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Backgrounder

Transit, Active Transportation, and Public Health

Chronic Diseases Are a Costly Health Issue

Chronic diseases have reached epidemic proportions in Canada. The cost of cardiovascular disease, just one of the chronic diseases, was $12.1 billion in 2008 (PHAC, 2008). Obesity, an important risk factor for chronic diseases is also on the rise. According to the Public Health Agency of Canada, over one in four Canadian adults are obese and 8.6% of children and youth aged 6 to 17 are obese. The estimated cost of 18 chronic diseases associated with obesity is $7.1 billion in Canada (PHAC, 2011).

Physical Activity Reduces Chronic Disease

The factors—or determinants—that are linked to obesity and chronic diseases include physical activity, diet, socioeconomic status, ethnicity, immigration status, and environmental factors. Each hour of moderate or vigorous activity per week is associated with a 4% to 9% reduction in the risk of premature death from all causes (Samitz, 2011).

Active Transportation Increases Physical Activity

Walking and cycling for transportation has proven to be an effective strategy for encouraging adults to be regularly active and reducing their risk of chronic diseases. Walking or cycling to work was associated with an overall 11% reduction in cardiovascular risk (Hamer, 2008).

Transit Use Increases Physical Activity

Most transit trips begin and/or end with walking. For example, a Montreal study found that a public transit round trip averaged 2,500 steps, which accounts for 25% of the physical activity recommended each day (Morency, 2011). A US study found that adults who use public transit walk an average of 19 minutes a day in the process of taking public transit, with 29% of them achieving the 30 minutes of daily physical activity recommended (Besser, 2005).

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Vehicles Associated with a Significant Number of Injuries and Deaths

Motor vehicle collisions are responsible for a significant burden in our society in terms of lives lost, pain and suffering, and impact on the healthcare system. In 2014, 1,834 people were killed in motor vehicle collisions and 149,900 people were injured in Canada. Of those killed, 15.7% were pedestrians and 1.9% were cyclists (TC, 2016).

Walking and Cycling Reduce Road Collisions

By shifting people from cars to walking and cycling, we can reduce the number of vehicles on the road, the potential for collisions, and the number of vehicle-related injuries and deaths (Litman, 2010). Studies from Copenhagen, London, and New York suggest that when more people walk and cycle as a mode of transportation, the roads becomes safer for pedestrians and cyclists because car drivers are expecting them and become more cautious (Woodcock, 2009).

Transit Reduces Road Collisions

Public transit is an extremely safe mode of travel. The fatality rate for transit passengers is about one-twentieth of the fatality rate for those who travel in cars (Beck, 2007). Total per capita traffic fatalities (including transit and automobile occupants and pedestrians) decline significantly as transit ridership increases in a community (TC, 2016).

Mental Health Is a Costly Health Issue

Approximately 20% of Canadians will personally experience a mental illness in their lifetime. It is a leading cause of disability in Canada. The economic cost of mental illness is estimated to be $51 billion per year in Canada, which includes health care costs, lost productivity, and a reduction in health-related quality of life (CAMH, 2009).

Walking and Cycling Can Improve Mental Health

When people walk or cycle for transportation, it increases their levels of physical activity, which has a positive effect on their mental health. Physical activity has been shown to positively impact emotion and mood, self-esteem, sleep, cognitive functioning in older adults, dementia, depression, anxiety, stress, schizophrenia, and drug and alcohol rehabilitation (Bingham, 2009). In addition, communities that are designed to support walking and cycling for transport build social cohesion or a sense of community, which also produces mental health benefits.

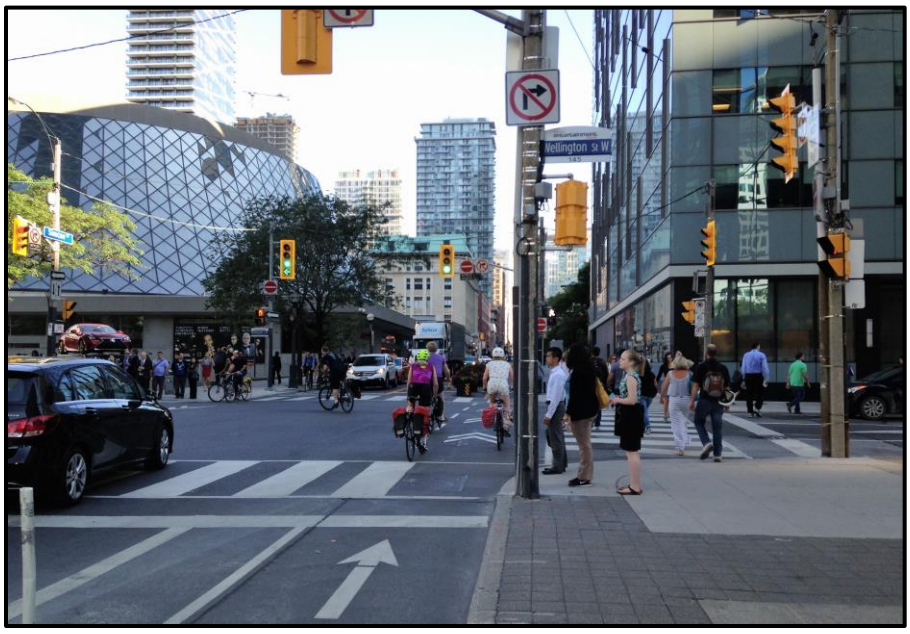
Public Transit Can Improve Mental Health

Transit can support good mental health by helping people increase their levels of physical activity. Secondly, transit-supportive communities, like walkable communities, improve social cohesion by giving people an opportunity to positively interact and engage with other people. Transit can also reduce social isolation by giving people access to jobs, services, and recreational opportunities. A reliable, safe, comfortable, and convenient public transit system has the potential to reduce the stress associated with commuting by car.

Air Pollution Is a Significant Health Problem

Air pollution is a significant health concern in a number of areas across Canada. Air pollution has been clearly linked to a wide assortment of acute and chronic adverse health impacts including the aggravation of asthma, the impairment of lung function, the development of cardiovascular diseases including lung cancer, and premature deaths from all causes and cardiovascular diseases (HEI, 2010).

Transportation Sector Is a Significant Source of Air Pollution



The transportation sector is a major source of air pollution in many urban centres. For example, Toronto Public Health has estimated that traffic-related air pollution produces approximately 440 deaths, 1,700 hospital admissions and 200,000 restricted activity days per year in the City of Toronto alone (TPH, 2007). In 2014, the Medical Officers of Health across the Greater Toronto and Hamilton Area (GTHA) extrapolated these results to estimate that traffic-related air pollution across the GTHA is responsible for approximately 700 premature deaths with an economic impact of over $4.6 billion per (Mowat, 2014). Air pollution is typically concentrated near major transportation arteries, which receive a lot of traffic and are often congested. Studies emphasize that those living on or near busy traffic roads (within 300 metres) are exposed to significantly higher levels of air pollution than those who live elsewhere (Giles-Corti, 2010).

Walking and Cycling Reduce Air Pollution

Replacing short vehicle trips with walking and cycling could significantly reduce air pollution because, in a typical 11-kilometre trip, 90% of emissions are generated in the first 1.6 kilometres before the vehicle warms up (TC, 2011).

Public Transit Reduces Air Pollution

Longer vehicle trips can be replaced by public transit which is a less polluting form of transportation. On a per passenger-mile basis, public transit tends to produce less air pollution than single-person vehicles. This is true even with trains and buses based on diesel fuel. The air pollution savings will be much greater once trains and buses are shifted to batteries run on electricity (Litman, 2010).

Climate Change Is the Greatest Public Health Issue

The World Health Organization (WHO) has declared climate change to be the greatest public health threat of the 21st Century (WHO, 2014). It estimates that, by the year 2030, an additional 250,000 will die each year from heat stress, diarrhea, malaria, and malnutrition as a result of climate change (WHO, 2014). In order for Canada to meet its commitments under the Paris Agreement on Climate Change, we must reduce greenhouse gas (GHGs) emissions by 30% from 2005 levels by 2030 and by 80% by 2050 (Canada, 2016).

Transportation Sector a Huge Contributor to Climate Change

In Canada, the transportation sector was the second largest source of GHG emissions, accounting for 26% of total national emissions in 2004 (Canada, 2016). In Ontario, the transportation sector is a particularly important source of emissions, responsible for 35% of GHGs (Ontario, 2016).

Active Transportation Reduces Greenhouse Gases

Walking and cycling produce no GHG emissions, making active transport highly desirable from a climate perspective. Public transit also has the potential to greatly reduce GHGs. Metrolinx has projected that the regional transportation plan, if implemented as developed, could reduce GHGs from passenger transportation by 30%; from 2.4 tonnes per person per year in 2016 to 1.7 tonnes per person per year in 2030 (TAO, 2016).

Poverty Has the Greatest Impact on Health

The WHO considers poverty to be the single largest determinant of health. Poverty can lead to illness due to poor nutrition, inadequate shelter, greater environmental risk, and less access to medicine (WHO, 2008). Research has found that people who receive social assistance are five times more likely than higher income earners to report their health as poor or fair and have higher rates of diabetes, heart disease, mood and anxiety disorders, and other chronic conditions than higher income earners (Wellesley Institute, 2013).

Active Transportation Can Alleviate Poverty

People living on low incomes often do not own a car. This means they rely on active transportation more than others in the general population and are much more reliant on local services (Frank, 2003). Families in car-dependent suburbs spend 25% of their monthly income on transportation, whereas those families living in walkable, transit-efficient neighbourhoods spend only 9% (Centre for Transit Oriented Development, 2007). Walking, cycling, and public transit give people living on low incomes transportation choices and better access to jobs, services, and recreational opportunities.

Social Inequalities Impact Health

Social inequality refers to the ways in which categories of people, such as women, children, the elderly, and new immigrants, are given different access to a variety of social goods, such as employment, education, and healthcare (Walker, 2007). There is an incredible opportunity to improve health and reduce health care costs by reducing social inequalities. For example, there could be a 45% overall reduction in the rate of hospitalizations for COPD among those younger than 75, if Canadians of all income levels experienced the same rate as those in the highest income level. This potential rate reduction represents 18,700 fewer hospitalizations in Canada per year and approximately $149 million in health system savings (CIHI, 2016).

Active Transportation Can Reduce Inequalities

Neighbourhoods that support active transportation can reduce social and health inequities by giving transportation options to those who cannot drive. According to one survey, approximately 4% of U.S. children (3.2 million) were unable to access necessary medical services at least once during 2004 because of inadequate transportation (Redlener, 2009). A study conducted in Toronto and Edmonton found that low-income residents restricted their use of health-related services due to transportation concerns (CUTA, 2010). By planning neighbourhoods to support active transportation and ensuring that low-income neighbourhoods are well served by public transit, we can prevent the marginalisation of groups that would have restricted mobility by providing access to employment, services, and retail.

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