2014 PETERBOROUGH CITY AND COUNTY
ACTIVE
TRANSPORTATION
& HEALTH
INDICATORS PRIMER

EXECUTIVE SUMMARY

Walking, cycling and transit are good for our personal health, our local economies, and the environment. Understanding the factors that influence the transportation decisions being made by Peterborough City and County residents can help us to support a transition to active, healthy and sustainable travel in our region. However, the transportation decisions individuals make are complex. They are informed by physical factors such as city, town, or region size, geography and composition (e.g., amounts of vegetation, waterways, bike paths, roadways and building densities); by personal factors such as age and income; and, by the kinds of supportive resources and services that are available locally.

The Active Transportation and Health Indicators report provides insights into how to design and manage our communities to facilitate safe, healthy, sustainable, and economically beneficial travel.

The objectives of this report are to:

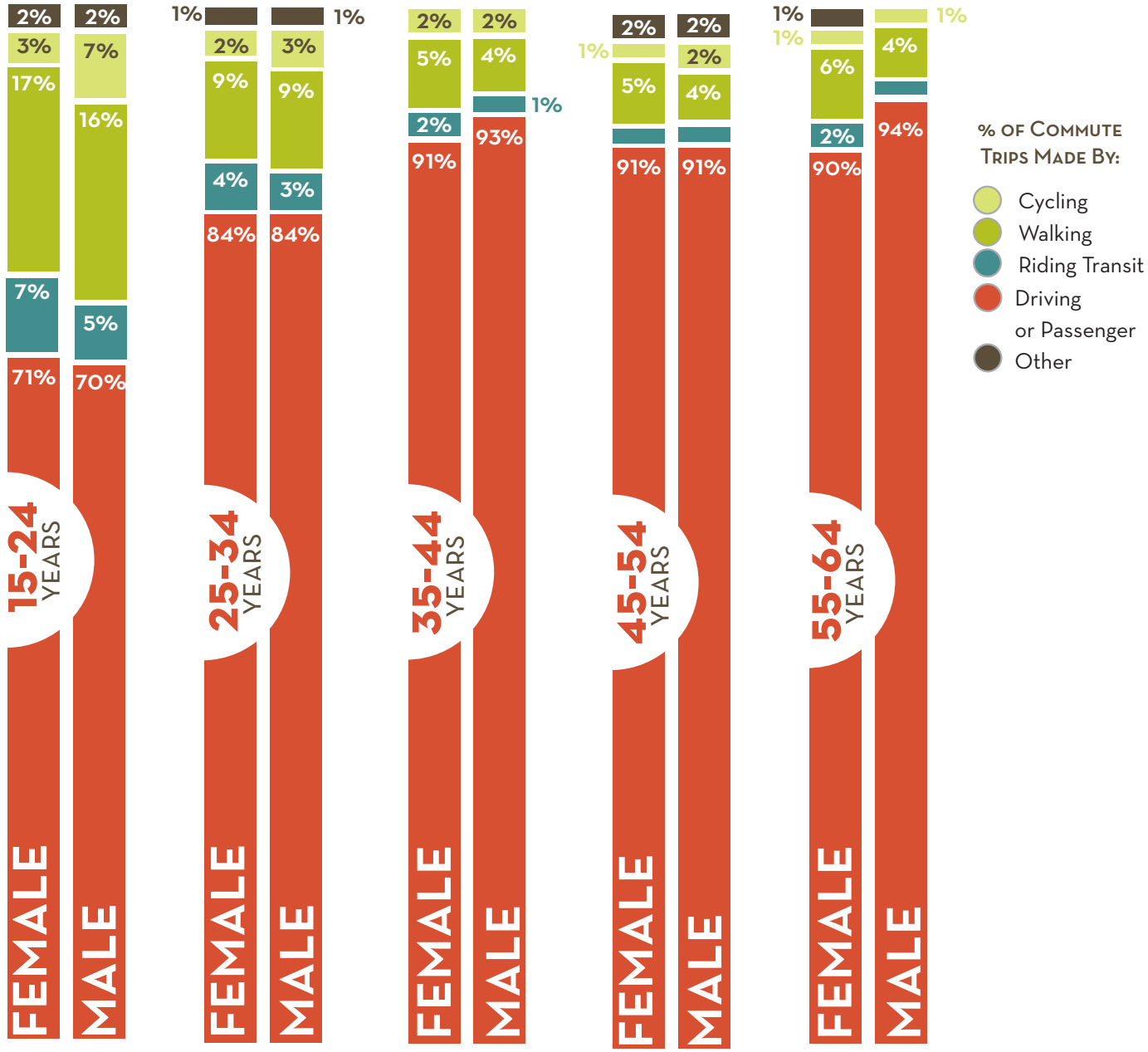
- To increase awareness about the impact transportation has on personal health, the health of the community, and the health of the natural environment;
- To enhance understanding regarding factors that influence levels of walking, cycling, and transit ridership;
- To identify critical issues and trends that can inform the development of evidence-based policies;
- To establish indicators that can be used to meaningfully measure progress toward a more walkable, bikeable, and transit-friendly community; and,
- To highlight successes and opportunities for future intervention.

AGE & GENDER

DEMOGRAPHIC TRAVEL TRENDS

Peterborough City and County

Across the region, the use of active transportation is strongly linked to age, gender. Males between the ages of 15 to 25 years are two times more likely to cycle than any other age group, while females of all ages are more likely to walk or ride transit to work.



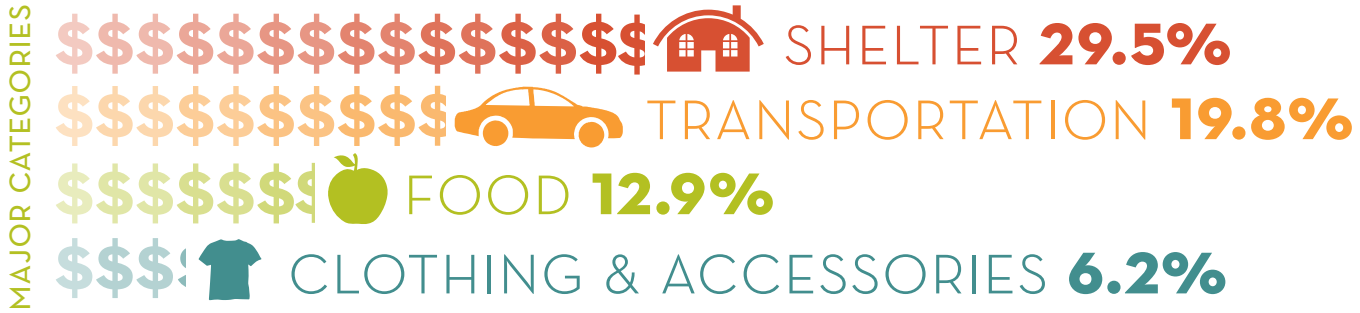
Source: Statistics Canada, 2006 Census

INCOME & SPENDING

Travel behaviour is also strongly linked to income. Persons who earn less than the city-wide median income - which is $29,980 in 2006 dollars - are two times more likely to bike, tree times more likely to walk, and ten times more likely to ride transit to work than persons earning more than the median.

There is insufficient data available to assess relationships between income and travel behaviour in the County. However, a review of income data reveals that over 50% of the County's population earns less than $30,000 each year.

Average household expenditures in Ontario (as % of overall income)



Survey of Household Spending, Statistics Canada, 2012

Persons who earn less than the city-wide median employment income ($29,980 in 2006 dollars) are:

3x more likely to walk,

2x more likely to bike, and

10x more likely to ride transit

on the trip to work than those persons earning more than the median.

According to the Canadian Automobile Association, the cost of owning and operating a vehicle is approximately $10,452 per year. Knowing this cost provides insight into the number of County residents who may not have the financial resources to own and operate a vehicle. In rural and semi-rural settings, where there is typically limited or no transit service available and minimal infrastructure that supports active transportation, County residents without access to a vehicle are at a disadvantage relative to their City counterparts who can access employment and services using alternative modes of transportation. Because of this, transportation equity in the County is strongly linked to income.

Source: Statistics Canada, 2006 Census
Notes: Employment income refers to total income received by persons 15 years of age and over during calendar year 2005 as wages and salaries, net income from a non-farm unincorporated business and/or professional practice, and/or net farm self-employment income. These figures are before tax.

CONSUMER SPENDING ON TRANSPORTATION

City of Peterborough

In 2011, a commuter who...

DRIVES has a median income of **$42,911** **COSTS** owning and operating a vehicle, per year **$10,452*** **SPENDS** $ **24%** of their income on transportation

RIDES TRANSIT has a median income of **$11,836** **COSTS** Peterborough Transit pass for 12 months **$660**** **SPENDS** $ **5.6%** of their income on transportation

BIKES has a median income of **$20,407** **COSTS** owning and operating a bicycle, per year **$150***** **SPENDS** $ **<1.0%** of their income on transportation

WALKS has a median income of **$17,201** **COSTS** **$0** **SPENDS** $ **0%** of their income on transportation

Sources: Statistics Canada, 2006; * Canadian Automobile Association, 2012; ** City of Peterborough, 2011; and, *** Share the Road, 2010

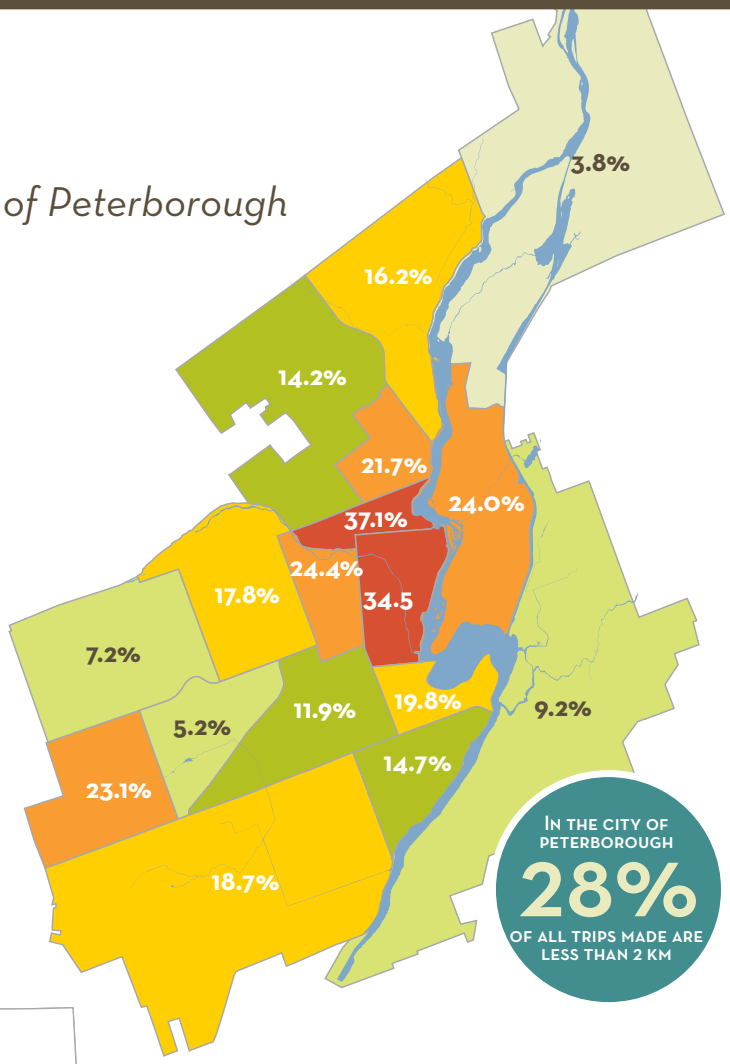
Notes: Based on the average employed person, 15 years and over, having a usual place of work. All numbers have been adjusted to 2011 figures using the Employment and Social Development Canada average income growth, by income bracket, between 2006 -2011

A.T. RATES FOR TRIPS LESS THAN 2 KM

% OF PEOPLE 11 YEARS + WALKING OR CYCLING FOR TRIPS LESS THAN 2 KM

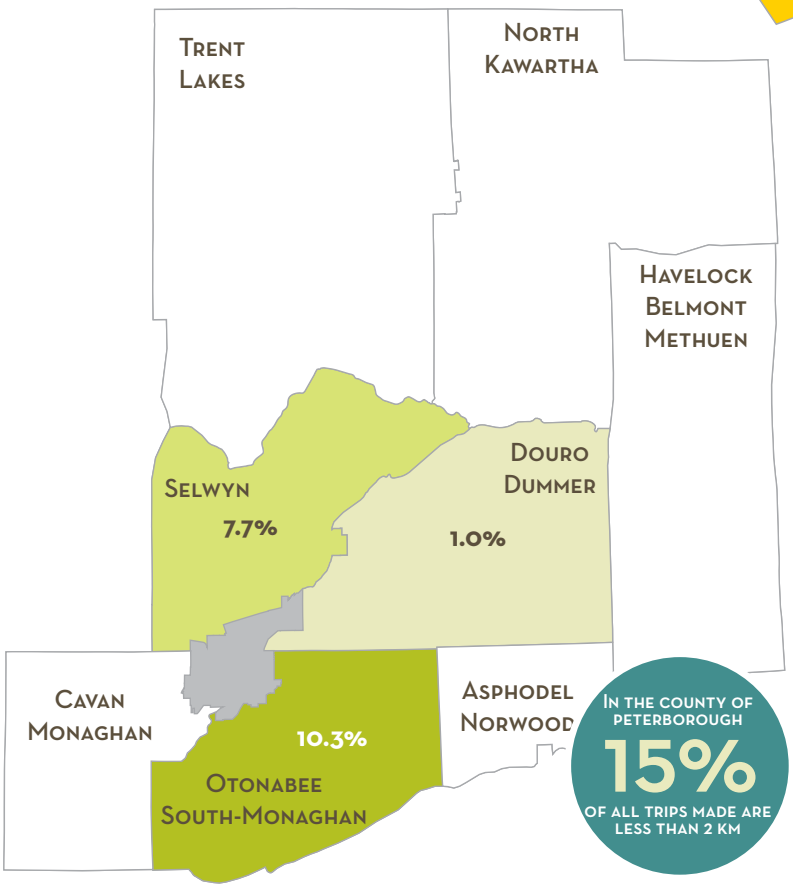
- 0.0% - 5.0%
- 5.1% - 10.0%
- 10.1% - 15.0%
- 15.1 - 20.0%
- 20.1 - 30.0%
- 30.1 - 40.0%
- Data not available in TTS

City of Peterborough



In the city of Peterborough **28%** of all trips made are less than 2 km

County of Peterborough



In the county of Peterborough **15%** of all trips made are less than 2 km

Source: Transportation Tomorrow Survey, 2006

While reflecting on levels of use provides a snapshot of current travel patterns, it does not necessarily contribute to an understanding of how many trips it might be possible to shift to active modes of transportation if supporting conditions were ideal. Identifying the percentage of current trips being made within a 'walkable' or 'bikeable' distance can frame the potential for change. And, prior to exploring facilities, programs, and services that can encourage walking and cycling, it is worth first identifying that there is plenty of opportunity for growth in levels of active transportation both in the City and in the County.

As a reference, distances of 2 km or less are frequently considered to be 'walkable,' while distances of 5 km or less are considered to be 'bikeable.'

In the City of Peterborough, 28% of all trips made are less than 2 kilometers while 73% of all trips made are within 5 kilometers. In the County, 15% of trips are within 2 kilometers and 32% of trips are within 5 kilometers. However, the percentage of residents already using active transportation for trips less than 2 or 5 kilometers is highly influenced by where they live.

Persons residing in and around the downtown are the most likely to be using active modes of transportation for short trips, while persons in the south-east and north-east of the City are the most likely to drive for trips within a suitable walking or cycling distance.

There are a number of factors that are likely to contribute to this trend, including:

- Demographics: the downtown area has the largest percentage of persons between the ages of 15 and 30 years;
- Block size and crossings: the downtown has smaller and more compact street blocks and more frequent pedestrian crossings, which contribute to a more pedestrian-friendly experience;
- Frontage and furniture: sidewalks in the downtown are more likely to have street furniture such as benches, as well as defined and visually stimulating frontage zones, which contribute to a more engaging and human-scaled experience;
- Land-use mix: land-use patterns are more mixed in the downtown, providing destinations in close proximity to origins and allowing for a greater variety of trips within a short distance; and,
- Availability of parking: residential and commercial parking is more generous, and often free-of-charge, outside of the downtown core.

However, it is also likely that the presence or absence of supportive infrastructure has an influence on the likelihood that someone will choose to walk or cycle for both personal and work-related trips.

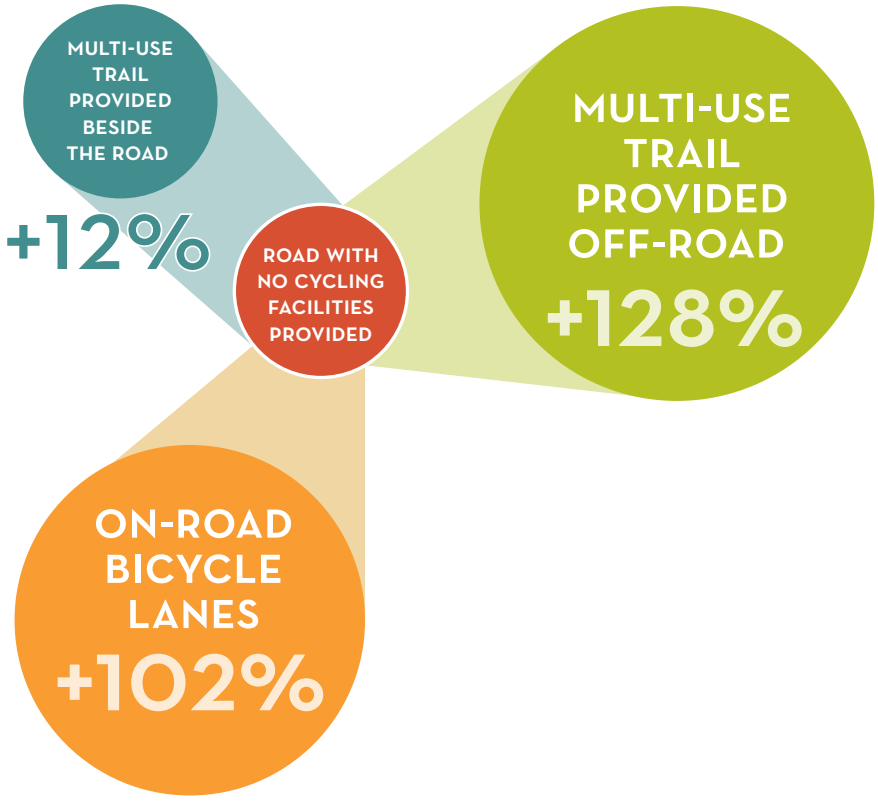
There is much evidence indicating that walking and cycling-specific infrastructure is co-related to increased levels of walking and cycling. Increased numbers of pedestrians and cyclists are associated with reduced collision risk, providing an additional benefit to increasing rates of active transportation.

In terms of cyclists, particularly female and older cyclists, preferences are for cycling on infrastructure that is separated from traffic (see full report for references). Local data to determine if these trends are relevant locally were not available until recently. The results of the 2012 and 2013 Bicycle and Pedestrian Counts confirm findings from other communities: Peterborough cyclists show a strong preference for off-road multi-use paths, and they also show a preference for on-road bicycle lanes. In both 2012 and 2013, three of the top four most frequented cycling routes were along multi-use trails.

Facility continuity is also has a significant impact on rates of cycling. While Peterborough's multi-use trail network is quite extensive, cyclists making purpose-driven trips, rather than recreational trips, will still need to use roads to access businesses or services. Only 8% of major streets currently have cycling-specific facilities in the City, and on some of these cycling lanes, vehicle parking is allowed for most of the day.

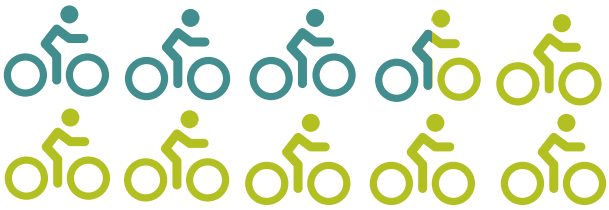
CYCLING RATES BY FACILITY TYPE

In 2012 & 2013, bicycle counts were undertaken at 24 intersections across Peterborough. The following graphic indicates the % growth observed in the number of cyclists when various cycling facility types are implemented



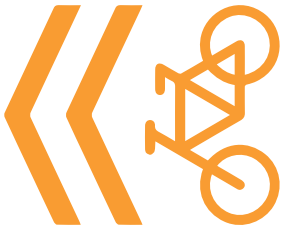
SIDEWALK CYCLISTS

In the City of Peterborough...



3.5
out of every ten cyclists ride on the sidewalk

However...



WHEN AN ON-ROAD CYCLING LANE IS INTRODUCED, THE NUMBER OF CYCLISTS ON THE SIDEWALK DECREASES BY 42%

Source: Peterborough Pedestrian & Cyclist Counts, 2013

POLICY

The City's Transportation Plan provides maps of a proposed cycling network and outlines a timeline for projects that should be completed in the short, medium and long term. The approved Cycling Network includes a total of 83 km of new on- and off-road cycling facilities, including more than 95 distinct cycling infrastructure projects. Funding for implementation of the network is provided in the capital budget.

Since 2012, cycling lanes have been completed on the Hunter Street bridge and on Lansdowne Street between Spillsbury Drive and Brealey Drive. Sixteen other projects are in the planning or design stages.

The update to the County of Peterborough's Transportation Master Plan, approved in 2014, recommends the development of a County-wide Active Transportation Plan. A potential cycling network was provided as a map in the Transportation Plan Update and has been designed to integrate with existing municipal trail systems in both the County and the City.

COMPLETE STREETS POSITION

The Peterborough County-City Health Unit has been working alongside several partners over the last 15 years to support active and safe recreational and transportation activities. In the fall of 2013, the Board of Health adopted a Complete Streets Position Statement and is now working to have complete streets policies adopted by the municipalities it serves.

Municipalities that adopt complete streets policies plan their transportation network for the most vulnerable road user, which ultimately makes roads safer for everyone. The City of Peterborough's 2012 Transportation Plan recommends the development of a Complete Streets Policy for the City, and since completion of the Plan, the City has been integrating complete streets design principles into many of its capital projects.

The Peterborough County-City Board of Health recognizes and endorses a Complete Streets approach to provincial, regional and local transportation policy formation and implementation.

The reasons for endorsement of the position statement are several, including that, Complete Streets practices have been shown to have positive impacts on multiple public health interests (physical activity levels, injury prevention, mitigation of climate change, health hazards, and social cohesion/mental wellness).

- Peterborough County-City Health Unit

Photo Credit: Susan Sauvé

There are several successful programs delivered locally that provide incentives to walk and bike for transportation, including the Workplace Shifting Gears Transportation Challenge and the Car Free School Days program.

Recently, funding to GreenUP and B!KE: the Peterborough Community Bike Shop has made it possible for them to deliver in-school cycling skills training programs. The school program is effective because it is delivered over enough weeks for the students to gain the skills and confidence they need to cycle in their neighbourhoods. In addition to the school-based cycling education programs, GreenUP, B!KE, and the City of Peterborough have also led the development of a number of community-based cycling education programs in the City and County of Peterborough. While some of these programs are broad-based, many of these programs seek to ensure that cycling remains an inclusive activity through targeted interventions. To further this mandate, B!KE and GreenUP have recently developed programs that focus on meeting the needs of specific demographics, such as youth-at-risk and children with physical and/or cognitive exceptionalities.

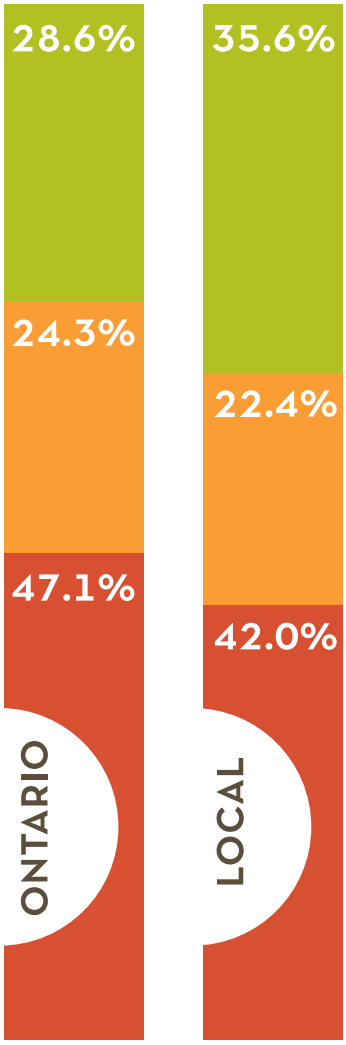
Additionally, B!KE's core programming seeks to increase access to bicycles, helping to ensure that the costs associated with bicycle ownership and maintenance do not prevent participation.

Photo Credit: Brianna Salmon

Active transportation provides an equitable means of travel while at the same time providing individuals with the physical activity their bodies require. Active transportation and physical activity play an important role in the health, well-being, and quality of life of Canadians. Research shows that when adults and children incorporate physical activity into their lives they live longer, healthier lives, tend to be more productive, and are more likely to avoid illness and injury.

LEVELS OF PHYSICAL ACTIVITY

Provincial & Local Trends



When Canadian Community Health Survey (CCHS) data are reviewed over time, Peterborough consistently has a higher proportion of highly active residents compared to Ontario. Additionally, Peterborough City and County residents also engage in more walking compared to the provincial average. Peterborough City residents are nearly twice as likely to walk and almost three times as likely to cycle to work, when compared to the provincial average. In the County, however, rates of active transportation are lower than the provincial average, indicating that walking to work may not contribute as much to the recommended physical activity levels for rural commuters.

Despite the high proportion of City and County residents that are highly active, there are still 42% of residents considered inactive. This means that there are a substantial number of City and County residents who are not benefiting from the numerous positive health outcomes that result when a person is physically active.

Physical Activity Levels

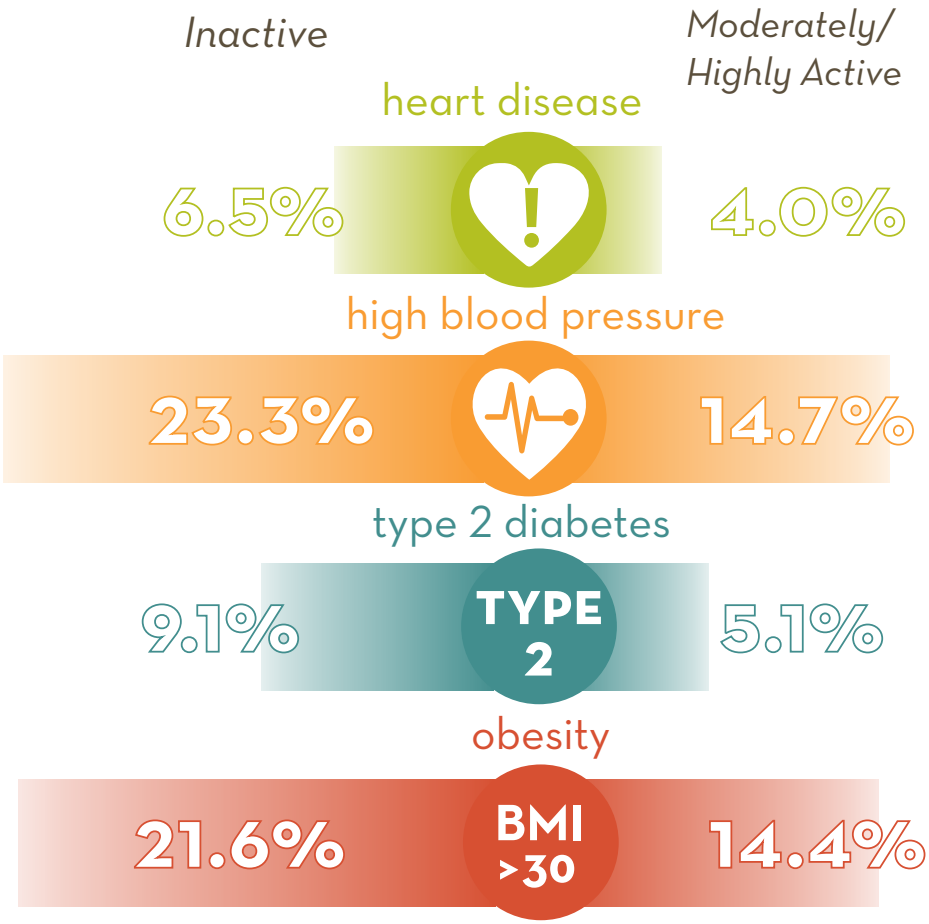
- Highly Active
- Moderately Active
- Inactive

The proportion of people who report being **HIGHLY ACTIVE** in the City and County of Peterborough is significantly greater than in Ontario.

The direct relationship between physical activity and health holds true for the *2014 Benchmarking Report: Bicycling and Walking in the United States*. A greater percentage of the population in US states that report high levels of active commuting meet or exceed recommended levels of physical activity and enjoy lower rates of obesity, high blood pressure, and type 2 diabetes (Alliance for Biking and Walking 2014). In Ontario, a review of CCHS data reveals the same trend. Individuals in Ontario who are highly or moderately active are less likely to have heart disease, type 2 diabetes, and high blood pressure, and are less likely to be obese when compared to individuals who are inactive.

Regular physical activity, such as walking and cycling, can have a substantial impact on improving public health and life expectancy. In fact, the quantified health benefits of active transportation can outweigh any risks associated with these activities by as much as 77 to 1, and add more years to an individual's life than what is lost from air pollution and traffic injuries.

CHRONIC DISEASES & RISK FACTORS BASED ON PHYSICAL ACTIVITY LEVELS



Source: Canadian Community Health Survey, 2011/2012

The World Health Organization has predicted that by 2020, road traffic injuries will become the third largest contributor to the global burden of disease (2004). According to Transport Canada, when compared to 12 other countries in 2008, Canada was ranked the 4th worst for fatalities per billion vehicle kilometers traveled (2011).

In Ontario, vehicle collisions over the past 20 years are on a downward trend; however, the number of pedestrian and cyclist injuries or fatalities is still considered unacceptable. As a result, in 2012 the Office of the Chief Coroner for Ontario released a pedestrian as well as a cyclist death review to highlight the number of pedestrian and cycling related fatalities in Ontario and the circumstances of these fatalities. The reviews found that in a one year period (2010) there were 95 pedestrian deaths and over a five year period (2006-2010) there were 129 cyclist deaths.

In terms of safety and collision trends, to reduce injuries and deaths associated with transportation collisions, many municipalities are adopting goals to reduce collision and injury rates, with vulnerable road users (pedestrians and cyclists) being of particular concern.

INJURIES & FATALITIES

PEDESTRIANS		CYCLISTS
836	EMERGENCY DEPARTMENT VISITS (2003 - 2012)	3283
99	HOSPITALIZATIONS (2003 - 2012)	137
8	DEATHS (2003 - 2009)	<5

Sources: National Ambulatory Care Reporting System, Canadian Institute for Health Information (2003 - 2012)
Discharge Abstract Database (DAD), Canadian Institute for Health Information (CIHI) (2003 - 2012)
Statistics Canada, Ontario Registrar General (2003 - 2009)

CONCLUSIONS

The full Active Transportation and Health Indicators report provides a more comprehensive discussion of all of the information presented in this primer. As mentioned earlier, active transportation rates and transportation choices are affected by many factors. An evidence-based understanding of the co-relation between urban design and health will assist decision makers to determine the route to healthy, sustainable communities.

FOR THE FULL REPORT, VISIT PETERBOROUGHMOVES.COM.

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Peterborough County-City
HEALTH UNIT
...because health matters!

GreenUP

City of Peterborough