MINT and C5-75*: Enhancing Primary Care for Older Adults Living with Memory Difficulties and Frailty

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November 5, 2019

*C5-75 is a trademark of Linda Lee, used under license by MINT Memory Clinics
“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
C5-75: An Upstream Approach

1. Systematic case-finding for Frailty - a state of increased risk of adverse health status change
   ▪ Must be efficient, practical, measurable
   ▪ Routinely implemented

2. Reduce risk by
   ▪ Identification and proactive management of co-existing medical and psychosocial conditions early, before crises
   ▪ Medication optimization
   ▪ Addressing factors such as nutrition, exercise, and social vulnerability with proactive interventions

3. Enable a person-centred care approach to care for older adults living with frailty
   ▪ Focus on strengths, resilience
   ▪ Delivered in primary care
Measures of Frailty

At least 27 frailty scales have been developed, e.g.

- Counting of accumulated deficits across multiple domains, eg. Frailty Index
- Clinical judgment, eg. CSHA Clinical Frailty Scale
- 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 Frailty Phenotype]

Bouillon K, et al.  BMC Geriatr 2005
Minitski AB, et al.  BMC Geriatr 2002

We 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-
C5-75: Development

- Design of C5-75 program informed by iterative process of testing and evaluation, including feedback from patients, healthcare providers, staff, and knowledge users (physicians) to refine program elements and processes to ensure feasibility, acceptability


- Demonstrated that the C5-75 program is feasible and acceptable in a less-resourced family practice setting through collaboration with community pharmacy


- Awarded funding support from Canadian Frailty Network to further refine C5-75 processes
C5-75: Level 1 and Level 2

Level 1
- Frailty: 4m gait speed + hand grip strength
- Exercise: self-reported level of physical activity
- Falls

Level 2
- Nutrition
- Cognitive impairment
- Urinary incontinence
- Depression, anxiety, social isolation
- Caregiver burden
- Fracture risk
- Medication review
- Assessment Urgency Algorithm (AUA)

Level 2: Interprofessional assessment for those identified as FRAIL (gait speed ≥ 6 seconds and reduced hand grip strength)

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%)
  
- Within nurse and AHP scope of practice

- Low cost
  - Minimal staff training
  - Dynamometer - $300-$400 CAD
1. Uses a feasible, objective, valid means of quickly screening for frailty during busy clinical practice: 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. Aims to change the system of primary healthcare to better address the needs of older adults living with frailty, enabling them to maintain health and wellbeing with best quality of life for as long as possible
Disrupting dementia care with a new, integrated approach

MINT Memory Clinics is the brainchild of Innovation grant recipient, Dr. Linda Lee, a family physician with more than 30 years’ practice under her belt. The model of care provides access to high-quality dementia care within the local family doctor’s office.

This is the shakeup dementia care needed.
The first MINT Memory Clinic was established in 2006 by a team of front-line healthcare professionals in Kitchener-Waterloo to address gaps in care for the increasing number of Ontarians living with dementia.

Now there are 114 MINT Memory Clinics established across Ontario.
In typical primary care practice…
MINT (Multi-specialty INterprofessional Team) Memory Clinics
(formerly known as Primary Care Collaborative Memory Clinics):

- A new model of dementia care created through a nationally-accredited training program for family physicians and interprofessional team members
- High quality care based on geriatrician chart audit

Geriatric medicine
Geriatric psychiatry
Cognitive neurology
eConsult
114 MINT Memory Clinic sites, serving 1/5 of Ontario

- 240+ family physicians
- 55+ specialists
- 750+ nurses and interprofessional healthcare providers
- 200+ community agency team members (e.g. Alzheimer’s Society)
Patients and families depend on MINT Memory Clinics for compassionate care they can count on.

“Amazing multidisciplinary team of passionate people providing support where there was a need.”
- Caregiver, Kenora

“I want to know all about the way my life is progressing so I can plan for my future and my family’s future.”
- Patient, Thunder Bay

“I would advise anyone in my age group to attend this memory clinic.”
- Patient, Temiskaming Shores

“If you don’t have a memory clinic, you’re running blind and it’s already stressful enough.”
- Bob and Sherrill

“He lived at home for five years after the diagnosis. I would not have been able to keep him home that long without their support.”
- Caregiver, Kitchener
Independent provincial evaluation commissioned by Ministry of Health and Long Term Care

Oversight provided by Health Quality Ontario

Primary Care Collaborative Memory Clinics are now called MINT Memory Clinics
Evaluation finds MINT model supports significant healthcare cost savings: **38% reduction** in cost-per-day for patients living with dementia.

<table>
<thead>
<tr>
<th>Cost Per Day After Index Date, Including Index Date</th>
<th>Non-PCCMC</th>
<th>PCCMC</th>
<th>Significant (s) / Not Significant (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient (DAD)</td>
<td>86.53</td>
<td>39.38</td>
<td>s</td>
</tr>
<tr>
<td>NACRS ED</td>
<td>5.24</td>
<td>2.58</td>
<td>s</td>
</tr>
<tr>
<td>ODB drugs (all ages)</td>
<td>8.38</td>
<td>8.17</td>
<td>n</td>
</tr>
<tr>
<td>Rehab (NRS)</td>
<td>2.49</td>
<td>2.19</td>
<td>n</td>
</tr>
<tr>
<td>Complex Continuing Care</td>
<td>10.68</td>
<td>8.99</td>
<td>s</td>
</tr>
<tr>
<td>Long Term Care (total)</td>
<td>33.46</td>
<td>27.13</td>
<td>s</td>
</tr>
<tr>
<td>Long Term Care (using OHIP/ODB)</td>
<td>5.19</td>
<td>0.5</td>
<td>s</td>
</tr>
<tr>
<td>Long Term Care (using CCRS)</td>
<td>28.27</td>
<td>26.62</td>
<td>s</td>
</tr>
<tr>
<td>Home Care Services</td>
<td>9.19</td>
<td>8.4</td>
<td>s</td>
</tr>
<tr>
<td>Total visits</td>
<td>17.10</td>
<td>9.66</td>
<td>s</td>
</tr>
<tr>
<td>Total Fee for Service visits</td>
<td>15.23</td>
<td>8.16</td>
<td>s</td>
</tr>
<tr>
<td>Other non-FFS visits</td>
<td>0.75</td>
<td>0.72</td>
<td>n</td>
</tr>
<tr>
<td>Non-FFS GP/FP visits</td>
<td>0.03</td>
<td>0.05</td>
<td>s</td>
</tr>
<tr>
<td>Inpatient MH</td>
<td>2.13</td>
<td>2.27</td>
<td>n</td>
</tr>
<tr>
<td><strong>Total Cost Per Day</strong></td>
<td><strong>184.95</strong></td>
<td><strong>114.18</strong></td>
<td>s</td>
</tr>
</tbody>
</table>

The column on the right indicates whether the difference between the PCCMC and the non-PCCMC values are significantly different or not. For most components, the PCCMC patients are seen to have lower costs per day than their non-PCCMC counterparts. Overall the cost per day (over the period of time that a person has dementia) is **38% lower** ($114.18 v. $184.95 per day).
## Estimate of Patient’s Costs

Lower overall cost to healthcare system for persons with dementia managed in MINT Clinics

<table>
<thead>
<tr>
<th>Non-MINT Clinic</th>
<th>MINT Clinic</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Total cost per day per person: $184.95*</td>
<td>• Total cost per day per person: $114.18*</td>
</tr>
<tr>
<td>• Total cost per year per person: $67,506.75</td>
<td>• Total cost per year per person: $41,675.70</td>
</tr>
</tbody>
</table>

➢ **$25,831.05 less per person per year with MINT Clinic care**

*Page 61, Health Innovations Group, Provincial Evaluation of Primary Care Collaborative Memory Clinics (PCCMCs) Final Report, 2019*
Patient Experience

Wait times for dementia care reduced by nearly half:

“The median number of weeks to first visit with a PCCMC physician was about 7 weeks. By comparison, the time to first visit with a geriatrician was 12 weeks, 14 weeks with a neurologist, and 13 weeks with a psychiatrist.”

Improved patient and caregiver quality of life:

“Through interviews...23 patients and 27 caregivers it was substantiated that there is an overall positive impact on the quality of life of patients and caregivers affiliated with a PCCMC.”

“Patients and caregivers, have expressed a high level of satisfaction with the PCCMCs.”
Healthcare System Impacts

Reducing Emergency Department visits:
• “Patients are not visiting the ED as quickly as non-PCCMC.”
• “PCCMC appear to have the potential to reduce system-wide use of emergency departments.”

Reducing ALC days and delay in transition to Long-Term Care
• “PCCMCs have a positive impact on the health system in terms of time to hospitalization, time to first Emergency Department visit following identification with dementia, ALC days and length of time to be admitted to long-term care compared to non-PCCMC patients.”
• “PCCMC patients remain out of long term care longer than their non-PCCMC counterparts” – 5.4 months delay on average

Building capacity in primary care and specialist care
• “A significant difference in the rates of referrals to specialist physician services was found between PCCMCs (10%) and non PCCMCs (105%)”
“Expanding C5-75: Primary Care Screening for Frailty in Older Adults with Cognitive Impairment”

- Level 1 hand grip + gait speed assessments in MINT Memory Clinics to identify those living with cognitive impairment and frailty

- Level 2 screening by community based specialized geriatric services for unrecognized/suboptimally managed co-existing conditions, streamlining those at highest risk to geriatric medicine with the aim of preventing health destabilization

- A collaborative effort between primary care, specialist care, and community agencies
A fresh approach to memory care.

Putting you and your family first with faster access to high-quality, compassionate memory care that’s close to home.
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www.mintmemory.ca
@MINTMemoryCare