

Transportation and Public Health Policy Recommendations

Centers for Disease Control and Prevention

Executive Summary

The Centers for Disease Control and Prevention (CDC) believes that transportation policies have profound public health implications. CDC supports policy and environmental change strategies that address the connections between transportation policy and public health outcomes and that emphasize public health and safety in the U.S. transportation system.

Transportation policy should support a balanced portfolio of automobile-based, public transit, and active transportation funding that supports health and reduces health care costs.

Transportation policy should also seek to:

- Reduce injuries associated with car crashes through vehicle safety, driver policies, and healthy community designs that reduce traffic speeds.
- Promote safe opportunities for physical activity by supporting active transportation infrastructure, such as bicycle and pedestrian paths, bicycle boulevards, and safe pedestrian and bicycling connections to public transit.
- Reduce exposure to air pollution and slow climate change by reducing vehicles miles traveled and shifting to active and public transit modes, as well as seeking other solutions to reduce pollution generated by ports and high-volume roadways.
- Encourage healthy community design through transit-oriented development and other opportunities to improve the density of street grids and increase residential density and mixed use developments.
- Improve equitable mobility.

Rationale

The current U.S. transportation infrastructure focuses on motor vehicle travel and provides limited support for other transportation options for most Americans. As a result:

- Opportunities for physical activity and active transport continue to decline; lack of physical activity is a major contributor to the steady rise in rates of obesity, diabetes, heart disease, stroke, and other chronic conditions in the U.S.
- Motor vehicle crashes continue to be the leading cause of injury death for most Americans, and pedestrians and bicyclists are at an even greater risk of death from crashes than those who travel by motor vehicles.
- Many Americans view bicycling and walking within their communities as unsafe because of traffic, the lack of sidewalks, crosswalks and bicycle lanes/paths.
- A lack of efficient alternatives to automobile travel disproportionately affects vulnerable populations such as the poor, the elderly, and children, by limiting access to jobs, health care, social interaction, and healthy foods.
- Air pollution from motor vehicles has contributed to the degradation of our environment and adverse respiratory and cardiovascular health effects. The transportation sector also accounts for approximately one-third of all U.S. greenhouse gas emissions contributing to climate change.

The Opportunity

Improving the safety of motor vehicle travel, expanding public transportation, and incorporating active transportation infrastructure (bicycle lanes/paths, shared-use trails and sidewalks, etc.) into federal transportation policy has the potential to save lives by preventing chronic diseases, reduce and prevent motor-vehicle-related injury and deaths, improve environmental health, and stimulate economic development.

Policy Recommendations

The following are key recommendations for federal policymakers to consider when developing new transportation policies.

Motor Vehicles

Motor vehicle travel has become safer over time, but motor vehicle crashes are still the leading cause of death for ages 1-34. Improving the safety and efficiency of motor vehicles and their occupants is critical to improving transportation policy and the public's health.

- *Provide incentive grants to states that implement, strengthen and/or continue to use effective interventions that improve passenger safety.* Examples of interventions include:
 - Primary seatbelt laws
 - Child safety seat and booster seat laws
 - Alcohol-impaired driving countermeasures
 - Motorcycle helmet laws
 - Lower speed limits and other efforts to reduce speeding
 - Comprehensive graduated drivers licensing systems
- *Improve access to trauma care for victims of motor vehicle crashes in order to improve survival outcomes after a crash. Due to the link between trauma and transportation, transportation funds could be tied to the creation of comprehensive trauma systems in states.*
- *Increase support for new and existing technologies to improve the safety of motor vehicles, including technologies that enable vehicles to withstand crashes with lower risk of injuries to occupants and technologies to prevent driving while intoxicated.*
- *Provide incentives for Americans to use alternatives to single occupancy vehicle travel.* Strategies include:
 - High occupancy vehicle lanes
 - Congestion pricing
 - Parking pricing
 - Distance-based vehicle and insurance fees
 - RideShare and vanpools and improved public transit
- *Improve the respiratory and cardiovascular health of the U.S. population by:*
 - Providing incentives for motor vehicle drivers to purchase vehicles with technologies designed to control pollution and reduce emissions.
 - Strengthening congestion mitigation/air quality programs and revising the Corporate Average Fuel Economy standards to stimulate low-emission release.
 - Requiring effective inspection and maintenance programs for medium- and heavy-duty vehicles, and retrofitting existing diesel vehicles with current pollution control measures to reduce emissions.

Public Transportation

Access to public transportation systems is necessary for people with physical, economic, or other limitations that impede their access to and use of a single occupancy vehicle. Policies that encourage public transportation infrastructure are needed to improve access for all people.

- *Increase federal and state funding sources for public transit.* For example:
 - Change the federal funding distribution formulas so that a higher proportion of existing federal dollars are devoted to mass transit.
 - Encourage or mandate states to increase investments in public transit, by: freeing up gas tax revenues to finance mass transit, congestion relief, air quality improvements, and other options not related to highway expansion alone.
 - Promote a link between funding and regulations for states that invest in public transit.
 - Give state, regional, and local governments more flexibility to move resources among public transportation funding categories and to meet local needs.
 - Subsidize mass transit and rail travel alternatives to encourage greater public use.
 - Through mandates or incentives, support a strong network of public transit options, including rapid bus and light rails, which connect housing and jobs as well as improve access to healthy foods, medical care, and other services.
- *Develop and implement model transportation planning policies that encourage transit-oriented developments and other mixed-use developments, and increase connectivity among neighborhoods and communities for all transportation modes.*
- *Establish a federal policy on Safe Routes to Transit to promote bicycling and walking to transit stations by making these connecting trips easier, faster, and safer by:*
 - Providing bicycle storage at transit stations, stops, city car-share pods.
 - Integrating safety enhancements for pedestrian and bicycle access to transit stations, stops, city car-share pods.
 - Removing pedestrian and bicycle barriers on roads and intersections near transit stations.
 - Enhancing the transit system to accommodate bicyclists and pedestrians.

Active Transportation

Active transportation systems connect the places where people live, learn, work, shop, and play via bicycle lanes/paths, shared-use trails and sidewalks, and other functional networks. The safety of all pedestrians and cyclists increases as more people choose active transportation.

- *Change the federal funding distribution formulas so that there are more federal dollars devoted to non-motorized transportation.*
- *Create a link between funding and regulations for states that reduce vehicle miles traveled and implement active living environments that promote walking, bicycling, and public transit and greenhouse gas reduction strategies.*
- *Mandate or provide incentives for states to increase investments in bicycle and pedestrian infrastructure.* Such infrastructure activities could include:
 - Complete Streets, which can enable the safe and convenient travel of all users of the street through solutions such as widening sidewalks; raising medians and narrowing roadways while expanding space for bicycle lanes, sidewalks, and street trees; placing bus stops in safe and convenient environments; and making various improvements for disabled travelers.

- Connecting roadways to complementary systems of trails and bicycle paths that provide safe places to walk and bicycle for children, the elderly, and the general public.
- Safe Routes to School infrastructure initiatives, such as the development of sidewalks and bicycle paths, to ensure that children can walk and bicycle safely to school. Safe Routes to School programs also include non-infrastructure activities, such as education, encouragement, enforcement, and evaluation.
- Adopting and funding pedestrian and bicycle master plans, including current sidewalk and bicycle lane/path inventory, which can be incorporated into city general plans and capital improvement programs.
- *Integrate and enforce use of pedestrian and bicycle design guidelines and evidence-based safety standards into transportation planning practice.* For example:
 - The American Association of State Highway and Transportation Officials provides guidelines that support pedestrian and bicycle design.
- *Establish federally-recommended standards for building and development efforts to include sidewalks, bicycle paths, areas for play, and active (walking and bicycling) access to transportation options for all ages.*
- *Establish an Active Transportation Account within the Highway Trust Fund modeled after the Mass Transit Account.*

Healthy Community Design

Healthy community design incorporates elements (such as street networks, street designs, and zoning) that work synergistically to promote health and safety.

- *Develop and implement model transportation planning policies that encourage transit-oriented and other mixed-use developments.*
- *Protect residents from local air pollution and noise from high-volume roadways, ports, and airports by discouraging high-density development (including of schools) near these air pollution sources and, if possible, constructing barriers to reduce nearby residents' exposure to air pollution and noise.*
- *Provide shade trees as a traffic calming measure and to reduce the effects of urban heat-islands.*
- *Develop street networks that facilitate active and public transportation by increasing connectivity and limiting block size.*
- *Design destinations for children (e.g., schools, parks, and libraries) within neighborhoods so that children can reach destinations without having to cross busy streets.*
- *Ensure equitable access to all transportation resources.*

Design to Minimize Adverse Health Consequences

There are a few circumstances where a solution to one problem may exacerbate another problem. For example, active transportation improves health overall by providing physical activity and reducing emissions. However, because our current transportation system causes active transportation users to disproportionately suffer from injuries, increasing active transportation may increase the absolute numbers of injuries if protective infrastructure and policies are not

concurrently implemented. In addition, decreasing the size/weight of vehicles and increasing adoption of new vehicle technologies will reduce greenhouse gases and other emissions but could adversely impact injuries in crashes and impact environmental health in other ways.

- *Support policies that protect pedestrians and cyclists from motor vehicle crashes, such as:*
 - Reducing motor vehicle speeds and designing streets to minimize pedestrian and bicycle injuries.
 - Increasing the responsibility of the motor vehicle driver in collisions with pedestrians and cyclists.
 - Implementing multimodal level of service indicators as performance measures for roadways that include measures of pedestrian, cyclist, and public transit operability.
 - Increasing the adoption of motor vehicle technologies that reduce injuries to pedestrians, such as bumpers designed to minimize pedestrian injury.
- *Support policies that maximize the benefits of shifting to efficient vehicles, such as:*
 - Reducing size disparities in the fleet of vehicles (e.g., modifying fuel economy standards to reduce the size and numbers of the largest vehicles).
 - Reducing the aggressiveness (the likelihood of injuring an occupant of another vehicle) of all vehicles.
 - Reducing the environmental health impact of technologies that improve fuel economy, such as recycling programs for hybrid vehicle battery systems.
- *Provide incentives for states and communities to conduct health impact assessments (HIAs) and safety audits to identify the impact of a new transportation project, program, or policy on community and individual health. In addition, pilot the inclusion of health consequence data into environmental impact assessments.*
 - HIA is a method by which a policy, program, or project may be judged as to its potential effects – and distribution of those effects – on the health of the population.
 - Safety audits are a method by which a policy, program, or project may be judged as to its potential effects on the safety of the population.

Climate Change

The impact of transportation systems on climate change is undeniable, and policies to limit these negative consequences must be enacted to ensure a comprehensive approach to public health.

- *Support policies that reduce greenhouse gas emissions by changing to renewable energy sources and increasing the fuel efficiency of vehicles.*
- *Support policies that reduce vehicle miles traveled, including land use policies that reduce vehicular travel, increase public transportation service, and increase active transportation infrastructure.*

Research and Surveillance

Data and evaluation are critical to ensure we have robust information on impact of transportation systems on health as well as to determine whether interventions have their intended effect.

- *Support national, state and local research to better understand the relationships between transportation, health and safety outcomes.*
- *Designate CDC as the lead agency for evaluating programs and activities designed to address the safety and health issues related to transportation. For example:*

- CDC can evaluate the effectiveness of laws/policies, programs, fidelity of program implementation, and enforcement of transportation policies to improve health and safety outcomes.
- *Support surveillance activities for active and public transportation.* Examples include:
 - Improved specificity of external-cause-of-injury codes for transportation-related deaths, hospitalizations, and emergency department visits to capture information on traffic-relatedness, vehicle type, and occupant status.
 - Comprehensive counts of deaths and injuries related to all modes of transportation, including pedestrians and cyclists.
 - Systematic counts of users of all modes of transportation, including pedestrians and cyclists.
 - Targeted community level data to track the impact of policies, programs and services.
- *Assess the impact of transportation migration (e.g., mode shift), of individuals switching from one form of transportation to another form, and of changing the mix in traffic, on the overall health and safety of travelers.*
- *Provide funding to transportation surveys, such as the National Household Transportation Survey, to include health- and safety-related questions.*

Professional Development and Job Creation

Training and enhancing the skills and abilities of existing workers must be combined with bringing new workers with a variety of skill levels into the field.

- *Support the development of professionals who are committed to enhancing the relationship of public health and transportation policy through fellowship programs and development of curricula related to integration of these areas.*
- *Conduct training for state and/or local entities on how to conduct HIAs and provide technical assistance.*
- *Insert training on the health effects of transportation planning into curricula for transportation planning students and continuing education for professional transportation planners and for students and practitioners of public health. Similarly, insert training for public health practitioners on transportation policy and its affects on health.*
- *Provide incentives for communities and states to include transportation, urban/rural planning, environmental and public health professionals, and bicycle/pedestrian advocates in local planning activities and implementation of community development initiatives.*
- *Increase the capacity of traffic police to improve the enforcement of laws related to motor vehicle, pedestrian, and bicycle safety.*
- *Ensure that jobs created by federal transportation investments reach low-income people and communities of color.*