Evaluation of Measuring Change in Frailty Status Following a Goal-Oriented, Multidisciplinary Primary Care Plan in Community-Dwelling Older Adults

Community Actions & Resources Empowering Seniors (CARES)

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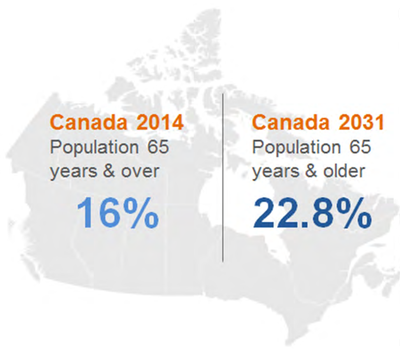
Aim

To proactively delay frailty in pre-frail seniors, enabling them to age well and die fit!

Problem Statement

Pre-frail seniors are becoming frail *unnecessarily.* Frailty is a geriatric syndrome associated with poor quality of life. Once frail the senior is more vulnerable and at risk for adverse outcomes including falls, disability, institutionalization and death.

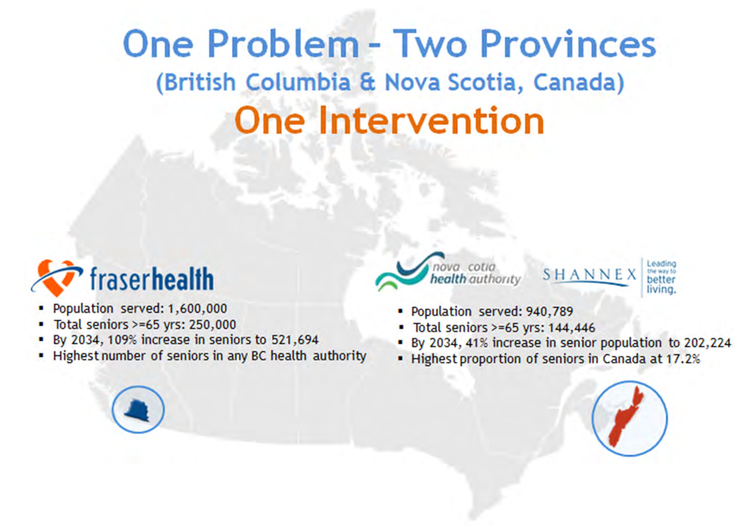


Causes:

- Rapidly aging population, challenges system capacity.
- Lack of proactive frailty recognition, identification & measurement.
- No standard practice in Primary Health Care/Community settings.
- Disconnect across the continuum.
- High utilization of acute care resources.
- Lack of coordination of services = reactive, isolated care.

Context

One Problem - Two Provinces
(British Columbia & Nova Scotia, Canada)
One Intervention



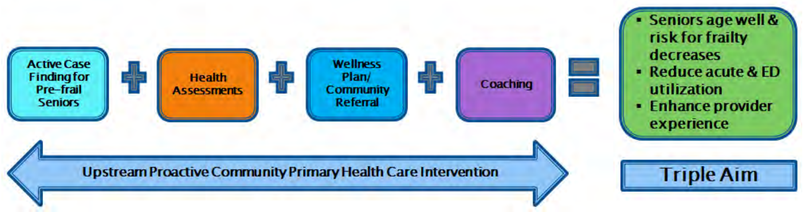
Anecdote – Jean's Story

- Caregiver for husband
- Potential to be socially isolated
- Difficulty walking
- Poor balance
- High blood pressure
- Irregular blood glucose levels
- Minimal focus on own needs
- Takes meds to sleep
- Limited exercise

Many seniors are in similar situations like Jean, and Jean's own health will continue to decline if something is not done…

CARES Model

Community Primary Health Care upstream intervention to decrease downstream utilization



Target Population - Inclusion Criteria

Persons >=65 years:

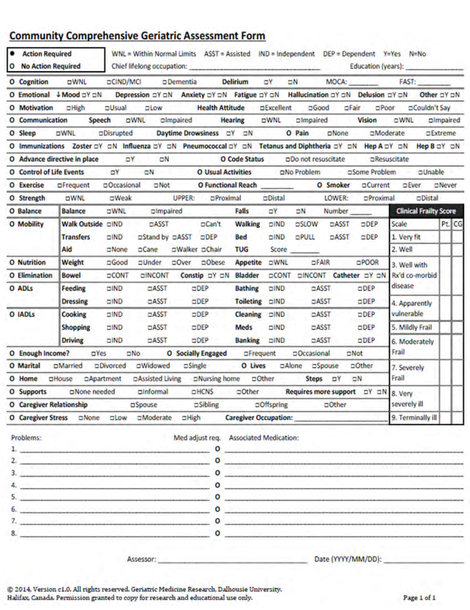
- Living at home or in assisted living within catchment community
- Rockwood Clinical Frailty Scale score between 1 (Managing Well) to 5 (Mildly Frail)
- Vulnerable to decline into frailty with a stressor

Patient Self Administered Tools:

- Patient Activation Measurement - Hibbard, J.H. (2003)

Physician Administered Tools:

- Medication Review
- Community Comprehensive Geriatric Assessment (CGA) - Geriatric Medicine Research, Dalhousie University (2014)
- Functional Assessment Staging Test - Resiberg, B. (1984)


Community Comprehensive Geriatric Assessment Form

Action Required / No Action Required — WNL = Within Normal Limits; ASST = Assisted; IND = Independent; DEP = Dependent; Y=Yes; N=No

Chief lifelong occupation: _____ Education (years): _____

Cognition	☐WNL	☐IND/MCI	☐Dementia	Delirium	☐Y	☐N	MOCA:_____	FAST:_____	
Emotional ↓ Mood	☐Y ☐N	Depression	☐Y ☐N	Anxiety	☐Y ☐N	Fatigue	☐Y ☐N	Hallucination	☐Y ☐N
Delusion	☐Y ☐N	Other	☐Y ☐N						
Motivation	☐High	☐Usual	☐Low	Health Attitude	☐Excellent	☐Good	☐Fair	☐Poor	☐Couldn't Say
Communication	Speech	☐WNL	☐Impaired	Hearing	☐WNL	☐Impaired	Vision	☐WNL	☐Impaired
Sleep	☐WNL	☐Disrupted	Daytime Drowsiness	☐Y	☐N	Pain	☐None	☐Moderate	☐Extreme
Immunizations	Zoster ☐Y ☐N	Influenza ☐Y ☐N	Pneumococcal ☐Y ☐N	Tetanus and Diphtheria ☐Y ☐N	Hep A ☐Y ☐N	Hep B ☐Y ☐N			
Advance directive in place	☐Y	☐N	Code Status	☐Do not resuscitate	☐Resuscitate				
Control of Life Events	☐Y	☐N	Usual Activities	☐No Problem	☐Some Problem	☐Unable			
Exercise	☐Frequent	☐Occasional	☐Not	Functional Reach _____	Smoker	☐Current	☐Ever	☐Never	
Strength	☐WNL	☐Weak	UPPER:	☐Proximal	☐Distal	LOWER:	☐Proximal	☐Distal	
Balance	Balance	☐WNL	☐Impaired	Falls	☐Y	☐N	Number _____		
Mobility	Walk Outside	☐IND	☐ASST	☐Can't	Walking	☐IND	☐SLOW	☐ASST	☐DEP
	Transfers	☐IND	☐Stand by	☐ASST	☐DEP	Bed	☐IND	☐PULL	☐ASST	☐DEP
	Aid	☐None	☐Cane	☐Walker	☐Chair	TUG	Score _____		
Nutrition	Weight	☐Good	☐Under	☐Over	☐Obese	Appetite	☐WNL	☐FAIR	☐POOR
Elimination	Bowel	☐CONT	☐INCONT	Constip	☐Y	☐N	Bladder	☐CONT	☐INCONT	Catheter	☐Y	☐N
ADLs	Feeding	☐IND	☐ASST	☐DEP	Bathing	☐IND	☐ASST	☐DEP				
	Dressing	☐IND	☐ASST	☐DEP	Toileting	☐IND	☐ASST	☐DEP				
IADLs	Cooking	☐IND	☐ASST	☐DEP	Cleaning	☐IND	☐ASST	☐DEP				
	Shopping	☐IND	☐ASST	☐DEP	Meds	☐IND	☐ASST	☐DEP				
	Driving	☐IND	☐ASST	☐DEP	Banking	☐IND	☐ASST	☐DEP				
Enough Income?	☐Yes	☐No	Socially Engaged	☐Frequent	☐Occasional	☐Not						
Marital	☐Married	☐Divorced	☐Widowed	☐Single	Lives	☐Alone	☐Spouse	☐Other				
Home	☐House	☐Apartment	☐Assisted Living	☐Nursing home	☐Other	Steps	☐Y	☐N				
Supports	☐None needed	☐Informal	☐HCNS	☐Other	Requires more support	☐Y	☐N					
Caregiver Relationship	☐Spouse	☐Sibling	☐Offspring	☐Other								
Caregiver Stress	☐None	☐Low	☐Moderate	☐High	Caregiver Occupation: _____							

Problems: (1–8) — Med adjust req. — Associated Medication:

Assessor: _____ Date (YYYY/MM/DD): _____

Clinical Frailty Score

Scale	Pt.	CG
1. Very fit		
2. Well		
3. Well with Rx'd co-morbid disease		
4. Apparently vulnerable		
5. Mildly Frail		
6. Moderately Frail		
7. Severely Frail		
8. Very severely ill		
9. Terminally ill		

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Nurse Administered Tools:

- Montreal Cognitive Assessment - Nasreddine, Z. (2003)
- Time Up & Go - Whiney, J.C., Lord, S.R., Close, J.C.T (2005)
- Functional Reach - Weiner, D.K. et al. (1992)

Evidence

- Periodic health assessments via a validated CGA are associated with better health outcomes for the senior (Leveille et al., 1998).
- Augmenting health assessments to enhance seniors natural protective factors with wellness planning and coaching can slow the progression of frailty (Wang et al., 2014).
- Primary care providers are ideally situated to incorporate proactive and best practices in their daily clinical work (Lacas et al., 2012).

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Results

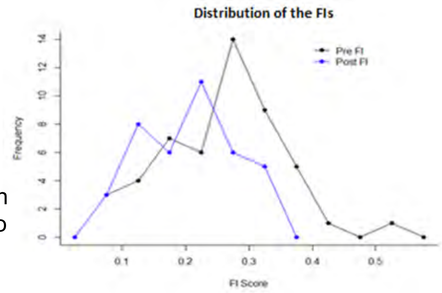
51 seniors participated in CARES:

33 from Fraser Health + 18 from Nova Scotia Health Authority

Quantitative Outcomes:

CARES proactively delays or reverses frailty in seniors, improving physical health and activity, including walking and quality of life.

- There was a statistically significant decrease in the frailty index (FI) score in seniors participating in CARES.
- On average, the seniors' score decreased by 0.032 from baseline to the 6-month follow-up CGA, equivalent to having 2 less health problems at follow-up.



- Improvements in frailty level were not statistically different by gender, age and site but frailer patients were more likely to improve their health through the program.

Qualitative Feedback:

- "I am now able to walk 'heel to toe', I couldn't do this when I started, my balance was awful." — **Participant**
- "I can go on the treadmill without holding on now."
- "I was surprised by how the scores of the participants improved! I was not expecting that." — **Provider**
- "I think of myself as an extension of family practice." — **Coach**
- "I make the community healthier."

Lessons Learned

- Primary care providers want to deliver proactive geriatric care to prevent frailty and want support from health authority to enable them:
  - Geriatric education on use of CGA
  - Automate CGA in EMR
  - Nurse support for team based care
- Primary care providers are well positioned to practice proactive geriatric medicine but need compensation for their time.

- Community organizations are eager to partner with primary care providers to help their community remain healthy and independent.
- **Coaching, either via community lay volunteers or formalized organizational role, is a KEY component of the CARES Model.**

Transformational Change

- Active case finding (recruitment of pre-frail seniors).
- Periodic comprehensive senior assessment using electronic CGA (embedded in EMR).
- Increase geriatric competency in primary care providers (frailty and dementia education).
- Promote team based care in primary health and primary care homes
- Lobby for incentive fee code for CGA in primary care.
- Integrate primary care with trained community volunteer wellness coach and social networks.

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