

THINKING BEYOND THE BOX: A FLIP-UP FOOT PLATE FOR AN OPEN FRAME MANUAL W/C

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Client Background

- 54 year old male with Multiple Sclerosis and recent history of seizures
- Physical Status: presents with a history of shoulder injuries; range of motion is within normal limits; no fixed postural deformities; decreased trunk stability and dependent on seating for postural stability; lower extremity extensor tone
- Environment: Home has some basic modifications for accessibility with a manual w/c
- Function Level: "functional paraplegic", functional use of upper extremities, Lower extremities: limited functional use and control, increased extensor tone (used to facilitate transfers and access bathroom with walker), transfers independently via standing pivot with grab bars, active w/c user in the community, plays w/c tennis
 - ADL: Manages bladder and bowels independently using standard toilet
- Current Equipment
 - Manual type 4 wheelchair, Invacare A4 18w x 18d (closed box frame style); Seat to floor (rail) 18 front, 17 back; rigid front end with individual flip up angle adjustable foot plates; overall width 27"; 24" air tires with 3 degrees of camber, 6" solid casters; no arm rests; side guards; anti-tippers removed
 - Infinity Lo Back backrest
 - Infinity Max Contour cushion with gel insert, 1 ¾ " anterior wedge, Invacare solid seat insert

Current Issues

- Current type 4 w/c 5 years old, too wide, too heavy, limiting independent mobility, limiting accessibility
- Requires light weight durable frame, with a flip up footplate for independent transfer and can breakdown and fit into the car trunk

Goals for Prescription

- Improve independent mobility
- Minimize and prevent further shoulder strain, decrease transfer needs
- Maintain/improve safe and independent transfers
- Improve accessibility (washroom/home environment/car)
- Facilitate funding assistance

Equipment / Solution

Ideal Equipment Specifications

- 16" width
- Rigid, light weight, open frame, titanium construction
- One piece flip up foot plate
- Frame adjustability to accommodate potential changes
- 90 degree front end
- NB: At present there are no standard rigid open C frame wheelchairs with a flip up footplate.

Creative Solution: Custom rigid open frame wheelchair

- TiLite – Custom ZRA, 16w x 17d, 90 degree rigid front end, flip down back canes, Kuschall fold down push handles
- 5” Soft Roll caster (smaller, improved turning radius and maintained performance of a 6”)
- One piece flip up foot plate, custom reinforcement at lower front end of frame to maintain frame rigidity (compensating for loss of rigid foot plate), does not interfering with foot positioning when seated and during transfers
- Apply WCM2 code to fund custom modification

Outcomes

- Increased accessibility at home
- Increased independent mobility and activity tolerance to access the front door ramp and to access the community
- Maintained independent and safe transfers
- Achieved optimum lower extremity posture for tone/positioning
- Obtained 75% funding from ADP for custom footplate