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Research Summary – 4 Functional Tests for Persons who Self-Propel a Manual Wheelchair (4FTPSMW) – Wheeled Mobility

Author Year Research Design Setting (country)	Demographics and Injury Characteristics of Sample	Validity	Reliability	Responsiveness Interpretability
[May et al.](#) 2003 Methodological Rehabilitation Centre in Canada	Group 1: N=10 patients, Avg. age = 33 years Group 2: N=10 patients Avg age = 29 All participants had a neurological condition affecting the spinal cord		**Test-retest, Inter-rater, Intra-rater:** Final 4 tasks: r= 0.99 (P<.001) All except 1-stroke push: ICC= 0.99 (P<.001)	**Interpretability:** See table 1 and 2.

Table 1. SEM and MDC (calculated from May et al. 2003) for the 4 tasks:

	SEM	MDC
Forward wheeling	0.82 seconds	2.27 seconds
Forward vertical reach	0.91 cm	2.52 cm
Ramps ascent	8.17 seconds	22.65 seconds
One-stroke push	3.84 cm	10.64 cm

Table 2. Test-retest scores for the 4 functional tasks:

	Forward wheeling (s)		Forward vertical reach (cm)		Ramp ascent (s)		One-stroke push (cm)	
Trials	1	2	1	2	1	2	1	2
Avg score	14.7	14.6	160.7	160.8	39.6	34.4	102.1	109.8

Author Year Research Design Setting (country)	Demographics and Injury Characteristics of Sample		Validity			Reliability			Responsiveness Interpretability		
	Standard deviation	8.2	7.3	9.1	10.1	81.7	70.1	38.4	40.6	
	Minimum	6.9	6.6	147.4	145.6	3.2	3.2	45.7	47.7	
	Maximum	34.3	31.0	172.3	173.6	255.1	219.9	175.5	188.7	