



# Strength in Numbers: A Fall Prevention Program



VNA & HOSPICE OF COOLEY DICKINSON

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*Caring for you at Home*

## The High Cost of Falls

- Falls are a major cost to society and individuals. In the United States, **1/3** of older adults fall each year with resulting direct medical costs of **\$30 billion** annually
- Falls are the leading cause of fatal and non-fatal injuries in older adults
- **20 to 30%** those who fall suffer moderate to severe injuries
- **40%** of nursing home admissions are fall-related
- People who sustain hip fractures have a **20%** increased death rate the year after and **50%** do not return to independence
- Many older adults develop a fear of falling, limit their activity, and further increase their risk of falling

## What is Strength in Numbers?

- Recognizing the high rate and cost of falls among older adults in Western Massachusetts, the VNA & Hospice of Cooley Dickinson developed Strength in Numbers in 2008
- Strength in Numbers is a six-week, evidenced-based, multi-factorial falls prevention program presented by VNA physical and occupational therapists
- Groups of up to 20 older adults meet weekly
- Strength in Numbers has been presented in: senior centers, churches & synagogues, retirement communities, and senior housing sites throughout Hampshire and Franklin Counties

## Strength in Numbers- Content



### Session 1: Falls Risk Assessment

- Overview of program & introductions
- Statistics on falls
- Personal fall risk assessment
- Exercise & presentation of video: "Fear of Falling: A Matter of Balance"

### Session 2: Functional Tests & Strength Exercises

- Discussion of strength changes as we age
- Effects of exercise on strength
- Administration of Functional Reach, Timed Up & Go and Single Leg Standing assessments
- Instruction in resistive exercises

### Session 3: Balance Program

- Strengthening exercises
- Balance exercise/activities
- Stretching as part of your exercise program
- Tai Chi
- Walking Program
- Supportive footwear
- Assistive devices

## Program Content

### Session 4: Medication & Falls

- Medication metabolism altered with aging related to kidney, liver function-changes
- Increased fall risk associated with taking 4 or more medications - most Seniors take ~9 medications
- Falls also associated with sedative & pain medications, diuretics, heart & blood pressure medications

### Session 5: Vision

- Age related changes in vision: sensitivity to light changes, reduced night vision, depth perception, glare, & contrast
- Effects of diseases/conditions on vision: diabetes, cataracts, glaucoma, macular degeneration, MS, & CVA
- Vision interventions to reduce falls



### Session 6: Home Safety Modification & Graduation Day

- Review Home Safety Checklist: discussion & education
  - Reflect on sessions
  - Participant evaluation of program
- 3 Month Follow-up:** Review and assess: falls, environmental changes, exercise routine, medication management.

## Accomplishments 2008-2012

- Over 1300 older adults have completed Strength in Numbers programs
- Retention Rate for the six weeks of the program 70% to 91%
- **20-55%** reduction in falls among those returning for follow-up
- **24-28%** increase in Single Leg Standing
- No adverse outcomes
- Overwhelmingly positive feedback
- **Train the Trainer Program:** over 50 physical and occupational therapists were trained in the program, fall risk assessment and treatment
- DVD was produced for the exercise program to be used by participants.
- A refresher course was presented in 2012

## Plan for 2014

- Produce local Cable TV Strength in Numbers program
- Collaborate with Cooley Dickinson Hospital Emergency Department to identify individuals at risk for falls (based on presenting complaint), and provide assessment or refer to appropriate providers
- Continue to present Strength in Numbers in our local communities
- Emphasis on coaching participants

## Funding

### Tufts Health Plan Foundation

John Boynton Fund

Citizens Bank Foundation

Franklin County Home Care Corporation

Highland Valley Elder Services