

21st Century Falls Prevention- FallsTalk Behavioral Intervention & FallScope Multimedia Behavioral Intervention
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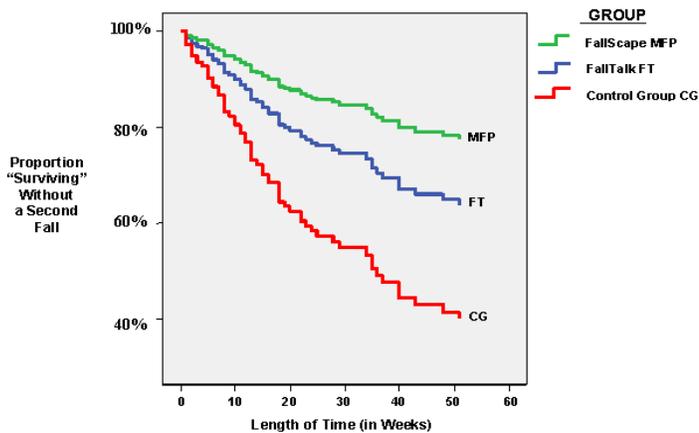
Falls are the leading cause of hospital admissions, disability and injury deaths in older adults. The Multimedia Fall Prevention program (FallScope) is designed to address the needs of seniors ranging from active community dwellers to residents of long term care facilities with dementia. FallScope is easy to administer, portable and can be tailored to suit each individual's needs in diverse settings. Our goal is to maximize seniors' functional independence, wherever they reside, encouraging proactive falls prevention measures through standardized evaluation and personalized intervention.



Using the latest computer technology, the FallScope System permits personal interventions with and without multimedia to be delivered in any location.

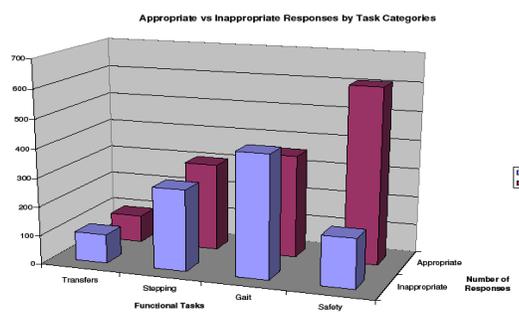


The FallScope System has been tested in over 400 seniors aged from 62- 98. The first implementation of the FallScope and FallsTalk methodology was used in research conducted in Senior Centers in 5 counties in 2 states. Based on Situated Cognition theory from the Educational Psychology domain, research studies with at-risk seniors clearly demonstrated that this unique multimedia behavioral intervention approach helps individual's to recognize the personal circumstances that may cause them to fall (fall threats)¹, resulted in increased fall prevention behaviors² and actually prevented falls³. Improved fall threat recognition was seen within one month, falls were significantly reduced in only 12 weeks compared to untreated individuals ($p < .001$); and by 6 months, those who had multimedia training (FallScope- MFP green) were even significantly less likely to fall compared to those who had the behavioral intervention without multimedia (FallsTalk- FT blue). One year later both groups (MFP and FT) 'survived' considerably better than a comparable study control group (CG- red), though the influence of the multimedia training was still highly significant ($p < .0001$).



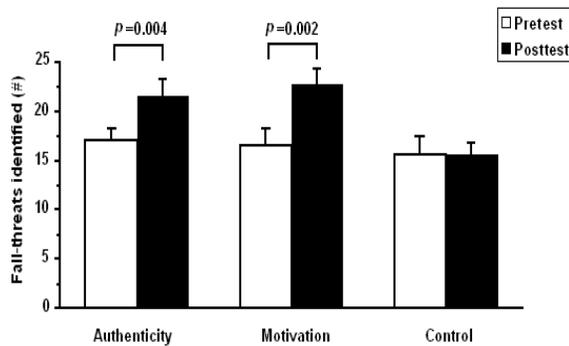
Among individuals who participated at least 12 weeks (n=171), those who had Multimedia Fall Prevention (MFP, n=110) survived longer without a second fall during the follow-up period compared to the FallsTalk group (FT, n= 61, the behavioral intervention without multimedia training, $p=0.016$). Historical controls (CG, n=41) experienced a second fall significantly sooner than either of the other two groups ($p < .0001$).

Falls are a key quality indicator in every clinical setting (e.g. Medicare PQRS, Oasis-C). FallScope has also been tested in various clinical settings and found to support functionally-based evaluation and care planning. The FallsTalk software produces customized Client workbooks that can be used for patient education, improving motivation and compliance. Outcomes measurement using FallScope multimedia was used to objectively document patient safety awareness in subacute care for goal setting, treatment planning and assessment of discharge readiness from short term rehabilitation⁴.

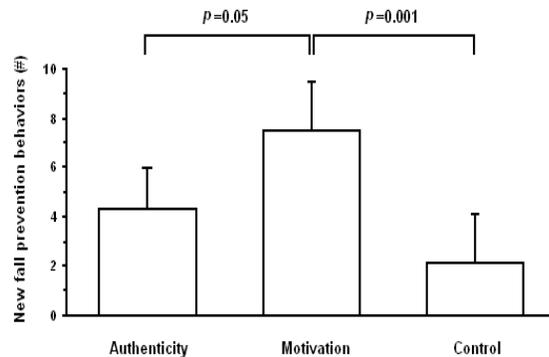


Functional tasks with the highest proportion of inappropriate responses as observed in a consecutive group of patients (n= 195) entering SubAcute care. Tasks (examples) were: Gait (walking in the home and driveway); Stepping (stairs inside the home); Transfer (in/out of the car); and Safety (standing on a chair, walking on ice). These suggest that the FallScope multimedia evaluation can be used to assess SubAcute patient's readiness to return to the community setting, in turn facilitating care and discharge planning.

The FallScope System has been used in diverse community settings. Research with residents of an Assisted Living Facility identified that as many as 41% were at-risk for falls by PQRS criteria, but as few as 26% were actually receiving assisted living care services⁵. In another study, active community dwellers recruited from area senior centers received FallScope multimedia training that was customized using educational tailoring methods⁶ that emphasized either authenticity or motivation and compared to a control group who received only the FallsTalk intervention (no multimedia training). Both FallScope groups recognized significantly more fall threats in novel situations than the Control group^a, but the Motivation group (self-selected relevance) subsequently reported significantly more falls prevention behaviors^b.



a- Pretest and posttest fall threats knowledge for three treatment groups. Authenticity and Motivation multimedia groups, but not Control show significant increases compared to pretest.



b- Number of new falls prevention behaviors for three treatment groups. The Motivation group reported significantly more new behaviors than the Authenticity or Control groups, which did not significantly differ.

FallScope has also been tested in the skilled nursing facility with individuals diagnosed with mild to moderate dementia⁷. Residents enjoyed the multimedia training, which was divided into three or four <15 minute sessions. Three weeks later, they were able to recognize the relevant fall threats in completely novel situations. Relevance can be determined with interview, functional or clinical assessment components. Clinical software modules permit evaluation, review of incidents or fall investigation of reportable events. This seamless integration of required reporting and care planning eliminates redundant steps and streamlines paperwork. The System offers safety assessment tools and an extraordinary intervention approach that has been developed and tested to accommodate even those older adults with significant dementia.

FallsTalk and FallScope interventions are recognized by the Administration on Aging, Administration on Community Living as meeting the Highest Tier of Evidence-Based Community Health Promotion/Disease Prevention program standards. The FallScope System has been developed and extensively tested with support from the National Institute on Aging starting in 2004, it has won awards from the American Geriatrics Society (AGS), American Physical Therapy (APTA) & American Occupational Therapy Associations (AOTA). FallScope is designed to function as a stand-alone intervention in a community or non-clinical setting, or can be used to complement medical or rehabilitation interventions. Changes to behavior and to an individual's understanding of situations that may cause their falls, have always been difficult to achieve. Structural Equation Modeling⁸ shows that the key long-term outcome of successfully preventing falls is achieved through learning to recognize personal fall threats and executing new prevention behaviors. This completely new intervention method encourages each individual to understand their personal and unique fall threats, enabling them in the moment, to identify aspects of their actions or environment that could cause a fall. Finally, the significant research evidence shows that FallScope participants do undertake new falls prevention behaviors, resulting in long-term success.

References

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