

IHE Discussion Paper

Adapting the WHO Best Buy Principles to Frailty Care in Canada



**INSTITUTE OF
HEALTH ECONOMICS**
ALBERTA CANADA



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Abbreviations

AFCC Advancing Frailty Care in the Community
CADTH Canadian Agency for Drugs and Technologies in Health
CFHI Canadian Foundation for Healthcare Innovation
CEA Cost effectiveness analysis
CFN Canadian Frailty Network
CHOICE Choosing Interventions that are Cost-Effective
CIHI Canadian Institute for Health Information
COVID-19 Coronavirus Disease 2019
HEC Healthcare Excellence Canada
ICER Institute for Clinical and Economic Review
ICOPE Integrated Care for Older People
IHE Institute of Health Economics
ISPOR International Society for Pharmacoeconomics and Health Outcomes
IQWiG Institute for Quality and Efficiency in Health Care
MCDA Multi-criteria decision analysis
NICE National Institute for Health and Care Excellence
NCD non-communicable disease
NHS National Health Service
SEED Systematic thinking for evidence based and efficient decision making
WHO World Health Organization

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Executive Summary

Canada has experienced significant pressure on its health and social care system in the last two years. This is especially the case for the programs and services provided for those living with frailty, and the COVID-19 pandemic has exposed important gaps in care and services that need to be fixed. As Canada adapts to changes in the way we live following the COVID-19 pandemic, we can expect significant public and government interest in providing high quality care for people with frailty. This will be driven by two factors. First, the pandemic highlighted significant problems in the quality of services provided to people living with frailty. Second, there will be substantial pressure on public budgets for services because of the economic conditions created by the pandemic response.

Frailty is a distinct health state related, but not exclusive, to ageing. When people are frail, it means body systems gradually lose their in-built reserves, resulting in vulnerability to illness, injury, and isolation. Frailty is not an inevitable outcome of ageing, but the risk of frailty increases with age.¹ Frailty presents a significant and increasing health system challenge in Canada. As the population of older people in Canada grows, there is an increased prevalence of people living with frailty. Frailty has been linked to prolonged duration of hospital stay, loss of independence, decline in quality of life and high costs of health services near the end of life.^{2,3} Improvements for those living with frailty is essential and urgently required.

It is clear that investment in care and services will be needed to resolve the problems in the care system. Yet at the same time, governments at all levels are experiencing increasing fiscal pressure. Budgets for health and social care increasingly must compete with equally pressing priorities including economic recovery, addressing social and economic inequalities and managing environmental crises. How these important decisions will be made and what trade-offs must occur should be informed by evidence-based and transparent principles and criteria. A useful model to explore is the World Health Organization's (WHO) *Best Buys* approach.

The WHO's Global Action Plan for the Prevention and Control of non-communicable diseases (NCDs) introduced the notion of *Best Buys*. This is a program of work that includes policy actions and high-value clinical or public health interventions that represent good value healthcare.⁴ Our report describes the WHO *Best Buys* initiative, and then presents some possible ways for the *Best Buys* approach to be used in Canada. For this report, we focus on people with frailty, one of the most pressing challenges across the entire care continuum.

This document provides a guide on how to use the principles underlying the *Best Buys* approach to identify high-value investments in care for people with frailty. Our goal is to support decision

¹ Turner, G. (2014). Introduction to Frailty, Fit for Frailty Part 1. London, UK, BGS.

² Carreras, M., et al. (2018). "Ageing and healthcare expenditures: exploring the role of individual health status." Health Econ 27(5): 865-876.

³ Canadian Institute for Health Information (2017). Seniors in Transition: Exploring Pathways Across the Care Continuum. Ottawa, ON, CIHI.

⁴ World Health Organization (2013). Global action plan for the prevention and control of noncommunicable diseases 2013-2020. Geneva, CH, WHO.

makers to reduce the preventable and avoidable burden of morbidity, mortality and disability due to frailty through *Best Buys* investments. Our specific aims are:

- To raise the priority accorded to the prevention and control of frailty.
- To strengthen and support health and social care systems to assess and manage frailty
- To strengthen national capacity, leadership, and partnerships in the prevention, management, and evaluation of frailty.

Based upon the material we present in this document, we recommend a phased process of deliberation to identify high-value actions to improve care. This process involves developing a list of possible policy actions and interventions, then reviewing these to assess:

- **Value**, including clinical benefit, impact on the health system, and impact on budgets, and
- **Feasibility**, and **Capacity**, including both financial and non-financial criteria. There are some potential investments which require significant changes to existing practices, or new physical or human resources. What is desirable may not be immediately feasible.

In addition to criteria for examining investments in specific activities, we note there are *Foundational Investments* required to improve the overall care system. This would include activities such as standardisation of the measurement of frailty across services, education and training programs, and development of an inventory of tools.

In preparing this background document we conducted interviews with a select number of individuals who play important roles in the provision of services to those with frailty. From these we learned that non-medical supports are seen as a key area in need of investment. Day to day living assistance to address isolation and optimize independence appear to be very important investments, and perhaps would have a greater impact than health system interventions. Some examples of interventions identified from literature and interviews are presented for consideration in the report.

Finally, a listing of desired outcomes is presented in the framework as 'overall system benefits' to guide evaluation of the impact of interventions and programs. Outcomes to be expected from investment should include improved quality of life and independence, reduced disability, successful ageing in place, as well as advances in goal-oriented (person-centred) care, not just disease-focused outcomes for individuals living with frailty.

This overview is presented as a background document to support ongoing consultation that we hope will further populate the framework. It is offered as a guide for deliberations around making choices around policy options and priorities in this important area. We hope the initial discussion around frailty may be a start of exploring *Best Buys* in a number of areas supported by health and social care investments.

Introduction

This report was commissioned by the newly established Healthcare Excellence Canada (HEC). HEC brings together two organizations – the Canadian Foundation for Healthcare Improvement (CFHI) and the Canadian Patient Safety Institute within a single body. Both organizations have an established record of supporting research and implementation of initiatives to help older Canadians live as safely and independently as possible. In this report we examine the opportunity to develop and implement a value framework informed by WHO *Best Buys* principles, applied in the Canadian context using frailty as an example.

Current public health and population concerns have led to the exploration of the *Best Buys* framework applied to one of the most significant health, social and economic challenges facing Canada during a time of rapid growth of the older demographic of the population. Not all Canadians will experience frailty with ageing, but those who do will face higher risk of unfavorable health outcomes and increased health care costs compared to their non-frail counterparts. Non-medical factors which seem to be strongly correlated with frailty, besides age, appear to be socioeconomic, educational attainment and marital status.

Frailty is an urgent concern across the country, representing an impending crisis for patients, their caregivers and government. Leveraging HEC capacity for facilitation of national policy discussions and collaborative implementation of evidence-informed innovative practices provides an opportunity to face the challenge of frailty head-on.

This report aims to present HEC, provincial, territorial, and national decision-makers with details on the WHO *Best Buys* initiative, and potential modifications for the Canadian context using frailty as an example. Key points of interest to decision-makers to guide choice of policy options and priorities are offered within a Frailty *Best Buys* framework in the Canadian context. (Appendix A)

Section One: Background

Overview

In a post-pandemic Canada, we can expect significant public and governmental attention to the quality of frailty care. This will be driven by two factors. First are the severe challenges with the quality of health and social care provided to people living with frailty that the COVID-19 pandemic highlighted. Second are the pressures on public and private sector budgets in health and social care resulting from the COVID-19-related economic downturn.

Per CFHI (now HEC), “The burden of frailty in Canada is steadily growing, especially in older adults. Today, more than 1.5 million Canadians are medically frail. In 10 years, more than two million Canadians may be living with frailty which is linked to a higher reliance on formal healthcare resources as well as family essential care partners.”⁵

Frailty predominantly, though not exclusively, affects older people. As such there is an urgent need and tremendous opportunity to improve care and quality of life for older people living with frailty, as well as support their essential care partners.⁶ A key future challenge is to maintain the quality of care provided to older people living with frailty while at the same time re-designing a system that better addresses their needs. This highlights the need to invest in the right interventions that show value in our rapidly ageing population – both structurally (e.g., in long-term residential care) and in systemic approaches such as measurement of patient centred and patient reported experiences and outcomes (e.g., health related quality of life, clinical outcomes). There are many choices of where to invest and there is a need for a framework to support making these choices.

Post pandemic will be an opportune time to improve the quality of decision making around the allocation of scarce health and social care resources, as these budgets are forced to compete with equally pressing priorities including economic recovery, redressing socio-economic inequalities and the environmental crises. How these important decisions will be made and what trade-offs must occur should be informed by evidence-based and transparent principles and criteria.

⁵ <https://www.cfhi-fcass.ca/what-we-do/spread-and-scale-proven-innovations/advancing-frailty-care-in-the-community>

⁶ Sinha, M. (2012). Portraits of Caregivers: Catalogue no. 89-652-X — No. 001. Social and Aboriginal Statistics Division. Ottawa, ON, Statistics Canada.

WHO *Best Buys* Framework

The World Health Organization's (WHO) Global Action Plan for the Prevention and Control of non-communicable diseases (NCDs) (2013–2020) outlines six priority objectives (see Box 1) whose realization would address the global burden (i.e., disability adjusted life years, DALYs) and threat of noncommunicable diseases representing a major public health challenge that undermines social and economic development throughout the world.⁷

These are highlighted as we feel it is important to identify overall objectives for initiatives like the *Best Buys* program which can act as an ongoing reference to guide the work. The draft *Frailty Best Buys Objectives* are adapted from the WHO Global Action Plan on NCDs *Best Buys* Program.

The WHO program of work is referred to as '*Best Buys* and other recommended interventions'.⁸ (Appendix B) *Best Buys* are the policy actions addressing priority areas of greatest disease burden, the most cost-effective interventions, (and other recommended interventions) that are felt to represent the greatest promise for good value healthcare.

The focus for the WHO program was on low- and middle-income countries and related to the burden of premature and preventable deaths due to NCDs, the projected economic losses and persistent poverty.

Box 1. WHO Global Action Plan for the Prevention and Control of non-communicable diseases (NCDs) (2013 – 2020) outlines six priority objectives:

1. To raise the priority accorded to the prevention and control of noncommunicable diseases in global, regional and national agendas and internationally agreed development goals, through strengthened international cooperation and advocacy.
2. To strengthen national capacity, leadership, governance, multisectoral action and partnerships to accelerate country response for the prevention and control of noncommunicable diseases.
3. To reduce modifiable risk factors for noncommunicable diseases and underlying social determinants through creation of health-promoting environments.
4. To strengthen and orient health systems to address the prevention and control of noncommunicable diseases and the underlying social determinants through people-centred primary health care and universal health coverage.
5. To promote and support national capacity for high-quality research and development for the prevention and control of noncommunicable diseases.
6. To monitor the trends and determinants of noncommunicable diseases and evaluate progress in their prevention and control.

⁷ World Health Organization (2013). Global action plan for the prevention and control of noncommunicable diseases 2013-2020. Geneva, CH, WHO.

⁸ World Health Organization (2017). '*Best Buys*' and Other Recommended Interventions for the Prevention and Control of Noncommunicable Diseases. D. Department for Management of NCDs, Violence and Injury Prevention (NVI). Geneva, Switzerland, WHO.

WHO *Best Buys* interventions target four key NCDs that are responsible for the majority of global deaths:

1. cardiovascular disease,
2. diabetes,
3. cancer, and
4. chronic respiratory disease.

WHO also targets evidence-based public health interventions to support reduction of the burden of NCDs:

1. reduce tobacco use,
2. reduce harmful use of alcohol,
3. improve diet, and
4. reduce physical inactivity.

The logic was to focus on those areas with the highest burden and interventions chosen were ones which could be initiated in low resource environments. The WHO *Best Buys* Program methods “Choosing Interventions that are Cost-Effective (CHOICE)” are the foundation for priority setting of interventions to address NCDs. CHOICE methods enable comparison of current and potential use of resources across a range of risk factors and diseases by applying generalized cost effectiveness analysis. This quantitative assessment of current and future efficiency within a system supports priority setting as well as analysis of new interventions under consideration. Interventions are defined as any approach to prevention, promotion, cure or rehabilitation intended to improve health. Each intervention is assessed for its impact on disease rates (i.e., incidence, remission, severity, mortality) individually and in combination with other interventions to identify optimal mix.

The Global Action Plan supported by the *Best Buys* program was developed through regional meetings, web consultation, informal consultation with members and dialogue with nongovernmental organizations and private sector entities.

In the context of Canada’s status as a high-income country with publicly funded universal health care coverage, the specific recommendations from the WHO *Best Buys* have already been largely implemented to some extent (e.g., interventions targeting COPD, heart disease, diabetes, cancer).

Canada’s expanded resource availability for health care delivery allows for focus beyond prevention efforts in a *Best Buys* approach, to incorporate hospital and community-based care services.

CHOICE methods boldly assume health system constraints can be eliminated (i.e., bought out) in the long term and sufficient capacity exists to support any prioritized interventions. Encouraging aspects of CHOICE methods are the ability to consider multiple scenarios within a single analysis to determine cost per healthy life year gained for each scenario in contrast to a common comparator - the null (i.e., no cost, no effects). Costs are measured from a health system perspective. The impact on the population of interest when it is given a certain intervention provides an estimate of effectiveness, which is applied at the population level over a lifetime horizon. (Figure 1) Full population cycle can be captured, and outcomes of prevention and treatment interventions compared across diseases.⁹ Application of the CHOICE methods is feasible across Canadian settings, where data is typically widely available to assess potential interventions.

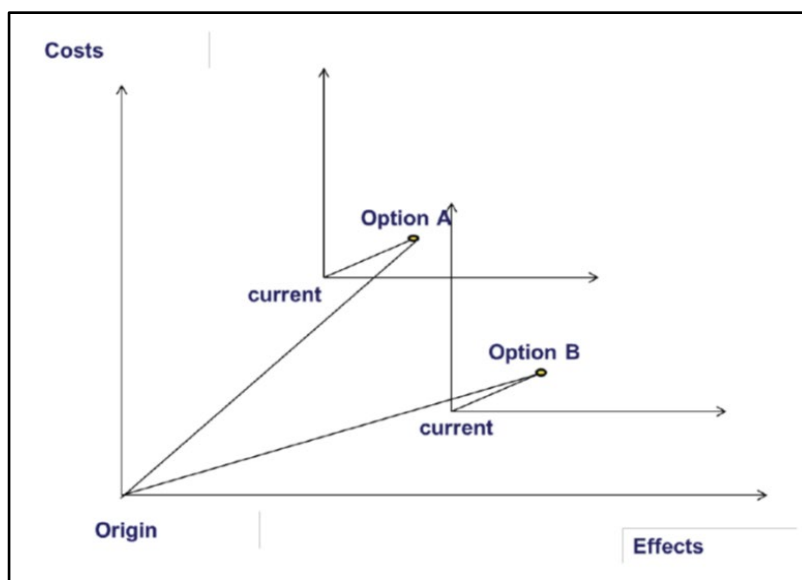


Figure 1. Cost effectiveness plane indicating the calculation of average and incremental cost-effectiveness ratios for two interventions. From Bertram, IJHPM 2021; doi:10.34172/ijhpm.2020.244

In addition to the limited list of NCDs targeted in low- and middle-income countries, the WHO has initiated dialogue on other conditions with considerable burden of disease. Frailty was the focus topic of the 2016 WHO Clinical Consortium on Healthy Ageing, where international experts developed a public health framework for future work in the field, including a model for integrated care for older people (ICOPE).¹⁰ Frailty is a compelling exemplar for application of interventions informed by the *Best Buys* CHOICE methodology in the Canadian context. Effective single-system disease therapies have led to improved survival over past decades, resulting in a growing number of people living with multiple inter-related health and social issues that affect their ability to live independently. Loss of independence and associated frailty contributes to high-cost health care needs (e.g., acute hospitalization and long-term care) and high-burden of disease. In a Canadian

⁹ Bertram, M. Y., et al. (2021). "Methods for the Economic Evaluation of Health Care Interventions for Priority Setting in the Health System: An Update From WHO CHOICE." *Int J Health Policy Management*.

¹⁰ World Health Organization (2017). *Integrated care for older people: Guidelines on community-level interventions to manage declines in intrinsic capacity*. Geneva, Switzerland, WHO.

health care system that is structured to address single-system illnesses, frailty is overlooked as a risk factor for high costs and poor outcomes of traditional approaches to care. Frailty inclusive care interventions and programs have been developed and implemented on a small-scale project level but have yet to see scale and spread to meet the demand for needed services across the care continuum. Principles of the *Best Buys* framework are applicable to frailty as a high-cost condition in a rapidly increasing demographic. Canada is rich in high-quality data to support policy decisions that focus on *Best Buys* to improve the lives of persons living with frailty and their essential care partners.

Application of the CHOICE methods could be applied to a short list of policy and other recommendation options for frailty. Consensus among decision-makers, clinicians, researchers, persons living with frailty and their essential care partners would be achieved by facilitated discussion. Prioritization might require straight-forward CHOICE methods and/or further deliberation to avoid bias based on availability of evidence. Where CHOICE methods are not appropriate, a framework is presented to guide prioritization of options.

Frailty: Provision of key information on Frailty

Frailty as key area of consideration in health care policy and delivery

Frailty is a distinct health state related to the ageing process in which multiple body systems gradually lose their in-built reserves, resulting in a vulnerability to stressors (e.g., illness, injury, isolation). It is not an inevitable outcome of ageing, but the risk of frailty increases with age. Notably, frailty is often associated with multiple chronic conditions, but when co-morbid conditions are well managed frailty may not be apparent. Similarly, frailty could be the only condition an individual has and is not recognized as such until serious functional decline is observed. There is often overlap between frailty and disability although frailty may be the cause or consequence of disability. As with other chronic health conditions, people should not be

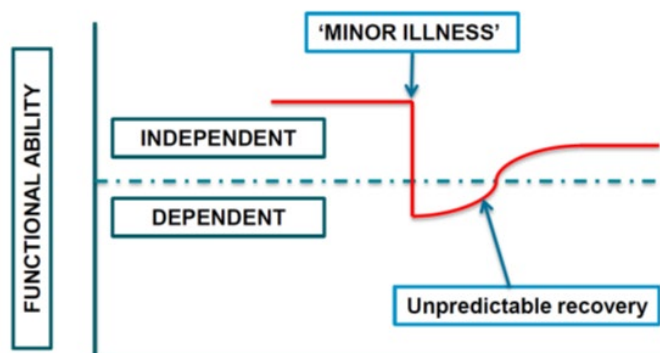


Figure 2. Vulnerability of frail elderly people to a sudden change in health status after a minor illness. (Clegg, Lancet 2013; 381: 752-62)

labeled as frail, rather they live with frailty.¹¹ (Figure 2)

¹¹ Turner, G. (2014). Introduction to Frailty, Fit for Frailty Part 1. London, UK, BGS.

Frailty presents a significant health system challenge in Canada. Rapid growth in the older demographic and concurrent increased frailty have been linked to prolonged duration of hospital stay, loss of independence, decline in quality of life and high costs of health services near the end of life.^{12,13} As the population ages we expect over two million Canadians will be living with frailty by 2030.¹⁴ The effects of frailty care extend to the estimated 3.75 million essential care partners in Canada caring for someone aged 65 or over. Overall health spending varies widely by age group, increasing with age from the Canadian average annual cost of \$2,600, to \$11,500 for people >65 years and approaching \$20,000 for those >80.¹¹ Increasing cost with age is primarily associated with hospitalization and continuing care services for older patients living with frailty.¹⁵ Meanwhile, Canada faces a persistent undersupply of geriatric medicine specialists across the country to meet population demand.¹⁶

Frailty is linked to higher consumption of healthcare resources. (see Figure 3). Of the \$220 billion spent on healthcare annually in Canada (11% of GDP), 46% is spent on people over 65 years old, although they are only 16% of the population. The cost of care for people under 65 years is one fifth of the cost of those over 65 and one tenth the cost of those over 80.¹⁷ Incremental annual costs of home care alone for patients living with frailty reach \$10,845.¹⁸ Rising costs of drugs, technologies and formal health care provider compensation are strong drivers of overall spending in this population.¹³

Health care delivery is primarily organized around particular diseases, response to episodic health needs and the requirements of the provider.¹⁹ Even when individual chronic diseases are well managed, as individuals age and accumulate more health deficits (e.g., disease, disability) their dependence on essential care partners increases (i.e., family, friends, and professionals) to support higher order function (e.g., shopping, banking, personal care, medication administration). The interaction between medical and social supports required for individuals living with frailty makes for complexity that is challenging for care recipients, care providers and decision makers. The reliance on essential care partners for assistance to keep older people living

¹² Canadian Institute for Health Information (2017). *Seniors in Transition: Exploring Pathways Across the Care Continuum*. Ottawa, ON, CIHI.

¹³ Carreras, M., et al. (2018). "Ageing and healthcare expenditures: exploring the role of individual health status." *Health Econ* 27(5): 865-876.

¹⁴ National Institute on Ageing (2018). *National Institute on Ageing Report on Frailty In Canada*. Toronto, ON, National Institute on Ageing.

¹⁵ Wodchis, W. P., et al. (2016). "A 3-year study of high-cost users of health care." *CMAJ* 188(3): 182-188.

¹⁶ Borrie, M., et al. (2020). "Ontario Geriatric Specialist Physician Resources 2018." *Can Geriatr J* 23(3): 219-227.

¹⁷ Grimes, K., et al. (2018). "Policy and Economic Considerations for Frailty Screening in the Canadian Healthcare System." *J Frailty Aging* 7(4): 233-239.

¹⁸ Mondor, L., et al. (2019). "The Incremental Health Care Costs of Frailty Among Home Care Recipients With and Without Dementia in Ontario, Canada: A Cohort Study." *Med Care* 57(7): 512-520.

¹⁹ Muscedere, J. (2018). *Frail seniors: Reorganizing the healthcare system to address the needs of some of its most vulnerable clients. A Canadian healthcare innovation agenda: policy, governance, and strategy*. A. S. Carson and K. R. Nossal. Kingston, ON, School of Public Policy, McGill-Queen's University Press: 73-93.

with frailty at home longer, preventing or delaying acute and long-term care is essential, is yet unrecognized in public policy.

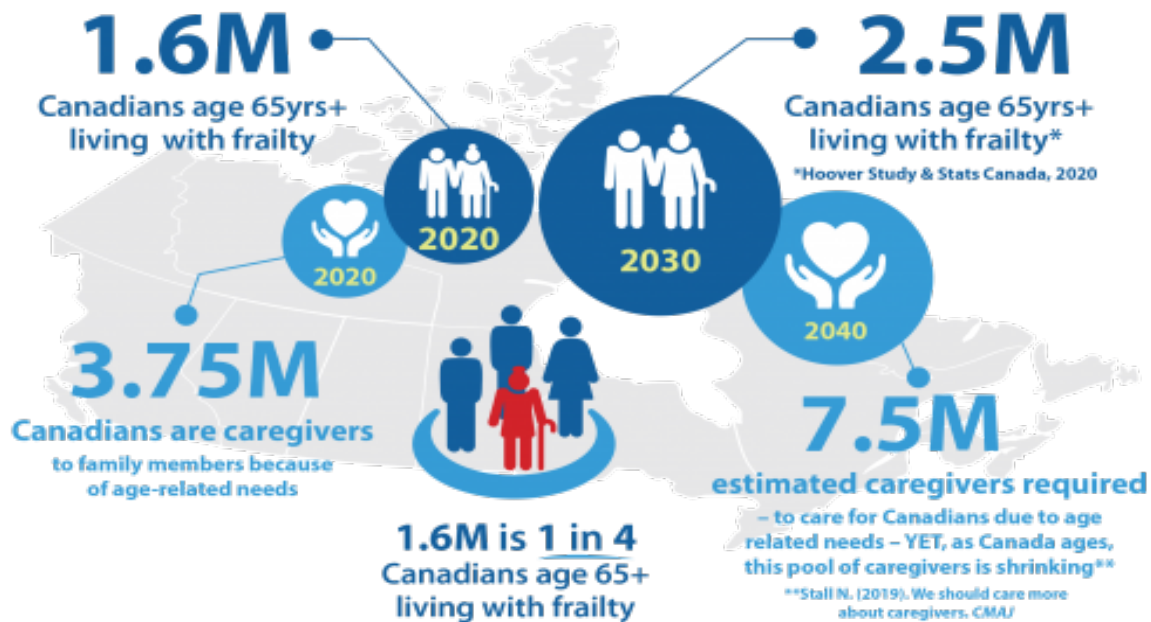


Figure 3 - Frailty Matters Infographic - Canadian Frailty Network

In the Canadian context of publicly funded health care, programs have been implemented across the care continuum focused on older individuals, without consistent availability of routine frailty screening or case finding. It is well documented that assessment of frailty incrementally improves prediction of patient centered outcomes when compared to age alone and the severity of frailty is routinely used by specialists in geriatric care to inform care planning for individuals, particularly in the setting of invasive procedures or therapies.²⁰ The option to focus on frailty in the context of a *Best Buys* model offers opportunity to make meaningful impact on the reliable capture of frailty assessment information, precise evaluation of program implementation, cost effectiveness and quality of life outcomes at individual and population levels for people living with frailty.

Background Statistics in Canada

Although associated with older people, frailty is also prevalent among younger adults. In Canada, the prevalence of frailty in adults advances with age, ranging from 5% in those 18-34 years old, 6% in 35-49-year-olds, 7% in 50-64-year-olds and 8% in those over 65 years.²¹ Frailty reaches a prevalence of 20-26% at 85 years of age.²² In 2016 there were over 770,000 (2.2% of the population) Canadians at least 85 years of age. That number is expected to grow to over 1.25

²⁰ Rockwood, K. and O. Theou (2020). "Using the Clinical Frailty Scale in allocating scarce health care resources." *Can Geriatr J* 23(3): 254-259.

²¹ Kehler, D. S., et al. (2017). "Prevalence of frailty in Canadians 18-79 years old in the Canadian Health Measures Survey." *BMC Geriatr* 17(1): 28.

²² Buckinx, F., et al. (2015). "Burden of frailty in the elderly population: perspectives for a public health challenge." *Arch Public Health* 73(1): 19.

million (4%) by 2031 and to 2.7 million (5.7%) by 2051. By 2031 we expect there will be between 200,000 and 250,000 frail people over the age of 85.²³ The expanding number of older Canadians represents a growing challenge across the care continuum, from primary and community-based services to emergency and acute hospital care. Meeting the care needs among the older population, especially those living with frailty, is expected to be challenging.

Policy Goals of the Frailty *Best Buys* Framework

The WHO *Best Buys* presents a framework for consistent design, implementation and evaluation of improvement initiatives that support health policy. Frailty *Best Buys* provides a framework to address a customized set of objectives in Canada. Some draft high-level goals based on the WHO *Best Buy* objectives are developed and are expected to be augmented and adapted through the consultation process. (Box 2)

People living with frailty would benefit from all health care sectors collaborating to assess frailty and provide appropriate individualized care plans. Consistency in care planning across the care continuum, whereby all providers (i.e., primary care, continuing care, emergency services, acute care) help to optimize outcomes while considering individual circumstances (i.e., frailty, comorbidities, essential care partner support) and goals of care, holds untapped potential in the Canadian health care context. The continuum of services should include non-health interventions as well as formal and informal support for day-to-day living.

Canadian examples of multi-component primary care interventions where the proposed Frailty *Best Buys* framework could be applied to gather evidence to support policy decisions on scale and spread are underway. The Canadian Frailty Network (CFN) hosted a Frailty Matters Innovation Showcase in 2018 where the top 5 innovations from across the country were chosen from 80 entries. Four of the top innovations formed the basis for HEC's Advancing Frailty Care in the Community (AFCC) Collaborative, in partnership with CFN, which is currently underway through 17 regional initiatives across Canada, with expected completion in 2022. Projects within AFCC have focused on implementing the following interventions and approaches in primary care settings:

1. screening for frailty in primary care provider panels,
2. providing those identified with frailty with a follow-up comprehensive assessment and individualized care plans,

Box 2. DRAFT Canadian *Best Buys* objectives:

1. To raise the priority accorded to the prevention and control of frailty.
2. To strengthen and orient health and social care systems to appropriately assess and manage frailty, including enhanced assessment, navigation, more appropriate and tailored interventions, and building of the evidence base.
3. To strengthen national capacity, leadership, multisectoral action and partnerships in the prevention and management and evaluation of frailty.

²³ National Institute on Ageing (2018). National Institute on Ageing Report on Frailty In Canada. Toronto, ON, National Institute on Ageing.

3. essential care partner assessment for stress/distress,
4. patient centred care, and
5. referral to community programs/services.

Frailty *Best Buys* is an opportunity to further implement recommended proactive frailty screening strategies to create the foundation from which policy decisions can be applied in areas (e.g., geographical, care setting, service type) of highest need and potential cost-effectiveness. Consistent frailty measures would assist in evaluating impact of implemented initiatives and help to avoid wasted resources on suboptimal interventions. Examples of reliable novel frailty assessment using the electronic frailty index can be found in British Columbia and Nova Scotia where CARES (Community Actions and Resources Empowering Seniors) has demonstrated development and sharing of frailty assessment among primary care providers, with focused interventions contributing to modest reductions in frailty severity.²⁴

One setting recognized as high-risk to its frail population during the pandemic was continuing care. The vulnerability of residents in long-term care and assisted living facilities as well as home care clients has come to the forefront of Canadian conscience. This highlights an opportunity to improve the care of people, who by their apparent need for personal and home support services, are likely to be frail. This population stands out as an area of high service need, higher risk of admission to acute care, further advancement of frailty, higher cost of care and potential benefit of consistent frailty-specific interventions.²⁵ Comprehensive assessment of frailty and application of meaningful interventions in these settings are opportunities for evaluation of cost effectiveness.

Comprehensive programs of work have been suggested to address frailty at every level of severity. Prevention of frailty by screening and providing targeted strategies to promote healthy ageing has shown promise. Enhanced home-based services have been explored across the country.

A key consideration must be not only for those living with frailty but those who are supporting them. Essential care partner support holds considerable potential for meaningful improvement, including financial support to ensure reliable availability of essential care partners to provide ongoing assistance to individuals living with frailty to minimize transitions in care, emergency department use and acute care admissions. Engagement with care partners about care planning and organization of formal supports should be explored and evaluated. Regular screening for essential care partner burnout and follow-up support to assist with building resilience can benefit the care partner as well as the person living with frailty.²⁶

²⁴ Theou, O., et al. (2017). "Reversing Frailty Levels in Primary Care Using the CARES Model." *Can Geriatr J* 20(3): 105-111.

²⁵ National Institute on Ageing (2018). *National Institute on Ageing Report on Frailty In Canada*. Toronto, ON, National Institute on Ageing.

²⁶ MG, W., et al. (2016). *Citizen Brief: Strengthening Care for Frail Older Adults in Canada*. Hamilton, Canada: McMaster Health Forum.

Section Two: Research and Findings

Literature review

In the Canadian context, health care innovation across the country requires a national approach to facilitation. HEC is well positioned to provide support to decision makers to implement improvements within a framework focused on goals aligned with key stakeholders, including decision-makers, providers, patients and supported by researchers. An applied value in healthcare framework for a Canadian approach to value-based health care is outlined by McCaughey²⁷ as theory-informed practice conceptualized at a federal level by defining values, core components and perspective. Shared federal, provincial, and territorial criterion, measures of the value proposition and implementation of policy at all levels specifying programs, processes, and initiatives as well as the outcomes measured, and achievement of effectiveness/efficiencies is needed.

Outcomes associated with health care, including patient reported outcomes, experience and patient and provider costs are important measures of value. Rising health care costs have driven the development of value frameworks to provide standardization in the assessment of financial costs and benefits (e.g., quality of life) of innovative health technologies and to assist decision makers to prioritize expenditures. Multiple national organizations (e.g., CADTH, NICE, ISPOR, ICER, IQWiG) and professional organizations (e.g., cancer, cardiology) have developed value frameworks. The range of frameworks available makes comparison among them challenging as purpose, methods and endpoints differ.

The foundation of value frameworks is cost effectiveness analysis (CEA). Examples of specifics missing from the CEA framework but that are useful to decision makers include health care professional, individual patient and essential care partners, and sub-group experiences. Further detail on effects from the multi-criteria decision analysis (MCDA) approach can enhance the CEA method, incorporating what matters to decision makers but is not captured by CEA.²⁸ An example of MCDA is its adoption by the British Columbia Health Technology Assessment Committee which includes a scoring matrix to measure impact on vulnerable populations among its prioritization criteria.²⁹ (Appendix B)

Consideration must also be given to regional context of health and social services efficiencies and effectiveness, even when a national organization provides facilitated design, implementation, and evaluation of potential *Best Buys*. Details are outlined in the systematic thinking for evidence based and efficient decision making (SEED) tool for determining whether an intervention will be meaningful in local context. First, policy interventions should be based

²⁷ McCaughey, D., et al. (2019). "The Quest for Value in Canadian Healthcare: The Applied Value in Healthcare Framework." *Healthc Pap* 18(4): 48-57.

²⁸ Dionne, F., et al. (2015). "Developing a multi-criteria approach for drug reimbursement decision making: an initial step forward." *J Popul Ther Clin Pharmacol* 22(1): e68-77.

²⁹ Government of British Columbia (2021). "BC Health Technology Assessment." "<https://www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/partners/health-authorities/bc-health-technology-assessment>"

on evidence or robust theoretical foundations. Second, where evidence is not specific to the target population, pilot studies and impact evaluation can provide guidance. Third, contextual factors must be considered when generalizability of evidence is uncertain. Fourth, availability of funding for implementation and maintenance of interventions should be considered. Finally, evidence informed policy discussion and development requires political buy-in.³⁰

Canadian resources are available to help decision makers prioritize spread of successful practices. CFHI adapted a tool to assess readiness of promising practices for spread across organizations. The tool helps avoid waste by highlighting the degree of readiness a practice has for wider implementation.³¹ Another important tool from CFHI helps to facilitate valuable discussions to determine whether sites are ready to receive effective practices from other sites.³² Both tools are important aspects of determining feasibility of interventions.

How can the WHO *Best Buys* work in the Canadian context? In the *Best Buys* approach, recommended interventions undergo evaluation to assess evidence of cost-effectiveness. As the population ages in the context of growing health costs and a growing number of people living with frailty there is potential to improve the care provided and the overall value of that care to the system. Care refers to services in the broadest sense including social supports and non-health interventions. This presents opportunities to develop, implement and evaluate customized models of care. Incorporating the *Best Buys* approach to addressing frailty combines a model of care and a value framework with sustainability in mind.

Initial steps need to be taken to assess the burden of frailty on a population level, to stratify by severity and segment the population to identify focus areas or groups who would most benefit from implementation of appropriate cost-effective improvement interventions. Examples of interventions can be found across the care continuum and at a population level. The UK National Health Service (NHS) developed and encourages RightCare to support the system-wide delivery of care for older people living with frailty by recognizing frailty and providing recommended guidance for best practice supports across all levels of severity and across the care continuum, at the individual level.³³

The Canadian Frailty Network provides an extensive suite of initiatives that were designed to assist decision-makers and clinicians to recognize frailty and optimize outcomes of frailty care across the care continuum.³⁴ Examples include programs that assess individual frailty severity and provide evidence-based nutrition and exercise interventions to home care clients.³⁵ An

³⁰ Isaranuwachai, W., et al. (2020). "Prevention of non-communicable disease: *best buys*, wasted buys, and contestable buys." *BMJ* 368: m141.

³¹ <https://www.cfhi-fcass.ca/innovations-tools-resources/item-detail/2013/09/02/readiness-to-spread-assessment>

³² <https://www.cfhi-fcass.ca/innovations-tools-resources/item-detail/2020/05/19/readiness-to-receive-assessment>

³³ National Health Service (2019). NHS RightCare: Frailty Toolkit. <https://www.england.nhs.uk/rightcare/wp-content/uploads/sites/40/2019/07/frailty-toolkit-june-2019-v1.pdf>

³⁴ <https://www.cfn-nce.ca/impact/>

³⁵ Johnson, S., et al. (2018). "Impact of a home-based nutrition and exercise intervention in improving functional capacity associated with falls among rural seniors in Canada." *Quality in Ageing and Older Adults* 19(4): 261-272.

example of a hospital frailty intervention is the integration of a geriatric assessment team, optimized elder-friendly care practices (standardized order set), patient-oriented rehabilitation (Bedside Reconditioning for Functional Improvements, BeFIT) and early discharge planning for older patients admitted to hospital for emergency surgery.³⁶ Although cost effectiveness is rarely evaluated within frailty trials there are current conceptual models available to inform cost effectiveness analyses.³⁷

Summary of key informant inputs

It will be important to gather content and potential draft frameworks with a broad section of stakeholders. Early discussions have taken place with a small number of senior leaders on the usefulness of a prioritization framework in frailty care and some initial suggestions for improvement.³⁸

It is important to note that several people who would be very helpful in informing discussions were not available until later in May or June given current circumstances in the health system.

The main points which arose from interviews conducted are summarized below and have been incorporated into the draft framework:

- The concept of a *Best Buys* Framework which outlines a set of criteria to help guide decision-making investments had great appeal to those interviewed. It would be important to identify the time horizon under consideration as *Best Buys* in 2-3 years are quite different from those to influence outcomes in 20-30 years.
- It was stressed that it would be important to be clear as to what decisions the framework was trying to inform and to ensure the evidence and criteria were fit to purpose for different levels of decision-making.
- The WHO *Best Buys* Framework was seen as quite 'Medical'. The new framework should extend beyond health programs and include other social and community supports, which in the case of frailty may be more impactful areas to invest than formal health programs. Utilization of concepts such as 'increased independence' rather than absence of disease were emphasized.

³⁶ Khadaroo, R. G., et al. (2020). "Clinical Effectiveness of the Elder-Friendly Approaches to the Surgical Environment Initiative in Emergency General Surgery." *JAMA Surg*: e196021.

³⁷ Haji Ali Afzali, H., et al. (2019). "Structuring a conceptual model for cost-effectiveness analysis of frailty interventions." *PLoS One* 14(9): e0222049.

³⁸ Angus Campbell, Canadian Frailty Network Board member, and former Head of Caregivers Nova Scotia**, Evan Romanow, ADM for Health Services, Alberta Health and former Chief of Staff to Executive Council Deputy* , PG Forest, Head of School of Public Policy, University of Calgary* , Eddy Nason, Senior Advisor, Genomics Canada, Expert in ROI frameworks for Health Research* , Richard Lewanczuk, Senior Lead, Enhancing Care in the Community, Alberta Health Services* , Corrine Schalm, Executive Director, Continuing Care Branch, Alberta Health**, Michael Wolfson, member Royal Society of Canada Task force on Long Term Care**, Sharon Straus, Geriatrician, St. Michael's Hospital, Toronto**, Rep from https://www.i-caare.ca/investigators**. * conducted, ** pending.

- It would be important to not only invest in direct service initiatives but to also consider foundational investments to improve the system overall such as the development of consistent frailty measurement instruments, and policy options work on system design. Healthcare Excellence Canada should consider where they are best placed to fill in the gap at a national level.
- Perhaps for another exercise, but exploration was encouraged of best practice models for system architecture for community support programs and local planning that can make day to day living circumstances more supportive of frail citizens.
- Stratification of frailty was felt to be important and utilization of some proven international models (for example the mild, moderate, severe UK Frailty tool).
- Increased frailty is a strong indicator for increased health care resource use and there is strong evidence in this regard from health system data. However, there is a lack of regular assessment of frailty, particularly in primary care settings.
- Decreasing essential care partner burden was seen as a significant area to address and should be included in any outcomes or cost analyses and be highlighted as a priority.
- Evidence and in particular economic evidence should be encouraged but there was some caution that there are evidence gaps in many areas and part of the program objectives might be to actively increase the evidence base for frailty.
- Equity was an important thing to address in any impact assessment in terms of geography, ethnicity, gender etc. This would be particularly important when considering who might be involved in any deliberative process to prioritize investments.
- Any *Best Buys* program, in order to gain traction and support, should demonstrate it would be supportive in addressing current articulated political priorities and in particular provincial health system priorities (for example: addressing long term care wait lists).
- While most of the discussion related to the frail elderly it was noted that taking a longer-term view may be important as risk for frailty in later life begins very early and a preventative part of the program could be focused on younger generations.
- Potential for assistive technologies should be explored to determine what circumstances they may offer cost effective opportunities.
- Municipal design strategies are needed to promote independence in accessible communities for older populations (e.g., density to support common needs such as groceries, banking, pharmacy, health, and personal services).

The respondents clearly felt that frailty was an important and timely area for investment. It provides a useful person-centred framing and fits well with a population and determinants of health approach rather than a medical model of a particular disease state. It can allow for privileging of non-medical factors and encouraging integration by looking at how we might support individuals to achieve enhanced wellbeing and increased independence.

The Questionnaire Guide used for interviews is outlined in Appendix B and could be used for future interviews.

Section Three - Overview of A Proposed Frailty *Best Buys* Framework for Frailty

The following provides a brief description of processes that could inform deliberation around Frailty *Best Buys* in Canada:

Step 1: Articulate High-Level Goal and Objectives: (draft adapted from WHO *Best Buys* in NCD).

S T E P O N E	<h3>Goal</h3>	<h3>High-level objectives</h3>
	To reduce the preventable and avoidable burden of morbidity, mortality, and disability due to frailty through investments in "Best Buys" in Frailty.	<ul style="list-style-type: none"> • To raise the priority accorded to the prevention and control of frailty. • To strengthen and orient health and social care systems to more appropriately assess and manage frailty including enhanced assessment, navigation, and more appropriate and tailored interventions. • To strengthen national capacity, leadership, multisectoral action and partnerships in the prevention, management, and evaluation of frailty.

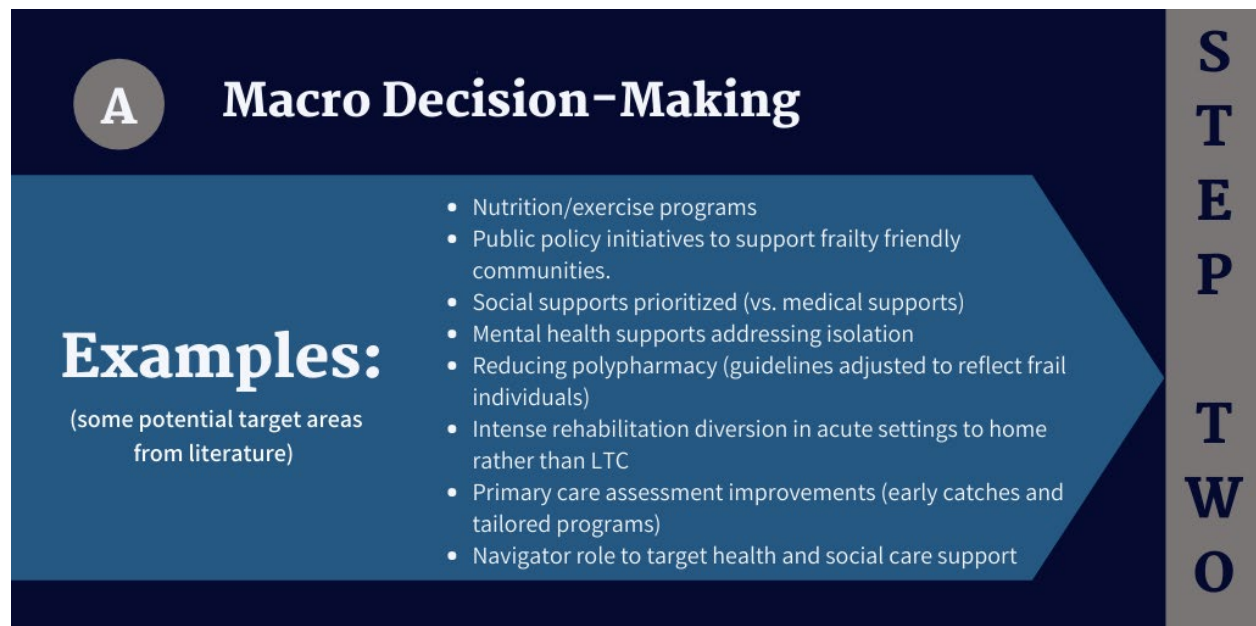
Step 2: Clarify Level of Decision-making: It is important to first determine what level of decision-making you are considering. Are you looking at macro groupings of interventions

<h2>Levels of decision-making</h2>		S T E P T W O
A	<h3>Macro Decision-Making</h3>	
B	<h3>Meso-Micro Decision-Making</h3>	
C	<h3>Foundational investments</h3>	

which might be categories of *Best Buys* in terms of frailty for a health system or health region, or alternatively looking at prioritizing a set of proposals based on specific criteria?

Step 2a: Macro Decision-Making: In determining target areas for investments these would be determined somewhat on overall available resources. Examples from the literature looking at frailty for highly effective and cost-effective programs are presented below.

Focus on macro target areas for investments would require a combination of synthesis of data and deliberation. For the WHO determination of priority areas in relation to NCD's there was a long history of gathering global data on burden of illness. There is less evidence available on the burden of frailty and less clear areas for targeting (i.e., comparable to preventable cancer through addressing tobacco control). As a starting point gathering demographic data on frailty-related utilization of the health system through analysis of administrative data would be useful.



A **Macro Decision-Making**

Examples:
(some potential target areas from literature)

- Nutrition/exercise programs
- Public policy initiatives to support frailty friendly communities.
- Social supports prioritized (vs. medical supports)
- Mental health supports addressing isolation
- Reducing polypharmacy (guidelines adjusted to reflect frail individuals)
- Intense rehabilitation diversion in acute settings to home rather than LTC
- Primary care assessment improvements (early catches and tailored programs)
- Navigator role to target health and social care support

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Step 2b: Meso-Micro Decision-Making: Criteria for Project Assessment and Evaluation: The second level of decision-making addresses the need for a process to evaluate individual projects. It is proposed the process should include two separate screens - one related to the potential value of the initiative and one related to feasibility. It is noted that both value assessment and feasibility would differ significantly depending on the context of health and social care systems across the country.

B Meso-Micro Decision-Making
Criteria for target areas/project assessment

Screen one: value assessment

1. Clinical effectiveness and health impact
 - a. Quality of life for patients and caregivers measured using validated instruments
 - b. Severity and progression of frailty assessed using validated instrument.
 - c. Maintenance or improvement of independence in the community.
 - d. Health system utilization
 - e. Scale of impact (i.e. number of people, services, locations, prevalence of disease).
 - f. Cost of implementation
2. Cost-effectiveness and budget impact
 - a. Is it efficient?
 - b. Is it affordable?

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B Meso-Micro Decision-Making
Criteria for target areas/project assessment

Screen two: Feasibility

1. Feasibility of implementation
 - a. Is it financially possible in the local context?
 - b. Is there capacity to implement in the preferred timeframe?
2. Critical non-financial considerations
 - a. How does it impact on provincial, territorial, and national seniors' strategies/ priorities (e.g., long term care waitlists, alternate level of care patients in acute hospital beds)?
 - b. Are local resources available to support implementation, evaluation, and maintenance of interventions?
 - c. What inter-sectoral collaborations are necessary? Are they ready to contribute?
 - d. Is there alignment with design strategies that promote independence in accessible communities for older populations (e.g., density to support common needs such as groceries, banking, pharmacy, health, and personal services)?

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Step 2c: System Foundational Investments in Frailty: There are certain foundational investments for a *Best Buys* program that do not directly relate to frailty care quality improvement but support prioritization of policy decisions.

For example, implementation of a frailty assessment instrument would be fundamental to determining where most people with frailty interact with the health care system (e.g., primary care, emergency departments, acute hospitalizations), severity of frailty and health services

use. Research on cost effectiveness of frailty screening is positive.³⁹ Potential to prevent or delay frailty appears in primary care settings whereas acute and continuing care settings are areas where advanced severity of frailty is highly prevalent. Standardized assessment of frailty could be performed using administrative data (e.g., developing a frailty index from ICD codes) to support priority-setting at any level of government.

UK clinical researchers have partnered with decision-makers to develop and validate an electronic frailty index (eFI) using routinely available primary care electronic health record data.⁴⁰ (Figure 3) Populations at risk are stratified to receive targeted interventions to optimize outcomes. Primary care providers use the eFI to identify patients over 65 living with moderate or severe frailty and apply care pathway interventions to prevent decline in function, provide service support, anticipate risks and needs, and trigger advance care planning and goals of care discussions. Providers are reimbursed for frailty-specific follow-up care in accordance with their contract.

Further comprehensive approaches to prioritizing frailty care and implementing key actions are outlined in the NHS RightCare Frailty toolkit.⁴¹ (Appendix B) The advice contained in the toolkit covers how to commission and provide the best system-wide care for people living with mild to severe frailty. The toolkit offers comprehensive guidance and best practice advice on population segmentation, identification and stratification, as well as supporting people living

C Foundational investments

1. Consistent standard measurement and reporting on frailty and related disability measures with stratification (mild, moderate, severe requiring different approaches).
2. Training/knowledge – skills required in various settings to recognize and address frailty.
3. Inventory of cost/outcomes measurement tools/sources to inform frailty business cases.
4. Community living and service design that prevents onset of frailty and enhances independence for frail persons.

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with mild, moderate and severe frailty, strategies to reduce hospital length of stay, manage

³⁹ Li, Z., et al. (2020). "Cost-effectiveness analysis of frailty assessment in older patients undergoing coronary artery bypass grafting surgery." *Canadian Journal of Cardiology* 36(4): 490-499.

⁴⁰ Clegg, A., et al. (2016). "Development and validation of an electronic frailty index using routine primary care electronic health record data." *Age Ageing* 45(3): 353-360.

⁴¹ National Health Service (2019). NHS RightCare: Frailty Toolkit. <https://www.england.nhs.uk/rightcare/wp-content/uploads/sites/40/2019/07/frailty-toolkit-june-2019-v1.pdf>

delirium, dementia and enhance end of life care. A self-assessment questionnaire for decision-makers and providers is included.

Step 3: *Best Buys* Prioritization Process: Structure of the prioritization process would differ depending on whether the goal is to: a) determine general target areas for *Best Buys* Investments, or b) evaluate and rank submission of proposals within those prioritized areas.

Whatever level the of decision-making, it is recommended that evidence be privileged, particularly evidence of cost-effectiveness when available. In the WHO *Best Buys* process the presence of at least one peer-reviewed evaluation or analyses related to the intervention was seen as important. However, it would be important to not make the presence of published evidence a litmus test for all interventions that might be funded. The process should be deliberative with guidance from an expert panel informing intervention rankings. Lack of evidence should be transparently presented and the precautionary principle should be used where promising interventions that have consensus from deliberations to be supported should proceed with evidence-gathering as part of the program.

Details from the UK NHS, publications, calls for proposals and existing sector priorities could inform the initial Canadian approach to defining priorities for investment with input from stakeholders representing patients, essential care partners, clinicians, researchers, professional bodies and community and social care organizations. A combination of data synthesis and deliberation should be facilitated for priority-setting at a national, provincial, and territorial level. A ranked list of final projects or key areas for frailty investment should be informed by the screens outlined in Step Two. Expert interviews will inform the detailed process.

Specific topics for Canadian deliberation about Frailty *Best Buys* investment could be drawn directly from initiatives designed, implemented, and evaluated across Canada with funding from the Canadian Frailty Network, a Network of Centres of Excellence program (2012-2022)⁴²

⁴² <https://www.cfn-nce.ca/impact/>

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Priority setting

1. Consistent standard measurement of frailty - stratification (mild, moderate, severe requiring different approaches)
2. Training/knowledge - skills required
3. Inventory of cost/outcomes measurement tools/sources to inform frailty business cases

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Overall System Benefits: The overall system benefits of Frailty Best Buy investments should be explicitly defined. Examples building from the WHO *Best Buys* program are outlined below.

Frailty *Best Buys* presents the opportunity to optimize care of Canadians living with frailty. Care that is frailty-inclusive rather than disease-focused has the potential to enhance independent ageing in the community while avoiding acute and long-term care costs, early mortality and limited quality of life.

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Overall system benefits

Enhanced Ageing in community

Frailty-focused rather than disease focused care

Avoidable mortality

DALYs, Quality of life.

Acute care and LTC cost avoidance

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In addition, a readiness assessment prior to engagement should be conducted to identify likely facilitators and barriers to implementation of policy discussions and future improvement work. Prioritization could be based on the British Columbia Health Technology Assessment



Committee prioritization matrix. It outlines key criteria similar to those listed in the evaluation framework above.⁴³

See Appendix A for full proposed *Best Buys* Frailty framework.

⁴³ Government of British Columbia (2021). "BC Health Technology Assessment.
"https://www2.gov.bc.ca/gov/content/health/about-bc-s-health-care-system/partners/health-authorities/bc-health-technology-assessment"

Section Four - How decision makers can use this information

The framework is provided as a preliminary guide to decision-makers to support thinking through options of where and how to invest in initiatives that can support a new approach to addressing frailty in Canada.

A clear issue for decision-makers is prioritizing interventions affecting people with costly care needs across Canada; productivity and efficiency will always be important. Consideration should also be given to impact of investment on key person-centred outcomes for people living with frailty (i.e., quality of life, functional abilities, independence).

Deliberation following the steps outlined should allow for careful consideration for selection of interventions and trade-offs required. Questions should include (i) which interventions will bring the highest return on investment; (ii) what government sectors need to be engaged (i.e., health, social care services and finance) and (iii) concrete cross sectoral commitments based on ROI and engagement.

When considering interventions, emphasis should be given to both economic and non-economic criteria, as both will affect the implementation and impact of interventions. Non-economic implementation considerations such as health impact, quality of life, acceptability, sustainability, scalability, equity, ethics, multisectoral actions, training needs, suitability of existing facilities and monitoring are essential elements in preparing to achieve the targets of the policy directive and should be considered before the decision to implement is considered.

Ageing populations are presenting a significant challenge to sustainable health care in Canada. Frailty is the most common condition leading to death in the community-dwelling older population. It is associated with higher risk of mortality and longer duration of acute hospitalizations as well as higher costs during hospitalization when compared to non-frail patients of similar age. Proactive recognition of the risk associated with frailty can help decision-makers maximize benefits and minimize waste in the context of limited resources. A framework for evaluating interventions that considers economic, clinical, quality of life and essential care partner outcomes will be essential to support the best use of constrained health care resources.

Section Five - Appendix

The following section provides two Appendices.

Appendix A is a one pager outlining the *Best Buys* Frailty Framework to be used for discussion purposes and a useful reference. It is a preliminary guide to decision-makers to support thinking through options of where and how to invest in initiatives that can support a new approach to addressing frailty in Canada.

Appendix B provides a listing of key resources for decision-makers related to this topic area that have been highlighted in the document.

Goal

Reduce the preventable and avoidable burden of morbidity, mortality, and disability due to frailty through investments in "Best Buys" in Frailty.

High-level objectives

- To raise the priority accorded to the prevention and control of frailty.
- To strengthen and orient health and social care systems to more appropriately assess and manage frailty including enhanced assessment, navigation, and more appropriate and tailored interventions.
- To strengthen national capacity, leadership, multisectoral action and partnerships in the prevention, management, and evaluation of frailty.

Levels of decision-making

A Macro: Best Buy "Target Areas" for Investments (top 5-10) (Government/Health Systems)

Determination: combination of synthesis of data and deliberation (i.e. for NCD WHO determination based on burden of illness and lowest cost interventions); less evidence available on burden of frailty and not clear disease areas to target.

B Meso-Micro: Criteria for project assessment and evaluation

Criteria to screen and prioritize applications and to inform evaluation criteria to be included in project evaluation, scale, and spread plans.

Examples:

(some potential areas from literature)

- Nutrition/exercise programs
- Social supports prioritized (vs. medical supports)
- Mental health supports addressing isolation
- Reducing polypharmacy (guidelines adjusted to reflect frail individuals)
- Intense rehabilitation diversion in acute settings to home rather than LTC
- Primary Care assessment improvements (early catches and tailored programs)
- Navigator role to target health and social care support

Criteria for target areas/project assessment

Screen one: value assessment

1. Clinical effectiveness and health impact
 - a. Quality of life for patients and caregivers measured using validated instruments
 - b. Severity and progression of frailty assessed using validated instrument.
 - c. Maintenance or improvement of independence in the community.
 - d. Health system utilization
 - e. Scale of impact (i.e. number of people, services, locations, prevalence of disease).
 - f. Cost of implementation
2. Cost-effectiveness and budget impact
 - a. Is it efficient?
 - b. Is it affordable?

Screen two: Feasibility

1. Feasibility of implementation
 - a. Is it financially possible in the local context?
 - b. Is there capacity to implement in the preferred timeframe?
2. Critical non-financial considerations
 - a. How does it impact on provincial, territorial, and national seniors' strategies/priorities (e.g., long term care waitlists, alternate level of care patients in acute hospital beds)?
 - b. Are local resources available to support implementation, evaluation, and maintenance of interventions?
 - c. What inter-sectoral collaborations are necessary? Are they ready to contribute?
 - d. Is there alignment with design strategies that promote independence in accessible communities for older populations (e.g., density to support common needs such as groceries, banking, pharmacy, health, and personal services)?

Foundational system investments

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1. Consistent standard measurement and reporting on frailty and related disability measures with stratification (mild, moderate, severe requiring different approaches).
2. Training/knowledge – skills required in various settings to recognize and address frailty.
3. Inventory of cost/outcomes measurement tools/sources to inform frailty business cases.
4. Community living and service design that prevents onset of frailty and enhances independence for frail persons.

Priority setting

1. Consistent standard measurement of frailty - stratification (mild, moderate, severe requiring different approaches)
2. Training/knowledge - skills required
3. Inventory of cost/outcomes measurement tools/sources to inform frailty business cases

Overall system benefits

Enhanced Ageing in community
 Frailty-focused rather than disease focused care
 Avoidable mortality
 DALYs, Quality of life.
 Acute care and LTC cost avoidance

Appendix B. Additional Resources

WHO *Best Buys* technical appendix.

The WHO *Best Buys* and other recommended interventions for the prevention and control of noncommunicable diseases is the 2017 technical appendix of the broader Global Action Plan. The technical appendix provides a list of options to address the four key risk factors for NCDs (tobacco, harmful use of alcohol, unhealthy diet and physical inactivity) and the four NCD areas of focus (cardiovascular diseases, diabetes, cancer and chronic respiratory diseases).

WHO *Best Buys* technical appendix

https://www.who.int/ncds/management/WHO_Appendix_BestBuys_LS.pdf

Global Action Plan (2013-2020)

https://apps.who.int/iris/bitstream/handle/10665/94384/9789241506236_eng.pdf;jsessionid=17D6F5EEAB5A833A11D5AE4515265FB8?sequence=1

Frailty assessment instruments (Edmonton Frail Scale and Clinical Frailty Scale).

Common frailty assessment instruments developed in Canada and applied internationally are the Clinical Frailty Scale and the Edmonton Frail Scale.

Clinical Frailty Scale <https://www.dal.ca/sites/gmr/our-tools/clinical-frailty-scale.html>

Edmonton Frail Scale <https://edmontonfrailscale.org/>

British Columbia Health Technology Assessment Committee MCDA Matrices.

The health technology assessment (HTA) review process includes a multi-criteria decision analysis scoring matrix. Scoring on the matrix contributes to committee deliberation and recommendations on new technologies considered for approval by senior health ministry and health authority leadership.

<https://www2.gov.bc.ca/assets/gov/health/about-bc-s-health-care-system/health-care-partners/health-authorities/bc-health-technology-assessments/htac-prioritization-and-mcda-matrices.pdf>

UK RightCare Frailty Toolkit.

The frailty toolkit provides comprehensive advice about the priorities in frailty assessment and care. It includes an interactive pdf to outline key resources and actions to take based on severity of frailty. Further details provide self-assessment to benchmark and guide improvement activities.

<https://www.england.nhs.uk/rightcare/products/pathways/frailty/>

Questionnaire Guide for Informants

Pre- interview Question

To be sent prior.

1. What criteria do you use when assessing where to invest resources for the best return on that investment in the health and social services sector generally? Any specific criteria when considering addressing frailty?
2. Presentation of Framework
3. Post-review of draft framework
4. We propose the following criteria for identifying *Best Buys* in addressing frailty. What do you think of the criteria proposed for use in assessment of *Best Buys* in Frailty Care?
5. What suggestions do you have in presentation of the draft framework (i.e., criteria, groupings, ranking)?
6. Would this be useful to you in supporting decision-making in terms of prioritizing investments?
7. What are the top three priority investments that you think are most pressing at the moment to improve frailty care? Provided for reference are priorities identified in past submissions from Canadian Frailty Network and others as examples. (to prompt thinking).
8. Do you anticipate the information would be available to inform the criteria outlined in the framework (i.e., cost, assessment of frailty, etc.)?
9. What information sources do you find missing most frequently that would be helpful in your role as a decision-maker?

References

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