

## Online Fall Risk Management Program for People With Multiple Sclerosis Who Use Wheelchairs or Scooters: A Pilot Study With Promising Findings

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**PURPOSE:** To evaluate the efficacy of iROLL-O, a group-based, online, fall prevention intervention designed for people with multiple sclerosis (PwMS) who use a wheelchair or scooter (WC/S) that features self-management content. The paucity of evidence-based, accessible interventions for this unique population that can be delivered by occupational or physical therapists created the imperative for this study.

**DESIGN:** A pre/post intervention, longitudinal experimental study was utilized. Participants were recruited primarily from North American Research Committee on MS Registry. All had MS, >18 years old, and had a Patient Determined Disease Steps Score of 7.

**METHOD:** Fall prevalence data, gathered via a fall tracking log, was recorded 12 weeks prior to and 32 weeks post-intervention (44 weeks total). Assessment of other key dependent variables occurred 12-weeks prior to the start of IROLL-O, immediately post- and 32 weeks post-intervention. These variables included fear of falling (SCI-Falls Concern Scale); knowledge related to fall prevention/management (Fall Prevention/Management Questionnaire); and fall management (Fall Management Scale). Repeated measures one-way ANOVA evaluated the intervention effect over time. An LSD Post-Hoc test determined differences between timepoints. Cohen's d effect sizes were estimated.

**RESULTS:** 12 participants completed the intervention. No significant change in fall incidence occurred. Fear of falling was significantly reduced following iROLL-O as measured by SCI-FCS scores ( $p < 0.01$ ,  $\eta^2 = 0.47$ ,  $d = 0.80$ ). Significant improvement in both FMS ( $p = 0.04$ ,  $\eta^2 = 0.26$ ,  $d = 0.85$ ) and FPMQ ( $p = 0.03$ ,  $\eta^2 = 0.36$ ,  $d = 0.67$ ) scores was observed.

**CONCLUSION:** iROLL-O has promise in achieving desired outcomes.

**IMPACT STATEMENT:** This study is first to evaluate the impact of an online fall prevention intervention for PwMS who use WC/S and will inform development of fall prevention programs for this vulnerable population.

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