Longevity worth living

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Introduction

Good health can be elusive at any age, but for the oldest adults, the ability to manage day-to-day activities, while avoiding costly injuries associated primarily with falls, can seem daunting.1-4

Facilitating active aging within community programs and services helps to optimize opportunities for people to enhance the quality of their lives as they age. For this, integrating the concepts inherent in the four pillars of active aging5 — health, participation, security and lifelong learning — is key.

In 2012, Shepherd’s Care Foundation’s Kensington Village (KV) campus, received a 5-year grant-funded project titled, “Campus of Wellness and Care Demonstration Project”. The overall goal of the project is to identify opportunities to enable aging residents to stay healthy and maximize independence for as long as possible. KV is home to 450 independent residents, with an average age of 87 years. In this setting, participation in physical activities plays a large role in enhancing health outcomes for diverse older adults that may be relatively frail and at high risk for injury.

Where to start?

In September 2014, the project launched with the following foundation of beliefs.

WE BELIEVE:

• that increasing levels of physical activity to minimum standards will increase the health of the residents;
• different types of physical activity (e.g., walking, lifting weights, and stretching) are beneficial as they elicit different kinds of adaptations;
• the four parameters of fitness (aerobic, balance, strength, and flexibility) can be thought of as distinct areas of behavioural change and can be worked on simultaneously;
• the best type of physical activity is that which gets done;
• the move to a more physically active lifestyle, depends on doing the right things at the right times; and
• initiatives must be owned by the residents.

SUMMARY

The Shepherd’s Care Foundation is working to identify and develop opportunities to support and enable its aging residents to live healthy and independent lives. This includes engaging residents in the process of research and program development to provide simple and safe activities to promote wellness, as well as fit the needs and interests of residents.

This article highlights the research, program process, and changes in residents’ perceptions of personal and physical health after participation in physical activities.

Cover photo: Anne Tomyn, at 88, enjoyed exercising and jumped into many physical activities, including the walking club. She was always game to take a walk outside. She passed away last year at age 90. Photo used with permission by her family.
What we did

Based on these beliefs, the team researched and implemented ability-appropriate, simple and safe activities to promote wellness for KV’s population. We created access to activities and resources that helped older adults to take an interest in their health, as well as act to improve and maintain it. Over time, these activities were altered as the needs and interests of the residents changed.

We encouraged residents to contribute to the project development, participate in decisions that would affect their day-to-day lives, and help us to understand the best approach for getting feedback and data. Communication with participants invited input and developed ownership.

We have learned to identify residents’ current needs and help them to progress onward to better health. Offering a number of fantastic physical activity classes only benefits people who are ready to take part in them. Many of the residents may not be ready to participate in activities, therefore, a big part of our approach is to get them to the point where they desire to start or increase their physical activity. Then we equip them to be able to choose a path that will help them attain their goals. This integrated model, addressing social determinants of health, is the backbone to our success.

Rod, 91, attends fitness classes regularly with one goal in mind — being physically able to go dancing at the local seniors centre every Wednesday. Having re-discovered his love of dancing three years ago, Rod knows the importance of being strong and stable on his feet if he is to continue to enjoy his outings.

Making a difference

To measure changes in health outcomes and functional performance, the Campus of Wellness and Care Demonstration Project model incorporates a spectrum of data collection methods. Two data collection methods and their outcomes are discussed here.

Surveys

General resident health surveys were developed and conducted in 2014 and 2016 to assess perceptions of personal physical and life enrichment pre- and post-participation in physical activities. Key findings include:

- improved ability of residents to live independently (from 62% to 77%)
- increased sense of wellbeing (from 43% to 79%)
- increased access to health information (from 26% to 82%)
- improved prevention of falls (from 42% to 52%)
- improved ability to manage pain (from 27% to 34%)
- increased participation in more mental/physical activity over time (from 52% for both mental and physical activities to 61% for mental activity and 75% for physical activity)
Functional physical fitness testing

To assess functional physical fitness, we used standardized tools including the Fullerton Advanced Balance Scale (FAB), the Seniors Fitness Test and the 30-Foot Walk (stride length and speed).

The FAB test consists of 10 performance-based activities with a possible total score of up to 40 points. The higher the score one receives, the lower the risk of falling.6,7

The Seniors Fitness Test is comprised of test items that assess flexibility, endurance, agility, strength, and balance with each domain scored separately. This test can help assess areas for improvement.8

The 30-Foot Walk measures gait speed under two conditions: preferred pace and maximum pace. Gait speed has been shown to be predictive of community ambulation skills, disability and risk for falls in the older adult population.9

These three tests were conducted at several points in time beginning January 2014 with the number of residents participating varying by test. Although the majority of testing was conducted within set time periods, some residents were either unavailable or had incomplete testing and had to return at times convenient for them. Our last functional physical fitness testing took place in October 2016. Based on individual scores in each of the tests or domains, residents were encouraged to participate in activities that would mitigate their areas of concern.

By way of example, Table 1 highlights the results over time for the FAB test. The average score at baseline score was 24 (i.e., scores of ≤ 25 indicate a higher risk for falling). Of those tested at baseline, 53% of residents opted to be re-tested on at least one other occasion.

On average, resident scores improved over time. For those participants who completed testing at Time 1 and Time 2, 65% had maintained or improved their scores. Those who tested at Time 3 and Time 4 had an average score above baseline.

Results suggest that the majority of residents undergoing functional physical fitness testing participate in some form of regular programming/activities that contributes to maintaining or improving functional abilities. Given the age of those tested and the likelihood many will have chronic conditions and/or physical/visual/social limitations, it is heartening to know one is never too old to make a difference and that keeping active is a good investment!

“\textit{I started exercising. I’m not getting any better but I sure am not getting any worse.}”

— Dave, 84 years

\begin{table}
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\begin{tabular}{|c|c|c|c|}
\hline
\textbf{Category} & \textbf{Baseline (n=55)} & \textbf{Time 2 (n=23)} & \textbf{Time 3 (n=7)} & \textbf{Time 4 (n=4)} \\
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Average age (years) & 86 & 85 & 85 & 85 \\
Range & 76 – 98 & 77 – 92 & 79 – 91 & 79 – 90 \\
Average score & 24 & 25 & 29 & 26 \\
(Max. 40; increased risk for falling at ≤ 25) & & & & \\
Range & 7 – 37 & 14 – 37 & 26 – 35 & 18 – 31 \\
Number improved & 12 & 4 & 0 & \\
Number maintained & 3 & 0 & 0 & \\
Number declined & 8 & 3 & 4 & \\
Pre-Post score difference (average) & +1.48 & +2.14 & -2.50 & \\
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\end{tabular}
\caption{Fullerton Advanced Balance Scale (FAB) Test Results by Time}
\end{table}

Note: During the project term, 6 residents passed away and 6 moved, leaving 43 residents that were eligible to be tested at Time 2.
The ability to maintain or improve your balance in your late 80s or early 90s is a great motivator to continue being active. While we do not track the number of resident falls, per se, we know from our care team that the need for post-fall followups has decreased significantly since the start of this initiative.

Overall, improving access to physical activities on-site and encouraging more active and functional aging (mental, physical, social, etc.) have led to improved quality of life and slower health decline for our oldest seniors. At the same time, it has helped to reduce overall health system costs, the most obvious example being a reduction of over 360 EMS calls since April 2013. In fact, in our community, we have been able to keep residents independent for longer; delaying, or in some cases avoiding, the need for a higher level of care.

**Discussion**

Our project is a demonstration initiative — creating and testing an innovation in real circumstances with real people. We are evolving our understanding of how to work with independent, older adults living in senior housing congregate settings, and creating, with them, environments that promote their health and wellbeing. Encouragement and relationships are key to resident engagement, participation and investment in improving their own health and wellness.

We have learned older adults will be clear and direct with their feedback and that their perception of planning and timelines change as they age. KV residents add value to our processes and live full, complex and vital lives that change over time. Their humour, tenacity and commitment to living life and facing its challenges have been invaluable personally and for the project.

The beliefs upon which our programming evolved still guide our project today, even though motivating residents to strive for the level of activity recommended in current guidelines can be challenging for some residents. Through this project, and by engaging residents in the process, we are learning how to help our oldest citizens understand that you are never too old to learn and never too old to make a difference in personal health and wellbeing.

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At 91, Marion was diagnosed with Parkinson’s disease, and she was informed that she would need a higher level of care. Through participation in over 70 physical activity classes at Kensington Village, she was able to not only maintain, but improve her fitness level.

Marion was able to live independently in her own home until her death (FAB test results: T1 [baseline] 14; T2 = 23; T3= 28).

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Georgette works on improving her upper body strength.
REFERENCES


ABOUT THE AUTHOR

Kelly Deis, BSHeC, has worked in public health for over 40 years. She started her career as a community health nutritionist and then went on to be an administrator and leader in knowledge translation.

Kelly has found working with seniors in the Campus of Wellness and Care Demonstration Project to be both rewarding and inspiring. This project was funded through an Alberta Health Continuing Care Innovation Grant.