

Transportation, Health & Climate Change: Promoting Healthier Transportation Policy in Oregon

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America's love affair with the automobile has given us freedom of travel at the expense of the environment and health. Our daily transportation choices are a critical driver of global warming, contributing 29 percent of America's greenhouse gas emissions; and also affect our health through the air we breathe, the risk of an accident, and the amount of physical activity. For example, a 2003 study in the *American Journal of Health Promotion*, showed sprawl in urban areas adds at least six pounds of weight to the average person's waistline through changes in physical activity. Walking and biking to work are well-known healthy options, but public transit users also get a daily average of 16 minutes of physical activity during their commute, while someone who drives to work typically only walks for 1½ minutes.

Physical activity is just one piece of the transportation-health puzzle. Cars also emit toxic pollutants, such as benzene and arsenic, into our air, causing asthma, lung cancer, and dozens of

change – decided to examine the health co-benefits of this policy proposal by commissioning the first-ever Health Impact Assessment (HIA) on a climate change-related policy. HIAs are one powerful tool to examine the relationship between projects or policies and their ultimate impacts on death and disease. The research analysis was conducted by Oregon Health and Science University researchers, guided by a 12-person advisory committee of technical experts and community groups. Partners included the state public health division, metropolitan planning organizations, land use and planning organizations, public health nonprofits, academic healthcare organizations, and bicycle and pedestrian advocates.

Looking at how three policy topic areas that reduce driving – land-use planning, public transit, and driving-related fees – would affect physical activity, air pollution, and car collision rates, enabled us to offer critical analysis that decision makers could use to develop healthier urban land-use and transportation policies at the local level. In total,

HIAs are more powerful tools when the results are used to advocate for specific policy objectives.

other diseases. An estimated 42,000 people die in the United States every year because of outdoor air pollution. This burden of disease falls heavily on low-income and minority populations that are more likely to live near highways. In addition, fatal vehicle collisions killed 313 people in Oregon's metropolitan counties in 2007.

Motivated by dire scientific predictions of global warming, the West Coast governors have formed a partnership to address global warming, including a new vision for our transportation and land use systems that shifts investments toward healthier transportation options such as public transit, bicycling, and walking. Oregon Governor Ted Kulongoski proposed targets for reducing the total miles driven in the state's six metropolitan areas (so-called, Vehicle Miles Traveled or VMT) to reduce greenhouse gas emissions as part of the 2009 Jobs and Transportation Act.

Upstream Public Health – a non-profit dedicated to promoting health in Oregon through policy

11 specific policy proposals were chosen by the advisory committee, including street connectivity, mixed-use neighborhoods, access to public transit, and driving-related fees such as employee parking fees, a gas or vehicle miles traveled tax, and congestion pricing.

The Health Impact Assessment included an extensive literature review on the connection between the 11 specific policies and their impacts on health in the areas of air pollution, vehicle collisions, and changes in physical activity. The relationships between the policies and health were described through cause and effect diagrams and the strength of the evidence was assessed for each link of the diagrams.

The study found that a combination of policies that increase transportation choices, and increase density is the most effective way to promote positive health benefits. Creating affordable neighborhoods that are high-density, mixed-use, and highly connected with bicycle- and pedestrian-friendly infrastructure would not only make people more active, but would decrease both air pollution and collision rates.

