

## Leadership Connection 2018 (15-18 September)

### Stepping On: An Evidence-Based Falls Prevention Program for Homebound Seniors

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#### **Background**

Falls are the leading cause of injury and death among those age 65 and older. The incorporation of an innovative evidence-based falls prevention program in homebound older adults needs to be implemented in order to prevent serious consequences related to falls. In fact, "Nationally, falls were the leading cause of non-fatal injuries for those 65 and older and corresponded to 800,000 hospitalizations and 2.8 million emergency department (ED) visits in 2014. That's a hospitalization every 40 seconds and an ED visit every 11 seconds." (Wisconsin Institute for Healthy Aging, 2013). Homebound older adults are among the most vulnerable population to falls due to complex variations in their health status, social isolation, and living environments. The utilization of a "Stepping On" fall prevention program will provide classes that help build the participants confidence to manage their health behaviors to reduce the risk of falls and maintain active and fulfilling lives.

#### **Introduction**

The Frederick County Department of Aging partnered with Hood College Nursing Program, and Hood College Social Work program to conduct the Stepping On project to connect homebound seniors to educational and recreational services. Stepping On is an evidence based fall prevention program that empowers older adults to carry out health behaviors in order to reduce the risk of falls. It is a community workshop offered once a week for seven weeks teaching older adults' balance exercises, and specific education on how to prevent falls. Over the course of seven weeks, each nursing student was paired with a social work student and one client. Workshop leaders consisted of professionals such as physical therapists, nutritionists, and the falls risk coordinators who are knowledgeable, and experienced in working with the selected population. The program is conducted through the use of iPads and the web based platform called "ZOOM". This application allows the participant to connect to a class consisting of other homebound individuals and an instructor. The participants were able to see and talk to the instructor and other class participants throughout the session. During the pre-assessment phase the nursing students assessed the client using the Johns Hopkins Falls Risk Assessment Tool to determine their fall risk score. The assessment tool asked questions based on age, fall history, elimination, medications, patient care equipment, mobility, and cognition. The client is given this tool at the beginning and end of the program to determine the extent of a change in falls risk and biopsychosocial status. In addition to the assessment tool, the client receives an exercise log each week. The instructor teaches how to correctly practice the exercises and how often they should record and practice the exercises during the week. After each week the nursing student collects the exercise log and turns this into the Frederick County Department of Aging in order to keep track of the client's progress. To evaluate the effectiveness of the Stepping On program, each participant was reassessed using the John Hopkins' Fall Risk Assessment Tool and through focused assessments on a weekly basis. Each fall risk score was compared with the score given prior to the program start date and subjective observations were shared with the program leaders.

#### **METHODS**

The search strategy for this research project was assisted by databases assessable through the Hood College library website. Employment of the well-known nursing databases such as CINAHL, Cumulative Index of Nursing and Allied Health Literature, Health Source, and PubMed assisted in the research process. Among the various databases and research articles, the common theme of the need for a falls prevention program such as "Stepping On" in older adults remained consistent. Keywords such as "prevention of falls" and "older adults" were used in the search process to narrow down potential articles and sources. Eliminating all articles written less than 5 years ago and only focusing on more current

nursing practice allowed the search to become even more specific and credible. Five research articles were used to assess the need to improve prevention of falls in older adults, compile data, and review outcomes necessary to complete this evidence-based research project.

### **Evaluation**

Compared to current evidence based research; Stepping On is a falls prevention program that has been shown to be an effective program. Among the research articles and studies used in this research project, there was minimal variation in the outcomes and conclusions. All of the articles demonstrated a need for a Stepping On Falls Prevention Program in older adults. One of the main studies by Peterson et al. (2015), showed that stepping on was effective in reducing the number of falls by 37% from 6 months before the program began to 6 months after the program ended. Similarly, Guse et al.(2015), found a “significant population-level reduction in discharges for fall injuries requiring hospitalization or an emergency department visit in both the enhanced support system and the standard support communities over the control communities, indicating that a community-wide effect can be achieved.” In addition to the program being effective, a study completed by Taing & McKay (2017), received positive feedback from the participants indicating that 94% of participants felt they had better strength and balance. However among these studies, the conclusions mentioned that more research is needed to identify barriers and facilitators that influence the successful adoption of this program. Along with these consistent findings, a study completed by Mahoney et al.(2017), offered interventions to improve the Stepping on Program by incorporating the Delphi toolkit in the planning process which outlines the key interventions for the program to be successful. The level of evidence in the controlled trials used is strong enough to support the Stepping On Program to homebound older adults. By implementing this evidence based project there is no foreseen harm or burden placed on homebound older adults. In fact, an improved quality of life, decrease risk of falls, and decrease in isolation have occurred in the research studies previously completed.

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### **Title:**

Stepping On: An Evidence-Based Falls Prevention Program for Homebound Seniors

### **Keywords:**

Older Adults, Prevention of Falls and Isolation and Stepping On Program

### **References:**

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### **Abstract Summary:**

Stepping on is a program that empowers older adults to carry out health behaviors that reduce the risk of falls. It is a community workshop offered once a week for seven weeks teaching older adults' balance exercises, and specific education on how to prevent falls.

### **Content Outline:**

#### **Introduction**

##### **Agency and Population Served**

The Frederick County Department of Aging Virtual Senior Center provides an opportunity for homebound elders to access programs, activities, and classes at four different senior centers from their home.

The Frederick County Department of aging partnered with Hood College Nursing Program, and Hood College Social Work program to conduct the project to connect homebound seniors to educational and recreational services.

Stepping on is a program that empowers older adults to carry out health behaviors that reduce the risk of falls. It is a community workshop offered once a week for seven weeks teaching older adults' balance exercises, and specific education on how to prevent falls.

Older adults who should attend include:

- 1) Are at risk for falling
- 2) Have a fear of falling
- 3) Who have fallen one or more times

Subjects covered: balance and strength, home and environmental safety, vision, medication review.

##### **Mission, Vision, and Values**

-Falls are the leading cause of injury and death among those age 65 and older.

-Stepping On provides classes that help build the participants confidence to manage their health behaviors to reduce the risk of falls and maintain active and fulfilling lives.

**Mission:** develop and administer programs and activities that support older adults with disabilities in their efforts to remain healthy, active, and independent members of the community, and to provide coordinate and advocate for services which promote the dignity and enrichment of life for all seniors, persons with disabilities, families and caregivers.

**Vision:** Live well, age well

**Values:** Friendly, Courteous, Timely, Responsive, Accurate, Consistent, Accessible, Convenient, Truthful, and Transparent.

##### **The Idea**

- 1) Create a Virtual Senior Center for Homebound Seniors
- 2) Purpose is to virtually connect homebound older adults in Frederick County with programs, services, and peers to reduce isolation and improve physical and mental health.
- 3) Begin with bringing Stepping On to homebound seniors
- 4) State-level support

## **Objectives**

- 1) Frederick County Department of Aging/Senior Center will identify homebound older adults who could benefit from the virtual Senior Center by August 1, 2017.
- 2) Pairs of students (1 nursing, 1 social work) will provide 10 weekly home visits to homebound older adults between September 2017- December 2017.
- 3) Students will use an iPad and Zoom application to connect homebound older adults with programming offered by Frederick County Department of Aging specifically with "Stepping On" (an evidence-based fall prevention program).
- 4) Students will complete pre- and post- assessments at each initial and final visit and submit all documentation and data to the Senior Center.

## **Goals**

- 1) Utilize a collaborative partnership between the Frederick County Department of Aging and Hood College Nursing & Social Work Departments to pilot the project and provide a learning experience for nursing and social work students
- 2) Provide nursing and social work students with a community learning experience focuses on older adults.
- 3) Assess the needs of homebound older adults through home visits and connect them with appropriate resources.
- 4) Reduce the risk of isolation by providing a virtual Senior Center to homebound older adults in Frederick County by December 31, 2017.
- 5) Reduce the risk of falls among homebound seniors identified by December 31, 2017.

## **Agency funds**

- State and Federal Funds for local senior citizen programs
- Department provides technical assistance, grants of federal and state funds for local programs.
- Area agencies also receive local funds, private donations, and contributions from program participants
- The Department receives general funds approved by the Maryland General Assembly, federal funds through the Older Americans Act, Medicaid, and other sources to carry out its mission.
- Frederick County Department of Aging will explore the same fee structure for activities and classes that is used in existing senior centers. These funds will offset the cost of the equipment maintenance, subscription fees for the web based platform.

## **Role of Nurse**

- Conduct home visits
- Conduct pre and post assessments for falls risk and biopsychosocial status.
- Conduct a health screen: Vital signs, medications review, and activities of daily living.
- Provide support and supervision for the homebound participant during the activity.

## **Assessment**

**Community:** Homebound older adults in Frederick County

### **Demographics:**

- Rate of death due to falls among older adults in Maryland increased by over 164 percent from 22 fatal falls per 100,000 to 58 fatal falls per 100,000 between 2000 and 2014.
- In 2014 number of death increased from 133-476
- In 2014, there were 22,212 hospitalizations for fall injuries among all ages in Maryland, of those 15,549 were among older adults.
- In 2014, older adults generated over 253 million in fall-related hospitalizations, and fall related Emergency Department visit charges were over 20 million.

**Data Collection:** Falls Risk Assessment Tool: Client was asked questions based on age, fall history, elimination, medications, patient care equipment, mobility, and cognition. 6-13 points= Moderate fall risk, >13 total points= high fall risk. The client is given this tool at the beginning and end of the program to determine the extent of change in falls risk and biopsychosocial status. Data is collected through Focus groups by analyzing the individual at each session, and through the falls risk assessment tool.

**IT applications:** The client receives an exercise log each week. The client then is taught how to practice

each of the exercises during the class. The instructor then teaches the client to record how often they practice the exercises during the week. Each client will practice strength exercises three times a week, and balance exercises five times a week. Each week the nursing student collects the exercise log and turns this into the Frederick County Department of Aging.

Technology: The students utilize iPads and the web based platform, ZOOM to connect the homebound older adult to a class consisting of other homebound individuals and an instructor. The web based platform allows participants to see and talk to the instructor and other class participants throughout the session.

### **Community Diagnosis**

Risk for falls among homebound older adults in Frederick County related to isolation, advanced age, previous falls, fear of falling, polypharmacy, and environmental/home safety hazards as evidenced by increased rate of deaths due to falls in Maryland by over 164 percent from 22 fatal falls per 100,000 to 58 fatal falls per 100,000 between 2000 and 2014 among homebound older adults.

### **Planning/Outcomes & Implementation**

The intervention to decrease the risk of falls in homebound older adults within the Frederick County region has been to implement the Stepping On program. This evidence-based program, approved by the U.S administration of aging and the CDC, uses balance and strengthening exercises paired with informative lessons to help the older adult feel comfortable moving around their environment safely.

### **Evaluation**

To evaluate the effectiveness of the Stepping On program, each participant will be reassessed using the John Hopkins' Fall Risk Assessment Tool and through focused assessments on a weekly basis. Each fall risk score will be compared with the score given prior to the program start date and subjective observations will be shared with program leaders. It is understood that not all fall risks can be overcome, but ultimately the participant should feel more comfortable in their environment and know what to do in case of a fall or accident.

First Primary Presenting Author

### ***Primary Presenting Author***

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**Professional Experience:** Volunteered for a community clinical rotation with our county's Department of Aging, where I participated in a new, innovative virtual senior center pilot project for homebound seniors. I completed home assessments and worked with a client over the course of the semester to offer the evidence-based Stepping On Program in the home.

**Author Summary:** Anna Waldron graduated with her BSN from Hood College and has been accepted into Johns Hopkins University DNP program. She works at Johns Hopkins on the Bone Marrow Transplant ICU. Anna worked with the Frederick County Department of Aging where she participated in a new, innovative virtual senior center pilot project for homebound seniors. She worked with a client over the course of a semester to offer the evidence-based Stepping On Program in the home.