Feasibility of Using Personalized Touch Screen Computer Application Mozzaz to Help Patients with Mild Cognitive Impairment or Dementia and Their Caregivers
In 2011 Canada had 5 million people aged over 65. The number is projected to reach 8.4 million by 2026, roughly 21.5% of total population.

Aging is the biggest risk factor for dementia and mild cognitive impairment (MCI), so the numbers with these conditions are predicted to rise.

Laurin D, et al. 2001
Background (cont……)

– A major portion of care giving involves continuous reminding of patients about their daily activities.

– Technology has been increasingly used to help older adults (OA) to age and live better

– But technology adoption by OA is relatively slow

– Adoption usually depends on device particulars (for example look, easiness to use, durability) and perceived usefulness to the user

Coughlin, D'Ambrosio, Reimer & Pratt, 2007
Wielandt et al., 2006
Purpose/Objective

The goal of this project is to investigate the feasibility of providing individualized health management through integrated mobile technology for older adults (OA) with MCI.

Objectives to reach this goal:

• To identify barriers and obstacles in using mobile platform application for older adults

• To explore if older adults with MCI can learn to use a mobile application to support their health and wellbeing
Methodology

– Phase 1 - user-engagement workshop (n= 29)

– Phase 2 - interviews with 5 dyads and training on Mozzaz™

– Phase 3 – use at home for 3 months

– Participants: Older adults aged 50+ years recruited through memory clinics and adult day programs.
Mozzaz™ is a commercially available mobile health platform

The personalized and interactive interventions or treatment can be monitored virtually in real time.
Mozzaz™

- Play cards
- Listen to music
- Do a puzzle
- Watch TV
- Read a book
- Shopping
Phase 1: User-engagement workshop

- Part of AGE-WELL TUNGSTEN project
- Facilitated, structured workshops included:
  - **Technology Interaction** – work in pairs to learn how to use a specific device or app
  - **Scavenger Hunt** – each person tries out a range of apps and devices and feedback.
- Tried and tested methods to collect data on ease of use, accessibility, acceptability, liked and disliked features, likely adoption, etc.
Phase 2 – interviews

- Challenges living with MCI or dementia that they would like help with
- Current technology use
- Opinions, perceptions and attitudes for adopting new technology
- Training on use of Mozzaz™
Phase 3 – Try at home

- Six dyads have been invited to try Mozzaz™ at home for up to three months.
- The frequency of use, their likes/dislikes, problems faced and so on will be measured using SUS.
- Using three outcome measures (QOL-AD, COPM and QCPR) to assess self-reported health and wellbeing, and patient-caregiver relationship.
Data-analysis

- All sessions will be video taped for subsequent qualitative data analysis using Observer™ video analysis software
- Scores on QoL-AD, COPM, and QCPR will be analyzed for quantitative descriptive analysis
- Inference on barriers and facilitators of technology adoption by OA plus effect of technology use on health-wellbeing, quality of life and relationship with caregiver will be sought in data analysis
Data-analysis (Results from first stage)

Feedback on Mozzaz Application (n=31)

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
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<tbody>
<tr>
<td>Good for patients</td>
<td>Too many Steps</td>
</tr>
<tr>
<td>Has Potential</td>
<td>Difficult to follow</td>
</tr>
<tr>
<td>Useful for those having communication difficulties</td>
<td>Hard to learn</td>
</tr>
<tr>
<td>Lists of Local resources would be helpful</td>
<td>Lacks follow-up</td>
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<tr>
<td>Unclear Purpose</td>
<td>Confusing/Overwhelming</td>
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Updates

- Phase 1 completed
- Recruitment for 2nd stage completed
- Six dyads signed up for training on Mozzaz™
- Phase 2, session 1 interview completed for 3 dyads
- Waiting to receive iPads for training on Mozzaz™
Impact of research

– Involvement of end-users (OA with MCI) in design and development process of technology

– Evaluate ease of use and suitability for delivering support for cognitive function and activities of daily life to OA with MCI

– Exploring the impact of a specific mobile platform (Mozzaz™) on QoL, self reported health and relationship with caregiver

– Decision-making on feasibility of using Mozzaz™ in routine care for people with MCI or dementia
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Thank You