



Table 1: Outcome Measures for Case Participants

Outcome Measure	Assessment	Case #1		Case #2		Case #3	
		Baseline	Post	Baseline	Post	Baseline	Post
1. MQOL	Physical Symptoms (0-10)	6.0	5.5	7.2	8.3	7.0	5.0
	Physical Well-Being (0-10)	7.0	6.0	9.0	9.0	5.0	4.0
	Psychological (0-10)	10.0	10.0	9.4	9.3	10.0	9.5
	Existential (0-10)	9.6	9.7	10.0	10.0	9.3	6.7
	Support (0-10)	10.0	10.0	10.0	10.0	8.5	9.0
	TOTAL SCORE (0-10)	8.5	8.2	9.1	9.3	8.0	6.8
2. LLFDI	Upper Extremity Functioning (0-25)	0	9.0	5.0	0	14.0	20.0
	Basic Lower Extremity Functioning (0-25)	3.0	6.0	6.5	0	5.0	14.0
	Advanced Lower Extremity Functioning (0-25)	9.0	17.0	5.0	5.0	8.0	21.0
	TOTAL SCORE (0-75)	12.0	32.0	16.5	5.0	27.0	55.0
3. ESAS	Pain (0-10)	2.0	2.0	0	1.0	3.0	4.0
	Fatigue (0-10)	4.0	3.0	4.0	3.0	4.0	7.0
	Nausea (0-10)	0.5	0	0	4.0	0	7.0
	Depression (0-10)	0	0	0	0	0	0
	Anxiety (0-10)	0	0	0	2.5	0	0
	Drowsiness (0-10)	0	0	0	0	1.0	6.0
	Appetite (0-10)	0	5.0	0	3.0	1.0	10.0
	Well-Being (0-10)	0	3.0	0	2.0	2.0	4.0
	Dyspnea (0-10)	0	0	0	0	1.0	3.0
4. BFI	TOTAL Global Fatigue (0-10)	2.0	4.8	0.1	2.3	2.0	6.9
5. HDS	Authentic Spirit Factor (1-7)	1.0	1.0	1.0	1.0	1.2	2.0
	Comfort Factor (1-7)	3.3	3.3	2.5	3.3	2.0	3.5
6. Physical parameters	Height (m)	1.6	1.6	1.6	1.6	1.6	1.6
	Weight (kg)	158.8	150.1	84.9	82.5	59.1	60.1
	BMI (kg/m2)	55.8	59.0	34.0	33.0	23.7	24.1
	Resting Blood Pressure (mm Hg)	138/80	112/72	122/76	106/80	148/80	132/90
	Resting Heart Rate (bpm)	86	83	93	88	84	108
7. 8-Foot up-and-go	Number of seconds required	12.4	14.0	5.81	5.44	8.41	10.0
8. Chair sit-and-reach	Left (number of centimeters)	-30.0	-15.0	+1.0	+1.0	0	-12.0
	Right (number of centimeters)	-33.0	-15.0	+2.0	+2.0	0	-11.0
9. Arm curl	Left (number of repetitions)	15	12	15	15	18	11
	Right (number of repetitions)	16	12	13	17	14	10
10. Back scratch	Left (number of centimeters)	-24.0	-31.0	+2.0	+0.5	-27.0	-30.0
	Right (number of centimeters)	-29.0	-32.0	+3.0	+2.0	-24.5	-24.0
11. Grip strength	Left (kg·feet)	32.0	34.0	24.3	24.5	34.0	25.5
	Right (kg·feet)	31.8	31.8	32.0	31.0	16.0	17.0
12. 30 second chair stand	Number of repetitions	10	8	13	17	15	11
13. Four test balance scale	Feet together (number of seconds)	10.0	10.0	10.0	10.0	10.0	10.0
	Semi-tandem (number of seconds)	10.0	10.0	10.0	10.0	10.0	10.0
	Tandem (number of seconds)	10.0	0	10.0	10.0	10.0	2.0
	One leg stand (number of seconds)	2.81	0	10.0	10.0	4.0	0
14. 6-minute walk	Total distance (m)	264.0	162.4	467.4	488.7	320.0	250.9

Appendix 1: Modified home-based functional walking (FW) program

	Exercise	Purpose	Target muscle / joint	Examples of equipment	Position
1.	Chin to chest	Range of motion	Cervical spine	None	Seated
2.	Chin to shoulder	Range of motion	Cervical spine	None	Seated
3.	Shoulder shrugs	Range of motion	Shoulder joint	None	Seated
4.	Arm swing	Range of motion	Shoulder joint	None	Seated
5.	Rowing	Range of motion	Shoulder and elbow joints	None	Seated
6.	Forward hugs	Range of motion	Lower back and upper arms	None	Seated
7.	Up and down leg march	Range of motion	Hip joint	None	Seated or standing
8.	Out and in leg march	Range of motion	Hip joint	None	Seated or standing
9.	Foot forward and backward	Range of motion	Knee joint	None	Seated or standing
10.	Toe point/flex and Wrist flex/extend	Range of motion	Ankle and wrist joints	None	Seated
11.	Ball squeeze	Resistance training Grip strength	Wrist and forearm muscles	Thera-band [®] hand exercisers	Seated
12.	Chest press	Resistance training	Pectoralis major, triceps and deltoids	Thera-bands [®]	Seated
13.	Rowing	Resistance training	Latissimus dorsi, trapezius, biceps and deltoids	Thera-bands [®]	Seated
14.	Biceps curl	Resistance training	Biceps	Neoprene dumbbells	Seated
15.	Triceps curl	Resistance training	Triceps	Thera-bands [®] or neoprene dumbbells	Seated
16.	Sit to stand	Resistance training	Quadriceps, hamstrings and gluteals	None	Seated and standing
17.	Knee flexion	Resistance training	Hamstrings	Ankle cuff weights	Seated or standing
18.	Toe raises	Balance retraining	Tibialis anterior	None	Standing
19.	Heel raises	Balance retraining	Gastrocnemius and soleus	None	Standing
20.	Swan	Stretching	Pectoralis major, deltoids and biceps	None	Seated
21.	Zipper stretch	Stretching Flexibility	Latissimus dorsi and triceps	Thera-bands [®]	Seated or standing
22.	Tibia touch	Stretching Flexibility	Hamstrings and spinal erectors	None	Seated
23.	Outer thigh stretch	Stretching	Hip abductors	None	Seated
24.	Quadriceps stretch	Stretching	Quadriceps and tibialis anterior	None	Seated or standing
25.	Calf stretch	Stretching	Gastrocnemius and soleus	None	Seated or standing

Appendix 2: Guidelines for the modified home-based functional walking (FW) program

Program Components	General Guidelines
1. Muscle strengthening	<p>Whole body resistance training with special emphasis on lower body muscle strengthening for transferring, standing, walking and prevention of falls</p> <p>Balanced resistance training of opposing muscle groups:</p> <ul style="list-style-type: none">- Chest/back muscles- Biceps/triceps- Quadriceps/hamstrings- Tibialis anterior/gastrocnemius and soleus <p>Maintenance of proper technique, breathing and positioning on range of motion prior to use of resistance equipment</p>
2. Balance retraining	<p>Whole body balance training with special emphasis on ankle dorsiflexors and plantar flexors for recovery of balance</p> <p>Maintenance of posture and balance using body weight alone prior to adding resistance equipment</p>
3. Intensity	<p>Goal of low to moderate intensity measured using Borg's ratings of perceived exertion (RPE) (0-10)</p>
4. Resistance	<p>Progression by:</p> <ul style="list-style-type: none">• Supported to unsupported positions• Range of motion or body weight to addition of resistance equipment• Start with the lightest resistance equipment and upwards• Increasing number of sets/repetitions prior to progression of resistance level <p>Reduce workload if:</p> <ul style="list-style-type: none">• Increased pain, fatigue or shortness of breath post exercise• Muscle pain or soreness > 48 hours <p>Terminate session if:</p> <ul style="list-style-type: none">• Excessive pain, fatigue or shortness of breath post exercise
5. Sets	<p>Progression by:</p> <ul style="list-style-type: none">• Start with one set of 8 repetitions per exercise• $RPE \leq 3$ consistent for ≥ 2 sessions prior to increasing number of repetitions by 2 until maximum of 15 repetitions per set• Once one set of 15 repetitions achieved, advanced to two sets of 8 repetitions
6. Frequency	<p>3 days per week, on non-consecutive days</p>

Appendix 3: Objective Physical Function Measures (listed in the order of testing)

Physical Function Test	Purpose	General Description
1. 8-Foot up-and-go	Agility and dynamic balance	Number of seconds required to get up from a seated position, walk 8 feet, turn and return to a seated position
2. Chair sit-and-reach	Lower body flexibility	Number of centimeters between extended fingers and tip of toe, when leg extended and hands reaching towards toes from a seated position at the front of a chair
3. Arm curl	Upper body strength	Number of bicep curls completed in 30 seconds holding a hand weight (5 lbs for women, 8 lbs for men)
4. Back scratch	Upper body flexibility	Number of centimeters between extended middle fingers, when one hand is reaching over the shoulder and the opposite hand up the middle of the back
5. Grip strength	Hand and forearm strength	Number of kilogram-feet measured on handheld dynamometer (average of 2 measurements per side)
6. 30 second chair stand	Lower body strength	Number of full stands completed in 30 seconds from a seated position
7. Four test balance scale	Static balance	Number of seconds up to 10 seconds each that participant is able to sustain 1) feet together stand, 2) semi-tandem stand, 3) tandem stand and 4) one leg stand
8. 6-minute walk	Aerobic endurance	Number of meters that participant can walk in 6 minutes around a 45.7 meter course