

## TRANSPORTATION AND HEALTH

### Transportation Determines Health

The way we travel determines our levels of physical activity and social interaction. In turn, this can affect our physical and mental conditions. Transportation policies and investments provide significant opportunities to promote human well-being and environmental health.

Research tells us that active transportation can prevent obesity, improve air and water quality, reduce greenhouse gas emissions, abate urban heat, increase traffic safety, reduce injuries, and build social and environmental capitals.

Transportation policies play a huge role in addressing the social, environmental and economic root causes of health. Poverty, or financial instability, is one of the root causes of poor health. Offering alternative transportation to jobs would give the underserved populations an affordable means to get to work and become more financially stable.

Many health-promoting transportation policies, such as creating pedestrian-friendly street environment, co-locating services and amenities near reliable transit services, adopting a complete streets ordinance, ensuring safe routes to major destinations, and redirecting transportation funding from roads to pedestrian, bicycle and transit, have proven multiple social, economy and environmental benefits.

### The Logic Model

Input / Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
Complete Streets	<ul style="list-style-type: none"><li>• Adopt a Complete Streets policy and ordinance that follow national best practices of organizations, such as Smart Growth America.</li><li>• Plan, design, and build streets with treatments for active transportation.</li></ul>	<ul style="list-style-type: none"><li>• Improved access to physical activity.</li><li>• Increased social connection.</li><li>• Improved equitable access to mobility.</li><li>• Reduced greenhouse gas emissions.</li><li>• Improved air quality.</li></ul>	<ul style="list-style-type: none"><li>• Reduced obesity.</li><li>• Improved physical health.</li><li>• Improved mental health.</li><li>• Improved quality of life, particularly among the underserved.</li><li>• Improved sense of community.</li><li>• Increased social and environmental capitals.</li></ul>

Input / Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
Neighborhood Road Environment	<ul style="list-style-type: none"> <li>• Treat streets as healthy and safe “places”.</li> <li>• Improve environmental quality of streets, such as:               <ul style="list-style-type: none"> <li>➤ Apply pedestrian and bicycle friendly design.</li> <li>➤ Ensure safe sidewalks.</li> <li>➤ Create connected on-street and off-street trails.</li> <li>➤ Develop gridded street patterns.</li> <li>➤ Ensure small street block size.</li> <li>➤ Minimize curb cuts.</li> <li>➤ Apply Low Impact Development/ Green Stormwater Infrastructure practices.</li> <li>➤ Provide green spaces, landscaping, public arts, and street furnishing to promote comfortable walking.</li> </ul> </li> <li>• Create compact and mixed-use developments conducive to walking and placemaking.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased walkability.</li> <li>• Increased bicycling.</li> <li>• Improved physical activity.</li> <li>• Increased social connection.</li> <li>• Increased small-scale economic development.</li> <li>• Reduced crime.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved local economy.</li> <li>• Increased social, environmental and physical capitals.</li> <li>• Increased community diversity and inclusiveness.</li> <li>• Improved quality of life across neighborhoods.</li> <li>• Improved sense of community and place attachment.</li> <li>• Improved neighborhood safety.</li> <li>• Increased life expectancy.</li> <li>• Reduced depression and improved emotional/mental health.</li> <li>• Improved health and well-being.</li> </ul>
Safety Measures	<ul style="list-style-type: none"> <li>• Use environmentally-sensitive design<sup>ii</sup>, landscape improvements, and street trees to improve roadside safety.</li> <li>• Consider a range of traffic calming measures, such as:               <ul style="list-style-type: none"> <li>➤ Road diet</li> <li>➤ Street crossing design</li> <li>➤ Speed humps</li> <li>➤ Design of on-street parking</li> <li>➤ Lighting</li> <li>➤ Visibility</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Improved driver safety.</li> <li>• Reduced collision rate.</li> <li>• Reduced cut-through traffic.</li> <li>• Increased user comfort for transit access and active transportation use.</li> <li>• Reduced number of traffic deaths and serious injuries.</li> <li>• Increased number of active transportation trips.</li> <li>• Safer driver behavior.</li> <li>• Reduced crime.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced traffic deaths (to zero) and serious injuries.</li> <li>• Improved neighborhood safety.</li> <li>• Improved health and well-being.</li> </ul>

Input / Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
	<ul style="list-style-type: none"> <li>➤ Lower Speed Limits</li> <li>➤ Speed camera</li> <li>• Educate the public about road safety.</li> <li>• Set Target Zero<sup>iii</sup> as a goal.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased number of pedestrians using amenities.</li> <li>• Improved walking and biking conditions for all residents.</li> </ul>	
Safe Routes and Connectivity	<ul style="list-style-type: none"> <li>• Plan and implement Safe Routes to School with stakeholders.</li> <li>• Consider access/ connectivity/ co-location with transit when siting schools.</li> <li>• Promote Safe Routes to Destinations, including parks and recreation, transit, shopping, and places of employment.</li> <li>• Promote street connectivity/ trail accessibility.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased number of students walking to school.</li> <li>• Increased number of pedestrians.</li> <li>• Increased physical activity.</li> <li>• Increased sidewalk and trail connections to schools.</li> <li>• Increased connected pedestrian and bicycle facilities to access destinations.</li> <li>• Increased social connection.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced obesity.</li> <li>• Increased social and environmental capitals.</li> <li>• Improved sense of community.</li> <li>• Increased acceptance of walking as a societal norm for all ages.</li> <li>• Improved health and well-being.</li> <li>• Improved livability.</li> </ul>
Equitable Access	<ul style="list-style-type: none"> <li>• Apply Universal Design<sup>iv v vi</sup> standards and principles to improve mobility among all ages and abilities.</li> <li>• Consider equity in making transportation decisions.</li> <li>• Support compact communities to promote equity for all.</li> <li>• Prioritize projects and investments in historically underserved areas with the affected communities.</li> <li>• Develop Americans with Disabilities Act (ADA) Evaluation and Transition Plan with stakeholders.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved equitable access to opportunities in historically underserved communities and for all population groups.</li> <li>• Increased number of adopted ADA Transition Plans in the County.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved social determinants of health indicators.</li> <li>• Reduced poverty.</li> <li>• Reduced health disparities.</li> <li>• Increased human, social and physical capitals.</li> <li>• Increased community diversity and inclusiveness.</li> </ul>

Input / Impact Area	Strategies/ Policies	Intermediate Outcomes	Ultimate Outcomes
Public Transit	<ul style="list-style-type: none"> <li>• Create compact and dense developments to support transit usage.</li> <li>• Co-locate services/ amenities near transit facilities.</li> <li>• Ensure continuous sidewalks and bike lanes connect to bus stops and transit centers.</li> <li>• Provide bike parking facilities.</li> <li>• Provide transit passes instead of parking stalls.</li> <li>• Provide transit services to connect low-income neighborhoods and employment centers.</li> </ul>	<ul style="list-style-type: none"> <li>• Increased number of people living within ½ mile radius to transit.</li> <li>• Increased connectivity and access to jobs, healthy foods, medical services, and community events.</li> <li>• Reduced single occupancy vehicle congestion and associated greenhouse gas emissions.</li> <li>• Increased transit ridership and frequency.</li> <li>• Increased percentage of riders accessing transit by walking or rolling.</li> <li>• Increased physical activity.</li> <li>• Increased transit services in areas with low car ownership rates.</li> </ul>	<ul style="list-style-type: none"> <li>• Improved social connections.</li> <li>• Reduced poverty.</li> <li>• Reduced obesity.</li> <li>• Improved overall health and well-being.</li> <li>• Increased social, physical and environmental capitals.</li> </ul>
Mode Shift	<ul style="list-style-type: none"> <li>• Set and track mode shift targets.</li> <li>• Develop performance measures other than traditional level of service-based congestion measures, such as Vehicle Miles Traveled<sup>vii</sup> and multimodal credits<sup>viii</sup>.</li> <li>• Develop Transportation Demand Management programs<sup>ix</sup> to promote alternatives to driving alone, such as Commute Trip Reduction, employee incentives, focused community outreach, etc.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced congestion and Vehicle Miles Traveled per capita.</li> <li>• Increased in number of trips by transit and active transportation modes.</li> <li>• Improved air quality.</li> <li>• Increased physical activity.</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced obesity.</li> <li>• Improved physical health.</li> <li>• Improved social and mental health.</li> <li>• Increased social and environmental capitals.</li> </ul>

## Research Evidence

### General

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## Endnotes

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