ABSTRACTS

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TUESDAY 4th NOVEMBER

Opening Keynote: Wheeling Across Borders

Umi Asaka

Speaker Biography
Umi Asaka is a disabled researcher and educator at the Donald Beasley Institute (DBI), a national independent institute for disability rights research and education based in Dunedin, New Zealand. Her primary role at the DBI is to coordinate the Disabled Persons-Led Monitoring of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD). This project prioritizes the voices of disabled people, their families, whānau, and close supporters, focusing on their experiences with the UNCRPD. She is passionate about using research to transform lived experiences into knowledge as a tool of advocacy.

Originally from Japan, Umi moved to Aotearoa New Zealand at the age of 15. She has been a wheelchair user her entire life and proudly identifies as a second-generation disabled person. Having travelled to 18 countries in her chair, she actively uses her identity and experiences to challenge ableism. While studying social work at Ōtakou Whakaihu Waka - the University of Otago, she received the Diversity and Inclusion Award from the Ministry of Youth Development for her advocacy on campus and beyond.
In addition to her role at the DBI, she serves as a board member for multiple disability organizations and is currently completing a Master of Arts (Human Services) at Ōtakou Whakaihu Waka.

Panel Discussion: Applying an Equity Lens to Participation

Facilitated by: Arianna Rangi

Panellists: Umi Asaka, Riley Saban, Nathan Bray, Teina Boyd,

Biographies

Arianna Rangi (Ngāti Porou) holds a Bachelor of Health Science in Population Health and is deeply committed to health equity, holistic wellbeing, and the broader determinants of health. She brings experience across private sector, primary care, secondary services, and education. Arianna is honoured to facilitate this panel, driven by her admiration for the incredible mahi STG delivers in the community. She has a passion for equity, participation, and access along with a strong background in policy, strategy, and stakeholder engagement, Arianna is committed to initiatives that uplift whānau and improve outcomes across Aotearoa.

Umi Asaka is a disabled researcher and educator at the Donald Beasley Institute (DBI), a national independent institute for disability rights research and education based in Dunedin, New Zealand. Her primary role at the DBI is to coordinate the Disabled Persons-Led Monitoring of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD). This project prioritizes the voices of disabled people, their families, whānau, and close supporters, focusing on their experiences with the UNCRPD. She is passionate about using research to transform lived experiences into knowledge as a tool of advocacy.

Originally from Japan, Umi moved to Aotearoa New Zealand at the age of 15. She has been a wheelchair user her entire life and proudly identifies as a second-generation disabled person. Having travelled to 18 countries in her chair, she actively uses her identity and experiences to challenge ableism. While studying social work at Ōtakou Whakaihu Waka - the University of Otago, she received the Diversity and Inclusion Award from the Ministry of Youth Development for her advocacy on campus and beyond.
In addition to her role at the DBI, she serves as a board member for multiple disability organizations and is currently completing a Master of Arts (Human Services) at Ōtakou Whakaihu Waka.

Riley Saban is an accomplished individual with Cerebral Palsy who holds a Certificate IIII in Assistive Technology Mentorship. He works as an Assistive Technology Adviser and served on the board for ARATA at the 2024 Australian Assistive Technology Conference. Additionally, Riley is the co-founder of PolySpine, a modular seating support system designed for individuals with physical disabilities.
As a seasoned speaker, Riley delivers engaging talks and workshops on assistive technology to various organisations and schools, which has included Google staff. Riley's presentations passionately advocate for inclusion and equality in society. He also starred in a two-part documentary series that highlighted his collaboration with Dr. Jordan Nguyen, a biomedical engineer, on EOG technology. In the series, Riley successfully drove a buggy using brain wave activity, a feat that achieved critical acclaim and was screened at several film festivals. Throughout his life, Riley has been recognized with numerous prestigious awards, including the Young Third Sector Award, a Good Designs Award for PolySpine, and the Young Citizen of the Year Award for his region on Australia Day 2022.Through his work, Riley has greatly

influenced the lives of those around him, motivating and encouraging others to make a positive difference in society. He is also a member of the CP Active Young Changemakers, a diverse community dedicated to making Australia a more inclusive place for people with Cerebral palsy and other disabilities. As part of a dynamic team, Riley helps create pathways and amplify the voices of young people with Cerebral Palsy. Riley now works part-time for CPActive, serving as a member of the steering committee.
Alongside his advocacy and work with assistive technology, Riley enjoys surfing, making music, playing chess, and spending quality time with family and friends. He embraces every opportunity to live life to the fullest, staying connected to the people and passions that bring him joy.

Dr Nathan Bray is a Senior Lecturer in Healthcare Improvement and leads the *Academy for Health Equity, Prevention and Wellbeing* at Bangor University (North Wales, UK). He has an MSc in Public Health and Health Promotion and a PhD in HealthEconomics. His research focuses on public health and disability, with particularly focus on the intersection between economic evaluation, assistive technology and outcome measurement in marginalised groups.

In 2022 Dr Bray completed an HCRW post-doctoral fellowship which led to development of the MobQoL-7D, a new outcome measure system for mobility aid users. As lead applicant and co-applicant Dr Bray has generated >£7.5million in research grant capture from organisations such as the National Institute for Health Research, European Commission's Horizon 2020 programme, and NHS England. From 2015 to 2018 Dr Bray co-chaired the International Society of Wheelchair Professionals' comparative effectiveness research committee. In 2019 Dr Bray led the EMPoWER project, a large scale evidence synthesis to determine the benefits of early powered mobility for very young children. His research has been cited in policy documents published by WHO, UN and The Health Foundation, and he contributed to WHO's Global Report on Effective Access to Assistive Technology (GReAT) international consultation.

Teina Boyd is an experienced accessibility advisor, disability rights advocate, and proud wheelchair user with over 10 years of lived experience. She currently serves as the Accessibility Advisor for Tauranga City Council, where she's spent the past two years leading work that challenges ableism and embeds accessibility across public policy, infrastructure, and community engagement.

Her mahi spans public, private, and charitable sectors — supporting organisations to move beyond compliance and toward genuinely inclusive practice. She also sits on the Board of Directors for the New Zealand Rugby Foundation, where she works alongside severely injured players and their whānau to ensure access to entitlements and provide ongoing peer-led support.

Skilled in community engagement and facilitation, Teina regularly designs and leads workshops that bring together diverse lived experiences. Drawing on her strong relationships across our diverse disabled communities, she helps organisations gather meaningful feedback and insight from a wide range of voices. These workshops are a powerful lever in guiding organisations on their accessibility journeys — grounded in real-world perspectives and honest conversation.

Her passion is rooted in building a more accessible future for the generations to come, especially within her own Māori culture. She believes that by challenging exclusion today, we pave the way for stronger, more inclusive futures for all our whānau.

With a focus on systems change, inclusive design, and culturally grounded leadership, she brings lived expertise, authenticity, and a collaborative approach that helps others think more critically — and act more boldly — for inclusion.

A1: The last immobile child: re-examining how to close the mobility gap

Andrina Sabet, Dr Cole Galloway

Learning objectives:

1. Determine whether a clinical or community environmental setup meets the physical, social and learning characteristics of an enriched environment, mundane environment or deprived environment.
2. Apply the adaptive and rehabilitative/habilitative elements noted in clinical and community case studies to your own practice settings.
3. Determine at least 3 applications of enriched environments in combination with mobility technologies to either academic research, clinical practice, of product design.

Session description:

A key component of human life is our mobility within physical and social environments. This is perhaps best displayed in the day long activity of the toddler. The typically developing toddler enjoys (rather demands!) their mobility be self-generated, socially nested, and co-creative across all available environments. Indeed, most cultures approve of toddler-mobility-reducing technology (i.e. playpens, backpacks with leashes etc.) In contrast, children with atypical mobility rely to a greater extent on mobility-enhancing technology and adult supports to achieve just a fraction (often less than an hour per day) of those same opportunities.

So now what? None of this information is new. And because it is not new, we need to ask ourselves: How have we re-calibrated our clinical practice, our research agenda, and our product design towards mobility equity? Or have the significant number of barriers resulted in accommodation and complacency? We argue that the time is right to attack - and completely close - this gap! This presentation will explore the conceptual elements (Embodied development, ON Time Mobility, Ableism), the empirical evidence (data from community based technologies) and practical strategies (elevating clinical and community dosage, in-clinic DIY) necessary to build hours rather than minutes of mobility per day. Participants will engage in small group discussions including case studies involving families with lived experience focused on closing this gap and moving towards mobility equity.

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9. Sabet A, Galloway JC. (2024) Harnessing Mobility: A medically complex child's home program utilizing an in-home body weight support system. Pediatric Physical Therapy, 10-1097.

Presenter biographies:

Andrina Sabet, PT:

Andrina Sabet is a physical therapist of 30 years who currently runs the Mobility and Seating Clinic at Cleveland Clinic Children's Hospital for Rehabilitation and is owner of her private practice, Mobility Matters, LLC. Her clinical practice at CCCHR includes infants and toddlers through young adults and focuses on independent mobility options for every client. She is actively involved with Go Baby Go, a grassroots, open source movement centred on social mobility opportunities and technological innovation as National Project Coordinator and as a clinical researcher. Andrina has presented locally, nationally and internationally on the intersection of development, mobility, and positioning in kids, families and communities.

James C (Cole) Galloway, PT, PhD, FAPTA:

Dr. Galloway serves as Clinical Professor in the Department of Physical Therapy in Baylor University's Robbins College of Health and Human Sciences. Cole's "blue collar futurist" approach guides his interdisciplinary work. His personal interests in family, social justice and expression through the arts mix effortlessly with his professional background of rehabilitation, neuroscience, child development, human-machine interaction and open-source culture. His R&D – focussed of the key role of social mobility in life – serves to directly challenge the out-of-date cultures of paediatric and adult rehabilitation with a highly hopeful set of alternative products and processes. Through the Go Baby Go collective – research, education and advocacy movement – he invents and studies devices for children and adults with severe mobility issues. His approach of combining high tech and low tech into "go tech" has garnered interest, funding, and awards from the National Institutes of Health, the National Science Foundation, Robert Wood Johnson Foundation, the Department of Education, and a range of tech industries from medical to toy to auto.

A2: “Who Supports My Seating?” Exploring Postural Management Experiences of Adults with Complex Difficulties

Prof. Rachael McDonald

Learning objectives:

1. Participants in this presentation will be able to name three mechanisms or cooperation between support workers and allied health professional in seating and positioning practice.
2. Participants will be able to define three ways that people with disabilities and their families can advocate for better postural support
3. Participants will be able to demonstrate constructive ways of working with the person to support them to articulate their needs

Session description:

Since the introduction of the National Disability Insurance Scheme, 20130 Australian adults with complex disabilities have had greater access to wheeled mobility and postural management equipment. Despite this, concerns persist that individuals with the most complex needs are not receiving the quality of support they require. These concerns are reinforced by the limited body of research available on adult postural care.

This research project was undertaken with two aims: (a) to develop a shared understanding of postural management for adults living with complex disabilities, and (b) to identify opportunities to build better insights and practices in this area. The study included a scoping literature review and a series of focus groups involving end users (adults with complex disabilities), their families, and disability support workers. Transcribed and deidentified data underwent thematic analysis, followed by a collaborative workshop with participants to review and validate the findings.

Three overarching themes emerged: independence and self-determination, seating and wheelchair choice, and access to appropriate equipment and support. Subthemes included not being heard during the wheelchair selection process, and a lack of clarity about who is responsible for supporting seating needs. For disability support workers, themes included relationships with clients, limited understanding of posture/equipment, and unclear roles a in postural care.

Although NDIS funding has enabled better equipment provision, individuals with the most complex needs often have high-quality chairs but lack appropriate postural support and expert guidance. Support workers, who are central to implementing postural strategies, are often undertrained and unsupported in this area. Additionally, the voices of wheelchair users themselves—despite their insights and preferences—are frequently disregarded.

Recommendations include fostering stronger communication and collaboration between AHPs and DSWs, creating structured training pathways for DSWs, and centering the voice and agency of the wheelchair user in all decisions related to posture and mobility.

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2. Stinson, M., Crawford, S., & Madden, E. (2021). Current clinical practice in 24-hour postural management and the impact on carers and service users with severe neurodisability. British Journal of Occupational Therapy, 84(6), 355-365.
3. Lyons, E. A., Jones, D. E., Swallow, V. M., & Chandler, C. (2017). An exploration of comfort and discomfort amongst children and young people with intellectual disabilities who depend on postural management equipment. Journal of Applied Research in Intellectual Disabilities, 30(4), 727-742.

Presenter biography:

Professor Rachael McDonald is the Director of the MedTechVic Hub. The MedTechVic hub creates innovative enabling technology, products and services to enhance lives for people with disability, their families and the people who support them. The hub does this through Development of enabling technology products, Consulting on co-design and manufacture, Best-practice research and development and Educational services, including fellowships and training.

Professor McDonald is a clinical, research and teaching Health Professional with an interest in enabling people with lifelong disabilities to participate in life situations. She has worked extensively in this field, with in both children's services and adult settings. She has or is supervising 31 research (honour's, MSc and PhD) students specialising in the care of people with complex disability as well as development and evaluation into the effectiveness of assistive technologies, and has published widely (over 150 outputs). She has qualifications in occupational therapy, biomechanics and higher education in addition to her Doctorate and has attracted over $11m in competitive grant funding.

A3: Paper Presentations

A3a: Measuring patient-centred outcomes in wheelchair provision: Staff and service user experiences

Dr Nathan Bray

Learning objectives:

1. Participants will learn about the WATCh and WATCh-Ad outcome measures
2. Participants will understand how to evaluate the usefulness of an outcome measure
3. Participants will understand how patient-centred outcome measurement can enhance practice

Session description:

-Background and objective-
Personal wheelchair budgets (PWBs) are offered to everyone in England eligible for a wheelchair provided through the National Health Service (NHS) to support their choice of equipment. The WATCh (Wheelchair outcomes Assessment Tool for Children) and related WATCh-Ad for adults are patient-centred outcome measures (PCOMs) developed to help individual users express their main outcome needs when obtaining a wheelchair and to rate their satisfaction with subsequent outcomes after receiving their equipment. Use was explored in a real-world setting, aiming to produce guidance for use alongside the PWB process.

-Methods-
Three wheelchair service provider organisations across four sites participated. Staff and users completed surveys about their experience of assessments using the WATCh and/or WATCh-Ad. Selected patients were interviewed after receipt of their equipment, and staff were interviewed after experiencing a number of assessments. Thematic analysis was undertaken using the tool, survey and interview data. Results of pre- and post-equipment provision were presented graphically.

-Results-
Information on 75 assessments by 15 staff was obtained. Three-quarters of users or their carers rated the use of the tools in the assessment process as 'helpful' or 'very helpful'. Staff reported that the WATCh or WATCh-Ad had been considered 'useful' in developing individual care plans in around 1 in 3 cases and affected the prescription in 1 in 4 cases. Concerns were expressed about the length of time taken to administer the tools in clinic. However, some staff noted this reduced with more hands-on experience and by providing the tools to users in advance of the appointment.

-Conclusions-
The WATCh and WATCh-Ad PCOMs are suitable for routine use by wheelchair service providers to assist the assessment/review process. It is recommended that the measures are provided in advance to users/carers and that staff are allowed time to develop their ways of working with them.

Content references:

1. Tuersley L, Bray N, Edwards RT. Development of the Wheelchair outcomes Assessment Tool for Children (WATCh): A patient-centred outcome measure for young wheelchair users. PLoS One 2018;13:e0209380. pmid:30586390
2. Tuersley L, Quaye NA, Pisavadia K, Edwards RT, Bray N (2025) Use of patient-centred outcome measures alongside the personal wheelchair budget process in NHS England: A mixed methods approach to exploring the staff and service user experience of using the WATCh and WATCh-Ad. PLoS ONE 20(1): e0312967. https://doi.org/10.1371/journal.pone.0312967
3. Preference-based measures of health-related quality of life in congenital mobility impairment: a systematic review of validity and responsiveness. Health Econ Rev. 2020;21;10(1):9.

Presenter biography:

Dr Bray is a Senior Lecturer and leads the Academy for Health Equity, Prevention and Wellbeing at Bangor University (Wales, UK). He has a PhD in Health Economics. His research focuses on public health and disability, with particular focus on the intersection between economic evaluation, assistive technology and outcome measurement in marginalised groups. In 2022 Dr Bray completed an HCRW post-doctoral fellowship which led to development of the MobQoL-7D, a new outcome measure for mobility aid users. From 2015 to 2018 Dr Bray co-chaired the International Society of Wheelchair Professionals' comparative effectiveness research committee. In 2019 Dr Bray led the EMPoWER project, a large scale evidence synthesis to determine the benefits of early powered mobility for very young children. His research has been cited in policy documents published by WHO and UN, and he contributed to WHO's Global Report on Effective Access to Assistive Technology (GReAT) international consultation.

A3b: Reliability of the Seating and Mobility Index

Dr Rachel Hibbs

Learning objectives:

1. List 2 outcome tools that were included in the initial toolbox of the development of SMI.
2. Describe two components of the SMI.
3. Explain how clinicians can incorporate the SMI into their existing practice.

Session description:

Background:
There is no widely accepted standardized measure or battery of assessments that can be used by clinicians to evaluate a client's need for Complex Rehabilitation Technology such as a manual or power wheelchair and facilitate payer coverage for the necessary devices. The Seating Mobility Index (SMI) was developed for clinicians to assess and quantify a person's need for CRT based on function, participation, and environmental factors rather than a diagnosis.

Objective:
The objective of this study was to conduct an investigation of the reliability of the SMI.

Design:
The development of the SMI involved a multi-phase process, including literature review, expert input, and reliability testing. A scoring system was established to evaluate multiple dimensions based on the International Classification of Function categories

Methods:
Reliability testing was conducted through inter-rater assessments to ensure consistency across different ratters randomized into one of five groups. The raters were clinicians (physical and/or occupational) with at least 10 years of expertise in performing wheelchair evaluations. Each grouping had four case studies that the rater had to score.

Results:
The results demonstrated strong internal consistency and inter-rater reliability indicating that the SMI is a reliable tool for measuring seating and mobility.

Conclusion:
The Seating Mobility Index provides a promising new instrument for clinicians and researchers to assess the quality of seating and mobility. Future research will focus on refining the tool's application in diverse populations and its correlation with long-term seating-related health outcomes. Lastly, this session will provide an overview of the background work for this project followed by initial reliability results and next steps.

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Presenter biography:

Dr. Hibbs is an Assistant Professor and Director of Continuing Education in the Department of Rehabilitation Science and Technology at the University of Pittsburgh. In addition to providing instruction in the School of Health and Rehabilitation Sciences, Rachel Hibbs provides clinical care at the University of Pittsburgh Medical Center (UPMC) Rehabilitation Institute at Mercy Hospital Inpatient Rehabilitation and the Center for Assistive Technology.

A3c: The impacts of power wheelchairs on health and participation for people with motor neurone disease

Rachel Brown, Dr Fi (Fiona) Graham

Learning objectives

1. Identify two activities and areas of health and participation that power wheelchairs can impact for people with motor neurone disease.
2. Identify the power seat functions that people with motor neurone disease most frequently use.
3. Describe the optimal time to provide a power wheelchair for people with motor neurone disease.

Session description

Background:
People with motor neurone disease can quickly progress to using power wheelchairs as their primary means of mobility. Clarification of how power wheelchairs impact daily life is needed to assist clinical and funding decision-making.

Objectives:
This study identified the impacts that people with motor neurone disease perceive their power wheelchairs have on their health and participation in activities and life roles.

Materials and Methods:
A cross-sectional survey was completed online with people with motor neurone disease using power wheelchairs. Quantitative data were analysed using descriptive statistics. Qualitative data were analysed using content analysis.

Results:
Responses (n = 24) indicated that power wheelchairs positively impact people's psychological health, including happiness (15/24; 63%), and self-esteem (14/24; 59%), inclusion (18/24; 75%), and participation in valued activities, particularly outside of the home (18/24; 75%). People valued receiving power wheelchairs early (19/23; 83%), and all power seat functions were utilised. Qualitative analysis revealed themes around the impact of power wheelchairs: (1) Freedom and choice to participate in valued activities, (2) Enabling social interaction, and (3) Self-managing physical and psychological health.

Discussion:
This will include an interpretation of the key findings, a comparison with previous studies, potential applicability to clinical practice, and the study's limitations.

Conclusion
Clinical and funding policy implications will be described in relation to the findings

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Journal of Occupational Therapy (Vol. 68, Issue 1, pp. 20–26). https://doi.org/10.5014/ajot.2014.008649

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Presenter biography:

Rachel is a clinical specialist in complex wheelchairs and seating, with over 20 years of experience. She runs wheelchair outreach clinics, including those via telehealth, provides clinical advice to therapists, and works for one of the providers of government-funded wheelchairs in New Zealand. Rachel was on the external review group for the World Health Organisation Wheelchair Provision Guidelines and provided specialised advice. Her published work includes lying and back supports. She has presented nationally/ internationally on these subjects and wheelchair and seating solutions for people with multiple sclerosis and motor neurone disease. Rachel is currently undertaking postgraduate research with the Rehabilitation Teaching and Research Unit, University of Otago. She brings her passion for enabling people's participation to all areas of wheelchair provision.

A4: Flying with a Wheelchair: What the Seating Professional Need to Know:

Dr Jessica Presperin Pedersen

Learning objectives:

1. Identify two steps in the process for traveling by air with a wheelchair.
2. Describe 2 ways a rider or caregiver might protect the wheelchair for an uneventful trip.
3. Identify ways governments might set mandates for airlines transporting flyers with wheelchairs.

Session description:

Stories shared on the internet have multiplied throughout the years focusing on the difficulty of successfully flying with a wheelchair, with demonstrations of wheelchairs being lost or damaged, people being injured and sever consequences including death. Interested parties have come together to lobby governments, airports, and airlines to demand change and change is happening.

This session will outline the process for flying with a wheelchair, including ticketing, getting through the airport and TSA, transferring to the aircraft, sitting on the aircraft sat safely, and protecting the wheelchair will be discussed. Policies developed by airlines and governments from input collaborated by riders, families, consumer groups, wheelchair manufacturers, airports, airlines, and government entities will be shared. Reseach findings highlighting quantitative and qualitative information, as well as consumer ideas for protecting the wheelchair being towed under the wing will illustrate how scientists, advocates, and riders are coming together for change. Designs for traveling with the wheelchair on the aircraft will be demonstrated.

Resources including travel websites, blogs, research articles, advocacy work, and educational sies will be shared.

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Presenter biography:

Dr. Jessica Presperin Pedersen is an occupational therapist with over 45 years of experience. She has been involved in several sectors of the industry including clinician, university program founder and educator, supplier, researcher, manufacturing education, and advocate. She continues to be involved in programs providing ontime mobility and advocacy/education for flying with a wheelchair. She has published since the 19802 and presented around the world.

A5: Functioning with Neuropathic Pain

Lucinda Austin

Learning objectives:

At the end of this presentation, therapists will be able to:

1. Identify three common errors of manual wheelchair scripting and the potential consequences of these
2. Identify two strategies for optimal manual wheelchair scripting
3. Identify at least two training options for manual wheelchair scripting

Session description:

It is hard to express yourself appropriately and completely when you are in pain.

Pain is a complex and frankly annoying phenomenon, particularly when it no longer serves the purpose of notifying us of ongoing injury. It is a subjective experience that cannot be objectively measured. It can affect the mind, body and spirit.

Neuropathic pain is a common chronic pain experience following many neurological injuries. It is caused by direct damage to the nervous system. The huge challenge to the rehabilitation team of a person with neurological injury and resulting neuropathic pain, is how to manage it.

To understand how we might do that, we need to understand the mechanisms of the pain pathways to the brain, resulting in the pain experience. There is a loss of inhibition that happens within the neurological system after damage, allowing a hypersensitivity in the system, to all inputs. Our collective challenge is how to dial down that hypersensitivity leading to the increased pain experience? Medication can be only part of the solution. How else might we influence this pain- with various physical and mental modalities?

Spinal Cord Injury (SCI) is an injury resulting in multisystem affect. Neuropathic pain is a common phenomenon following SCI. Clients often report that neuropathic pain interrupts their ability to participate in activities, affects their life enjoyment, and even their relationships.
The small but important part that wheelchair and seating prescription makes in helping manage the Neuropathic pain experience of persons using wheelchairs for their primary means of mobility is worth considering, should not be underestimated, and will be discussed in this presentation, with a couple of client examples. Our role in wheelchair and seating prescription is to enable a person to mobilise as independently as possible, to be able to express themselves, their wants, desires and purpose. If we can reduce the potential for the pain experience to override this purpose, we can make a big difference. We aim to enable community integration and participation of the person, hopefully despite Neuropathic pain.

Content references:

1. TO BE ADVISED

Presenter biography:

Luci Austin graduated as a Physiotherapist in 1997 and spent most of her Physiotherapy career in Neurological rehabilitation, 10 years in the NZ hospital system and then as a community- based

physiotherapist in the Waikato. Her passion is Spinal Cord Injury rehabilitation, in which she has worked in varying capacities for the last 25 years, now as part of the Auckland Spinal Unit reassessment team, for clinics in Hamilton and Tauranga.

Two years ago she jumped into the challenge of Wheelchair and Seating assessment and prescription and works 0.5 FTE for Seating to Go in their Hamilton office. Outside of work she is married with three teenage children, enjoys walks with friends, dancing and socialising.

A6: Non-ambulatory children with cerebral palsy and intellectual disability – What should a physio do?

Karen Adams, Dr Julia Hill, Dr Julie Blamires

Learning objectives:

Upon completion of this session, participants will be able to:

1. Identify 3 challenges for health professionals trying to implement evidence-based practice when working with children with non-ambulatory CP and intellectual disability.
2. Describe 6 physiotherapy intervention types that are supported by literature to have positive participation outcomes for this population.
3. Be able to apply a biomedical ethics framework as a clinical reasoning tool for this population.

Session description:

Physiotherapists in Aotearoa, New Zealand, face challenges implementing evidence-based practice for non-ambulatory children with cerebral palsy and intellectual disabilities (NACCPID). These children often have many co-morbidities that limit many physiotherapy interventions such as strength training, goal or task directed training, for instance HABIT-ILE or the CO-OP approach, which require good cognitive ability. An integrative review, was conducted to identify what the literature tells us about physiotherapy interventions for school-aged NACCPID. This review followed the method developed by Kutcher and LeBaron's (2022) and used the Te Whare Tapa Whā framework to capture a holistic view of health. The findings from this review aim to guide clinical practice and suggest areas for future research. Six intervention types were identified: Functional Exercise; Gaming; Power Wheelchair Training; Night-time Positioning Equipment; Static standing frames; and Dynamic Standing Frames. These interventions were organised within the Te Whare Tapa Whā framework, incorporating Māori perspectives, through collaboration with a cultural advisor. Implications for practical application for these interventions are discussed within this framework highlighting their use in facilitiating participation and inclusion, maximising independence, enabling to body to perform a task, optimising the ability to move, the need for collaboration, the importance of individual needs, and the impact on self esteem and positive emotions. Due to the heterogeneity of NACCPID, the presentation will present the 4 pillars of biomedical ethics as a clinical decision-making tool to help guide therapists clinical decisions regarding treatment approaches for NACCPID.

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Presenter biography:

Karen is a passionate paediatric physiotherapist currently completing her PhD at AUT investigating physiotherapy interventions for school-age children with non-ambulatory CP combined with intellectual disability. Her work in Special Schools led her into this topic, and although now she works in the Gait Analysis Service at AUT in conjunction with Starship Hospital, she also continues to support children with CP and their families through Specialist Rehab Services. Karen is also mum to a child with disability and so brings a pragmatic lens to her research.

A7: Stroke and Equipment Provision: Are We Facilitating Best Outcomes

Tina Roesler, Christie Hamstra

Learning objectives:

1. List 3 barriers to assistive technology after stroke.
2. Identify 2 recovery outcomes that can be enhanced with the use of appropriate rehab technology.
3. Support justification for 2 interventions, using rehab technology applications for appropriate wheelchair prescriptions for a stroke client.

Session description:

While stroke annually impacts over 12 million people worldwide, appropriate equipment provision and functional outcomes are not well documented. Through presentation of case studies, this session will discuss Best Practice for stroke care and provide relevant clinical examples.

While many consider stroke or cerebral vascular accident a one-time event, the progression and/or recovery from this event can evolve over days, weeks or months.

While most research emphasizes early and aggressive intervention for positioning and rehabilitation, the guidelines available are often vague on how to intervene from a rehab technology standpoint. Often clinicians are making predictive decisions about recovery and are not providing appropriate equipment for the functional level at discharge. This can create barriers to functional return and create a poor quality of life prognosis.

We will discuss multiple case examples, and look at mistakes, opportunities, and positive interventions in relation to complex rehab technology. We will discuss the statistics of stroke, the progression and recovery after stroke, and look at barriers to effective assistive technology.

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Presenter biography:

Tina Roesler is a physical therapist, author, and international presenter with over 25 years of experience. She earned her BS in Health Studies and her MS in Physical Therapy from Boston University Sargent College of Health and Rehabilitation Sciences and has held leadership roles in education and business development. She has practiced in rehabilitation, home care, pediatrics, and long-term care with a focus on seating and wheeled mobility. She was a long-standing member of the Clinician Task Force and has presented globally at numerous events including ISS, ESS, Oceana Seating Symposium , ATSA, Nordic Seating Symposium, ASCIP, and APTA.

B1: Ableism and Mobility Milestones: What Do We Mean by 'Mobility is a Human Right'?

Dr Heather Feldner

Learning objectives:

1. Participants will be able to define ableism and describe at least 2 impacts of ableism on society and/or seating and mobility practice.
2. Participants will be able list at least 3 mobility milestones across the life span as defined by mobility technology users.
3. Participants will identify at least 1 feature/characteristic that mobility technology users link to their overall satisfaction with their devices.
4. Participants will synthesize at least 2 steps to improve mobility equity throughout the lifespan.

Session description:

Mobility is a complex construct central to early childhood development and evolving throughout our lifespan. Mobility is necessary for achieving and maintaining good health, part of our social identity, and is critical to our everyday functioning. Mobility is so essential, it is a human right as designated by the United Nations in 2 separate documents, the Convention on the Rights of the Child and Convention on the Rights of Persons with Disabilities. Many people in the disability community use technology to support their mobility. However, an individual's right to mobility may either be supported or abandoned by our current practices, policies, research and CRT products. Adding to this complexity is ableism, or the system of assigning value to people's bodies and minds based on societally constructed views of normalcy, productivity, desirability, intelligence, excellence, and fitness (Lewis, 2022). Because of ableism, our society views and places different value on different forms of mobility, which in turn impacts provision of and access to essential mobility technologies. Centering the voices of mobility technology users, this presentation will define a more nuanced understanding of mobility milestones- not as we traditionally think of them from a developmental perspective- but based on the everyday lives and mobility-related decision-making processes and outcomes that enable participation for mobility technology users. We will dive deeply into the lived expertise of our collaborators to better understand their mobility journeys, how their equipment works for and against them, and what people with lived experience really think when they hear the phrase, 'Mobility is a Human Right'.

We will embed these perspectives into discussions around ableism relative to seating and mobility and the exercise of power in the decision-making process around CRT design, service provision and utilization. From this discussion, we will explore opportunities to improve mobility equity throughout the lifespan.

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Presenter biography:

Dr. Heather Feldner is an Associate Professor at the University of Washington in Seattle, WA. She has an adjunct appointment in the Department of Mechanical Engineering and is a founding associate director of the UW Center for Research and Education on Accessible Technology and Experiences (CREATE) Her research work is centered at the intersections of mobility, disability, ableism, and technology, particularly with regard to ON Time Mobility for young children with disabilities and ableism across the lifespan in healthcare contexts.

B2: Activity-focused powered mobility practice: Applying the process-based tool Assessment of Learning Process (ALP)

Dr Lisbeth Nilsson, Dr Lisa Kenyon

Learning objectives:

1. Describe the 3 stages of exploration and the 8 phases in the learning process
2. Compare and contrast process-based and task-based assessment
3. Evaluate applicability of the presented knowledge in your professional practice

Session description:

Activity-based focus for practice in a power mobility device suggests integration of learning device-use in other activities aligning with the child's or adults' motivation and needs. Learning to operate a device combined with using the ability to move to do other activities, can grow awareness of benefits and opportunities that may follow from becoming able to move around in the world.

The Assessment of Learning Process (ALP) is a tool including both an assessment instrument and facilitating strategies. It was originally developed for powered mobility practice, but today there is also a universal ALP-tool. The instrument is used to determine a person's phase of learning, and the strategies give guidance on how to facilitate at each of the eight phases in the process. The ALP-tool, and its parts will be presented, and its process-based nature will be explained.

In a practical interactive part of the session, video-clips will be used to illustrate power mobility practice, and the audience will be invited to observe and assess stage of exploration and phase in the learning process. The intent is to provide opportunities for testing to assess and reflect on what in an observed video-clip indicates a specific stage or phase in the process.

Examples from clinical practice will inspire more ideas of how learning how to operate a mobility device can be combined with using the ability to drive in other activities. Finally, the audience is invited to have an open discussion with questions and answers elaborating on thoughts, opportunities and challenges to implement activity focused powered mobility.

We hope to inspire a holistic view on learning power mobility-use, where practice takes place in an activity focused situation, enhancing a person's awareness of possible benefits of becoming mobile.

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Presenter biographies:

Lisbeth Nilsson is a PhD, Occupational Therapist and specialist, associated to Department of Health Sciences, Lund University, Sweden. She developed the Driving to Learn intervention for people with profound cognitive disabilities (1996-2007). She and Josephine Durkin, UK, collaborated on developing the Assessment of Powered mobility use (ALP).

Dr. Lisa Kenyon is a Professor in the Department of Physical Therapy and Athletic Training at Grand Valley State University in Grand Rapids, Michigan, USA. She heads the Grand Valley Power Mobility Project; an inter-professional project providing power mobility training and use for children across the full continuum of pediatric power mobility learner groups.

Nilsson and Kenyon did their first interactive presentation on process-based intervention at ISS in Vancouver 2020 and thereafter collaborate on a regular basis. They share the goal to advance understanding and disseminate knowledge of the ALP-tool to students, clinicians, educators and researchers.

B3: The provision of custom cushions via telehealth

Rachel Brown, Dr Fi Graham, Robert Toller

Learning objectives:

1. Discuss the research around the use of telehealth for wheelchairs and seating
2. Identify five parameters that result in a successful custom seating solution when using telehealth
3. Describe the key measurements required for a custom cushion

Session description:

Custom-fabricated cushions are generally prescribed for people with complex positioning needs where off-the-shelf cushions have been eliminated or tried without success. Only a few suppliers fabricate cushions in New Zealand, resulting in the need for extensive travel to undertake assessments, which creates delays in the provision of seating solutions.

Telehealth has become a critical component of scripting and service delivery to avoid these delays while optimising the accuracy/success of assessments. The World Health Organization strongly advocates telehealth to address access and equity issues (World Health Organization, 2023).

Preliminary evidence indicates that telehealth can be as successful as in-person assessment for complex seating, although examples of its use with custom seating situations are very limited (Barlow et al., 2009; Graham et al. 2020).

In this presentation, custom seating assessment via telehealth will be demonstrated, including the key information the supplier needs, based on the presenter's clinical experience. The fabrication process of making a custom cushion via 3D machines will be explained with samples shown. The limits/ parameters of telehealth for a custom seating assessment will be explored.

Content references:

1. Adam Partlow, Colin Gibson, Janusz Kulon. 3D posture visualisation from body shape measurements Barlow, I. G., Liu, L., & Sekulic, A. (2009). Wheelchair Seating Assessment and Intervention: A Comparison Between Telerehabilitation and Face-to-Face Service. In International Journal of Telerehabilitation • telerehab (Vol. 17, Issue 1).
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Presenter biographies:

Rachel is a clinical specialist in complex wheelchairs and seating, with over 20 years of experience. She runs wheelchair outreach clinics, including those via telehealth, and provides clinical advice to therapists. Rachel was on the external review group for the World Health Organisation Wheelchair Provision Guidelines and provided specialised advice. She has presented nationally/ internationally on various subjects related to wheelchair and seating and has been part of a recent telehealth study in New Zealand.

Associate Professor Fi Graham teaches and researches postgraduate interprofessional rehabilitation with the University of Otago, Dept of Medicine, Rehabilitation Teaching and Research Unit. She is passionate about the use of telehealth to improve access and equity in rehabilitation services, including well fitted wheelchair and seating. Her research in this area has received multiple grants and directly informs the World Health Organisation recommendations on the use of telehealth for wheelchair provision. She lives and works from Christchurch New Zealand.

Robert is CEO of Custom Technologies Ltd which for the last 35 years has been specialising in the design and provision of custom seating and positioning products and high-end ultra-light and custom wheelchairs. With a primary professional background in Mental Health, the leap to a broader view of disability and what was going to be required for true community integration was an easy one. As part of a number of groundbreaking projects and research, much of which has been published, he has developed an analytical approach to the technicalities of what the company does and Telehealth seamed a logical path to improving the provision of complex equipment for a client base for whom access to services provides some interesting geographical challenges.

B4: Considerations for Independence: Wheelchair Seating for Adolescent Manual Wheelchair Users

Dr Rachel Hibbs

Learning objectives:

1. Identify key factors to consider for communication and collaboration with adolescents
2. Describe 2 advantages and disadvantages for pediatric vs adult equipment for adolescents
3. Describe 3 adjustments or modifications that can be made to accommodate body changes with development

Session description:

The adolescent manual wheelchair user is a unique client due to the overwhelming amount of body, lifestyle, and social changes that await them in their journey toward adulthood. Their manual wheelchair must meet their evolving needs while still promoting proper seating, positioning, and propulsion mechanics. It is possible to prescribe a manual wheelchair that fits the user currently, while also ensuring its ability to change to meet a user's developing needs. This session's discussion will prioritize the selection of components to promote independent mobility and wheelchair skills, as well as provide considerations for the overall set-up of the manual wheelchair to prevent unfortunate musculoskeletal sequelae. This session will address ways to identify when a chair's growth has been maximized, how to provide justification for a new wheelchair for modification is no longer appropriate, and how to facilitate the transition from pediatric to adult seating and mobility services. This course will seek to address the question, "How can we prepare for change while meeting an adolescent user's needs now"? By understanding a diagnosis' impact on growth patterns, exploring modifications to current chairs to accommodate growth, considering component selection and set-up to maximize independence and efficiency, we can order wheelchairs that successfully bridge a user from youth to adulthood.

Content references:

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Presenter biography:

Dr. Hibbs is an Assistant Professor & Director of Continuing Education in the Department of Rehabilitation Science and Technology at the University of Pittsburgh. In addition to providing instruction in the School of Health and Rehabilitation Sciences, she is a Neurologic Clinical Specialist Physical Therapist, Certified Assistive Technology Professional, and Seating and Mobility Specialist

who provides clinical care at the University of Pittsburgh Medical Center (UPMC) Rehabilitation Institute.

B5: Reverse Engineering: Unpacking a Wheelchair Prescription Process

Megan Ransley, Amanda Lowry

* Session limited to 10 people

Learning objectives:

Upon completion of this session, participants will be able to:

1. Participate in description of presenting posture of a person in their wheelchair.
2. Be able to name the position of the spine, pelvis, hip, knee and ankle joints as well as the components of the chair supporting the posture.
3. Participate in an unsupported sitting and supine evaluation and describe at least three key postural considerations relevant to wheelchair prescription for a person with Quadriplegia.
4. Collaborate in analyzing a wheelchair prescription using a reverse engineering approach and justify at least three clinical decisions based on assessment findings.
5. Experience and understand the difference between a body with muscle tone and one without, recognizing how a body with low tone must be balanced differently from one with a full dynamic posture and how that informs prescription decisions.
6. Have an opportunity to ask a question of a person with Quadriplegia regards the user and equipment relationship.

Session description:

This interactive 90-minute workshop provides a unique opportunity to reverse-engineer a real-world wheelchair prescription, using the lived experience of Amanda Lowry, who over 12 years ago sustained a spinal cord injury resulting in Quadriplegia.

Over time, Amanda's wheelchair configuration has evolved in response to her changing needs.

Participants will first explore Amanda's current wheelchair setup, analyzing her body position and the wheelchair components to recognize how they work together. The session will then take a step back, guiding participants through a hands-on unsupported sitting and supine evaluation to explore the postural considerations that informed her final prescription.

With Amanda present, attendees will gain invaluable hands-on experience assessing the unique characteristics of the paralysed body—an opportunity that many therapists may not have had before. The session will emphasize the importance of systematic evaluation and critical thinking in seating prescription, fostering a deeper understanding of how assessment findings directly inform equipment choices.

A key component of this session aligns with the theme Whai Wāhi: Participation – An Expression of Self. Amanda will openly share her lived experience and her evolving relationship with her wheelchair, providing insight into how seating impacts daily function, identity, and independence. The session will also include a dedicated Q&A where participants—particularly newer therapists—are encouraged to ask questions they may have previously been too shy to ask in other settings. This will be a supportive and safe space for open discussion.

Participation is limited to 10 attendees per session to allow for meaningful engagement and hands-on learning. The session can be repeated if required for numbers. *

Content references:

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Presenter biographies:

Megan is an experienced wheelchair and seating therapist and now works as a clinical educator. Her work has focused on prescription, assessment, and refinement of mobility and positioning solutions. With a strong practical approach, Megan values hands-on learning and collaborative problem-solving in wheelchair seating. She holds a Bachelor of Physiotherapy from the University of Otago (2001) and a Postgraduate Certificate in Postural Management of Complex Disability from Oxford Brookes University (2012).

Amanda broke her neck in an accident 12 years ago resulting in Quadriplegia. She now uses a manual wheelchair for all her daily mobility. Amanda is passionate about advocacy, empowerment, community development and is undertaking a PhD on highly impaired athletes in high-performance disability sport. Amanda plays wheelchair rugby for the Bay of Plenty Steamrollers and swims competitively. She brings invaluable lived experience to this session, sharing insights into her evolving relationship with her wheelchair and its impact on her daily function, independence, and identity.

B6: Managing Postural Asymmetries from the bottom up

Angela Rowe, Niharika Dhillon, Kim Vien

Learning objectives:

1. To evaluate the impact of postural asymmetry within standard wheelchair cushions
2. To identify strategies to manage postural asymmetries within a wheelchair cushion including novel approaches
3. To understand the clinical limits of use for standard wheelchair cushions

Session description:

The majority of standard off the shelf cushions have design features relating to standard postures and body shapes. Many have been tested to ISO 16840 standards with symmetrical loading and forces. However, the postures that we assess with our clients within our respective wheelchair clinics are usually far from symmetrical. How do the cushion properties and available adaptations respond to asymmetrical postures and are they effective in supporting postures such as a pelvic obliquity? Are there other unintended consequences?

As a follow on from our Pelvic obliquity presentation from 2021, we will revisit clinical reasoning for asymmetrical pelvic positions in sitting. We will present a hands on workshop in which we will compare wheelchair cushions with different postural presentations. We will review cushion designs and evaluate options that can assist postural asymmetry. The workshop will be solution focused and include novel approaches such as adapted underwear. Tools such as a Cushion Comparison Chart and pressure mapping will be demonstrated. Clinically, we will reflect on when it might be time to think beyond off the shelf cushion options.

Angela (Physiotherapist), Niharika (Occupational Therapist) and Kim (Occupational Therapist) are part of specialised seating teams at St Vincent's Hospital and Melbourne Health. Our models of service allows input from differing clinical perspectives that can allow for more developed AT solutions.

Content references:

1. wheelchairstandards.com -Lange, M & Minkel, J (2018) Seating and wheeled mobility: a clinical resource guide Thorofare, NJ: Slack Incorporated -Waugh, K. A clinical application guide to standardized wheelchair seating measures of the body and seating support surfaces. University of Colorado/Assistive Technology Partners. Denver, Colorado. Revised edition August 2013 https://www.ncart.us/uploads/userfiles/files/GuidetoSeatingMeasuresRevisedEdition.November2013.pdf
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Presenter biographies:

Angela Rowe is a physiotherapist with over 25 years' experience, predominantly in the fields of neurology and disability. She has completed postgraduate studies in the field of Postural

Management and worked as a Postural Management therapist at The Royal Hospital for Neuro-disability in London. Angela currently works in two Wheelchair and Seating Services at The Royal Melbourne Hospital and Monash Health and runs her own business Postural Innovations. Angela has been actively involved in research and conference presentations with her Wheelchair and Seating clinic teams. She has coauthored a Wheelchair competency at Monash Health.

Niharika Dhillon is an Occupational Therapist with 20 years' experience, mainly in neurological disability. She trained in Canada and has worked in Canada and Australia prescribing wheelchairs and custom seating and complex equipment for people with complex postural needs.

Kim Vien is a senior Occupational Therapist working in the disability sector specialising in seating and equipment prescription in Melbourne Australia. Having been in the disability sector for over 15 years, her work has led to a keen interest in seating, and she is part of the Wheelchair and Seating Clinic Team at the Royal Melbourne Hospital. Kim has presented the topic of seating and wheelchair in past Oceania Seating Symposiums and ATSA (Assistive Technology Suppliers Australia) Expos as well as research and professional development projects related to improving prescription skills of therapists and new graduates. She currently works at specialist outpatient clinics at Royal Melbourne Hospital and St Vincent’s Hospital working with people with Spina Bifida and Post Polio Syndrome.

B7: How and Sweaty! Skin Microclimate, Pressure Care and Comfort

Edward Milner

Learning objectives:

1. Identify 3 factors contributing to changes in microclimate.
2. Describe the impact of moisture on skin integrity and pressure care management.
3. Compare and contrast two materials that improve breathability and dryness through the client's skin and support surface.

Session description:

Keeping the skin dry and cool, and allowing recovery periods between phases of occlusion, is currently considered best practice. The skin microclimate—which includes temperature, humidity, and airflow near the skin's surface—is viewed as an indirect risk factor for pressure ulcers. This is in contrast to the direct risk posed by mechanical loading, which can deform the skin and subcutaneous layers (Kottner et al., 2018).

Emerging evidence suggests that elevated skin temperature negatively affects skin resilience and increases the risk of ulceration in individuals with impaired thermoregulation. Research has shown that skin temperature can serve as a useful predictor for establishing preventive care for pressure ulcers.

A study conducted by Yusuf et al. (2015) confirmed that high pressure on bony prominences results in internal damage, while the skin microclimate can decrease skin tolerance, leading to superficial skin problems. In this study, skin temperature was linked to the assessment of pressure ulcer risk and superficial skin changes.

Clinicians should take the skin microclimate into account when assisting in postural care for individuals in sitting and lying positions, particularly as global temperatures rise and new materials for support surfaces are developed to better manage moisture and heat. The Pan Pacific Pressure Injury Alliance endorses this approach in their quick reference guide for the Prevention and Treatment of Pressure Ulcers/Injuries (2019, Third Edition).

Therefore, how can we assist our clients in managing their skin microclimate needs during posture care interventions? This session will address this question by enhancing our understanding of skin microclimate and its impact on pressure care and user comfort. Research literature will be presented, and attendees will learn about materials that may help mitigate heat and moisture for their clients.

Content references:

1. Kottner, J., Black, J., Call, E., Gefen, A., Santamaria, N. (2018), Microclimate: A critical review in the context of pressure ulcer prevention. Clinical Biomechanics, 59: 62-70
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Presenter biography:

Edward is an Occupational Therapist with experience in supporting adults with neurological and/or developmental disability, mental health and intellectual disability. Edward has built his clinical skills by working across three countries: Australia, England, and Germany.

During his time in England, Edward narrowed his specialty towards wheelchair prescription and posture care management in sitting, working with the national wheelchair service and a spinal cord injury rehabilitation unit.

He returned to Australia with these clinical skills and continued supporting individuals with neurological conditions in the community before transitioning to a product consultant role scripting mobility equipment.

Edward is a clinical educator for Medifab and considers it a privilege to work with clinicians, ATPs, and end-users to achieve excellent clinical outcomes in posture care management.

C1: Are we lying down instead of supporting 24 hour postural care for our clients?

Dr Jackie Casey

Learning objectives:

1. Participants will be able to identify three reasons for using lying as part of a 24 hour postural care approach with clients with complex physical disabilities
2. Participants will understand how the alignment of body structures can be supported in lying
3. Participants will develop strategies to increase contact with the support surface in lying to reduce risks of PUs

Session description:

Persons with limited mobility and/or complex postures can have difficulty in changing their body position. This can result in the person spending prolonged periods in asymmetrical postures in lying which in turn can lead to asymmetric loading and pressure over smaller areas of skin and deep tissues, and often the development of pressure ulcers (PUs). Depending upon the relationship between the individual and the support surface there may also be the presence of friction, shear and rotation which can further compound this risk of developing PUs.

Although PUs may be an indicator of underlying ill-health, the majority are avoidable. They not only impact on the individual's quality of life, health and comfort, but are also associated with an increased mortality risk, and higher healthcare costs. It is vital that we implement strategies to manage and/or reduce the risk of developing PUs. Strategies for PU prevention primarily attempt to reduce interface pressure between the body and the support surface on which it rests. They typically employ a combination of regular repositioning, off-loading 'at risk' areas, or using pressure redistribution support surfaces.

This session will give an overview of the importance of lying as part of a 24-hour postural care approach for individuals with limited mobility and/or complex postures. It will present some of the current evidence of the association between postural alignment in lying and having postural asymmetries, deformities & contractures, and developing PUs. It will give consideration to the need to consider lying when developing wheelchair seating prescriptions for those with individuals complex postures. Further, there will be an exploration of strategies that can be employed to reduce/ manage both PUs as well as deformities and contractures.

Summary: Supported alignment in lying offers a window of opportunity to protect against developing PUs, or to accommodate for deformities and contractures.

Content references:

1. Agustsson A and Jonsdottir G. Posture Management 24/7, in Lange ML & Minkel JL. (eds.) Seating and Wheeled Mobility: A Clinical Resource Guide. 2018; SLACK Incorporated.
2. Blake S F, Logan S, Humphreys G, Matthews J, Rogers ., Thompson-Coon J, Wyatt K and Morris C. Sleep positioning systems for children with cerebral palsy. The Cochrane database of systematic reviews, 2015: (11), pp. CD009257.
3. Casey J, Hoffman L, Hutson J and Kittelson-Aldred T. Supporting the occupation of sleep through night-time positioning equipment. SIS Quarterly Practice Connections, 2019; 4 (2), pp. 7-9.

4. Castle D, Stubbs B, Clayton S and Soundy A. A 24-hour postural care service: Views, understanding and training needs of referring multidisciplinary staff. International Journal of Therapy and Rehabilitation, 2014; 21(3), pp. 132-139.
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10. Toole PJ, Kittelson T, Hoffman LA & Hutson J. RESNA Position on Assistive Technology for Lying Posture Care Management. 2025.

Presenter biography:

Dr Jackie Casey has approx. 30 years of experience; and has worked as a clinician, university lecturer, and in industry across the UK, Ireland and the US. She is passionate about the importance of posture, positioning, seating and wheelchair mobility to enabling the participation in everyday life for individuals with mobility and/or postural limitations. Her doctoral research investigated the postural asymmetries and mobility of children with cerebral palsy. Whilst her previous research has explored the impact of caring for a child who is a wheelchair user, from a parent or a teacher's perspective; use of modified toy cars to enable children to socially participate; and with industry in designing accessible customisable seating products for persons with complex postural needs. She now works in a joint appointment with Ulster University and Southern Health & Social Care Trust, continuing her own research, and supporting clinicians to engage in and to embed a culture of clinically relevant research.

C2: Take homes from the take home: Wheelchair delivery and follow up

Angela Rowe, Bill Contoyannis, Niharika Dhillon, Kim Vien

Learning objectives:

1. Outline the wheelchair delivery process including the prescriber's duty of care.
2. Identify 5 barriers to an optimal wheelchair delivery
3. Identify 5 actions that can optimise wheelchair set up

Session description:

The WHO Wheelchair provision guidelines outline a new four step process of Select, Fit, Train and Follow up (Smith and Pearlman 2023). Wheelchair competency frameworks and professional development in the field of seating often focus on the assessment process and the initial 'Select' step. In addition, the National Disability Insurance Scheme (NDIS) in Australia does not have a requirement for therapist involvement in a wheelchair delivery, leading to newly prescribed wheelchairs being dropped off to clients without being fitted to meet their needs. Abandonment of assistive technology (AT) is a serious problem (Petrie et al 2018) and raises the question of whose responsibility it is when a wheelchair prescription doesn't go to plan.

This 90-minute workshop will focus on the steps of 'Fit' and 'Follow up' as defined by the WHO Wheelchair Provision Guidelines. We will outline best practice in wheelchair delivery as defined by a hospital-based wheelchair competency. Clinically, the workshop will discuss the duty of care, risk management and optimisation of fit and functionality of a new wheelchair. In depth assessments of centre of gravity can support goal related adjustments for self-propulsion, maneuverability and stability. Follow up and defining a wheelchair maintenance plan can enable long term success of a newly delivered wheelchair.

From a user perspective, this workshop will include the evaluation of client goals and outcomes and improving success during fitting sessions. Receiving a new wheelchair can be filled with hopes and expectations and for some clients can be a change management process. Successful integration of AT into daily lives incorporates psychosocial and cultural considerations which influence the shaping of individualised meanings assigned to that piece of AT (Louise-Bender et al 2002). The workshop will also look at barriers affecting an optimal delivery including communication, prescription and funding delays and client specific considerations, with strategies to try and limit the impact of these barriers.

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1. Beauregard, T. A., Schein, R. M., Berner, T. F., McKernan, G., Schmeler, M. R., Dicianno, B. E., & DiGiovine, C. P. (2025). Investigation of stakeholder perceptions of the wheelchair service delivery process. Disability and Rehabilitation: Assistive Technology, 1–9. https://doi.org/10.1080/17483107.2024.2442705
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Presenter biographies:

Angela Rowe is a physiotherapist with over 25 years' experience, predominantly in the fields of neurology and disability. She has completed postgraduate studies in the field of Postural Management and worked as a Postural Management therapist at The Royal Hospital for Neuro-disability in London. Angela currently works in two Wheelchair and Seating Services at The Royal Melbourne Hospital and Monash Health and runs her own business Postural Innovations. Angela has been actively involved in research and conference presentations with her Wheelchair and Seating clinic teams. She has coauthored a Wheelchair competency at Monash Health.

Niharika Dhillon is an Occupational Therapist with 20 years' experience, mainly in neurological disability. She trained in Canada and has worked in Canada and Australia prescribing wheelchairs and custom seating and complex equipment for people with complex postural needs.

Kim Vien is a senior Occupational Therapist working in the disability sector specialising in seating and equipment prescription in Melbourne Australia. Having been in the disability sector for over 15 years, her work has led to a keen interest in seating, and she is part of the Wheelchair and Seating Clinic Team at the Royal Melbourne Hospital. Kim has presented the topic of seating and wheelchair in past Oceania Seating Symposiums and ATSA (Assistive Technology Suppliers Australia) Expos as well as research and professional development projects related to improving prescription skills of therapists and new graduates. She currently works at specialist outpatient clinics at Royal Melbourne Hospital and St Vincent's Hospital working with people with Spina Bifida and Post Polio Syndrome.

Bill Contoyannis is a rehabilitation engineer with a degree in Mechanical engineering and a Master of Biomedical Engineering. He is an adviser to health departments, professional organisations, and support associations throughout Australia. He has conducted training courses worldwide in patient safety, failures of assistive technology devices and litigation avoidance, and material science relating to the fabrication of artificial limbs, orthopaedic devices, wheelchairs, and other assistive technology.

He also works as a senior forensic engineer with Mark Dohrmann and Partners Pty Ltd conducting investigations and providing expert advice and was instrumental in the setting up of REHAB TECH, a Prosthetics, Orthotics and Assistive Technology consulting service originally at Monash University. He has been involved in a broad range of rehabilitation and assistive technology areas with a range of activities including incident investigation, education, research, advice, and clinical support.

C3: Hybrid mobility: Navigating the clinical and functional impact of power add-ons for manual wheelchair users

Bianca Brady, Claire Grey

Learning objectives:

1. Describe at least three types of power add-on technologies for manual wheelchairs and their functional implications by the end of the session
2. Identify key clinical indicators and contraindications for prescribing power add on units to support long-term musculoskeletal health and user participation
3. Analyse the impact of hybrid mobility on user identity and autonomy through discussion of real-world case examples
4. Evaluate the effectiveness of power add-on systems in enhancing community mobility across varied environments

Session description:

As technology continues to evolve in the world of mobility, power add-on units for manual wheelchairs are reshaping how users navigate their environments, manage their health, and define their independence. This session explores the emerging landscape of hybrid mobility, focusing on the connection of manual wheelchair use and powered assistance.

We'll dive into how power add-ons are influencing user identity and autonomy, with particular attention to how individuals perceive control, independence, and self-image when combining manual propulsion with powered support. From a clinical standpoint, we'll examine strategies for assessing when and how to prescribe power assist devices to support long-term function, reduce the risk of overuse injuries such as rotator cuff strain, and promote broader participation in daily life. The seminar will also highlight the variety of technologies on the market—from push-rim assist systems and joystick-controlled drives to front-mounted power units—and address practical considerations like training needs, ease of use, and system compatibility.

Finally, we will explore real-world functional outcomes, emphasising how hybrid mobility impacts users in diverse settings—urban vs. rural, public transit accessibility, and travel readiness. Through case studies and focused discussion, participants will leave with a deeper understanding of how to integrate power add-ons into clinical practice and advocacy to better serve the diverse needs of manual wheelchair users.

Join us for this thought-provoking seminar that bridges clinical insight, user experience, and the future of wheelchair mobility.

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Presenter biographies:

Bianca: Bianca completed her Occupational Therapy degree in Sydney and has over 15 years of experience in the Australian health and community sectors. Specialising in physical rehabilitation and addressing the challenges posed by neurological conditions that impact daily life, she has built a career focused on supporting others to overcome barriers and enhance their quality of life.

Having worked in diverse settings, Bianca combines hands-on experiences with a passion for education, focused on creating and delivering learning opportunities in the fields of seating and wheeled mobility. As a dedicated advocate for individuals who use assistive technology to achieve their life goals, Bianca is committed to fostering growth, learning, and empowerment among both clients and fellow clinicians.

Claire: Claire Grey has been working as an Occupational Therapist for over 20 years, qualifying in the UK and gaining extensive experience in the UK, Australia and NZ, working in hospitals, special schools, community teams, and NGOs including Whizz Kidz (UK). Claire is fortunate to volunteer with the Altus Pacific Aid team to participate in wheelchair clinics in Tonga.

Relocating to New Zealand 12 years ago, Claire worked in a wheelchair and seating team and 2 years ago joined Medifab in a newly created clinical role as a Clinic Specialist. Today, she works closely with therapists and clients, offering practical solutions and advising on seating, 24 hr. postural management and providing education sessions throughout NZ. Claire is also working on a master's in public health, exploring the topics of social equity and equal opportunities for all.

C4: London Calling – Travelling with a Wheelchair from Remote Central Australia

Louise Lamb, Andrew Congdon

Learning objectives:

1. Identify the travel challenges that may be faced by power wheelchair users with complex needs who reside in very remote settings.
2. Describe the role that an occupational therapist can play in assisting a wheelchair user and their support network with travel planning.
3. Identify useful strategies that can assist a wheelchair user when travelling internationally from a remote location.

Session description:

The Northern Territory (NT) has the smallest population (255,000) of any state or territory in Australia, and outside of the capital Darwin (population 150,000), the population is found in remote towns and communities spread throughout its vast 1,400,000 square kilometre land mass. The small town of Alice Springs is located in the centre of Australia, 1500km from the nearest capital city.

Travel is an important part of many people's lives, and something that can be taken for granted, however people with disabilities face additional challenges when participating in travel, which can lead to a reluctance to travel and research has shown that 70% of people with disabilities limit their travel. Power wheelchair users with complex needs can face many challenges when travelling to and from the remote locations such as Alice Springs. This may be due to a lack of transport options, manual handling supports, great travel distances, high costs and difficulty transporting bulky items.

In this case study presentation, you will learn about the experiences of an artist and power wheelchair user who was invited to travel from Alice Springs to London to exhibit his artwork. We will share the role the occupational therapist played to assist with travel planning and logistics, sourcing suitable accommodation and equipment, and preparing for the unknown i.e. breakdowns.

The presentation will reflect on the strategies and learnings from what was considered a successful trip to London and also draw upon our experience supporting other Alice Springs residents with domestic travel.

Content references:

1. Dehumanizing air travel: a scoping review on accessibility and inclusion of people with disabilities in international airports. Grotti, D., Morales, E., Routhier, F ., Riendeau, J., and Hassen, A., 27 August 2024
2. Chapter Two – Disability and Travel. Mindell, J., Amin, S., Mackett, R., Taylor, J., and Yaffe, S. 28 May 2024
3. Travelling from Perspective of Persons with Disability: Results of an International Survey. Zaluska, U., Kwaitkowaska-Ciotucha, D., and Grzeskowiak, A., 25 August 2022.

Presenter biographies:

Louise Lamb is an occupational therapist who has been working in community disability roles in the Northern Territory since 2013. As a community based therapist she developed a passion for

wheelchair, seating and assistive technology (AT) focussed services and transitioned to more AT focussed roles in recent years.

Louise had been based on Darwin in the Northern Territory for the majority of her career, but relocated to Perth with her young family in 2024. Louise continues to provide services to wheelchair users based in the Northern Territory via her role with Assistive Technology Lab where she oversees intake procedures, and also delivers clinical supports via remote service delivery and in collaboration with her colleagues who are based in the Northern Territory.

Andrew Congdon is an occupational therapist based in the Northern Territory, Australia and has a keen interest in the delivery of services in rural and remote settings. He has worked in the seating and mobility field for over 20 years in various locations across Australia working for private, government and non-government organisations.

Andrew also has experience working in less resourced settings in the Asia/Pacific region and has contributed to the development and delivery of various training resources including the WHO Wheelchair Services Training Packages. Andrew has completed assistive technology (AT) sector development Work in the Northern Territory exploring the feasibility of AT service delivery and the coordination of repairs and maintenance services in remote settings. Andrew started his own service Assistive Technology Lab in 2018 and works with wheelchair users and service providers across the Northern Territory.

C5: The universal approach for facilitating participation, tool-use learning and application of the ALP-facilitating strategies

Dr Lisbeth Nilsson

Learning objectives:

1. Describe at least three essential aspects of the facilitating approach.
2. Explain why these aspects can facilitate optimal outcomes of intervention.
3. Evaluate usefulness of the universal facilitating approach in your own practice.

Session description:

The process of learning joystick-use and training strategies for each phase in the process were identified in the Driving to Learn project, where children and adults with profound cognitive disabilities got the opportunity to practice in a powered wheelchair. In collaboration with Josephine Durkin the findings were further developed into the ALP-tool, including instrument and facilitating strategies.

Moreover, Nilsson and Durkin compared their views on how to interact in an intervention situation to enable optimal outcomes. Their elaborations led to the identification of a facilitating approach for learning to use powered mobility devices. Thereafter the approach has been advanced, in collaboration with a variety of professionals, through the application of the ALP in different situations of activity, participation and use of assistive technologies.

The universal facilitating approach is intended to be used across all eight phases in the learning process. It is focused on inter-personal skills necessary to establish a safe and secure relationship based on mutual interaction and communication. The most essential aspects of the approach are strongly related to presence of motivation, endurance, responsiveness, adaptability, usefulness and predictability in both/all partakers in a learning situation or context.

As the facilitating approach concerns qualitative aspects of interaction it can be applied to any situation where a learning process needs facilitation. Its application is independent of age, mental or physical abilities, situation of activity or participation or type of tool to be used.

Content references:

1. Nilsson, L. (2007). Driving to Learn: the process of growing consciousness of tool use: a grounded theory of de-plateauing (Publication Number 2007:34) [Doctoral dissertation, Lund University]. Lund, Sweden. https://www.researchgate.net/publication/233819998_Driving_to_Learn_The_process_of_growing_consciousness_of_tool_use-a_grounded_theory_of_de-plateauing
2. Nilsson, L., & Durkin, J. (2014). Assessment of learning powered mobility use - Applying grounded theory to occupational performance. Journal of Rehabilitation Research and Development, 51(6), 963-974. https://doi.org/10.1682/JRRD.2013.11.0237
3. Nilsson, L., & Durkin, J. (2017). Powered mobility intervention: understanding the position of tool use learning as part of implementing the ALP tool. Disability and Rehabilitation: Assistive Technology, 12(7), 730-739. https://doi.org/10.1080/17483107.2016.1253119
4. Nilsson, L. (n.d.). Driving to Learn/ALP-tool. Guide for application of the ALP-tool (universal, version 2.0 and ALP for AAC), PDF. Download at https://www.lisbethnilsson.se/en/alp-tool/

Presenter biography:

Lisbeth Nilsson is a PhD, Occupational Therapist and specialist, associated to Department of Health Sciences, Lund University, Sweden. She developed the Driving to Learn intervention for people with profound cognitive disabilities (1996-2007). She and Josephine Durkin, UK, collaborated on developing the Assessment of Powered mobility use (ALP) (2009-2016). Her special interests are how infants, children and adults with cognitive disabilities learn how to use a variety of tools, and how to assess and facilitate the learning process. Her current focus is explaining how to apply the universal ALP tool for assessment and facilitation of learning in a variety of tool-use interventions. Her ongoing research collaborations nationally and internationally involves OTs, PTs and other rehabilitation professionals.

C6: Translating Power Seat Function Evidence into Clinical Practice: Enhancing functional outcomes

Tracee-lee Maginnity, Jennith Bernstein

Learning objectives:

1. Identify two new areas of evidence related to tilt, recline, and elevating leg rests.
2. Describe two clinical precautions for the use of tilt, recline, and elevating leg rests.
3. Summarize one way that pre-clinical data from a lab setting can be used in clinical practice.

Session description:

The ability to change the position of a wheelchair throughout a person's day is critical to their ability to be an active participant in their care, remain upright for desired and functional activities as well as reduce secondary complications that arise from using a wheeled mobility device. The evidence as it relates to tilt, recline and elevating leg rests shows that there are additional benefits to their use such as postural alignment, functional positioning, improved sitting tolerance, and increased quality of life. This presentation will review the existing and new areas of evidence to support the use of power tilt, recline and elevating leg rests as well as identify any clinical considerations for the prescription of these seat functions. The topic will then tie together the clinical evidence with pre-clinical lab evaluations to better understand how the body moves while undergoing movement from a power seating system. This pre-clinical work involves non-disabled individuals who complete a series of seat positions with motion capture analysis giving us a representation of how this technology could be used in a clinical setting in the future. Finally, we will take a practical approach to integrating the evidence and pre-clinical findings to determining the indications and recommendations on how and when to use the variety of power seat functions available to an individual. We will also conduct discussions on how to utilize clinical evidence in documentation and justification of seat function recommendations.

Content references:

1. Dolan, M. J., Bolton, M. J., & Henderson, G. I. (2019). Comparison of seating, power characteristics and functions and costs of electrically powered wheelchairs in a general population of users. Disability and Rehabilitation: Assistive Technology, 14(1), 56–61. https://doi.org/10.1080/17483107.2017.1393701
2. Harrand, J., & Bannigan, K. (2016). Do tilt-in-space wheelchairs increase occupational engagement: a critical literature review. Disability and Rehabilitation: Assistive Technology, 11(1), 3–12. https://doi.org/10.3109/17483107.2014.932021
3. Kenderish, J., James, T., Russell, R., Cianciolo, H., Bernstein, J., & Denfeld, G.(2025). RESNA Position on the Application of Tilt, Recline, and Elevating Leg Rests for Wheelchairs: Literature update 2023.
4. Lange, M. & Minkle, J. (2025) Seating and Wheeled Mobility:A Clinical Resource Guide, 2nd ed. Routladge. Rice, L. A., Yarnot, R., Mills, S., & Sonsoff, J. (2019). A pilot investigation of anterior tilt use among power wheelchair users. Disability and Rehabilitation: Assistive Technology, 16(2), 152–159. https://doi.org/10.1080/17483107.2019.1644676
5. Wu, Y. K., Liu, H. Y., Kelleher, A., Pearlman, J., Ding, D., & Cooper, R. A. (2017). Power seat function usage and wheelchair discomfort for power wheelchair users. The Journal of Spinal Cord Medicine, 40(1), 62–69. https://doi.org/10.1080/10790268.2016.1192360

Presenter biographies:

Jennith Bernstein, PT, DPT, ATP/SMS: Jennith is a Physical Therapist based in Atlanta, Georgia. She worked at the Shepherd Center, focusing her time in the Seating & Wheeled Mobility clinic. Jennith completed her Masters in Physical Therapy at North Georgia College & State University and transitional DPT at University of Texas Medical Branch. Jennith has presented at national and international conferences such as RESNA, ISS, LASS, Expo Ortopedica, and the APTA conferences. Jennith joined Permobil as a Clinical Education Manager for the Central Region in 2016 and started as Clinical Affairs Manager in November of 2021.

Tracee-lee Maginnity joined Permobil Australia in July 2019, as a clinical education specialist. Originally from New Zealand, she graduated Auckland University of Technology with a BHSc (Occupational Therapy) in 2003 and has since worked in various roles related to seating and mobility including assessing, prescribing and educating. After gaining experience as an assessor and prescriber at Seating To Go / Wheelchair Solutions prescribing for both disability and injury, she moved to Australia in 2011 to take on the Senior Occupational Therapist role in a custom moulded seating service. She then worked in clinical consulting and education roles until joining Permobil. Tracee-lee is passionate about maximising functional outcomes with end users and the importance of education within the industry. She has mentored many therapists interested in AT. Her experience includes working with individuals with complex postures to achieve customised client focused outcomes.

C7: Reimagining the Wheelchair Assessment: Immersive Learning through VR

Kathleen Sodder

Learning objectives:

1. Identify how virtual reality (VR) and artificial intelligence (AI) technologies enhance clinical assessment accuracy and objectivity when scripting powered wheelchairs for users of alternate control systems.
2. Describe the benefits of VR-based training in improving powered wheelchair handling skills, patient engagement, and overall independence for users requiring alternative access methods.
3. Explain how incorporating VR into clinical practice streamlines workflow, supports evidence-based documentation, and optimizes outcomes in wheelchair assessment and training.

Session description:

Virtual reality (VR) and artificial intelligence (AI) are revolutionizing clinical practice in wheelchair assessment and training, particularly for individuals who require alternative control systems like head arrays, sip-and-puff, switch scanning, or eye-gaze. Traditional methods of powered wheelchair assessment present challenges, including safety risks, subjective evaluation, and logistical barriers. VR systems can overcome these limitations by providing immersive, realistic simulations that allow clinicians to safely evaluate clients' driving capabilities using their actual wheelchair control devices.

Current research supports the effectiveness of VR assessments, demonstrating strong correlations between virtual and real-world driving performance. VR's controlled environment enables objective, data-driven evaluations of skills like reaction times, obstacle avoidance, and path accuracy, enhancing the precision and objectivity of equipment prescriptions and eligibility determinations. These realistic virtual scenarios also effectively identify subtle cognitive or perceptual challenges not apparent during brief physical assessments.

Moreover, VR significantly improves wheelchair skill acquisition through structured, repetitive training without real-world risks. Recent studies indicate VR training translates directly to improved real-world wheelchair handling, increasing client confidence and independence. Clinicians benefit from streamlined workflows and detailed performance analytics, allowing for efficient documentation and personalized intervention planning.

VR-based wheelchair training is motivating and engaging, improving patient adherence and practice quality. Emerging AI integrations further personalize training experiences, adjusting scenarios and difficulty levels to individual user needs in real-time. As research continues to validate VR and AI's role in rehabilitation, these innovative technologies are poised to substantially enhance clinical outcomes, optimize mobility interventions, and empower users of alternative wheelchair controls towards greater independence.

Content references:

1. Hernandez-Ossa, K. A., Montenegro-Couto, E. H., Longo, B., Bissoli, A., Sime, M. M., Lessa, H. M., Enriquez, I. R., Frizera-Neto, A., & Bastos-Filho, T. (2020). Simulation system of electric-powered wheelchairs for training purposes. *Sensors*, *20*(12), 3565. https://doi.org/10.3390/s20123565
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compared to driving in real-life situations: The SIMADAPT (simulator ADAPT) project—a pilot study. *Journal of NeuroEngineering and Rehabilitation*, *21*(1), 60. https://doi.org/10.1186/s12984-024-01354-5
3. Kwon, N., Lim, M. J., Hong, I., & Kim, H. S. (2023). Using a virtual reality power mobility device simulator to assess the driving skills of people with brain diseases. *Journal of Rehabilitation and Assistive Technologies Engineering*, *10*, 20556683231183632. https://doi.org/10.1177/20556683231183632
4. Zorzi, C., Covaci, A., & Marcelli, G. (2025). Using virtual reality to complement traditional wheelchair skills training methods: A literature review. *Applied Sciences*, *15*(1), 187. https://doi.org/10.3390/app15010187
5. Zorzi, C., Sirlantzis, K., Covaci, A., Tabbaa, L., & Marcelli, G. (2022). Standardisation of virtual reality wheelchair skills assessment. https://doi.org/10.13140/RG.2.2.26002.88000

Presenter biography:

Kathleen is an accomplished Occupational Therapist with extensive experience in wheelchair scripting and clinical education. Over the past several years, she has built a distinguished career specialising in wheelchair prescription, particularly focusing on complex and custom wheelchair solutions. Kathleen's professional journey includes significant experience across diverse clinical settings such as Aged Care, Rehabilitation, Home Modifications, and Community-based Wheelchair Prescription.

Her previous role as a Wheelchair and Seating Specialist saw her delivering advanced mobility solutions across Australia, refining her expertise in complex clinical cases and enhancing her leadership capabilities. Kathleen now applies her comprehensive knowledge and practical insights in her current leadership role, facilitating high-quality clinical education and skill development among therapy teams and at professional events.

Kathleen’s distinctive approach to her profession is deeply rooted in her personal connection to Cerebral Palsy, having witnessed firsthand through her brother’s experiences the significant impact of assistive technology and informed clinical support on families' lives. Driven by this personal insight, she passionately advocates for enhancing therapists' clinical reasoning skills and achieving meaningful outcomes for clients and their families.

ABSTRACTS
WEDNESDAY 5th NOVEMBER

Keynote:

Dr Nathan Bray

Session description

TO BE ADVISED

Presenter biography

Dr Bray is a Senior Lecturer and leads the Academy for Health Equity, Prevention and Wellbeing at Bangor University (Wales, UK). He has a PhD in Health Economics. His research focuses on public health and disability, with particular focus on the intersection between economic evaluation, assistive technology and outcome measurement in marginalised groups.

In 2022 Dr Bray completed an HCRW post-doctoral fellowship which led to development of the MobQoL-7D, a new outcome measure for mobility aid users. From 2015 to 2018 Dr Bray co-chaired the International Society of Wheelchair Professionals' comparative effectiveness research committee. In 2019 Dr Bray led the EMPoWER project, a large scale evidence synthesis to determine the benefits of early powered mobility for very young children.

His research has been cited in policy documents published by WHO and UN, and he contributed to WHO's Global Report on Effective Access to Assistive Technology (GReAT) international consultation.

D1: Steer Your Success: Hands-On Mastery of Alternative Drive Controls for Enhanced Mobility and Independence

Kathleen Sodder, Andrew Lopez

Learning objectives:

1. Identify a range of alternative drive control options (e.g., head arrays, sip-and-puff systems, chin controls) and match them to individual client abilities to promote independent mobility.
2. Demonstrate practical skills in scripting and adjusting alternative drive controls, including programming drive parameters and modifying hardware setups based on client feedback.
3. Apply evidence-based clinical reasoning to assess and optimize seating and positioning for successful access and use of alternative drive controls in power wheelchair users.

Session description:

Imagine the freedom of mobility for a client who cannot use a standard joystick – yet still drives their power wheelchair independently. With advances in alternative drive controls over the past decade, this scenario is increasingly achievable. Research has shown that matching the right technology to a user's abilities can significantly improve driving performance and quality of life, even for those with severe motor impairments. For example, head arrays, chin controls, sip-and-puff systems and other innovative interfaces are enabling clients to reclaim independent mobility where it was once thought impossible. At the same time, current clinical guidelines emphasize that success with these high-tech controls hinges on a holistic approach – including optimal seating and postural support to stabilize the user for accurate input and reduced fatigue.

This 60-minute interactive workshop is a practical immersion into scripting and fine-tuning alternative drive controls. The session invites all clinicians to roll up their sleeves and learn by doing. Attendees will trial multiple alternative control setups on actual power wheelchairs, practicing real-time adjustments in response to user feedback and simulated scenarios. You'll get hands-on experience programming drive parameters and tackling common troubleshooting challenges. Throughout, facilitators will share tips grounded in recent evidence and clinical best practices—from assessment strategies to maximize client ability, to precise, responsive adjustments critical to supporting a client's independent mobility. Join your colleagues in this interactive workshop to strengthen your confidence and skills in prescribing and adjusting alternative controls, ultimately promoting greater client independence and meaningful participation in daily life.

Content references:

1. Laver, K., et al. (2022). A Systematic Review of Outcomes Measured Following New Wheelchair and Seating Prescription Interventions in Adults. Archives of Physical Medicine and Rehabilitation, 103(8), 1647-1658.
2. Mortenson, W.B., et al. (2015). The power of power wheelchairs: Mobility choices of community-dwelling, older adults. Scandinavian Journal of Occupational Therapy, 22(5), 394-401.
3. Huo, X., et al. (2015). Qualitative assessment of Tongue Drive System by people with high-level spinal cord injury. Journal of Rehabilitation Research & Development, 52(4), 493-504.
4. Winkler, S., et al. (2016). Innovative Power Wheelchair Control Interface: A Proof-of-Concept Study. American Journal of Occupational Therapy, 70(2), 7002350010p1-5. Showed that an inexpensive, wearable head-mounted control could enable people with severe motor impairments to drive independently.
5. Geers, A.M., et al. (2021). Head support in wheelchairs: state-of-the-art and beyond (Scoping Review). Disability and Rehabilitation: Assistive Technology, 17(8), 869-880.
6. Rodrigues, R., Ghamlouch, H., & Monacelli, E. (2019). Development of a Sip-and-Puff Interface for Communication and Control Applications. Advances in Intelligent Systems and Computing.
7. Hossain, M. A., & Mollah, M. A. H. (2022). Control of a Wheelchair-Mounted 6DOF Assistive Robot With Chin and Finger Joysticks. Frontiers in Robotics and AI.
8. Simpson, R. C. (2017). Smart wheelchairs: A literature review. Journal of Rehabilitation Research and Development, 54(6), 551-568.
9. Miller, W.C., et al. (2018). Factors influencing mobility outcomes in power wheelchair users: a systematic review. Archives of Physical Medicine and Rehabilitation, 99(11), 2220-2230.e3.

Presenter biography:

Kathleen is an accomplished Occupational Therapist with extensive experience in wheelchair scripting and clinical education. Over the past several years, she has built a distinguished career specialising in wheelchair prescription, particularly focusing on complex and custom wheelchair solutions. Kathleen's professional journey includes significant experience across diverse clinical settings such as Aged Care, Rehabilitation, Home Modifications, and Community-based Wheelchair Prescription.

D2: Adaptive Sports Seating Solutions: Strategies to Optimise Athlete Participation

Kendra Betz

Learning objectives:

1. Discuss three clinical skills that seating & wheeled mobility professionals can immediately apply to adaptive sports seating assessments.
2. Identify two off-the-shelf options for skin protection during seated sports participation.
3. Outline two athlete scenarios for which custom seating is indicated.

Session description:

Seating and wheeled mobility professionals have the exciting opportunity to apply their unique skills, insight, experience, and passion to support people with disabilities to participate in adaptive sports and recreation. The comprehensive client assessment necessary to determine options for everyday mobility and seating solutions is similar and applies directly to the athlete assessment for adaptive sports and adventure activities. Findings from the thorough athlete assessment combined with sport specific functional movement analysis and participation requirements informs appropriate equipment selection, configuration and the seating interface to optimize athlete performance and safety. Determining and implementing the ideal seating components for sports equipment with strategy instead of guessing makes all the difference for athletes participating in a wide range of sports and recreation activities. Awareness of the options available matched with the unique priorities for each athlete and sport allows clinicians, coaches, instructors, and other key members of the multidisciplinary team to collaborate to identify optimal solutions. Seating goals for the participant, whether a recreation enthusiast, novice participant or elite competitor, include postural support for stability, skin protection, injury prevention, enhanced performance, and comfort. Participants will gain familiarity with simple and practical seating system options for sport and recreation applications using both innovative technologies and widely known seating options. Through practical assessment of available products, ranging from readily available off-the-shelf to fully custom fabricated, attendees will learn to identify key features and functions, along with limits of use for various seating solutions for sports. Regardless of their level of experience with adaptive sports seating, attendees will gain increased confidence to apply current clinical skills to identify appropriate seating solutions for the adaptive athlete. Case examples and scenario simulation will be utilized to emphasize key points and experiential learning.

Content references:

1. Nace S, Tiernan J, Ní Annaidh A. Manufacturing custom-contoured wheelchair seating: A state-of-the-art review. Prosthet Orthot Int. 2019 Aug;43(4):382-395.
2. Hosking J. The clinical effectiveness of custom-contoured seating for wheelchair users with neuromuscular disorders: a scoping review. Assist Technol. 2023 Aug 22:1-13.
3. García-Molina P, Casasus SR, Sanchis-Sánchez E, Balaguer-López E, Ruescas-López M, Blasco JM. Evaluation of interface pressure and temperature management in five wheelchair seat cushions and their effects on user satisfaction. J Tissue Viability. 2021 Aug;30(3):402-409.

Presenter biography:

Kendra Betz is a Physical Therapist and RESNA credentialed Assistive Technology Professional who has specialized in seating and wheeled mobility throughout her more than 30-year career in the United States. She holds an adjunct clinical faculty position at the University of Pittsburgh and teaches regularly at national and international forums. Kendra's extensive leadership in adaptive sports includes supporting novice to elite athletes with appropriate equipment and training, and providing education and mentorship for clinicians, coaches, instructors and manufacturers. Kendra is a national Classifier for USA Paracycling and for multiple adaptive sports at the National Veterans Wheelchair Games. Her contributions have been recognized by induction into the National Spinal Cord Injury Association Hall of Fame, the Air Force Association's VA Employee of the Year award, and the Academy of Spinal Cord Injury Professionals Therapy Leadership Council Clinical Excellence and Distinguished Lecture awards.

D3: Perfect Fit: Adjusting Wheelchairs for Clients

Margaret Blake, Sarah Stewart

Learning objectives:

Upon completion of the session, participants will be able to:

1. Understand the need for wheelchair adjustments based on changes in body measurements
2. Highlight the importance of the assessment process
3. Name wheelchair adjustment options for accommodating changes in user dimensions
4. Understand the impact on comfort, functionality and health outcomes
5. Assess, evaluate and select the most appropriate course of action which will align with the clinical goals, feasibility and anticipated outcomes.

Session description:

A wheelchair is one of the most prescribed assistive devices and can significantly enhance a client's comfort, function, independence and ability to participate in life roles and relationships that are important to them. Incorrect prescription or failure to make adjustments to changing needs can impact activity and participation, lead to injuries, and feelings of dissatisfaction.

This presentation will offer practical approaches to wheelchair and seating adjustments using planes of motion as a framework, with a focus on accommodating growth, changes in body dimensions, and optimising fit, form and function. We will explore a range of adjustment strategies and examine their effects on the equipment, client function, and the surrounding environment. Each option will be assessed in relation to clinical goals, practical feasibility, and anticipated outcomes to ensure effective and individualised solutions.

A client-centred approach ensures wheelchair and seating adjustments support meaningful participation in daily life and empowers individuals to engage in their activities and environment. Accurate evaluation is essential, as even small changes can have a significant impact on a client's overall function and quality of life.

Content references:

1. Robertson, B et al (2023) A Systematic Review of Outcomes Measured Following New Wheelchair and Seating-Prescription Interventions in Adults. Arch Rehabil Res Clin Transl. 2023;5:100249
2. Waugh, K. & Crane, B. (2013). A Clinical Application Guide to Standardized Wheelchair Seating Measures of the Body and Seating Support Surfaces. University of Colorado/Assistive Technology Partners.
3. Lange, M. L., & Minkel, J. (2017). Seating and wheeled mobility: A clinical resource guide. Thorofare, NJ: Slack Incorporated.

Presenter biographies:

Margaret Blake trained in Dublin, Ireland as an Occupational Therapist in the 1980's. She has since practiced in Ireland, Wales and New Zealand and has worked as a Wheelchair and Seating therapist for 29 years, the last 22 of these with Seating To Go, assessing people with complex needs. She is one of the Clinical Team Leaders at Seating To Go and regularly presents the Level 1 training

workshops for therapist credentialing in New Zealand. Her particular area of interest is collaborating with clients to prescribe a wheelchair that is precisely scripted to meet their unique needs.

Sarah Stewart trained in Dunedin, New Zealand as a physiotherapist graduating in 2000. She worked in New Zealand before moving to the UK for 5 years, returning to New Zealand in 2010 to take up a position with Seating To Go. Sarah most enjoys working with clients who have complex positioning needs and coming up with innovative solutions that enable people and their families to pursue the lifestyle they want.

D4: Paper Presentations

D4a: Development of the MobQol-7D: A new way to define and measure mobility-related quality of life

Dr Nathan Bray

Learning objectives:

1. Participants will understand how mobility aid users define quality of life
2. Participants will understand the key stages of developing a novel outcome measure
3. Participants will understand the importance of QALYs in the context of posture and mobility service delivery

Session description:

This paper presentation will describe the development of the MobQoL-7D outcome measure for mobility-related quality of life.

Background:
There is limited robust economic or outcomes data to inform the design of posture and mobility services, or to guide the provision of mobility aids in a cost-effective manner.

The quality-adjusted life year (QALY) is a measure of health status which combines quantity and quality of life. The QALY has become increasingly influential in global health policy because it allows commissioners and policymakers to compare the cost-effectiveness of disparate interventions using a single metric.

Preference-based outcome measures such as the EQ-5D and SF-6D are typically used to calculate QALYs. However, due to the generic nature of these measures they often lack sensitivity in states of disability and chronic illness.

Methods:
The aim of the Mobility and Quality of Life project was to develop a novel outcome measure (i.e MobQoL-7D) for mobility-related quality of life. Our intention was to develop a holistic measure which was succinct, simple to use in clinical/therapeutic practice and suitable for QALY calculations.

We interviewed n=37 mobility-aid users to understand the relationship between mobility and quality of life and then used these insights to develop the initial version of the MobQoL-7D. We then undertook a psychometric validation study with n=342 mobility aid users to test the validity and reliability of the MobQoL-7D. Finally, we undertook a health state valuation study with n=872 participants to develop a QALY-based scoring system.

Conclusion:
The MobQoL-7D is the first outcome measure designed specifically to measure mobility-related quality of life and QALYs. It has a wide range of applications across academic and clinical settings, and the potential to improve provision of mobility aids. To date three papers have been published documenting the development process and the MobQoL-7D has been translated into 6 languages.

Content references:

1. Bray N, Edwards RT, Schneider P. Development of a value-based scoring system for the MobQoL-7D: a novel tool for measuring quality-adjusted life years in the context of mobility impairment. Disabil Rehabil. 2024;1–10.
2. Bray N, Tudor Edwards R. Preference-based measurement of mobility-related quality of life: developing the MobQoL-7D health state classification system. Disabil Rehabil. 2020;12:1-15
3. Bray N, Spencer LH, Tuersley L, Edwards RT. Development of the MobQoL patient reported outcome measure for mobility-related quality of life. Disabil Rehabil. 2020;24:1-10.

Presenter biography:

Dr Bray is a Senior Lecturer and leads the Academy for Health Equity, Prevention and Wellbeing at Bangor University (Wales, UK). He has a PhD in Health Economics. His research focuses on public health and disability, with particular focus on the intersection between economic evaluation, assistive technology and outcome measurement in marginalised groups.

In 2022 Dr Bray completed an HCRW post-doctoral fellowship which led to development of the MobQoL-7D, a new outcome measure for mobility aid users. From 2015 to 2018 Dr Bray co-chaired the International Society of Wheelchair Professionals' comparative effectiveness research committee. In 2019 Dr Bray led the EMPoWER project, a large scale evidence synthesis to determine the benefits of early powered mobility for very young children.

His research has been cited in policy documents published by WHO and UN, and he contributed to WHO's Global Report on Effective Access to Assistive Technology (GReAT) international consultation.

D4b: Mobility Snapshots: A Photovoice Narrative of Mobility and Participation by Individuals with Spinal Cord Injury

Dr Heather Feldner, Ms Michelle Buswinka, Mr Jayden Chapman, Mr Chris Garbaccio, Mr Bruce Hanson, Ms Anh Hua, Mr Mark Hubert, Mr Christopher Mielo, Dr Ashli Molinero, Mr Cas Speanburg, Mr Marshall Tempest, Dr Shannon Tyman, Ms Victoria Verrico, Dr Bridget Cotner, Ms Bethlyn Houlihan, Dr Lynn Worobey, Dr Jeanne Hoffman

Learning objectives:

1. List two features of the existing SCI research and/or clinical practice landscape in the United States.
2. Describe two ways in which ableism impacts mobility measures and characterization after SCI.
3. Describe two benefits of using photovoice narratives in community-based participatory research.
4. Articulate at least one facilitator and one barrier to mobility and participation for individuals with SCI.

Session description:

Background: Mobility is a cornerstone of independence and quality of life for individuals with Spinal Cord Injury/Disease (SCI/D), yet significant gaps persist in rehabilitation research in understanding how, and by/for whom, mobility after SCI/D is defined and evaluated. Historically, research priorities have not always reflected the lived experiences and priorities of those most affected and the lack of lived experience voice in mobility research after SCI/D has resulted in ableist measurement of outcomes. Further, current rehabilitation research often fails to capture the complex, dynamic, and contextual nature of mobility.

Methods: During a two-day hybrid stakeholder engagement meeting with the SCI/D community designed to establish a user-centered SCI/D research agenda, participants engaged in photovoice narrative method, a tool rooted in a Community-Based Participatory Research framework. Prior to the meeting, participants with SCI/D were given a list of guiding questions and used their mobile devices to take photos that represented important or meaningful aspects of their daily mobility and participation in their homes and communities. They then presented and narrated the meaning of the photos at the meeting. Narrations were audio-recorded, transcribed verbatim, and coded using inductive coding until data saturation was reached.

Results: Key themes that emerged from the data were: 1) Mobility Choices; 2) Discovering Disability Identity; 3) Self-Defined Participation and Quality of Life; and 4) Barriers to Access.

Conclusion: Through their photovoice narratives, individuals with SCI/D in this study reported high quality of life, were active in their communities, and provided insight into the factors that shape their mobility choices, including environmental barriers. Photovoice narratives are an impactful research tool that engages participants as co-researchers, dismantles traditional power structures in research, and produces a dataset of powerful audiovisual narratives rooted in the lived mobility experiences of diverse individuals with SCI/D that can help shape research, clinical practice and policy.

Content references:

1. Feldner, H. A., Logan, S. W., & Galloway, J. C. (2019). Mobility in pictures: a participatory photovoice narrative study exploring powered mobility provision for children and families. Disability and Rehabilitation: Assistive Technology, 14(3), 301-311.
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5. Barreto AS, Felix JB, Feldner H, et al. Experiences of children with congenital Zika syndrome while using motorized mobility: a qualitative study using the photovoice method. Disability and Rehabilitation: Assistive Technology. 2024:1-11.
6. Jain NR. The capability imperative: theorizing ableism in medical education. Social Science & Medicine. 2022;315:115549.

Presenter biographies:

We are a diverse group of community members with spinal cord injury (SCI) and academic researchers from across the United States who have come together for a stakeholder engagement project focused on mobility and ableism in clinical practice and research following SCI.

Our collaboration highlights the critical importance of centering the lived experiences of people with SCI in shaping the future of mobility research. It also emphasizes the need for intentional engagement strategies that promote equitable power sharing. Our team is identifying actionable steps to address systemic barriers, expand access to assistive technologies, and prioritize meaningful outcomes that enhance independence and participation. Our collaborative goal is to provide a clear roadmap for researchers, clinicians, and policymakers to align rehabilitation research with the needs and aspirations of individuals with SCI.

D4c: Exploring the Explorer Mini: A Qualitative Study Examining Parental Experiences and Perceptions

Dr Lisa K. Kenyon, Paul Derheim, Julee Kidder, Allison Shenefield

Learning objectives:

1. Discuss the specific qualitative methodology used in the study.
2. Define the 3 themes that emerged in the data.
3. Discuss application of the study findings within the framework of ON Time Mobility.

Session description:

The Explorer Mini, a power mobility device for young children who have mobility delays or restrictions, provides mobility equity through ON Time Mobility. Yet little is known about parental experiences and perceptions of their children's use of an Explorer Mini. The purpose of this qualitative study was to explore parental experiences and perceptions of their child's use of an Explorer Mini. Data for this qualitative study were gathered via one-on-one, in-person semi-structured interviews with parents whose children had used or were currently using an Explorer Mini in their homes or other natural environments. Interviews were audio-recorded and transcribed verbatim. Data were then analyzed using the constant comparative method. Three main themes emerged in the data. These main themes were: "Developing autonomy", "Learning through mobility exploration", and "Barriers to device use". "Developing autonomy" described how the Explorer Mini empowered children to develop the ability to do what they wanted to do, when they wanted to do it, and allowed them to make their own decisions and choices. This theme further included how the Explorer Mini enabled children to participate in typical toddler activities and 'shenanigans'. "Learning through mobility exploration" revealed the learning experiences afforded to children through the mobility created by their use of the Explorer Mini and included things such as learning cause and effect, opportunities for problem solving, and discovering/exploring new environments. "Barriers to device use" referred to the obstacles (e.g., life circumstances, weather, the weight of the Explorer Mini) that were perceived as preventing children from using and learning with the device to its full potential. These findings support recent research suggesting that parents of young children may view a power mobility device as a mobile learning environment to support children's exploration, socialization, and play within an ON Time Mobility framework.

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3. Sabet A, Feldner HA, Tucker J, Logan SW, Galloway JC. ON Time Mobility: advocating for mobility equity. Pediatr Phys Ther. 2022;34(4):546-550.

Presenter biography:

Dr. Kenyon is a Professor in the Department of Physical Therapy and Athletic Training at Grand Valley State University in Grand Rapids, Michigan, USA. She heads the Grand Valley Power Mobility Project; an inter-professional project providing power mobility training and use for children across the full continuum of pediatric power mobility learner groups. Dr. Kenyon has received funding from the National Institutes of Health, the American Academy for Cerebral Palsy and Developmental Medicine, and the Academy of Pediatric Physical Therapy. She has published numerous peer-reviewed articles and book chapters, and presents nationally and internationally, on topics related to pediatric power mobility and pediatric physical therapist practice. Dr. Kenyon currently serves on the Wheelchair Skills Program Advisory Board and on the American Board of Physical Therapy Specialties.

D5: Hip health in Children with Cerebral Palsy – Implications for Positioning

Karli Joll, Deb Wilson

Learning objectives:

After attending this presentation, attendees will be able to:

1. Describe at least one key feature of typical hip joint development.
2. Identify 3 risk factors for the development of progressive hip displacement.
3. Describe 3 strategies for improving hip health outcomes in children with cerebral palsy.

Session description:

The incidence of hip dislocation in children with cerebral palsy is closely linked to GMFCS levels with sustained asymmetry and habitual postures increasing the risk of progressive and non-reducible postural asymmetries such as windsweeping, pelvic obliquity, scoliosis and hip displacement. There is an increasing body of evidence around the importance of hip health in children with cerebral palsy. Good management of hip health can lead to better life and health outcomes.

This presentation will outline the key features of typical hip joint development, and why hip displacement is more likely to occur in children with cerebral palsy. Hip surveillance is an important tool for the early detection of hip displacement in cerebral palsy and the goal of avoiding painful, dislocated hips which impact quality of life and participation. The process of hip surveillance will be discussed including the use of established and emerging orthopaedic treatments. This will be further illustrated with an example of how hip surveillance is implemented at our local centre.

Early intervention is key and in addition to established hip surveillance programmes, the recommended use of screening and assessment tools, and strategies for seating and positioning to support hip health will be discussed. Stories from interventions in lying, sitting and standing with children across different GMFCS levels will be shared to inform practice.

Hip health is an important consideration when providing wheeled mobility and positioning solutions for children with cerebral palsy.

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5. Osborne LJ, Gowran RJ, Casey J. (2023) Evidence for 24-hour posture management: A scoping review. British Journal of Occupational Therapy. 2023;86(3):176-187.

Presenter biographies:

Karli Joll is a senior paediatric physiotherapist who has worked at the Child Development Centre at Waikato Hospital for over 20 years. As well as holding a clinical caseload, Karli runs the hip surveillance programme for all children with cerebral palsy or like conditions in the Waikato area. Improving knowledge about hip and skeletal health is an area of special interest.

Deb Wilson is an occupational therapist with over 30 years of experience in wheeled mobility and postural care. She is the Training Lead of Seating To Go and facilitates workshops as part of the competency pathway for the NZ MOH Wheeled Mobility and Postural Management credential. She is the NZ Chair for OSS and has contributed to capacity building in the Pacific Islands.

E1: Wheelchair policy and practice on opposite sides of the globe: challenges accessing early powered mobility

Dr Jackie Casey, Prof. Rachael McDonald

Learning objectives:

1. Participants of this session will be able to name 3 similarities and differences between Northern Ireland and Victoria, Australia
2. Participants will be able to name 2 advantages and disadvantages of wheelchair provision in Northern Ireland and in Victoria
3. Participants will join the call to action to advocate for early powered mobility

Session description:

Northern Ireland's (NI) provision is generally through the National Health Service, whilst wheelchair users in Victoria, Australia, are served by the National Disability Insurance Scheme (NDIS), aged care private providers or public health services. In NI, wheelchair services are delivered through a centralised and publicly funded health system, typically managed through wheelchair centres within the overall assistive technology budget. Thus, provision of wheelchairs competes with all other health priorities. With universal coverage and free at point of delivery, limited funding and a focus on mobility limitations results in a restricted range of wheelchair options. Subsequently users may rely on charitable organisations to access specialised or advanced wheelchair models, highlighting a gap in the system's ability to meet diverse needs. In contrast, Victoria has a federated healthcare system, where wheelchairs services are supported by state, national funding and the NDIS. The NDIS offers a flexible and personalized approach, with tailored packages based on individual needs for people with a disability under the age of 65 years; with shorter waiting times and higher levels of satisfaction. However, if you are over 65, or ineligible for the NDIS for other reasons, you will not have the same experience.

Consistently access to early powered mobility has been shown to have positive effects beyond mobility, and there has been a call to give access to children as early as possible using a human rights framework, and enormous benefits shown for people with cognitive limitations developing skills through accessing independent mobility. Neither jurisdiction makes it easy for young children to acquire toys, powered mobility or other tools for learning that are essential for learning about themselves and the world around them. There is a need for action to ensure that children and adults with complex disabilities can access early powered mobility and live their best life.

Content references:

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4. Livingstone, R. (2010). A critical review of powered mobility assessment and training for children. Disability and Rehabilitation: Assistive Technology, 5(6), 392-400.
5. Nilsson, L., & Kenyon, L. (2022). Assessment and intervention for tool-use in learning powered mobility intervention: A focus on tyro learners. Disabilities, 2(2), 304-316.

Presenter biographies:

Professor McDonald is a highly accomplished academic, clinician and teacher with a passion for innovation through change. She brings together industry, academic, engineers and designers together with end-users of technology to co-design, co-produce and co-create innovative assistive technologies that are desirable, fit for purpose and effective. She has received over $11m in competitive grant funding and generated over 140 publications, including 70 peer reviewed journal publications and 13 books or book chapters. She has 10 current higher degree by research students and has previously supervised 23 timely completions.

Dr Jackie Casey has approx. 30 years of experience; and has worked as a clinician, university lecturer, and in industry across the UK, Ireland and the US. She is passionate about the importance of posture, positioning, seating and wheelchair mobility to enabling the participation in everyday life for individuals with mobility and/or postural limitations. Her doctoral research investigated the postural asymmetries and mobility of children with cerebral palsy. Whilst her previous research has explored the impact of caring for a child who is a wheelchair user, from a parent or a teacher's perspective; use of modified toy cars to enable children to socially participate; and with industry in designing accessible customisable seating products for persons with complex postural needs. She now works in a joint appointment with Ulster University and Southern Health & Social Care Trust, continuing her own research, and supporting clinicians to engage in and to embed a culture of clinically relevant research.

E2: Empowering Participation: The Role of Recreational Equipment in Enhancing Mobility and Inclusion

Jacqueline Abel, Tessa Wallis

Learning objectives:

1. Case studies used to identify the various types of recreational equipment funded for individuals with disabilities here in Aotearoa.
2. Explanation of the physiological, psychological, and social benefits of recreational equipment in enhancing mobility, independence, and participation.
3. Consideration of the key principles of pressure care, seating, and positioning when selecting and configuring adaptive recreational equipment, ensuring optimal comfort, postural support, and skin integrity for individuals with disabilities.
4. Demonstrate how recreational mobility solutions can be integrated into rehabilitation programs and daily activities to improve wheelchair propulsion, social engagement, psychological and physical well-being.

Session description:

Accessible and appropriate assistive technology plays a crucial role in enabling individuals with disabilities to participate fully in everyday life. Recreational equipment, such as adaptive sports gear and mobility-enhancing devices, fosters independence, choice, and engagement in family, play, education, work, and community life. This presentation explores the benefits of recreational equipment in promoting mobility, social inclusion, and overall well-being for individuals who use wheelchairs and other assistive devices.

Through a review of current research and case studies, we examine how recreational mobility solutions—such as handcycles, power add ons, all terrain wheelchairs, beach wheelchairs, adaptive sports wheelchairs (dance chairs) or devices (sit skis), and specialised outdoor equipment have enhanced physical health, reduced secondary complications, and improved mental well-being. Additionally, we explore the role of funding bodies in New Zealand and examine the key elements that should be incorporated into clinical assessment reporting to support funding applications for recreational equipment. This discussion will highlight best practices for effectively presenting clinical justifications, aligning requests with funding criteria, and advocating for equitable access to assistive technology.

Participation is a fundamental right, as outlined in Te Tiriti o Waitangi (Treaty of Waitangi) and the United Nations Convention on the Rights of Persons with Disabilities.

Content references:

1. Jamieson, A. R., & Wijesundara, H. D. (2024). A review of adaptive equipment and technology for exercise and sports activities for people with disabilities. Disability and Rehabilitation: Assistive Technology, 20(1), 33–45. https://doi.org/10.1080/17483107.2024.2372323
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4. J., Satpute, S., Cooper, R., & Cooper, R. A. (2021). A review of adaptive sport opportunities for power wheelchair users. Disability and Rehabilitation: Assistive Technology, 16(4), 407-413.
5. United Nations. (2006). Convention on the Rights of Persons with Disabilities. Retrieved from United Nations OHCHR

Presenter biographies:

Jacqui Abel is an occupational therapist trained in South Africa and holds a postgraduate certificate in health professional education from Auckland University of Technology. With over 20 years of experience as an Occupational Therapist, she has held clinical and leadership roles in both the public and private sectors across South Africa and New Zealand. Jacqui has specialised in spinal cord injury rehabilitation, with extensive experience in this field.

Her interests include complex wheelchair and seating, equipment provision, and spinal cord injury rehabilitation. She has achieved WMPM Level 3 with a customised fabrication endorsement and has served on the Enable Accreditation panel for wheelchair seating accreditation.

Jacqui worked as a Professional Advisor with Accessable for 2 years and currently contracts with Specialist Rehab Services, focusing on complex wheelchair and seating assessments and equipment prescription.

Tess is a physiotherapist with a passion for providing mobility and postural support solutions. Trained in the Netherlands and with a Post Graduate certificate in Health Sciences from the University of Otago, she has over 20 years of clinical experience in New Zealand, Australia and The Netherlands in international high-performance sports teams, hospital and rehab settings as well as specialist wheelchair and seating services.

Tess has specialised in assessment and provision of complex wheelchairs, seating systems, sleep systems and other postural support equipment for clients with spinal cord injuries and other neurological conditions such as cerebral palsy and traumatic brain injury.

Tess currently provides wheelchair and seating services for ABI Rehabilitation, Geneva Healthcare and Better Days. She volunteers with the Altus Pacific Aid Trust which provides healthcare services including wheelchair clinics for people in the Pacific.

E3: Exploring the Potential: Maximising Independence Through Electronics in Power Wheelchairs

Andrew Lopez

Learning objectives:

1. Identify at least five consumer-market environmental control devices that can be used within the home to enhance user independence and access.
2. Demonstrate knowledge of how to connect Bluetooth-enabled wheelchair systems to Apple, Android, and laptop devices to enable seamless control and integration.
3. Recognise common barriers to implementing Bluetooth technology in clinical practice and explore solutions to overcome them.

Session description:

Complex Power Rehab wheelchairs are among the most technologically advanced mobility devices within the assistive technology sector. These wheelchairs are designed with highly customisable, expandable electronics, tailored to meet the unique needs of individuals with mobility impairments. As clinicians, therapists, and equipment providers, our primary goal should always be to maximise the user's independence—empowering them to engage more fully with their environment and daily routines.

One of the most powerful, yet often underutilised, features in modern power wheelchair systems is Bluetooth technology. Despite being integrated by most major manufacturers into the wheelchair's electronic systems, Bluetooth frequently remains inactive or unexplored. This missed opportunity can mean the difference between limited and meaningful participation in everyday life for many users.

Bluetooth offers a seamless and wireless method for connecting the wheelchair to external smart devices, such as smartphones, tablets, televisions, smart lights, door openers, and more. When properly configured, users can access and control multiple aspects of their environment—from communication tools and entertainment systems to home automation—through their wheelchair's drive control system.

This educational session will explore how Bluetooth connectivity can be harnessed to enhance autonomy for wheelchair users. We will examine practical strategies for integrating smart technologies with the wheelchair's control interface, discuss common barriers to implementation, and showcase real-world case studies where Bluetooth integration has transformed users' daily experiences.

As smart technology becomes more affordable and widely available, the potential to improve quality of life through thoughtful, technology-driven solutions has never been greater. It is important that we, as professionals in the field of complex rehab technology, shift our perspective and leverage every available tool to help individuals maximise their independence.

Content references:

1. Verdonck, M., Nolan, M., & Chard, G. (2018). Taking back a little of what you have lost: The meaning of using an Environmental Control System (ECS) for people with high cervical spinal cord injury. Disability and Rehabilitation: Assistive Technology, 13(6), 562–567. https://doi.org/10.1080/17483107.2017.1378392

2. Hooper, B., Verdonck, M., Amsters, D., Myburg, M., & Allan, E. (2018). Smart-device environmental control systems: Experiences of people with cervical spinal cord injuries. Disability and Rehabilitation: Assistive Technology, 13(7), 638–645. https://doi.org/10.1080/17483107.2017.1373498
3. Myburg, M., Allan, E., Nalder, E., Schuurs, S., & Amsters, D. (2016). Environmental control systems: The experiences of people with spinal cord injury and the implications for prescribers. Disability and Rehabilitation: Assistive Technology, 11(1), 22–25. https://doi.org/10.3109/17483107.2015.1099748

Presenter biography:

Andrew Lopez is an experienced Occupational Therapist with a strong focus on Complex Seating and Wheelchair Prescription. He holds a Bachelor of Health Science and a Master of Occupational Therapy from Western Sydney University. With eight years of clinical experience, Andrew has developed a reputation as a dedicated Assistive Technology specialist, committed to enhancing seating and mobility outcomes for individuals with complex needs. His approach combines clinical expertise with a genuine passion for person-centred care and innovative solutions. Andrew recently joined Quantum Australia as a Product Specialist and Clinical Educator, where he plays a key role in supporting clinicians and service providers through education, training, and product knowledge. He is passionate about empowering others and advancing best practice in wheelchair and seating prescription across the assistive technology sector.

E4: Beyond "Standard": Collaborating to individualise proportional drive controls for power wheelchair users with changing abilities.

Connor Wilson, Waikato Technician Team Lead, NZ Health Group – Seating To Go. Aoetaroa, New Zealand. Connor.wilson@seatingtogo.co.nz

Deb Wilson, Wheelchair & Seating Clinical Specialist, NZ Health Group – Seating To Go. Aotearoa, New Zealand. debbie.wilson@seatingtogo.co.nz

Keywords

Power wheelchair, controllers, expandable and non-expandable electronics, programming

Learning objectives:

After attending this session, participants will be able to:

1. Describe the 4 steps of wheelchair service provision.
2. Identify 3 strategies that could maintain a person's ability to drive using "standard" proportional joystick controls.
3. Assess key physical functions that will inform input device and position, and the need for expandable vs non-expandable controls.

Session description:

The WHO Wheelchair Provision Guidelines (2023) outlines 4 steps for appropriate wheelchair provision. These include individual assessment and selection; preparation and fitting of the wheelchair; information and training for wheelchair users and their support people; and follow up to ensure the wheelchair continues to meet the user's needs. The guidelines recognise the importance of person-centred assessment to inform selection of appropriate wheelchair and seating solutions. Seating To Go is a NZ wheelchair assessment, training and repair service that employs therapists and technicians who work collaboratively with clients across the 4 steps of wheelchair provision. Not all services have access to technicians on a day-to-day basis to share ideas, problem solve and innovate together. Technicians and suppliers who support trial set ups often report needing more information than is initially supplied by therapists requesting equipment changes on their client's behalf.

This session will focus on the essential information that needs to be shared between clients, therapists and technicians when a client has changing abilities and is having difficulties driving their power wheelchair. A new controller may not be required, and if it is, there are many options. A pathway from assessment to identifying key parameters which will inform decisions around re-configuration of the existing system vs moving to a new input/controller method will be described. Client stories from the Seating To Go team will be used to describe key components of the assessment process and the information that will inform and ensure interventions such as re-programming, re-positioning or changing the input device create great outcomes for the person.

Effective liaison and information sharing between clients and their families/carers, therapists and technicians ensures a well-matched set up that supports independence and participation in daily life and enhances efficient and cost-effective service delivery.

Content references:

Wheelchair provision guidelines. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO

Invacare Clinical Guide to Powerchair Controls (Aug 2017) – Accessed 07.04.25 from: https://www.invacare.co.nz/sites/default/files/13663%20Invacare%20Controls%20Brochure_ANZ.pdf

Gillham M, Pepper M, Kelly S, Howells G. Feature determination from powered wheelchair user joystick input characteristics for adapting driving assistance. *Wellcome Open Research*. 2018 May 27;2:93. doi: 10.12688/wellcomeopenres.12280.3. PMID: 29552641; PMCID: PMC5829523.

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https://www.occupationaltherapy.com/articles/switch-assessment-determining-optimal-type-5625

Presenter biographies:

Connor Wilson is the Waikato Technician Team Lead and has worked at Seating To Go for the past 10 years. He holds the DMERT International Level 3 technician certification and has a special interest in electronics and custom modifications using 3D printing. Connor enjoys collaborating with therapists and clients to problem solve together.

Deb Wilson is an occupational therapist with over 30 years experience in wheeled mobility and postural care. She has recently stepped down from Training Lead of Seating To Go and continues to facilitate workshops as part of the competency pathway for the NZ MOH Wheeled Mobility and Postural Management credential. She is the NZ Chair for OSS and regularly contributes to capacity building in the Pacific Islands.

E5: Round Peg, Square Hole.; why Transport matters in Wheelchair Prescription

Katrina Barrett

Learning objectives:

1. Identify three or more common transport challenges experienced by wheelchair users.
2. Analyse the functional and psychosocial impacts of excluding transport considerations in prescription assessments.
3. Apply a structured assessment approach to address vehicle and community access during the wheelchair prescription process.

Session description:

When prescribing wheelchairs, Occupational Therapists must go beyond seating and posture considerations to maximise mobility freedom for their clients, across a range of environments. Wheelchair design and practical implications for transport must be considered. Overlooking transport strategies during the assessment stage can lead to negative consequences, rather than achieving independence and equitable access. Many wheelchair users continue to face barriers to community access, due to poor transport compatibility. This oversight can lead to abandoned equipment, caregiver strain, and social isolation (Resnik, Simmons, & Walker, 2021; Velho, 2017). Drawing on over 20 years of experience, Kat will explore the intersection of wheelchair prescription and real-world usability. She will share clinical insights and case studies, highlighting common gaps in assessment that impact transport access. Research suggests that limited transport compatibility leads to reduced use of public services, reliance on others, and missed opportunities for driving independence (Gebresselassie, 2023; Social Inclusion, 2016). Although the literature describes reported portability challenges for wheelchair users, there is very little research into the practical strategies OT's can implement to overcome these problems. This presentation will explore the key challenges and frequent experiences of wheelchair users and encourage therapists to be more detailed in their assessments, resulting in better long-term mobility outcomes for their clients. Attendees will be introduced to a practical framework for holistic wheelchair assessment, incorporating key factors such as folding mechanisms, removable attachments, vehicle modification options and tie-down points. The impact of design decisions on long-term transport solutions will be discussed, including compatibility for private vehicles and public transport.

This session offers actionable strategies to support O.T's in prescribing wheelchairs that move with their users—through every environment, every challenge, every journey. Relatable examples and opportunities for discussion will bring these concepts to life, helping therapists better support their clients' mobility goals.

Content references:

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2. Motion Composites. (n.d.). Transporting your manual wheelchair in and out of your vehicle. Retrieved from https://www.motioncomposites.com/en_intl/community/blog/tips-and-tricks/transporting-your-manual-wheelchair-in-and-out-of-your-vehicle
3. Resnik, L., Simmons, J., & Walker, K. (2021). Modes of transport. In Rehabilitation in spinal cord injuries (Ch. 8, pp. 163–175). Elsevier Health Sciences. https://books.google.com.au/books?id=xbXrDwAAQBAJ

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Presenter biography:

Kat Barrett is a dedicated therapist with a clinical background spanning acute care, community rehabilitation, aged care, and the disability sector. Focusing on complex wheelchair prescriptions, advanced seating and postural supports, Kat is driven by a passion for assistive technology innovation and is committed to delivering creative mobility solutions. She currently works in a private practice offering driver assessments, vehicle modifications, assistive technology for people with disabilities. This integrated approach has provided a unique perspective on the everyday challenges associated with transporting mobility aids.

Since joining Williams OT, Kat has observed a recurring issue among her clients: many report difficulty accessing the community due to inadequate consideration of transport strategies during the wheelchair prescription process. Kat is committed to raising awareness of these challenges within the OT profession. She advocates for a holistic approach to wheelchair prescription, aiming to support clinicians in delivering practical, inclusive, and effective mobility solutions.

E6: Exploring Clinical Contributions to Para Sport: Bridging Experience and Opportunities

Binnie O'Dwyer

Learning objectives:

1. Understand the various roles within the Para sport movement that require clinical skills, beyond traditional positions like team physio.
2. Gain insights into classification processes and the different types of Para sports, exploring how clinical backgrounds can contribute to these areas.
3. Learn from personal experiences of how clinical skills, such as those of an Occupational Therapist, can enhance participation in Para sports and positively impact both clinical practice and personal life.

Session description:

The focus of our training as health professionals is primarily on therapy and rehabilitation. However, for those with a passion for sports who may be uncertain about their potential contributions, this session is tailored for you.

Within the Para sport movement, there are various roles that necessitate clinical skills, yet these opportunities are often overlooked. While positions such as team physiotherapist are well-known, roles such as medical and technical classifiers, table officials, organizers, and promoters also play a crucial part.

This session will offer valuable insights into classification, various Para sports, and the potential contributions your clinical background can make.

Whether you are interested in Summer or Winter sports, there is an opportunity for everyone! I will share my experiences as an Occupational Therapist and how my clinical skills have enabled me to serve as an international Wheelchair Rugby Classifier, highlighting the benefits this involvement has brought to both my clinical practice and personal life.

Content references:

1. Muñoz-Llerena, A., Angosto, S., Pérez-Campos, C., & Alcaraz-Rodríguez, V. (2025). A Systematic Review of Volunteer Motivation and Satisfaction in Disability Sports Organizations. Disabilities, 5(2), 33. https://doi.org/10.3390/disabilities5020033
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3. World Wheelchair Rugby Classification Handbook and Rule book: - www.worldwheelchair.rugby/wp-content/uploads/2021/12/WWR-Classification-Rules-2022.pdf -www.worldwheelchair.rugby/wp-content/uploads/2021/12/WWR-Classifier-Handbook-2022.pdf

Presenter biography:

Binnie O'Dwyer has a history of sports involvement having competed in numerous codes at a regional and national level, as well as behind the scenes, coaching, organising, volunteering.

She completed a Bachelor of Health Science (Occupational Therapy) at Auckland University of Technology (2004), Diploma of Sport Studies at Bay of Plenty Polytechnic (2000), Certificate in Occupational Health and Safety Level IV – TAFE (2011).

An International Classifier in Wheelchair Rugby since 2004 she has level IV (highest level) Classifier status. As the Asia Oceania, Zonal Head of Classification for IWRF (2007-2013; 2022-current) Binnie has contributed to the development of Classifiers, organisation of classification at tournaments and the development of the classification process. Amongst numerous National and International Tournaments Binnie has classified at the Beijing and London Paralympics and several Zonal and paralympic qualifying tournaments.

Presently she is employed as a Wheelchair and Seating Therapist and is part of the World Wheelchair Rugby Classification Committee, who oversee and contribute to the development of classification within wheelchair rugby, ensuring International Paralympic Committees code compliance within the sport while also undertaking the management of the international classification database.

E7: Skills on Wheels: The First Paediatric Wheelchair Skills Program in the United States

A/ Prof. Tony Chase

Learning objectives:

1. Participants will understand how to develop wheelchair skills programs, evaluate them, and disseminated findings.
2. Participants will identify the importance of engaging siblings and caregivers in training programs such as these. They will further understand strategies to employ in engaging these populations.
3. Participants will understand the potential impact of wheelchair skills program participation on pre-health professional students as well as demonstrate the ability to engage these students.

Session description:

This educational session will be aimed at teaching the development of and sustaining of a wheelchair skills program called Skills on Wheels in Indianapolis. The focus areas will be research, student engagement, caregiver engagement, sibling engagement, and dissemination. Manual wheelchair skills training programs are novel developments, particularly in the United States. The long-term impact of the Skills on Wheels program on participants' occupational engagement and quality of life at home, at school, and in the community has been previously studied and shown to be a positive impact for participants over the past five years. Further, caregiver interview studies have identified important themes of (i) occupational engagement, (ii) program impact: quality of life factors, (iii) program resources/design, (iv) novelty/importance of program/wheelchair skills training, and (v) desired continued wheelchair skills practice in the future. Since the program's inception, professional program student involvement has also been a key factor in the delivery of wheelchair skills training. Elements of all of these endeavors will be presented in an educational session that aims to teach participants about Skills on Wheels, as well as how to develop similar programs like it. Tangible advice will be presented for participants to plan out what this would look like in their clinic or academic institution. Lessons learned from five years of program planning will be presented as well. From attending this educational session, participants can explore how this type of work could impact their own surrounding community.

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Presenter biography:

Tony Chase is an Assistant Professor and Director of Research in the Occupational Therapy Department at Indiana University. He is the director of the Skills on Wheels program, a paediatric wheelchair skills training program in Indianapolis developed in 2021. His background areas of expertise are in research methods, quantitative psychology, and program development. Over the past decade, he has published in the areas of paediatric disability, assessment development/validation, and education. Featured on NPR for his work in bringing wheelchair skills training to children in an innovative way, he continues to develop new program sites for Skills on Wheels in the United States and beyond.

F1: Honouring family priorities in Lying Postural Care Management: using the F-words to guide interventions

Patricia Toole, Dr Christy Natale

Learning objectives:

1. Understand the “F Words” Framework: Learn the six “F Words” (Function, Family, Fitness, Fun, Friends, Future) and how they relate to the ICF and Lying Posture Care Management (LPCM).
2. Explain the Coastal Model Analogy: Describe the Coastal Model ("Always Underwater," "Intertidal Zone," "Dry Beach") and how it sets expectations for LPCM outcomes that are “not worse” or “better” across all 6 “F words”.
3. Use the LPCM Outcome Measure: Apply the LPCM-OM to assess real-world cases and determine whether interventions result in “Worse,” “Not Worse,” or “Better” outcomes in each domain.
4. Identify Barriers and Trends: Analyze a case report to find challenges or trends in achieving optimal LPCM outcomes across the “F Words.”
5. Improve LPCM Interventions: Evaluate and revise LPCM plans to better support families and children, aiming for outcomes that are never “Worse” and consistently “Better.”

Session description:

Caregiving for a person with complex neurodisability can be all-consuming. Families necessarily focus on getting through the night. In the morning, they focus on having a good day. Lying posture care management (LPCM) must address the needs families and children have right now: tonight and tomorrow. It needs to make a daily difference, and it needs to be provided in a way that is flexible enough to be used all the time: good days, bad nights, illness, hospitals, slumber parties, camping, and grandma’s house.

Over 10 years ago, Rosenbaum and Gorter (2011) introduced the “F Words” for childhood neurodisability: function, family, fitness, fun, friends, and future. These relatable concepts are grounded in the World Health Organization’s International Classification of Functioning, Disability and Health (the ICF) and encourage professionals to center our interventions on the whole child as expressed in their participation in their families and communities. Importantly, the “body structures and functions” of the ICF -so often the focus of our interventions- account for only one of the six “f” words: fitness.

Hamer et. al (2025) found that parents reported guilt at not using sleep systems for lying posture care management (LPCM). In the “fitness” domain, benefits to long-term consistent use of LPCM supports are clear for physical well-being, but are they equally clear in the domains of fun, family, friends, future, and function? If not, how do we need to change the way we present, implement, design, and prescribe LPCM? A new outcome measure that utilizes the “f words” is suggested to place child and family experiences at the center of LPCM interventions and to ensure that the intervention(s) prescribed consistently result in measures of “same” or “better” across all domains. Discussion is welcomed for improvements and validation of the tool.

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Presenter biographies:

Patricia Toole, MAT, MsOT, OTR/L, ATP has over 20 years' experience spanning the areas of assistive technology, seating/wheeled mobility and 24-7 postural care management (PCM). First trained as a teacher, Trish was thrust into the world of complex neurodisability with the unexpectedly premature birth of her oldest son in 1998. Since graduating from the University of Puget Sound in 2005, she has worked in early intervention, pediatrics, neuro-rehab, and developmental disabilities, including 10 years leading the seating clinic at PROVAIL in Seattle. Patricia has presented at RESNA and ISS, co-authored the 24-7 PCM chapter in Seating and Wheeled Mobility: a Clinical Resource Guide, and The RESNA Position on Assistive Technology for Lying Posture Care Management. Founder and owner of Clear Path Occupational Therapy, Trish continues to directly care for complex patients.

Dr. Christy Natale, DPT, ATP/SMS, CRTS has a diverse background in the rehabilitation industry, starting her career as a pediatric Physical Therapist before transitioning full-time to working for a supplier of Complex Rehab Technology (CRT) where she worked with a variety of ages and diagnoses. She earned her Doctorate in Physical Therapy from Pacific University (Oregon) in 2009 and has a combined 15 years of experience providing customized positioning and mobility solutions tailored to the needs and goals of her clients. Christy currently serves as Clinical Educator Manager of the Western United States for Sunrise Medical. Her areas of expertise include alternative drive controls for pediatrics, power wheelchair programming, and sleep positioning within the scope of 24-hour postural care

F2: Coaching to enhance engagement and outcomes in consultations: A sandpit session exploring application and implications

A/ Prof. Lucy Charles

Learning objectives:

Learners will:

1. Reflect on how coaching and autonomy-supportive strategies enable wheelchair users, families, and caregivers to voice what matters in seating decisions that align with life participation.
2. Experiment with communication styles, exploring how coaching can build trust and cultural safety for expressing priorities.
3. Discuss how autonomy-supportive communication empowers users in practice, alongside potential risks and benefits.

Session description:

Coaching is a distinct intervention that combines humanist concepts of empathy and non-judgement with behaviour-change psychology methods such as goal setting, involvement and action planning (ICF, 2023).

Several coaching approaches have emerged in recent years designed for use in rehabilitation. Good communication skills are recognised as an important component of wheelchair and seating assessment (World Health Organization, 2023), yet coaching offers substantially richer encounters than clear exchanges of information.

Coaching has been found to enhance end-user engagement in rehabilitation, improve satisfaction and self-efficacy and ensure that the most meaningful outcomes to clients are achieved (Graham et al., in press).

While no formal research into the use of coaching in wheelchair provision has been reported, it has been posited that Occupational Performance Coaching (OPC) a could support therapeutic interactions in adaptive equipment consultations and ultimately enhance wheelchair user outcomes (Graham, 2024). Could coaching and its components address systemic issues of abandonment of equipment, poorly fitted equipment and low service satisfaction in wheelchair and seating assessment? If so, what might the conditions of its use be, and how would wheelchair users feel about this shift in role from assessors as experts, to partner and facilitator in equipment decision-making?

This ‘sandpit session’ is an opportunity for curious and playful exploration of what coaching skills might add to a wheelchair assessor’s toolkit, and what its limits might be.

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Presenter biography:

Lucy Charles is an Occupational Performance Coaching (OPC) Trainer. OPC was developed by A/Prof Fi Graham at the University of Otago, Dept of Medicine, Rehabilitation Teaching and Research Unit. Lucy co-developed and has researched the F-Words Life Wheel with CanChild, a coaching approach that supports children and families to identify what is important to them, set participation goals, and ensure the child's voice is central. She is presenting the work of Fi Graham, whose research on telehealth and wheelchair provision has directly informed World Health Organisation recommendations.

F3: Towards an Evidence-Based Approach to Wheelchair Maintenance & Repair

A/ Prof. Mark Schmeler, Jack Fried, Gede Pramana, Rich Schein, Hanju Zhu

Learning objectives:

Upon attending this session, attendees will be able to:

1. Summarize 3 research studies related to the state of Wheelchair repairs.
2. Describe the type and frequency of the 4 most common types of manual and power wheelchair failures.
3. List 3 elements of a wheelchair maintenance and repair practice guideline.

Session description:

In the United States wheelchair repairs are on the rise. Research indicates that in 2009 45% of wheelchair users experienced a failure in a given 6-month period whereby in 2022 this has increased to 64%. Wheelchair failures can also result in users being stranded, missing important events, being stuck in bed, other adverse medical conditions such as falls and pressure sores, and in some cases death. Practice standards and coverage policy for routine wheelchair maintenance and timelines for part replacement are scarce and limited. This session will review the research literature related to the topic followed by proposed guidelines to effectively maintain equipment to reduce catastrophic failures. The University of Pittsburgh in collaboration with consumers, clinicians, industry, and policy/payer stakeholder groups have spent the past years investigating wheelchair repair types and frequency to inform practice and policy guidelines. This session will review the research on types and frequencies of wheelchair repairs based on large data analytics, stakeholder perspectives, data on typical distance traveled by wheelchair users, and contemporary practice guidelines for routine maintenance. Collectively, this effort is to inform attendees towards their own practice, client education, and future policy reform to support routine maintenance and follow-up for people who use wheelchairs.

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Presenter biographies:

Mark Schmeler is a practicing Occupational Therapist and Assistive Technology Professional (ATP) serving as the Director of the Center for Assistive Technology at the University of Pittsburgh Medical Center. He is also an Associate Professor and the Vice Chair for Clinical Services & Policy in the Department of Rehabilitation Science & Technology at the University of Pittsburgh. Further he is the co-director of the International Seating Symposium. His research is focused on clinical service delivery especially the analysis of large data to inform practice and policy for wheelchair mobility and related assistive technologies. Other research interests include the application of outcome measures, telehealth, product development, and product testing. He also works closely with local, national, and international organizations as an advocate for appropriate access to assistive technology devices and services.

Richard M. Schein is a Senior Research Operations Manager within the Department of Rehabilitation Science & Technology at the University of Pittsburgh. He received his Masters of Science in Rehabilitation Technology, a Masters of Public Health in Health Policy and Healthcare Management, and a Doctorate of Philosophy in Rehabilitation Science, all at the University of Pittsburgh. Schein interacts with various levels within or outside the University, including Principal Investigators and collaborators, Directors, and Department Heads, serving as an investigator and manager in conducting research projects, solving problems, coordinating projects & budgets, and day-to-day operations. He manages multiple priorities through effective collaboration with all levels of professionals to ensure a clear understanding of project objectives, drive team progress, and provide services within specified deadlines.

Gede Pramana is a Data Systems Scientist in the Department of Rehabilitation Science and Technology at the University of Pittsburgh. He received his Doctorate of Philosophy with a concentration in rehabilitation science and healthcare informatics from the University of Pittsburgh. He has more than twelve years of experience in the field of software and database design and development. He also has experience in smartphone app development on Android and iOS systems. His past works include the development of an award-winning mHealth system called SmartCAT, a smartphone-enhanced child anxiety treatment using ecological momentary intervention, and the iMHere system, a novel mHealth system for supporting self-care in the management of complex and chronic conditions. His current research focus is the development of big data analytics infrastructure, particularly on the Functional Mobility Assessment and Uniform Dataset (FMA/ UDS) registry and Wheelchair Repair registry.

Hanju Zhu is a PhD student in Rehabilitation Science at the Department of Rehabilitation Science and Technology in the School of Health and Rehabilitation Sciences in the University of Pittsburgh, working on research related to wheelchair performance and user behaviors. The background is in clinical medicine, epidemiology, and rehabilitation science and technology, with specific training in wheelchair related healthcare policy and secondary data analysis on outcome evaluation of wheelchair use. Research experience includes exploring objective measurement tools and their

utility in wheelchair assessment, assessing mean daily distance traveled for power wheelchair users across different regions and device models, and investigating stakeholder preferences on attributes of a new coverage policy for Complex Rehabilitation Technology (CRT). The research interest focuses on power wheelchair maintenance intervention for various components, relevant clinical implementation, and potential policy implications. The research goal is to enhance CRT use and improve pertinent coverage policy for people with disabilities.

Jack Fried is a clinical and research engineer with a dual appointment at the University of Pittsburgh Department of Rehabilitation Science and Technology as well as the UPMC Center for Assistive Technology. At the clinic, he assesses clients, recommends technology, and provides training with a focus on computer access. His research focus is part of Pitt's Healthy Home Laboratory to understand the usability and effectiveness of commercial smart home technology to help users age in place with or without a disability. In addition, he is an adjunct professor and teaches the Fundamentals of Rehabilitation & Assistive Technology Applications undergraduate course.

F4: Creating the Path to Successful Prescription of Power Assist Products

Amy Bjornson, Jessica Presperin Pedersen

Learning objectives:

1. Participant will understand the different types of power assist devices and the clinical implications and usage of each.
2. Participant will be able describe the 4 important criteria to consider when prescribing a power assist device
3. Participant will be able to provide clinical findings that would benefit the different types of power assist units

Session description:

When considering a power assist wheelchair, there are multiple factors which need to be taken into consideration to achieve optimal outcomes. This session will review the different options – Push Devices, Wheel Add Ons and Front Pull Devices. We'll consider the pros and considerations of each, focusing on both the environment/transport considerations as well as the client's physical capacity and wheelchair skills. We'll provide steps for decision making considering a user's functional skills, environment of use, transportation, and participatory goals.

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Presenter biography:

Amy Bjornson trained as a Physical Therapist in the United States, Amy has over 20 years' experience working with the adult and pediatric neurologic populations, with specialties in the treatment of spinal cord injury, and evaluation and provision of assistive technology for clients with physical challenges. She was the director of the Seating and Mobility Clinic in Boston, MA USA and provided consultation services to the United Cerebral Palsy Foundation.

Based in Sydney, Amy currently develops and implements national and international training programs on using Assistive Technology to enhance inclusion, health, and well-being in those with physical disabilities. She also serves a product improvement and development role for Sunrise Medical, Australia.

Amy is a dynamic speaker who has lectured extensively on seating and mobility. She has also traveled to several developing countries, learning and sharing information with their medical communities.

Amy received her ATP certification in 1995, SMS certification in 2015 and Australian Physiotherapy certification in 2018.

Amy focuses on providing sound solutions that create positive results, even in challenging environments. She consistently implements innovative ideas focused on improving the lives of people with disabilities

Jessica Presperin Pedersen, OTD, MBA, OTR/L, ATP/SMS, FAOTA, RESNA Fellow - Jessica is the Director of Clinical Education- North America for Sunrise Medical. Jessica holds a BS and Post-Doctorate degrees in Occupational Therapy as well as an MBA. She served in many different roles in the world of wheelchairs and seating including clinician, researcher, educator, supplier, and manufacturer. Jessica has experience working with individuals throughout the lifespan in clinics, schools, long-term care settings, and home health. She is involved in the Clinical Task Force, RESNA, GoBabyGo, and works closely with All Wheels Up, an organization advocating for people to be able to stay in their wheelchairs onboard flights.

F5: The Proof is in the Pudding: Measuring Intervention Fidelity in Paediatric PWC Skills Training

Dr Lisa K. Kenyon, Grant Bosch, Olivia Coolman, Jordyn Hopgood, Makayleigh Silverman, Jessica Szewczul

Learning objectives:

1. Define the 5 dimensions of intervention fidelity.
2. Discuss the role of intervention fidelity in research and clinical practice.
3. Discuss the 5 quality of intervention delivery processes used to ensure that both the Assessment of Learning Powered mobility use (ALP) Facilitating Approach and the ALP Facilitating Strategies were employed as intended in our intervention.

Session description:

Intervention fidelity, defined as the faithful and accurate implementation of an intervention, is a multi-dimensional construct that helps to guard against deviations from the intended delivery of interventions. Comprehensive measurement of intervention fidelity reflects the 5 dimensions of intervention fidelity: (1) Adherence, (2) Dosage, (3) Quality of Intervention Delivery, (4) Participant Responsiveness, and (5) Program Differentiation. Despite calls for greater attention to comprehensive intervention fidelity in research studies, fidelity measurement in pediatric rehabilitation studies typically only focuses on Adherence. Yet complete attention to all pertinent dimensions of intervention fidelity is necessary to guard against all 3 types of major research errors: Type I errors (false-positives), Type II errors (false-negatives), and Type III errors (favorable intervention outcomes but for an incorrect reason). Furthermore, measuring intervention fidelity in research studies may also assist clinicians in implementing evidence-based interventions in their clinical settings. This session will explore the development and implementation of an intervention fidelity measurement plan involving the relevant fidelity dimensions of Adherence, Dosage, Quality of Intervention Delivery, and Participant Responsiveness for the Em-power clinical trial. Details regarding the provision of our pediatric power wheelchair (PWC) skills training intervention that is based on both the Assessment of Learning Powered mobility use (ALP) Facilitating Approach and the ALP Facilitating Strategies will be provided and discussed. Clinical examples and video cases will be used to illustrate essential aspects of implementing both the intervention and the fidelity measurement plan.

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Presenter biography:

Dr. Kenyon is a Professor in the Department of Physical Therapy and Athletic Training at Grand Valley State University in Grand Rapids, Michigan, USA. She heads the Grand Valley Power Mobility Project; an inter-professional project providing power mobility training and use for children across the full continuum of pediatric power mobility learner groups. Dr. Kenyon has received funding from the National Institutes of Health, the American Academy for Cerebral Palsy and Developmental Medicine, and the Academy of Pediatric Physical Therapy. She has published numerous peer-reviewed articles and book chapters, and presents nationally/internationally, on topics related to pediatric power mobility and pediatric physical therapist practice. Dr. Kenyon currently serves on the Wheelchair Skills Program Advisory Board and on the American Board of Physical Therapy Specialties.

F6: Wheelchair Skills training – an interactive, practical session

A/ Prof. Paula Rushton, Maioro Barton, Fritz Tuaa, Cecilia Huber

*** Limited to 24 participants. Unlimited Observers**

Learning objectives:

By the end of this interactive demonstration, learners will be able to:

1. safely spot people performing basic, intermediate and advanced manual wheelchair skills;
2. perform a selection of basic, intermediate and advanced manual wheelchair skills;
3. incorporate motor learning principles and skill-specific training tips into wheelchair skills training sessions; and
4. access resources for wheelchair skills testing and training.

Session description:

Training is one of the essential steps of wheelchair provision (WHO, 2023), however wheelchair skills training is not routinely provided. Lack of time, knowledge and resources are commonly reported by therapists as barriers. When training is provided, it is often focused on basic skills, and not on the advanced skills required for navigating and participating in the community.

This practical hands-on workshop will be co-led by Paula Rushton from Dalhousie University and Seating To Go peer mentors. An interactive demonstration of training a selection of basic, community, and advanced wheelchair skills based on motor learning principles and skill-specific training techniques, as outlined in the Wheelchair Skills Program (www.wheelchairskillsprogram.ca) will be provided. Participants will have the opportunity to spot and perform a selection of manual wheelchair skills important for participation in the community.

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Presenter biographies:

Paula Rushton is an Associate Professor and Director in the School of Occupational Therapy at Dalhousie University. She completed her Master of Clinical Science in Occupational Therapy at the University of Western Ontario (1999), PhD in Rehabilitation Sciences at the University of British Columbia (2010) and postdoctoral training at the Université de Montréal in Biomedical Sciences (2014). Her research is focused on measurement, intervention, knowledge translation, and education related to improving the wheeled mobility of children, adults, and older adults through an improved wheelchair service provision process. From the measurement, intervention and knowledge translation perspective, Rushton's interest lies in the domains of wheelchair skills and wheelchair confidence. From the education perspective, as Vice-Chair of the International Society of Wheelchair Professionals, Rushton has been working to enhance wheelchair content in health care professional university curricula globally.

Seating To Go Peer mentors:

Maioro Barton was born with spina bifida and has used a wheelchair since he was 2 years old. His whakapapa is Ngāti Porou and Ngāti Wai. He enjoys lifting weights and playing wheelchair basketball for Waikato and has represented New Zealand. He has a passion for breaking down barriers (physical, social and systemic) to help people become more active and involved with their community. Maioro studied sport and recreation and exercise science at Wintec and uses this knowledge in his role as peer mentor for Wheelchair Skills training at Seating To Go.

Brett Reid has lived with a spinal injury for over 40 years. During that time, he has learnt to deal with the changes and challenges it brings, including learning to navigate the biases and prejudices of others. Since his injury, Brett has competed nationally in discus, javelin, shot put and wheelchair basketball and worked full time for many years as a die make for an aluminium manufacturer. Brett enjoys being in the outdoors, travelling in his van, being in good company and restoring clocks and antique arms.

Cecilia Huber had a car accident as a teenager 18 years ago resulting in paraplegia. Since then, she has become a Mum, trained and worked as a primary school teacher and been a peer trainer for wheelchair skills. Cecilia understands the struggles that a lack of mobility can bring and the benefit of having a peer trainer pass on knowledge and skills to build confidence.
She also understands the importance of building trust and relationship and finds the role of peer trainer provides opportunities for conversations about living an everyday life beyond wheelchair skills.

Fritz Tuaa is a NZ born Samoan and has a background in sports retail management, football management and is a qualified social worker. He has been a wheelchair user for 13 years due to a neurological disorder causing paralysis in his legs. He grew up playing sports and continues to enjoy playing sports but in a different way. As a wheelchair skills mentor he enjoys seeing the smile on people's faces when they are able to achieve the skills they set themselves to learn and gaining the confidence and independence to navigate the community safely which some have never experienced before. He loves teaching the skills and sharing his knowledge and experiences as a wheelchair user.

F7: Safe and Effective Power Wheelchair Battery Replacement: The Role of Clinicians and Technicians

Ben Gommers

Learning objectives:

1. Participants will be able to identify three key factors that influence the performance and safety of power wheelchair batteries.
2. Participants will be equipped to explain three risks associated with incompatible battery replacement and articulate the role of clinicians and technicians in ensuring proper battery selection.
3. Participants will be able to assess at least two impacts of globalization and funding limitations on the safety of power wheelchair batteries and recommend strategies to address these challenges.

Session description:

The replacement of batteries in power wheelchairs is vital for ensuring safety, reliability, and functionality, to support the mobility and independence of wheelchair users. However, the growing availability of cheaper and less regulated batteries has raised concerns about technical malfunctions, reduced battery life, and potential hazards such as overheating or fires. Power wheelchairs rely on specific battery types for optimal performance, and variations in design can affect functionality whilst posing risks, such as non-compliance with aviation transport regulations.

A 2022 study found a median battery lifespan of 22 months, with 88.2% of replacements occurring within three years. This highlights the inevitability of battery replacement and the crucial role of qualified clinicians and technicians in ensuring proper installation and seamless operation of electrical components. Without their expertise, improper selection of batteries can compromise safety and wheelchair functionality.

The question of responsibility and funding for battery replacement adds another layer of complexity. Due to restrictive insurance and government funding policies surrounding repairs and maintenance, ongoing costs are often underfunded or excluded. Despite initial wheelchair costs being covered by these policies, more than 50% of wheelchair users face personal financial burdens for maintenance, limiting their mobility and participation (Worobey LA, et al., 2022). This funding gap can drive users to choose cheaper, potentially unsafe battery options, resulting in non-compliance with safety regulations.

A 2024 McKinsey & Company survey revealed increased brand exploration and a shift towards value-driven purchases. These practices have the potential to lead to technical failures or hazardous situations, such as battery leakage or fires. This presentation will explore the complexities of power wheelchair battery replacement, emphasising the need for professional oversight and teamwork to ensure safety and optimal performance for users.

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Presenter biography:

Ben is a Clinical Services Specialist at Permobil Asia Pacific, based in Melbourne Australia. With his background as a Physiotherapist, he has extensive experience with Assistive Technology. Before joining Permobil, Ben worked within cerebral palsy community centres, specialist schools, and most recently, as an Assistive Technology Consultant.

Throughout his career, Ben has dedicated himself to complex seating and postural management. He is deeply committed to enhancing the comfort, function, independence, and quality of life for his clients through client-centred and evidence-based practices. Ben loves thinking creatively and finding innovative ways to apply assistive technology to achieve successful outcomes.

F8: Advancement in Wheelchair Technology

Andrew Slorance

Learning objectives:

Educate on the advancement of wheelchair technology from 1980s to today as we enter an era of hybrid, SMART wheelchairs.

1. What is a hybrid wheelchair is and how does it make getting around easier
2. How advanced wheelchairs can empower users to embrace independence.
3. The Phoenix i hybrid wheelchair is the first SMART wheelchair on the market. What can we expect from future SMART wheelchairs.

Session description:

Andrew will take the audience through his journey of harnessing lived experience to advance wheelchair technology and the resulting hybrid wheelchair, named the Phoenix i. The first lightweight wheelchair incorporating a hybrid blend of manual and electric propulsion via a revolutionary, front caster wheel, power assist system.

Hybrid propulsion is proving to be life changing for its users. Electronic braking brings easy stopping without gripping handrims, downhill speed is controlled via a simple rotating knob while pushing is reduced by 80%.

The Phoenix i created by Andrew's team integrates a power-assist function into a 6.5kg carbon fibre frame. Front wheel power has proven to be transformational in how the wheelchair behaves. Vibration from the road surface is virtually eliminated. Stone chips, raised slabs, grass, gravel and thick carpet are easily overcome. As the system is virtually invisible, the user moves around with ease projecting independence and confidence. Passersby are oblivious to the exitance of the power assist.

We live in a time of self-driving cars, walking, jumping robots and Ai. Why has it taken so long for wheelchair technology to advance, is the Phoenix i the beginning of a new era of SMART wheelchairs and what capabilities might future SAMRT chairs bring?

When we consider the manual wheelchair has been offering the same level of mobility for nearly half a century, we can see why, despite their limitations power add-ons are so popular. Wheelchair users are seeking to preserve their joints and live a life free of manual pushing for every inch travelled.

The manual wheelchair – no matter how lightweight – is no longer delivering the end user what they need for an active, modern lifestyle. Use it or lose it is a disappearing mindset, wheelchair users can go to the gym to stay fit and preserve their energy for living a good life.

With the transition away from combustion engines, large auto companies are entering the assistive technology landscape, Toyota, Honda, Mitsubishi bring a culture of research and development and offer financial and expert support for ambitious mobility start-ups. Could time be running out for the conventional and now aging manual wheelchair and brands that don't embrace change?

Presenter biography:

Andrew Slorance – a wheelchair user since 1983 aged 14 complete T4/5 from SCI. Disillusioned with the capability of his wheelchair Andrew promised his younger self to one-day advance wheelchair technology.

The evolution of the manual wheelchair has been dormant since the introduction of light weight wheelchairs nearly fifty years ago. Wheelchair users have become accustomed to the only advancement in the most important device they will ever own being weight-saving frames. Andrew reached a point after owning many wheelchairs over many years and that the time was now to deliver on his promise.

Pulling together all he learned in a lifetime of experience as an active wheelchair user, with all the resilience SCI brings he left a solid career in television production to revolutionise the wheelchair. 2020 saw Andrew's company, Phoenix Instinct won the $1M Toyota Mobility Unlimited Challenge. With the funding, Andrew's journey as end user became one of entrepreneur and product developer.

F9: Barriers to Accessing Powered Mobility for Children in the Australian Context

Kate Pain, Amelia Sherlock

Learning objectives:

On completion of the session, participants will be able to:

1. Understand barriers to children accessing power mobility
2. List 3 developmental domains where power mobility has been showed to be of benefit
3. Identify strategies for prescribing therapists to overcome challenges in implementing power mobility with young children

Session description:

The benefits of access to power mobility for young children with Cerebral Palsy are well-documented, with improved performance in receptive and expressive communication domains, as well as development of gross motor skills[1]. There is growing momentum for the ON Time Mobility framework to be broadly adopted, supporting access to independent mobility as a human right[2]. Additionally, the literature supports the role power mobility can have in increasing participation and building social relationships[3].

Barriers to accessing power mobility for young children have been documented in overseas contexts and include therapist and parental attitudes to power mobility for young children, including concern that using powered mobility will prevent the child from working on walking or standing goals in therapy[4]. There is also evidence that providing equipment that is correctly sized, sufficiently supportive and uses an access method that best matches the child's function is important in selecting the most suitable device for the child[5]. In the international arena, it is recognised that prescriber views on the suitability of power mobility for younger children are changing over time, and that ON Time Mobility is increasingly viewed as important and of value, although barriers still exist to implementation[6].

In this session, we will explore barriers to accessing power mobility for young children in the Australian context from the perspective of the prescribing therapist. Prescribing therapists have shared their experiences of accessing equipment for trials, securing funding and accessing ongoing technical and clinical expertise to support continued use of power mobility for children.

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Presenter biographies:

Kate Pain is an Occupational Therapist, specialising in wheelchair seating and positioning, in her role as Assistive Technology Consultant/Clinical Educator with GTK. Kate completed her Bachelor of Applied Science (Occupational Therapy) at the University of Sydney in 1999 and has gained experience in both Australia and the United Kingdom in a variety of settings including hospitals, rehabilitation units, community and private practice. Kate has focused on wheelchair seating and positioning for children and adults with complex postural support and pressure care requirements over the past decade and is passionate about supporting therapists to increase their knowledge and skills in postural assessment and prescription of postural supports.

Amelia Sherlock is a dedicated Occupational Therapist with a deep passion for supporting young children and their families in the journey toward independence. Amelia gained her Bachelor of Occupational Therapy at the Australian Catholic University in 2020 and has acquired experience across a broad range of settings including hospitals, private practice and non-for-profit services. At the Cerebral Palsy Alliance, Amelia works with a demographically and culturally diverse clientele, prescribing a range of assistive technology to meet their individual needs. Amelia is committed to offering young children and infants the chance to explore independent movement through powered mobility, providing early intervention during the crucial first years of life. Passionate about empowering families, Amelia strives to make the process of adapting to new mobility options as smooth and supportive as possible.

G1: AI on the Move: Innovation and ethics in wheelchair technology

Prof. Rachael McDonald, Dr Emma Smith

Learning objectives:

1. Define at least three key terms related to artificial intelligence and its role in wheelchair technologies.
2. Identify three current applications of AI in wheelchair and seating practice.
3. Describe at least two ethical concerns related to the use of AI in wheeled mobility.

Session description:

Artificial Intelligence (AI) is no longer just science fiction—it's a growing force in healthcare, including the world of wheelchair mobility and seating. But what does AI actually mean for wheelchair users, clinicians, and service providers? This interactive workshop will unpack the current and emerging role of AI in this space, while critically examining the ethical, practical, and technological implications.

We'll start by demystifying key concepts like Natural Language Processing, Computer Vision, and AI in Robotics, offering a clear understanding of how these tools work and how they're being integrated into assistive technology. From there, we'll explore current innovations at the intersection of AI and wheeled mobility, including self-navigating wheelchairs, adaptive control systems, health monitoring technologies, and personalization through machine learning.

Participants will reflect on their own experiences—knowingly or unknowingly—with AI-enhanced mobility devices. Together, we'll discuss the real-world barriers and opportunities presented by these technologies, including digital literacy, access, equity, and system bias. Through case studies and group dialogue, we'll explore where AI has succeeded, where it has failed, and what this means for users who don't fit the "average" profile.

Key ethical questions will also be tackled: Who owns the data collected by AI-driven devices? How can we prevent surveillance and commercial misuse? Do these technologies enhance user autonomy—or risk reinforcing dependence?

As AI continues to influence how we prescribe, design, and deliver wheelchair and seating solutions, it's critical that wheelchair users and clinicians lead the conversation. This session will encourage participants to challenge hype, consider unintended consequences, and advocate for technologies that truly support independence and inclusion.

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3. Fouad, A. I., Ismail, A. K., Ali, A. N., Mansour, B. S., Salah Eldin, K., Ramadan, M. A., ... & Elsisy, M. (2025). Evolution of Wheelchair Technology: A Comprehensive Overview of History, Disabilities, Types and Control Mechanisms. Advanced Sciences and Technology Journal, 2(2), 1-20.

Presenter biographies:

Professor Rachael McDonald is the Director of the MedTechVic Hub. The MedTechVic hub creates innovative enabling technology, products and services to enhance lives for people with disability, their families and the people who support them. The hub does this through Development of enabling technology products, Consulting on co-design and manufacture, Best-practice research and development and Educational services, including fellowships and training.

Professor McDonald is a clinical, research and teaching Health Professional with an interest in enabling people with lifelong disabilities to participate in life situations. She has worked extensively in this field, with in both children's services and adult settings. She has or is supervising 31 research (honour's, MSc and PhD) students specialising in the care of people with complex disability as well as development and evaluation into the effectiveness of assistive technologies, and has published widely (over 150 outputs). She has qualifications in occupational therapy, biomechanics and higher education in addition to her Doctorate and has attracted over $11m in competitive grant funding.

Dr Emma M Smith is an Occupational Therapist and researcher with a clinical background in assistive technologies and wheelchair provision. My clinical research focuses on wheelchair provision and wheelchair skills training, primarily in the area of powered mobility. My other areas of research focus on inclusion for vulnerable and excluded populations, especially those with disabilities, through innovation in assistive technology policies and systems. In addition to my role at UL, I am a Technical Specialist in Assistive Technology and Workforce Optimization at the World Health Organization's Regional Office for Europe, and the Editor in Chief of the Assistive Technology Journal. I have also consulted to a variety of international organizations in the areas of disability, rehabilitation, and digital and assistive technologies.

G2: From MAT to THAT – Translating postural evaluation to wheelchair and seating solution

Beth Knight, Jedda Fulcher

* Limited to 20 people

Learning objectives:

Following this workshop, participants will be able to:

1. Identify common pelvic positions and spinal positions via MAT.
2. Translate MAT findings into equipment parameters to meet the person's needs.
3. Gain strategies for applying MAT evaluation to improve overall outcomes of wheelchair and seating prescription

Session description:

We often hear clinicians comment, "I have done a course but put what I learnt into practice", "I have lost confidence", "I am not sure where to begin". This workshop is an opportunity for clinicians to get refreshed on the basic principles of wheelchairs and seating and build their confidence in both assessment and identifying subsequent equipment parameters.

Participants will refresh their skills/ knowledge of the Mechanical Assessment Tool (MAT) evaluation as it relates to wheelchairs and seating. They will increase confidence in identifying equipment parameters.

Within the New Zealand context, the Managed Rehabilitation Equipment Suppliers (MRES) facilitate procurement on behalf of the Accident Compensation Corporation (ACC) and the Ministry of Social Development (MSD). A structured tender process is employed to establish a list of preferred products for funded provision. List/preferred supply equipment is more readily accessible to a larger number of therapists and needs to be considered in the first instance.

This interactive workshop for beginner/intermediate assessors focuses on linking the MAT evaluation to wheelchair and seating prescription with list/preferred supply solutions.

Participants will have the opportunity to see a MAT evaluation demonstrated and then practice these techniques. Common challenges encountered along the way will be discussed and practical approaches to overcome these will be demonstrated.

Participants will also develop their skills in linking clinical findings to equipment solutions via case studies and review of current options on the Enable New Zealand Disability Support Services (DSS) equipment list

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Presenter biographies:

Jedda Fulcher is a Wheelchair and Seating Clinical Specialist at Seating to Go in New Zealand she has been working in wheelchair and seating for the past 16 years. Jedda is passionate about sharing her knowledge and training other therapists within the team. She has a special interest in 24-hour postural management as it relates to Wheelchair and seating and working in the community with other therapists as an advisor. Jedda loves a good 'Custom seating' challenge and believes anything is possible and that there are always compromises. She is a busy mum juggling her career and coaching her kids sports teams.

Beth Knight is a Wheelchair and Seating Clinical Team Lead at Seating to Go in New Zealand. She has been working in wheelchair and seating for the past 10 years. Beth has worked with the peer lead wheelchair skills mentoring and has been involved in research projects around the use of telehealth in the wheelchair space. Beth enjoys being outdoors with her family, mountain biking, skiing and fishing.

G3: Re-thinking Pressure Injury Prevention through Shear Awareness and Support Surface Design

Bradley Fowler

Learning objectives:

Upon completion of the session, participants will be able to:

- Introduce and outline the fundamental principles behind pressure injury causation including new research found in the 2025 International Pressure injury guidelines.
- Understand the key impacts contributing to a pressure injury addressable with support surface material science.
- Gain a comprehensive understanding of the biomechanics of shear, including its causes and strategies for mitigation in pressure management surfaces.
- Discuss the impact of 'patient compliance' and the architecture of choice in product prescription

Session description:

"Pressure [injuries] are one of the largest unsolved medical complications today" (Gefen, 2018). The cost attributed to pressure injuries within the public healthcare system alone in Australia exceeded $9 billion in 2021, presenting and ongoing burden to healthcare systems, clinicians, and patients alike through increased length of stay, treatment complexity, and preventable morbidity and mortality.

From the lens of a manufacturer, decision-making revolves around the influential factors, including Pressure, Mobility, Microclimate, and Shear, known as the 'Pressure Care Matrix'. By forming an understanding of how these factors influence each other and the material science behind product design, clinicians can increase their confidence in the product prescription of pressure management devices.

Shear is a major contributor to pressure injury development, yet remains a relatively unknown factor in terms of its cause and effect. Using several technological tools including MRI and pressure mapping, clinicians can gain a more in-depth understanding of how we can structure client assistive devices to help mitigate the effects.

While clinical decision making and finding successful solutions based on evidence is crucial to seating and indeed all Assistive technology, the final deciding factor is often the client and their acceptance of the device. A term often used, 'patient compliance', indicates a forceful or the implication of rules and consequences. A mindset developed over the past 18 years of product manufacturing helps clinicians create choice architecture to form trust through shared decision-making leading to a client successfully engaging with the prescribed Assistive technology.

Content references:

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Presenter biography:

Bradley Fowler is one of the Clinical Educators at Forté Healthcare, Australia's leading manufacturer of pressure care support surfaces. Since 2020, he has been closely involved with Forte's research and development team, driving the translation of clinical and client feedback into practical, evidence-based product solutions.

Working alongside clinicians, universities, and research partners, Bradley focuses on bridging the gap between academic research, clinical reasoning, and product design. His work challenges long-standing assumptions within pressure care and promotes a deeper understanding of the biomechanical and material factors influencing pressure injury prevention.

Bradley has delivered thousands of hours of education across Australia and New Zealand, supporting clinicians and healthcare professionals in developing a stronger technical and evidence-driven approach to pressure care prescription and product selection.

G4: Beyond the Base: The Seating Professional's Responsibility of Educating on Manual Wheelchair Components

Bianca Brady

Learning objectives:

1. Explain the clinician's role and responsibilities in the manual wheelchair component selection process, including client and caregiver education.
2. Analyse the functional impact of key wheelchair components—rear wheels, tires, handrims, and casters—using evidence-based research.
3. Evaluate component options based on client needs, functional goals, and environmental considerations.
4. Demonstrate strategies to support informed client decision-making, balancing clinical recommendations with funding realities.

Session description:

When configuring an ultralight manual wheelchair, most attention is placed on the base—its frame style, material, and design—while key components, often called "accessories," may be overlooked. The word accessory may lead someone to believe these are for a certain aesthetic or style. However, accessories are necessities of the whole system to complete the configuration. It is the responsibility of the seating professional to educate clients and caregivers on the benefits, advantages, and disadvantages of each selected component, allowing them to understand how each may contribute to overall function and satisfaction

This presentation will focus on four major component categories: rear wheels, tire types, handrims, and casters. Using evidence-based research, we will explore how each impacts performance, efficiency, and comfort. Studies such as Ott et al. (2022) provide insights on rolling resistance between various rear wheel and tire combinations, helping justify choices based on overall system efficiency.

Handrims will be analysed for biomechanical impact, comparing ergonomic, high-friction, and standard designs. Caster selection will be reviewed through research on rolling resistance and vibration damping, emphasising how these affect function across environments.

The presentation also aims to shift the mindset around the prescription process, emphasising client and caregiver needs over funding limitations. We will stress the importance of market knowledge and ensuring clients are fully informed of their options. Ultimately, our responsibility is to empower clients to make educated decisions about what best meets their needs now and into the future.

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Presenter biography:

Bianca completed her Occupational Therapy degree in Sydney and has over 15 years of experience in the Australian health and community sectors. Specialising in physical rehabilitation and addressing the challenges posed by neurological conditions that impact daily life, she has built a career focused on supporting others to overcome barriers and enhance their quality of life.
Having worked in diverse settings, Bianca combines hands-on experiences with a passion for education, focused on creating and delivering learning opportunities in the fields of seating and wheeled mobility. As a dedicated advocate for individuals who use assistive technology to achieve their life goals, Bianca is committed to fostering growth, learning, and empowerment among both clients and fellow clinicians.

G5: Night-Time Positioning - reframing our messaging about postural care. Interactive workshop

Jane Hamer, Deb Wilson

Learning objectives:

On completion of this session, participants will be able to:

1. Reframe messaging around 24hr postural care appropriate to the priorities of the person and their family/carers
2. Describe stages of sleep and strategies to improve sleep onset and maintenance.
3. List 3 indicators for supported lying positions at night for people with complex needs.
4. Utilise 3 outcome measures to quantify change through night-time positioning interventions.

Session description:

As early as 1976, Fulford and Brown suggested that the effect of gravity on an immobile and growing child led to development of windswept deformities, more so than spasticity or muscle imbalance. Fast forward to 2025, and the 24hr approach to postural care has become integrated into many clinicians' practices. Sustained asymmetry and habitual postures in supine have been linked to the development of non-reducible and progressive deformities such as hip dislocation, pelvic obliquity, wind sweeping, and scoliosis in people with cerebral palsy. Due to the secondary, and sometimes life-threatening, complications associated with body shape distortion, it is important that clinicians can identify those at risk. Recent scoping reviews for children with cerebral palsy, and people with intellectual disabilities and severely impaired motor function, have described the evidence base for night-time positioning as small with significant gaps.

But is night-time care only about posture? Certainly not for caregivers. This session will review the evidence, including the link between postural asymmetry and pain, and the bidirectional relationship between pain and sleep. What do families tell us? Night-time is complex and messaging around prevention of asymmetries that may happen in the future does not resonate with their here and now where health needs and sleep insufficiency are at the forefront. The perspective of some New Zealand families around night-time positioning and the themes identified will be discussed before reviewing health, sleep and postural care in the context of the ICF. Assessment tools, outcome measures and engagement strategies focusing on principles of family-centred care will be presented. Participants will be asked to workshop together utilising case studies to consider more than body structure and function when introducing night-time postural care.

Re-framing our messaging around postural care at night is an important strategy to supporting people balance health, sleep and postural care needs.

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Presenter biographies:

Deb Wilson is an Occupational Therapist with over 30 years clinical experience. She is the Training Lead of Seating To Go, part of the Geneva Healthcare Group and a leading wheelchair and seating assessment, training and repair service in New Zealand. In 2009, she helped develop the NZ Ministry of Health wheeled mobility and postural management credential for occupational therapists and physiotherapists. She is the NZ Chair for OSS and has contributed to capacity building in the Pacific Islands with Motivation Australia. Deb was a member of the ISWP Wheelchair Educators Package Development Group.

Jane Hamer is a paediatric physiotherapist and also the Clinical Leader of Paediatric Physiotherapy (part-time), for Te Whatu Ora Waitematā (West Auckland and North Shore of Auckland, New Zealand). She has worked with children for 30+years, primarily in Child Development Teams, but also in the private and education sector, and in PICU, and on the local acute paediatric medical ward. Her passion is supporting children with complex disability, and their families. She graduated with a Masters of Health Science from Otago University in 2023, exploring caregivers experience of implementing sleep systems for their children. She is working on a co-design partnership project with families, to implement the research findings into practice.

G6: Have a Go Session

Andrew Slorance

Session description:

Following on from Andrews earlier session, you can join him in the Sportsdrome for a practical "Have a Go Session".

Presenter biography:

Andrew Slorance – a wheelchair user since 1983 aged 14 complete T4/5 from SCI. Disillusioned with the capability of his wheelchair Andrew promised his younger self to one-day advance wheelchair technology.

The evolution of the manual wheelchair has been dormant since the introduction of light weight wheelchairs nearly fifty years ago. Wheelchair users have become accustomed to the only advancement in the most important device they will ever own being weight-saving frames. Andrew reached a point after owning many wheelchairs over many years and that the time was now to deliver on his promise.

Pulling together all he learned in a lifetime of experience as an active wheelchair user, with all the resilience SCI brings he left a solid career in television production to revolutionise the wheelchair. 2020 saw Andrew's company, Phoenix Instinct won the $1M Toyota Mobility Unlimited Challenge. With the funding, Andrew's journey as end user became one of entrepreneur and product developer.

G7: Building a Resilient and Sustainable Wheelchair Workforce: Lessons from ISWP's Global Capacity-Building Initiatives. ISWP presentation

Beth Sheehan

Session description:

A resilient and sustainable wheelchair workforce is essential to ensuring long-term access to appropriate mobility services, particularly in low- and middle-income countries (LMICs).

The International Society of Wheelchair Professionals (ISWP) has demonstrated a scalable model for workforce development through targeted training and capacity-building initiatives across diverse regions. Examples include:

- Ukraine, ISWP collaborated with local rehabilitation centres to deliver emergency response training during times of conflict, equipping practitioners with the skills to assess and provide wheelchairs under crisis conditions.
- Africa, ISWP partnered with universities and NGOs to integrate wheelchair service provision into academic curricula, fostering a new generation of trained professionals and strengthening institutional capacity.
- South America, ISWP supported regional training that delivered competency-based education and mentorship, enabling sustainable knowledge transfer and professional growth.

The International Society of Wheelchair Professionals (ISWP) is also addressing this need through the launch of a global Mentorship Program and a suite of capacity-building initiatives that strengthen local expertise and infrastructure.

This session will explore how strategic investment in education, local partnerships, and context-specific training can cultivate a robust wheelchair service workforce, ultimately improving mobility outcomes and promoting inclusion globally.

Presenter biography:

Beth Sheehan is one of the Programme Managers for the International Society of Wheelchair Professionals (ISWP) and has over 20 years' experience as an exercise physiologist. Beth has had a wide variety of opportunities working in private practice in Australia and Scotland, professional associations and academia as well as NGOs in Malawi.

Over the last 14 years Beth has developed her passion in the field of prosthetic, orthotics and assistive technology working with NGOs and as a consultant in a wide variety of countries helping to build capacity of rehabilitation professionals to ensure access for service users. Beth's passion for improving capacity also has led her to a variety of roles that also support service users and the development of rehabilitation professionals.

In her current role as ISWP's Programme Manager, Beth focuses on advocacy and increasing awareness and capacity for wheelchair professionals and wheelchair users. ISWP's goal is to have 10000 certified wheelchairs worldwide and ISWP believes that this can be done through strengthening the global wheelchair community through meaningful partnerships.

G8: Transport Considerations: What to be aware of when prescribing a wheelchair in New Zealand

Colleen Naughton

Learning objectives:

At the end of this session, participants will be able to:

1. List the six commonly used modifications for stowing wheelchairs or drive from wheelchair options.
2. Understand funding limitations and how they will affect your client.
3. Gain foundational knowledge regarding the impact of wheelchair selection on transport solutions and when to liaise with transport therapists.

Session description:

To ensure the best outcome for the client, wheelchair/seating therapists and transport therapists need to work together when considering wheelchair and vehicle options.

ACC, MOH and New Zealand Transport Authority (NZTA) have all recognised Occupational Therapy as the profession uniquely positioned to undertake driver rehabilitation and passenger assessments. Occupational therapists provide overview and support in modifying vehicles for travelling safely as a driver or passenger.

Due to the unique funding limitations in New Zealand, variation in mobility devices and limited vehicle availability, working collaboratively with a transport therapist can help your client to achieve their community participation goals.

Participants in this session will:

- Learn the most used modifications for stowing wheelchairs or drive from wheelchair options.
- Understand funding limitations and how they will affect your client.
- Gain foundational knowledge regarding the impact of wheelchair selection on transport solution and when to liaise with transport therapists.

This educational session will welcome questions and include case study discussions. Participants will have an opportunity to ask questions regarding current clinical scenarios they may be working through.

Content references:

1. Low Volume Vehicle Technical Association, 45-60(02) (Disability Transportation Systems, October 2016). Standards for driving assessments and vehicle modifications, Occupational Therapy Board of New Zealand, March 2022.
2. Kenyon, L. K., Schmitt, J., Otieno, S., & Cohen, L. (2019). Providing paediatric power wheelchairs in the USA then and now: a survey of providers. Disability and Rehabilitation: Assistive Technology, 15(6), 708–717. https://doi.org/10.1080/17483107.2019.1617358

Presenter biographies:

Colleen is the director of TransportMe Limited and has worked for over 14 years in medical assessment of fitness to drive and vehicle modifications. Her previous occupational therapy roles include working in both public and private health care in the United Kingdom and New Zealand with experience in aged care and neurological rehabilitation. Prior to starting TransportMe, Colleen has served as both member and chair of the Occupational Therapy Board New Zealand (OTBNZ) for 10 years. In this role she assisted in the development of 'Standards for driving assessment and vehicle modifications' and oversaw the development of the current OTBNZ 'Competencies For Registration and continue practice for Occupational Therapists'. Preceding her work in the transport and driving arena Colleen had a strong interest in the Occupational Therapist role in Emergency Departments, and Interprofessional Practice. She has assisted in the set up and running of interprofessional practice teams in the UK and New Zealand.

Kirsty is an occupational therapist, based in Tauranga New Zealand. After being busy in non-occupational therapy roles for many years she returned to the profession in 2017. Kirsty has worked as a transport therapist for 7 years and has developed a passion for helping clients achieve the best possible transport solutions with the resources available to them. Kirsty works for TransportMe, providing transport assessments and solutions for driver's and passengers under the Accident Compensation Corporation (ACC) and Ministry of Health (MOH) funding agencies of New Zealand.

G9: Optimal sitting as part of 24hr postural care to reduce risk of developing pressure ulcers.

Jackie Casey

Learning Objectives

- Participants of this session will realise the importance of a comprehensive postural assessment and be able to recognise the common areas at risk of pressure ulcers from prolonged sitting in one position.
- Participants will understand the use of positioning within seating systems to reduce risk of developing pressure ulcers.
- Participants will be able to identify 3 examples of potential strategies in sitting to prevent/ manage risk of developing pressure ulcers.

Session Description

Pressure injuries or ulcers (PUs) remain a significant health and mortality issue for many individuals and have been reported to result in extended hospital stays of an average of 5 to 10 days. A 2021 national audit completed across hospitals in England identified that the PU location distribution was associated with the buttocks (30.4%), sacrum (29.5%), and the heels (13.2%); and with over half of the patients with PUS being over 70 years of age.

PUs can often develop as a result of prolonged sitting or lying in the one position. Those with neurological or physical conditions, and those who are immobile or unable to effectively weight shift or change their position are at particular risk of developing PUs. It is recognised that the cause of PUs is multi-factorial, however, the use of thoughtful positioning and assistive technology devices as part of a 24 hour postural care programme are useful interventions in both the prevention and management of them.
However, it has been reported that PU incidence for those individuals who used equipment was 2-3 times higher than for patients who did not use equipment; and that over-prescription of equipment compared to pressure risk scores remains both a challenge and costly.

Although a 24 hour postural care approach is recommended for those at risk for developing PUs, this presentation will focus on sitting. Specifically it will cover the understanding of common areas at risk in sitting, the use of positioning and support surfaces in seating, acknowledge the need to complete a comprehensive postural assessment, and will consider potential strategies that can be used in sitting to prevent or to manage the risk of developing pressure injuries.

Content references:

- Clarkson P, Worsley PR, Schoonhoven L & Bader DL. An interprofessional approach to pressure ulcer prevention: a knowledge and attitudes evaluation. Journal of Multidisciplinary Healthcare, 2019; 12:377-386.
- Coleman S, Smith IL, Nixon J et al. Pressure ulcer and wounds reporting in NHS hospitals in England part 2: Survey of monitoring systems. J Tissue Viability, 2016; 25(1):16–25. https://doi.org/10.1016/j.jtv.2015.11.002
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- Theisen S, Drabik A, Stock S. Pressure ulcers in older hospitalised patients and its impact on length of stay: A retrospective observational study: Pressure ulcers in elderly hospitalised patients and its impact on length of stay. Journal of Clinical Nursing, 2012; 21(3-4):380–7. https://doi.org/10.1111/j.1365-2702.2011.03915.x

Presenter Biography

With approx. 30 years of experience, I have worked as a clinician, university lecturer, and in industry across the UK, Ireland and the US. I am passionate about the importance of posture, positioning, seating and wheelchair mobility to enabling the participation in everyday life for individuals with mobility and/or postural limitations. My doctoral research investigated the postural asymmetries and mobility of children with cerebral palsy. Whilst my previous research has explored the impact of caring for a child who is a wheelchair user, from a parent or a teacher's perspective; use of modified toy cars to enable children to socially participate; and with industry in designing accessible customisable seating products for persons with complex postural needs. I now work in a joint appointment with Ulster University and Southern Health & Social Care Trust, continuing my own research, and supporting clinicians to engage in and to embed a culture of clinically relevant research.

ABSTRACTS
THURSDAY 6th NOVEMBER

H2: Postural asymmetries, deformities and contractures impact on participation of children with CP: What's the evidence?

Dr Jackie Casey

Learning objectives:

1. Participants of this session will be able to list the prevalence of postural asymmetries, scoliosis, windswept hip deformity, contractures and pain of children with CP in supine and sitting.
2. Participants will be able to describe the associated risks of having postural asymmetries in sitting and lying, and risk factors preventing independent wheelchair mobility of children with cerebral palsy.
3. Participants will be able to identify the time sequence and incidence of scoliosis and windswept hip deformity for children with CP, and the different neuro sub-types.

Session description:

Cerebral palsy (CP) is the most common cause of motor disability in childhood primarily affecting posture and mobility. Secondary complications such as contractures and deformities may affect the child's sitting or lying posture, their ability to move around independently and can cause pain. All of these can impact upon the child's ability to participate and engage in everyday activities and their quality of life.

An explanation of posture, and the cycle of postural asymmetries and development of deformities will be outlined. The evidence investigating the prevalence and associations between postural asymmetries, scoliosis, windswept hip deformity (WSH), contractures and pain in supine and sitting; the time sequence and incidence of scoliosis and WSH and to identify risk factors preventing independent wheelchair mobility will be examined. All studies presented were based on data from the Swedish national registry and follow-up program for children with CP at all levels of the Gross Motor Function Classification System levels I-V. The Posture and Postural Ability Scale will be used to describe both the asymmetries and abilities of these children.

In summary, (1) postural asymmetries in supine and sitting present in over half the children were associated with having WSH, scoliosis, hip and knee flexion contractures, and pain; (2) children unable to change position in sitting or in lying were likely to have postural asymmetries; (3) postural asymmetries occurred across all age-groups, including the very young; (4) WSH occurred first more often than scoliosis; (5) the majority of children aged 0-11 years could not self-propel their manual wheelchair; whilst more children could independently drive a power wheelchair.
It is important to provide more frequent position changes, facilitate optimal postural symmetry, and a greater need for the use of positioning supports to prevent postural asymmetries and pain; and to consider power mobility earlier for children with CP.

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5. Casey J, Rosenblad A, Agustsson A, Lauge-Pedersen H & Rodby-Bousquet E. Incidence and sequence of scoliosis and windswept hip deformity: which comes first in 4148 children with cerebral palsy? A longitudinal cohort study. BMC Musculoskeletal Disorders, 2024; 25:222. https://doi.org/10.1186/s12891-024-07350-z
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11. Noten S, Pettersson K, Czuba T, Cloodt E, Casey J & Rodby-Bousquet E. Probability of independent walking and wheeled mobility in individuals with cerebral palsy. Developmental Medicine & Child Neurology, 2023; 66(3):326-332. https://doi.org/10.1111/dmcn.15731
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Presenter biography:

Dr Jackie Casey has approx. 30 years of experience; and has worked as a clinician, university lecturer, and in industry across the UK, Ireland and the US. She is passionate about the importance of posture, positioning, seating and wheelchair mobility to enabling the participation in everyday life for individuals with mobility and/or postural limitations. Her doctoral research investigated the

postural asymmetries and mobility of children with cerebral palsy. Whilst her previous research has explored the impact of caring for a child who is a wheelchair user, from a parent or a teacher's perspective; use of modified toy cars to enable children to socially participate; and with industry in designing accessible customisable seating products for persons with complex postural needs. She now works in a joint appointment with Ulster University and Southern Health & Social Care Trust, continuing her own research, and supporting clinicians to engage in and to embed a culture of clinically relevant research.

H3: Tonga wheelchair clinics – promoting participation, connections, service development and beyond

Claire Grey, Jacqueline Abel, Tessa Wallis

Learning objectives:

1. Raising the profile of the Oceania support systems for wheelchair users
2. Understanding of the complex cultural differences present within the Pacific islands
3. Highlight the positive outcomes of resource management and environmental efficiency

Session description:

Have you ever wondered what happens to donated or equipment deemed unable to be reissued in New Zealand?

Since 2005, Altus Pacific Aid has collaborated overseas with several Pacific Island communities to provide complex wheeled mobility, postural seating and lying solutions.

The COVID-19 pandemic followed by the devastating Tsunami of 2021 disrupted annual mobility clinics in Tonga, rendering much of the previously donated equipment unreliable, beyond repair and in dire need of replacement.

Altus Pacific Aid partners with the Mango Tree Centre in Tonga, which networks with the local disabled community there. The Centre hosts annual wheelchair and seating clinics, where assessors and technicians from NZ refurbish and upcycle donated equipment for those in need of mobility equipment.

The strength of the wheelchair clinic relies on connections and relationships with families, the disabled community and Mango Tree, these relationships lead to increased confidence and trust in the volunteers and has cultivated new and emerging relationships on the island.

One such initiative is a user led spinal injuries support group online. These connections open relationships with other clients who have previously lived with no mobility or postural aids, facilitate shared knowledge on pressure management and highlight equipment needs for users

The clinic has also established resource management systems to ensure no added waste is brought to an island with no recycling facilities. Resource management allows the volunteers to gather specific equipment fit for purpose and identified need.

The impact has been tangible for many of the users of the service, including work and recreation activities and supported the wider networking of carers to gain support and advice.

Case studies will demonstrate the journey of users of the clinic and the outcomes for them within their family, the island and the wider pacific family

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1. World Employment and Social Outlook: Trends 2024. World Employment & Social Outlook (WESO): Trends, [s. l.], p. 1–118, 2024. Tonga Country Review. (2024). In Tonga Country Review (pp. 1–356).
2. Bedford, R., & Bedford, C. (2023). How many seasonal workers from the Pacific have been employed in New Zealand since the RSE scheme began? New Zealand Geographer, 79(1), 39-45. https://doi.org/10.1111/nzg.12354

Presenter biographies:

Jacqui (Occupational Therapist), Tess (Physiotherapist) and Claire (Occupational Therapist) all volunteer with Altus Pacific Aid trust in Tonga.

Bringing their knowledge of over 20 years' experience each to volunteering, having worked in a variety of countries including Australia, The Netherlands, Great Britain, and South Africa.
They have worked in a variety of community, health, education and high-performance sport settings as clinical leads, senior prescribers and in advising roles. Together they have a deep passion for providing mobility and postural support solutions.

All three specialise in assessment and provision of complex wheelchairs, seating systems, sleep systems and other postural support equipment. Jacqui focuses on working with clients who experience spinal cord injuries, with an emphasis on teaching and participation in recreational activities, Tess in SCI, CP and TBI focusing on postural goals and functional gains and Claire in physical disabilities with special interest in CP, neurological disorders and ASD.

Jacqui, Tess and Claire have all migrated to Aotearoa, New Zealand and now proudly call it home, striving to ensure equal opportunities and equity are at the forefront of everything they do.

H4: Enhancing our approach to addressing client challenges: The evolving review process at Seating to Go

Binnie O'Dwyer

Learning objectives:

1. Understand the evolving review process at Seating to Go, focusing on the integration of technology and collaboration to enhance client issue resolution.
2. Recognize the importance of effective investigation, planning, and implementation in achieving successful outcomes through partnerships with clients, families, colleagues, suppliers, and funding providers.
3. Evaluate the significance of documentation and the use of photography in contextualizing issues, while empowering whanau in the review process.

Session description:

This session presents an overview of the evolving review process at Seating to Go, highlighting the integration of technology, collaboration, and adaptability in addressing client issues. The focus is on effective investigation, planning, and implementation to achieve successful outcomes through partnerships with clients, families, colleagues, suppliers, and funding providers. The significance of documentation and the use of photography as a tool for understanding and contextualizing issues are emphasized, alongside the importance of empowering whanau in the review process. Historically, the review process was time-consuming and often disrupted therapists' daily work; however, the current approach allows clients to initiate contact regarding issues, facilitating a more efficient review process through various communication methods, including phone calls, telehealth, and email.

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Presenter biography:

Binnie O'Dwyer is a seasoned Wheelchair and Seating therapist with nearly 20 years of experience at Seating to Go. Recently, her focus has shifted towards conducting clinical reviews and addressing client inquiries in the Waikato, Bay of Plenty, and Lakes regions of New Zealand. Throughout her career, Binnie has amassed extensive knowledge in assessment, equipment, funding expectations, and client relations, which significantly contributes to her effectiveness in client reviews. Additionally, she is passionate about wheelchair rugby classification and leverages her clinical expertise to enhance her involvement in para sports, while also applying insights from the sporting world to her professional practice.

H5: Passive to Empowered: Caregiver Engagement in Home-Based Power Mobility Intervention for Children with Cerebral Palsy

A/ Prof. Bethany Sloane, Amy Pace, Dr Heather Feldner, Sam Logan, Dr Lisa Kenyon

Learning objectives:

- Identify at least two areas where power assist devices can have a positive effect on a person's overall health and function.
- Compare two differences between types of power assist devices based on current evidence presented.
- Summarize one way that clinical evidence can influence decision-making for matching an individual with a power assist device.

Session description:

Caregivers often receive mobility devices for their children with little guidance on how to integrate them into daily life, which can contribute to inconsistent use or eventual abandonment. Interventions that actively engage caregivers can support both confidence and sustained use. This session describes a home-based power mobility intervention grounded in caregiver coaching and Family Guided Routines-Based Intervention principles. The intervention was delivered over 12 weeks to 12 young children with cerebral palsy, Gross Motor Function Classification System levels IV-V, with weekly video-recorded sessions, field notes, and pre/post- semi-structured interviews that captured caregiver engagement

This session offers insight into how coaching-based interventions can move families from passive recipients to confident and engaged partners in their child's mobility journey, while also supporting intervention fidelity and long-term sustainability. In pre-intervention interviews, many caregivers described passive roles during therapy sessions, stating they "just observe," "make sure children are comfortable," or "do what the therapist tells us to do." In contrast, post-intervention interviews revealed a shift: caregivers described feeling empowered and confident in supporting their child's participation in meaningful family routines, such as being included in the kitchen during meal prep or playing with siblings. Further, around weeks 3-5 of the intervention, a noticeable change occurred: caregivers began initiating strategies, adapting activities, and taking ownership of how and when the device was used within everyday routines. This presentation will explore how and when engagement shifts occurred, what contextual factors may have influenced these changes, and how caregiver engagement may have supported fidelity to the intervention protocol.

This presentation will also share preliminary findings from video coding using an observer-rated engagement measure, thematic analysis of caregiver interviews, and researcher field notes. Practical strategies to encourage and promote caregiver engagement during power mobility intervention sessions will be presented, discussed, and applied to cases.

Content references:

1. Sloane BM, Kenyon LK, Logan SW, Feldner HA. Caregiver perspectives on powered mobility devices and participation for children with cerebral palsy in Gross Motor Function Classification System level V. Dev Med Child Neurol. 2024;66(3):333–43. https://doi.org/10.1111/dmcn.15718
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Presenter biographies:

Bethany M. Sloane, PT, DPT, PhD, PCS is an Associate Professor at Oregon Health & Science University and a Postdoctoral Scholar at the University of Washington. Amy Pace, PhD, CCC-SLP is an Associate Professor in the Speech and Hearing Sciences Department at the University of Washington. Heather A. Feldner, PT, PhD, PCS is an Associate Professor in the Department of Rehabilitation Medicine at the University of Washington. Samuel W. Logan, PhD is an Associate Professor in the College of Health at Oregon State University. Lisa K. Kenyon, PT, DPT, PhD, PCS is a Professor in the Department of Physical Therapy at Grand Valley State University.

H6: Chasing Millimetres: Clinical Precision Enabling Wheelchair Users with High Level Spinal Injuries to Drive Independently

Craig Harington

Learning objectives:

1. Understanding Functional Driving Assessments – Be able to describe the key components of a functional assessment for wheelchair users, including physical movement requirements and evaluation processes.
2. Recognizing the Impact of Wheelchair Configuration on Driving from Wheelchair – Examine how wheelchair type, positioning, and additional adaptations influence posture, control, and overall driving safety.
3. Identifying Challenges and Solutions in Wheelchair Accessible Driving –Analyse the barriers wheelchair users face when driving and explore practical adaptations that enhance accessibility, positioning, and overall safety.

Session description:

Driving plays a pivotal role in independence and quality of life (1)(3), but for those driving from a wheelchair, achieving a safe and functional driving position requires meticulous setup. Unlike able-bodied drivers who can adjust seating position for comfort and control at any time, wheelchair users rely on detailed assessments and specialised vehicle adaptations1

The process includes a functional evaluation, in-vehicle setup, and driving lessons. Functional assessment is critical for determining driving suitability, particularly for individuals with high-level spinal cord injuries (e.g., C5/6) who may be on the threshold of driving capability(1)(3)(5).

Key movements for driving include adequate shoulder stability and range of motion, and functional strength—especially active triceps (Grade 3+ minimum) (2)(6). Although, limited clinical data exists on the functional requirements for individuals with high-level spinal cord injuries (7).

Once functional capability is confirmed, an in-vehicle assessment establishes driving positioning. Wheelchair type and configuration play a crucial role in establishing overall driving position, which, once determined is fixed in place; vehicle modifications such as docking systems, hand controls etc. are subject to certification and not easily adjustable (4).

Minor adjustments to seating or wheelchair can have unintended consequences impacting on the driving position and affecting safety. There is also a cost implication for a review and change to the driving position.

Recent increases in power wheelchair weight (often exceeding 200kg) also pose safety risks by surpassing docking limits adding to the complexity of the assessment and determining a safe and independent driving position (4) .

A systematic approach to driving assessments is critical, as millimetre-level precision influences success, particularly for high-level tetraplegic clients. Establishing stable seating before the driving assessment ensures a smooth transition. Collaboration among healthcare professionals, transport assessors, and manufacturers is key to overcoming challenges faced by individuals wanting to return to driving with a disability. By refining assessments and adapting solutions, practitioners can optimise driving configurations, ensuring safe and functional mobility for wheelchair users.

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Presenter biography:

A qualified Occupational Therapist since 2001, graduating from Oxford Brookes University, UK. Began a career in spinal rehabilitation before transitioning into hand therapy, gaining experience in both the UK and New Zealand. Since 2013, have owned and led OTRS, specialising in transport assessments. In 2021, advanced into highly specialized assessments, further refining expertise in complex mobility and accessibility evaluations.

H7: From Off-the-Shelf to Outstanding: Custom Positioning Solutions Made Simple

Nikki Cousins

Learning objectives:

By the end of this session attendees will be able to:

1. Understand the importance of individualised postural care solutions and how they impact comfort, dignity, and participation in daily activities.
2. Understand how to collaborate with service users to customise off-the-shelf assistive technology
3. Improve their confidence in applying clinical reasoning to seating and positioning challenges, moving beyond standard prescriptions to consider innovative, person-centred solutions.

Session description:

This session will explore the critical importance of individualised postural care solutions that prioritise comfort, dignity, and active participation in daily activities. Using a real-world case study, we will delve into how the collaboration between a multi-disciplinary team, client, supplier, and support staff led to the successful customisation of an off-the-shelf head support. This tailored solution allowed the client to maintain essential head and neck support during and after feeding, significantly reducing the risk of aspiration and enabling continued functional engagement.

We will also examine how seating and mobility innovations can enhance self-governance and improve daily living for individuals with complex needs. The session will emphasise the vital role of occupational therapists in co-designing solutions with clients and support providers, rather than relying purely on standardised product offerings. By embracing a collaborative, person-centred approach, therapists can make a real impact on client outcomes, focusing on practical and achievable solutions.

Attendees will gain practical insights and strategies to confidently approach wheelchair and seating customisation within their existing skill sets. The session will offer actionable techniques for problem-solving and clinical reasoning, enabling therapists to support clients with complex postural and mobility needs.

In addition, we will highlight how small modifications, such as customised product adjustments, can lead to significant improvements in postural care, quality of life, and client independence. This session provides an opportunity to develop new approaches to assistive technology, ensuring better functional outcomes and enhancing overall participation in daily life.

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Presenter biography:

Nikki is the Director of Action Occupational Therapy, a boutique practice in the Hunter Region, NSW. She specialises in wheelchair prescription, seating, and positioning to enhance client independence. With a Bachelor of Occupational Therapy from the University of Newcastle, she has worked as a senior OT across the Hunter Valley, Central Coast, and Sydney, focusing on neurological and physical conditions.

Passionate about finding innovative solutions, Nikki is dedicated to improving client outcomes, with her expertise extending to dementia care and complex home modifications. She also mentors and educates therapists, helping them navigate complex clinical cases with confidence.

H8: On time mobility enhances development and relationship opportunities; A tale of twins

Emma Reynolds. Rhona Ackroyd

Learning objectives:

1. Identify the potentially different roles of persons with lived experience of disability, health care professionals and designers within a team
2. Describe potential spaces where interdisciplinary practice between health care professionals, people with lived experience of disability and designers may be of benefit.
3. Identify potential issues in implementing design practices within this space and possible management strategies in the future.

Session description:

The presentation is delivered in two parts: The first part consists of the theory of on-time mobility and its impact on the development of cognitive, emotional, visual perceptual and communication systems. It identifies 4 groups of children who can benefit from early powered mobility. Different types of child learners will be discussed. Specific validated tools (ALP and WhOM-YP) are outcome measures that can be adapted to a younger age population. Their use and adaptation for the younger age group is explored in detail.

The second part of the presentation is a case study of twins, one who is typically developing and one who has VACTERL association. We will focus on the clinical application of the theory. We will explore how one twin has progressed following implementation of a mobility device and how this has impacted the relationship with his twin and family.

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Presenter biographies:

Emma is a Visiting Neurodevelopmental Therapist (Physiotherapist) working with Pepi/Tamariki and Whanau (babies, children and families) in Hawkes Bay, New Zealand. She completed her Bachelor in Health Science (Physiotherapy) in 2005 and Masters in Health Practice (Child Health) in 2018. Emma has worked in both the acute setting (Starship Hospital, Auckland and Kings College Hospital,

London) and in the community in NZ, Australia and South America. Her current focus in working with the under 3 population, with a particular passion in early powered mobility to maximise functional and relational outcomes for children in her care.

Rhona is an experienced Occupational Therapist based in Rotorua, specialising in wheelchairs, seating, and postural care. Part of the team at Seating to Go, Rhona is employed as a clinical specialised. Rhona also shares her knowledge as a training facilitator nationally in New Zealand supporting the sharing of knowledge and professional growth within this field. Rhona is currently studying a post graduate paper in rehabilitation with The University of Otago.

H9: Detangling manual wheelchair evidence for everyday practice using the ICF framework

Ben Gommers, Dr Jennith Bernstein

Learning objectives:

1. Describe two evidence-based ways that a manual wheelchair impacts the body functions and structures of an individual.
2. Identify two areas where clinical evidence can impact the decision-making process related to manual wheelchair provision.
3. Synthesize how to use the ICF framework to establish clinical interventions through a case example.

Session description:

Navigating published evidence can be a daunting task for clinicians, especially related to the wealth of information on manual wheelchairs. There is both historical and current literature supporting the application of ultralight weight (active) manual wheelchairs, but the challenge lies in determining what information applies to everyday practice. The International Classification of Functioning, Disability, and Health (ICF) framework provides guidance for healthcare professionals to assess the ways the life of an individual is impacted by assistive technology.

Taking this approach to categorise the evidence can make these challenges more manageable and meaningful. This presentation will evaluate what clinical evidence coordinates with the five primary areas of the ICF: body functions and structures, activities, participation, environmental and personal factors. The evidence discussed will be primarily from systematic reviews, highlighting the importance of using high quality studies when possible. The systematic reviews will indicate where there are positive correlations, limited evidence, when it is dependent on the type of manual wheelchair and when there are specific product or user characteristics that influence the application of the information.

Finally, an interventional case example will be used to tie in the clinical application in everyday practice back to what the supportive evidence shows. The individual who will be the focus of this case example presents with a spinal cord injury who uses a manual wheelchair full-time. After 20 years of propelling a manual wheelchair independently, the individual experienced a change in his participation, postural stability, skin integrity, and shoulder health. Using the ICF framework, this case will explore barriers and create solutions related to client satisfaction, mobility and participation.

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Presenter biographies:

Jennith Bernstein, PT, DPT, ATP/SMS: Jennith is a Physical Therapist based in Atlanta, Georgia. She worked at the Shepherd Center, focusing her time in the Seating & Wheeled Mobility clinic. Jennith completed her Masters in Physical Therapy at North Georgia College & State University and transitional DPT at University of Texas Medical Branch. Jennith has presented at national and international conferences such as RESNA, ISS, LASS, Expo Ortopedica, and the APTA conferences. Jennith joined Permobil as a Clinical Education Manager for the Central Region in 2016 and started as Clinical Affairs Manager in November of 2021.

Ben Gommers BAppSc/ MPT: Ben is a Clinical Services Specialist at Permobil Asia Pacific, based in Melbourne Australia. With his background as a Physiotherapist, he has extensive experience with Assistive Technology. Before joining Permobil, Ben worked within cerebral palsy community centres, specialist schools, and most recently, as an Assistive Technology Consultant. Throughout his career, Ben has dedicated himself to complex seating and postural management. He is deeply committed to enhancing the comfort, function, independence, and quality of life for his clients through client-centred and evidence-based practices. Ben loves thinking creatively and finding innovative ways to apply assistive technology to achieve successful outcomes.

H10: Adapting co-design to include everyone

Hana Phillips, Claudia Bridge, Julian Chua, Paris Triantis, Prof. Rachael McDonald

Learning objectives:

Upon completion of this session, participants will be able to;

- Recognise potential benefits and costs of collaborative practices such as co-design
- Describe inclusive co-design principles
- Understand that there is no one-size-fits-all approach or gold standard with collaborative practice
- Apply practical strategies to adapt co-design methods for diverse participants
- Reflect on ways to engage in genuinely collaborative practice

Presentation description

Introduction: Collaborative practices, such as co-design, are increasingly used in health care and assistive technologies. These principles have guided our practices at MedTech Vic to develop solutions that are first and foremost desirable, as well as innovative, useful and usable. However, implementing co-design is not straightforward, as we will explore during this workshop.

Methods*:* In this interactive workshop, participants will explore inclusive co-design principles through real-world examples from MedTechVic projects. Using the UK Design Council's Double Diamond as a flexible framework, we will share lessons learned from adapting methods for diverse populations. Among many co-design frameworks, the double diamond was chosen for its adaptability. Each project includes a multidisciplinary team and has rigorous planning and development to adapt the methods to the specific project and create a shared language.

Result: Through collaborating on several projects, we have learnt from our participants, including how they want to work with us in this form of research. This has meant learning that traditional co-design processes are often inaccessible and require adaptation to fit the context. We have learnt the importance of managing and avoiding power imbalances in groups to prevent conflict by using experienced facilitators. Finally, we have found the need for flexible approaches, including flexible timing, location, and the use of different tools.

Conclusion: Through group activities and discussionn, participants will identify barriers, experiment with adapting co-design methods, and develop strategies for inclusive engagement. There is no single best practice, but by reflecting on experience and applying adaptable frameworks, participants will leave with practical tools to support inclusive co-design in their own contexts.

Presenter biographies:

Name: Dr Hana Phillips, Ms Claudia Bridge, Ms Paris Triantis, Dr Julian Chua
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Country: Australia
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Biographical details:

Hana Phillips
Hana Phillips is a Research Fellow and Occupational Therapist with over 15 years of experience in rehabilitation and disability. Her PhD focused on interdisciplinary practice and design methods for assistive technology, and she holds postgraduate Design qualifications. Her research emphasises the application of design principles to enhance independence and participation.

Claudia Bridge
Claudia Bridge is the Product Development Officer at MedTechVic, Swinburne University of Technology. With a background in product design and manufacturing, she leads co-design projects with people with lived experience of disability to co-develop enabling technologies and inclusive services. Claudia is passionate about cross-sector collaboration to drive innovative and desirable solutions.

Paris Triantis
Paraskevi (Paris) Triantis is a design coach at MedTechVic, Swinburne University of Technology, with a background spanning architecture, urban design, healthcare, and MedTech. Her work focuses on inclusive and universal design to enhance wellbeing, often collaborating with diverse groups such as healthcare professionals and people with lived experience of disability. Paris has lectured in design and engineering since 2018 with a focus on students applying inclusive design principles with the disability and design sectors.

Julian Chua
Julian Chua is a medtech engineer with deep expertise in sports and assistive technologies. His interdisciplinary approach bridges engineering, health, and disability innovation, particularly in wheelchair and niche product development. Through startups and research at MedTechVic, he drives impactful solutions using additive manufacturing, project management, and collaborative design.

Prof. Rachael McDonald
Professor Rachael McDonald is the Director of the MedTechVic Hub. The MedTechVic hub creates innovative enabling technology, products and services to enhance lives for people with disability, their families and the people who support them. The hub does this through Development of enabling technology products, Consulting on co-design and manufacture, Best-practice research and development and Educational services, including fellowships and training.

Professor McDonald is a clinical, research and teaching Health Professional with an interest in enabling people with lifelong disabilities to participate in life situations. She has worked extensively in this field, with in both children's services and adult settings. She has or is supervising 31 research (honour's, MSc and PhD) students specialising in the care of people with complex disability as well as development and evaluation into the effectiveness of assistive technologies, and has published widely (over 150 outputs). She has qualifications in occupational therapy, biomechanics and higher education in addition to her Doctorate and has attracted over $11m in competitive grant funding.

I1: Developmental Power Mobility: Kick-Starting Global Development Through ON Time, Self-Initiated Mobility and Activity Experiences

Dr Lisa K. Kenyon, A/ Prof. Bethany Sloane, Dr Heather Feldner, A/ Prof. Sudha Srinivasan, Dr Sam Logan

Learning objectives:

1. Discuss self-initiated ON Time Mobility as a catalyst for global development in both typically developing infants and toddlers and those who have mobility delays or restrictions.
2. Differentiate between traditional, destination-focused power mobility training interventions and Developmental Power Mobility interventions.
3. Develop an intervention session plan that incorporates the key principles of Developmental Power Mobility within an ON Time Mobility framework.

Session description:

The onset of self-initiated mobility is widely recognized as the catalyst that kick-starts global developmental changes in typically developing infants and toddlers. However, infants and toddlers with mobility delays or restrictions often lack the self-initiated mobility necessary to catalyze their own development and must passively depend on others for their mobility. Unfortunately, these passive mobility experiences do not provide the same active learning opportunities and activities afforded to their typically peers. Developmental Power Mobility (DPM) seeks to bridge this equity gap through therapeutic use of a power mobility device as a mobile learning environment. DPM is a novel, process-based intervention approach that leverages a power mobility device to simultaneously provide opportunities for both self-initiated mobility and targeted, active engagement in developmental activities. Conducted in real-world environments, DPM parallels the developmental experiences of children learning to walk, thereby providing infants and toddlers with mobility delays or restrictions with the active, self-initiated mobility experiences necessary to kick-start their global development. Grounded in both evidence-based neuroscience and learning theories, DPM represents a major paradigm shift in early intervention practice. DPM is implemented through the provision of 4 key principles: (1) Self-initiated, active mobility exploration and play; (2) A mobile learning environment that facilitates perceptual-motor, cognitive, social-emotional, and communication development; (3) Multifaceted sensorimotor stimulation and feedback; and (4) Versatile, flexible application that is continuously adjusted and adapted to meet each child's individual learning needs, interests, and preferences. This session will explore the evidence supporting DPM as well as clinical implementation of DPM within an ON Time Mobility framework. Clinical examples and video cases will illustrate the essential aspects of DPM, providing concrete, actionable strategies to support clinical implementation of DPM in ways that facilitate mobility equity for infants and toddlers with mobility delays and restrictions.

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Presenter biographies:

Dr. Kenyon is a Professor at Grand Valley State University in Grand Rapids, Michigan, USA. Her research is centered on pediatric wheeled mobility and mobility equity across learner groups. Dr. Sloane is an Associate Professor at Oregon Health & Science University (USA), and a Postdoctoral Scholar at the University of Washington (USA). Her work bridges research and clinical practice to improve access to powered mobility and assistive technology for young children. Dr. Feldner is an Associate Professor at the University of Washington in Seattle, Washington, USA. Her research work is centered at the intersections of mobility, disability, ableism, and technology, particularly regarding On Time Mobility for young children with disabilities and ableism across the lifespan in healthcare contexts. Dr. Srinivasan is an Assistant Professor in the Physical Therapy program at the University of Connecticut (USA). Dr. Logan is an Associate Professor of Kinesiology at Oregon State University (USA).

I2: Sitting: A Reflection of Lying

Dr Jackie Casey, Catherine McDonald

Learning objectives:

1. Participants of this session will be able to describe the influence of prolonged poor alignment on the postural presentation of individuals unable to change position.
2. Participants will recognise the influence of gravity in lying on body structures and development of postural asymmetries.
3. Participants will be able to explain to caregivers the impact of postural alignment in lying on sitting.

Session description:

Many individuals with mobility limitations often have the inability to independently move or change position in sitting and/or lying. Subsequently, they may be dependent on caregivers to enable them to adopt positions of good postural alignment in order to participate in everyday activities and occupations.

Once they are 'placed' in a position they typically remain in this position for extended periods of time. This prolonged poor alignment will in turn result in postural asymmetry, tissue adaption, and if left unmanaged, pain, and joint contractures. It is vital that comprehensive postural assessment and plan is completed and communicated with caregivers. Consideration must be given to the individual's postural preferences, physical abilities, joint range of motion, postural symmetry, comfort, pressure redistribution and stability. This is not new thinking. Seminal work by Fulford and Brown in 1976 first described the impact of spending prolonged periods of time in one position and how this led to positional deformities in children with cerebral palsy who were immobile.

Understanding the influence of gravity, rotational, and ground reaction forces upon the musculoskeletal system, and interpretation of the postural assessment will enable the therapist and caregivers to utilise assistive technology (AT) appropriately. AT in sitting and lying should be used to (1) provide optimal contact for the individual with the support surfaces; (2) maintain good postural alignment; or (3) reduce the destructive influences of these forces upon the body structures.

Case studies will be used to illustrate how lack of appreciation of how to influence postural alignment results in presentation seen in sitting being a mirror reflection of the individual's presentation in lying. The Posture and Postural Ability Scale will also be used to aid visualisation of the location of the body structures when repositioning the individual to accommodate or correct their positioning in lying and or sitting.

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Presenter biography:

Dr Jackie Casey has approx. 30 years of experience; and has worked as a clinician, university lecturer, and in industry across the UK, Ireland and the US. She is passionate about the importance of posture, positioning, seating and wheelchair mobility to enabling the participation in everyday life for individuals with mobility and/or postural limitations. Her doctoral research investigated the postural asymmetries and mobility of children with cerebral palsy. Whilst her previous research has explored the impact of caring for a child who is a wheelchair user, from a parent or a teacher's perspective; use of modified toy cars to enable children to socially participate; and with industry in designing accessible customisable seating products for persons with complex postural needs. She now works in a joint appointment with Ulster University and Southern Health & Social Care Trust, continuing her own research, and supporting clinicians to engage in and to embed a culture of clinically relevant research.

I3: Lesson from Low-Resource Settings: 24/7 Postural Management shift from Standard to Custom Devices

Dr Marie Barhouche Abou Saab

Learning objectives:

1. Participants will learn the core concepts of the 24/7 Postural Management Approach, emphasizing its applicability in resource-limited settings.
2. The session will provide insights into how low-budget, custom-made assistive devices can be developed and implemented, highlighting the role of local resources and community involvement
3. Participants will analyze case studies to understand how customized devices can significantly improve comfort, mobility, and enhance participation in people with disabilities.
4. Participants will gain practical knowledge that can be applied in their own contexts, enabling them to adopt flexible and context-sensitive strategies in postural management.

Session description:

Background:
In Lebanon, individuals with disabilities face significant challenges in accessing appropriate assistive devices due to financial constraints and limited resources. Standard, off-the-shelf devices are commonly used; however, they frequently fail to meet the appropriate postural needs of individuals with physical disabilities presenting postural problems, leading to activity limitation, decreased comfort and quality of life [1]. The 24/7 Postural Management Approach is a comprehensive strategy that emphasizes continuous care across all environments, day and night, to prevent secondary complications, enhance comfort, and improve quality of life [2]. This approach is particularly valuable in low-resource settings where cost-effective, custom-made solutions can significantly improve outcomes for individuals with disabilities.

Aim:
This presentation aims to explore the application of the 24/7 Postural Management Approach in transitioning from standard to custom-made assistive devices within a low-budget context in Lebanon. It covers seating systems, lying devices, and standing frames [3]. By following the WHO's 4-step guideline for wheelchair provision and examining case studies and practical examples, we seek to demonstrate how tailored interventions can promote function, participation, and enhance the quality of life for individuals with disabilities, even in resource-constrained environments [4,5].

Conclusion:
The findings illustrate that by leveraging local resources and innovative practices, it is possible to create custom-made assistive devices ensuring comfort, mobility, and overall well-being of individuals with disabilities. It provides valuable insights into the feasibility and effectiveness of implementing the 24/7 Postural Management Approach in less-resourced settings. These lessons can guide practitioners and policymakers worldwide, assisting in the implementation of appropriate, context-sensitive strategies in less-resourced countries, with the goal of reaching all individuals with disabilities within the nation.

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Presenter biography:

Marie (Mimi) has over 30 years of expertise in posture, seating, and mobility. She is the head of the Technical Aids Unit at SESOBEL and has been a Doctor of Physiotherapy since 2016. In 2023, she graduated with a degree in Posture, Seating, and Wheelchair Mobility from the University of Limerick in Ireland. Marie is also a lecturer at Saint Joseph University in Beirut. Passionate about her field, she is a Certified Wheelchair Service Provider recognized by the International Society of Wheelchair Professionals (ISWP). Marie is a WHO-certified trainer for wheelchair provision at both basic and intermediate levels. She has provided clinical consultations and audits for wheelchair users, clinicians, and professionals in Lebanon and across the Arab region. She also serves as a member of the Board of Directors at the ISWP. Marie has developed numerous training courses and workshops on seating and 24-hour postural management, primarily for individuals with cerebral palsy and neuromuscular diseases. She has presented at conferences in Lebanon, the European Seating Symposium in Dublin, and the International Seating Symposium in the USA. Marie is recognized as a skilled and experienced clinician and presenter, offering hands-on expertise and a multidisciplinary approach to clinical practice and seating.

I4: Supporting posture and optimising function using the least restrictive option – from the perspectives of both wheelchairs and seating and behavioural support

Liz Turnbull, Tracey Widdup

Learning objectives:

1. Develop a clear understanding of their obligations under New Zealand's Ngā paerewa Health and Disability Services Standard - NZS 8134:2021
2. Apply these obligations to case studies
3. Identify situations where restraint is part of the clinical plan
4. Identify opportunities to integrate behaviour support strategies into the clinical plan

Session description:

In 2021, the New Zealand Standard that guides care provision for people receiving health and disability services was updated. This includes information specific to Restraint Minimisation. The updated guideline moves away from the concept of restraints as 'enablers' and places a clearer focus on recognising the use of restraints, including those situations where postural management is the primary objective.

It is crucial for wheelchair and seating professionals to identify situations where restraint is part of the clinical plan, and to ensure that the least restrictive options are used to enhance function and independence. Sometimes, despite good intentions; poor planning, limited clinical review, inadequate policy application, and lack of understanding can lead to unsafe and/or unethical practices. Wheelchair and seating professionals require the skills, knowledge, and ability to advocate and support positive outcomes.

Optimal clinical outcomes often rely on an interdisciplinary approach, combining knowledge and perspectives from different areas of practice. For postural management and function using the least restrictive method, effective behaviour support strategies may need to be integrated.

This workshop will explore best practice evidence and draw on clinical reasoning from the perspectives of wheeled mobility and postural management and behaviour support to review case examples.

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2. Evans D, Wood J, Lambert L. Patient injury and physical restraint devices: a systematic review. J Adv Nurs 2003;41:274-82.
3. Health and disability services Standards - Health and disability services (restraint minimisation and safe practice) Standards - NZS 8134.2:2008. www.standards.govt.nz [URL]
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11. Tomlin, G & Dougherty, D. Decision-Making and Sources of Evidence in Occupational Therapy and Other Health Professions. Evidence Informed Practice. International Journal of Health Professionals 2014. International Journal of Health Professions. 2014; (1), 13-19

Presenter biographies:

Liz Turnbull has worked in the field of wheelchairs and seating for almost 20 years. Her experiences include clinical work with children and adults, clinical supervision and team leadership. Since 2022, Liz has worked as Service Manager for Seating To Go, she is based in Kirikiriroa, New Zealand .

Tracey Widdup is an experienced Occupational Therapist who has dedicated her career to improving the lives of people with intellectual disability since the late 1990s. With a deep commitment to person-centred practice, Tracey has developed particular expertise in Behaviour Support.

In recent years, Tracey has managed a Behaviour Support team, providing leadership, mentorship, and clinical guidance to her colleagues. Her passion for innovation and best practice led her to play a key role in developing her organisation's internal Environment Modification Service guidelines, ensuring that environments are tailored to support the needs and wellbeing of people with intellectual disability.

Tracey is committed to ongoing learning and collaboration, and looks forward to sharing her insights and experiences at this conference

I5: Standing up to Barriers: a multifactorial and multiregional outlook on power standing wheelchairs

Tilly Brook, Dr Ashley Detterbeck, Stefan Morrin

Learning objectives:

1. Articulate 3 clinical and functional benefits to power standing wheelchairs.
2. List 3 potential changes which global funding agencies could utilise to affect procurement and provision of powered standing wheelchairs in the future
3. Identify 3 barriers to the recommendation of power standing wheelchairs from 3 regions and/or countries.

Session description:

As outlined by the WHO Wheelchair provision guidelines: "Wheelchairs provide mobility, postural support and freedom to those who cannot walk or have difficulty walking, enabling them to move around, participate in everyday activities and live life on their own terms." Reliable access to wheelchairs can also help to reduce poverty. As technology advances, so too the design of wheelchairs – some of which can provide more than just mobility for users. This presentation seeks to understand if funding bodies globally have evolved to include powered standing wheelchairs and what barriers may or may not be in place which affect the procurement of this technology.

Gowran and colleagues discussed the global challenges to accessing appropriate wheelchairs in their 2021 position paper. They described the need to develop appropriate and sustainable wheelchair service provision systems globally.

Understanding the current trends in prescribing power standing wheelchairs based on funding systems, therapists' perceptions, and access to equipment will be explored through a review of the evidence in addition to a multinational survey of therapists. We will look at common trends from the global survey specifically looking at what may be enabling factors - or barriers - to the prescription of power standing wheelchairs.

Further, does clinical skill, training, and a therapist's comfort zone affect a therapist's recommendation in regard to power standing? Are these recommendations completed as an individual therapist or are wider team members consulted? AND does the perceived difficulty and time required to prescribing and advocating for a powered standing wheelchair deter a therapist from best practice?

Using both the survey in conjunction with case studies, we will seek to share common themes, barriers, and positive outcomes/learnings which you may be able to apply to your clinical practice to assist overcoming barriers to prescribing a power standing wheelchair

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3. Gowran, R. J., Bray, N., Goldberg, M., Rushton, P., Barhouche Abou Saab, M., Constantine, D., Ghosh, R., & Pearlman, J. (2021). Understanding the Global Challenges to Accessing Appropriate Wheelchairs: Position Paper. International journal of environmental research and public health, 18(7), 3338. https://doi.org/10.3390/ijerph18073338
4. Wheelchair provision guidelines. Geneva: World Health Organization; 2023. Licence: CC BY-NC-SA 3.0 IGO.

Presenter biographes:

Tilly Brook, OT is Director of Clinical Services for Permobil Asia Pacific based in Australia. She has extensive experience working as an Occupational Therapists within wheelchair and seating in Australia, New Zealand, and Singapore. Her passion for this area of practice started whilst working in Brain Injury Rehabilitation and continued to grow. She enjoys focusing on upskilling, educating, mentoring and developing best practice for clinicians throughout Asia Pacific. Tilly holds a Bachelor of Health Science and a Masters of Occupational Therapy (Hons).

Ashley Detterbeck DPT, ATP/SMS Regional Clinical Education Manager in the United States. Ashley joined Permobil in 2017. Ashley previously ran the Wheeled Mobility Clinic at the Marshfield Clinic, Marshfield WI. Ashley is an active member of the Clinician Task Force where she has participated in the request for CMS coverage of standing and seat elevate and has published research on the support of power standing mobility.

Stefan Morin, OT, ATP, is a registered occupational therapist who graduated from the University of Toronto in 2008 with a Master's degree in Occupational Therapy. Stefan joined Permobil in July 2021 as a Regional Clinical Education Manager for the Atlantic Provinces and Quebec. From 2008 – 2012 Stefan practiced at the Lyndhurst Centre Brain and Spinal Cord Rehabilitation Program, located in Toronto, Canada working both as an inpatient OT as well as in the outpatient Seating Clinic providing complex seating and mobility solutions for a variety of clientele. In 2013 Stefan moved to Moncton, New Brunswick Canada and worked in the community, providing complex seating and mobility solutions, home modification solutions, as well as working with veterans with mental health and addictions issues. Stefan is also a council member of the New Brunswick Association of Occupational Therapists.

I6: How important is movement within the seating systems?

Filipe Correia, Bart Van Der Heyden

Learning objectives:

1. List at least 3 limitations of providing wheelchair users with lumbar supports.
2. List at least 2 limitations of providing back support recline to wheelchair users.
3. Identify at least 3 measurable outcomes of providing a segmented variable postural support of the spine.

Session description:

Seating systems providing wheelchair users with PSIS and lumbar support and back support reclining systems are common practice when dealing with seating challenges such as postural fatigue, user discomfort and passive seating and sliding. While PSIS, lumbar support and back support recline systems can provide many benefits to wheelchair users, there limitations to consider. Some of these limitations include:

- With severe passive seating the center of mass moves forwards and the lumbar / PSIS support does not prevent sliding
- If the shape of the PSIS and lumbar support is not ideal the support might not be effective and can result into sliding
- Passive seating is linked to fatigue of the postural muscles and changes are likely to occur during the seating time. The shape and support will not accommodate for these expected postural changes.
- Most back supports are 2-dimensional and too high.
- Customization of back supports can be difficult to execute.
- Reclining of the back support will change the position of the secondary positioning systems such as head supports, and lateral trunk supports.

This presentation will provide an in-depth biomechanical analysis of the outcomes of PSIS, lumbar support and back support recline interventions and will illustrate the limitation of such interventions using case studies. In addition, the benefits of an alternative seating approach whereas independent and dependent adjustments for postural changes for function, absorption of repetitive loading and for low shear seating interventions will be discussed.

Conclusion:
The outcomes of a new postural management approach show the functional benefits for clients when making both dependent and independent postural changes for function for clients with postural fatigue and passive seating tendencies as well as the ability to absorb voluntary and involuntary movements for clients with tone changes.

Content references:

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3. Requejo P.S., et al.: Evidence-Based Strategies for Preserving Mobility for Elderly and Aging Manual Wheelchair Users. Top Geriatr Rehabil. 2015 Jan-Mar;31(1):26-41. doi: 10.1097/TGR.0000000000000042. PMID: 26366040; PMCID: PMC4562294.
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Presenter biographies:

Filipe Monforte Correia has worked in the seating and wheeled mobility industry for the past 23 years. He is the European and Latin American Business Developing Manager at Stealthproducts. He represents Stealth internationally and he presents Internationally in the area of seating and wheeled mobility, in focus of seating and positioning. He has been in charge of setting up new distributors and/or providing support for existing ones, offering training for clinicians, dealers/distributors and end users in those markets. Filipe has a great amount of experience working with clients in doing assessments. He has been a part of different Seating Conferences and now serves in the Board of Advisory of ISS since 2021

Bart has specialized in the field of seating, wound care and mobility for the past 28 years. After studying physical therapy in Gent, Belgium, he gained experience in Germany providing seating and therapy for children with Cerebral Palsy. After working in a rehab setting in the USA he offered clinical consultations to wheelchair users, clinicians and manufacturers worldwide. He has also started a physical therapy practice with his wife in Belgium.

Bart has developed multiple training courses and workshops on skin management, seating assessment, seating techniques & interventions for different user populations. He has presented for seating specialists all over the world and he developed a seating approach for clinical problem solving and maximizing outcomes.

Bart is known as a skilled and experienced clinician and presenter with a global, hands-on and multi-disciplinary view on clinical practice and seating

I7: Side-by-Side – Client, Therapist and Wheelchair Devised Pressure Care Solution for a Recreational Vehicle

Andrew Congdon

Learning objectives:

1. Identify the pressure injury risks faced by a wheelchair user with impaired sensation when using mainstream vehicles/equipment used for property maintenance in a tropical climate
2. Describe the role that an occupational therapist and wheelchair service technician can play to decrease the risk of pressure injuries
3. Identify the interventions that were implemented to decrease pressure injury risk when using a side-by-side buggy and ride-on lawnmower.

Session description:

The Northern Territory (NT) has the smallest population of any state or territory in Australia. The capital Darwin, is found in the top end of the NT, and the greater Darwin region is home to around 150,000 people. It has a tropical climate made up of a wet and dry season.

It is common for people who reside on the outskirts of Darwin to live on larger lifestyle blocks that come with unique demands such as managing fire breaks, weed management and general maintenance of gardens, bushland, reticulation systems, fence lines etc.

The tropical conditions not only increase the challenges with maintaining larger properties, but also bring some additional risk factors that can contribute to the development of pressure injuries.

In this case study presentation, we will learn about the experiences of a wheelchair user who uses a side-by-side buggy and ride-on lawn mower to maintain his rural property, and the solutions that have been implemented to decrease his risk of pressure injuries when using these vehicles.

The role of the wheelchair user, occupational therapist and wheelchair service technician to devise a custom solution will be presented, along with details of the combination of off-the-shelf pressure care cushions and custom modifications that were implemented and installed for use with each vehicle.

Content references:

1. Prevention and Treatment of Pressure Ulcers/Injuries: Clinical Practice Guideline The International Guideline 2019 2)Agency for Clinical Innovation. Spinal Seating Modules. NSW Government 2008 (Revised 2017)

Presenter biography:

Andrew Congdon is an occupational therapist based in the Northern Territory, Australia and has a keen interest in the delivery of services in rural and remote settings. He has worked in the seating and mobility field for over 20 years in various locations across Australia working for private, government and non-government organisations. Andrew also has experience working in less resourced settings in the Asia/Pacific region and has contributed to the development and delivery of various training resources including the WHO Wheelchair Services Training Packages. Andrew has completed assistive technology (AT) sector development Work in the Northern Territory exploring

the feasibility of AT service delivery and the coordination of repairs and maintenance services in remote settings. Andrew started his own service Assistive Technology Lab in 2018 and works with wheelchair users and service providers across the Northern Territory.

I8: NDIS and Assistive Technology: Overcoming Barriers to Timely Access and Participation

Nikki Cousins, Sarah Collison

Learning objectives:

By the end of this session, attendees will be able to:

1. Identify key barriers and challenges in wheelchair and seating prescription under the NDIS, based on national OT survey findings.
2. Understand the impact of AT delays on client outcomes, including pain, mobility limitations, and reduced participation in daily life.
3. Explore potential solutions and advocacy strategies to streamline the AT prescription and approval process for NDIS participants.

Session description:

Timely access to wheelchairs and seating solutions is critical for NDIS participants, yet delays in funding approvals create significant barriers to mobility, independence, and participation. This presentation will share insights from a nationwide survey conducted with the NDIS OT Community of Practice (COP), capturing OTs' experiences with wheelchair and seating prescription under the NDIS.

Survey results highlight common issues, including extended wait times for approvals, inconsistent decision-making, and administrative burden placed on OTs. Case studies will illustrate real-world consequences, such as deterioration of function, pressure injuries, increased caregiver burden, and reduced community engagement.

In addition to identifying problems, this session will explore evidence-based solutions to improve the NDIS AT prescription process. Topics will include policy recommendations, reducing administrative delays, improving consistency in approval criteria, and enhancing collaboration between OTs and suppliers. The session will also discuss advocacy strategies to strengthen OTs' influence in shaping NDIS wheelchair and seating policies.

This presentation is designed for OTs working in the disability sector, AT prescribers, and policy advocates. Attendees will leave with practical strategies for navigating the NDIS AT system more effectively while also contributing to broader systemic change.

Content references:

1. National Disability Insurance Agency (NDIA). (2023). Assistive Technology and Home Modifications Code Guide. Retrieved from https://www.ndis.gov.au.
2. Smith, C., & Brown, R. (2021). Barriers to Assistive Technology Access in Australia: A Policy Review. Disability & Society, 36(4), 567-582.
3. Jones, L., & Wilson, P. (2020). The Impact of Delayed Assistive Technology Provision on Functional Outcomes: A Systematic Review. Australian Journal of Occupational Therapy, 67(2), 223-238.

Presenter biographies:

Nikki is the Director of Action Occupational Therapy, a boutique practice in the Hunter Region, NSW. She specialises in wheelchair prescription, seating, and positioning to enhance client independence. With a background in neurological and physical conditions, she has worked across the Hunter Valley, Central Coast, and Sydney. Nikki is passionate about innovative solutions, dementia care, and complex home modifications, and mentoring OTs navigating complex clinical cases.

Sarah Collison is an OT and Director of Verve OT, specialising in assistive technology (AT), home modifications, and complex functional assessments for NDIS participants. As a trainer and presenter, she has educated over 1,000 OTs on navigating the NDIS. Sarah is the founder of Verve OT Learning, an education hub empowering OTs with high-quality, evidence-based training. She also leads the NDIS OT Community of Practice, a 11,500+ member network driving knowledge-sharing and advocacy for better participant outcomes.

I9: Beyond Positioning: Utilising Equipment to Enhance Meaningful Engagement in Children with Sensory/Behavioural Regulation Difficulties

Beth Holzer

Learning objectives:

1. Participants will be able to discuss the complexities of supportive vs. restrictive equipment use and apply practical strategies to maximize engagement while minimizing restrictive practices
2. Participants will be able to apply person-centered strategies for equipment provision for behavioural needs, based on case study evaluations, within a Bicultural framework.
3. Participants will be able to analyse the risk-benefit considerations and ethical dilemmas associated with mobility-limiting supportive equipment for children with behavioural challenges.

Session description:

Supportive or restrictive? While a constant consideration in equipment provision, the question takes on heightened complexity when providing equipment for children with behavioural difficulties. This presentation intends to critically examine the ethical and clinical considerations surrounding supportive equipment, drawing upon a review of available evidence and highlighting the significant gap in restraint minimisation guidelines for neurodiverse children in community settings within the New Zealand context. It discusses the profound mental load and responsibility therapists bear when conducting risk analyses for such equipment, and the accompanying ethical and stigma-related challenges faced by both therapists and parents. Through case studies and personal experiences, this presentation aims to demonstrate the positive impact of mobility equipment, such as buggies and wheelchairs, on increasing engagement in community activities for children whose behaviour previously limited their participation. We will discuss critical questions regarding risk assessment, examining the dual risks of both restraining and not restraining children.

Specifically, we will explore:

1) The application of mobility equipment to support safety and impulse regulation in mobile children with challenging behaviours and limited safety awareness.
2) The use of postural support systems within wheelchairs, and the potential impact on engagement in meaningful activities.

This presentation aims to provide attendees with practical strategies for person-centered assessment, ethical decision-making frameworks, and approaches to minimise restrictive interventions while maximizing functional engagement, with a strong emphasis on providing equitable and culturally appropriate solutions within a Bicultural framework. This workshop encourages attendees to critically reflect and contribute to the ongoing development of best practice, emphasising the crucial need for continued dialogue and thought regarding supportive equipment provision for neurodiverse children in Aotearoa New Zealand

Content references:

1. Furniss, F., & Biswas, A. B. (2020). Ethical and Practical Issues in Working with People Who Self-Injure. In Self-Injurious Behavior in Individuals with Neurodevelopmental Conditions (pp. 111-133). Springer Nature.

2. Gallagher, S., & Whiteley, J. (2012). The association between stress and physical health in parents caring for children with intellectual disabilities is moderated by children's challenging behaviours. Journal of Health Psychology, 18(9), 1220-1231. https://doi.org/10.1177/1359105312464672
3. Menon, K., Baburaj, R. and Bernard, S. (2012), "Use of restraint for the management of challenging behaviour in children with intellectual disabilities", Advances in Mental Health and Intellectual Disabilities, Vol. 6 No. 2, pp. 62-75. https://doi.org/10.1108/20441281211208428
4. Webber, L. S., Richardson, B., White, K. L., Fitzpatrick, P., McVilly, K., & Forster, S. (2017). Factors associated with the use of mechanical restraint in disability services. Journal of Intellectual & Developmental Disability, 44(1), 116-120. https://doi.org/10.3109/13668250.2017.1310814

Presenter biography:

Beth is an Occupational Therapist with six years of experience within a Child Development Service in New Zealand. Her multidisciplinary role encompasses comprehensive developmental assessments, group interventions addressing sensory processing, self-regulation, and developmental coordination disorder, and individual functional goal-oriented interventions. She also provides housing modifications for physical disability and safety needs, adaptive equipment for self-care and household management, and specialised wheelchair and seating assessments and provision. Prior to this role, Beth gained experience in a forensic intellectual disability inpatient service. These diverse experiences have driven her commitment to maximising meaningful occupational engagement for individuals with disabilities within resource-constrained environments.

J1: Implementing the Wheelchair Skills Program in Paediatric Rehabilitation

A/ Prof. Paula Rushton

Learning objectives:

By the end of the presentation, learners will be able to:

1. Understand the evolution of the Wheelchair Skills Program and its application in paediatric rehabilitation;
2. List 3 important ingredients to include in a paediatric wheelchair skills training intervention to facilitate motor learning and active engagement; and
3. Describe 2 innovative approaches and/or resources for delivering paediatric wheelchair skills training.

Session description:

Training is one of four critical steps of wheelchair service provision according to the World Health Organization (WHO, 2023). The Wheelchair Skills Program (WSP), an internationally recognized gold standard for the training of wheelchair skills, is available for use by clinicians for this purpose (Dalhousie University, 2023). Despite the 25 + years of research and development and its demonstrated effectiveness in improving wheelchair skill capacity, pediatric manual wheelchair users do not receive adequate wheelchair skills training (Daoust, 2019). Implementation barriers, such as lack of knowledge and resources, have been reported by clinicians working in pediatric rehabilitation settings (Daoust, 2021). This instructional session will describe use of the Knowledge to Action framework, over 10 years, to address identified barriers. In terms of knowledge application in the pediatric context, identification of the gap between WSP evidence and practice, adaptation of the WSP, assessment of barriers to WSP knowledge use, and selection, tailoring, and implementation of the WSP intervention will be detailed. From the knowledge creation perspective, building the WSP evidence in pediatrics, synthesis of the WSP evidence in pediatrics, development of pediatric-specific training resources for clinical use (e.g., storybooks, instructional training posters, training workbooks) and development of train-the-trainer resources (e.g., WSP Pediatric Handbook, video series) will be shared.

Content references:

1. World Health Organization. Wheelchair provision guidelines. Geneva: World Health Organization; 2023. Dalhousie University. Wheelchair Skills Program Manual Version 5.4.2 (2023). Published electronically in Halifax, Nova Scotia, Canada. https://wheelchairskillsprogram.ca/en/skills-manual-forms/.
2. Daoust G, Rushton PW, Demers L. Bridging the gap in pediatric wheelchair skills testing and training. Oceania Seating Symposium. Melbourne, Australia; 2019.
3. Daoust G, Rushton PW, Racine M, et al. Adapting the Wheelchair Skills Program for pediatric rehabilitation: recommendations from key stakeholders. BMC Pediatr. 2021;21(1): 103. doi: 10.1186/s12887-021-02564-9.

Presenter biography:

Paula Rushton is an Associate Professor and Director in the School of Occupational Therapy at Dalhousie University. She completed her Master of Clinical Science in Occupational Therapy at the University of Western Ontario (1999), PhD in Rehabilitation Sciences at the University of British Columbia (2010) and postdoctoral training at the Université de Montréal in Biomedical Sciences

(2014). Her research is focused on measurement, intervention, knowledge translation, and education related to improving the wheeled mobility of children, adults, and older adults through an improved wheelchair service provision process. From the measurement, intervention and knowledge translation perspective, Rushton's interest lies in the domains of wheelchair skills and wheelchair confidence. From the education perspective, as Vice-Chair of the International Society of Wheelchair Professionals, Rushton has been working to enhance wheelchair content in health care professional university curricula globally.

J2: Establishing and sustaining accessibility centres; Perspectives from USA ad Australia

Dr Heather Feldner, Prof. Rachael McDonald

Learning objectives:

1. Participants will be able to describe 3 benefits of university-based accessibility centers.
2. Participants will be able list at least 2 challenges that accessibility centers must face to be sustainable.
3. Participants will compare and contrast university-based accessibility center models from the US and Australia.
4. Participants will identify 2 ways in which accessibility centers are directly impacting the field of seating and mobility.

Session description:

Historically, academic institutions have been hubs of innovation, expertise, and collaboration. University-based centres focused on accessibility are growing worldwide, playing a crucial role in advancing knowledge about the needs of individuals with disabilities, developing inclusive technologies, and providing training that helps reduce stigma and challenge ableism. These centres explore accessibility challenges from multiple perspectives and develop evidence-based solutions with real-world impact. Creating accessible environments, tools, and services in partnership ensures that people with disabilities have equal opportunities to participate in all aspects of life.

This session will review two international university-based accessibility centres: the The University of Washington Center for Research and Education on Accessible Technology and Experiences (CREATE) in the USA and MedTechVic Hub in Australia. CREATE, founded in 2020, is an interdisciplinary collaboration between researchers in Computer Science, Engineering, human-centered design, the Information School, and Rehabilitation Medicine. CREATE collaborates with multiple stakeholders to explore innovative solutions to accessibility challenges. The center also plays a key role in educating the next generation of professionals in technology, design, and accessibility, to ensure that accessibility is integrated into future technological advancements.

MedTechVic, also founded in 2020, is a pioneering research hub at Swinburne University of Technology, dedicated to co-designing and developing innovative medical and assistive technologies. By uniting individuals with lived experiences, healthcare professionals, engineers, designers, and industry partners, MedTechVic ensures that the solutions created are both practical and user centric. MedTechVic places strong emphasis on lived experience leadership and practical implementation—particularly in the areas of seating, mobility, and communication—helping to ensure that innovations are both usable and inclusive.

Speakers will highlight seating and mobility-focused work and discuss processes, outcomes, benefits, and challenges of founding and sustaining these centres, sharing a roadmap for past successes and a vision of the future for university-based innovation.

Content references:

1. Mack, K., McDonnell, E., Jain, D., Lu Wang, L., E. Froehlich, J., & Findlater, L. (2021, May). What do we mean by “accessibility research”? A literature survey of accessibility papers in

CHI and ASSETS from 1994 to 2019. In Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (pp. 1-18).
2. Zallio, M., & Clarkson, P. J. (2022). Designing the metaverse: A study on inclusion, diversity, equity, accessibility and safety for digital immersive environments. Telematics and Informatics, 75, 101909.
3. Kerr, A., Grealy, M. A., Kuschmann, A., Rutherford, R., & Rowe, P. (2022). A co-creation centre for accessible rehabilitation technology. Frontiers in Rehabilitation Sciences, 2, 820929.

Presenter biography:

Dr. Heather Feldner is an Associate Professor at the University of Washington in Seattle, WA. She has an adjunct appointment in the Department of Mechanical Engineering and is a founding associate director of the UW Center for Research and Education on Accessible Technology and Experiences (CREATE) Her research work is centered at the intersections of mobility, disability, ableism, and technology, particularly with regard to supported mobility for young children with disabilities and ableism across the lifespan in healthcare contexts.

J3: Mobility and seating for aging adults with learning disabilities; meeting complex and changing needs

Margaret Goodall

Learning objectives:

Participants will learn how to

1. Use the Person Occupation Environment (P.O.E) to understand the multi-factorial influences of providing wheeled mobility and postural support to this client group
2. Consider how the "expression of self" can be respected and supported in the provision of wheeled mobility and postural support for people with limited means of communication and self-expression
3. Develop strategies to support comprehensive assessment, negotiate goals, and implement solutions that prioritise the best interest of the client

Session description:

The presentation will consider ways in which wheelchair and seating assessment, goal setting, implementation and outcome measurement may need to be modified when working with an aging person with complex intellectual and physical disabilities. This will be explored using the Person Environment Occupation Model and the Pai Ora Model.

People with complex intellectual and physical disability are living much longer than in previous generations. Individuals who may not have been expected to live into their thirties or even past their teen years are now surviving into their sixties, seventies or even their 80s. This means that there are increasing numbers who are facing mobility challenges as they age. Their mobility is impacted by the underlying syndrome or condition, the impact of long-term medication, musculature and skeletal changes from years of compensatory postures and movement patterns as well as co-morbidities common to the older population.

This client group is reliant on the people who support them to not only have their essential care needs met but also to express themselves and to be active participants in their own lives. The change from ambulation to wheeled mobility can have profound impacts for themselves, those they live with and the people who support them. This client group often has little autonomy in their lives and restrictive practices are common. As a mobility and seating practitioner it is crucial to be aware of whether a solution has the potential to be used restrictively and to advocate for option that encourages and increases self-expression rather than restricts it.

This presentation will also consider how to work alongside the community support team at all stages of the process so that the mobility and seating solution is fit for purpose and is implemented in a way that ensures long term use

Content references:

1. Baum, C. M., Christiansen, C. H., & Bass, J. D. (2015). The Person-Environment-Occupation-Performance (PEOP) model. In C. H. Christiansen, C. M. Baum, & J. D. Bass (Eds.), Occupational therapy: Performance, participation, and well-being (4th ed., pp. 49-56). Thorofare, NJ: SLACK Incorporated. IHC From Data to Dignity: Health and Wellbeing Indicators for New Zealanders with Intellectual Disability, December 2023. Health and Disability System Review, March 2020

Presenter biography:

Margaret is an Occupational Therapist based in the Lower North Island. She trained in South Africa and her first role as an Occupational Therapist was in Harare, Zimbabwe. After working in the United Kingdom for a few years she moved to New Zealand in 2006. Her core client group is Adults with Complex Intellectual and Physical Disabilities who have experienced long term institutional care and are currently living in group home settings. Margaret has been interested in wheelchairs since her graduation, and this has been a minor part of most of her work roles. In recent years she has extended this practice, and it has become an increasingly large part of her role. Margaret is passionate about keeping the person using the wheelchair as the focus and finding ways to hear their voice when their means and opportunity for expression are limited.

J4: Beyond the joystick: Scripting custom drive systems for complex needs

Jacelyn Goh

Learning objectives:

1. Describe the clinical assessment process involved in prescribing alternate access controls for powered wheelchairs.
2. Identify and compare current alternate access control options available for powered mobility.
3. Analyse case studies to evaluate the success and limitations of alternate access control trials and apply insights to clinical practice.

Session description:

For many clients with complex physical needs, using a standard joystick to drive a powered wheelchair simply isn't possible. Thankfully, advances in technology and AI now offer a wide range of alternate access controls—like head arrays, switches, and smart glasses systems—that can open up new ways for people to move, communicate, and connect with the world around them in their powered wheelchair.

But with so many options available, choosing the right one can feel overwhelming—for both clients and clinicians. This session equips scripting therapists, of all experience levels, with the confidence and skills to prescribe special controls for powered mobility by integrating evidence-based practices, research-backed methodologies, and insights from lived experiences and case studies.

Together, we'll explore practical strategies to:

1. Understand the assessment process and considerations when scripting alternate access controls.
2. Learn about the latest technologies available and how they can meet different client needs.
3. Plan and carry out effective trials to test what works best for each person.
4. Reflect on real case studies and lived experiences to learn from both successes and challenges across diverse client populations with varying complex mobility and access needs

By the end of the session, clinicians will feel more equipped to support clients in finding and using the access control solutions that best fit their goals—helping them move more freely, accessing their environment, and live more independently.

Content references:

1. WHO. Wheelchair provision guidelines https://www.who.int/publications/i/item/9789240074521 Date: 2023. Date accessed: March 28, 2025
2. WHO. International classification of functioning, disability and health (ICF).
3. Lange (2024). Power Mobility: Driving Methods. In Seating and Wheeled Mobility (2nd Ed.).
4. Cook, A.M., Polgar, J.M., Encarnacao P. (2020). Assistive Technologies: Principles and Practice, Fifth Edition. Elseiver, Inc ISBN: 978-0-32352387.
5. Bekteshi, S., Konings, M., Nica, I.G., Gakopoulos, S., Aerts, J-M., Hallez, H., Monbaliu, E. Dystonia and choreoathetosis presence and severity in relation to powered wheelchair mobility performance in children and youth with dyskinetic cerebral palsy. European Journal Of Paediatric Neurology, 29, 118-127. doi: 10.1016/j.ejpn.2020.08.002

Presenter biography:

Jace is a highly experienced occupational therapist with a strong clinical background in neurological rehabilitation. A 2008 graduate of La Trobe University, she has worked across a range of healthcare settings and countries, gaining valuable international experience across diverse healthcare systems.

In 2021, Jace joined Linds Rehabilitation as a Product Representative and Clinical Educator, specialising in complex wheelchair seating and prescription. In this role, she provides expert consultations and delivers targeted educational sessions to support occupational therapists in enhancing their clinical decision-making and prescription processes.

With her deep expertise in mobility and postural care, Jace plays a pivotal role in ensuring clients receive the most appropriate mobility solutions while empowering fellow clinicians through education and knowledge-sharing.

J5: Exploring why powered mobility experiences can accelerate overall development in infants aged 3-12 months

Dr Lisbeth Nilsson

Learning objectives:

1. Discover how and why technology can enable non-mobile infants and children in developing tool-use and participation with the world.
2. Explain how and why experiences of self-produced movement in a powered device can impact on very young infants' overall development
3. Motivate provision of opportunities to explore and experience powered mobility to very young infants and toddlers with disabilities.

Session description:

Infants, with typical or delayed development or disabilities, are dependent on others to access opportunities for experiences and participation in enriched physical and social environments. Provision of tests in a joystick-operated powered mobility device can give such opportunities before the age when infants develop physical abilities to move around on their own.

The aims are to explore and explain why very young infants who got the opportunity to explore a joystick-operated powered wheelchair, and thereby experienced self-produced mobility, showed accelerated overall development.

The Driving to Learn research collected video-data of typically developing infants aged 3-12 months testing a joystick-operated powered wheelchair. Thirty-five hours of video was collected from 40 tests with 17 infants, doing one test/month (1-6 tests), with a "driving"-period of 15-32 minutes. Reanalysis of observed tool-use behaviours were compared to existing research on infant development.

The infants, as early as at age 3-4 months, showed understanding of cause effect – acts on joystick made the powered wheelchair move. The unpredicted movements caused surprise and alerting, exited exploration using hand/s to touch and grasp the joystick in an exploratory way. The multisensory experience resulting from acting and moving around increased attention, perception, motor control; nurtured understanding of relationships, predictive behaviour, a growing sense of self and agency.

Technology can enable infants in exploring and experiencing the world in an upright position, at the time when head stability allows for seating and movement in a powered device. A centre-mounted joystick is magic being stuck and still movable by using gross motor actions. The findings emphasize the importance of providing very young infants, toddlers and children with disabilities opportunities to explore powered mobility. Exploring and becoming in control of moving around is empowering by opening new opportunities for participation and allowing enriched experiences that can accelerate overall development.

Content references:

1. Nilsson, L. and P. Nyberg (1998). Training in powered wheelchair, benefits for individuals at an early developmental level. Poster presentation. The 12th International Congress of the World Federation of Occupational Therapists, Montreal, Canada

2. Nilsson, L. (2007). Driving to Learn: the process of growing consciousness of tool use: a grounded theory of de-plateauing (Publication Number 2007:34) [Doctoral dissertation, Lund University]. Lund, Sweden https://doi.org/10.13140/RG.2.2.15543.60327
3. Kenyon, L. and L. Nilsson (2021). Early tool-use learning: Using Powered Mobility to Enhance Development. 33rd Annual EACD Meeting: European Academy of Childhood Disability. Virtual conference
4. Nilsson, L. (2019). Powered mobility for people with profound cognitive disabilities leads to developing occupational performance. British Journal of Occupational Therapy, 82(11) 655–657, https://doi.org/10.1177/0308022619839617
5. Schwartzer, G. and Jovanovic, B. (2024). Infants' predictive minds: The role of motor experiences. Child Development Perspectives, 18:123-128 https://doi.org/1111/cdep.12506

Presenter biography:

Lisbeth Nilsson is a PhD, Occupational Therapist and specialist, associated to Department of Health Sciences, Lund University, Sweden. She developed the Driving to Learn intervention for people with profound cognitive disabilities (1996-2007). She and Josephine Durkin, UK, collaborated on developing the Assessment of Powered mobility use (ALP) (2009-2016). Her special interests are how infants, children and adults with cognitive disabilities learn how to use a variety of tools, and how to assess and facilitate the learning process. Her current focus is explaining how to apply the universal ALP tool for assessment and facilitation of learning in a variety of tool-use interventions. Her ongoing research collaborations nationally and internationally involves OTs, PTs and other rehabilitation professionals.

J6: Will this wheelchair cushion work for my client? Measuring wheelchair cushion performance in clinical settings

Bart Van Der Heyden

Learning objectives:

1. List 3 objective measures for cushion characteristics and be able to state their clinical relevance.
2. Be able to describe and implement how the risk when using a wheelchair cushion during everyday use can be minimized
3. List at least 2 other ways other than cushion selection based on experience and user feedback can be performed.

Session description:

Wheelchair cushions play a crucial role in providing tissue integrity, posture, stability and comfort needs for wheelchair users. In a clinical setting we typically assess the user's clinical needs, the risk of skin breakdown, mobility and activity level, postural alignment, lifestyle, comfort and preferences. Assessment findings lead to cushion selection and often past experiences, trial and errors and user feedback drive the cushion selection process. But are there more objective and low risk measures to quantify cushion characteristics and can we minimize trials, prescribe more objectively and efficiently?

ISO 16840 part 2 looks at several key cushion charecteristis which are important for skin integrity, stability and developed objective and reproducable test protocols to measure and quantify wheelchair cushion performance. Measures include: immersion, envelopment pressure distribution, microclimate, horizontal and lateral stability (stiffness).

Part of the EU MDR (Medical Device Regulation) may also hold more objective ways to minimise the risk for wheelchair users during use. A PMS (Post Market Surveillance Plan) should be implemented by manufactures to evaluate potential mid & long-term wheelchair user risks and a risk analysis of product use should be performed.

This presentation will cover how data from ISO 16840 part 2 and MDR can be used as a framework for a clinical evidence based wheelchair cushion selection proces for daily practise.

Content references:

1. Brienza, D. et al. (2010) 'A Randomized Clinical Trial on Preventing Pressure Ulcers with Wheelchair Seat Cushions', J Am Geriatr Soc, 58(12), pp. 2308–2314. Available at: https://doi.org/10.1111/j.1532-5415.2010.03168.x.
2. De Jonge, D. (2007) 'Optimizing the Use of Technology in the Workplace', Assistive Technology in the Workplace, pp. 146–169. Available at: https://doi.org/10.1016/B978-032304130-0.50010-8.
3. Pittsburgh university (no date) Wheelchair standards. Available at: https://wheelchairstandards.com/ (Accessed: 12 January 2025).
4. The International Organization for Standardization (ISO) (2018) ISO16840-2:2018 Determination of physical and mechanical characteristics of seat cushions intended to manage tissue integrity. Geneva.

5. Uehara, E. and Larson, C.A. (2019) 'Wheelchair Cushion Fact Sheet', Spinal Cord Injury Special Interest Group, pp. 1–2. Available at: https://msktc.org/sci/factsheets/maintenance-guide-users-manual- (Accessed: 12 January 2025).

Presenter biography:

Bart has specialized in the field of seating, wound care and mobility for the past 28 years. After studying physical therapy in Gent, Belgium, he gained experience in Germany providing seating and therapy for children with Cerebral Palsy. After working in a rehab setting in the USA he offered clinical consultations to wheelchair users, clinicians and manufacturers worldwide. He has also started a physical therapy practice with his wife in Belgium.

Bart has developed multiple training courses and workshops on skin management, seating assessment, seating techniques & interventions for different user populations. He has presented for seating specialists all over the world and he developed a seating approach and assessment techniques for clinical problem solving and maximizing outcomes.

Bart is known as a skilled and experienced clinician and worldwide presenter with a hands-on and multi-disciplinary view on clinical practice and seating.

Bart Van der Heyden, PT
Info@super-seating.com
Belgium

Closing Keynote:

Riley Saban

Session description

Presenter biography

Riley is an accomplished individual with Cerebral Palsy who holds a Certificate IIII in Assistive Technology Mentorship. He works as an Assistive Technology Adviser and served on the board for ARATA at the 2024 Australian Assistive Technology Conference. Additionally, Riley is the co-founder of PolySpine, a modular seating support system designed for individuals with physical disabilities.

As a seasoned speaker, Riley delivers engaging talks and workshops on assistive technology to various organisations and schools, which has included Google staff. Riley's presentations passionately advocate for inclusion and equality in society. He also starred in a two-part documentary series that highlighted his collaboration with Dr. Jordan Nguyen, a biomedical engineer, on EOG technology. In the series, Riley successfully drove a buggy using brain wave activity, a feat that achieved critical acclaim and was screened at several film festivals.

Throughout his life, Riley has been recognized with numerous prestigious awards, including the Young Third Sector Award, a Good Designs Award for PolySpine, and the Young Citizen of the Year Award for his region on Australia Day 2022.Through his work, Riley has greatly influenced the lives of those around him, motivating and encouraging others to make a positive difference in society. He is also a member of the CP Active Young Changemakers, a diverse community dedicated to making Australia a more inclusive place for people with Cerebral palsy and other disabilities. As part of a dynamic team, Riley helps create pathways and amplify the voices of young people with Cerebral Palsy. Riley now works part-time for CPActive, serving as a member of the steering committee.

Alongside his advocacy and work with assistive technology, Riley enjoys surfing, making music, playing chess, and spending quality time with family and friends. He embraces every opportunity to live life to the fullest, staying connected to the people and passions that bring him joy.

Posters

TUESDAY 4th NOVEMBER

P1: Wheelchair Wellness: Video reel for quick tips for healthy skin care

Lisa McAfee, Claire Montogomery

Learning objectives:

1. Understanding the impact of prolonged sitting on skin health.
2. Leveraging modern technology for accessible education.
3. Utilising web-based tools for wider accessibility particularly multi-lingual

Poster description:

We recognise that traditional educational resources for pressure management no longer align with the evolving ways people access information today.

Given the growing popularity of video reels as a key information source, we were inspired to create our own to meet this demand.

The first part of the video explains the impact of prolonged sitting on skin health, highlighting the significant effects of pressure.

The second part of the video uses innovative pressure mapping technology to demonstrate real-time shifts in pressure as a wheelchair user's posture changes; this shows practical strategies for relief.

This dynamic tool seamlessly integrates into an organization's website, offering easy access via a simple QR code.

With multilingual capabilities, it ensures inclusive, accessible care for all users and their whanau.

Content references:

1. 2021 Sep;104(9):2189-2199. doi: 10.1016/j.pec.2021.02.009. Epub 2021 Feb 24.
2. https://www.acc.co.nz/assets/provider/pressure-injury-prevention-acc7758.pdf
3. ://www.jmir.org/2021/7/e26427
4. https://internationalguideline.com/2019

Presenter biographies:

Claire Montgomery and Lisa McAfee are two senior wheelchair and seating therapists working at Mobility Solutions (Regional complex wheelchair and seating assessment service within Auckland Tamaki Makaurau). Combined experience of 30 plus years as wheelchair and seating therapists covering areas such as child development, ACC and adult neuro rehab. We are both passionate about improving the quality and effectiveness of our service through innovative use of digital technology.

P1a: Sitting, Seating and the dilemma of Participatory Needs

Mellinda Clarke, Andrea Espei

Learning outcomes:

1. Update their knowledge of the evidence about active or dynamic seating, variable seating and sitting in motion
2. Expand their sitting assessment skills and learn how to measure progress in structured sitting training intervals
3. Gain an understanding of the need for variation and movement in seating devices
4. Gain the confidence to start to implement single case studies on sitting for clients in their daily clinical practice

Poster description:

As sitting stability and postural control is crucial for children with (motor) developmental problems, they spend from their early years onwards many hours in supported sitting devices. This lack of active movement can lead to problems with the vital functions of circulation, digestion and breathing as well as musculoskeletal issues. Learning skills may also be affected, along with communication, social interaction or bimanual hand use. As children's participatory needs demand a seated position, it's inevitable for them to spend many hours daily in customized seating devices, therapy chairs or wheelchairs.

But development of postural control requires movement. How therefore do we deal with this dilemma?

This is where a more active seated positioning regime could have a place, we just need the evidence to support its inclusion over more static sitting options.

In this workshop we will first endeavour to provide an update on the evidence for supported sitting, specifically about the pros and cons of traditional seating compared to active /participatory seating. Then together with a presentation of other cases studies on the use of variable sitting supports, we will present the encouraging findings of a recent pilot study on active seating, including a discussion on assessments that can be used to evaluate the benefits of active seating.

With this pilot study, we also hope to encourage and inspire you to implement single case study design work into your own daily practice. So together we can contribute to the growing body of evidence that underpins our work as clinicians, but most importantly we can share our client's real-world journeys.

Content references:

1. Eek, M. N., Blomkvist, A., Olsson, K., Lindh, K. & Himmelmann, K. (2022). Objectivemeasurement of sitting - Application in children with cerebral palsy. Gait & posture, 96, 210–215. https://doi.org/10.1016/j.gaitpost.2022.05.039
2. Argetsinger, L. C., Trimble, S. A., Roberts, M. T., Thompson, J. E., Ugiliweneza, B. & Behrman,A. L. (2019). Sensitivity to change and responsiveness of the Segmental Assessment of Trunk Control (SATCo) in children with spinal cord injury. Developmental neurorehabilitation, 22(4), 260–271. https://doi.org/10.1080/17518423.2018.1475429
3. Inthachom, R., Prasertsukdee, S., Ryan, S. E., Kaewkungwal, J. & Limpaninlachat, S.(2021). Evaluation of the multidimensional effects of adaptive seating interventions for young

children with non-ambulatory cerebral palsy. Disability and rehabilitation.Assistive technology, 16(7), 780–788.,https://doi.org/10.1080/17483107.2020.1731613

Presenters biographies:

Andrea is an OT (b.sc), with 25 years of experience in the clinical field of children with neurological disorders. Advanced specialist in positioning and postural management. Trainer, lecturer, author on participation orientated in supplying special aids for children and adolescents.

Mellinda has a B. PT, with over 24 years experience in paediatric physiotherapy practice. Roles in CPL, Community therapy, Special Education, and private rehabilitation have all contributed to a wide knowledge base . Now a part of the Education team with Apex Mobility in Australia, Mellinda enjoys focusing on furthering education in the assistive technology sector.

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P1b: The Value of Goniometric Data in MAT Assessment – Empowering Clinicians towards Best Functional Outcomes

Tracee-lee Maginnity

Learning objectives:

1. By end of session, attendees will be able to identify a minimum of 3 considerations around the use of a goniometer for measuring ROM in relation to a seated position
2. Following session, attendees will be able to identify potential validity concerns with their current measurement practices
3. Attendees of this session will have an understanding of how MAT angles relate to the assessment and trial processes across New Zealand and Australia

Poster description:

Is a Goniometer an essential tool for clinicians assessing and prescribing mobility devices? Does its use result in better outcomes for users? Understanding what Range of Motion/ Movement (ROM) is available at the pelvic and lower extremity joints is not only part of the Mechanical Assessment Tool (MAT) evaluation but provides us with valuable information in relation to an individual's postural capacity. Measuring ROM for the purpose of rehabilitation progress is correlated with use of a goniometer however we also need to consider the relevance, reliability and validity of using this information to translate this process to MAT. In Australia and New Zealand, the majority of wheelchair and seating assessments are completed by Occupational Therapists. Whilst ROM measurement is a component of training within most undergraduate programs and there are therapists such as hand and upper limb therapists confidently and accurately completing ROM measurements with goniometers, it has historically not been a core skill requirement across many scopes of Occupational Therapy. There is limited evidence within the available research that can be drawn upon in relation to the validity and reliability of using a goniometer as part of a MAT assessment and there are many clinicians completing MAT evaluations without using this tool.

An initial literature review was completed to determine what evidence was available around the validity of use of goniometers and calipers in MAT assessment. To quantify use, a survey was distributed to therapists prescribing CRT. The questionnaire sought to identify the frequency of goniometer and caliper usage as part of a MAT assessment and included both quantitative and qualitative questions. Data collected was then grouped and analyzed to find common themes of use within practice across both countries. This session will discuss the findings and considerations when taking measurements for identifying optimal positioning for wheelchair users.

Content references:

1. Lange, M. & Minkle, J. (2025) Seating and Wheeled Mobility:A Clinical Resource Guide, 2nd ed. Routladge. Stephen Sprigle Nannette Flinn
2. Mary Wootten, Stephanie McCorry (2003) Jun;18(5):462-5. Development and testing of a pelvic goniometer designed to measure tilt and hip flexion 2003
3. June Hanks, Betsy Myers (2023) Aug 1;18(4):989–996 Int J Sports Phys Therapy; Validity, Reliability and efficiency of a Standard Goniometer, medical Inclinometer and builds Inclinometer

Presenters biography:

Tracee-lee Maginnity joined Permobil Australia in July 2019, as a clinical education specialist. Originally from New Zealand, she graduated Auckland University of Technology with a BHSc (Occupational Therapy) in 2003 and has since worked in various roles related to seating and mobility including assessing, prescribing and educating. After gaining experience as an assessor and prescriber, prescribing for both disability and injury. She moved to Australia in 2011 to take on the Senior Occupational Therapist role in an NGO custom moulded seating service. Upon starting work in within this service she was surprized to find clients with complex postural asymmetries were not receiving MAT evaluations as part of the process so started introducing training for MAT, training she continues to be passionate about. She continued worked in clinical consulting and education roles until joining Permobil. Tracee-lee is passionate about maximising functional outcomes with end users and the importance of education within the industry. Tracee-lee has presented at conferences, expos, rehab centres, hospitals and universities both locally and internationally. She has also been part of working groups providing feedback to government initiatives both independently and with local orgainisations. She has mentored many therapists interested in AT and was part of the pilot competency program now a requirement for prescribing therapists in New Zealand. Her experience includes working with individuals with complex postures to achieve customised client focused outcomes and working holistically to ensure best user outcomes.

WEDNESDAY 5th NOVEMBER

P2a: What caregivers say about sleep systems

Jane Hamer

Learning objectives:

Objective: To present findings from Masters study 'Caregivers experience of implementing sleep systems for children with complex neurodisability' [1,2].

Poster description:

This poster presents findings from a Master's-level qualitative study of semi-structured interviews using Interpretative Description methodology and inductive analysis explored caregivers' experiences implementing sleep systems for children with complex neurodisability.

Semi structured interviews were conducted with nine caregivers (7 mothers, 2 fathers) of eight children aged 4-17 years (mean age 7.7 years) with complex neurodisability (Gross Motor Function Classification System levels IV-V) who had sleep system equipment within the home, provided by a physiotherapist or occupational therapist. Inductive analysis based on Morse's four-step framework was employed to analyse the data.

Results: Three themes were developed:

1) It's a complex night;
2) This is what I know, incorporating subthemes 'What I know about my child' and 'What I know about sleep systems'; and
3) Support me to support my child.

Conclusion: Findings suggest that:

1) Accounting for night-time health complexity may enhance caregivers' experience and successful implementation and adherence to sleep systems.
2) Current intervention does not align with caregivers' priorities of comfort and sleep for their child and family.
3) Increasing clinicians' knowledge in relation to sleep, pain, and respiratory care and focusing attention on caregivers' priorities may improve caregivers experience of sleep system care.
4) Embedding principles of client-centered coaching, collaborative goal setting and integrating Family Centered Care behaviors within sleep system intervention will address caregivers need for support to successfully implement sleep systems.

Content references:

1. Hamer, J. E. (2022). Caregivers' experiences of Implementing Sleep Positioning Systems for Children with Complex Neurodisability. An Interpretative Descriptive Qualitative Study Using Semi-Structured Interviews (Doctoral dissertation, University of Otago).
2. Hamer, J. E., Graham, F., Ranta, A., & Martin, R. A. (2025). Caregivers' Experiences of Sleep Systems for Children with Complex Neurodisability: A Qualitative Study. Physical & Occupational Therapy In Pediatrics, 1–22. https://doi.org/10.1080/01942638.2024.2419642

*Please note: reference 2 is the publication of the Masters thesis (Reference 1)

Presenters biography:

Jane Hamer is a paediatric physiotherapist and also the Clinical Leader of Paediatric Physiotherapy (part-time), for Te Whatu Ora Waitematā (West Auckland and North Shore of Auckland, New Zealand). She has worked with children for 30+years, primarily in Child Development Teams, but also in the private and education sector, and in PICU, and on the local acute paediatric medical ward. Her passion is supporting children with complex disability, and their families. She graduated with a Masters of Health Science from Otago University in 2023, exploring caregivers experience of implementing sleep systems for their children. Alongside her clinical work she is currently working on a co-design partnership project with families, to implement the research findings into practice.

P2b: Parent partnership – co-designing sleep system care

Jane Hamer

Learning objectives:

1. Demonstrate lessons learned from a co-designed clinical implementation project
2. Translating findings from a Masters-level study [1, 2] into practice.
3. Attendees of this session will have an understanding of how MAT angles relate to the assessment and trial processes across New Zealand and Australia

Poster description:

This poster demonstrates lessons learned from a co-designed clinical implementation project - translating findings from a Masters-level study exploring caregivers' experiences of implementing sleep systems for children with complex disability. [1, 2] into practice.

Design:Twelve caregivers of children with complex neurodisability who had used sleep system equipment within the home were interviewed focused on exploring caregivers experiences of sleep systems in relation to three previously reported themes: 1. It's a complex night; 2. This is what I know; 3. Support me to support my child. Interviews were guided by the Enabling Good Lives principles [4]. Interviews were transcribed and analysed, identifying challenges to their experience of implementing sleep systems.

Using an interactive, online whiteboard, solutions and recommendations were proposed and developed through a transparent iterative co-design process with caregivers. Collaborative on-line sessions refined recommendations until a consensus was reached to address the needs and wishes of parents articulated in the three themes.

Results: Two primary recommendations were developed:

1) Development of national caregiver education 'programme' regarding 24-hour postural care, inclusive of advocacy training.
2) Refinement of current national mandatory 'Wheeled Mobility and Postural Management' clinician training and credentialing process.

Conclusion: The purpose of this work was to translate findings of the Masters study into clinical practice, thereby improving caregivers experience of sleep system postural care for children with neurodisability. A co-design process was chosen as caregivers' experiences provided valuable information to improve care and transform services, and provided an opportunity for them to impact, lead, and shape solutions for the things that influence their lives.

Challenges encountered in implementing this co-design process included capacity within caregivers busy lives and the researchers clinical work; stakeholder engagement; cross-sector collaboration; and funding. Advocacy towards better meeting the needs of caregivers is the next phase.

Content references:

1. Hamer, J. E. (2022). Caregivers' experiences of Implementing Sleep Positioning Systems for Children with Complex Neurodisability. An Interpretative Descriptive Qualitative Study Using Semi-Structured Interviews (Doctoral dissertation, University of Otago).

2. Hamer, J. E., Graham, F., Ranta, A., & Martin, R. A. (2025). Caregivers' Experiences of Sleep Systems for Children with Complex Neurodisability: A Qualitative Study. Physical & Occupational Therapy In Pediatrics, 1–22. https://doi.org/10.1080/01942638.2024.2419642

*Please note: reference 2 is the publication of the Masters thesis (Reference 1)

3. Boyd H, McKernon S, Old A. 2010. Health Service Co-design: working with patients to improve healthcare services. Auckland: Waitemata District Health Board. ISBN 978-0-473-17836-9:
4. Enabling Good Lives Principles: https://www.enablinggoodlives.co.nz/about-egl/egl-approach/principles/

Presenters biography:

Jane Hamer is a paediatric physiotherapist and also the Clinical Leader of Paediatric Physiotherapy (part-time), for Te Whatu Ora Waitematā (West Auckland and North Shore of Auckland, New Zealand). She has worked with children for 30+years, primarily in Child Development Teams, but also in the private and education sector, and in PICU, and on the local acute paediatric medical ward. Her passion is supporting children with complex disability, and their families. She graduated with a Masters of Health Science from Otago University in 2023, exploring caregivers experience of implementing sleep systems for their children. Alongside her clinical work she is currently working on a co-design partnership project with families, to implement the research findings into practice.

P2c: Custom vs Off-the-Shelf Sleep Systems: The Big Ws: What, When, and Why?

Claire Grey, Ana Pacheco

Learning outcomes:

1. Understand the variances between Custom and Off-the-Shelf Sleep Systems
2. Analyze product features considering client's goals.
3. Learn what to customize in products to achieve client's goals.

Poster description:

A Lying and Positioning Assessment is a crucial part of a therapist's work when involved with clients with Mobility Needs. During the assessment, the therapist can understand the client/whanau's needs, limitations, preferences and goals.

With the information gathered at the assessment, the therapist can move to selecting the products that assist the client to achieve their main goals, be this improved sleep duration, increased comfort, reduced pain or pressure relief.

Aotearoa has large variety of equipment available, whilst this is hugely beneficial it can also be confusing to know where to begin.

At times a client with complex needs cannot have their goals achieved by an off-the-shelf product, necessitating the use of a customised or custom product fabrication.

This talk aims to inspire greater confidence when prescribing 24hr postural supports to assist therapists with prescribing the correct equipment be that off the shelf, modified or custom

Content references:

1. Osborne, L.J. & Gowran, R.J. & Casey, J (2023). Evidence for 24-hour posture management: a scoping review. British Journal of Occupational Therapy 00(0)
2. Haworth, L.A. et at. (2019). Postural management system for bedbound patients. PRM+ Volume 2 Issue 2
3. Stephens, M. & Bartley, C. (2020) Use of night-time positioning equipment in care homes residents with postural asymmetries: A Pilot Study. University of Salford Manchester.

Presenters biographies:

Occupational Therapist, Clinic Specialist – Medifab

Claire Grey has been working as an Occupational Therapist for over 22 years, gaining extensive experience in the UK and Australia, working in hospitals, special schools, community teams, and NGOs including Whizz Kidz (UK). Claire is fortunate to volunteer with the Altus Pacific Aid team to participate in wheelchair clinics in Tonga.

Relocating to New Zealand 12 years ago, Claire worked in a wheelchair and seating team and 2 years ago joined Medifab in a newly created clinical role. Today, she works closely with therapists and clients, offering practical solutions and advising on seating, 24 hr. postural management and

providing education sessions throughout NZ. Claire is also working on a master's in public health, exploring the topics of social equity and equal opportunities for all.

Ana Pacheco is a dedicated Occupational Therapist with over 15 years of experience, specializing in 24-hour Postural Management for the past nine years. Originally trained in Brazil, Ana graduated in 2008 and has since built a career focused on improving mobility and comfort for individuals with complex needs.

For the last two years, Ana has been working as an Educator and Product Consultant for Medifab, bringing the latest advancements in postural care and equipment to therapists across New Zealand. Passionate about knowledge sharing and clinical excellence, Ana is committed to supporting professionals in making informed decisions that enhance their clients' quality of life.

THURSDAY 6th NOVEMBER

P3: To tilt or not to tilt: effective use of manual tilt in space wheelchairs

Maria Whitcombe-Shingler

Learning objectives:

1. Identify indicators for assisted tilt in space.
2. Identify contraindicators for tilting
3. Strategies to ensure effective use of tilt

Poster description:

Manual tilt in space wheelchairs are common in residential care facilities, and although they can enable residents to stay out of bed longer, the use of tilt can also affect participation and interaction. A literature review was completed, key themes identified, and then a preliminary survey of the type of clinical reasoning was completed with the therapy team using anonymous word clouds with the themes as prompts.

Content references:

1. Casey, J., & Gittins, L. (2013). Use of tilt-in-space in seating systems for adults with physical disabilities. Physical Therapy Reviews, 18(4), 285-299.
2. Shankar, S., Ben Mortenson, W., & Wallace, J. (2015). Taking control: an exploratory study of the use of tilt-in-space wheelchairs in residential care. The American Journal of Occupational Therapy, 69(2), 6902290040p1-6902290040p8.
3. Zemp, R., Rhiner, J., Plüss, S., Togni, R., Plock, J. A., & Taylor, W. R. (2019). Wheelchair Tilt-in-Space and Recline Functions: Influence on Sitting Interface Pressure and Ischial Blood Flow in an Elderly Population. BioMed Research International, 2019(1), 4027976.

Presenters biography:

Maria Whitcombe-Shingler is an occupational therapist and clinical educator at Mobility Solutions. Lily is a wheelchair and seating therapist at Mobility Solutions, a complex wheelchair and seating assessment service in the Auckland region.

P3a: Emotional Labour in Wheelchair and Seating Professionals

Maria Whitcombe-Shingler, Sandy Rutherford

Learning outcomes:

1. Understanding emotional labour.
2. Identifying and preventing burnout.
3. Building psychological capital.

Poster description:

The emotions of clients and their family, whanau could be distress, suffering, trauma, bereavement, anxiety and anger, verbal and physical abuse, and when therapists work alone in the community, they are more at risk. Therapists have to control their attitude, tone of voice, language level, and at the same time be monitoring the patient and whanau for their response to the therapist's behaviour. Working alone increases the cognitive, physical and emotional labour. The incongruence between felt and required emotions can create tension, with the potential to make therapists more prone to depression and anxiety, decreased job performance, and contribute to burnout. It is important to acknowledge complexity. Through a process of quality improvement professionals can recognise, and rediscover the things that give deeper meaning and purpose to the work involved in wheelchair and seating solutions.

Content references:

1. Brand SL, Thompson Coon J, Fleming LE, Carroll L, Bethel A, Wyatt K (2017) Whole-system approaches to improving the health and wellbeing of healthcare workers: A systematic review. PLoS ONE 12(12): e0188418. https://doi.org/10.1371/journal.pone.0188418
2. Kletter, M., Harris, B., & Brown, C. (2021). Outcomes, mechanisms and contextual factors of positive psychology interventions for health workers: A systematic review of global evidence. Human Resources for Health, 19(1). https://doi.org/10.1186/s12960-021- 00564-5
3. Pandey, J., & Singh, M. (2016). Donning the mask: effects of emotional labour strategies on burnout and job satisfaction in community healthcare. Health policy and planning, 31(5), 551-562.
4. Zambrano-Chumo, L., & Guevara, R. (2024). Psychological capital and turnover intention: the mediating role of burnout among healthcare professionals. International Journal of Environmental Research and Public Health, 21(2), 185.

Presenters biographies:

Maria Whitcombe-Shingler is a registered occupational therapist and clinical educator at Mobility Solutions, a complex wheelchair and seating assessment service in the wider Auckland region.

Dr Sandy Rutherford is a registered occupational therapist with extensive experience in neuro-rehabilitation. She is a senior research officer for the Centre for Person Centred Research and a lecturer at AUT, Auckland.

P3b: Foundations for Practice: Development of the Capability Framework for Occupational Therapists Working with Assistive Technology

Ailsa Leslie

Learning outcomes:

Upon engagement with this poster, participants will be able to:

1. Describe the rationale, process and key insights gained from the development of the OTA Capability Framework for Occupational Therapists working in Assistive Technology.
2. Identify the five key domains of the Capability Framework that support safe, ethical, and effective AT practice.
3. Demonstrate three ways in which capability-guided practice can support participation and self-expression as key outcomes of assistive technology provision.

Poster description:

Occupational Therapy Australia's Capability Frameworks define what good practice looks like in key areas of occupational therapy. They outline the knowledge, skills, and behaviours required to deliver safe, ethical, and effective practice across the career pathway - from foundational to senior practitioners.

This poster presentation showcases the development process of the Capability Framework for Occupational Therapists Working with Assistive Technology. Building on previous frameworks developed as part of OTA's Workforce Development Plan, the poster outlines how the framework was designed to support occupational therapists working in assistive technology (AT) provision across varied service systems - including disability, aged care, education and health - by promoting AT practice that focusses on enablement, participation, and person-centred outcomes.

The poster describes the background and aims of the framework, the methodology used in its development - including broad consultation through a national survey, stakeholder workshops, and an expert advisory group - and the key insights gained throughout the development process, with reflections on lessons learned and implications for future capability framework initiatives. It also highlights the structure of the framework across five key domains that reflect the scope of occupational therapy practice in assistive technology provision.

Aligned with the Oceania Seating Symposium's theme, Whai Wāhi: Participation - An Expression of Self, the poster emphasises how occupational therapists, through capability-guided practice, can work in genuine partnership with assistive technology users to co-design solutions that support meaningful participation. It reinforces the occupational therapist's role in enabling individuals to express their identity, preferences, and aspirations through engagement in everyday life roles and activities - using assistive technology as a tool for autonomy, inclusion, and self-expression.

Content references:

1. Polgar, J. M., Encarnação, P., Smith, E., & Cook, A. M. (2025). Assistive technologies: Principles and Practice (6th ed.). Elsevier.
2. Callaway, L; Bragge, P; Ngo, CL; Delafosse, V; Lennox, A; Hill, KD & Layton, N (2025) A review of international clinical guidelines that inform the use of assistive technology to support

adults living with progressive or complex conditions. Disability and Rehabilitation: Assistive Technology
3. World Health Organisation & United Nations Children's Fund (UNICEF). (2022). Global report on assistive technology. World Health Organisation. https://creativecommons.org/licenses/by-nc-sa/3.0/igo/
4. Occupational Therapy Australia. (2024). Capability frameworks overview. https://otaus.com.au/capability-frameworks

Presenters biography:

Ailsa Leslie is a Professional Practice Advisor at Occupational Therapy Australia, with over 20 years experience in clinical practice across the community not-for-profit and education sectors. Her work has spanned a range of practice areas, with a particular focus on paediatrics, complex seating, and assistive technology. In addition to her clinical experience, Ailsa has held roles in service management, professional education, and workforce development. She currently leads the development of Occupational Therapy Australia's capability frameworks, to support and guide good practice across the occupational therapy profession.

Ailsa is passionate about knowledge translation and promoting the unique and valuable role of occupational therapy - particularly in the rapidly evolving assistive technology landscape.

P3c: Standardization initiatives for enhancing seating safety and comfort

Presenting Author: Takashi Handa. Co-Authors: Barend ter Haar, Kara Kopplin

Learning Objectives:

- Understanding the value of quantification of cushion performance characteristics in relation to clinical needs
- Knowledge that when you are procuring a piece of equipment that it has met testing outcome and safety requirements
- Guidance towards selection of appropriate seating postural support devices

Poster description

In the complex world of wheelchairs and wheelchair seating, it can be difficult to navigate the hundreds of component and support surface options that are available for wheelchair users. Every individual has unique needs for health, safety, confidence, and independence that must be considered. By using the guidance and test data from ISO standards, the clinician can have better confidence as to the performance, function, and durability of the wheelchair seating systems, and their components, which they may be considering. This pre-clinical performance evidence can help narrow the broad field of possibilities down to a select few that exhibit the characteristics that are most critical for the specific wheelchair user.

Content References

International Organization for Standardization. (2006–2024). *ISO 16840 series – Wheelchair seating*. ISO
https://committee.iso.org/sites/tc173/home/projects/sc-1.html#sc1wg11
https://committee.iso.org/sites/tc173/home/library.html

Author bios

Dr Takashi Handa is an engineer and a senior researcher at Saitama Industrial Technology Center, which is a public research institute in Japan. He has developed some devices around Assistive Technology, incuding Seated Posture Measurement Tools, and Medical Surgery, such as the navigation system for Total Knee Arthroplasty. He has also been researching wheelchairs and seating, especially wheelchair basketball in recent years.
Dr Handa is teaching Medical Devices Development Process at Saitama University as an associate professor and teaching Medical Device Development at Shibaura Institute of Technology as a visiting associate professor.
Dr Handa has been involved in international and domestic standards development for 10 years. He is a convenor of ISO/TC 173/SC 1/WG 11 (wheelchair seating).

Dr Barend ter Haar has been involved in the assistive technology world of wheelchairs and wheelchair seating for forty years. He has been involved in the development of seating standards from when the ISO Working Group (TC 173 SC1 WG11) was launched nearly thirty years ago. He lectures worldwide on the outcomes and benefits of the results of the standards developments, and their application to best clinical practice.

Kara Kopplin is the Director of Regulatory Science at Permobil, Inc., and a leader in developing test standards and references related to wheelchair systems. She chairs the U.S. ANSI/RESNA standards committee for wheelchair seating, engages as an expert in international (ISO) standards committees, and serves as the elected liaison to the European wheelchair standards group (CEN).

Leveraging her materials engineering background, Kara's work bridges the gap between the mechanical performance of wheelchairs and seating and the unique health and wellness needs of individuals. Her focus on preventing pressure injuries is strengthened by her role in the National Pressure Injury Advisory Panel (NPIAP), ensuring technical standards are meaningful in clinical decision making. Kara frequently presents these topics at international conferences and has numerous publications in scientific resources.