

---

## B4: Power Assist: Navigating the Options

Margaret Blake, NZROT  
Wendy Hartley, NZROT  
Sandie Grant, NZROT

### Learning objectives:

Upon completion of the session participants will be able to:

1. Compare and contrast a range of Power Assist options for wheelchair users
2. Identify the most appropriate options to consider based on individual client need and the pros and cons of each
3. Use clinical rationale and reasoning to confidently select appropriate Power Assist options ensuring both client need and environmental factors/limitations are considered

### Session description:

Over the past decade the availability of Power Assist options for wheelchair users has increased significantly: options now include products designed to remain on the wheelchair as well as units designed to be fitted and removed independently by the user. Selection of the most appropriate option can be daunting. Consideration needs to be given to the type of terrain the client wants to access, how they will transport the item, how it will interface with their manual wheelchair and whether or not it is more appropriate than a power wheelchair. This session will discuss a range of options, present the pros and cons associated with each and include clinical rationale for the selection of a product. The challenges presented by a range of environments will be discussed, with Case Studies used to illustrate the assessment process and outcomes for clients.

### Content references:

1. Levy, Charles E., Buman, Matthew P., Chow, John W., Tillman, Mark D., Fournier, Kimberly A., & Giacobbi, Jr, Peter. (2010). Use of Power Assist-Wheels Results in Increased Distance Traveled Compared to Conventional Manual Wheeling. *Am J Phys Med Rehabil.* 2010 Aug:

89(8): 625-634. doi:  
10.1097/PHM.0b013e3181e72286

2. Haubert, L.L., Requejo, P., Mulroy, S., & Newsam, C. (2005). Comparison of energy expenditure and propulsion characteristics in a standard and three pushrim-activated power-assisted wheelchairs. *Topics in Spinal Cord Injury Rehabilitation*, 11(No 2), 64-73.
3. Paralyzed Veterans of America Consortium for Spinal Cord Medicine (2005). Preservation of Upper Limb Function Following Spinal Cord Injury: A Clinical Practice Guideline for Health-Care Professionals. *The Journal of Spinal Cord Medicine*, 28(5), 434 – 470.

---

## B5: The Power and Freedom: The Impact of Power Assist

Sharon Davies, QSM

Maria Whitcombe-Shingler, NZROT, MOccTher

### Learning objectives:

1. To share Sharon's experiences of being assessed for, trialling and using power assist.
2. To share the experience of using the WhOM from a client and therapist perspective.
3. To discuss the benefits of power assist options compared to other power mobility solutions.

### Session description:

Sharon as the client, Maria in the role of therapist, share the journey of identifying the need for, obtaining funding, and trialling power assist options to access work, public transport and the wider community

Qualitative single case study design, with a constructivist paradigm, was used with the WhOM (Wheelchair Outcome measure) as one of the outcome measures. A photographic record will also be shared. This is Sharon's story.

More than ever, wheelchair designs are reflecting the desires of people with disabilities to be fully integrated members of society. By borrowing ideas from the bicycle and even the car industry, wheelchair manufacturers are creating ever more mobile, more adaptive means of mobility.

So as a background to Sharon's story, her occupational therapist Maria, will share her clinical assessment and reasoning around Sharon's wheelchair mobility needs and the full range of power assist options considered, with their benefits, costs and possible challenges, to support and enhance Sharon's work and community access.

Conclusion: Power assist offers physical and social benefits for users. Therapists should consider users' overall lifestyles and environments before recommending.

### Content references:

1. Arledge, S., et al. (2011). RESNA Wheelchair Service Provision Guide. Retrieved from <https://eric.ed.gov/?id=ED534426>
2. Baxter, P. & Jack, S. (2008). Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4), 544-559
3. Giacobbi, P.R. et al (2010). Wheelchair users' perceptions of and experiences with power assist wheels. *American Journal of Physical Medicine and Rehabilitation*, 89(3), 225-234
4. Giesbrecht, E.M., Ripat, J. D., Cooper, J. E, & Quanbury, A.O.(2011).Experiences with using a pushrim activated power assisted wheelchair for community based occupations: A qualitative exploration. *Canadian Journal of Occupational Therapy*, 78,129138. doi: 10.2182/cjot.2011.78.2.8
5. Mortenson, W.B., Miller, W., & Miller-Pogar, J. (2007). Measuring wheelchair intervention outcomes: Development of the Wheelchair Outcome Measure. *Disability and Rehabilitation: Assistive Technology*, 2(5), 275-285. doi:10.1080/174831007014755863 doi: 10.1097/PHM.0b013e3181c9d7df