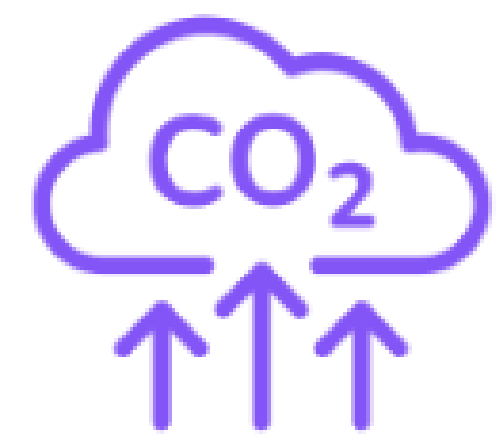


Background



The healthcare system in Canada is one of the most significant single contributors to climate change, accounting for nearly 5% of the total national greenhouse gas emissions.

- However, point-of-care (POC) testing (medical diagnostic testing done at the time of patient care) remains a largely unexamined area of study.
- The healthcare system is responsible for the consumption of countless litres of fossil fuel and greenhouse gas emissions, partly due to travel for appointments, prescriptions, and test results.

This research aims to contribute to the understanding of the environmental and patient care implications of point-of-care blood draw services in rural communities. **Findings will guide healthcare policy and practice to optimize service delivery and minimize environmental impact.**

Objectives

1. Determine the difference in CO2 emissions associated with patient travel for bloodwork between rural communities with and without access to point-of-care blood draw services.
2. Assess the impact of travel distance on patient adherence to completing requisite bloodwork.
3. Explore patient and caregivers' attitudes and perceptions regarding point-of-care bloodwork services and travel distance for bloodwork.

Methods

The study employs a **descriptive, cross-sectional observational design** to examine attitudes, environmental impact, and adherence behaviours with travelling for blood draw services.



Sampling

- Focused on a single group of rural participants.
- Min. sample size 50 to a max. of 250 responses.
- Sampling via passive recruitment in Parkhill Medical Clinic.



Procedure

- Participants access the survey through QR code or a paper copy in waiting room.
- Submit online or drop in physical lock box



Data Collection

- Survey assessing:
 - Demographic info (age, gender, rural vs. urban, type of car)
 - Frequency of bloodwork requirements
 - Distance traveled for bloodwork
 - Willingness to adhere to bloodwork requisites based on travel distance
 - Perceptions and attitudes towards point-of-care blood draw services



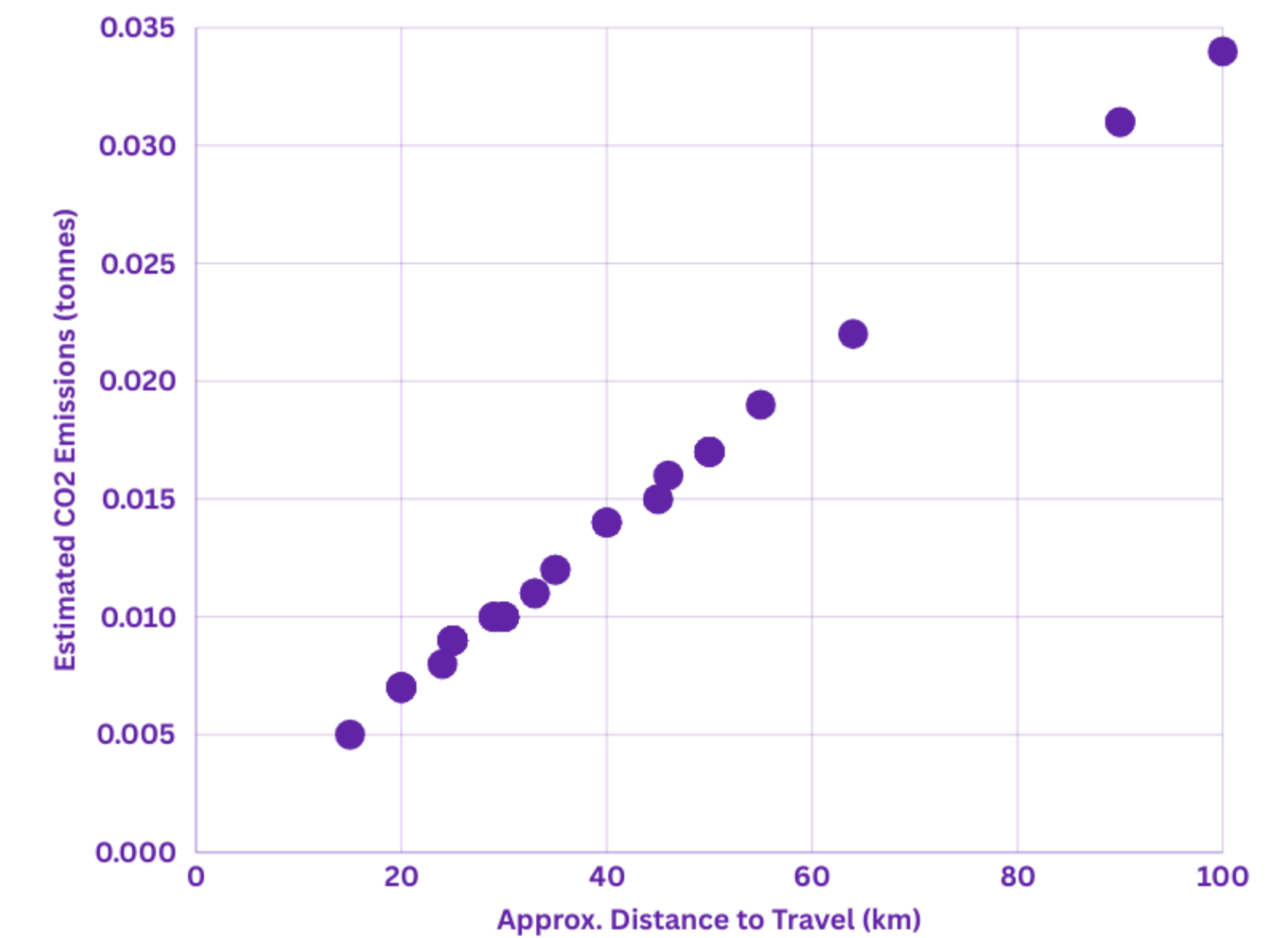
Data Analysis

- Descriptive statistics and non-parametric testing for ordinal data.
- Estimated net carbon emissions by combining survey averages with public data on Canadian vehicle fuel efficiency.

Results

*Preliminary results (n=54)

Environmental Impact of Accessing Bloodwork Outside Local Communities Estimated CO2 Emissions (tonnes)



- 91% of participants travelled by car for blood draws; 100% drove gas-powered vehicles, most commonly SUVs (63%).
- If in-office blood draws weren't available, 14.6% said they would only "sometimes" go elsewhere.
- 100% of participants "strongly support" point-of-care blood draws.

Discussion

- **Environmental Impact:** Rural patients travel an average of **38.7 km** one way, generating **16kg of CO₂ emissions per trip**, highlighting the environmental and access challenges of centralized services.
- **Patient Impact:** Travel is a **barrier to healthcare** which underscores support for POC services.
- **Next Steps and Limitations:** Findings are limited by cross-sectional design and **self-report bias**. **Larger samples** will support cost-effectiveness analysis and targeted policy recommendations.