

# Safe Use of Mobility Aid Checklist (SUMAC) - 4-wheeled walkers

SW HUNTER PT PHD & J HOLMES OT PHD

## Safe Use of Mobility Aid Checklist - SUMAC

### TASK 1: TRANSITION OF SIT TO STAND

**Testing procedure:** People will start from a seated position in a standard height chair with armrests. On the command, “Go”, they will stand, walk forward on a level surface for 6 meters at a self-selected comfortable pace, turn around, walk back to the chair, turn and sit back down. (Evaluation of Task 1 and 2 are combined in the same assessment)

Equipment: Standard height chair with arm rests

Physical Function				Interaction with equipment		
	Scoring				Scoring	
	0	1	2		0	1
<b>Transition Sit to Stand</b>						
<b>Sit to stand from chair (single attempt)</b>	Unable	Able, uses arms to help	Independent, no use of arms	Walker positioned directly in front and within arm’s reach		
<b>Sit to stand attempts</b>	Unable to do independently	Able, but requires >1 attempt	Able, only requires 1 attempt	Brakes engaged on walker		
<b>Immediate balance upon standing (first 5 seconds)</b>	Unsteady, loses balance or near loss	Unsteady, uses arms for support	Steady without arm support	Reaches one hand at a time to grasp handle of walker as stands		
				Feet remain within base of support of walker		
				Upright posture of trunk		
				Establishes balance before unlocking walker		
				Cueing (reverse score, yes=0, no=1) [At any time during the task]		
<b>Comments</b>				<b>Comments</b>		

**Physical Function Score Task 1:** \_\_\_\_\_ **Interaction with Equipment Score Task 1:** \_\_\_\_\_ **(Higher scores represent better function.)**

**TASK 2: GAIT WITH PIVOT TURN TO APPROACH CHAIR TO SIT**

**Testing procedure:** People will start from a seated position in a standard height chair with armrests. On the command, “Go”, they will stand, walk forward on a level surface for 6 meters at a self-selected comfortable pace, turn around, walk back to the chair, turn and sit back down. (Evaluation of Task 1 and 2 are combined in the same assessment)

Equipment: Standard height chair with arm rests

Physical Function				Interaction with equipment		
	Scoring				Scoring	
	0	1	2		0	1
<b>Gait with pivot turn to approach chair to sit</b>						
<b>Gait with turn so properly aligned to chair to sit down</b>	Unable without physical assistance or does not align self to chair independently	Turns slowly, several small steps to catch balance following turn	Independent, steady with no loss of balance and continuous steps	Feet remain within base of support of walker		
<b>Walk backwards so feels chair behind legs</b>	Unable without physical assistance or does not walk backwards independently	Able but slow, discontinuous steps and unsteady	Independent, steady with no loss of balance and continuous steps	Maintains hands of hand grips of walker during turn		
<b>Stand to sit</b>	Misjudged distance or body alignment or falls into chair	Uses arms or not a smooth motion	Smooth controlled lowering into chair without use of arms	Maintains upright posture		
				Feet do not collide with walker		
				Brakes engaged on walker prior to starting to sit		
				Reaches one hand at a time to grasp arm of chair as sits		
				Cueing (reverse score, yes=0, no=1) [At any time during the task]		
<b>Comments</b>				<b>Comments</b>		

Physical Function Score Task 2: \_\_\_\_\_ Interaction with Equipment Score Task 2: \_\_\_\_\_ (Higher scores represent better function.)

### TASK 3: AMBULATION ON A LEVEL SURFACE

**Testing Procedure:** People will start from a standing position and then will walk on a level surface at a self-selected comfortable pace for up to 60 meters.

**Equipment:** None

Physical Function				Interaction with equipment		
	Scoring				Scoring	
	0	1	2		0	1
<b>Ambulation on level surface</b>						
<b>Initiation of gait</b>	Hesitancy or multiple attempts	No hesitancy		Feet remain within base of support		
<b>Step length-right</b>	Right foot does not pass left stance foot (step to gait)	Right foot passes left stance foot (step through gait)		Feet do not collide with walker		
<b>Step height-right</b>	Right foot does not completely clear the floor	Right foot completely clears floor		Maintains upright posture		
<b>Step length-left</b>	Left foot does not pass right stance foot (step to gait)	Left foot passes right stance foot (step through gait)		Equipment does not collide with environmental obstacles		
<b>Step height-left</b>	Left foot does not completely clear the floor	Left foot completely clears floor		Maintains control of equipment		
<b>Step symmetry</b>	Left step does not equal right	Left equals right		Cueing (reverse score, yes=0, no=1) [At any time during the task]		
<b>Step continuity</b>	Stopping or discontinuity between steps	Steps appear continuous				
<b>Path</b>	Marked deviation from straight path	Mild to moderate deviation from straight path	No deviations from straight path			
<b>Trunk</b>	Marked sway	No sway, but flexion of trunk and/or knees	No sway, no flexion of trunk or knees			
<b>Walking distance (without rest)</b>	Unable <5 m	5-30m 30-50m	>50m			
<b>Walking independence</b>	> minimum physical assist	Minimum physical assist of 1 person Supervision	Independent			
<b>Comments</b>				<b>Comments</b>		

Physical Function Score Task 3: \_\_\_\_\_ Interaction with Equipment Score Task 3: \_\_\_\_\_ (Higher scores represent better function.)

**TASK 4: WALKING WHILE PERFORMING TASK OF HORIZONTAL HEAD TURNS**

**Testing Procedure:** People will walk at a self-selected walking pace on a level surface for 6 meters and turn around an obstacle and walk back 6 meters while turning their head from side to side.

Equipment: One orange cone to be placed on the floor.

Physical Function				Interaction with equipment		
Scoring				Scoring		
0	1	2		0	1	
<b>Walking while performing task of horizontal head turns</b>						
	Major decrease in gait speed, staggers/loses balance, or stops	Minor decrease to gait speed within smooth gait path	Performs head turns smoothly with no change in gait	Feet remain within base of support of walker		
				Feet do not collide with walker		
				Maintains upright posture		
				Walker does not make contact with obstacle		
				Maintains control of equipment		
				Cueing (reverse score, yes=0, no=1) [At any time during the task]		
<b>Sum</b>				<b>Sum</b>		
<b>Comments</b>				<b>Comments</b>		

Physical Function Score Task 4: \_\_\_\_\_ Interaction with Equipment Score Task 4: \_\_\_\_\_ (Higher scores represent better function.)

**TASK 5: WALKING WHILE PERFORMING A CONCURRENT COGNITIVE TASK**

**Testing Procedure:** People will walk at their self-selected walking pace on a level surface for 6 meters and turn around an obstacle and walk back 6 meters while performing a concurrent cognitive task aloud. The difficulty of the cognitive task is individualized to each person’s abilities.

Equipment: One orange cone to be placed on the floor.

Physical Function					Interaction with equipment		
Scoring					Scoring		
0	1	2	3		0	1	
<b>Walking while performing a concurrent cognitive task</b>							
Cognitive task: _____							
	Unable to do both at the same time, stops walking (posture second)	Unable to do both at the same time, stops secondary task (posture first)	Able to do both at the same time, slowing of gait or talking, minor unsteadiness	Able to do both at same time without change in gait or talking, no unsteadiness	Feet remain within base of support of walker		
					Feet do not collide with walker		
					Maintains upright posture		
					Walker does not make contact with obstacle		
					Maintains control of equipment		
					Cueing (reverse score, yes=0, no=1) [At any time during the task]		
<b>Sum</b>					<b>Sum</b>		
<b>Comments</b>					<b>Comments</b>		

Physical Function Score Task 5: \_\_\_\_\_ Interaction with Equipment Score Task 5: \_\_\_\_\_ (Higher scores represent better function.)

**TASK 6: WALKING WHILE NEGOTIATING OBSTACLES**

**Testing Procedure:** People will walk in a figure of eight pattern. Two cones will be placed 1.5 meters apart and people will maneuver around the cones to complete a figure of eight. The person will go around the figure of eight path twice for a single test session.

Equipment: Two orange cones to be placed on the floor.

Physical Function				Interaction with equipment		
	Scoring				Scoring	
	0	1	2		0	1
<b>Walking while negotiating obstacles</b>						
	Unable to clear obstacles or requires physical assistance	Able to do with slowing of gait speed and change in steps	Able to do without changing gait speed and no unsteadiness	Feet remain within base of support of walker		
				Feet do not collide with walker		
				Maintains upright posture		
				Maintains control of equipment		
				Walker does not make contact with obstacle		
				Cueing (reverse score, yes=0, no=1) [At any time during the task]		
<b>Sum</b>				<b>Sum</b>		
<b>Comments</b>				<b>Comments</b>		

Physical Function Score Task 6: \_\_\_\_\_ Interaction with Equipment Score Task 6: \_\_\_\_\_ (Higher scores represent better function.)

**TASK 7: WALKING THROUGH AN OPEN DOORWAY**

**Testing procedure:** People will walk through an open doorway at their self-selected comfortable pace. There will be a 3 meter lead walk before the doorway to be able to judge for any alterations in gait.

Equipment: A standard single doorway opening.

Physical Function				Interaction with equipment		
	Scoring				Scoring	
	0	1	2		0	1
<b>Walking through an open doorway</b>						
	Major decrease in gait speed, staggers/loses balance, or stops	Minor decrease to gait speed within smooth gait path	No change in gait speed and smooth gait path	Feet remain within base of support of walker		
				Maintains hands of hand grips		
				Maintains upright posture		
				Walker does not make contact with doorframe		
				Cueing (reverse score, yes=0, no=1) [At any time during the task]		
<b>Sum</b>				<b>Sum</b>		
<b>Comments</b>				<b>Comments</b>		

**Physical Function Score Task 7:** \_\_\_\_\_ **Interaction with Equipment Score Task 7:** \_\_\_\_\_ **(Higher scores represent better function.)**



**TASK 8: OPEN AND WALK THROUGH A DOOR THAT OPENS AWAY FROM PERSON**

**Testing Procedure:** Facing a door that opens away from the person, they will open the door, walk through it, and then close the door.

Equipment: Perform assessment with a door that does not have self-closing mechanism.

Physical Function				Interaction with equipment		
Scoring				Scoring		
0	1	2		0	1	
<b>Open and walk through a door that opens away from the person</b>						
	Major decrease in gait speed, staggers/loses balance, stops	Minor decrease to gait speed within smooth gait path	No change in gait speed and smooth gait path	Approaches door at an angle so faces side of door that opens away (faces door knob side of door)		
				Reaches for door knob with hand closest to door and pushes door out without losing balance or tipping aid		
				Opens door wide enough to get body and mobility aid through opening		
				Both hands on hand grips of walker while walking through door way		
				Walks through doorway without colliding with doorframe or door with body or mobility aid		
				Once clear of door path, able to reach for door within arm's reach to close it without colliding with body or mobility aid or needing to walk with one hand on walker		
				Feet remain within base of support of walker		
				Feet do not collide with equipment		
				Maintains upright posture		
				Cueing (reverse score, yes=0, no=1) [At any time during the task]		
<b>Sum</b>				<b>Sum</b>		
<b>Comments</b>				<b>Comments</b>		

Physical Function Score Task 8: \_\_\_\_\_ Interaction with Equipment Score Task 8: \_\_\_\_\_ (Higher scores represent better function.)

**TASK 9: OPEN AND WALK THROUGH DOOR THAT OPENS TOWARDS THE PERSON**

**Testing Procedure:** Facing a door that opens towards from the person, they will open the door, walk through it, and then close the door.

**Equipment:** Perform assessment with a door that does not have self-closing mechanism.

Physical Function				Interaction with equipment		
Scoring				Scoring		
0	1	2		0	1	
<b>Open and walk through door that opens towards the person</b>						
	Major decrease in gait speed, staggers/loses balance, stops	Minor decrease to gait speed within smooth gait path	No change in gait speed and smooth gait path	Approaches door at an angle so faces the hinges and body position is clear of door path		
				Reaches for door knob with hand closest to door and pulls door in without losing balance or tipping aid		
				Opens door wide enough to get body and mobility aid through opening		
				Both hands on hand grips of walker while walking through door way		
				Walks through doorway without colliding with doorframe/door with body or mobility aid		
				Once clear of door path, able to reach for door within arm's reach to close it without colliding with body or mobility aid or needing to walk with one hand on walker		
				Feet remain within base of support of walker		
				Feet do not collide with equipment		
				Maintains upright posture		
				Cueing (reverse score, yes=0, no=1) [At any time during the task]		
<b>Sum</b>				<b>Sum</b>		
<b>Comment</b>				<b>Comment</b>		

**Physical Function Score Task 9:** \_\_\_\_\_ **Interaction with Equipment Score Task 9:** \_\_\_\_\_ **(Higher scores represent better function.)**

## SUMAC – Safe Use of Mobility Aid Checklist

Task	Physical Function (x/40)	Interaction with Equipment (x/63)
TASK 1: TRANSITION OF SIT TO STAND		
TASK 2: GAIT WITH PIVOT TURN TO APPROACH CHAIR TO SIT		
TASK 3: AMBULATION ON A LEVEL SURFACE		
TASK 4: WALKING WHILE PERFORMING TASK OF HORIZONTAL HEAD TURNS		
TASK 5: WALKING WHILE PERFORMING A CONCURRENT COGNITIVE TASK		
TASK 6: WALKING WHILE NEGOTIATING OBSTACLES		
TASK 7: WALKING THROUGH AN OPEN DOORWAY		
TASK 8: OPEN AND WALK THROUGH A DOOR THAT OPENS AWAY FROM PERSON		
TASK 9: OPEN AND WALK THROUGH DOOR THAT OPENS TOWARDS THE PERSON		
<b>TOTAL SCORE</b>		

**Note: Higher scores represent better function**



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