Patient Population Characteristics

N = 965                Mean age (years ± SD): 81 ± 5                Gender, female (n, %): 505, 52%

COPD – Chronic Obstructive Pulmonary Disease; CAD – Coronary Artery Disease; MI – Myocardial Infarction;
CABG – Coronary Artery Bypass Graft; MCI – Mild Cognitive Impairment

Lee, Patel et al., Geriatrics, 2018;3:39
Level 1 Screening Results

Exercise (N = 945):
- Physically active: 30+ min moderate intensity 5+ days/week: 48%
- Physically active: occasionally or during some seasons: 36%
- Not physically active beyond activities of daily activities: 16%

Frailty (N = 965):
- Gait Speed: 14%
- Gait Speed_Hand Grip: 7%

Falls (N = 750):
- 2+ in past 6 months: 4%
- Falls in past 6 months requiring medical attention: 5%

Lee, Patel et al., Geriatrics, 2018;3:39
# Level 2 Screening Results

<table>
<thead>
<tr>
<th>Screening Component</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fracture Risk (N = 119)</strong></td>
<td></td>
</tr>
<tr>
<td>Prescribed medications for osteoporosis</td>
<td>23 (19%)</td>
</tr>
<tr>
<td>Not prescribed medication for osteoporosis /T-L spine x-rays were ordered</td>
<td>27 (23%)</td>
</tr>
<tr>
<td>Not prescribed medication for osteoporosis/ BMD testing ordered.</td>
<td>51 (43%)</td>
</tr>
<tr>
<td><strong>Mental Health Screening</strong></td>
<td></td>
</tr>
<tr>
<td>PHQ-9 – positive screen for depression (N = 50)</td>
<td>11 (7%)</td>
</tr>
<tr>
<td>GAD-7 – positive screen for anxiety disorder (N = 94)</td>
<td>4 (3%)</td>
</tr>
<tr>
<td>LSNS-6 – positive screen for social isolation (N = 117)</td>
<td>29 (20%)</td>
</tr>
<tr>
<td>Zarit Caregiver Burden – positive screen for high burden (N = 103)</td>
<td>15 (15%)</td>
</tr>
<tr>
<td><strong>Cognition Screening (N = 119)</strong></td>
<td></td>
</tr>
<tr>
<td>Mini-Cog – positive screen</td>
<td>26 (22%)</td>
</tr>
<tr>
<td><strong>Urinary Incontinence Screening (N = 147)</strong></td>
<td></td>
</tr>
<tr>
<td>Patients reporting symptoms of urinary incontinence</td>
<td>47 (39%)</td>
</tr>
<tr>
<td><strong>Assessment Urgency Algorithm (N = 68)</strong></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>8 (12%)</td>
</tr>
<tr>
<td>Level 2</td>
<td>22 (32%)</td>
</tr>
<tr>
<td>Level 3</td>
<td>5 (7%)</td>
</tr>
<tr>
<td>Level 4</td>
<td>1 (1%)</td>
</tr>
<tr>
<td>Level 5</td>
<td>10 (15%)</td>
</tr>
<tr>
<td>Level 6</td>
<td></td>
</tr>
</tbody>
</table>

Lee, Patel et al., Geriatrics, 2018;3:39
## Medication Use in Frailty

(April 2013 – August 2015; Pharmacist Review)

<table>
<thead>
<tr>
<th>Category</th>
<th>Initial medication review (n = 41)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total medications/patient (mean/range)</td>
<td>11 (5 – 23)</td>
</tr>
<tr>
<td>Prescribed medications/patients (mean/range)</td>
<td>8 (3 – 15)</td>
</tr>
<tr>
<td>Over the Counter Medication per patient (mean/range)</td>
<td>4 (0 – 9)</td>
</tr>
<tr>
<td>PRN per patient (mean/range)</td>
<td>1.44 (0 – 8)</td>
</tr>
<tr>
<td>High Risk Drug (HRD) per patient (mean/range)</td>
<td>3.27 (0 – 7)</td>
</tr>
<tr>
<td>% patients on 1+ HRD</td>
<td>95%</td>
</tr>
<tr>
<td>% patients on 5+ prescribed medications</td>
<td>90%</td>
</tr>
<tr>
<td>% patients on 5+ total medications</td>
<td>100%</td>
</tr>
</tbody>
</table>

Patel T, Bauer J, Lee L et al. CPJ 2016; 149: S27
Review of Medications in C5-75

Top 10 prescription medications (n = 142)

- Anti-HTN: Antihypertensives
- HMG-CoA RI: 3-hydroxy-3-methyl-glutaryl-coenzyme A reductase inhibitor
- AP: Antiplatelet (including ASA)
- GI protection: Histamine 2 blocker or proton pump inhibitor
- AD: Antidepressants
- Topicals: Topical creams/ointments/lotions
- Inhalers
- Laxatives
- APAP: Acetaminophen
- BP: Biphosphates/bone modifying agents

High risk drugs used by patients with an initial medication review (n = 41)

- Insulin
- CV meds
- NSAIDs
- O/N: Opiods/Narcotics
- BD2: Benzodiazepines and analogues
- AP/AC: Antiplatelets/Anticoagulants

Anti-HTN: Antihypertensives; HMG-CoA RI: 3-hydroxy-3-methyl-glutaryl-coenzyme A reductase inhibitor; AP: Antiplatelet (including ASA); GI Protection: Histamine 2 blocker or proton pump inhibitor; AD: Antidepressants; Topicals: Topical creams/ointments/lotions; APAP: Acetaminophen; BP: Biphosphates/bone modifying agents; CV meds: Digoxin, antihypertensive medications; NSAIDS: Nonsteroidal anti-inflammatory drugs; O/N: Opiods/Narcotics; BD2: Benzodiazepines and analogues; AP/AC: Antiplatelets/Anticoagulants

Patel T, Bauer J, Lee L et al. CPJ 2016; 149: S27
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Community Pilot

Pilot test of C5-75 in less well resourced practice setting

- Urban family practice, 14 physicians; 11,819 patients
- Co-located with a community pharmacy

Community pharmacists/staff trained to complete C5-75 screening

Screening was completed with 46 patients

- Mean age = 80 (± 4.7); range = 72 – 97 years
- 71% female

Frailty based on

- Gait speed: 13% (6/46)
- Gait speed with grip strength: 9% (4/46)

Level 2 Screening: 12 (26%)

Surveys of staff (N = 2) and patients (N = 33): feasibility, acceptability and satisfaction

- Patient Satisfaction: mean = 4.5/5; 93% ≥4 ratings
- Pharmacy staff: screening perceived as feasible and acceptable
  - Time concerns in only 2 (4%) of cases
  - No staff reported lack of comfort with screening
Future of C5-75

- Continue developing program to improve effectiveness and efficiency
- Impact of interventions
- Challenges, barriers
  - Healthcare providers, patients and caregivers
- Performance of individual components
  - Diagnostic accuracy
  - Influence on healthcare
  - Perceived value to stakeholders
  - Perceived practicality (efficiency and acceptability) to stakeholders
Patient and Health Care Provider impacts

- Between 2014-2015, surveys completed by 123 patients who received C5-75 assessments demonstrated high levels of satisfaction with screening processes, time required, and contributions to care decisions resulting from this program; none expressed dissatisfaction.

- Between 2014-2015, surveys were also completed by 31 health care providers, including 18 family physicians whose patients whose patients received C5-75 assessments.
Impact Testimonials

Comments from 18 family physicians in response to the question, “Is there any other feedback you would like to provide relating to your experience as a healthcare provider as part of this pilot project?“:

• “The C5-75 program has been essential in coordinating & delivering truly effective care to these patients. Patients themselves have appreciated the continuity of care. This clinic utilized the best of various professionals.”

• “This has been very helpful in a busy practice to identify complex patients and screen them. This has led to helpful suggestions and improved care (additional interventions that were needed).”

• “I find this program to be very valuable to identify frail patients, and especially to help us as practitioners understand how to reduce risks and better treat this complex population.”

• “C5-75 has identified issues as yet less obvious in a variety of my patients. It has been very positive.”

• “Has helped automate some screening, which would normally be missed in regular practice setting.”

• “Excellent response from patients.”
In summary, C5-75:

1. Utilizes a feasible, objective, valid means of quickly screening for frailty during busy clinical practice using gait speed with hand grip strength

2. Integrates a structured, multidisciplinary, evidence-informed approach to systematically and pro-actively screen for and manage frailty and its associated conditions

3. Has been developed by practicing primary care practitioners, tested, piloted, and designed for integration into Canadian primary care practice

4. Aims to change the system of primary healthcare to better address the needs of frail older adults, enabling them to maintain health and wellbeing with best quality of life for as long as possible
Core Project Team Members

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Contributors to Clinical Expertise

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