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

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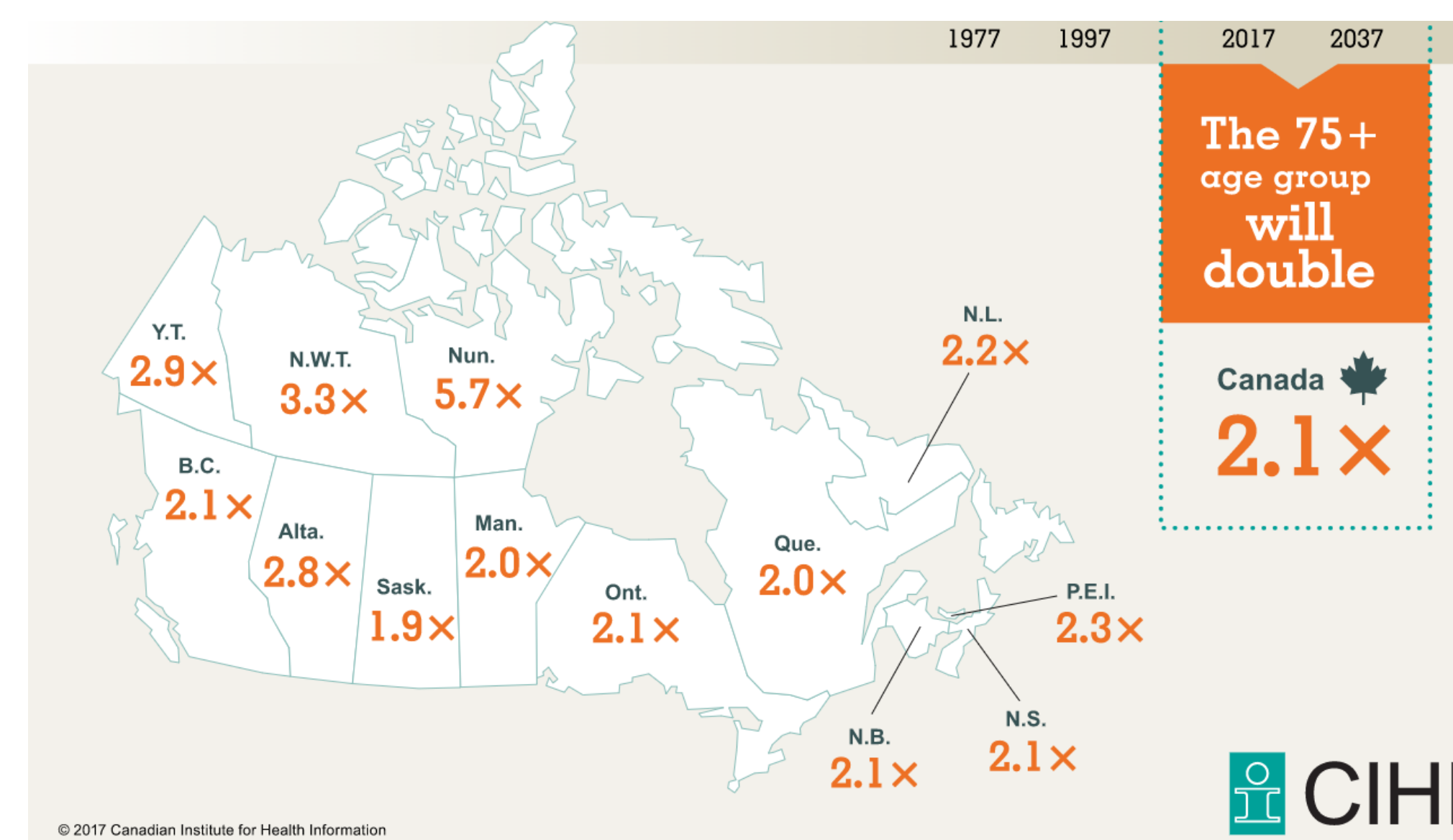
## ABSTRACT

Transportation is the thread that binds the fabric of daily life, linking people to activities and opportunities that fundamentally shape their individual wellbeing and collective social welfare. This is especially true for older individuals, whose options for independent mobility may decline with age. This project aims to address gaps in our knowledge regarding older Canadian's public transport needs and experiences by combining tested quantitative data, such as accessibility measurements at fine geographic and temporal scales, and qualitative methods, including surveys and in-depth guided interviews among different older adult populations on public transport experiences and perceptions. Understanding these mobility needs will be critical to helping more older Canadians remain in their homes longer.

## 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**  
<https://www.cbc.ca/news/canada/coronavirus-covid19-public-transit-1.5509927>

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 & Hausteine, 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 identify 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: Thunder Bay (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

- Understand the relationship between levels of accessibility to various opportunities and an expanded range of individual and social outcomes for older adult populations
- 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. 18 papers were identified to be most relevant, including 3 from Canada, 6 from United States, 4 from China, 4 from Europe and 2 from Australia. 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.

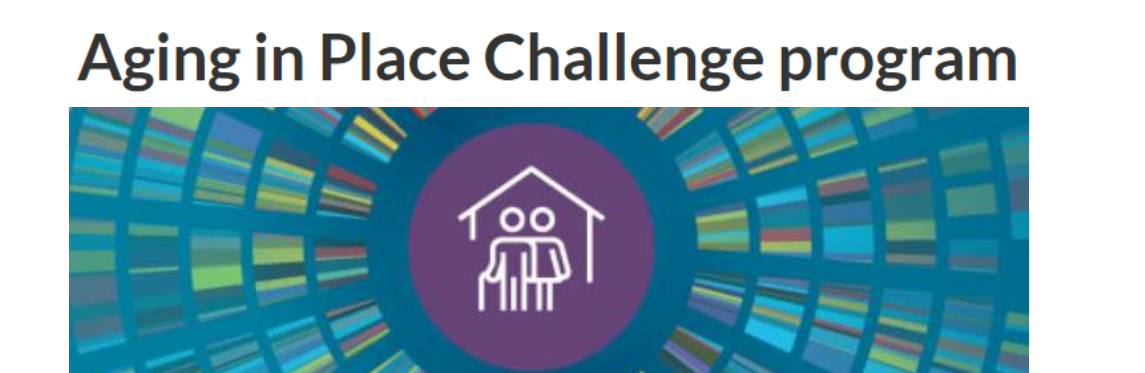
A number of gaps were identified, including the large variations in how 'older adults' are defined, destinations used in accessibility calculations, public transport modes used, and accessibility calculations.

A paper has been submitted to the Journal of Transport Geography (December 2021).

## NEXT STEPS

General transit feed specification data will be obtained for case studies cities. Accessibility measures will be calculated for each city. A survey to better understand older Canadians' experience related to public transportation accessibility will be designed and carried out.

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