

Fall Prevention in Senior Centers: Qualitative Evaluation through Discussion Groups with Older Adults

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 - Yale University School of Medicine; fall prevention interventionists
 - Dorothy Baker, PhD, RNCS; Margaret Gottschalk, PT, MS; Luann Bianco, BA
 - Nine Senior Centers; settings for intervention

Background

- Falls occur annually to one-third of people aged 65 and older; one-half of those aged 85 and older.
- Known risk factors for falls, representing the evidence base for interventions, are preventable.
- In the early 1990's, the Yale FICSIT randomized controlled trial found an in-home individualized, risk factor-focused intervention to be efficacious.*
- This project—Step by Step—incorporated the Yale FICSIT intervention model into Senior Center activities and programs.**
- Nine Senior Centers—2 predominantly Hispanic and 1 predominantly African American—in greater Hartford CT region participated.

*Tinetti ME, et al, N Engl J Med 1994; 331:821-827

**Baker DI, et al, The Gerontologist 2007; 47:548-554

Step by Step Intervention Strategies

- **Senior Center-wide events and activities to raise awareness about falls to promote behavior change to reduce risks**
 - Kick-off events and health fairs offered entertaining ways of delivering fall prevention messages
 - Monthly calendars explaining relationship of falls to other chronic illnesses
 - Low impact exercise activities incorporated into existing activities when possible
- **Individualized fall risk assessments**
 - Conducted by Senior Center-based nurses; all were invited to voluntarily undergo assessments

Step by Step Multi-factorial Fall Risk Assessment Protocols*

- **Postural hypotension:** supine and standing blood pressure checks
- **Multiple medications:** review of all current prescription and OTC medications
- **Balance:** functional reach test, unilateral stance test
- **Gait & mobility:** timed get up and go test
- **Feet & shoes:** sensation test and shoe inspection
- **Home hazards:** self-reported checklist
- **Vision:** newspaper print size check

*Based on the Yale FICSIT trial; implementation in SCs guided by the Yale University School of Medicine partners for Step by Step

Risk Factor Interventions

- **Nurse assessors provided practical, teachable interventions for each risk factor identified; all developed by Yale experts through the Connecticut Collaboration for Fall Prevention (CCFP)***
 - Reviewed “Passbook” with tips on how to address each risk factor
 - Showed how to perform balance exercises
 - Encouraged engaging at appropriate exercise level; videos developed in English and Spanish
- ***CCFP funded by the Donaghue Foundation in CT; visit www.fallprevention.org.**

Step by Step Evaluation Strategies

■ Quantitative evaluation

- Pre-post design; balance and gait performance measures compared at time of assessment and 4-5 months later (not today's focus)

■ Qualitative evaluation

- Structured discussion groups with Senior Center (SC) participants before, and 12 months after, intervention strategies were initiated
- Today's focus: follow-up discussion group results
- Participants asked about impressions of SC-wide fall prevention activities and individualized assessments

Sample Selection

- **Before intervention, 9 SC directors were asked to invite 10-15 members or regular users to participate in group discussions; 109 participants attended.**
 - **General discussion of fall experiences and how fall prevention activities might be developed at SC**
 - **Held between December 2003-February 2005**
- **All of these participants were again invited to follow-up discussion groups.**
 - **Held between December 2004 and March 2006**

Discussion Group Logistics

- Discussion guide was developed in line with objectives; intent was to cover all questions in the same order with all groups in 60-90 minutes.
- Two groups conducted in English and Spanish.
 - Spanish and English translation done throughout discussion using bilingual research or clinical staff members
- Discussion group leader requested and obtained unanimous verbal assent to audiotape discussions in all 9 groups.

Discussion Group Data Analysis Steps

- **Verbatim transcripts were produced from audiotapes; bilingual research staff transcribed and translated Spanish language discussion components into English.**
- **Two research team members (CU and PT) independently read transcripts and searched for concepts using two major domains: impressions of fall prevention activities at SCs generally; and experiences with nurse at individualized assessments.**

Discussion Group Data Analysis Steps

- **“Ethnograph” software and manual coding techniques were used.**
- **Initial coding process led to theme identification based on comment frequency.**
- **Third analysis team member (RF) joined others to review themes included and excluded from results.**
- **Consensus reached by all 3 team members to yield results.**

Results

- **72 participants; 60 females and 12 males**
 - Most had participated in initial discussion groups
 - Most volunteered for individualized assessments
- **General impressions of fall prevention activities:**
 - Most common theme involved favorable impressions of exercise-related activities started or enhanced by the fall prevention initiative
 - Hispanic SCs previously had no structured exercise activities and the exercise and balance videos were popular at most SCs.

Results: Exercise-Related Activities

- **Benefits of exercise programs and videos**
 - Improved energy, improved respiratory health, and ambulation
 - *“the exercises have helped me 100% because I have had a lot of nervous energy...I am more calm”*
 - *“now I’m learning every day to breathe with my mouth open...the breathing exercises are helping me a lot”*
 - *“since I’ve been coming here I feel better because the exercise (helps me) do the 30 steps (to reach her apartment)”*.
 - *“once I learned the exercises I’ve learned how to better walk on the stairs and now I don’t fall”*

Results: Home Modifications

- Participants reported modifying their homes by removing area rugs, affixing rubber mats under carpeting, using bath mats and installing grab rails, using night lights, and relocating wires.
 - *“I learned that I must go into the bathtub slowly until I can get in comfortably. But there were many times before that when I would always fall”*
 - *“when I get up from a chair now, I’m looking around to see if there’s anything I can trip on or an obstacle in my way”*

Results: Individualized Assessments

- One-on-one meetings with the nurse were favorably reviewed in every discussion by participants who had met with nurses
 - *“very good, very kind, and very pleasant...always paying attention”*
 - *“...better than your doctor because when you go in to the doctor you just talk and come out”*
- Participants reported that the nurses were particularly informative about multiple medications, postural hypotension, and balance problems.

Results: Multiple medications

- *“The nurse pointed out...it’s better not to be overmedicated because that can cause you to fall. I was surprised to hear that”*
- *(Translator for Hispanic participant): “her nurse shows how to take the medication and follow the indication on the prescription...she asks us to bring the name of the medication they are taking and how to take them on schedule”.*

Results: Postural Hypotension

- *“there was something that I learned about being in a prone position and then getting up. Your blood pressure can drop immediately and if this happens so many degrees or whatever, it’s a problem for you...now instead of jumping out of bed I take my time”*
- *“to get out of bed, I wait until all my blood move in my body. Then I get out of bed and I don’t feel anymore dizzy”*

Results: Balance problems

- *“The exercises she gives are really so easy to do that you don’t feel, well, I guess I won’t do that today, it takes too long...(with the instructions) you can do just being around your kitchen and your bedroom hanging on to your bureau or whatever and it makes it easier if you kind of get into that habit to do it as you kind of walk by...”*

Results: Barriers and Suggestions

- **Transportation to SCs was reported as a barrier in some groups, including both Hispanic groups.**
- **Popularity of fall prevention initiatives in Hispanic SCs increased demand, which ironically led to new problems such as insufficient exercise space and nurse availability.**
- **Weekend hours were suggested for the future in some groups, and media and newsletter reminders were mentioned in all groups.**

Sustainability of Step by Step

- Participants universally voiced support for sustainability of exercise activities and nurse assessments
- At 5 SCs, nurse assessments now integrated into pre-existing nurse activities.
- At 2 SCs, nurses cannot continue individualized assessments but all exercise programs continue.
- At 2 SCs, fall prevention initiatives temporarily suspended due to staff turnover and plans for a larger facility that will include space for Step by Step initiatives.