

# **“C5-75”**: CENTRE FOR FAMILY MEDICINE CASE-FINDING FOR COMPLEX CHRONIC CONDITIONS IN PERSONS 75+

## **A PRIMARY CARE INITIATIVE TO ADDRESS FRAILTY AND ASSOCIATED COMPLEX GERIATRIC CONDITIONS**

**L. Lee, MD, MCISc(FM), CCFP(COE), FCFP**  
**T. Patel, BScPharm, PharmD**

C5-75 is a trademark of Linda Lee, used under license

**Sept 2018**



20-03

Focus on catastrophic effects of illness

Person-centred approaches focused on the potential to manage or 'live well'

**19 Academic  
Family Practices**

**Primary Care  
Memory Clinic**

**“C5-75”  
Frail  
Older Adults**

Centre for Family Medicine  
Family Health Team

- Established in 2005
- Serving 28,309 patients in Kitchener, Waterloo, and Wellesley, Ontario

Addressing challenging gaps in  
community-based health care:

- Pro-active
- Primary care-based
- Interprofessional
- Evidence-informed
- Efficient, feasible
- Evaluative research



Practice

# Measures of Frailty

At least 67 frailty instruments have been developed...

- Clinical phenotype of (i) slowed walking speed, (ii) low physical activity, (iii) unintentional weight loss, (iv) low energy and (v) low grip strength (weakness) where 3 of 5 = frail [Fried Phenotype]
- Counting of accumulated deficits across multiple domains, eg. Frailty Index
- Clinical judgment, eg. CSHA Clinical Frailty Scale

Buta BJ, et al. Ageing Res Rev 2017

Bouillon K, et al. BMC Geriatr 2005

Fried LP, et al. Geronto A: Biol Sci Med Sci 2001

Minitiski AB, et al. BMC Geriatr 2002

Rockwood K, et al. Can Med Assoc J 2005

# C5-75: Development

1. Conducted and published reviews of the frailty literature to inform our program development
  - Systematic review of frailty markers or risk tools validated in the ambulatory care setting (Lee, Patel, Hillier, et al. *Geriatr Gerontol Int* 2017;17:1358-77)
    - We found none that were clinically useful and psychometrically sound
  - Review of frailty in primary care (Lee, Heckman, Molnar, et al. *Can Fam Physician* 2015;61:227-31)
2. Demonstrated the use of gait speed and handgrip measures together to be an accurate, precise, specific, and sensitive proxy for the Fried frailty phenotype (Lee, Patel, Costa, et al. *Can Fam Physician* 2017;63:e51-7)

# C5-75: Development

3. Design of C5-75 program informed by iterative process of testing and evaluation, using feedback obtained from patients, healthcare providers, staff, and knowledge users (physicians) to refine program elements and processes
4. Awarded funding support in 2013 as a Ministry of Health and Long Term Care Medically Complex Demonstration Project
5. Recently demonstrated that the C5-75 program is feasible and acceptable in a less-resourced family practice setting through collaboration with community pharmacy (presented at the 2017 Canadian Geriatric Society Annual Scientific Meeting)
6. C5-75 program description and outcomes published  
(Lee, Patel, Hillier, et al. *Geriatrics* 2018;3, doi:10.3390/geriatrics3030039)

# C5-75: Level 1 and Level 2

**Level 1 Screening** - nurses offer to all patients 75+ during a regular office visit, annually

- Frailty – 4-meter gait speed + hand grip strength
- Exercise – self-reported level of physical activity
- COPD – Canadian Thoracic Society screening questions
- Falls
- Exertional dyspnea / Heart Failure

**Results and specific recommendations sent to physician via Electronic Medical Records**

**Level 2 Screening** – interprofessional assessment for those identified as frail (gait speed  $\geq 6$  seconds and hand grip strength  $<14\text{kg}/24\text{kg}$ ), or those with Heart Failure or high risk of falls

- Nutrition
- Cognitive impairment
- Urinary Incontinence
- Depression, Anxiety, Social Isolation
- Caregiver burden, if applicable
- Falls/Fracture risk
- Full medication review
- Assessment Urgency Algorithm (AUA) – those identified at highest risk to be referred to Geriatric Medicine

**Results and specific recommendations sent to physician via Electronic Medical Records**

# C5-75: Level 1 and Level 2

- **C5-75 is feasible to implement within a busy family practice**

## Level 1:

- Implemented during regular office visits, annually
- < 7 minutes to complete
- Over 5 years, 1,073 older adults have been assessed (75% of persons aged 75+ in our Family Health Team)

## Level 2:

- < 30 minutes to complete
- Requires extra appointment but only for those who are frail (7%) or at high risk (Heart Failure, falls)

- **Within nurse and AHP scope of practice**

- **Low cost**

- Minimal staff training
- Dynamometer - \$300-\$400 CAD





## **Research: C5-75**

- **Screening for frailty**
- **Case-finding in C5-75**
- **Medication use**
- **Community pilot**

# Screening for Frailty: Applicability in Family Practice

- Goal: to improve practicality and feasibility of screening for frailty in primary care
- Study objective: examine relative accuracy of individual Fried frailty phenotype measures in identifying the Fried frailty phenotype in a primary care setting
- Fried phenotype:
  - Gait speed (# seconds/ 4m)
  - Hand grip (dynamometer)
  - Self-reported exhaustion, low physical activity, unintended weight loss
- Retrospective chart review
- 516 patients aged 75 years+ completed C5-75 screening

# Combined Gait Speed and Grip Strength

<b>Criteria</b>	<b>Sensitivity</b>	<b>Specificity</b>	<b>Positive predictive value</b>	<b>Accuracy</b>
Gait speed	87.5%	94.6%	52.5%	94.2%
Hand grip	100%	90.5%	42.4%	91.1%
Combined	87.5%	99.2%	87.5%	98.4%

N = 383 patients with complete frailty screening data

Frailty prevalence ( $\geq 3$  more frailty criteria) = 6.5%

- Gait speed or grip strength alone were sensitive and specific as a proxy for the Fried phenotype
- Dual-trait measure of grip strength with gait speed was more accurate, sensitive, and specific

# C5-75 Case Finding

(April 2013-December 2016)

<b>Level</b>	<b>Total # assessments completed</b>	<b># unique patients</b>	<b># repeated annual assessments</b>
Level 1	1,461	965	496
Level 2	640	582	58