

## Land use planning and health

### The effects of planning on health

Decisions by governments, planners and developers determine the way that our communities, neighbourhoods, roadways, transit systems, parks, and trails are designed and built.

Traffic congestion, inadequate transit, and poor neighbourhood design are the result of planning and policies that in turn have health consequences. It is important to reflect on land use planning decisions since they will impact on whether our communities can achieve a healthy quality of life for all.

Land use planning refers to the scientific, aesthetic, and orderly arrangement of land, resources, facilities and services. The purpose of land use planning: to secure the physical, economic and social efficiency, health and well-being of urban and rural communities.<sup>1</sup>

### Evidence linking health and land use planning<sup>1,2</sup>

A growing body of evidence shows important **associations** between land use (community and neighbourhood design, roadways, transit, parks, and trails) and health (levels of physical activity, obesity, respiratory conditions, cardiovascular diseases, mental health, as well as rates of injuries). The influence of 'place' on human health is a significant public health issue that is key to preventing disease and injury, prolonging life, improving quality of life and promoting health.

### Urban design and physical (in)activity

Some of the strongest evidence shows that several key urban design elements are consistently related to levels of physical activity. People who live in walkable communities (those that have mixed uses, connected streets and higher density) walk more and drive less than those who live in auto-dependent (suburban) communities. Promoting 'walkable' communities and active transportation as strategies to increase levels of physical activity can result in healthier communities.

### Urban design and air pollution

Motor vehicles make a significant contribution to air pollution in large urban centres. The number of major roadways and the growing number of vehicles is resulting in increased human exposure to air pollution. Improved air quality and healthier neighbourhoods overall could be achieved by: emphasizing public transit and infrastructure that supports active transportation over the building of more roads, and promoting transportation demand management as well as other strategies that reduce automobile dependence.

**Statistics Canada survey of auto dependence: % of population aged 18 and over making all trips by car (as a driver or passenger) by census metropolitan area (CMA)<sup>3</sup>**

Edmonton - 77%  
Calgary - 75%  
Quebec - 74%  
Winnipeg - 72%

Ottawa-Gatineau - 71%  
Vancouver - 69%  
Toronto - 66%  
Montreal - 65%



## Urban design and vulnerable populations

The sprawling nature of large urban centres favours automobile travel, privileging some groups in the population over others. Those who cannot drive often face serious limitations to their mobility and

independence as well as their access to many things that affect their health (e.g., employment with adequate pay, educational opportunities, personal and instrumental social connections).

Vulnerable groups disadvantaged by sprawl

include: children; some seniors; those with physical or cognitive impairments that limit their ability to drive; as well as anyone who cannot afford an automobile. Designing housing, neighbourhoods, streets, sidewalks, commercial spaces and public spaces to address the transportation and mobility needs of vulnerable groups could reduce automobile dependence, decrease social inequity, and improve population health.

**Urban sprawl: a pattern of land use typically found in suburban developments, characterized by single-use zoning, low density land use, and low levels of street connectivity.**

**74.2% of Calgary residents and 66.6% of Edmonton residents strongly agree or somewhat agree that urban sprawl is a problem for their region.<sup>4</sup>**

## Strategies to link land use planning and health

- Ensure that health perspectives are included in municipal land use planning processes and decision-making.
- Adopt “smart growth” principles:
  - compact neighbourhoods with a mix of land uses
  - well connected street networks
  - supportive pedestrian environments
- Increase the number of safe bicycling and walking routes that include practical, everyday destinations (work, school, shopping, and recreation).
- Improve access to public transit.

## Find out more

- LEED (Leadership in Energy and Environmental Design) for Neighbourhood Development [www.usgbc.org](http://www.usgbc.org)
- Canada Green Building Council [www.cagbc.org](http://www.cagbc.org)
- Smart Growth Canada Network [www.smartgrowth.ca](http://www.smartgrowth.ca)
- Victoria Transport Policy Institute [www.vtppi.org](http://www.vtppi.org)

## References

1. Johnson SA, Marko J. Designing healthy places: land use planning and public health. Edmonton, Alberta: Population Health - Capital Health; September 2007.
2. Population Health - Capital Health. Environments matter: Population Health Annual Report 2006/2007. Edmonton, Alberta: Population Health - Capital Health; 2007.
3. Statistics Canada, Canadian Social Trends. *Dependence on cars in urban neighbourhoods: Life in metropolitan areas*. January 2008.
4. Canada West Foundation, Looking West 2007 Survey: Segment 1: Urban Environment.