

# Let's Get Functional

Using evidence-based models of physical activity program planning and delivery to motivate movement in frail, sedentary older adults



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## Problem

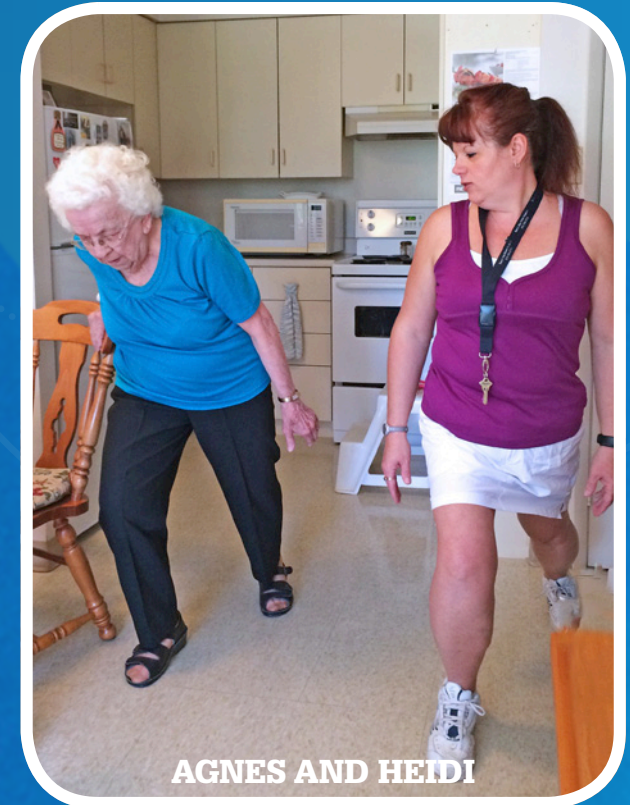
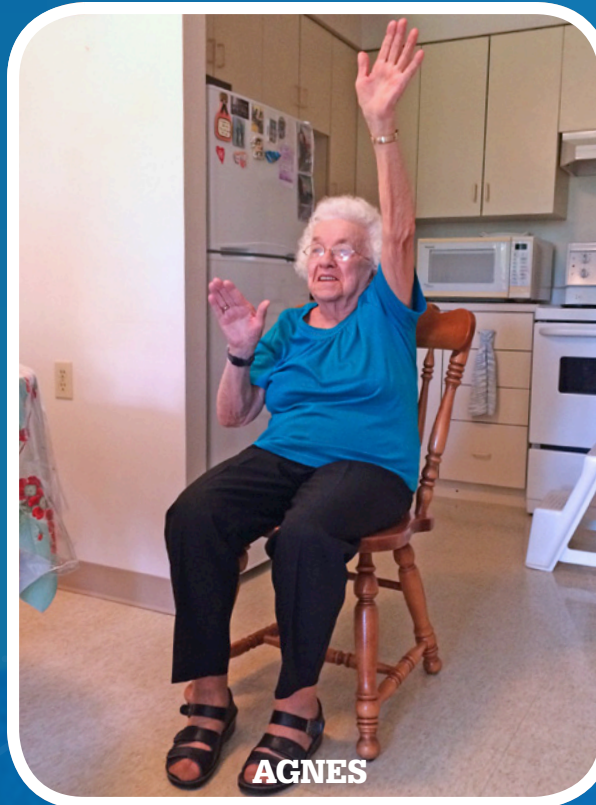
There is a lack of accessible, supervised physical activity programming for community-dwelling seniors at high risk of falling. Evidence-based programs exist for this population however evidence-based implementation practices are scarce.

## Background

As part of the Champlain Falls Prevention Initiative, Barry's Bay and Area Senior Citizens Home Support Services (BBAHS) was invited to participate in a community-based project with Assisted Living clients, living in a social housing building operated by Renfrew County Housing on Stafford St. in Barry's Bay.

This Initiative involved the use of the **Staying Independent Checklist**, a risk assessment tool and a screening and intervention algorithm for use with primary care. In addition, the Renfrew County and District Health Unit (RCDHU) delivered Fall Prevention training to our PSWs based on the BEEACH Fall Prevention Model.

We used the tools to identify clients at high risk of falling and immediately offered an exercise intervention called the Home Support Exercise Program to challenge our clients, staff and administration towards evidence-based practices.



“One without the other  
is like serum without a syringe;  
the cure is available  
but the delivery system is not.”<sup>(5)</sup>



## The Serum

### Program or Intervention

One single intervention has far reaching impact on diminishing rates of chronic diseases, rates of falls, with an overwhelming collection of scientific evidence over the past 50 years.

### Components of Best Practices for Physical Activity Programming for Older Adults<sup>(9)</sup>

#### Programs

- Select evidence-based physical activity programs to optimize health outcomes.
- Be integrated into settings that have the infrastructure
- Have access to exercise specialists or trainers
- Offer individual exercise Instruction
- Measure functional outcomes pre and post

#### Behaviour Modification Strategies

- Not enough to tell someone to 'just do it'
- Consider individual motivation, fear and beliefs
- Look for the 'teachable' moments
- **Instill task-specific self-efficacy—the determinant that has the strongest adherence to fitness programs in older adults**

“Physical activity is now identified as the single most important factor in maintaining independence.” <sup>(7)</sup>

### Program Method

#### Program

**The Home Support Exercise Program (HSEP)** was chosen as a direct intervention for clients interested in a four-month structured and targeted pilot in their own home. HSEP, developed by the Canadian Centre for Activity and Aging, is the evidence-based program of choice due to its simple and progressive exercise design and ability to address multiple areas of functioning (mobility, balance, ability to transfer and strength) while enhancing quality of life and self-efficacy.

#### Participants

Two self-selected PSWs, one co-ordinator and 12 older adults screened at high risk for falls living in an apartment building already on our Assisted Living program. Health providers notified. Previous offers by PSWs to help with home exercise had not been accepted. Ten participants continued. Eight participants (six female, two male) 68–97 years of age completed entire program.

#### Pilot Project

**Teach and Monitor HSEP (each visit lasted 30 minutes)**

- 2 months of 3 visits per week
- 1 month of 2 visits per week
- 1 month of 1 visit per week plus group class

#### Assessment Measures

- Functional Assessments
  - » TUG • Sit/Stand • 4-stage Balance • Functional Reach
- Confidence Scale
  - » Falls Efficacy Scale

#### Participant Satisfaction Survey

#### PSW Survey

#### Evaluation and Reflection

- Ongoing clinical data analysis with local Emerg RN
- Develop poster presentation
- Create plan for sustaining/evolving further actions



## The Syringe

### Delivery System

We have elaborate systems helping people manage Diabetes or Heart Disease for example that embed a message to stay active. Physical Activity needs to become a stand-alone priority in order to address the looming Physical Inactivity Crisis.

### Evidence-Based Systemic Approaches to Implement Programs <sup>(5)</sup>

#### Changing Practices

**Build competence and capacity:** Need for qualified staff who will be able to facilitate effective programming to an older adult population with varied needs and abilities; staff who also believe that the intervention is worthwhile.

**Build support systems:** “Training without coaching results in about 5–10% of the qualified staff actually using the intended interventions in practice” <sup>(5)</sup>

#### Changing Organizations

Requires a commitment to changing front-line practices and to fully supporting front-line staff.

#### Changing Systems

Implementation supports for evidence-based interventions need to be part of legislation. Focus has been on the software and not the hardware to run programs effectively.

### Delivery Method

#### Motivate Administration

- Co-ordinator reviewed research on subject matter and becomes certified in Senior Fitness and Home Support Exercise through Canadian Centre for Activity and Aging.
- BBAHS Executive Director and Coordinator commit to developing and funding a direct intervention to enhance functional mobility.
- Champlain LHIN Falls Prevention Strategy coalesced opportunity to develop Stafford Pilot Project

#### Motivate Staff

- First HSEP training for all staff in 2011 with little uptake by staff or clients.
- Workshops to sensitize staff to falls and their role in prevention
- RCDHU inservice and Stafford Pilot Project intro, January 2015
- Booster HSEP inservice and request for commitment, February 2015
- PSW-led facilitation of Stafford Pilot Project
- Coordinator support and coaching
- Discuss modification and progression
- Problem solve and exchange ideas
- PSWs and Coordinator meetings to review client progression

“The response to physical inactivity has been incomplete, unfocused, and most certainly understaffed and underfunded, particularly compared with other risk factors for non-communicable diseases.” <sup>(6)</sup>



MAX AND SHELLEY

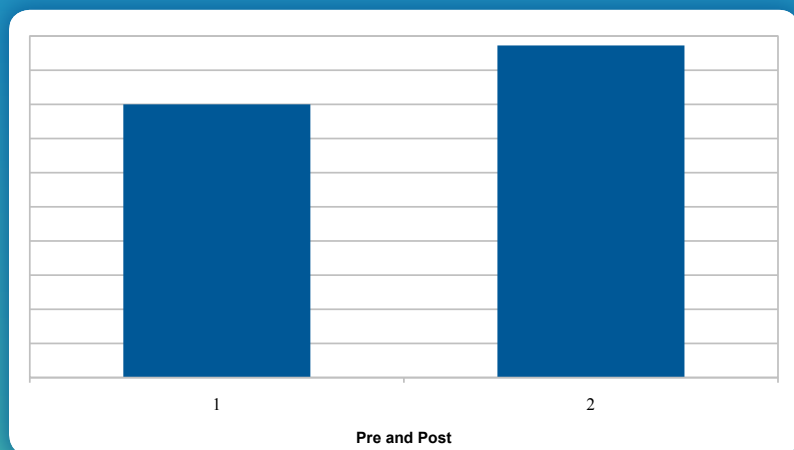
#### Motivate Client

- Staying Independent Checklist raised awareness of fall risk
- Immediately offer an intervention while promoting project as a special opportunity
- Utilize trusted PSWs with two to six years employment at Stafford Street
- See Program Method



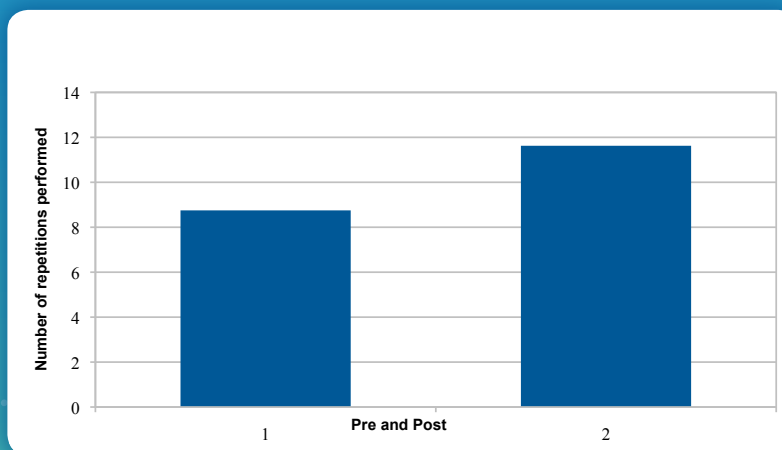
## CONFIDENCE SCALE (FES)

21% IMPROVEMENT



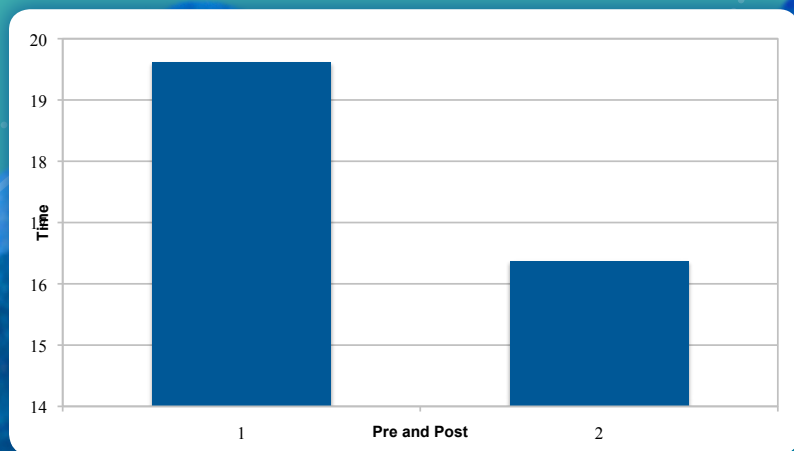
## SIT TO STAND

32.8% IMPROVEMENT

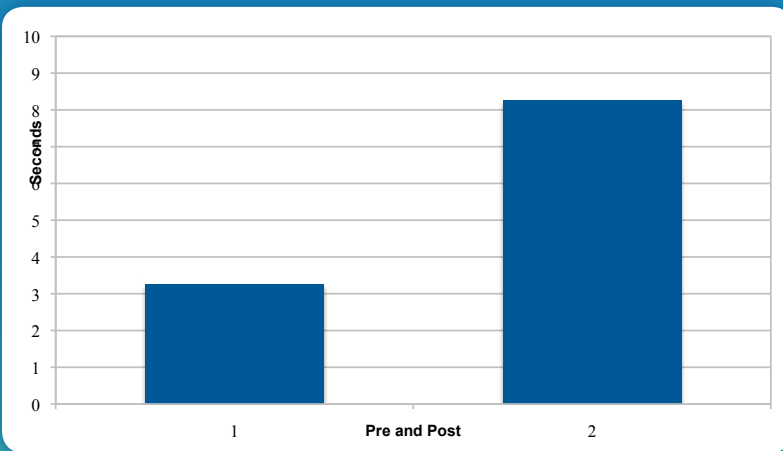


## TIMED UP AND GO (TUG)

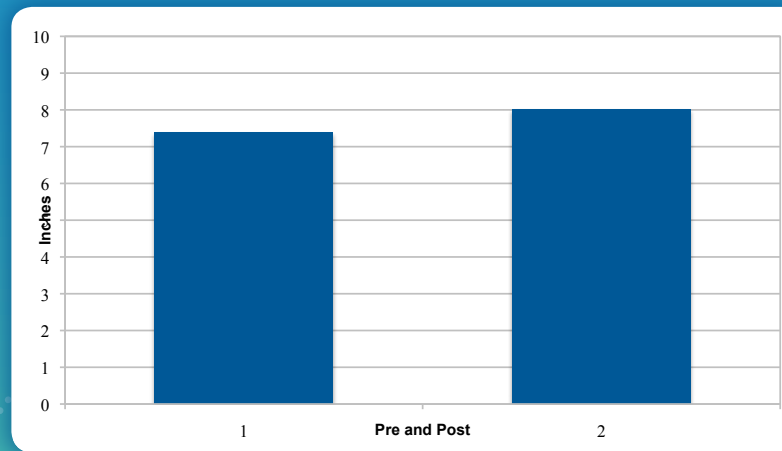
16.5% IMPROVEMENT



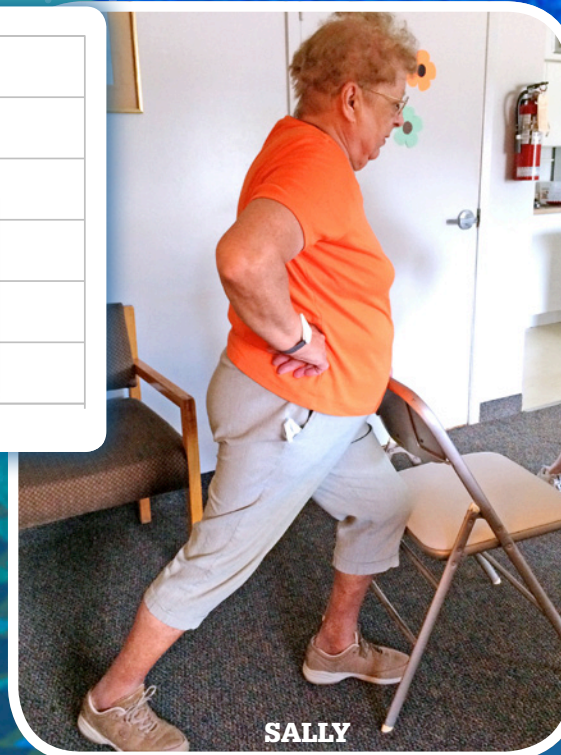
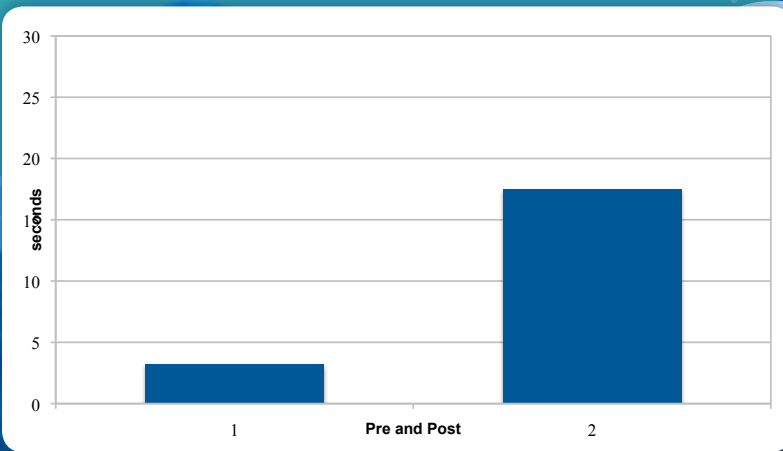
### TANDEM BALANCE 60% IMPROVEMENT (10 SEC MAX)



### FUNCTIONAL REACH 7.5% IMPROVEMENT



### TANDEM BALANCE 81% IMPROVEMENT (30 SEC MAX)





## CLIENT Comments

"They tell you what to do and how not to hurt yourself. They explain it thoroughly. That's what I like. And they're company!"

"I guess the trust in the people that works here. That's what I think it is anyway. They like the people so they like to do something with them. Plus they get right into it with you. They're good. I don't know why people would refuse."

"I think we live in heaven because we have people taking care of us, what we need. We have somebody there to say "Go Get Em" you know. That's what we need. We need someone in the back to give us a little push. It makes all the difference in the world."

"Funny thing is...it doesn't take much to exercise but I need the support. I got my doctor, my son, the PSWs. I believe in support!"

## Improving FUNCTIONAL Fitness

"I'm able to go out without my walker. I always used it before. Now I use my cane."

"My muscles (pointing to calves) used to have a funny feeling or something, now they seem to be OK. Maybe the exercises have helped cause when I kneel at church it's not so bad."

"I've noticed that I can get up and down better. And even getting into the car or out of the car. My son says that I do a lot better."

## Self- Efficacy

"It's made me think better. Makes me think that I'm doing good!"

"I was really down there for a while. I really was and when Heidi started this exercise for me it really changed me around...around enough that I like to do it after supper on my own. Ten to 20 minutes it's done. I've done it so many times that it's all in my head. I know all the rhythm and I just do it."

"I never knew I'd do all them exercises like that. I was surprised because I'm wobbly, you know, on my own (chuckle) but you can do it if you put it in your mind."

## STAFF Comments

"It's changed the whole feeling of that building (Stafford St.)—it's become a form of entertainment and discussion amongst the participants about how well they are doing and how well they are feeling. It's a win-win."

"I was worried I'd have to think of things every week to get them to continue when in essence they motivated me because they were so enthusiastic. So glad to have that individual attention."

# Conclusions

**HSEP is an effective intervention for improving functional fitness as well as enhancing quality of life and self-efficacy when combined with effective delivery systems.**

**Providing 1:1 client focused, structured and targeted exercise interventions can produce significant qualitative and quantitative outcome measures regardless of level of frailty.**

**Trained, coached and coordinated PSWs play a unique role providing exercise motivation and adherence for the frail, sedentary older adult.**

**Effective program planning and delivery is both science and art, which together can address the social, behavioral and psychological facilitators of physical activity.**

## Future Considerations

### Consider Health Policies

Sixty percent of Canadians over 65 are inactive making Inactivity a higher health risk than rates of smoking or chronic diseases.<sup>(9)</sup>

“Wellness costs, while illness is subsidized or fully covered. The only way to get a free fitness test is to have a heart attack.”<sup>(2)</sup>

“There is no medicine that can compete with physical activity to prevent problems of aging and promote vitality and zest for life.”<sup>(1)</sup>

### Consider Delivery Models

A major finding by VON Canada’s report evaluating innovative community-based models of physical activity interventions showed that “volunteer-led (or PSW-led) exercise provided through an established community-based health services organizations reached older adults who would not normally have access to exercise at an appropriate level.”<sup>(10)</sup>

### Consider Economic Impact

“Falls are the leading contributor to overall injury costs in Canada and account for \$6.2 billion or 31% of total costs of all injuries.”<sup>(3)</sup>

“The economic impact of physical inactivity in Canada in terms of chronic disease, obesity and health care costs is estimated at \$6.8-billion Cdn per annum.”<sup>(4)</sup>

### FALL INCIDENTS

All eight participants had a fall in the six months previous to HSEP.

No one fell during program or since program completion.

### ADHERENCE

Seven of our eight participants averaged 84% attendance.

The eighth participant had only 47% attendance due to illness.

## ACKNOWLEDGEMENTS

Assisted Living Participants

Heidi McDonald and Shelley Boyce, PSWs  
Colleen Musclow, Health Promoter, Renfrew County and District Health Unit

Anne Burns, RN and data analyst

Champlain Falls Prevention Workgroup

The Champlain Falls Prevention Strategy is supported by the Champlain LHIN

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