Getting Around to Age in Place: Meeting Older Canadians' Mobility Needs via Public Transportation

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INTRODUCTION

Mobility and transportation are key enablers for the financial, health and even psychological well-being of people. In the Canadian context, older adults rely primarily on private automobiles as their means of transportation (Newbold et al., 2005). However, not all older adults have access to a car. Further, when health issues arise, many must either reduce their driving or 'give up the keys'. Driving regulation and cessation is often a difficult and emotional transition, that is associated with negative outcomes such as declines in health indicators and decreased participation in activities outside of the home (Chihuri et al., 2016; Goins et al., 2015).

According to the Canadian Institute for Health Information (CIHI), the number of Canadians 75 years and older is expected to double over the next two decades. The distribution of the population increase within Canada is shown in Figure 1.

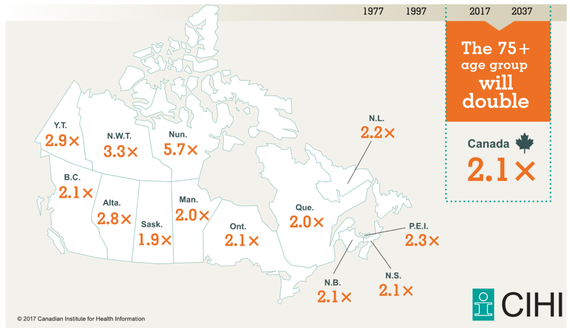

Figure 1. Canada's Older Adult Population Outlook
https://www.cihi.ca/en/infographic-canadas-seniors-population-outlook-uncharted-territory

The World Health Organization (WHO) defined "accessible and affordable public transportation [as] a key factor influencing active ageing," according to the agency's Global Age-Friendly Cities guide (WHO, 2007, Figure 2).

Figure 2. WHO Healthy Cities Framework
WHO, "Global Age Friendly Cities: A Guide," in "Ageing and Life Course Family and Community Health," Geneva, 2007.

As such, even though only 3.1% of older Canadians use transit (Newbold & Scott, 2018), many have argued that it is vital that public transit agencies provide services that meet the needs of older adults (Hanson & Hildebrand, 2011; Shrestha et al., 2017), since public transportation (Figure 3) is a low cost and environmentally friendly alternative to private automobiles that holds the potential to maintain older adults' independent mobility.

Figure 3. An Example of Public Transportation Option

Research on older adults' public transport use is limited, especially in the Canadian context. Some research compares transit use across age groups (Fordham et al., 2017; Newbold et al., 2005), or other social factors such as gender (Siren & Haustein, 2013). Other research explores older adults' attitudes towards transit (Habib et al., 2011), or how aspects of the built environment influence public transport use amongst older adults (Hess, 2012; Kim, 2011). Further, although a great deal of research worldwide has sought to identity gaps in public transport provision generally, researchers and practitioners know comparatively little about how well public transport serves the actual needs of older adults.

We know even less about older adults' specific public transport needs and experience in the Canadian context, where location of residence (urban, rural or remote), the structure of the healthcare system,

cultural norms surrounding aging and mobility and even the climate interact to shape unique demands. Understanding these mobility needs will be critical to helping more older Canadians remain in their current homes longer.

OBJECTIVE

The project aims to:

- Better understand where older Canadians reside in urban, rural and remote settings in 6 case study sites (Figure 4), and key destinations they need to access (i.e. health and wellness care, outdoor recreation, religious institutions, community centres, and affordable wholesome food)
- Determine how well public transportation services older adults within the study sites

The gaps identified from this research will inform future NRC transit related research.

Figure 4. Proposed Case Study Cities
Shortlisted cities include: Victoria (BC), Vancouver (BC), Saskatoon (SK), Toronto (ON), Montreal (QC) and Halifax (NS. Cities under consideration include: Thunderbay (ON), St. Catharines (ON), Sherbrooke (QC) and St. John's (NL).

METHODOLOGY

Four key activities will be carried out:

- Generate new and refined evidence-based transit accessibility measures focused on the needs of older adults, examples include:
  - Safety and comfort of older passengers as it relates to vehicles and stations
  - Adequate transit routes to serve the destinations they need to access
  - Convenience of transit station locations
  - Frequent and reliable services
  - Accessible information on transit options
  - Age-friendly drivers and vehicles
  - Travelling public's respect for priority seating
- Understand how older Canadians experience public transport and its role in their well-being, activity levels and social inclusion
- Quantify the relationship between transport accessibility and health and social outcomes
- Facilitate the broader adoption of tested accessibility measures to improve public transport service for older adults by professionals across Canada

RESULTS TO DATE

The project officially launched in September 2021.

A literature review of peer-reviewed journal papers has been completed. Most papers identified locations of high and low accessibility, where central areas have greater accessibility than suburban areas. Papers identified inequalities in accessibility for older adults compared to the other segments of the population, and higher access by car than by public transport. At least one paper discussed accessibility for older adults decreasing over time and over the course of the COVID-19 pandemic.

An accessibility metric has been developed based on population density, transit infrastructure, accessibility comparisons between transit and cars, and destinations of interest for older adults. An example of the analysis is shown in Figure 5 for Vancouver.

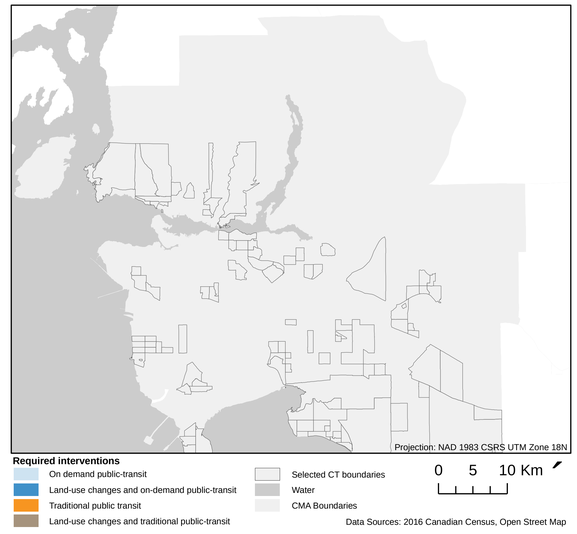

Figure 5. Accessibility Metric Analysis for Vancouver

The accessibility metric analysis enables the prioritization of communities for closer examination.

NEXT STEPS

A survey to better understand older Canadians' experience related to public transportation accessibility has been designed. Ethics approval for the survey and methodology has been obtained from McGill University and NRC. The survey is expected to be launched in winter and spring of 2023.

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OUR PARTNERS

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