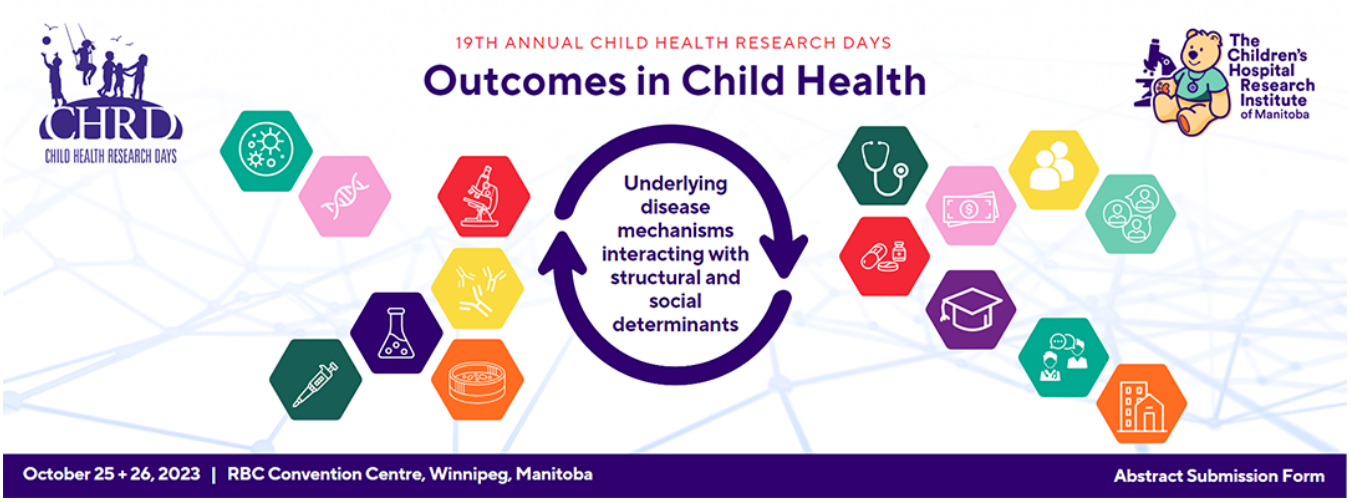

CHRD 2023: Abstract Submission Form

Submitter Name
Isaak Fast

Presenter Name
Isaak Fast

Presenter Status
Undergraduate Students

Research Category
Community Health / Policy

Role in the project
Analyze Data
Write Abstract
Screening and Data Extraction

Title
Urban Trail Infrastructure and Physical Activity Levels: A Systematic Review and Meta-Analysis of Natural Experiments

Background
In response to climate change, cities across Canada are investing over $1B in new cycling infrastructure to support more active transportation. Little empirical evidence exists describing the effectiveness of adding protected cycling trails on changes in cycling or physical activity levels.

Objective
We hypothesized that areas with new infrastructure would experience increased physical activity and trail use compared to areas without new infrastructure.

Methods
We searched CINAHL, EMBASE (Ovid), MEDLINE (Ovid), SPORTDiscus, TRD/Transportation Research Information Services (TRIS), Web of Science and Google Scholar for articles published from 2010 to 2023. We included studies with an experimental pre-post design that reported physical activity or trail counts for an intervention and control area. The interventions were limited to protected and/or separated bike lanes, including cycle tracks, greenways, and bike lanes with concrete barriers. Our primary outcomes were individual level physical activity and trail use counts. A modified risk of bias tool will be employed to assess the methodological quality of each selected study.

Results
Three independent reviewers screened abstracts from 3936 articles, of which 58 were reviewed for

potential full text review. After resolving conflicts, 29 articles describing natural experiments of new cycling infrastructure met eligibility criteria and will be subjected to data extraction and subsequent meta-analysis. We will present the data for population characteristics in both intervention and control areas, such as socioeconomic status, mean age, race, and the percentage of females, as well as outcomes related to physical activity. We will also report the risk of bias for these studies and the degree to which they adhered to TREND reporting guidelines for quasi-experimental studies.

Conclusion
These data will provide the first comprehensive assessment of the impact of new cycling trails on physical activity levels in urban centres.

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