

Parkinson Edge Outcome Measures Taskforce

Instrument name: 2 Minute Walk Test					
Reviewer: Jeffrey Hoder and Terry Ellis				Date of review: 2/20/2012	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input checked="" type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input checked="" type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input checked="" type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary: http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=896					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I		X			
II		X			Largest range of variability in this stage (Schenkman, 2011)
III		X			Assistive device may be utilized, if client can still ambulate independently.
IV		X			Once assistance is needed to ambulate,

					this test becomes less valid.
V				X	
Overall Comments:	<p>Initial study by Light et al in JNPT 1997, required (3) trials, done before a 2.0 hour functional assessment battery, during a functional assessment battery and at the end of a functional assessment battery. They took the measurements of the 3rd trial. H&Y III or IV.</p> <p>Some articles site comfortable or preferred walking speed, some as fast as possible. Light et al “cover as much ground as you can in 2 minutes”; 2 practice trials, one test secondary to testing effects.</p>				
Overall Comments:	No cost. Easy to administer.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
	X				
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				

NIH toolbox adapted the instructions from the American Thoracic Society’s 6 minute walk test. Normative data establish with n=4800 ages 5-85. NIH study utilized a 50 ft course. One trial was performed. The 2 MWT requires up to 2 practice sessions to reduce a practice effect (Light et al, 1997), with Light noting that the walking distance increased significantly over 3 trials.

REFERENCES

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Ellis, T., Katz, D. I., White, D. K., DePiero, T. J., Hohler, A. D., & Saint-Hilaire, M. (2008). Effectiveness of an inpatient multidisciplinary rehabilitation program for people with Parkinson disease. *Phys Ther*, 88(7), 812-819. doi: 10.2522/ptj.20070265

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Miller, P. A., Moreland, J., et al. (2002). "Measurement properties of a standardized version of the two-minute walk test for individuals with neurological dysfunction." *Physiotherapy Canada* 54(4): 241-248.

Reuben D; Magasi S; McCreath H; Bohannon RW; Wang Y-C; Bubela DJ; et al. (2013) "Motor assessment using the NIH Toolbox ." *Neurology* 80 (11 Supplement 3).

Rossier, P. and Wade, D. T. (2001). "Validity and reliability comparison of 4 mobility measures in patients presenting with neurologic impairment." *Arch Phys Med Rehabil* 82(1): 9-13. Find it on PubMed

Schenkman, M., Ellis, T., Christiansen, C., Baron, A. E., Tickle-Degnen, L., Hall, D. A., & Wagenaar, R. (2011). Profile of functional limitations and task performance among people with early- and middle-stage Parkinson disease. *Phys Ther*, 91(9), 1339-1354. doi: 10.2522/ptj.20100236

Stewart, D. A., Burns, J. M. A., et al. (1990). "The two-minute walking test: a sensitive index of mobility in the rehabilitation of elderly patients." *Clinical Rehabilitation* 4(4): 273-276.

White, D. K., Wagenaar, R. C., Ellis, T. D., & Tickle-Degnen, L. (2009). Changes in walking activity and endurance following rehabilitation for people with Parkinson disease. *Arch Phys Med Rehabil*, 90(1), 43-50. doi: 10.1016/j.apmr.2008.06.034

Parkinson Edge Outcome Measures Taskforce

Instrument name: 5x sit to stand						
Reviewer: Alicia Esposito and Deb Kegelmeyer					Date of review: 4/28/13; 5/31/13	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment						
Construct/s measured (check all that apply):						
Body structure and Function		Activity			Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input checked="" type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:			<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:						
Recommendation Categories						
Hoehn and Yahr stage	4	3	2	1	na	Comments
I	X					2 strong studies in PD with large subject numbers and reported data on each H&Y stage
II	X					
III	X					
IV	x					
V					x	May not be appropriate as patient

					would not be able to perform sit to stand
Overall Comments:	<p>Variations of sit to stand tests exist</p> <ul style="list-style-type: none"> • 10x sit to stand • 10 second sit to stand • 30 second sit to stand <p>Measurements of time are more precise (5x sit to stand; 10x sit to stand) then counting of repetitions (30 second sit to stand; 10 second sit to stand). Individuals who are weak however may not be able to complete the requisite number of repetitions and consequently counting the number of repetitions in a pre set amount of time may be preferable for certain patient populations.</p> <p>Duncan et.al. 2011 found that individuals in each H and Y stage (I=2, II=2, III=2 and IV=1) were unable to perform FTSTS because they were unable to arise from a chair without using the upper extremities. There may be some floor affect across stages of the disease.</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
	X				
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Good psychometric properties and establishment of normative data

References

Bohannon, R. W. (2006). "Reference values for the five-repetition sit-to-stand test: a descriptive meta-analysis of data from elders." *Perceptual and Motor Skills* 103(1): 215-222.

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Buatois, S., Perret-Guillaume, C., et al. (2010). "A simple clinical scale to stratify risk of recurrent falls in community-dwelling adults aged 65 years and older." *Physical Therapy* 90(4): 550-560.

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Lord, S. R., Murray, S. M., et al. (2002). "Sit-to-stand performance depends on sensation, speed, balance, and psychological status in addition to strength in older people." *Journals of Gerontology. Series A, Biological Sciences and Medical Sciences* 57(8): M539-543.

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Paul, S et al (2012). "Reproducibility of measures of leg muscle power, leg muscle strength, postural sway and mobility in people with parkinson's disease." *Gait and Posture* 36: 639-642.

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Tiedemann, A., Shimada, H., et al. (2008). "The comparative ability of eight functional mobility tests for predicting falls in community-dwelling older people." *Age and Ageing* 37(4): 430-435.

Whitney, S. L., Wrisley, D. M., et al. (2005). "Clinical measurement of sit-to-stand performance in people with balance disorders: validity of data for the Five-Times-Sit-to-Stand Test." *Physical Therapy* 85(10): 1034-1045.

Parkinson Edge Outcome Measures Taskforce

Instrument name: 6 Minute Walk Test					
Reviewer: Jeffrey Hoder and Terry Ellis				Date of review: 2/20/2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input checked="" type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input checked="" type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input checked="" type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary: http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=895					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				There is a significant amount of normative data published.
II	X				
III	X				Assistive device may be utilized, if client can still ambulate independently.
IV	X				Once assistance is needed to ambulate,

					this test becomes less valid.
V				X	
Overall Comments:	Excellent psychometrics. Frequently utilized within the literature to evaluate walking capacity. There is some variability in the length of track/hallway that is utilized in the research. Generally either 30-30.5m (Canning, 2006; Falvo, 2009) or 100ft length (Steffen, 2008; American Thoracic Society, 2002), with recommended turning around cones.				
Overall Comments:	<p>General instructions: The participants were required to walk back and forth along the 30-m walkway for 6 minutes. Participants were instructed to walk <i>as far as possible</i> in the 6 minutes and were provided with standardized encouragement every minute, for example, “You are doing well, you have 5 minutes to go.” Total distance walked during the test was recorded to the nearest tenth of a meter and the 6-minute average walking velocity was calculated by dividing the total distance walked by the total number of seconds in the test. To reflect the intensity of exercise performed, heart rate, breathlessness, and leg muscle fatigue were recorded on immediate completion of the test. Leg muscle fatigue were evaluated by using the Borg 10-point Rating of Perceived Exertion scale. –Canning, 2006</p> <p>Steffen, 2008: MDC=82 m; ICC=.96</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
	X				
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				

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ATS statement: guidelines for the six-minute walk test. *Am J Respir Crit Care Med.* 2002;166(1):111–117.

Canning CG, Ada L, Johnson JJ, McWhirter S. Walking capacity in mild to moderate Parkinson's disease. *Arch Phys Med Rehabil* 2006;87:371-5.

Enright, P. L. and Sherrill, D. L. (1998). "Reference equations for the six-minute walk in healthy adults." *Am J Respir Crit Care Med* 158(5 Pt 1): 1384-1387.

Harada, N., Chiu, V., et al. (1999). "Mobility-related function in older adults: assessment with a 6-minute walk test." *Archives of physical medicine and rehabilitation* 80(7): 837-841.

Perera, S., Mody, S., et al. (2006). "Meaningful change and responsiveness in common physical performance measures in older adults." *Journal of the American Geriatrics Society* 54(5): 743-749.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: 9 Hole Peg Test					
Primary Reviewer: Suzanne K. O’Neal, PT, DPT, NCS and Rosemary Gallagher, PT, DPT, GCS				Date of review: May 2013	
ICF domain (check all that apply): <input checked="" type="checkbox"/> Body function/structure <input checked="" type="checkbox"/> Activity _____ Participation					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input checked="" type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input checked="" type="checkbox"/> Other: Dexterity		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I		X			
II		X			
III		X			
IV		X			
V				X	Stage 5 not included in studies used for this review.
Overall Comments:					

	Excellent test-retest reliability. MDC established in one study. No other psychometrics found for the PD population				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Widely used in clinical settings.
	X				
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		

REFERENCES

Earhart, G., Cavanaugh, J., et al. (2011). "The 9-Hole Peg Test of Upper Extremity Function: Average Values, Test-Retest Reliability, and Factors Contributing to Performance in People With Parkinson Disease." *JNPT* 35(4): 157-163.

Mathiowetz, V., Kashman, N., et al. (1985). "Grip and pinch strength: normative data for adults." *Archives of Physical Medicine and Rehabilitation* 66(2): 69-74.

Oxford Grice, K., Vogel, K. A., et al. (2003). "Adult norms for a commercially available Nine Hole Peg Test for finger dexterity." *American Journal of Occupational Therapy* 57(5): 570-573.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: 10 Meter Walk Test					
Reviewer: Jeffrey Hoder and Terry Ellis				Date of review: 2/20/2012	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity that apply		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary: http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=901					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				There is a significant amount of normative data established.
II	X				
III	X				Assistive device may be utilized, if client can still ambulate independently.
IV		X			Once assistance is needed to ambulate,

					this test becomes less valid.
V				X	
Overall Comments:	<p>Should we retitle this test as “Gait Speed” with 10 meters as the preferred distance? NIH Toolbox utilized a 4 meter gait speed and has n>4800 for ages 5-85.</p> <p>Generally the average of 2 trials for comfortable, 2 trials for fast speed. Comfortable speed and as fast as possible with time recorded to the nearest 100th of a second and documented in meters/second.</p> <p>2 options:</p> <ol style="list-style-type: none"> 1. A distance of 10 m is marked on the floor. The subject begins the test 5 m before the starting line and completed the test 5 m after the finish line. Time is recorded from the time when the subject crossed the starting line to the time when he or she crossed the finish line. (Schenkman, 1997; Fritz, 2009) 2. A distance of 10 m is marked on the floor. Subsequent marks are placed at 2 m from starting point and 2 m from ending point to allow a 6 m timed middle section for the test. Subject starts, walks 2 meters, is timed over the middle 6 meters, then timer is stopped 2 meters before finish. (Brusse, 2005; Steffen, 2008) <p>Steffen, 2008: 37 community-dwelling adults with parkinsonism MDC = 0.18 m/s comfortable; 0.25 m/s fast ICC=.96 comfortable; .97 fast</p>				
Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
	X				
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention	X				

research studies?			
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References

Bohannon, R. W. (1997). "Comfortable and maximum walking speed of adults aged 20-79 years: reference values and determinants." *Age Ageing* 26(1): 15-1.

Fritz, S., Lusardi, M.(2009). White Paper: "Walking Speed: the Sixth Vital Sign." *Journal of Geriatric Physical Therapy* 32(3): 110.

Perera, S., Mody, S., et al. (2006). "Meaningful change and responsiveness in common physical performance measures in older adults." *Journal of the American Geriatrics Society* 54(5): 743-749.

Reuben D; Magasi S; McCreath H; Bohannon RW; Wang Y-C; Bubela DJ; et al. (2013) "Motor assessment using the NIH Toolbox ." *Neurology* 80 (11 Supplement 3).

Schenkman, M., Cutson, TM, Kuchibhatla, M, Chandler, J, and Pieper, C. (1997). "Reliability of Impairment and Physical Performance Measures for Person's with Parkinson's Disease." *Physical Therapy* 77(1): 19-27.

Steffen, T. and Seney, M. (2008). "Test-retest reliability and minimal detectable change on balance and ambulation tests, the 36-item short-form health survey, and the unified Parkinson disease rating scale in people with parkinsonism." *Physical Therapy* 88(6): 733-746.

Tyson, S. and Connell, L. (2009). "The psychometric properties and clinical utility of measures of walking and mobility in neurological conditions: a systematic review." *Clin Rehabil* 23(11): 1018-1033.

Watson, M. J. (2002). "Refining the ten-metre walking test for use with neurologically impaired people." *Physiotherapy* 88(7): 386-397.

Parkinson Edge Outcome Measures Taskforce

Instrument name: 30 second sit to stand test					
Reviewer: Alicia Esposito, PT, DPT, NCS and Deb Kegelmeyer DPT, MS, GCS				Date of review: 4/30/13	
ICF domain (check all that apply): <input checked="" type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input checked="" type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		
II			X		
III			X		
IV			X		
V			N/A		
Overall Comments:	No literature regarding its use in the PD population. Measures of time are more precise (5x sit to stand, 10x sit to stand) then counting of				

	repetitions within a particular time frame (30 second sit to stand; 10 second sit to stand). Individuals who are weak however may not be able to complete the requisite number of repetitions in a pre set amount of time may be preferable for certain populations.				
Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	In context with variations in other sit to stand tests
		X		x	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		Not to be used in PD related research secondary to a lack of literature supporting its use in the PD population

REFERENCES

Jones, CJ et al (1999). "A 30-s chair-stand test as a measure of lower body strength in community-residing older adults." *Research Quarterly for Exercise and Sport*. 70(2): p113-119

MacFarlane, DJ et al (2006). "Validity and normative data for thirty second chair stand test in elderly community dwelling hong kong chinese." *American Journal of Human Biology*. 18: p418-421.

McCarthy, E et al (2004). "Repeated chair stands as a measure of lower limb strength in sexagenarian women." *Journal of Gerontology: Medical Sciences*. 59A(11): p1207-1212.

Parkinson Edge Outcome Measures Taskforce

Instrument name: 360° Turn Test					
Reviewer: Terry Ellis PT, PhD, NCS; Laura Savella Spt and Jeffrey Hoder				Date of review: 4/30/2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input checked="" type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I		X			Good psychometric properties and excellent clinical utility of this measure in H&Y Stage 1. Lacking some information on validity and reliability.
II		X			Good psychometric properties and excellent clinical utility of this measure in H&Y Stage 2. Lacking some information

					on validity and reliability.
III		X			Good psychometric properties and excellent clinical utility of this measure in H&Y Stage 3. Lacking some information on validity and reliability.
IV			X		No studies on this measure have included H&Y Stages 4.
V			X		No studies on this measure have included H&Y Stages 5.
Overall Comments:	The existing evidence offers some normative data in both healthy elders and persons with PD, evidence of acceptable test-retest reliability in PD, and convergent validity of the test with the Continuous Scale Physical Functional Exam (CS-PFP) in PD. The psychometric data applies to patients in H&Y Stages 1-3. No studies on this measure have included H&Y Stages 4 or 5.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	The 360 Degree Turn Test is part of the Berg Balance Test, which students will learn to administer. Although there are a limited number of studies in persons with PD, the available evidence suggests that the psychometric properties of the 360 Degree Turn Test are adequate.
		X		X	
Research Use	YES		NO		Comment
Is this tool appropriate for use in intervention research studies?			X		At present more evidence is needed on the psychometric properties of the 360 Degree Turn Test, including its validity, reliability, and responsiveness in subjects with PD before it should be

			used as an independent assessment of dynamic balance.
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Parkinson Edge Outcome Measures Taskforce

Instrument name: Activities Specific Balance Confidence (ABC) Scale					
Reviewer: Erin Hussey and Cathy Harro				Date of review: May 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input checked="" type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I		X			Demonstrated in small subset of samples that included Hoehn Yahr Stage I
II		X			Demonstrated good psychometrics and good clinical utility in target population
III		X			Demonstrated good psychometrics and good clinical utility in target population
IV			X		Insufficient data in target population at this Hoehn Yahr Stage to recommend.

V				X	Insufficient data representing use in this Hoehn Yahr stage; Items represent activities that are not completed in this stage.
Overall Comments:	Good <u>psychometrics</u> to support use with individuals in early to middle stages of Parkinson disease. Good <u>clinical utility</u> with completion either independent by clients or administered within 20 minutes. For optimal results, examiner administration is recommended with clients for whom comprehension of the tool is questionable.				
Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		x	X		
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Berg Balance Scale					
Reviewer: Deb Kegelmeyer and Alicia Esposito				Date of review: 3/6/13	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				x	Ceiling effects noted
II	x				
III	x				
IV				x	Questionable use due to no assistive device can be used.
V				X	Cannot be used
Overall Comments:					

Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				

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Parkinson Edge Outcome Measures Taskforce

Instrument name: BESTest					
Reviewer: Cathy Harro and Erin Hussey				Date of review: June, 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure Environment <input checked="" type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input checked="" type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input checked="" type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input checked="" type="checkbox"/> Other: Other: balance motor strategies		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I		X			Excellent psychometrics AND good clinical utility.
II		X			Excellent psychometrics AND good clinical utility.
III		X			Excellent psychometrics AND good clinical utility.

IV		X			Excellent psychometrics AND good clinical utility.
V				X	This H & Y stage was not assessed in research; as functional level is too low for the designed balance test.
Overall Comments:	Excellent test-retest and inter-rater reliability for total BESTest scores. Excellent concurrent and discriminative validity. Adequate predictive validity for fall risk (retrospective and prospective -6month).				
Overall Comments:	Good Clinical Utility: Requires 30 minutes to administer test for trained raters. Training DVD available for purchase.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Clinical utility >30 minutes to administer. Shortened version of test (Mini BEST) is published with strong psychometrics and better clinical utility (15 min. to administer). Expose students to original text to understand subsections and face validity.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Excellent psychometrics: reliability, validity, predictive validity without floor or ceiling effects in PD population. Further studies are needed to determine responsiveness of this measure for assessing clinically meaningful change in balance.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Brief BESTest					
Reviewer: Cathy Harro and Erin Hussey				Date of review: May, 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input checked="" type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input checked="" type="checkbox"/> Other: Postural control strategies		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I		X			Excellent clinical utility. Limited number of studies in PD but good initial test psychometrics. Lacking any data on test retest reliability, concurrent validity, or responsiveness of measure.
II		X			Excellent clinical utility; good test psychometrics in few published studies.

					(see above, stage I)
III		X			Excellent clinical utility; good test psychometrics in few published studies. (see above, stage I)
IV		X			Excellent clinical utility; good test psychometrics in few published studies. (see above, stage I)
V				X	Lack of any research for this stage; functional level may be too low for balance activities on the test.
Overall Comments:	Excellent clinical utility: takes only 10 minutes to administer with minimal training required. Test Psychometrics: Significantly less research on this version than on the Mini BESTest or full version BESTest. Adequate ability to predict fallers. Lacking research on concurrent or discriminative validity and test responsiveness.				
Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	PD EDGE recommends MiniBEST over this Brief BESTest, based on stronger test psychometrics and more extensively researched.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Test has excellent construct validity, internal consistency, and inter-rater reliability; however research is lacking regarding responsiveness as a balance outcome measure.

REFERENCES

Duncan RP, Leddy AL et al. (2013); Comparative utility of the BESTest, Mini-BESTest, and Brief BESTest for predicting falls in individuals with Parkinson's disease: A Cohort Study. Phys Ther

Padgett PK, Jacobs JV, Kasser SL (2012). Is the BESTest at its Best? A suggested brief version based on interrater reliability, validity, internal consistency, and theoretical construct. Phys Ther 92: 1197-1207

Parkinson Edge Outcome Measures Taskforce

Instrument name: Continuous Scale Physical Functional Performance					
Reviewer: Terry Ellis PT, PhD, NCS; Laura Savella sPT and Jeffrey Hoder				Date of review: 4/30/2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input checked="" type="checkbox"/> Flexibility <input checked="" type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input checked="" type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input checked="" type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input checked="" type="checkbox"/> Reintegration to community <input checked="" type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I		X			Excellent validity and reliability in this population. Limited by extensive time needed to administer CS-PFP
II		X			Excellent validity and reliability in this population. Limited by extensive time needed to administer CS-PFP
III		X			Excellent validity and reliability in this

					population. Limited by extensive time needed to administer CS-PFP
IV			X		No studies tested the CS-PFP on subjects in H&Y Stage IV
V			X		No studies tested the CS-PFP on subjects in H&Y Stage V
Overall Comments:	<p>The CS-PFP requires patients to carry out “real life” everyday functional tasks, typically performed in the home environment, optimizing its ecological validity. For this reason, it may be considered a reasonable option to measure tasks at the Participation Level. The CS-PFP has excellent validity and reliability, as well as evidence suggesting its sensitivity to changes in function in Parkinson’s Disease: H&Y Stages 1-3. No studies have tested its validity and reliability in H&Y stages 4 and 5. The CS-PFP has limited clinical utility based on the extensive list of equipment required (much of which must be standardized in size, weight, etc.) and the space demands (ex. washing machine and dryer), the cost of training for use of this tool, and the long time administration of this test takes in a population with Parkinson’s disease (45-70 minutes) (Schenkman et al, 2002) or 40-60 min (Hearty et al, 2007). The short form CS-PFP10 has not yet been examined in a population with Parkinson’s disease, but the shorter time of administration for populations of older adults (30 minutes) may make this a more useful clinical measure in the PD population. Although the CS-PFP is an excellent test of participation with strong ecological validity; it is time consuming and has considerable requirements for equipment and space. Therefore, it is not recommended in the PD core set of measures.</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Students should be exposed to this tool given its strong psychometric properties in the elderly population and in persons with Parkinson’s disease. In addition, it is a potentially valuable tool to assess tasks at the
		X		X	

					Participation Level. However, given the formal training, equipment, and space requirements it may not be feasible to learn to administer in the academic setting.
Research Use	YES	NO			Comments
Is this tool appropriate for use in intervention research studies?	X				The CS-PFP has excellent validity and reliability, as well as evidence suggesting its sensitivity to changes in function in Parkinson's Disease: H&Y Stages 1-3. The CS-PFP is appropriate to use in research studies, where its cost, the time it takes to administer, and the training requirements may be less prohibitive. It is comprehensive in nature and has strong ecological validity.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: CTSIB - Clinical Test of Sensory Integration and Balance					
Reviewer: Deb Kegelmeyer and Alicia Esposito				Date of review: May 2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input checked="" type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				x	1 study – no difference between PD and controls
II				x	
III				x	1 study poor results, 1 study ok results
IV			x		
V				x	Floor effect, they cant do it.
Overall Comments:	Overall not separate PD from healthy age matched controls except in H&Y stage IV				

Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		x		x	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			x		

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Dynamic Gait Index					
Reviewer: Cathy Harro and Erin Hussey				Date of review: 6/12/2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input checked="" type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input checked="" type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input checked="" type="checkbox"/> Other: balance motor strategies		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				Excellent psychometrics AND excellent clinical utility; Note small % of participants across research studies were in stage I, therefore unclear if ceiling effect.
II	X				Excellent psychometrics AND excellent clinical utility

III	X				Excellent psychometrics AND excellent clinical utility
IV	X				Excellent psychometrics AND excellent clinical utility; small % of participants across studies were in stage IV, therefore unclear if floor effect
V				NA	This H Y stage not assessed in research; may be too low level for the designed balance test
Overall Comments:	<p>Psychometrics: Excellent test-retest in PD population; inter-rater reliability not tested in PD but excellent in stroke, MS, CDE. Excellent validity to detect fallers from non-fallers in multiple PD studies. Excellent concurrent validity with standardized balance measures in stroke and MS populations (Berg, ABC, Timed Walk tests), but not assessed in PD. Adequate concurrent validity with disease severity (UPDRS-motor). Established MDC in PD (2.9pts) but no MCID. Adequate discriminative ability to detect fallers from nonfallers based on established Cutoff score 19/24 across multiple studies. Measure is responsive to change following treadmill locomotor training and RAC cued step training with moderate effect size. Unclear if ceiling or floor effects for those with PD in stage 1 and 4 respectively but not evident in stages 2-3.</p>				
Overall Comments:	<p>Excellent Clinical Utility: Requires 10 minutes to administer test for trained raters. No specialized training is required except for review of test administration procedures and standardized scoring. Equipment readily available in the clinic to administer the text. No fee for use of this test.</p> <p>NOTE: Unclear if DGI vs FGA is more sensitive and responsive test in PD population at this time. More research has examined psychometrics of DGI in PD than FGA; however Face validity of FGA reflects 3 new items that may be reflective of balance problems during mobility in PD (walking on line, walking backward, and walking with eyes closed). Further research is needed to determine which measure is more responsive to severity of disease and to measure responsiveness to rehabilitation interventions.</p>				
Entry-Level Criteria	Students should learn	Students should be exposed to tool (e.g.	Comments		

	to administer tool		to read literature)		
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		X		X	Clinical utility 10 minutes to administer. Original version of Functional Gait Assessment. Has strong psychometric properties across multiple studies in PD.
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Excellent psychometrics: reliability, validity, predictive validity especially related to fall risk in PD population. A few studies on responsiveness support this as a sensitive measure to change in balance following mobility or gait interventions.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Functional Axial Rotation (FAR)					
Reviewer: Erin Hussey and Cathy Harro				Date of review: May, 2013	
ICF domain (check all that apply): <input checked="" type="checkbox"/> Body structure <input type="checkbox"/> Body function <input type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input checked="" type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Good reliability, but has insufficient data and consistency of administration to recommend
II			X		Good reliability, but has insufficient data and consistency of administration to recommend
III			X		Good reliability, but has insufficient data and consistency of administration to

					recommend
IV			X		Good reliability, but has insufficient data and consistency of administration to recommend
V				X	No data for this Hoehn Yahr stage
Overall Comments:	Tool has been reported in research using varied methods of data summary reported by the originator and other variations specific to assessment of functional neck and trunk flexibility reported by authors who have not adopted this technique. Clinical Utility: requires acquisition of marked measuring hoop and stabilizing base. Measure can be completed within 5-10 minutes of set-up.				
Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	The construct of measuring spinal ROM is valuable for students; the method for flexibility assessment using this specific tool has insufficient psychometric data or consistency at this time to recommend for entry level.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Falls Efficacy Scale					
Reviewer: Erin Hussey				Date of review: May, 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				X	Unable to recommend on the basis of current evidence in published literature.
II				X	Unable to recommend on the basis of current evidence in published literature.
III				X	Unable to recommend on the basis of current evidence in published literature.
IV				X	Unable to recommend on the basis of

					current evidence in published literature.
V				X	Not represented at Stage V
Overall Comments:	<u>Psychometrics:</u> Some evidence of responsiveness to intervention but mixed evidence relative to distinguishing fallers from non-fallers at Hoehn & Yahr Stages 2 or 3. Multiple different variations of the Falls Efficacy Scale limit comparison across studies and too few studies available specific to the Tinetti FES 10-item version. The variations include number of items (ranging from 10 to 16) and rating scale.				
Overall Comments:	<u>Clinical Utility:</u> Good efficiency as patient questionnaire (5-15 minutes)				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Unable to support at entry level for use with Parkinson disease based on current evidence and variability in format.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		

REFERENCES

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Functional Gait Assessment					
Reviewer: Cathy Harro and Erin Hussey				Date of review: May, 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input checked="" type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input checked="" type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input checked="" type="checkbox"/> Other: balance motor strategies		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				Excellent psychometrics AND excellent clinical utility; Note small % of participants across research studies were in stage I, therefore unclear if ceiling effect.
II	X				Excellent psychometrics AND excellent clinical utility.

III	X				Excellent psychometrics AND excellent clinical utility.
IV	X				Excellent psychometrics AND excellent clinical utility; small % of participants across studies were in stage IV, therefore unclear if floor effect.
V				NA	This H Y stage not assessed in research; stage V would have functional level too low to meet minimum criteria for this test.
Overall Comments:	<p><u>Psychometrics</u>: excellent reliability and concurrent validity with standardized balance and gait measures. Normative data published for healthy adults and elderly. Adequate predictive ability to identify prospective fallers (6 & 12 months). Good discriminative validity based on on vs. off medication state. Measure is responsive to change following dopamine replacement medications (large effect size). Unclear if ceiling or floor effects for those with PD in stage 1 and 4 respectively but not evident in stages 2-3. Further research is needed on FGA {MDC, fall risk prediction, responsiveness}.</p>				
Overall Comments:	<p>Excellent <u>Clinical Utility</u>: Requires 10 minutes to administer test for trained raters; however scoring criteria is more detailed and complex than DGI scoring. No specialized training is required except for review of test administration procedures and standardized scoring.</p> <p>NOTE: Unclear if DGI vs. FGA is more sensitive and responsive test in PD population at this time. Both tests have excellent psychometrics in PD. However, PD Edge task force is recommending FGA based on enhanced construct validity with revised tool and addition of 3 new test items that are reflective of balance deficits during mobility in PD (walking on line, walking backward, and walking with eyes closed). Further research is needed to determine which measure is more responsive to detect balance deficits across stages of disease and to measure responsiveness to rehabilitation interventions.</p>				
Entry-Level Criteria	Students should learn to administer	Students should be exposed to tool (e.g. to read literature)	Comments		

	tool				
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Clinical utility 10 minutes to administer. Revised version of Dynamic Gait Index. Has strong psychometric properties across multiple studies in PD.
	X				
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Excellent psychometrics: reliability, validity, predictive validity especially related to fall risk in PD population. Only one study on responsiveness that support this as a sensitive measure to change in on vs. off levodopa medications. Further research needed on MDC and MCID in PD population.

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Walker, M., Austin, A., et al. (2007). "Reference group data for the functional gait assessment." *Physical Therapy* 87(11): 1468.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Freezing of Gait Questionnaire					
Reviewer: Deb Kegelmeyer and Alicia Esposito				Date of review: May 2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I					Not in studies
II		x			
III		x			
IV		x			
V					Not in studies
Overall Comments:	Gave 3 not 4 due to lack of correlation with other measures leading some to question validity though it is not agreed that it should correlate with those measures.				

Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		x	x		
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	x				

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Four Square Step Test					
Reviewer: Deb Kegelmeier and Alicia Esposito				Date of review: 3/6/13	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			x		Not studied but based on elderly and stroke should be useful
II		x			Only one study
III		x			Only one study
IV		x			Only one study
V				x	
Overall Comments:	One well done study, no MCID or MID and no SEM				

Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		x		x	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	x				I'm not strongly recommending but I think it would be useful as long as there isn't anything better to measure multi-directional stepping in a functional way.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Fatigue Severity Scale					
Reviewer: Terry Ellis PT, PhD, NCS; Laura Savella sPT and Jeffrey Hoder				Date of review: 4/30/2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input checked="" type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input checked="" type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input checked="" type="checkbox"/> Role function <input type="checkbox"/> Shopping <input checked="" type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary: http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=1101					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I		X			Good Psychometric Properties and good clinical utility in PD
II		X			Good Psychometric Properties and good clinical utility in PD
III		X			Good Psychometric Properties and good clinical utility in PD

IV			X		Only one study of psychometrics for PD recruited pts in H&Y Stage 4 (n=3);
V			X		No studies in this H&Y stage
Overall Comments:	<p>Although there is limited volume of research examining the psychometric properties of the FSS in persons with PD, those that have been published reveal adequate psychometric properties.</p> <p>Responsiveness to exercise interventions requires additional studies.</p> <p>At this point no studies examining psychometric properties included persons in H&Y Stage 5. One study examined psychometric properties in 3 persons H&Y Stage 4.</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	The Fatigue Severity Scale requires further study in persons with PD, but can be applied to several other diagnostic groups and therefore of value for students to learn to administer. It is quick and easy to implement with excellent clinical utility. There is currently no data on cut-off scores in PD and little normative data to guide a novice clinician in the interpretation of any score on the FSS.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				The Fatigue Severity Scale may be used in research studies to discriminate among patients with PD with and without fatigue. The FSS was responsive to pharmacological intervention (Mendonca et al,

			2007), but not exercise intervention (Winward et al, 2012)
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Grace J, Mendelsohn A, et al. A comparison of fatigue measures in Parkinson's disease. *Parkinsonism Relat Disord*. 2007;13(7):443-445.

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Valderramas S, Feres AC, et al. Reliability and validity study of a Brazilian-Portuguese version of the Fatigue Severity Scale in Parkinson's disease patients. *Arq Neuropsiquiatr*. 2012;70(7):497-500.

Winward C, Sackley C, MeekC, et al. Weekly exercise does not improve fatigue levels in Parkinson's disease. *Mov Disord*. 2012;27(1):143-146.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Functional Independence Measure					
Reviewer: Deb Kegelmeyer and Alicia Esposito				Date of review: May 2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input checked="" type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers <input checked="" type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				x	No studies in PD
II				x	Only one subject in PD
III			x		
IV			x		
V			x		
Overall Comments:	Only normative data in the two studies on PD. Some issues noted in other neurologic populations in studies on them				

Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		x		x	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			x		Utility not demonstrated in PD or strongly in some other studies

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Functional Reach					
Primary Reviewer: Rosemary Gallagher, PT, DPT, GCS				Date of review: 4/2013	
Secondary Reviewer: Suzanne O' Neil, T, DPT, NCS					
ICF domain (check all that apply):					
___ Body function/structure ___X___ Activity ___ Participation					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
___ Aerobic capacity/endurance ___ Ataxia ___ Cardiovascular/pulmonary status ___ Cognition ___ Coordination (non-equilibrium) ___ Dizziness ___ Dual Tasks ___ Fatigue ___ Flexibility ___ Muscle performance ___ Muscle tone / spasticity ___ Pain ___ Sensory integration ___ Somatosensation ___ Other:		___X___ Balance/falls ___ Bed mobility ___ Gait (include stairs) ___ High Level mobility ___ Transfers ___ Wheelchair skills ___ Other:		___ Community function ___ Driving ___ Health and wellness ___ Home management ___ Leisure/Recreational activities ___ Life satisfaction ___ Quality of life ___ Reintegration to community ___ Role function ___ Shopping ___ Social function ___ Work ___ Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				X	
II		X			
III		X			
IV			X		Need more psychometrics in this stage
V				X	Not assessed in this group
Overall Comments:	<ul style="list-style-type: none"> The FR and the UPDRS show a low correlation: association: ($\emptyset = 0.39$) significance: ($X^2(1) = 2.967$) and therefore measure 				

	<p>different constructs. The FRT, in comparison to the UPDRS may be more useful in predicting the risk of postural instability during daily activity. (Jenkins et al. (2010) <i>Parkinsonism and Related Disorders</i>, 16; 409-41).</p> <ul style="list-style-type: none"> • The FR showed only moderate sensitivity (.52) and specificity (.53) in discriminating between PD fallers and non-fallers (Kerr et al. (2010) <i>Neurology</i>, 75;116-124) • Behrman et al. (2002) concluded that the FRT is effective in differentiating subjects with PD with and without a fall history, and also subjects with PD and a fall history, from healthy adults. 				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		X		X	<p>The FRT is a useful measure for use in people with PD both in the clinical and research setting. It is recommended that students be exposed to this measure.</p> <p>In a clinical setting the FR was found to be a good option to assess balance in terms of time and ease of administration. Tanji et al (2008) <i>Mo'vt disorders</i>, 23:13; 1897-1905.</p>
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				

References

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Thomas, J. I. and Lane, J. V. (2005). "A pilot study to explore the predictive validity of 4 measures of falls risk in frail elderly patients." *Archives of Physical Medicine and Rehabilitation* 86(8): 1636-1640.

Weiner, D. K., Duncan, P. W., et al. (1992). "Functional reach: a marker of physical frailty."
J Am Geriatr Soc 40(3): 203-207.

Parkinson Edge Outcome Measures Taskforce

Instrument name: History of Falls Questionnaire					
Reviewer: Suzanne O’Neal, PT, DPT, NCS and Rosemary Gallagher				Date of review: May 2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				X	
II				X	
III				X	
IV				X	
V				X	
Overall Comments:	Unable to recommended due to lack of psychometric data for the Parkinson’s population				

Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		

REFERENCES

Talbot L, Musiol R, et al. (2005). “ Falls in young, middle-aged and older community dwelling adults: perceived cause, environmental factors and injury.” BMC Public Health 5(86).

Parkinson Edge Outcome Measures Taskforce

Instrument name: Mini-BESTest					
Reviewer: Cathy Harro AND Erin Hussey				Date of review: May, 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input checked="" type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input checked="" type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input checked="" type="checkbox"/> Other: balance motor strategies		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				Excellent psychometrics AND excellent clinical utility.
II	X				Excellent psychometrics AND excellent clinical utility.
III	X				Excellent psychometrics AND excellent clinical utility.
IV	X				Excellent psychometrics AND excellent

					clinical utility.
V				NA	This H Y stage was not assessed in research; functional level too low for the designed balance test.
Overall Comments:	<u>Test Psychometrics:</u> Excellent test-retest and inter-rater reliability. Excellent concurrent validity with multiple standardized balance and mobility measures and excellent discriminative validity. Adequate ability to predict fall risk (retrospective fallers and prospective-6 & 12 month). Some discrepancy is total score used across studies. Measure is responsive to change during rehabilitation with established MDC and SEM.				
Overall Comments:	Excellent <u>Clinical Utility:</u> Requires 10-15 minutes to administer test for trained raters. Training DVD available for BESTest items, however Mini-BEST revised scoring from 4 level to 3 level with revised scoring definitions.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Clinical utility 10-15 minutes to administer. Shortened version of test (BESTest); strong psychometric characteristics across multiple studies in PD.
	X				
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Excellent psychometrics: reliability, validity, predictive validity without floor or ceiling effects in PD population. Future research should remain consistent with standardization of scoring (28 total points) outlined by primary authors.

REFERENCES

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- Duncan RP, Earhart GM (2013). Four square step test performance in people with Parkinson disease. *JNPT* 00: 1-7
- Duncan RP, Leddy AL, Cavanaugh JT et al (2012). Accuracy of fall prediction in Parkinson Disease: 6-month and 12-month prospective analyses. *Parkinsons Dis* 2012: 237673. Epub 2011 Nov 30
- Duncan RP, Earhart GM (2012). Should one measure balance or gait to best predict falls among peoples with Parkinson disease? *Parkinsons Dis* 2012: 923493
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Parkinson Edge Outcome Measures Taskforce

Instrument name: Mini Mental State Examination					
Primary Reviewer: Rosemary Gallagher, PT, DPT, GCS				Date of review: 4/2013	
Secondary Reviewer: Suzanne O’Neil, PT, DPT, NCS					
ICF domain (check all that apply): <input checked="" type="checkbox"/> Body function/structure <input type="checkbox"/> Activity <input type="checkbox"/> Participation					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input checked="" type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Is not sensitive enough to pick up mild cognitive impairment, MoCA is more sensitive and is more highly recommended.
II	X				*Strict Licensing ruling: Must purchase but cost is not prohibitive. Still a commonly used test.
III	X				

IV	X				
V			X		Not sensitive to change in people with severe dementia
Overall Comments:	MMSE subject to ceiling effects MMSE not sensitive to mild Cognitive impairment (MoCA is better)				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Use in research currently but Montreal Cognitive Assessment (MoCA) is a better tool to pick up mild cognitive impairment (MCD) often found in early stages of PD.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Montreal Cognitive Assesment (MoCA)					
Reviewer: Erin Hussey and Cathy Harro				Date of review: May, 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input checked="" type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				Strong psychometrics and good clinical utility for use in screening for cognitive decline
II	X				Strong psychometrics and good clinical utility for use in screening for cognitive decline
III	X				Strong psychometrics and good clinical utility for use in screening for cognitive decline

					decline
IV	X				Strong psychometrics and good clinical utility for use in screening for cognitive decline
V		X			Limited number of subjects have been included at Stage V. Those reported support use of tool in screening for cognitive decline.
Overall Comments:	Psychometrics: Excellent reliability, excellent correlation with MMSE and neuropsychology test batteries at screening level, excellent sensitivity for detection of mild cognitive impairment in earlier stages. Good sensitivity and adequate specificity for the screening of dementia across all stages of disease progression. Cutoff scores reported for mild cognitive impairment and for dementia.				
Overall Comments:	Clinical Utility: Efficient – requires about 10 minutes to administer.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
	X				
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Recommended for use in research particularly when cognition is being screened (ie, cognition is not a primary outcome).

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Modified Gait Efficacy Scale					
Reviewer: Alicia Esposito, PT, DPT, NCS and Deb Kegelmeyer DPT, MS, GCS				Date of review: May 2013	
ICF domain (check all that apply):4/27/13 <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input checked="" type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		
II			X		
III			X		
IV			X		
V			N/A		
Overall Comments:	PD EDGE grading: 2 due to lack of establishment of psychometric				

	properties and normative data in the PD population				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Similar self efficacy objective measures like the ABC and the FES have been more thoroughly researched and thus should be the focus of entry level education
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		Can be utilized in researched however, similar self efficacy objective measures like the ABC and the FES have been more thoroughly researched and

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Newell, et al (2011). "The modified gait efficacy scale: establishing the psychometric properties in older adults." *Physical Therapy*. 92: p318-328.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Modified Parkinson Activity Scale					
Reviewer: Suzanne O’Neal, PT, DPT, NCS				Date of review: May 2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input checked="" type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input checked="" type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		
II			X		
III			X		
IV			X		
V				X	
Overall Comments:	Good correlation with UPDRS (motor) and VAS. No ceiling effect found. Established MDC. Only one study found.				

Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?					Good psychometrics however only one study found.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		

REFERENCES

Keus S.J.H., Nieuwboer, A., et al. (2009). "Clinimetric analyses of the Modified Parkinson Activity Scale." *Parkinsonism and Related Disorders* 15(4)263-9.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Physical Performance Test- Modified					
Reviewer: Jeffrey Hoder and Terry Ellis				Date of review: 2/20/2012	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input checked="" type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary: http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=1104					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Small n in studies.
II		X			
III		X			
IV		X			
V			X		Small n in studies.
Overall Comments:	<ul style="list-style-type: none"> • Three Versions: 9-item scale and 7-item scale of PPT and a modified PPT looking at gait and balance. • A 5-point scale of (0-4) on each item • Timed ADL tasks: <ul style="list-style-type: none"> • PPT (9 items): write a sentence, place beans in a coffee can, lift 				

	<p>heavy book (PDR), don a lab coat, pick up a penny from the floor, turn 360 degrees, walk 50 ft, negotiate 9-12 steps (time and # flights).</p> <ul style="list-style-type: none"> • PPT (7 items): excludes stairclimbing • Modified PPT (9 items): progressive standing static balance (Romberg, ½ tandem, tandem), chair rise, book lift, don/doff jacket, pick up penny from floor, 360 degree turn, 50 ft walk, stair climb (time and # flights). (excludes writing and simulated eating) <ul style="list-style-type: none"> • Classification: Modified PPT: Not frail (32–36 points), mildly frail (25–31 points), or moderately frail (17–24 points). (Brown et al, 2000; 107 elderly subjects, >77 y.o.) • 10-15 minutes to administer • Equipment needed
<p>Overall Comments:</p>	<p>Parkinson’s disease: MDC = 2.5 (Paschal, 2006) looked at PPT (9 and 7 item) (Paschal, 2006; n =14; mean age = 62.4(6.3); mean time of diagnosis 6.4(6.3) years; modified Hoehn and Yahr Stages 2 and 2.5)</p> <ul style="list-style-type: none"> • Excellent psychometrics (test/retest ICC=0.818 for modified version, 0.895 for full version; interrater reliability 0.93-0.99) • Correlates with Katz Activities of daily living and Tinetti gait. • Insensitive to short term fluctuations (Paschal, 2006) <p>Modified PPT: (Tanji, 2008; n=79 total; mean age=65.5; HY stage I n=5, II=47, III=13, IV=9, V=5)</p> <ul style="list-style-type: none"> • High Interrater reliability (0.94-0.99) • Modified PPT discriminated levels of disability (total UPDRS) better than motor impairment (motor UPDRS). Good with early stages of PD, unsatisfactory with advanced disease. Correlated well with UPDRS. <p>No normative data established.</p> <p>*There are different versions of this test and their names seemed to be used interchangeably in the literature.</p> <p>Conclusion: In its various forms, the Physical Performance Test has a nice sampling of ADLs. The modified PPT needs to be further researched for individuals with PD to determine MDC, MIDC, and</p>

	any predictive value. I would not include this in our core group.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				PPT for studies looking at dexterity. Mod PPT for studies more focused on gait and balance.

Binder EF, Storandt M, Birge SJ. (1999). "The Relationship Between Psychometric Test Performance and Physical Performance in Older Adults." *Jour Gerontology Med Sci*; 54A(8):M428-M432.

Brown M, Sinacore DR, Binder EF, Kohrt WM. (2000). "Physical and Performance Measures for the identification of mild to moderate frailty." *J Gerontol A Biol Sci Med Sci*; 55(6):M350-5.

Lusardi, M. M., Pellecchia, G. L., et al. (2003). "Functional performance in community living older adults." *Journal of Geriatric Physical Therapy* 26: 14-22.

Paschal, K., Oswald, A., et al. (2006). "Test-retest reliability of the physical performance test for persons with Parkinson disease." *J Geriatr Phys Ther* 29(3): 82-86.

Reuben, D. B. and Siu, A. L. (1990). "An objective measure of physical function of elderly outpatients. The Physical Performance Test." *J Am Geriatr Soc* 38(10): 1105-1112.

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Tanji H, Gruber-Baldini AL, Anderson KE, Pretzer-Aboff I, Reich SG, Fishman PS, Weiner WJ, Shulman LM. (2008). "A comparative study of physical Performance measures in Parkinson's disease." *Mov Disord*; 23(13): 1897-905.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Multidirectional Functional Reach					
Reviewer: Alicia Esposito, and Deb Kegelmeier				Date of review: 4/30/13	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		
II			X		
III			X		
IV			X		
V			N/A		
Overall Comments:	No literature regarding its use in the PD population. The multidirectional functional reach provides a unique opportunity to measure reach in alternate directions as forward reach does not predict				

	ability to perform backward or lateral reach and therefore fall risk may not be accurately captured with a reaching test in only one direction. Decreased strength of psychometric properties for backward and lateral reach may indicate that forward reach (as per the functional reach) may be a more effective use of time				
Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		Not to be used in PD related research secondary to a lack of literature supporting its use in the PD population

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Holbein-Jenny, MA et al (2005). "Balance in personal care home residents: a comparison of the berg balance scale, the multi-directional reach test, and the activities-specific balance confidence scale." *Journal of Geriatric Physical Therapy*. 28(2): pp. 48-53.

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Newton, RA (2001). "Validity of the multi directional reach test: A practical measure for limits of stability in older adults." *Journal of Gerontology: Medical Sciences*. 56A(4): p: M248-M252.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: OPTIMAL					
Reviewer: Deb Kegelmeyer and Alicia Esposito				Date of review: May 2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input checked="" type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input checked="" type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input checked="" type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input checked="" type="checkbox"/> Home management <input checked="" type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			<input checked="" type="checkbox"/>		
II			<input checked="" type="checkbox"/>		
III			<input checked="" type="checkbox"/>		
IV				<input checked="" type="checkbox"/>	Maybe a 2 there may be some ceiling effects here though it hasn't been studied
V					Not able to do test items
Overall Comments:	Some ceiling effects were noted in other populations. No studies in PD specifically though the study may have included some individuals with				

	PD but weren't separated out for analysis				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		x		x	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			x		No studies in PD but good in those studied.

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Guccione, AA., et al. "Development and testing of a self-report instrument to measure actions: outpatient physical therapy improvement in movement assessment log (OPTIMAL)." *Physical Therapy*, v. 85 issue 6, 2005, p. 515-30.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Parkinson's Disease Activities of Daily Living Scale					
Reviewer: Alicia Esposito and Deb Kegelmeyer				Date of review: 4/30/13	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input checked="" type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Literature does not provide information as per H and Y scale and instead uses disease duration
II			X		
III			X		
IV			X		
V			X		
Overall Comments:	Further assessment of psychometric properties is necessary to determine how effective the PADLS is as a measure of self rated ADL ability. Since the PADLS does not allow individuals to rate the severity of the problem and the authors report that it should not be utilized in isolation, the question				

	remains whether the information provided by the PADLS is more effective than other already established self assessments of ADL ability. The author states that the PADLS provides health professionals a reliable index of self rated DL which takes little time to complete. The PADLS provides a single global rating and does not allow the individual to rate severity of specific problems. The PADLS is not suitable in isolation and must complement existing measures in order to provide the health professional with more comprehensive information on how patient's perceive their illness.				
Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		Not to be used in PD related research secondary to a lack of literature supporting its use

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Hobson, JP, Edwards, NI, Meara, RJ (2001). "The parkinson's disease activities of daily living scale: a new simple and brief subjective measure of disability in parkinson's disease." Clin Rehabil 15: 241-246.

Martinez-Martin, P et al (2008). "Specific patient-reported outcome measures for parkinson's disease: analysis and applications." Expert Rev. Pharmacoeconomics Outcome Res 8(4) 401-418

Parkinson Edge Outcome Measures Taskforce

Instrument name: Parkinson's Fatigue Scale					
Reviewer: Alicia Esposito, and Deb Kegelmeier				Date of review: 4/27/13	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input checked="" type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input checked="" type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input checked="" type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I		X			
II		X			
III		X			
IV		X			
V		X			
Overall Comments:	Recommended scale as per the Movement Disorders Society Recommendations for patients with Parkinson's Disease across all				

	<p>stages of H and Y or the UPDRS motor scale Good psychometric properties and clinical utility. Variability regarding scoring method is necessary in order to ensure consistency of its use.</p> <p>Whether the PFS provides an advantage over generic fatigue scales is unclear. Because fatigue is multidimensional with physical emotional, cognitive and social features, the PFS may not adequately reflect clinically significant non-physical aspects of fatigue.</p>				
Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Highly specific tool measuring fatigue only in individuals with Parkinson's Disease.
		X	X		
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				<p>Should be utilized only if measuring the PHYSICAL aspects of fatigue.</p> <p>The PFS may not provide an advantage over generic fatigue scales.</p>

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Brown, et al (2005). "The parkinson fatigue scale." Parkinsonism and related disorders. 11:49-55.

Friedman, J et al (2010). "Fatigue rating scales critique and recommendations by the movement disorders society task force on rating scales for parkinson's disease." Movement Disorders 25(7): 805-822.

Grace, J et al (2007). “A comparison of fatigue measures in parkinson’s disease.” *Parkinsonism and Related Disorders*. 13:443-445.

Martinez-Martin, P et al (2008). “Specific patient-reported outcome measures for parkinson’s disease: analysis and applications.” *Expert Rev. Pharmacoeconomics outcomes Res*. 8(4): 401-418.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Parkinson's Disease Questionnaire-8					
Reviewer: Terry Ellis PT, PhD, NCS; Laura Savella, sPT				Date of review: 4/30/13	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input checked="" type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				At least 2 studies report excellent psychometric properties in Stage 1
II	X				Numerous studies report excellent psychometric properties in Stage 2
III	X				Numerous studies report excellent psychometric properties in Stage 3
IV	X				At least 2 studies report excellent psychometric properties in Stage 4

V		<input checked="" type="checkbox"/>			One study reports on adequate to excellent convergent validity and adequate internal consistency in a sample including persons in H&Y Stage 5.
Overall Comments:	<p>Many studies do not specify number of participants in each H&Y stage but report the mean H&Y stage. The majority of evidence supporting the use of this measure is for persons in H&Y Stages 2-3. The use of the PDQ-8 is highly recommended for persons in H&Y Stages 1-4 and recommended for use in persons in H&Y Stage 5.</p> <p>This is a quick, valid, and reliable tool with adequate to excellent psychometric data supporting its use in persons with PD. It is moderately to highly responsive to changes in HRQoL with natural disease progression and with pharmacological interventions, particularly in the later H&Y stages. However, responsiveness to rehab interventions has not been adequately assessed. The PDQ-8 has no ceiling/floor effects and is adequately correlated with H&Y Stages, UPDRS scores, and disease duration.</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	This is a quick, valid, and reliable tool with adequate to excellent psychometric data supporting its use in persons with Parkinson's disease. It is a useful tool for identifying changes in quality of life over time as the disease progresses. Responsiveness to rehabilitation interventions is unknown.
	<input checked="" type="checkbox"/>				
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	<input checked="" type="checkbox"/>				This is a quick, valid, and reliable tool with adequate to excellent psychometric data supporting its use in persons

			<p>with PD. It is moderately to highly responsive to changes in HRQoL with disease progression and with pharmacological interventions, however responsiveness to rehab interventions has not been adequately assessed. The PDQ-8 has no ceiling/floor effects and is adequately correlated with H&Y Stages, UPDRS scores, and disease duration.</p>
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Tan LCS, Luo N, Nazri M, Li SC, Thumboo J. Validity and reliability of the PDQ-39 and the PDQ-8 in English-speaking Parkinson's disease patients in Singapore. *Parkinsonism & related disorders.* 2004;10(8):493-9.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Parkinson's Disease Questionnaire-39					
Reviewer: Terry Ellis, PT PhD, NCS; Laura Savella, sPT and Jeffrey Hoder				Date of review: 4/30/13	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input checked="" type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary: http://www.rehabmeasures.org/Lists/RehabMeasures/PrintView.aspx?ID=1017					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				Numerous studies report good to excellent psychometric properties
II	X				Numerous studies report good to excellent psychometric properties
III	X				Numerous studies report good to excellent psychometric properties

IV	X				Numerous studies report good to excellent psychometric properties
V	X				Numerous studies report good to excellent psychometric properties
Overall Comments:	<p>Many studies do not specify number of participants in each H&Y stage but report the mean H&Y stage. The use of the PDQ-39 is highly recommended for persons in H&Y Stages 1-5.</p> <p>The psychometric properties of the PDQ-39 have been extensively studied. There is extensive psychometric data available for this measure, the majority of which reveals adequate to excellent validity and reliability for both the PDQ-39 Summary Index score and most of the 8 domain scores (with the notable exception of the Social Support domain).</p> <p>Caution should be taken when interpreting information from the various domains of the PDQ-39, as the psychometric data suggests the domain scores are often less valid and reliable and have larger floor and ceiling effects compared with the PDQ-39 Summary Index score.</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	The PDQ-39 is a valid and reliable tool with adequate to excellent psychometric data supporting its use in persons with Parkinson's disease. It is a useful tool for identifying changes in quality of life over time with disease progression, and has shown to be responsive to both pharmacological and rehabilitation interventions
	X				
Research Use	YES		NO		Comments
Is this tool appropriate	X				The PDQ-39 is a valid and

<p>for use in intervention research studies?</p>			<p>reliable tool with adequate to excellent psychometric data supporting its use in persons with PD. It is moderately to highly responsive to changes in HRQoL with disease progression, pharmacological and rehabilitation interventions.</p> <p>The PDQ-39 Summary Index has neither ceiling nor floor effects, but some domain scores (Stigma, Social Support, and Communication) display floor effects, while others (Mobility, Social Support) have displayed ceiling effects.</p>
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Parkinson Edge Outcome Measures Taskforce

Instrument name: Profile PD					
Reviewer: Cathy Harro and Erin Hussey				Date of review: May, 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input checked="" type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input checked="" type="checkbox"/> Muscle performance <input checked="" type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input checked="" type="checkbox"/> Other: : Postural control strategies; bradykinesia		<input checked="" type="checkbox"/> Balance/falls <input checked="" type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Good but limited psychometrics in PD (only 2 published studies) and good clinical utility.
II			X		Good but limited psychometrics in PD (only 2 published studies) and good clinical utility.
III			X		Good but limited psychometrics in PD

					(only 2 published studies) and good clinical utility.
IV				X	Test has not been examined in stage 4 in the original 2 research studies.
V				X	Test has not been examined in stage 5 in original 2 research studies.
Overall Comments:	<p><u>Psychometrics</u>: Profile PD published research limited to original study by Schenkman and one other study. A single study provides evidence for excellent inter-rater reliability and adequate internal consistency in 2/3 subsections and in the total score. Good construct validity for distinguishing between stage of PD and disease severity. Lack of research on measure's responsiveness or sensitivity to change. Further research is needed before strong clinical recommendations can be made for its use in clinical practice across PD stages of disease. Further research is also needed to compare UPDRS-MS with Profile PD to support construct/criterion validity.</p>				
Overall Comments:	<p><u>Clinical Utility</u>: Good—requires 20-30 minutes to administer, no cost or specialized equipment for the test.</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Limited research on this tool but its parallel structure and face validity to UPDRS (gold standard PD measure), with focus on activity and function specific to PD makes it a good learning tool about physical therapy examination in persons with PD.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		Further research is needed on its psychometric properties in PD population before it is used as a valid outcome measure in PD intervention

			<p>research. However, this tool has good construct and face validity as comprehensive measure of PD clinical symptoms and effect on daily function; therefore further research is warranted on its test psychometrics.</p>
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Cutson T, Sloane R, Schenkman M. Development of a clinical rating scale for persons with Parkinson's disease. *Journal Of The American Geriatrics Society*. June 1999;47(6):763-764.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Purdue Pegboard Test					
Reviewer: Jeffrey Hoder and Terry Ellis				Date of review: 4/20/2012	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input checked="" type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input checked="" type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input checked="" type="checkbox"/> Other: Dexterity		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input checked="" type="checkbox"/> Other: Fine motor		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Small n in studies
II		X			
III		X			
IV		X			
V			X		Small n in studies
Overall Comments:	<p>Strong psychometrics. It is valid and reliable. It has been used in medication trials (Tan,2003), post neurosurgery (Pal,2000) and to measure dexterity during off times in PD (Brown, 1998). It was used to test dexterity during dual task performance (Proud, 2010).</p> <p>Dexterity was measured with and without a dual task in PD: dominant and</p>				

	<p>non-dominant hand with and without dual task (serial 7). (Proud, 2010). Significant difference between number of pegs placed by PD subjects versus non-PD (n=22, PD, n=22 controls; mean age=64 yrs old, mean mH&Y=2).</p> <p>Time to accomplish test: 30 seconds. Correlated strongly to UPDRS total and motor (Proud, 2010). Dexterity decreases with increased severity of disease.</p>				
Overall Comments:	<p>Cost \$110-150 (9 hole peg test wooden: \$60- Rolyan plastic \$80)</p> <p>Established norms like the 9 hole peg test. Normative data was established on factory workers who performed manual tasks for their occupation. (Tiffin, 1948).</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				

REFERENCES

Brown RG, Jahanshahi M. (1998). "An unusual enhancement of motor performance during bimanual movement in Parkinson's disease." *J Neurol Neurosurg Psychiatry*; 64:813-6.

Pal, PK, Samii, A, Kishore A, et al. (2000). "Long term outcome of unilateral pallidotomy: follow up of 15 patients for 3 years." *J Neurol Neurosurg Psychiatry*; 69:337-44.

Proud, EL, & Morris, ME. (2010). "Skilled Hand Dexterity in Parkinson's Disease: Effects of Adding a Concurrent Task." *Arch Phys Med Rehabil*; 91: 794-799.

Tan EK, Ratnagopal, P, Han, SY, Wong, MC. (2003). "Piribedil and bromocriptine in Parkinson's disease: a single-blind crossover study." *Acta Neurol Scand*; 107:202-6.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Push and Release Test					
Reviewer: Terry Ells PT, PhD, NCS; Laura Savella sPT and Jeffrey Hoder				Date of review: 4/30/2013	
ICF domain (check all that apply): ___ Body structure <u>X</u> Body function <u>X</u> Activity ___ Participation ___ environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
___ Aerobic capacity/endurance ___ Ataxia ___ Cardiovascular/pulmonary status ___ Cognition ___ Coordination (non-equilibrium) ___ Dizziness ___ Dual Tasks ___ Fatigue ___ Flexibility ___ Muscle performance ___ Muscle tone / spasticity ___ Pain ___ Sensory integration ___ Somatosensation ___ Other:		<u>X</u> Balance/falls ___ Bed mobility ___ Gait (include stairs) ___ High Level mobility ___ Transfers ___ Wheelchair skills ___ Other:		___ Community function ___ Driving ___ Health and wellness ___ Home management ___ Leisure/Recreational activities ___ Life satisfaction ___ Quality of life ___ Reintegration to community ___ Role function ___ Shopping ___ Social function ___ Work ___ Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Jacobs et al, 2006 does not report H&Y stages of subjects. It is not know if patients in H&Y 1 were included in this study
II		X			Adequate validity and reliability in H&Y Stage 2; Excellent clinical utility
III		X			Adequate validity and reliability in H&Y

					Stage 3; Excellent clinical utility
IV		X			Adequate validity and reliability in H&Y Stage 4; Excellent clinical utility
V			X		Jacobs et al, 2006 does not report H&Y stages of subjects. It is not known if patients in H&Y 5 were included in this study.
Overall Comments:	The inter-rater reliability and convergent validity of the Push and Release test has shown to be adequate in persons with PD. It has also been shown to discriminate between fallers and non-fallers with PD. It has not been adequately tested in its ability to predict fall risk in PD.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Preliminary evidence suggests the P&R Test has adequate validity and inter-rater reliability in PD, although more evidence is needed. It has shown to discriminate between fallers and non-fallers with PD. It has excellent clinical utility.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Preliminary evidence suggests the P&R Test has adequate validity and inter-rater reliability in PD, although more evidence is needed. It has shown to discriminate between fallers and non-fallers with PD. Compared to the Pull Test, it displays greater sensitivity in both “ON” and “OFF” states. Compared to the Pull Test it

			has poorer specificity in the “OFF” state but superior specificity in the “ON” state.
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REFERENCES

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Valkovic P, Brozova H, et al. Push-and-release test predicts Parkinson fallers and nonfallers better than the pull test: comparison in OFF and ON medication states. *Mov Disord.* 2008;23(10):1453-1457

Parkinson Edge Outcome Measures Taskforce

Instrument name: Pull test as done on UPDRS – Retropulsive test					
Reviewer: Deb Kegelmeyer and Alicia Esposito				Date of review: May 2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				x	
II				x	
III				x	
IV				x	
V				x	
Overall Comments:	Very weak psychometrics across studies.				

Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		x		x	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			x		

Bloem BR, Grimbergen YA, Cramer M, Willemsen M, Zwinderman AH. Prospective assessment of falls in Parkinson's disease. *Journal of neurology* 2001;248:950-958.

Foreman KB, Addison O, Kim HS, Dibble LE. Testing balance and fall risk in persons with Parkinson disease, an argument for ecologically valid testing. *Parkinsonism Relat Disord* 2011;17:166-171.

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Valkovic P, Brozova H, Botzel K, Ruzicka E, Benetin J. Push-and-release test predicts Parkinson fallers and nonfallers better than the pull test: comparison in OFF and ON medication states. *Mov Disord* 2008;23:1453-1457.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Rush Dyskinesia Scale					
Reviewer: Suzanne O’Neal, and Rosemary Gallagher				Date of review: 6/25/2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		
II			X		
III			X		
IV			X		
V				X	This stage not included in Goetz et al study
Overall Comments:	Main strengths: Assesses functional disability of dyskinesia and clinimetric testing revealed relatively high inter-rater and intrarater				

	reliability. Weaknesses: Assessments are done at one time point therefore may not reflect the rest of day. Patient may also exhibit more or less dyskinesias in the clinic versus at home. The assessment is also confined to an observer rating of motor disability during specified tasks and may not capture disability related to other tasks. The various types of dyskinesias may present at different times of day and/or may depend on medication cycle.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	The weak psychometric properties, particularly poor sensitivity to changes over time, do not suggest recommendations for teaching in an educational setting. Better psychometric properties have been found with the Unified Dyskinesia Rating.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		Goetz et al, 2013 found poor sensitivity to dyskinesia severity change over time.

REFERENCES

Colosimo C., Martinez-Martin P., et al. (2010). "Task Force Report on Scales to Assess Dyskinesia in Parkinson's Disease: Critique and Recommendations." *Movement Disorders* 25(9):1131-1142.

Goetz C.G, Stebbins G.T., et al. (1994). "Utility of an Objective Dyskinesia Rating Scale for Parkinson's Disease: Inter- and Intrarater Reliability Assessment." *Movement Disorders* 9(4):390-4.

Goetz C.G., Stebbins G.T., et al. (2013). "Which Dyskinesia Scale Best Detects Treatment Response?" *Movement Disorders* 28(3):341-6.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Self-Assessment Parkinson's Disease Disability Scale					
Reviewer: Suzanne O'Neal, and Rosemary Gallagher				Date of review: 5/1/2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input checked="" type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input checked="" type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input checked="" type="checkbox"/> Other: ADLs		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input checked="" type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I		X			
II		X			
III		X			
IV		X			
V		X			
Overall Comments:	Excellent consistency, excellent correlation with the Sickness Impact				

	Scale (SIC68). Strong relationship with H&Y stages. Good correlation with the Beck's Depression Inventory and the Mini-Mental State Examination				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		

REFERENCES

Biemans MA, Dekker J, van der Woude LH. (2001). "The Internal Consistency and Validity of the Self-assessment Parkinson's Disease Disability Scale". Clin Rehabil. 2001 Apr;15(2):221-8.

Brown R, MacCarthy B, et al. (1989). "Accuracy of Self-Reported Disability in Patients with Parkinsonism". Arch Neurol. 1989; 46:955-959.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Exercise Self Efficacy Scale					
Reviewer: Deb Kegelmeyer and Alicia Esposito				Date of review: May 2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input checked="" type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input checked="" type="checkbox"/> Other: self efficacy		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input checked="" type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			x		
II			x		
III			x		
IV			x		
V			x		
Overall Comments:	No studies in PD, good psychometrics in other populations				

Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		x		x	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	x				Unless other better studied scale exists

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Shaughnessy M, Michael K, Resnick B. Impact of treadmill exercise on efficacy expectations, physical activity, and stroke recovery. *J Neurosci Nurs* 2012;44:27-35.

Resnick B, Galik E, Gruber-Baldini AL, Zimmerman S. Perceptions and performance of function and physical activity in assisted living communities. *J Am Med Dir Assoc* 2010;11:406-414.

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Resnick B. A longitudinal analysis of efficacy expectations and exercise in older adults. *Res Theory Nurs Pract* 2004;18:331-344.

Resnick B, Luisi D, Vogel A, Junaleepa P. Reliability and validity of the self-efficacy for exercise and outcome expectations for exercise scales with minority older adults. *J Nurs Meas* 2004;12:235-247.

Resnick B, Jenkins LS. Testing the reliability and validity of the Self-Efficacy for Exercise scale. *Nurs Res* 2000;49:154-159.

Bean JF, Bailey A, Kiely DK, Leveille SG. Do attitudes toward exercise vary with differences in mobility and disability status? - a study among low-income seniors. *Disabil Rehabil* 2007;29:1215-1220.

Parkinson Edge Outcome Measures Taskforce

Instrument name: SF-12 version 2 (SF-12v2)					
Reviewer: Erin Hussey and Cathy Harro				Date of review: May, 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input type="checkbox"/> Activity <input type="checkbox"/> Participation <input checked="" type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input checked="" type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input checked="" type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Lack of sufficient data on SF-12v2 following substantive revision. Clinical utility is limited by permission and fee for access and use.
II			X		Lack of sufficient data on SF-12v2 following substantive revision. Clinical utility is limited by permission and fee for access and use.

III			X		Lack of sufficient data on SF-12v2 following substantive revision. Clinical utility is limited by permission and fee for access and use.
IV			X		Lack of sufficient data on SF-12v2 following substantive revision. Clinical utility is limited by permission and fee for access and use.
V			X		Lack of sufficient data on SF-12v2 following substantive revision. Clinical utility is limited by permission and fee for access and use.
Overall Comments:	<p>Tool is a generic health-related quality of life tool that is a shortened form of the 36-item SF-36v2.</p> <p><u>Psychometrics:</u> Tool was revised and new normative data published in 2009. The revisions were substantive, thus previous data supporting and criticizing SF-12v1 could not be applied to this measure. Currently, there is a lack of published studies documenting psychometric properties for use with Parkinson Disease to determine if the criticisms for SF-12v1 have been remedied. In other US demographic populations, evidence indicates there is adequate to excellent psychometrics relative to reliability, internal consistency, discrimination and concurrent validity.</p>				
Overall Comments:	<p><u>Clinical Utility:</u> Access to tool is somewhat limited due to registration process required with a fee applied to acquire training manual and for specific uses. Administration of the 12-item survey is efficient (5 minutes). Survey administered as a questionnaire and can be self-administered or completed through examiner interview.</p>				
	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	May be cost prohibitive; limited evidence to support use at entry level for this population.
		X		X	

Research Use	YES	NO	Comments
Is this tool appropriate for use in intervention research studies?		X	Based on general population data, the revised version of this item may prove to be a useful screening tool in research. At this time, there is inadequate evidence involving subjects Parkinson Disease to recommend use in research.

REFERENCES

Cheak-Zamora, N. C., Wyrwich, K. W., & McBride, T. D. (2009). Reliability and validity of the SF-12v2 in the Medical Expenditure Panel Survey. *Quality of Life Research*, 18 (6), 727–735.

Jakobsson, U., Westergren, A., Lindskov, S., & Hagell, P. (2012). Construct validity of the SF-12 in three different samples. *Journal Of Evaluation In Clinical Practice*, 18(3), 560-566. doi:10.1111/j.1365-2753.2010.01623.x

Lindskov, S., Westergren, A., Hagell, P. (2007). A controlled trial of an educational programme for people with Parkinson's disease. *Journal of Clinical Nursing*, 16 (11C):368–376.

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Ware J., Jr., Kosinski, M. Turner-Bowker, D.M. Gandek, B. (2002). User's manual for the SF-12v2 Health Survey Quality Metric Inc, Lincoln, RI. (PD EDGE reviewer unable to access this manual)

Parkinson Edge Outcome Measures Taskforce

Instrument name: SF-12 version 2 (SF-12v2)					
Reviewer: Erin Hussey and Cathy Harro				Date of review: May, 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input type="checkbox"/> Activity <input type="checkbox"/> Participation <input checked="" type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input checked="" type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input checked="" type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Lack of sufficient data on SF-36v2 following substantive revision. Clinical utility is limited by permission and fee for access and use.
II			X		Lack of sufficient data on SF-36v2 following substantive revision. Clinical utility is limited by permission and fee for access and use.

III			X		Lack of sufficient data on SF-36v2 following substantive revision. Clinical utility is limited by permission and fee for access and use.
IV			X		Lack of sufficient data on SF-36v2 following substantive revision. Clinical utility is limited by permission and fee for access and use.
V			X		Lack of sufficient data on SF-36v2 following substantive revision. Clinical utility is limited by permission and fee for access and use.
Overall Comments:	<p>This is a generic health-related quality of life tool.</p> <p>Based on consensus review of an expert panel from a Movement Disorders group, the SF-36v2 is a recommended (but not highly recommended) measure for use in Parkinson Disease. This consensus was made primarily on the basis of data supporting the use of SF-36v1.</p> <p><u>Psychometrics:</u> Tool was published in a revised manual in 2000 and new normative data was published in 2009. The revisions were substantive, thus previous data supporting and criticizing SF-36v1 could not be directly applied to this version 2 of the measure. Currently, there is a lack of published studies documenting psychometric properties for use with Parkinson Disease to determine if the criticisms for SF-36v1 have been remedied. In other US demographic populations, evidence indicates there is adequate to excellent psychometrics relative to reliability, internal consistency, discrimination and concurrent validity.</p>				
Overall Comments:	<p><u>Clinical Utility:</u> Access to tool is somewhat limited due to registration process required with a fee applied to acquire training manual and for specific uses. Administration of the 36-item survey is efficient (10-15 minutes). Survey administered as a questionnaire and can be self-administered or completed through examiner interview.</p>				
	Students should learn to administer tool	Students should be exposed to tool (e.g. to read literature)	Comments		

Should this tool be required for entry level curricula?	YES	NO	YES	NO	May be cost prohibitive; limited evidence to support use at entry level for this population.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		Based on general population data, the revised version of this item may prove to be a useful screening tool in research. At this time, there is inadequate evidence involving subjects Parkinson Disease to recommend use in research.

REFERENCES

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- Brown, C.A., Cheng, E.M., Hays, R.D., Vassar, S.D., Vickrey, B.G. (2009). SF-36 includes less Parkinson Disease (PD)-targeted content but is more responsive to change than two PD-targeted health-related quality of life measures. *Quality of Life Research*. 18:1219-1237.
- Leonardi M, Raggi A, Pagani M, Carella F, Soliveri P, Albanese A, Romito L. (2012). Relationships between disability, quality of life and prevalence of nonmotor symptoms in Parkinson's disease. *Parkinsonism & Related Disorders*. 18(1): 35-39.
- Martinez-Martin P., Jeukens-Visser M., Lyons K.E., et al. (2012). Health-related quality-of-life scales in Parkinson's disease: Critique and recommendations. *Mov. Disord*. 2011;26(13):2371–2380. doi:10.1002/mds.23834
- Nilsson MG, Drake AM, Hagell P. (2010). Assessment of fall-related self-efficacy and activity avoidance in people with Parkinson's disease. *BMC Geriatrics*.10:78
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Parkinson Edge Outcome Measures Taskforce

Instrument name: Single leg stance or “One-legged stance test”					
Reviewer: Jeffrey Hoder and Terry Ellis				Date of review: 4/20/2012	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input checked="" type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Extensive normative data has been established with this test.
II			X		
III			X		
IV				X	
V				X	
Overall Comments:	Instructions: Stand on the preferred leg with eyes open and hands on hips, looking straight ahead. The trial was started when the foot left				

	the ground. The trial was stopped when (1) the subject's foot touched the ground or stance leg, (2) the arms swung away from their hips, or (3) reached a maximal time of 30 seconds. (Jacobs, 2006)				
Overall Comments:	<p>Cut-off time of 10 seconds provided the highest sensitivity and specificity for history of one or more falls (75% of those that had a h/o falls exhibited OLS time of 10 seconds or less (high sensitivity); 74% of non-fallers exhibited OLS time of > 10 seconds (high specificity). 67 subjects with PD with 65 age-matched controls (mean age of 67+-12 years; PD 10+-6 yrs) (Smithson, 1998).</p> <p>For the one-leg stance test, a cut-off time of 10 s provided the best combination of sensitivity and specificity for fall history in the PD subjects, consistent with a previous report by Smithson et al who reported that PD subjects with a history of falling, on average, exhibited one-leg stance times of under 10 s, and PD subjects without a history of falling, on average, exhibited one-leg stance times of about 15 s. (Jacobs, 2006).</p> <p>OLS was not significantly associated with falls in 71 subjects with iPD. (Mak, 2009).</p> <p>Significantly shorter OLS time (40%) than age-matched controls in 72 subjects with PD (12 single fallers, 13 multiple fallers) and 74 controls (6 fallers). No significant difference in OLS time in PD fallers vs. non-fallers. (Mak, 2010).</p> <p>*Point of concern: the Average time of SLS for age 80 in healthy older adults is < 10 seconds (Springer, 2007). This may not be a valid predictor of falls in individuals over age 80. Follow up studies after Jacobs (Mak, 2009,2010) failed to identify 10 seconds as an accurate cut-off to discriminate fallers from non-fallers.</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be	YES	NO	YES	NO	

required for entry level curricula?		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				

Jacobs, JV, Horak, FB, Tran, VK, & Nutt, JG. (2006). "Multiple balance tests improve the assessment of postural stability in subjects with Parkinson's disease." *J Neurol Neurosurg Psychiatry*. March; 77(3): 322-326.

Mak, MKY & Pang, MYC. (2009). "Balance confidence and functional mobility are independently associated with falls in people with Parkinson's disease." *J Neurol*; 256:742-749.

Mak, KY & Pang, MYC. (2010). "Parkinsonian single fallers versus recurrent fallers: different fall characteristics and clinical features." *J Neurol* 257:1543-1551.

Smithson F, Morris ME, Iansek R. Performance on clinical tests of balance in Parkinson's disease. *Phys Ther* 1998;78:577-92.

Springer, BA, Marin, R, Cyhan, T, Roberts, H, & Gill, NW. (2007). "Normative values for the unipedal stance test with eyes open and closed." *J Geriatr Phys Ther*; 30(1):8-15.

Parkinson Edge Outcome Measures Taskforce

Instrument name: St. Louis University Mental Status Exam					
Reviewer: Terry Ellis PT, PhD, NCS; Laura Savella sPT and Jeffrey Hoder				Date of review: 4/30/13	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input checked="" type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary: None					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		No studies in persons with PD ; excellent validity and reliability in an older adult, veteran population.
II			X		No studies in persons with PD; excellent validity and reliability in an older adult, veteran population.
III			X		No studies in persons with PD; excellent

					validity and reliability in an older adult, veteran population.
IV			X		No studies in persons with PD; excellent validity and reliability in an older adult, veteran population.
V			X		No studies in persons with PD; excellent validity and reliability in an older adult, veteran population.
Overall Comments:	No studies have analyzed psychometric properties of the SLUMS in a population with Parkinson's Disease. A majority of studies examining this measure in veteran and older adults, over 60 years, revealed good to excellent psychometric properties.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	This measure is useful in the older adult population and may be more sensitive than the MMSE at detecting Mild Neurocognitive Impairments in that population; and therefore may be appropriate for students to be exposed to. However, it has not been tested in patients with PD.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		The psychometric properties of the tool have not been studied in patients with PD.

REFERENCES

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dementia and mild neurocognitive disorder-A pilot study. *Am J Geriatr Psychiatry*. 2006;14(11):900–910.

Cao L, Hai S, Lin X, Shu D, Wang S, Yue J. The Saint Louis University Mental Status Examination, the Mini-Mental State Examination, and the Montreal Cognitive Assessment in detection of cognitive impairment. *Journal of the American Medical Directors Association*. 2012;13(7):626–629.

Cummings-Vaughn L, Cruz-Oliver D, Malmstrom T, Tumosa N, Morley J. The Veterans Affairs Medical Center Saint Louis University Mental Status Examination comparison study. *Alzheimer's & Dementia*. 2012;8(4):P485.

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Cruz-Oliver, D., Malmstrom, T. K., Allen, C. M., Tumosa, N., & Morley, J. E. (2012). The veterans affairs Saint Louis University Mental Status Exam (SLUMS Exam) and the Mini-Mental Status Exam as predictors of mortality and institutionalization. *The Journal of Nutrition, Health, & Aging*, 16(7), 636–641.

Brown DH, Lawson LE, McDaniel WF, Wildman RW. (2012). Relationships between the Nevada Brief Cognitive Assessment Instrument and the St. Louis University Mental Status Examination in the Assessment of Disability Applicants 1,2. *Psychological Reports*, 111(3),939–951.

Raji MA, Tang RA, Heyn PC, et al. Screening for cognitive impairment in older adults attending an eye clinic. *Journal of the National Medical Association*. 2005;97(6):808–14.

Stewart S, O'Riley A, Edelstein B, Gould C. A preliminary comparison of three cognitive screening instruments in long-term care: the MMSE, SLUMS, and MoCA. *Clinical Gerontologist*. 2012;35(1):57–75.

Morley JE, Tumosa N. Saint Louis University Mental Status Examination (SLUMS). *Aging Successfully*. 2002;XII:4.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Step-Up Test					
Reviewer: Suzanne O'Neal and Rosemary Gallagher				Date of review: 6/25/2013	
ICF domain (check all that apply): ___ Body structure ___ X Body function ___ X Activity ___ Participation ___ environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
___ Aerobic capacity/endurance ___ Ataxia ___ Cardiovascular/pulmonary status ___ Cognition ___ Coordination (non-equilibrium) ___ Dizziness ___ Dual Tasks ___ Fatigue ___ Flexibility ___ Muscle performance ___ Muscle tone / spasticity ___ Pain ___ Sensory integration ___ Somatosensation ___ Other:		___ X Balance/falls ___ Bed mobility ___ Gait (include stairs) ___ High Level mobility ___ Transfers ___ Wheelchair skills ___ Other:		___ Community function ___ Driving ___ Health and wellness ___ Home management ___ Leisure/Recreational activities ___ Life satisfaction ___ Quality of life ___ Reintegration to community ___ Role function ___ Shopping ___ Social function ___ Work ___ Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		
II			X		
III			X		
IV			X		
V			X		
Overall Comments:	<ul style="list-style-type: none"> No studies with use of this test with the PD population. Only one study done with use on stroke population, however good psychometric properties in reliability. Not to be confused with the Step Test 				

Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?					Insufficient data available in the PD population to recommend for entry level curricula
		x		x	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			x		Insufficient data available in the PD population to recommend for use in research

REFERENCES

Tyson, S., DeSouza, L.(2004). "Reliability and validity of functional balance tests post stroke". Clinical Rehabilitation 2004;18(8):916-923.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Stops Walking While Talking Test					
Reviewer: Jeffrey Hoder and Terry Ellis				Date of review: 4/20/2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input checked="" type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				X	
II				X	
III				X	
IV				X	
V				X	
Overall Comments:	Poor sensitivity in identifying fallers in PD without cognitive impairment. Further research needs to be done to see if there is value in this test for individuals with PD with cognitive impairment or				

	depression.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Not related to PD. There may be some value related to elderly with MCI.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		

REFERENCES

Lundin-Olsson, 1997: 58 institutionalized residents, cognitive impairment and depression were not excluded. Subjects were able to walk with or without aids, 12 stopped walking when beginning a conversation. 10 fell during 6 mo follow up. Walk from home room to assessment, did they stop walking when talking. Observation. Specificity = 95%, sensitivity = 48%. Positive predictive value = 83%; negative predictive value = 76%.

Bloem, 2000: 38 iPD subjects, 35 controls. SWWT was abnormal in 4 patients (2 fallers, 2 non-fallers). 14 iPD reported 119 falls, 5 controls reported 7 falls. Within PD group: SWWT poor sensitivity (14.3% and adequate specificity (91.7%) Poor predictor of falls in PD. Patients with cognitive impairment were excluded.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Supine to Stand Test					
Reviewer: Terry Ellis PT, PhD, NCS; Laura Savella sPT and Jeffrey Hoder				Date of review: 4/30/2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				X	No data on the validity or reliability of this measure for persons with PD.
II				X	No data on the validity or reliability of this measure for persons with PD.
III				X	No data on the validity or reliability of this measure for persons with PD.
IV				X	No data on the validity or reliability of this measure for persons with PD.

					this measure for persons with PD
V				X	No data on the validity or reliability of this measure for persons with PD.
Overall Comments:	Only one study (Alexander et al, 2000) has examined test-retest reliability in disabled geriatrics population. Although some normative data exists for persons with PD, there are no studies examining validity or reliability of this measure in this population. Evidence of ceiling effects in the early stages (H&Y 1-2.5).				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	There is limited evidence investigating the validity or reliability of this tool in persons with PD.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		There is limited evidence investigating the validity or reliability of this tool in persons with PD.

REFERENCES

Alexander NB, Galecki AT, Nyquist LV, Hofmeyer MR, Grunawalt JC, Grenier ML, Medell JL. Chair and bed rise performance in ADL-impaired congregate housing residents. *J Am Geriatr Soc.* 2000;48(5):526-533.

Schenkman M, Morey M, Kuchibhatla M. Spinal flexibility and balance control among community-dwelling adults with and without Parkinson's disease. *J Gerontol A Biol Sci Med Sci.* 2000; 55(8):M441-5.

Schenkman M, Ellis T, Christiansen C, Barón AE, Tickle-Degen L, Hall DA, Wagenaar R, Profile of functional limitations and task performance among people with early- and middle-stage Parkinson Disease. *Phys Ther.* 2011;91(9):1339-1354.

Schenkman M, Cutson TM, Kuchibhatla M, Chandler J, Pieper CF, Ray L Laub KC. Exercise to improve spinal flexibility and function for people with Parkinson's disease: a randomized,

controlled trial. *J Am Geriatr Soc.* 1998;46(10):1207-16.

Whitson HE, Sanders LL, Pieper CF, Morey MC, Oddone EZ, Gold DT, Cohen HJ. Correlation between symptoms and function in older adults with comorbidity. *J Am Geriatr Soc.* 2009;57(4):676-82.

Morey MC, Schenkman M, Studenski SA, et al. Spinal-flexibility-plus-aerobic versus aerobic-only training: effect of a randomized clinical trial on function in at-risk older adults. *J Gerontol A Biol Sci Med Sci.* 1999;54:M335–342.

Gold DT, Shipp KM, Pieper CF, et al. Group treatment improves trunk strength and psychological status in older women with vertebral fractures: results of a randomized, clinical trial. *J Am Geriatr Soc.* 2004;52:1471–1478.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Timed Backwards Walk					
Reviewer: Suzanne O'Neal and Rosemary Gallagher				Date of review: May 2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		
II			X		
III			X		
IV			X		
V				X	
Overall Comments:	Correlated with the Berg Balance scale and UPDRS				

Overall Comments:					
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		x		x	Although it has predictive ability to determine walking difficulty in high-functioning adults, there are other tests that are far superior in predicting falls (more multi-dimensional tests such as the Mini-BESTest).
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			x		

REFERENCES

Duncan R., Earhart G., (2012) “Should One Measure Balance or Gait to Best Predict Falls among People with Parkinson Disease?”. Parkinson’s Disease. Epub 2012 Oct 31.

Hackney M., Earhart G., (2009).”Backward Walking in Parkinson Disease”. Movement Disorders 24(2):218-223.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Timed Up and Go (TUG)					
Primary Reviewer: Rosemary Gallagher, PT, DPT, GCS				Date of review: 4/2013	
Secondary Reviewer: Suzanne O'Neil, PT, DPT, NCS					
ICF domain (check all that apply):					
___ Body function/structure <u> X </u> Activity ___ Participation					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
___ Aerobic capacity/endurance		<u> X </u> Balance/falls		___ Community function	
___ Ataxia		___ Bed mobility		___ Driving	
___ Cardiovascular/pulmonary status		<u> X </u> Gait (include stairs)		___ Health and wellness	
___ Cognition		___ High Level mobility		___ Home management	
___ Coordination (non-equilibrium)		<u> X </u> Transfers		___ Leisure/Recreational activities	
___ Dizziness		___ Wheelchair skills		___ Life satisfaction	
___ Dual Tasks				___ Quality of life	
___ Fatigue				___ Reintegration to community	
___ Flexibility				___ Role function	
___ Muscle performance				___ Shopping	
___ Muscle tone / spasticity				___ Social function	
___ Pain				___ Work	
___ Sensory integration					
___ Somatosensation					
___ Other:		___ Other:		___ Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				Although no ceiling effects are noted for the TUG in people with PD, most studies include Stage 1 in their psychometrics. Nocera et al, 2013, states that the predictive value of the TUG in people with PD is in line with that of healthy older adults.
II	X				

III	X				
IV				X	
V				NA	Not tested in this stage
Overall Comments:	Must be ambulatory but may use an assistive device				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Timed Up and Go Cognitive and Manual					
Primary Reviewer: Rosemary Gallagher, PT, DPT, GCS				Date of review: 11/2013	
Secondary Reviewer: Suzanne O'Neil, PT, DPT, NCS					
ICF domain (check all that apply): <input type="checkbox"/> Body function/structure <input checked="" type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input checked="" type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input checked="" type="checkbox"/> Role function <input type="checkbox"/> Shopping <input checked="" type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				X	Not tested in this population
II			X		
III			X		
IV			X		
V				X	Not tested in this population
Overall Comments:	<ul style="list-style-type: none"> • Good psychometrics for the TUG-Cog and TUG Manual in a healthy elderly population, and the TUG has been shown to be a 				

	<p>reliable and valid tool to use in individuals with PD. Despite lack of extensive psychometric data for the TUG Cog and TUG Manual in individuals with PD, recommend these tests as a dual task measure for those with PD secondary to the reliability and validity of the TUG, TUG Cog and TUG Manual in the healthy elderly population. More research needs to be performed on these measures on people with PD.</p> <ul style="list-style-type: none"> In PD, changes in gait under dual task conditions are proportional to the complexity of the secondary task performed. (Campbell et al 2003) 				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		X	X		
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Tinetti Performance Oriented Mobility Assessment (POMA) / Tinetti Mobility Test					
Reviewer: Erin Hussey and Cathy Harro				Date of review: May, 2013	
ICF domain (check all that apply): <input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers (sit-stand) <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Good clinical utility; insufficient evidence using this stage to rule out ceiling effect.
II		X			Good clinical utility; Adequate to excellent psychometrics to support use as a screening tool for falls risk; Insufficient evidence to support for use to detect

					responsiveness.
III		X			Good clinical utility; Adequate to excellent psychometrics to support use as a screening tool for falls risk; Insufficient evidence to support for use to detect responsiveness.
IV		X			Good clinical utility; Adequate to excellent psychometrics to support use as a screening tool for falls risk; Insufficient evidence to support for use to detect responsiveness.
V				X	Insufficient evidence using this stage to rule out floor effect
Overall Comments:	Psychometrics: well-established cut score that is comparable across elderly populations with and without Parkinson Disease. Adequate to excellent concurrent validity with gait speed and other balance indicators. Published evidence demonstrates mixed results and lack of strength of evidence or expert consensus relative to responsiveness and the gait component of the measure demonstrates ceiling effect.				
Overall Comments:	Clinical Utility: Efficient screening tool, completed in about 10 minutes				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Tool is useful as a screening tool for falls risk across multiple populations, including mid-stages of Parkinson Disease.
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		Compared to other options for balance research, this tool shows consistency of cut-off score, but lacks strength for SEM, MDC, and MCID, thus likely to not provide robust

			<p>responsiveness data.</p> <p>Relative to other options for gait assessment, this tool is less discriminating, more prone to ceiling effect, and less responsive.</p>
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Parkinson Edge Outcome Measures Taskforce

Instrument name: Trunk Impairment Scale (TIS)					
Primary Reviewer: Rosemary Gallagher, PT, DPT, GCS				Date of review: 2/2013	
Secondary Reviewer: Suzanne O’Neal, PT, DPT, NCS					
ICF domain (check all that apply):					
___X___ Body function/structure ___X___ Activity _____ Participation					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
___ Aerobic capacity/endurance		___X___ Balance/falls		___ Community function	
___ Ataxia		___ Bed mobility		___ Driving	
___ Cardiovascular/pulmonary status		___ Gait (include stairs)		___ Health and wellness	
___ Cognition		___ High Level mobility		___ Home management	
___X___ Coordination (non-equilibrium)		___ Transfers		___ Leisure/Recreational activities	
___ Dizziness		___ Wheelchair skills		___ Life satisfaction	
___ Dual Tasks				___ Quality of life	
___ Fatigue				___ Reintegration to community	
___ Flexibility				___ Role function	
___X___ Muscle performance				___ Shopping	
___ Muscle tone / spasticity				___ Social function	
___ Pain				___ Work	
___ Sensory integration					
___ Somatosensation					
___ Other:		___ Other:		___ Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		
II			X		
III			X		
IV			X		
V				X	
Overall Comments:	The small sample size (PD n=26, Controls n=26) with small numbers of PD in stages II=IV (Stage II=7, stage 2.5= 7, stage III= 11, stage				

	IV=1), make it difficult to recommend an ideal stage for use of this measure.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
	YES	NO	YES	NO	
Should this tool be required for entry level curricula?		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		

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Verheyden, G., Vereeck, L., et al. (2006). "Trunk performance after stroke and the relationship with balance, gait and functional ability." *Clinical Rehabilitation* 20(5): 451-458. [Find it on PubMed](#)

Verheyden G., Willems A., Ooms L., Nieuwboer A. (2007). Validity of the Trunk Impairment Scale as a measure of trunk performance in people with Parkinson's disease. *Arch Phys Med Rehabil*, 88, 1304-1308. Available from Ovid Medline or CINAHL.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Unified Dyskinesia Rating Scale (UDysR Scale)					
Reviewer: Cathy Harro and Erin Hussey				Date of review: June 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input checked="" type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input checked="" type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input checked="" type="checkbox"/> Other: dyskinesia, dystonias		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input checked="" type="checkbox"/> Other: ADLs		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I				X	Not tested in participants in stage I in published studies.
II			X		Fair clinical utility (15+ minutes and training required); limited research on test psychometrics; only a few studies from original research team who developed the instrument.

III			X		Fair clinical utility; limited research on test psychometrics; only a few studies from original research team who developed the instrument.
IV			X		Fair clinical utility; limited research on test psychometrics; only a few studies from original research team who developed the instrument.
V				X	Test has not been examined in stage 5 PD.
Overall Comments:	<p>UDysR Scale has only been tested by original research team (Goetz et al, team of international movement disorder experts), with support for excellent inter-rater, intra-rater and test retest reliability; as well as excellent internal consistency. Goetz also supports temporal stability of UDysRS score during ON or OFF times of medications.</p> <p>Research is lacking regarding concurrent validity, discriminative validity and content validity, no MDC. Only one study on responsiveness to drug trial.</p> <p>Further research is needed before strong clinical recommendations can be made for its use in clinical practice across PD stages of disease to assess presence and effects of dyskinesia during ON and OFF states in persons with PD. Currently this tool has more direct research application as potentially sensitive measure to detect change (positive or negative) in dyskinesia during drug/ surgical/or exercise based interventions.</p>				
Overall Comments:	Clinical Utility: requires 15 minutes to administer in face to face interview and direct observation. Training is required and available for fee with DVD-based training tape, including a certification exercise.				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Limited research on this tool at this time; inadequate to support its use in entry level DPT education.
		X		X	
Research Use	YES		NO		Comments

Is this tool appropriate for use in intervention research studies?	**	X	<p>Further research is needed on its psychometric properties in PD population before it is used as outcome measure in PD rehabilitation research.</p> <p>**Has good potential as a reliable measure with good face validity to assess dyskinesia in interdisciplinary studies (drug trials, DBS trials, etc...)</p>
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Parkinson Edge Outcome Measures Taskforce

Instrument name: UPDRS					
Reviewer: Alicia Esposito and Deb Kegelmeyer				Date of review: 4/30/13	
ICF domain (check all that apply): <input checked="" type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input checked="" type="checkbox"/> Cognition <input checked="" type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input checked="" type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input checked="" type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				
II	X				
III	X				
IV	X				
V	X				
Overall Comments:	Recommended by the Movement Disorder Society Excellent psychometric properties as compared to the original UPDRS. Good clinical utility with updated versions as more items can be				

	completed in questionnaire form without need for clinician. Free for personal.individual use but increased cost when utilized for research purposes				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		X	X		
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Gold standard for research purposes

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Gallagher, D. et al (2012). “Validation of the MDS UPDRS part I for non motor symptoms in parkinson’s disease.” *Movement Disorders* 27(1) 79-83.

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society-sponsored revision of the unified parkinson’s disease rating scale: (MDS-UPDRS).” *Movement Disorders* 5(9) 1190-1194.

Parkinson Edge Outcome Measures Taskforce

Instrument name: Walk While Talking Test					
Primary Reviewer: Rosemary Gallagher, PT, DPT, GCS				Date of review: 4/2013	
Secondary Reviewer: Suzanne O’Neal, PT, DPT, NCS					
ICF domain (check all that apply):					
___X___ Body function/structure ___X___ Activity ___X___ Participation					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
___ Aerobic capacity/endurance		_X_ Balance/falls		_X_ Community function	
___ Ataxia		___ Bed mobility		___ Driving	
___ Cardiovascular/pulmonary status		_X_ Gait (include stairs)		___ Health and wellness	
X Cognition		___ High Level mobility		___ Home management	
___ Coordination (non-equilibrium)		___ Transfers		___ Leisure/Recreational activities	
___ Dizziness		___ Wheelchair skills		___ Life satisfaction	
X Dual Tasks				___ Quality of life	
___ Fatigue				_X_ Reintegration to community	
___ Flexibility				___ Role function	
___ Muscle performance				___ Shopping	
___ Muscle tone / spasticity				_X_ Social function	
___ Pain				___ Work	
___ Sensory integration					
___ Somatosensation					
___ Other:		___ Other:		___ Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Lack of psychometric data in PD
II			X		Lack of psychometric data in PD
III			X		Lack of psychometric data in PD
IV			X		Lack of psychometric data in PD
V				X	Must be ambulatory
Overall Comments:	<ul style="list-style-type: none"> Verghese et al, 2002: WWT is highly predictive of falls in a healthy older population 				

	<ul style="list-style-type: none"> • Verghese et al, 2012: WWT may better predict frailty than disability (as compared to the SPPB) in healthy CDOA • The shorter WWT (13 sec), is a reliable alternative to the SPPB (5 min) in busy clinical settings for healthy CDOA • LaPoint et al (2010): Controls adapted a strategy of increased double support time during dual task while PD did not. This may have placed those with PD at greater risk for falls. • Camicioli et al (1998): Significant increased # of steps in PD but no significant increase in time compared to controls 				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Lack of psychometric data in PD
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?			X		Lack of psychometric data in PD

References

Verghese J, Buschke H, Viola L, Katz M, Hall C, Kuslansky G, Li[ton R, (2002). Validity of divided attention tasks in predicting falls in older individuals: A preliminary study. *JAGS*, 50;1272-157

Verghese J, Holtzer R, Lipton RB, Wang C. (2012). Mobility stress test approach to predicting frailty, disability, and mortality in high-functioning older adults. *JAGS*, 60;1901-1905.

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Camicioli R, Oken BS, Sexton G, Kaye JA, Nutt JG (1998). Verbal fluency task affects gait in Parkinson's disease with motor freezing. *J Geriatr Psychiatry Neurol*, 11:181-185

LaPoint LL, Stierwalt JAG, Maitland CG (2010). Talking while walking: Cognitive loading and injurious falls in Parkinson's disease. *Int'l J of Speech-Language Pathology*, 12(5):455-459.

O'Shea S, Morris ME, Iansek R (2002). Dual task interference during gait in people with Parkinson's disease: Effects of motor versus cognitive secondary tasks. *Phys Ther*, 82(9); 888-897.

Parkinson Edge Outcome Measures Taskforce

Instrument name: World Health Organization-Quality of Life-Bref (WHOQOL-BREF)					
Reviewer: Erin Hussey and Cathy Harro				Date of review: May, 2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation <input type="checkbox"/> Environment					
Construct/s measured (check all that apply):					
Body structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input checked="" type="checkbox"/> Life satisfaction <input checked="" type="checkbox"/> Quality of life <input type="checkbox"/> Reintegration to community <input checked="" type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I			X		Adequate to excellent psychometrics involving other populations, but lacking sufficient published evidence to recommend for use in Parkinson Disease
II			X		Same
III			X		Same
IV			X		Same
V			X		Same

Overall Comments:	<p><u>Psychometrics:</u> adequate to excellent reliability, correlation with other factors (e.g., age, depression, number of caregivers, disease duration); one study demonstrated adequate discrimination between Parkinson and non-Parkinson elderly. Current available studies lack sufficient evidence relative to reliability, validity, and responsiveness for Parkinson Disease and there are not any documented SEM, MDC, or MCID.</p> <p>A Movement Disorders Task force (2011) identified WHOQOL-BREF as a suggested (but not a recommended) measure based on reasonable psychometrics identified in other populations but insufficient evidence specifically for Parkinson Disease.</p>				
Overall Comments:	<p><u>Clinical Utility:</u> there is no cost to use the tool. Compared to the WHOQOL-100, this is an efficient tool, requiring about 15 minutes to administer and score using the manual to calculate transformed scores.</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				Despite recommendations against current clinical use for those with Parkinson Disease, the strength of psychometrics in other populations suggest this may be an appropriate selection for the domains addressed.

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Parkinson Edge Outcome Measures Taskforce

Instrument name: Walk While Talking Test					
Reviewer: Rosemary Gallagher and Suzanne O’Neal				Date of review: 4-2013	
ICF domain (check all that apply):					
<input type="checkbox"/> Body structure <input type="checkbox"/> Body function <input checked="" type="checkbox"/> Activity <input checked="" type="checkbox"/> Participation <input type="checkbox"/> environment					
Construct/s measured (check all that apply):					
Body Structure and Function		Activity		Participation	
<input type="checkbox"/> Aerobic capacity/endurance <input type="checkbox"/> Ataxia <input type="checkbox"/> Cardiovascular/pulmonary status <input type="checkbox"/> Cognition <input type="checkbox"/> Coordination (non-equilibrium) <input type="checkbox"/> Dizziness <input checked="" type="checkbox"/> Dual Tasks <input type="checkbox"/> Fatigue <input type="checkbox"/> Flexibility <input type="checkbox"/> Muscle performance <input type="checkbox"/> Muscle tone / spasticity <input type="checkbox"/> Pain <input type="checkbox"/> Sensory integration <input type="checkbox"/> Somatosensation <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Balance/falls <input type="checkbox"/> Bed mobility <input checked="" type="checkbox"/> Gait (include stairs) <input type="checkbox"/> High Level mobility <input type="checkbox"/> Transfers <input type="checkbox"/> Wheelchair skills <input type="checkbox"/> Other:		<input checked="" type="checkbox"/> Community function <input type="checkbox"/> Driving <input type="checkbox"/> Health and wellness <input type="checkbox"/> Home management <input type="checkbox"/> Leisure/Recreational activities <input type="checkbox"/> Life satisfaction <input type="checkbox"/> Quality of life <input checked="" type="checkbox"/> Reintegration to community <input type="checkbox"/> Role function <input type="checkbox"/> Shopping <input type="checkbox"/> Social function <input type="checkbox"/> Work <input type="checkbox"/> Other:	
Link to rehabmeasures.org summary:					
Recommendation Categories					
Hoehn and Yahr stage	4	3	2	1	Comments
I	X				Good measure to pick up possible deficiencies in early stages of disease
II	X				
III	X				
IV	X				
V				X	Must be ambulatory
Overall Comments:	Verghese et al, 2002:				

	<p>WWT is highly predictive of falls in a healthy older population</p> <p>Verghese et al, 2012: -WWT may better predict frailty than disability (as compared to the SPPB) in healthy CDOA</p> <p>-The shorter WWT (13 sec), is a reliable alternative to the SPPB (5 min) in busy clinical settings for healthy CDOA</p> <p>Verghese et al, 2008: WWT not associated with frailty in CDOA</p> <p>LaPoint et al (2010): Controls adapted a strategy of increased double support time during dual task while PD did not. This may have placed those with PD at greater risk for falls.</p>				
Entry-Level Criteria	Students should learn to administer tool		Students should be exposed to tool (e.g. to read literature)		Comments
Should this tool be required for entry level curricula?	YES	NO	YES	NO	Test is very quick and easy to conduct. Useful in a busy clinic
		X		X	
Research Use	YES		NO		Comments
Is this tool appropriate for use in intervention research studies?	X				

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Camicioli R, Oken BS, Sexton G, Kaye JA, Nutt JG (1998). Verbal fluency task affects gait in Parkinson's disease with motor freezing. *J Geriatr Psychiatry Neurol*, 11:181-185

LaPoint LL, Stierwalt JAG, Maitland CG (2010). Talking while walking: Cognitive loading and injurious falls in Parkinson's disease. *Int'l J of Speech-Language Pathology*, 12(5):455-459.

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Vergheze J. (2010). Identifying frailty in high functioning older adults with normal mobility. *Age Aging*, 39;382-399.