Health and active transportation: an inventory of municipal data collection and needs

Meghan Winters & Erna Van Balen
Simon Fraser University

Advisory Committee

Advisory Committee:

- Dale Bracewell, Manager Active Transportation, City of Vancouver

- Don Buchanan, Transportation Planner, City of Surrey

- John Carsley, Medical Health Officer, Vancouver Coastal Health

- Tannis Cheadle, Manager Population and Public Health, Provincial Health Services Authority

- Rahul Chhokar, Epidemiologist, Fraser Health

- Gene Chin, Project Manager, Healthy Canada by Design CLASP initiative, Heart and Stroke Foundation

- Claire Gram, Population Health Policy Consultant, Vancouver Coastal Health

- Raymond Kan, Senior Regional Planner, Metro Vancouver

- Emily Laflamme, Regional Epidemiologist, Vancouver Coastal Health

- Alice Miro, Project Manager, Heart and Stroke Foundation

- Mike Pennock, Population Health Epidemiologist, Ministry of Health

- Chris Quigley, Senior Planner, Translink

- Helena Swinkels, Medical Health Officer, Fraser Health

- Oonagh Tyson, Manager, Health Protection, Fraser Health

Filling a gap

- Integrating health into transportation planning is a challenge for many local governments
- One part of this is the lack of knowledge and access to data collected in the health and transportation sectors that can be used to inform decision-making

Project aims

- Document **data collection efforts** related to transportation and health across various sectors

- Document the **data needs** of these organizations

- Describe **promising practices** from other Canadian centres for the collection and presentation of data

- **Identify** synergies, opportunities for coordination, gaps and recommended actions

Integrating health into transportation planning

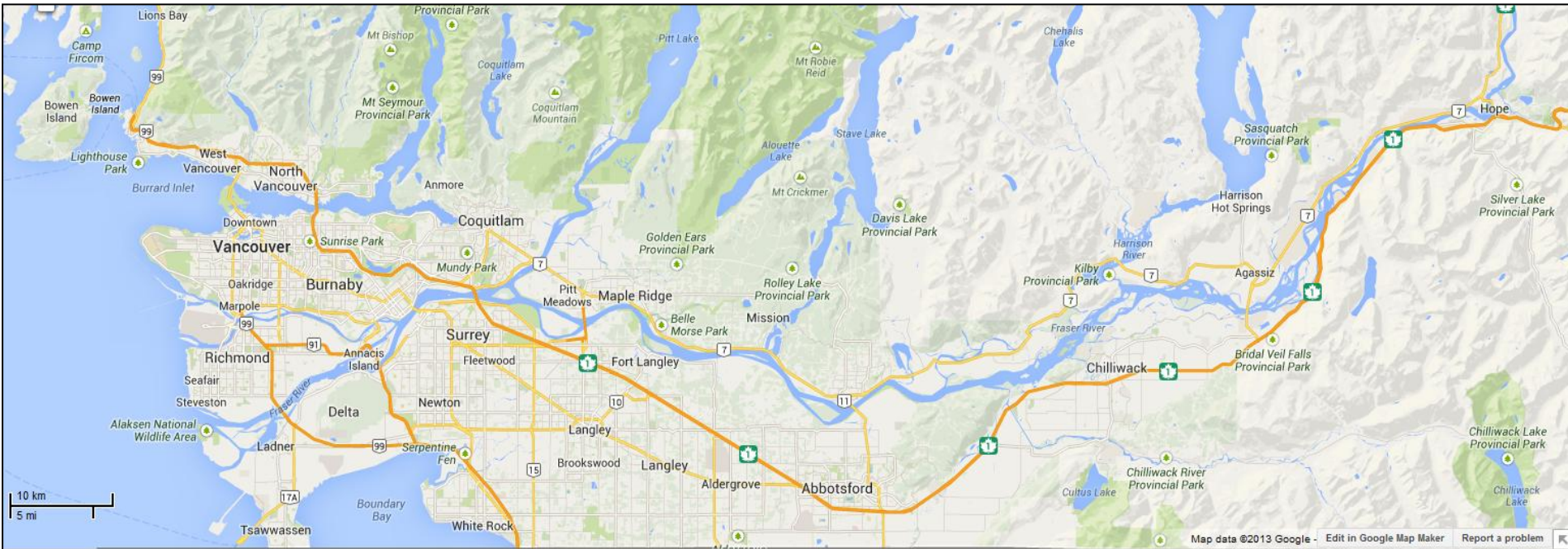|	Tier 1	Tier 2	Tier 3
Data currently available	• Traffic counts, if any, are for motorized traffic only • Do not have health data	• Have traffic counts, including some AT data • Have some injury data	• Have extensive count programs, including AT • Have injury data from several sources, but no other health data
Data needed	• More/better data on AT • Best practice of data collection	• Best practice of data collection • Sharing data and accessibility	• Sharing data and accessibility • Linking health and transportation
Promising practices	• National Count Day • Peel Data Centre	• National Count Day • Peel Data Centre • Injury and crash maps	• Injury and crash maps • Toronto diabetes map • HEAT • Health Impact Assessments
Recommendations	1 - 4 5	1 - 4 5 - 6	1 - 4 6 - 9

Setting

Methods

- Interviews:
  - 22 transportation planners in 15 municipalities
  - 2 health authorities
  - 2 regional governments
  - Other: Translink, Insurance Corporation of BC, BC Injury Research and Prevention Unit
- Identified themes of data needs
- Worked with Advisory Committee to identify promising practices and recommendations

DATA COLLECTED

Active transportation data collected by Municipalities

- 12 of 15 munis have traffic count programs

- 9 of those include cyclist and/or pedestrian counts

- 5 municipalities have systematic active transportation count programs

- almost all municipalities count cyclists and pedestrians on a project basis

- few collect demographics of cyclists and pedestrians

Data collected by other organizations

- Crashes and injuries
  - ICBC, BCIRPU, Health Authorities
- Health: physical activity, obesity, chronic disease
  - Statistics Canada (CCHS, CHMS), My Health My Community
- Transit
  - Trip Diary, Automated passenger counters
- Other
  - National Household Survey, Bike to work week, Trail/parks counts
  - Built Environment
  - Air quality

CLASP
COALITIONS LINKING ACTION
& SCIENCE FOR PREVENTION

An initiative of:
CANADIAN PARTNERSHIP
AGAINST CANCER
PARTENARIAT CANADIEN
CONTRE LE CANCER

HEALTHYCANADA
by design

DATA NEEDS

Needs

- Sharing of and access to data
  - Regional health & transportation data, collaboration with other sectors
- Improved transportation data
  - Improved methods, increased capacity, transit data
- More injury and safety data
  - Crashes involving pedestrians and cyclists, severity of injuries
- Help making links between health and transportation
  - What health metrics to use, Cost-benefit
- Technology and best practices of data collection
  - Standardized data collection
- Data on built environment/infrastructure

CLASP
COALITIONS LINKING ACTION
& SCIENCE FOR PREVENTION

An initiative of:

CANADIAN PARTNERSHIP
AGAINST CANCER
PARTENARIAT CANADIEN
CONTRE LE CANCER

HEALTHYCANADA
by design

RECOMMENDATIONS

Integrating health into transportation planning

	Tier 1	Tier 2	Tier 3
Data currently available	• Traffic counts, if any, are for motorized traffic only • Do not have health data	• Have traffic counts, including some AT data • Have some injury data	• Have extensive count programs, including AT • Have injury data from several sources, but no other health data
Data needed	• More/better data on AT • Best practice of data collection	• Best practice of data collection • Sharing data and accessibility	• Sharing data and accessibility • Linking health and transportation
Promising practices	• National Count Day • Peel Data Centre	• National Count Day • Peel Data Centre • Injury and crash maps	• Injury and crash maps • Toronto diabetes map • HEAT • Health Impact Assessments
Recommendations	1 - 4 5	1 - 4 5 - 6	1 - 4 6 - 9

General recommendations

1. Establish a regional approach to data collection for transportation and health
2. Establish a regional database of transportation and health data
3. Leverage funding and resources
4. Enhance knowledge exchange between municipalities

Integrating health into transportation planning

Tier 1

Data currently available
- Traffic counts, if any, are for motorized traffic only
- Do not have health data

Data needed
- More/better data on AT
- Best practice of data collection

Promising practices
- National Count Day
- Peel Data Centre

Recommendations

1 - 4
5

Recommendation:
- Expand existing municipal intersection counts to include active transportation

Promising practice: National Count Day

National Bicycle and Pedestrian Documentation Project

Home   Participate   Downloads

Program Forms and Materials

Count and Survey Forms

- Data Collection Instructions (pdf)
- Forms (pdf)
- Data Entry Spreadsheet (xls)

Training Materials

Training materials: Overview for count/survey program administrators

- Counts Training Presentation (pdf)
- Surveys Training Presentation (pdf)

Training materials: Use these to train count/survey volunteers

- Volunteer Training Presentation - Counts (pdf)
- Volunteer Training Presentation - Surveys (pdf)

About NBPD

Integrating health into transportation planning

Tier 2

Data currently available
- Have traffic counts, including some AT data
- Have some injury data

Data needed
- Best practice of data collection
- Sharing data and accessibility

Promising practices
- National Count Day
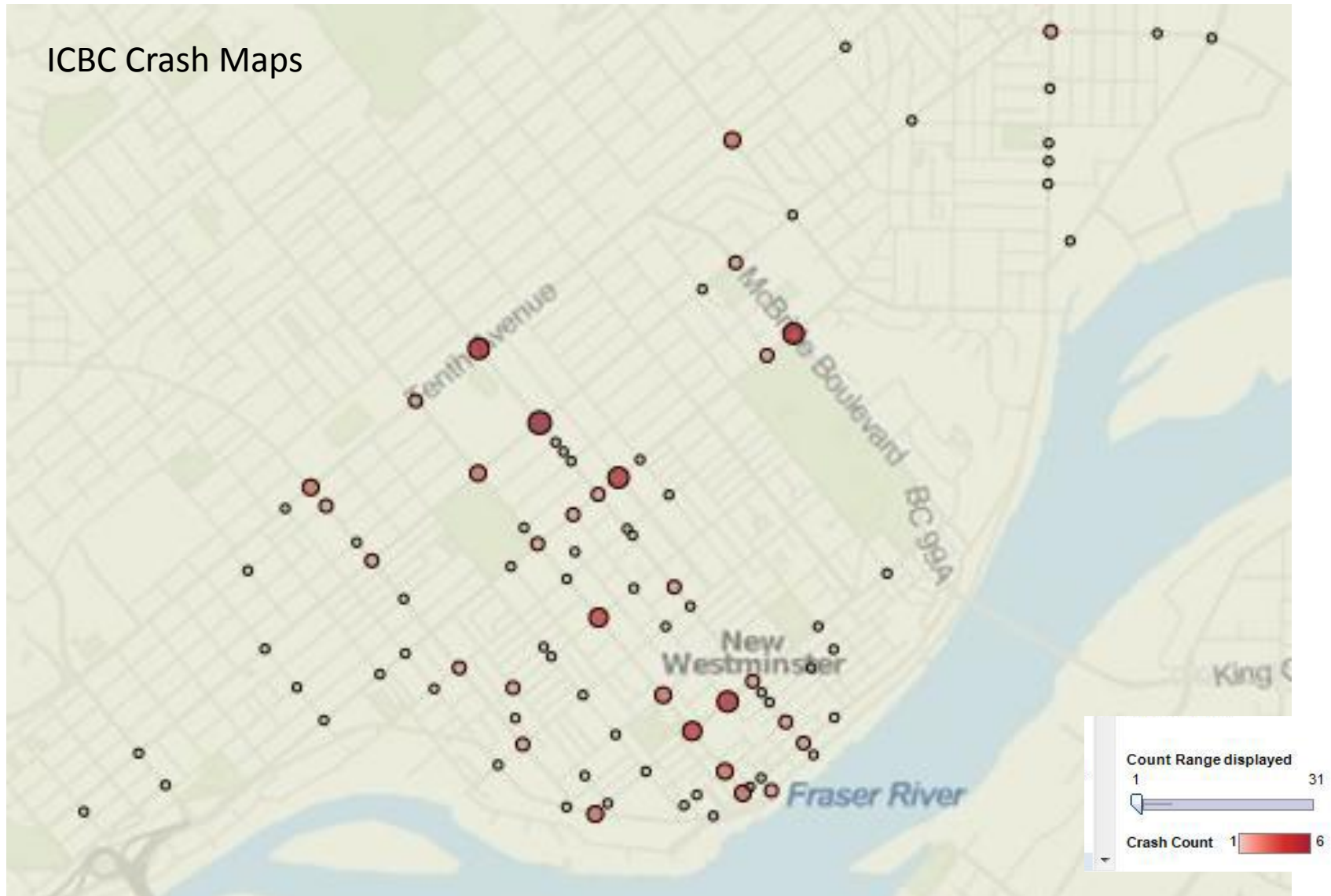- Peel Data Centre
- Injury and crash maps
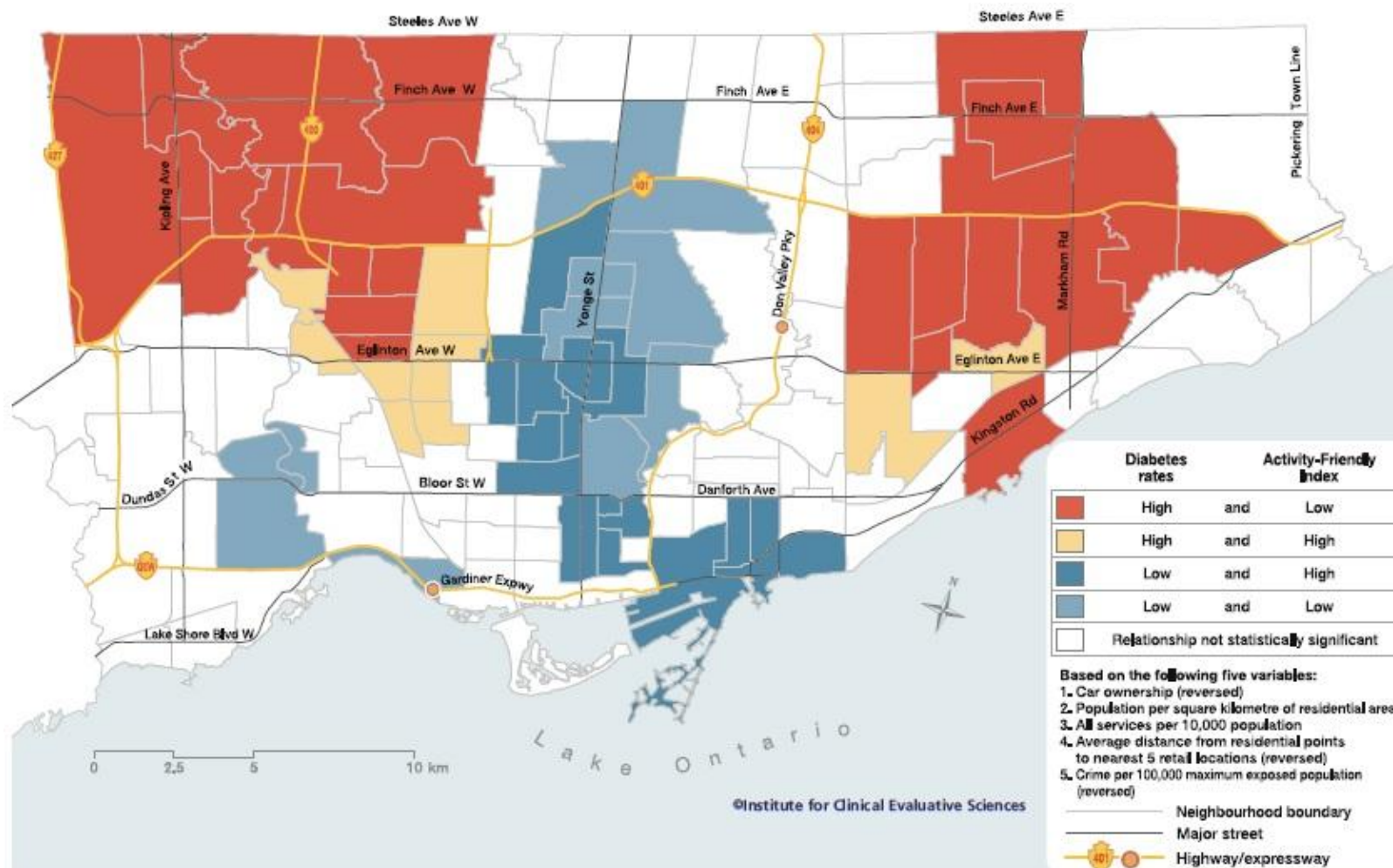
Recommendations

1 - 4
5 - 6

Recommendations:
- Expand and align existing count programs
- Use health and injury data sources already available

Promising Practice: crash and injury maps

ICBC Crash Maps

Promising Practice: visualizations

Findings

- In 2001, areas in the northwest and eastern parts of Toronto had both high diabetes rates and low scores on the Activity-Friendly Index (AFI).
- A number of neighbourhoods in downtown (south central) and central Toronto had both low diabetes rates and high AFI scores.

Integrating health into transportation planning

Tier 3

Data currently available
- Have extensive count programs, including AT
- Have injury data from several sources, but no other health data

Data needed
- Sharing data and accessibility
- Linking health and transportation

Promising practices
- Injury and crash maps
- Toronto diabetes map
- HEAT
- Health Impact Assessments

Recommendations
1 - 4
6 - 9

Recommendations:
- Access existing health and injury data sources
- Add health-related questions to surveys
- Carry out health impact assessments or HEAT
- Make use of advancing technology

Promising Practice:
Health Economic Assessment Tool (HEAT)
for walking and cycling

- online tool to conduct an economic assessment of the health benefits

- estimates value of reduced mortality from specified amounts of walking and cycling

- useful for:
  - cost-benefit of planning new infrastructure
  - valuing current levels
  - modelling future scenarios

- online training available

- limitations: mortality only, spatial resolution, assumptions

Health economic assessment tools (HEAT) for walking and for cycling

Methodology and user guide

ECONOMIC ASSESSMENT OF TRANSPORT INFRASTRUCTURE AND POLICIES

http://www.heatwalkingcycling.org/

HEAT example

In Toronto, walking prevented 60 deaths per year and cycling 49 deaths per year (2006 levels), representing $130 to $478 million in health benefits

Achieving walking and cycling mode shares of 12% and 6%, respectively, would prevent about 100 additional deaths each year
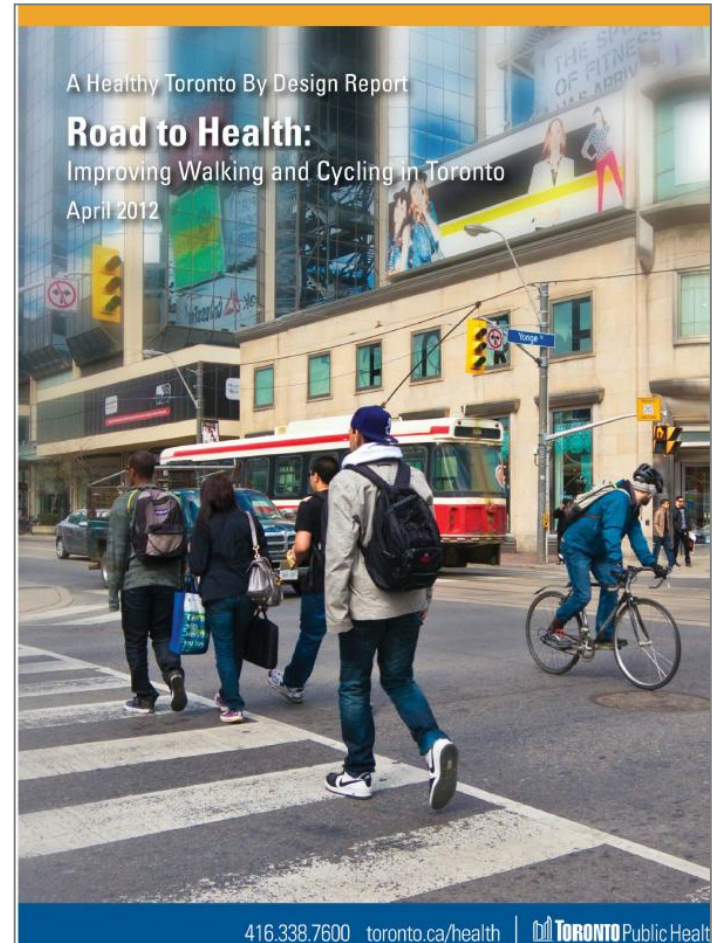
Discussion

Acknowledge differences between municipalities, different views for health at the table

Opportunities:

- Connect people and data sources
- Regional initiatives currently underway

Challenges:

- Data at different geographic levels
- Multi-sector: transportation, planning and health
- Some needs are not data-related

Next steps in action and dissemination

- National Webinar, Presentation at Transportation Research Board Conference, CITE

- HEAT modeling

- Emerging initiatives: My Health My Community, City of Vancouver Transportation Survey, Translink HIA

- Follow up grants to build on these recommendations

- My own on-going dialogue with stakeholders, decision-makers, and trainees

- Gaps from grant – key national stakeholders? – is this TRB? Is this CITE?
- City of Vancouver – HEAT tool modeling

HEAT inputs

- How many people are walking/cycling *- Trip Diary, municipal counts*
- Average duration of walking/cycling per person (distance, duration, or trips)
  - Trip Diary
- Crude mortality rate *– default value, Statistics Canada/health authorities*
- Value of a statistical life - *default value*
- Time period over which health benefits calculated
- Discount rate

Visualization: crash and injury maps

Figure 4 Distribution of pedestrian victims in Rosemont/Petite-Patrie according to Urgences-santé (1999–2003).

Number of victims
- • 1–2
- • 3–7
- ● 8–11

Street network
— Major roads
— Local streets

0   0.5   1
km

Projection: NAD83, MTM zone 8.
Sources: city of Montréal; Urgences santé.