

Application of a Clinical Practice Guideline for Persons with Multiple Sclerosis in a Multi-Setting, Multi-Discipline Rehabilitation Facility

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Clinical Practice Guideline

“Clinical practice guidelines are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.”

-Institute of Medicine, 1990



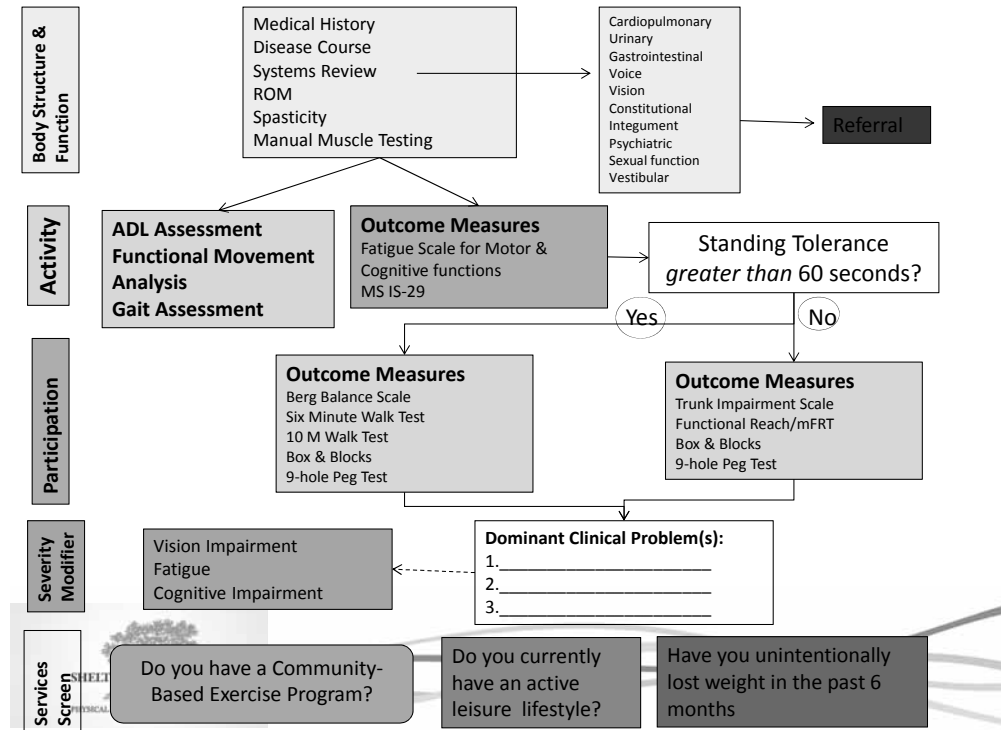
Why have a CPG?

- Reduce variability in evaluation and treatment across levels of care and services
- Lifespan approach with consistent measurement
- The CPG was intended to provide the clinician in each setting, guidance on a thorough assessment and evidence-based plan of care, including an appropriate transition through the rehabilitation spectrum, into a long term fitness program.



Rehabilitation Algorithm





Interventions

- Select the appropriate interventions based on dominant clinical problem list

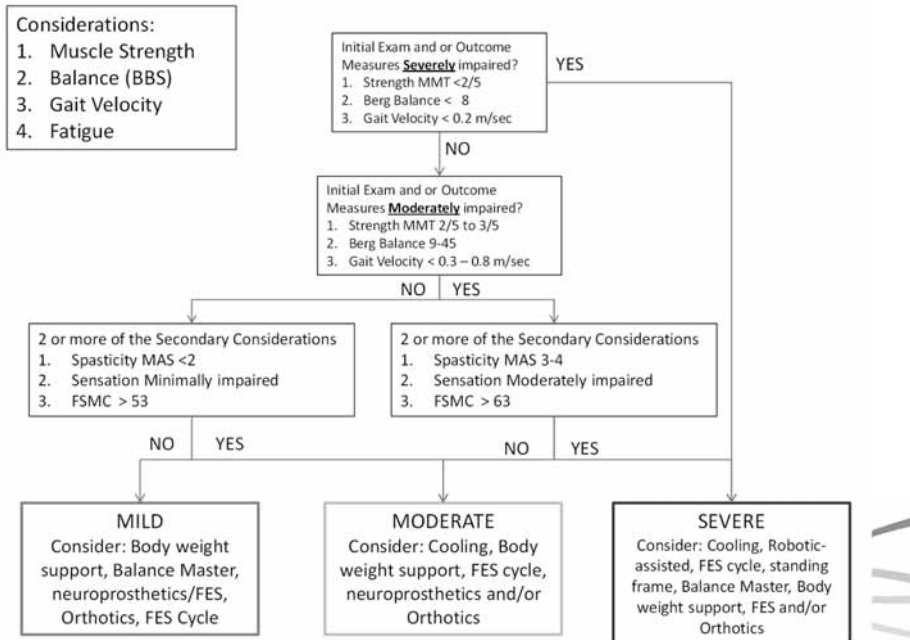
8.1 Fatigue and the Impact of Heat Sensitivity on the MS Patient	38
8.2 Energy Conservation Education	39
8.3 Activities of Daily Living (ADLs) and Transfers training.....	40
8.4 Spasticity	41
Spasticity Algorithm – reprinted from Thompson et al, 2005	43
8.5 Endurance Training	45
8.6 Strength Training	46
8.7 Gait Training	48
Gait Intervention Algorithm	49
8.7 Balance	55
Balance Intervention Table	57
8.8 Dysphagia	60
8.9 Dysarthria	62
8.10 Aphasia	62
8.11 Cognition	63

Interventions

- Evidence-based recommendations
- Algorithms based on outcome measure performance to aid the clinician in selecting the appropriate technology or tool to assist in maximizing the principles of motor learning, neuroplasticity and motor control.

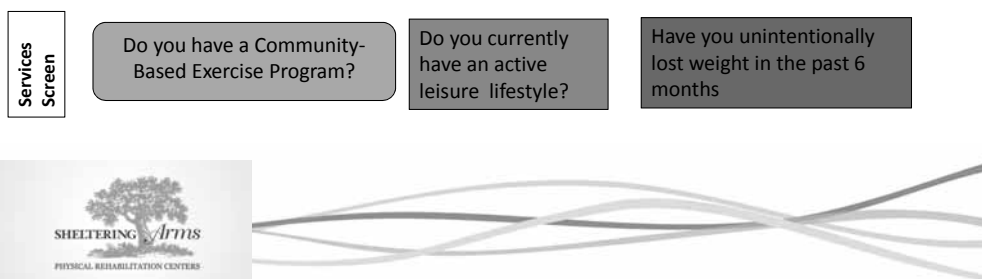


Gait Intervention Algorithm



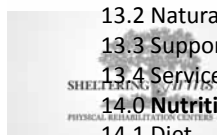
Transitions of Care

Transitions of care and community integration are also included in this model, with recommended service screens for RT, Fitness and Dietary services.



Participation

9.0 Participation	65
9.1 Community, Social, and Civic Life	66
9.2 Interpersonal Interactions and Relationships	66
9.3 Major Life Areas (Education, Work and Economic Life)	66
9.4 Leisure Life	67
9.5 Leisure Education	68
9.6 Leisure Skills	69
10.0 Disease Management	69
10.1 Healthy Lifestyle Discharge Plan	68
10.2 Chronic Disease Self-Management Program	69
11.0 Fitness & Therapeutic Recreation Services Screening Algorithms	71
12.0 Transitions of Care	72
12.1 Skilled Therapy to Health and Wellness Services	72
12.2 Community Based Wellness & Exercise (not SA affiliated)	73
12.3 Skilled Recreational Therapy to Community Based Services.....	73
13.0 Environmental	74
13.1 Products and Technology	74
13.2 Natural Environment and Human-Made Changes to Environment.....	75
13.3 Support from Friends and Family	75
13.4 Services, Systems, and Policies.....	75
14.0 Nutrition	76
14.1 Diet	76

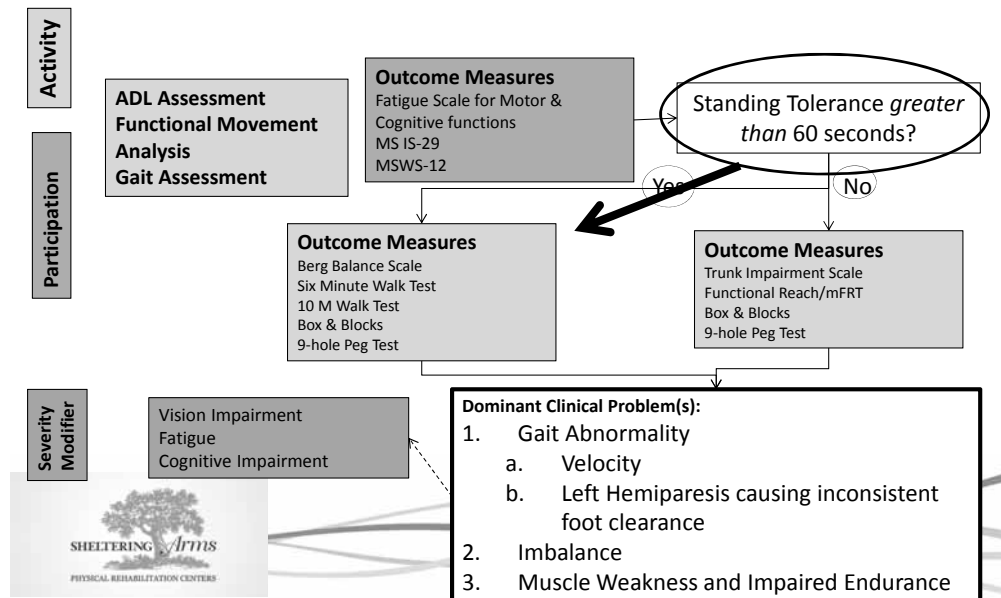


Case A

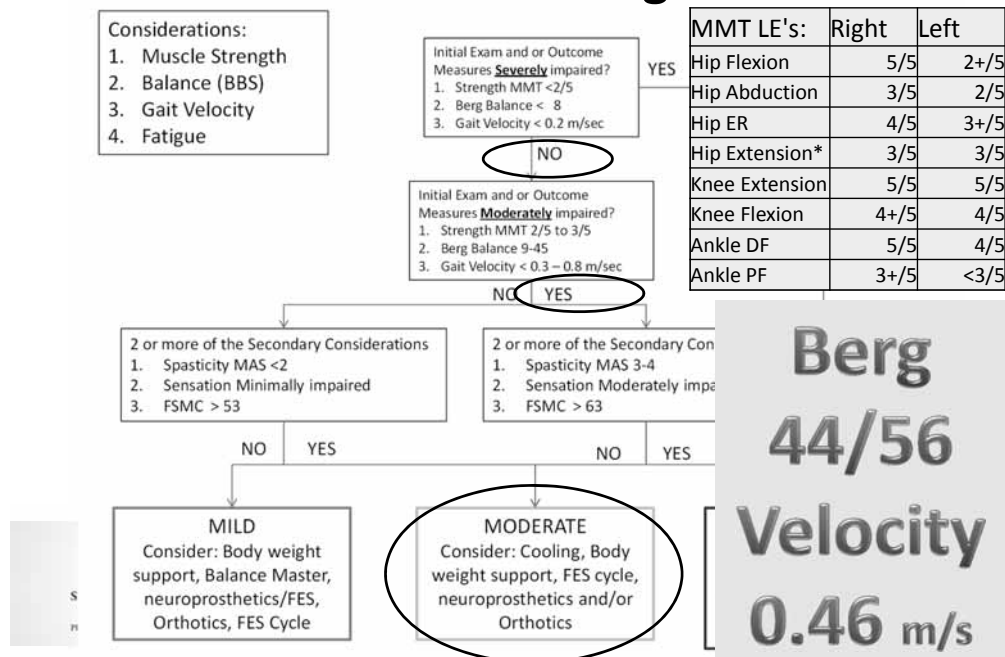
- Diagnosed in 2005 at the age of 60
- Using a SPC until 2010 where she switched to a rollator due to frequent falls and gradual worsening of L LE strength
- Presented to our system in OP PT summer 2015 due to weakness
- No personal history of fitness



Case A: Assessment Algorithm



Gait Intervention Algorithm



Case A: Plan of Care

- 2 x week x 8 weeks
- Treatments included:
 - AFO prescription
 - Gait training
 - Balance training
 - CV and PRE fitness instruction
- Discharged to community based fitness within our health system
- PT re-assess at 3 months and 8 months



Outcomes

GaitRITE	Initial	D/C - 8 weeks	3 month	8 month
Conditions	Rollator	Rollator & Left AFO	Rollator & Left AFO	Rollator & Left AFO
Velocity	0.46	0.75	0.74	0.71
Step Length L (cm)	48	57.8	60	61
Step Length R (cm)	48	60	56	56
Single Limb Support L (% GC)	24.2	30.5	31.1	30
Single Limb Support R (% GC)	28	33.5	33.3	34
Base of Support (cm)	9.5	8.6	6.3	5

Outcomes

	Initial	D/C - 8 weeks	3 month	8 month
Berg Balance Scale	35	44	41	42

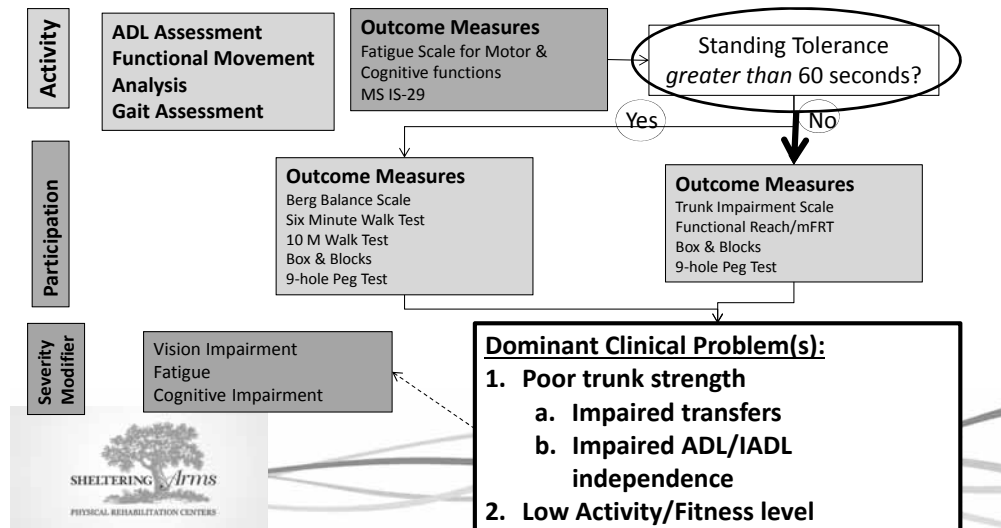
	Initial	D/C - 8 weeks	3 month	8 month
MSWS - 12	48%	x	15%	56%
MSIS - 29	62	x	41	40
FSMC - Motor	29	x	21	26
FSMC - Cognitive	27	x	15	19

Case B

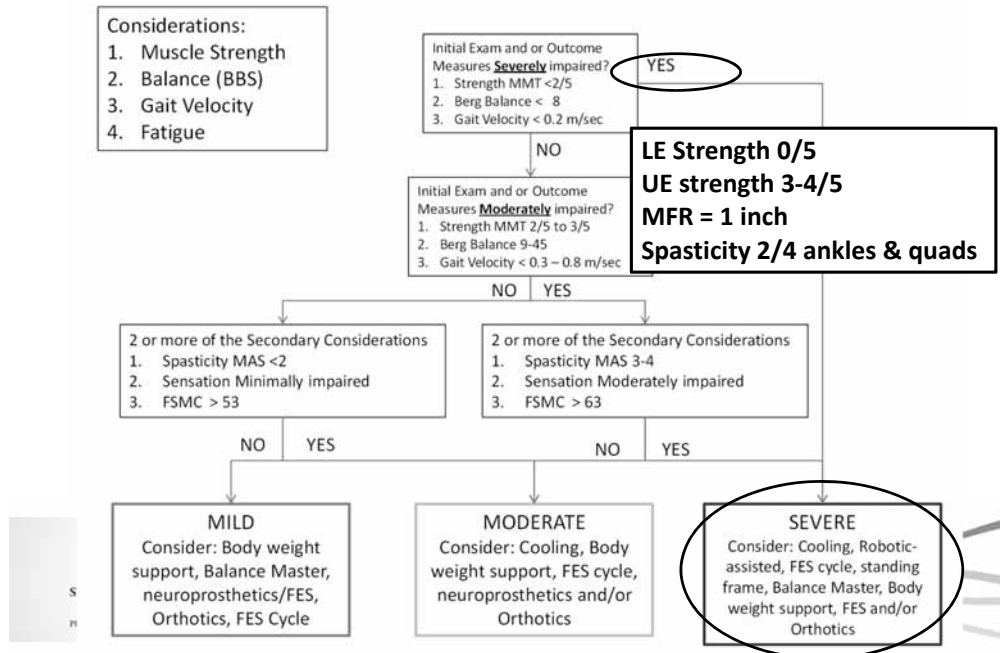
- 37 year old AA male diagnosed with MS at the age of 31
- Progressive-relapsing disease course, non-ambulatory within 3 years of diagnosis
- Multiple rounds of skilled therapy
 - Kreger Institute
 - Home Health
- Stem Cell treatment in Mexico 2013, no change in condition



Case B: Assessment Algorithm



Case B



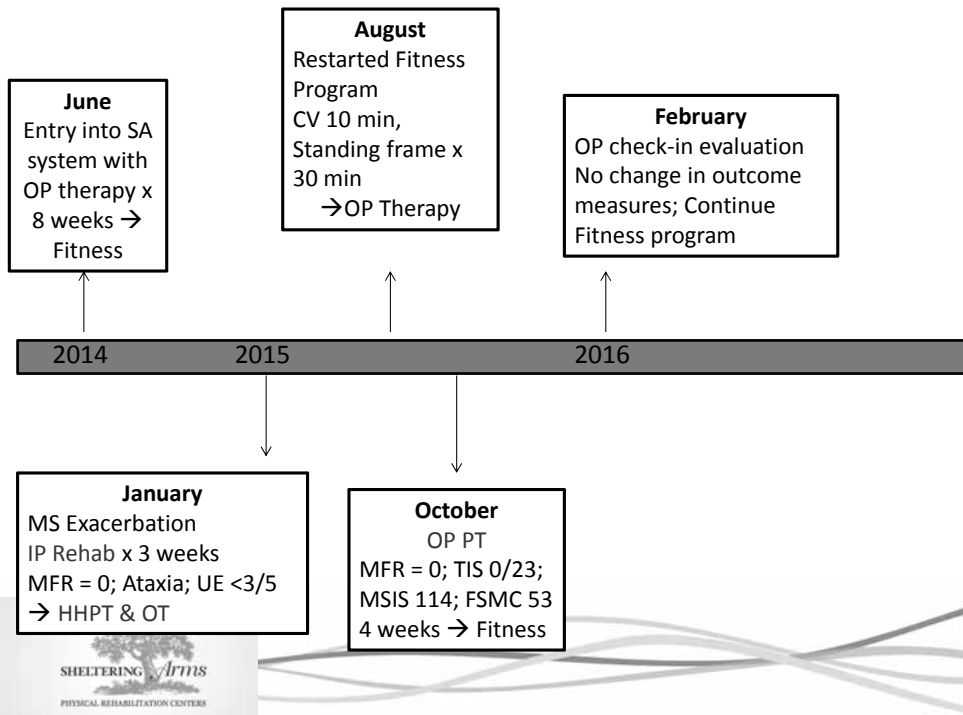
Case B: Plan of Care

- 2 x week x 8 weeks
- Treatments included:
 - Standing Frame exercises
 - Postural muscles
 - Trunk muscles
 - UE muscles
 - UE PRE exercises from manual w/c
 - CV fitness (upper & lower ergometer)
 - Transfer training, including family training
- Discharged to community based fitness within our health system



Case B: Outcomes

- Modified Functional Reach 1 inch → 2 inches
- CV exercise tolerance 5 minutes → 30 minutes
- UE PREs increased from 10-15# → 25-30#
 - Lat Pull Down
 - Seated Row
 - Seated Chest Press



MS Clinical Practice Guideline

- Lifespan approach
- Promoting life long fitness at all mobility levels, improving health and limiting development/worsening of comorbidities
- Picking up on relapses/regressions quicker (not waiting for the next MD follow-up)
- Consistency of care to track outcomes over time throughout levels of care

