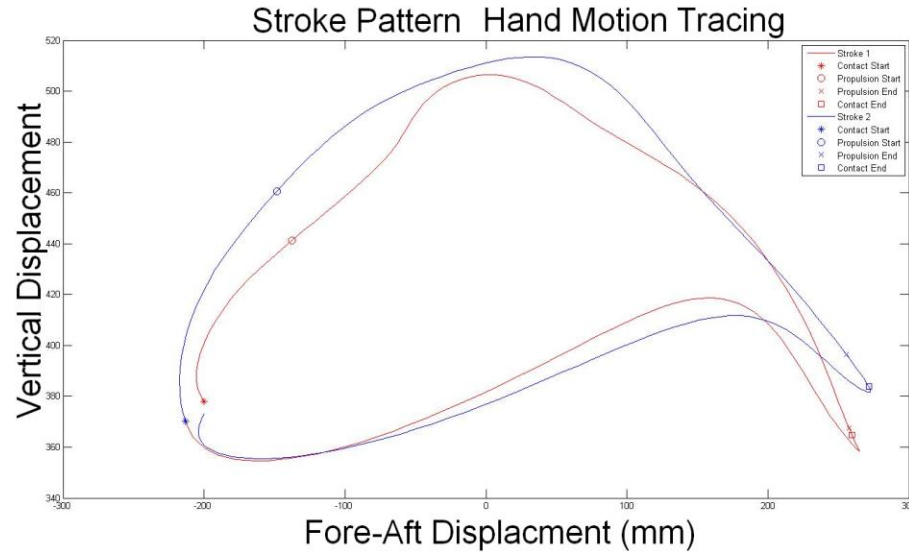


Client & Session Information

	Client Session 1	Client Session 2	Client Session 3
Name	Patient Name	Patient Name	Patient Name
Age [y]	17	17	17
Gender	Male	Male	Male
Weight [kg]	66	66	66
Height [cm]	170	170	170
Primary Diagnosis	Spinal Cord Injury	Spinal Cord Injury	Spinal Cord Injury
Date & Time	10-22-2013 09:48	10-22-2013 09:51	10-22-2013 09:51
Number of Pushes	7.0	7.0	8.0

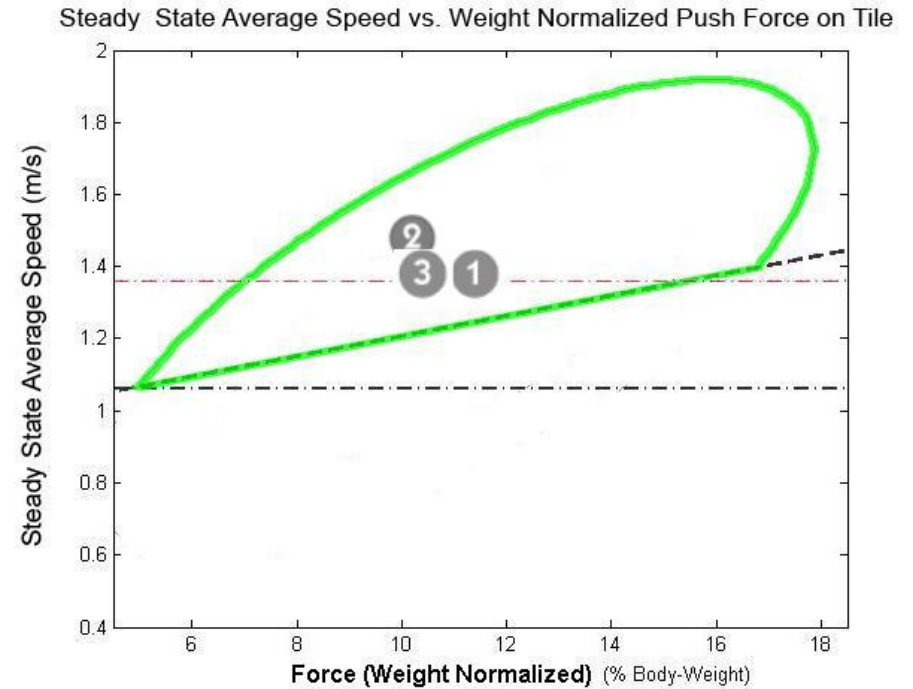
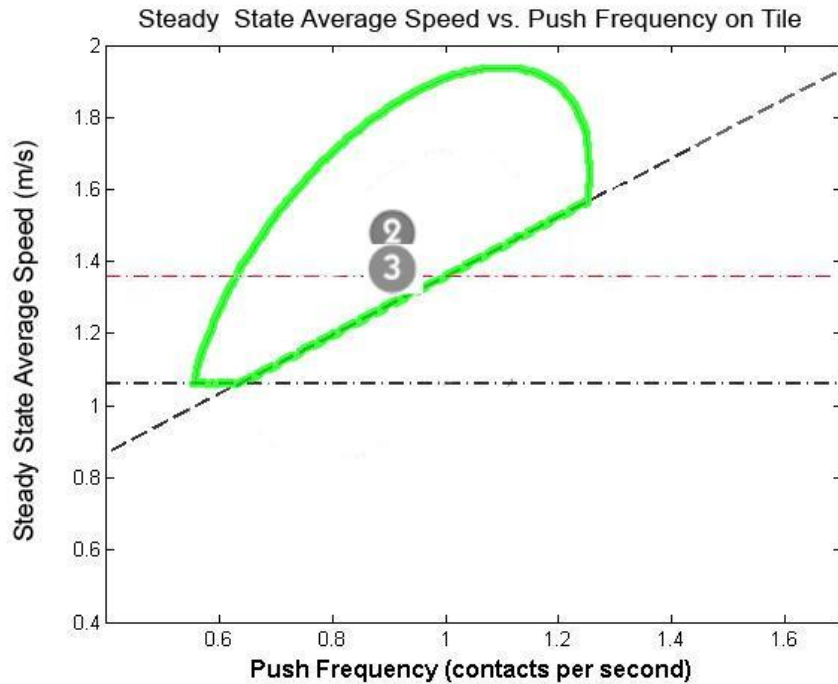










Key Data from Client Session & Comparison to Database Averages









(These key parameters are calculated from all pushes except for the first 3. Database averages may not be available depending upon protocol chosen)

	Client Session 1	Client Session 2	Client Session 3		Database Average † ‡	Database Top 25% ‡
Speed [m/s]	1.4	1.5	1.4		1.29	1.73
Push Frequency [1/s]	0.9	0.9	0.9		0.91	1.05
Push Length [degree]	89.2	83.2	85.1		74.48	82.90
Force (Weight Normalized) %	11.1	9.9	10.1		11.32	12.95

† Database averages shown are from user data collected by the SmartWheel User Group Database, and is for informational purposes only. ‡ Current Database sample size ranges from 915 to 320 (Sample size varies by condition and protocol). ‡ Speed, Frequency, Push Length and Force data are drawn from the database population that fell within the top 25% of SPEED (Upper Quartile)



	Speed and Push Frequency are okay (at or above functional speed and at or above the sloped line). Based on the location of marker and client assessment, may still consider opportunities to improve speed or push frequency
	Based on Client Assessment, consider interventions to DECREASE push frequency. Speed is okay (at or above functional speed)
	Based on Client Assessment, consider interventions to INCREASE speed and DECREASE push frequency
	Based on Client Assessment, consider interventions to INCREASE speed. Push frequency is less than normative push frequency, but functional speed is not attained
	The green outlined area is the normative distribution of push frequency from the database for those that pushed above functional speed and at or above normative speeds from the database [1]
	The sloped line indicates relation between normative speeds and normative push frequencies from the database [1]
	The horizontal line indicates the Minimum Functional Speed (1.06m/s) that is defined as the minimum speed needed to safely cross an intersection [2]
	The horizontal line indicates the functional speed (1.36m/s) necessary to match the normative walking speed of adults [3]

	Speed and Push Force are okay (at or above functional speed and at or above the sloped line). Based on the location of marker and client assessment, may still consider opportunities to improve speed or push force
	Based on Client Assessment, consider interventions to DECREASE push force. Speed is okay (at or above functional speed)
	Based on Client Assessment, consider interventions to INCREASE speed and DECREASE push force
	Based on Client Assessment, consider interventions to INCREASE speed. Push force is less than normative force, but functional speed is not attained
	The green outlined area is the normative distribution of push force from the database for those that pushed above functional speed and at or above normative speeds from the database [1]
	The sloped line indicates relation between normative speeds and normative push forces from the database [1]
	The horizontal line indicates the Minimum Functional Speed (1.06m/s) that is defined as the minimum speed needed to safely cross an intersection [2]
	The horizontal line indicates the functional speed (1.36m/s) necessary to match the normative walking speed of adults [3]

Session Results- Startup

These parameters are calculated from the first 3 pushes.

	Client Session 1	Client Session 2	Client Session 3	Client Session 4
Peak Force Push 1 [N]	94	99	27	
Peak Force Push 2 [N]	89	80	90	
Peak Force Push 3 [N]	76	86	76	
Distance after 2nd Push [m]	2.1	2.0	1.0	
Distance After 3rd Push [m]	3.3	3.4	2.2	
Speed After 2nd Push [m/s]	1.2	1.1	0.9	

Session Results - Steady State

These parameters are averages calculated from all pushes except for the first 3.

	Client Session 1	Client Session 2	Client Session 3	Client Session 4
Peak Force [N]	72	64	65	
Avg. Push Force [N]	53	49	49	
Peak Backwards Force [N]	-2	-5	-6	
Speed [m/s]	1.4	1.5	1.4	
Avg. distance / push [m]	1.6	1.6	1.6	
Push Length [deg]	89	83	85	
Push Frequency [1/s]	0.87	0.90	0.89	
Peak/Avg. Force Ratio	1.3	1.3	1.3	
Push Mechanical Effectiveness	0.51	0.62	0.62	

References Cited:

- [1] Cowan, RE, Boninger, ML, Sawatzky, BJ, Mazoyer, BD, & Cooper, RA. Preliminary Outcomes of the SmartWheel Users’ Group Database: A Proposed Framework for Clinicians to Objectively Evaluate Manual Wheelchair Propulsion. Archives of Physical Medicine and Rehabilitation, 2008, 89: 260-8.
- [2] Hoxie, RE, and Rubenstein, LZ. Are older pedestrians allowed enough time to cross intersections safely? Journal of the American Geriatric Society, 1994; 42: 241-4.
- [3] Bohannon, RW. Comfortable and maximum walking speeds of adults aged 20-79 years: reference values and determinants. Age and Ageing, 1997; 26: 15-19.

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