CARES: Early Frailty Identification and Prevention Strategy

Community Action & Resources Empowering Seniors

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ABSTRACT

As a result of the debilitating impact of chronic diseases and frailty nearly half of Canada's health care budget is spent on seniors over the age of 65. Fraser Health has the highest number of seniors of any BC health region. The increasing aging population will predispose seniors to frailty and lead to unsustainable pressure on an already over-burdened health care system. Therefore, the CARES (Community Actions and Resources Empowering Seniors) Project, an upstream innovative approach, was developed to delay the impact of frailty downstream and maintain seniors' quality of life and judicial use of health care resources.

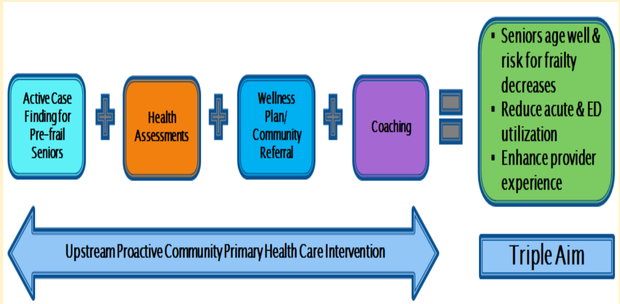
CARES Project's primary objective is screening for frailty in the primary care setting. As part of routine care, participating physicians incorporate the Community Geriatric Assessment (CGA) and Frailty Scales to identify pre-frail seniors and track changes in frailty over time. If pre-frailty is identified, a referral is initiated to a local Telephone Coaching Program. Trained volunteer coaches engage in a weekly 30 minute telephone conversation for 3 to 6 months, the secondary objective. Over the 3 to 6 month period, support provided and coaching strategies enhance the senior's self-management capacity and adoption of health protective behaviours namely, engaging in exercise.

RESEARCH

CARES Research Title: Frailty assessment for older adults at points of care: Validating the electronic comprehensive geriatric assessment / frailty index (eFI-CGA).
Research Summary - Background: By 2050, people aged 65+ years are projected to constitute 25% of the total Canadian population (31% in British Columbia). Older adults, especially those who are *frail*, often have multiple interacting medical and social problems, are at greater risk for adverse events, and have complex healthcare needs. In Canada, at over $100 billion, almost half of the healthcare budget is spent on older adults. Accurate and early assessment of frailty is crucial for effective care management and curbing of possible preventable health decline. The frailty index (FI) uses a deficit accumulation-based approach to assess frailty (*i.e.* level of frailty increases proportionally as the number of health deficits increases). The FI can be calculated using variables from the Comprehensive Geriatric Assessment (CGA), a well-established multidimensional, interdisciplinary clinical tool used to determine the medical, psychological, and functional capabilities of older adults. The FI-CGA has been shown to be robust and valid, but manually calculating an FI-CGA requires considerable time for frontline clinicians, a deterrent to its adoption.
Objectives: To test the *reliability* (*e.g.* internal consistency, inter-rater, intra-rater) and the *construct validity* of the eFI-CGA in primary, community, and residential care settings for early frailty assessment in older adults.
Methods/Expertise: Our team consists of clinicians, scientists with expertise in aging and frailty, statistical and database scientists, clinical knowledge users, patient representatives, and decision-makers. Access to existing datasets in our health information systems (*e.g.* EMR and interRAI) will allow for the calculation of the eFI-CGA for older adults in different healthcare settings (*e.g.* primary, residential, and acute care). We will analyze retrospective and prospective datasets in order to map and test the psychometric properties of the eFI-CGA tool.

CARES Model

Community Primary Health Care upstream intervention to decrease downstream utilization



Target Population - Inclusion Criteria

Persons 65 - 85 years (and by exception):

- Living at home or in assisted living within catchment community with a Rockwood Clinical Frailty Scale score between 3 (Managing Well) to 6 (Moderately Frail)
- Emerging chronic health issue or other risk factor for frailty

Proactively Delaying Frailty: Jean's Story

At 75 years of age, Jean is the primary caregiver for her husband. Jean spends most days at home and is socially isolated. She has difficulty walking and does not participate in any regular exercise. Her balance is poor and has had some near misses for falls. Jean has high blood pressure and irregular blood glucose levels. Jean's primary care provider recognizes she is on a path to a state of frailty due to her risk factors. However, there is no plan to delay Jean's decline into frailty. Without intervention the primary care provider worries Jean may have a serious fall and may have to be admitted to an acute care facility.

KEY COMPONENTS / PROCESSES / METHODS

Frailty threatens the quality of life of seniors. As the leading cause for the disproportionate use of health care resources, frailty is a serious threat to the sustainability of the health care system. Mounting evidence suggests frailty can be prevented with early assessment and management, thus the CARES intervention was developed. The CARES model is based on a goal-oriented multidisciplinary primary care plan which combines a Comprehensive Geriatric Assessment with health coaching. The CGA has repeatedly demonstrated its value in the clinical setting for bringing about enhanced outcomes. The Frailty Index (FI) is a reliable and sensitive measure that can be generated from the CGA. Integrating both scales into the electronic medical record of primary care enables the use of a reliable and valid measurement of frailty at point of service. Using the electronic FI-CGA in the clinic setting guides healthcare providers to make more meaningful and comprehensive healthcare decisions. Based on the degree of frailty, health coaching aims to both support the seniors competence in their self-management as well the adoption of health promoting behaviours like exercise and improved nutritional choices. Using the CARES model in primary care aims to provide substantial healthcare cost savings over time by addressing frailty at early stages and decreasing costly hospital admissions. Also it aims to improve the quality of life of seniors by generating a sense of empowerment and control over their risk for frailty through health coaching to adopt healthy aging strategies.

TECHNOLOGY as an ENABLER: The e-CGA/Frailty Index in EMR

Electronic versions of the CGA are now possible, enabling clinicians to enter data and get a calculated FI score right at the time and point of care!

RESULTS

Fifty-one seniors participated in the CARES "proof of concept" model evaluation; 39 completing both the baseline and 6-month follow-up CGA. The findings demonstrate that the progression of frailty in seniors can be proactively delayed and their physical health improved through active coaching. Over the 6-month period, CARES helped increase physical activity in pre-frail seniors. Seniors also reported considerable improvements in their well-being and quality of life. The analysis found there was a statistically significant decrease in the frailty index score. On average, the seniors' frailty index score from the baseline CGA to the 6-month post CGA decreased by 0.032, which is equivalent to having two fewer health problems within 6 months. Additionally, 38% of participants had an improved frailty status at six-months. The study involved a small number of participants but did demonstrate that significant decreases in frailty can be achieved in the 6 month CARES program.

The evaluation also found an improvement for physicians, NPs, patients and the community. Benefits to physicians and NPs include enhanced access to frailty education, having an evidence-based frailty assessment tool in EMR, improved sensitivity in measurement of frailty with access to CGA and Frailty Index, ability to track and monitor frailty over time with Frailty Index, and in-office support of RN/CNS to complete eFI-CGA and assist with care planning. Patients benefited from receiving a comprehensive frailty assessment that identified an evidence-based frailty measure, participating in wellness planning, developing capacity in self-management, and receiving navigational support of available community resources.

CONCLUSION

CARES was intentionally designed to be easily spread into urban and rural settings and is culturally adaptable. Specifically - the Comprehensive Geriatric Assessment (CGA) can be successfully spread into other EMRs. It is an evidenced-based assessment approach. The Frailty Index (FI) is a reliable and sensitive measure of frailty generated from the CGA. Implementing the eFI-CGA into the electronic medical records of primary care providers supports the use of a reliable and valid measurement of frailty at point of service. Using the eFI-CGA in the clinic setting guides healthcare providers to make meaningful and comprehensive healthcare decisions.

Post eFI-CGA, community-based health coaching can be successfully spread. Coaching aims to support the senior's competence in their self-management, facilitates connections to resources in the community, generates their sense of empowerment and control over their risk for frailty as well the adopting healthy aging strategies and health promoting behaviors like exercise and improved nutritional choices. Health coaching was made available by self-management BC. These resources are available to motivated seniors who are interested in developing their self-management capacity and improving their health protective behaviors. Health coaching is a pragmatic low technology based intervention and most seniors have access to a phone.

ACKNOWLEDGEMENTS

The project team would like to thank a variety of stakeholders that have bought into the CARES model and are working with us to support its development and spread. These stakeholders are: Canadian Foundation for Healthcare Improvement, Canadian Frailty Network, Canadian Institutes of Health Research, University of British Columbia, University of Victoria, Canadian Primary Care Sentinel Surveillance Network, Simon Fraser University, Doctors of BC, Dalhousie University, and Innovation Boulevard. Sincere thanks goes to 7 Maple Ridge and 5 White Rock/South Surrey Family Practice Offices that have assisted in the development and implementation of the eFI-CGA into the Intrahealth Profile EMR and contributed to its ongoing success. Also receiving positive feedback from GP offices on the value of the tool with regards to ease of use and appropriateness within community practice.