Investigation of the Feasibility of an Intervention to Manage Fall Risk in Wheeled Mobility Device Users with Multiple Sclerosis

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Background: Falls are a common concern for wheeled mobility device users with multiple sclerosis (MS); however, no evidence-based fall prevention programs have been developed to meet the specific needs of the population. We examine the preliminary feasibility of a fall management intervention in wheeled mobility device users with MS.

Methods: Study participants were exposed to an intervention program targeting risk factors for falls, including transfer skills and seated postural control. The feasibility of the program was evaluated by assessing participant perspectives, cost, recruitment rates, study adherence, participant retention, safety, and the ability to collect primary and secondary outcomes, including fall frequency, concerns about falling, transfer quality, and seated postural control.

Results: 16 wheeled mobility device users completed the program, which was found to be feasible and was positively evaluated by participants. No adverse events were experienced. After exposure to the intervention, fall frequency significantly decreased (P < .001) and transfer quality (P = .001) and seated postural control (P = .002) significantly improved. No significant differences were found regarding concerns about falling (P = .728).

Conclusions: This study examined the feasibility of an intervention program to manage fall risk in wheeled mobility device users with MS. The program was found to be feasible, and preliminary results showed the intervention to be effective in decreasing fall frequency. Additional testing is needed to further examine the efficacy and long-term impact of the intervention. Int J MS Care. 2018;20:121-128.

Falls are a common concern in persons affected by multiple sclerosis (MS). Falls may result in physical injury that requires hospitalization and/or development of a dysfunctional fear of falling. Approximately two-thirds of the MS population report concerns about falling that might result in self-imposed activity curtailment, loss of confidence, difficulty performing typical societal roles, loss of independence, and physiologic deconditioning. Ultimately, this disuse-disability cycle may place individuals at greater risk for falls.

The adverse physical and psychosocial impact of falls has led to a growing amount of research examining prevention strategies to decrease the frequency of falls in ambulatory individuals. Overall, this work has highlighted that some fall risk factors, such as impaired balance and functional mobility, are modifiable, and there is great potential to prevent falls in people with MS using targeted rehabilitation interventions.

Unfortunately, most research in the MS population thus far has focused almost exclusively on community ambulators. This focus ignores the approximately 25% of the MS population who use a wheeled mobility device (manual wheelchair, power wheelchair, scooter, etc.) as their primary means of community mobility.