Reviewer ID: Nicole Elfring**,** John Zhu, Jeremy Mak, Kyle Diab, Joanne Chi			**ICF Level:** Activity	
Type of Outcome Measure: Timed Up and GO (TUG) walking test				**Total articles:** 9

Author ID Year	**Study Design**	**Setting**	**Population (sample size, age) and Group**
Duffell et al. 2015		Outpatient service at the Rehabilitation Institute of Chicago	N=83, (26F, 57M) Age: 18 - 50 Mean age = 47.28 Time Since Injury: > 12 months All AIS C or D
Lam et al. 2008	Systematic review		Data reported in study was from Van Hedel, Wirz & Dietz 2005 (population characteristics available above).
Lemay & Nadeau 2010	Longitudinal study	An intensive rehabilitation center in Montreal, Canada (Institut de readaptation Gingras-Lindsay de Montreal)	32 SCI subjects (25 males, 7 females) mean age: 47.9± 12.8 yrs Neurological level: 15 paraplegic, 17 tetraplegic Level of injury: 17 cervical, 10 thoracic, 5 lumbar Type of injury: 21 traumatic, 11 non-traumatic Inclusion criteria: (1) Adults with SCI AIS D either of traumatic or non-traumatic etiology and (2) the ability to walk 10m independently with or without upper-extremity assistive devices.
Poncumhak et al. 2013	Cross-sectional	A tertiary rehabilitation center, Thailand.	Validity Test: FIM-L 6: N=33, mean age = 50.9±13.5, Time since injury: 59.5 ±85.8 months AIS-C=9, AIS-D=24, tetraplegia=9, paraplegia=24 FIM-L 7: N=33, mean age = 50.23±9.5, Time since injury: 44±64.5 months AIS-C=1, AIS-D=32, tetraplegia=13, paraplegia=20 Reliability Test: N=16, mean age = 50.8±10.3, Time since injury: 30.6±19.9 months AIS-C=2, AIS-D=15, tetraplegia=6, paraplegia=10
Poncumhak et al. 2014	Cross-sectional	A tertiary rehabilitation center in Thailand	N=60, 42 male Mean age = 49.95 Mean time since injury = 55.5 yrs
Saensook et al. 2014	Cross-sectional		N=85, 59 male
Srisim et al. 2015	Prospective cohort study	Tertiary Rehab Center (Thailand)	N = 83 23 Multiple Fallers (Age: 44.21 ± 10.7): Time Since injury (months): 58.70 ± 60.03 AIS C: 9 (39%) 60 Non-multiple fallers (52.68 ± 11.21): Time Since injury (months): 46.72 ±36.42 AIS C: 12 (20%)

van Hedel 2008	Retrospective analysis	The European Multicenter Study of Human Spinal Cord Injury Database. 19 SCI rehabilitation centers across Europe.	N = 6 – 127 (range seen below) Acute, Subacute, Chronic SCI
van Hedel, Wirz & Dietz 2005	Cross-sectional and repeated assessments	SCI center of a university hospital in Switzerland	Validity study participants: N = 75 (30 females & 45 males) Mean age = 54±20 years Cervical = 25 Thoracic = 21 Lumbar = 21 Sacral = 8 Reliability study participants: N = 22 (8 females & 14 males) Mean age = 52±20 years Cervical = 7 Thoracic = 7 Lumbar = 7 Sacral = 1

1. RELIABILITY

Author ID	Internal Consistency	Test-retest, Inter-rater, Intra-rater
Van Hedel, Wirz & Dietz 2005	No data available	Pearson correlations Intrarater r=0.979, P<.001 Interrater r=0.973, P<.001 Bland-Altman plot: Significant difference in intra-rater (3.3±7.0s) using Wilcoxon signed-rank test at p=0.001. No significant differences with inter-rater assessment (-0.3±7.5s).
Poncumhak et al. 2013		Interrater ICC = 0.999 (0.999-1.000) for FIM-L 6 (N=8); 1.000 (0.999-1.000) for FIM-L 7 (N=8)
Poncumhak et al. 2014		Interrater ICC (N=20) = 0.998 (95%CI=0.997~0.999), p<0.001
Srisim et al. 2015		Interrater ICC= 0.999 (0.999-1.000)

2. VALIDITY	
Author ID	**Validity**
Van Hedel, Wirz & Dietz 2005	Correlation of the TUG with other scales measuring the same construct as the TUG: 10MWT and TUG: r = 0.89, n=70 6MWT and TUG: ρ = -0.88, n=62 Subgroups: WISCI scores of 0 to 10: 10MWT and TUG: r=0.92, n=15 6MWT and TUG: r=-0.96, n=15 WISCI scores of 11 to 20 6MWT and TUG: r=-0.78, n=47 10MWT and TUG: r=0.88, n=27 Dependent walking group: 6MWT and TUG: ρ=-0.74, n=18 10MWT and TUG: r=0.88, n=27 Independent walking group: 6MWT and TUG: ρ =-0.88, n=44 10MWT and TUG: ρ=-0.86, n=43 Walking Index for Spinal Cord Injury II (WISCI II): ρ = -0.76, n=67 Subgroups: WISCI II scores of 0 to 10: ρ = 0.16, n=20 WISCI II scores of 11 to 20: ρ = -0.65, n=47 WISCI II dependent walking group: ρ = -0.22, n=23 WISCI II independent walking group: ρ = -0.66, n=45
Lemay & Nadeau 2010	Spearman's correlations with other walking scales: (all P<0.01) Berg Balance Scale: -0.815 Spinal Cord Injury-Functional Ambulation Inventory (SCI-FAI) parameter: -0.761 SCI-FAI assistive devices: -0.802 SCI-FAI mobility: -0.724 WISCI II: -0.799 10 Meter Walk Test: -0.646 (For 10 MWT, Pearson's product moment correlation instead of Spearman's ρ)
Poncumhak et al. 2013	With 10MWT Scores: point biserial correlation coefficient = -0.692 (P<0.05)
Poncumhak et al. 2014	Score of <18s "had good-to-excellent capability to determine the ability of walking without a walking device of subjects with SCI: ROC curve area: 0.95 (95%CI=0.89~1.00) Sensitivity=90% Specificity=87%
Srisim et al. 2015	Unable to predict and discriminate non-multiple fallers and multiple fallers Ability of cut-off score (≥ 26 s) to predict risk of multiple falls: Sensitivity: 56% Specificity: 69% AUC: 0.57
Van Hedel 2008	Construct validity with the 10 MWT over time:

Time Since Injury	N	Spearman Rho	R2 (adjusted value)
2 weeks	6	0.81*	0.96
1 month	74	0.87**	0.57
3 months	136	0.95**	0.75
6 months	131	0.96**	0.76
12 months	127	0.92**	0.72
*p < 0.05; **p < 0.001			

3. RESPONSIVENESS

Author ID	Responsiveness
Saensook et al. 2014	Non-ambulative assistive device patients perform significantly better than patients with device (p<0.001); Cane users perform significantly better than walker (p<0.001) and crutches users. (p<0.05)

4. FLOOR/CEILING EFFECT – no data available

5. INTERPRETABILITY

Author ID	Interpretability
Van Hedel et al. 2005	Mean (SD) TUG score: 36 (27) seconds Range: 8-156 seconds
Lemay & Nadeau 2010	Mean (SD) TUG scores of the whole group and subgroups: Total group: 17.0 (18.7), range: 6.4-111.3 Paraplegia: 19.7 (25.9), range: 6.4-111.3 Tetraplegia: 14.6 (8.8), range: 6.5-36.7
Lam et al. 2008 (systematic review)	Calculated from data from Van Hedel et al. 2005: SEM = 3.9 seconds MDC = 10.8 seconds
Duffell et al. 2015	MCID = -14.5s
Poncumhak et al. 2014	SEM = 0.41
Srisim et al. 2015	SEM: 0.23