by more than 20 percent.

SO, WHILE THEIR NEEDS ARE NOT TOTALLY MET AND THE TECHNOLOGY THEY RECEIVE MAY NOT ALLOW THEM TO DO ALL THE THINGS THEY NEED AND DESIRE TO DO, THEY DO GET SOMETHING.

Policy change that results in cuts in reimbursement is the most insidious. During my research, I identified seven items that were commonly provided with ultra lightweight manual wheelchairs where policy and coding changes reduced or eliminated payment. The

total impact for all items was a 25 percent reduction in reimbursement (See Table 3 below).

The full picture isn't complete though until you consider how product selection has changed. This is where the question regarding improving people's lives comes in. Unfortunately, even many clinicians are resigned to the fact that their patients can no longer obtain the technology they need. These changes, which have happened little by little,

HCPCS Code K0005				
	Actual Fee Schedule Changes	Actual % Change over previous year	CPI-U % Change	Fee Schedule Change if CPI-U update
Oldest Available Fee Schedule 1998	\$1,763.39			
1999	\$1,763.39	0	1.7	\$ 1,793.36
2000	\$1,763.39	0	2	\$ 1,829.23
2001	\$1,768.68	0.3	3.7	\$ 1,896.91
2001	\$1,888.62	6.78		
Temporary (one year) update only				
2002	\$1,839.21	-2.6	3.2	\$ 1,957.61
2003	\$1,848.76	0.5	1.1	\$ 1,979.14
2004	\$1,848.76	0	2.1	\$ 2,020.70
2005	\$1,848.76	0	3.3	\$ 2,087.39
2006	\$1,848.76	0	2.8	\$ 2,145.83
2007	\$1,848.76	0	4.3	\$ 2,238.11
2008	\$1,848.76	0	2.7	\$ 2,298.54
2009	\$1,941.20	5	5	\$ 2,413.47
2010	\$1,941.20	0	-1.4	\$ 2,379.68
Multi-Factor Productivity adjustment reduction of 1.2 2011	\$1,939.26	-.1	1.1	\$ 2,405.85
Multi-Factor Productivity adjustment reduction of 1.2 2012	\$1,985.80	2.4	3.6	\$ 2,492.27
Multi-Factor Productivity adjustment reduction of .9 2013	\$2,001.69	0.8	1.7	\$ 2,534.83
Multi-Factor Productivity adjustment reduction of .8 2014	\$2,021.71	1	1.8	\$ 2,580.46

TABLE 4- Ultra Lightweight Manual Wheelchair Actual Fee Schedule Changes versus Consumer Price Index- Update (CPI-U)

K0005- Ultra lightweight adult manual wheelchair <30 pounds

-22% or -\$567.76 lower reimbursement comparing 2014 fee schedule to what the fee schedule would have been with all CPI-U updates since 1998.

have slowly but definitely changed what consumers are provided. Most important of all is that consumers are not always aware that only a few years ago they may have received something different, something that could improve their function or reduce further loss of function. So, while their needs are not totally met and the technology they receive may not allow them to do all the things they need and desire to do, they do get something. And, the something they get is most likely in the same HCPCS code as the technology they truly need. If the technology is assigned to the same HCPCS code, this means that the loss in access is invisible to payers. There is no way for the payer to track this change in access. Please know that I am in no way advocating that suppliers should provide product even if it means they lose money. That thinking is why many CRT providers have closed their doors. I am

encouraging transparency to the consumer. I am advocating letting them know what they should have versus what they most likely will have. This transparency invites them to the fight for appropriate access.

My goal for the article in Topics of Geriatric Rehabilitation was to document the years of change that has led to where we are today. However, the purpose for writing this article is to encourage everyone to consider how access has changed and how you have modified your services and product choices. The industry must agree to work alongside consumers and clinicians to fight for improved access. I believe understanding the facts is the first step. But, understanding the history is hollow unless we shine a light on the access problems that exist today and acknowledge that the changes in access have been insidious. If we are to obtain the changes that are needed, it will require all stakeholder involvement. Dramatic change is needed to ensure that we can return to improving people's lives through innovation and appropriate provision of CRT products and related services.

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EXAMPLE K0005 ULTRA-LIGHT WHEELCHAIR AND RELATED ACCESSORIES

Initial HCPCS Code	Descriptor/Definition	Fee Schedule Date	Fee Schedule Amount	Current HCPCS Code	Status	2014 Fee Schedule	Impact-based on last available fee schedule
K0005	Ultra Lightweight Adult Wheelchair			K0005	Valid Code	\$2,021.71	
K0062	Handrim with 8-10 oblique projections each	2003	\$61.01	E0967	Billable replacement only	\$ -	\$(122.02)
K0055	Seat depths 15,17,18 for high strength lightweight and ultra lightweight manual wheelchairs	2003	\$95.10	code deleted	coding guidelines changed: all manual wheelchairs include all seat widths, depths and seat to floor heights	\$ -	\$(95.10)
K0054	Seat widths 10,11,12,15,17,20 for high strength lightweight and ultra lightweight manual wheelchairs	2003	\$104.64	code deleted	coding guidelines changed: all manual wheelchairs include all seat widths, depths and seat to floor heights	\$ -	\$(104.64)
K0056	Seat height less than 17 or equal to or greater than 21 for lightweight or ultra lightweight manual wheelchairs	2003	\$95.10	code deleted	coding guidelines changed: all manual wheelchairs include all seat widths, depths and seat to floor heights	\$ -	\$(95.10)
K0035	Heel loop with ankle strap, each	2003	\$25.90	E0951	Valid Code: descriptor changed to state with or without ankle strap; new fee schedule developed	\$20.76	\$(10.28)
K0030	Solid insert		\$95.15	E0992	Not separately billable	\$ -	\$(95.15)
E0192	Pressure Equalizing Cushion	2004	\$387.01	E2603	Coding changes in 2004: fee schedule developed using gap-filling methodology; Valid Code	\$165.77	\$(221.24)
Total Impact						\$2,208.24	\$(743.53) 25.18% reduction in reimbursement

TABLE 3- IMPACT OF POLICY AND CODING DECISIONS ON REIMBURSEMENT

DON'T BE AFRAID TO SHOW YOUR WARTS

Uh oh, Jim is writing an opinion piece! But have no fear – I hope that this will help set your mind free.

After spending several days at the International Seating Symposium, there was a very popular thread shared by the presenters. (Keep in mind that those folks spend at least an hour, for every minute of their presentation, so please respect their energy.) They admitted failure. Failure? Well, this was tried, that was tried and after several unsuccessful attempts, they found an answer. These are the leaders of our industry and courageously speak about what was right and what was wrong. Remember Tommy Edison screwed up several times before he screwed in a lightbulb that brightened up our nights.

How many times have you been involved in a wheelchair fitting and asked the therapist for their opinion only to hear, “You know more about wheelchairs than I do”? Your shoulders slump and you look to the floor. God bless them, they are doing the best they can. After all, some schools spend a whole two days or maybe two weeks on wheelchair basics. Yes, you may have more experience with wheelchairs, but we did not spend four to six years learning about the human

anatomy. There can be an intimidation situation that goes both ways, but as the warden said in the movie Cool Hand Luke, “What we have here is a failure to communicate.” Now I’m not talking about having to spend a night in the box, (If you have never seen the old Paul Newman movie, I’m sorry. Although rent it – you will enjoy it.) but many of us are afraid to show our ignorance on a subject, worried that it will bruise our ego or we are intimidated by others in the room. I have served on the board of directors of

companies and one of the first things learned was if you don’t understand or know about something, for Pete’s sake, open your mouth. Odds are that others there may have the same question, but were reluctant to say so.

Did you ever notice that at our industry get-togethers, many answer questions with what we think others want to hear, not necessarily what we may be thinking? Maybe we are trying to be politically correct. Boy, what an oxymoron that term is. How many politicians are ever correct?

All of us have been in a situation in which we were intimidated by the perceived knowledge of another. We are all brilliant and also sometimes dumb as rock. Humble up, health care is a never ending endeavor of learning and team work. If this industry doesn’t humble you, you must not be paying attention. Don’t try to intimidate or allow others to intimidate you. If someone talks down to you, they are the one with the problem.

This career path is a never ending challenge. None of us will ever know all of it. In my 30 plus years of this work (Or as Jean Minkel said to me, “Maybe three decades sounds better?”), I have learned from therapists, manufacturers, clients, patient aids, special education teachers, doctors, peers and anyone else who may have had an idea.

HUMBLE UP, HEALTH CARE IS A
NEVER ENDING ENDEAVOR OF
LEARNING AND TEAM WORK.
IF THIS INDUSTRY DOESN'T
HUMBLE YOU, YOU MUST NOT
BE PAYING ATTENTION.

NOW GO OUT THERE, SHOW YOUR
WARTS AND DON'T BE AFRAID TO ASK
QUESTIONS. I KNOW I STILL AM.

CONTACT THE AUTHOR

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NRRTS REGISTRANTS

Congratulations to the newest NRRTS Registrants. MARCH 18 THROUGH MAY 15, 2015.

Morgan Bray, RRTS®

Trust Care Home Medical
8677 Telegraph Rd
Henrico, VA 23060
Telephone: 804-262-9001
Registration Date: 4/28/2015

Karen Bussey, ATP, RRTS®

Glasgow Prescription Center
615 SL Rogers Wells Blvd.
Glasgow, KY 42141
Telephone: 270-651-8889
Fax: 270-651-6198
Registration Date: 5/5/2015

Russell E. Collins, ATP, RRTS®

Professional Respiratory and Rehab
2180 Stein Dr
Ste 106
Chattanooga, TN 37421
Telephone: 423-954-8901
Fax: 423-954-8903
Registration Date: 4/26/2015

Pamela Crutchfield, ATP, RRTS®

Professional Respiratory and Medical
2180 Stein Dr
Ste 106
Chattanooga, TN 37421
Telephone: 423-954-8901
Fax: 423-954-8903
Registration Date: 4/16/2015

Diane Ford, RRTS®

Browning's Pharmacy and Health Care
141 E. Hibiscus Blvd
Melbourne, FL 32901
Telephone: 321-725-6320
Fax: 321-952-2318
Registration Date: 3/19/2015

Scott Litton, ATP, RRTS®

St. Vincent Medical Supply & Mobility
1124 16th St. West
Billings, MT 59102
Telephone: 406-237-8920
Fax: 406-237-8905
Registration Date: 4/6/2015

Christopher Martin Schang, RRTS®

Access Medical
1440 S State College Blvd
Anaheim, CA 92806
Telephone: 714-988-2474 x.205
Fax: 866-533-3030
Registration Date: 4/28/2015

Richard Walls, ATP, RRTS®

Hometown Healthcare Equipment
107 East Washington St
Houston, MS 38851
Telephone: 662-456-4630
Fax: 662-456-2262
Registration Date: 4/15/2015

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 MARCH 18 THROUGH MAY 15, 2015.

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Justin Keith O'Young, ATP, CRTS®

National Seating & Mobility, Inc.
Broadview, IL

Stephen Talbot, ATP, CRTS®

Zurcare
Starkville, MS

Lindsey Kampwerth, ATP, CRTS®

Paraquad Inc.
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Clarence Douglas Praytor, ATP, CRTS®

A & A Home Health Equipment, Inc.
Trussville, AL

Robert J. McKnight, ATP/SMS, CRTS®

Access Medical, Inc.
Carlsbad, CA

Jamin Sprague, ATP, CRTS®

Geneva Woods
Anchorage, AK

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 MARCH 18 THROUGH MAY 15, 2015.

For an up-to-date verification on Registrants, visit www.nrnts.org, updated daily.

Ella Elizabeth Boylston, ATP, Newnan, GA



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