

CASE STUDY

Ashley – Dystonia and Equipment Breakage

Client: Ashley

PT/OT/Supplier: Christine G. Dale, OTR/L, ATP

Location: Oxford, MS

Christine 'Chris' Dale is the Director of Therapy Services at North Mississippi Regional Center. She has successfully used Dynamic Seating components as a part of wheelchair solutions for many of the residents at the center.

Ashley is a 35 year old woman with the diagnoses of cerebral palsy and dystonia. She has lived at the Regional Center for about 10 years and Chris has been working with her during that time. Ashley is typically happy, likes coming to therapy and eating, and hates being wet. She points to images on her tray to communicate with others.

The Problem

Ashley exhibits large and forceful movements (dystonia) which have led to injury to her legs and damage to the wheelchair. She needs to move and her movements increase when she is agitated or excited. The current wheelchair was unable to accommodate these movements.

The Solution: Lower Extremities

Chris recommended Dynamic Seating for Ashley soon after her arrival. Ashley was repeatedly breaking wheelchair footrest hangers secondary to her forceful movements. Her legs would contact the hard surfaces of the footrest hangers and footplates during movement, leading to bruising and abrasions. Dynamic Footrests were recommended to provide movement, diffuse force, and protect Ashley's feet and legs from injury.

Chris recommended a combination of shoeholders, ankle huggers, and tall canvas Chuck Taylor shoes to keep Ashley's feet on the footplates. Without this combination, Ashley was managing to pull her feet right out of her shoes! If her feet were not secured to the footplates, Ashley would have continued to contact the footrest hangers with her legs and not be able to exert force against the footplates to activate the Dynamic Footrests.

The Solution: Back

As Ashley's dystonia causes large and forceful movements, Chris also recommended a Dynamic Back to provide movement at the hips, as well as to diffuse force in combination with other dynamic components.

The Solution: Head

Ashley had bent the mounting hardware on her previous head support – that takes a tremendous amount of force! Chris recommended a Freedom Designs Dynamic Head Support (this no longer appears to be available) to prevent



Quick Notes

Challenges:

- ✓ Rocking and banging
- ✓ Equipment breakage
- ✓ Client injury
- ✓ Agitation

Areas affected:

- ✓ Back
- ✓ Legs
- ✓ Head

Equipment Used:

- ✓ [Dynamic Rocker Back](#)
- ✓ [Dynamic Footrests](#)
- ✓ [Dynamic Head Support](#)
- ✓ [Invacare Solara TS Wheelchair](#)
- ✓ [Freedom Designs Seating](#)

equipment damage and to further diffuse force, again, in combination with other dynamic components.

Recommendations

An Invacare Solara TS manual wheelchair was recommended with a Freedom Designs contoured seating system. Seating Dynamics Dynamic Footrests and Dynamic Rocker Back interface (DRBi) were also recommended. A Freedom Designs Dynamic Head Support (incorporating springs behind the head pad) was also added. Ashley uses, and prefers, a subbasis bar and sits in a persistent posterior pelvic tilt.

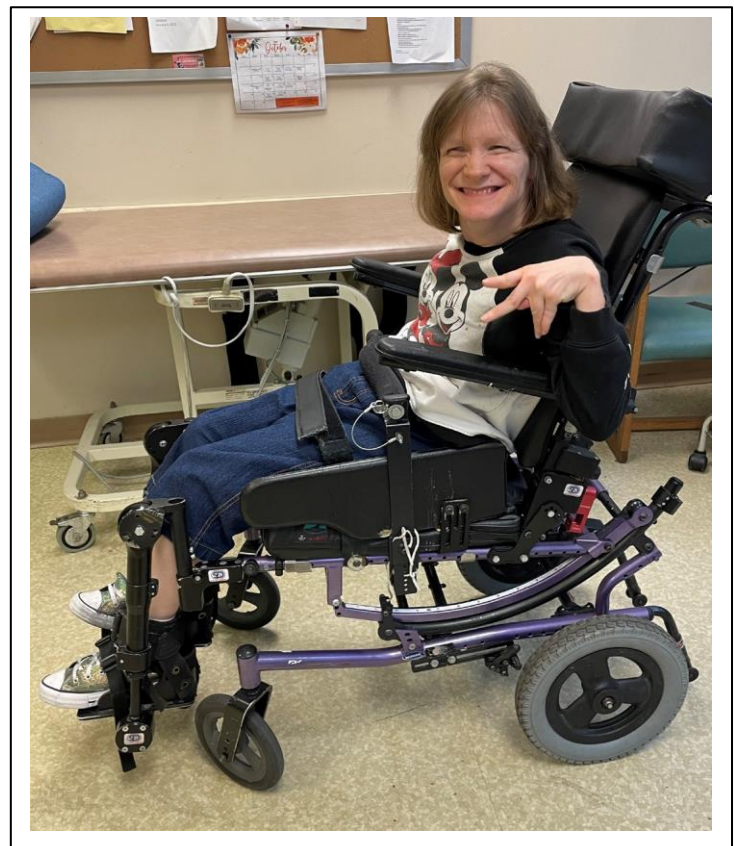
Results

Ashley no longer damages or breaks equipment on her seating system or wheelchair frame. She is no longer injuring her lower extremities on the footrest hangers and footplates. Chris has also noticed that Ashley can tolerate sitting for longer periods of time with Dynamic Seating and that she is less agitated. Her speech, although still difficult to understand, has improved.

- No more injuries
- No further equipment damage
- Increased sitting tolerance
- Decreased agitation
- Improved speech clarity

“How would you like to be stuck in one position all the time? If you have a few things you can move, why not?”

Christine G. Dale, OTR/L, ATP
Director Therapy Services
North Mississippi Regional Center
Oxford, MS



About the Author

Michelle is an occupational therapist with 35 years of experience and has been in private practice, Access to Independence, for over 15 years. She is a well-respected lecturer, both nationally and internationally and has authored numerous texts, chapters, and articles. She is the co-editor of *Seating and Wheeled Mobility: a clinical resource guide* and editor of *Fundamentals in Assistive Technology*, 4th ed. Michelle is a RESNA Fellow and member of the Clinician Task Force. Michelle is a certified ATP, certified SMS and is a Senior Disability Analyst of the ABDA.
