Safe Routes to School National Partnership

INVESTING

IN WALKING, BIKING, AND SAFE ROUTES TO SCHOOL

A WIN FOR THE BOTTOM LINE





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OVERVIEW

For decades, American communities focused on building for the car—resulting in highways, high-speed roadways, and sprawling developments with long distances between homes, jobs, and shopping. Not surprisingly, rates of walking and biking plummeted. Between 1969 and 2009, the once-common sight of neighborhood kids walking or biking to school fell from 48 percent to just 13 percent.[1]

Researchers have found that these changes to our communities come at an alarming cost to our health: **less physical activity, an obesity epidemic, increases in chronic disease**, and **more traffic deaths and injuries.** As the evidence has become more widely known, the trend is starting to shift: small towns and big cities all across the country are looking to improve walkability and access to transit. Thousands of schools have implemented Safe Routes to School initiatives to get more kids walking and biking to school safely.

These efforts can be slowed by lack of resources to invest in sidewalks, crosswalks, trails, and traffic calming. Improving walkability has more than health benefits though; it can also be good for the pocketbook, government budgets, and the overall economy. Looking at the cost savings and economic benefits of investments in Safe Routes to School, walking, and biking can help make the case for increasing those investments.

SAVING LIVES EQUALS LOWER MEDICAL COSTS

In 2015, a total of 6,193 people were killed while walking and biking—17.6 percent of all traffic deaths—and another 115,000 people were injured while walking and biking. Focusing on children, 277 kids under the age of 14 were killed and 13,000 were injured while walking and biking.[2]

These tragic losses are not evenly distributed across the population. People walking in low-income areas are twice as likely to be killed in a traffic crash than those walking in more affluent neighborhoods.[3] The fatality rates for Latino and African American people walking are twice as high as they are for whites.[4] Low-income children face a higher risk of being injured or killed when walking.[5]

Besides the loss of life or function due to injury, traffic deaths and injuries are costly. An analysis of 2010 data reveals that the medical costs of hospitalization, emergency room visits, and treatment for people injured or killed while walking and biking totaled $5.9 billion. For kids under age 14, the medical costs were $1.1 billion. Preventing the death of just one child walking or biking is estimated to save approximately $1.4 million in lifetime medical and work-loss costs.[6]

We know how to reduce these deaths and injuries: **put in sidewalks**, **street lighting**, **bike lanes**, and **crosswalks**. These improvements give people safe places to walk and bike, separated from traffic. **Slowing traffic** or **reducing the amount of vehicles** makes a significant difference too.

Specific to children, Safe Routes to School interventions—which pair infrastructure improvements like sidewalks with teaching safe walking and biking skills, increased traffic enforcement, and other strategies—have a strong track record of improving safety.

A study in New York City found a 33 to 44 percent decline in pedestrian injury among school children in areas with Safe Routes to School projects, compared to no change in locations without.[7] An analysis of 47 schools in California found that Safe Routes to School infrastructure improvements resulted in a 75 percent reduction in collisions involving bicyclists and pedestrians of all ages—not just children.[8]

Safe Routes to School interventions are cost-effective too. A follow-up study in New York City found that the initial $10 million Safe Routes to School investment to make improvements at 124 schools would yield $240 million in cost savings from fewer injuries to adults and children over the course of fifty years. Thus, each dollar invested in improving safety for kids yields $24 in reduced medical costs just from reduced traffic injuries.[9]

For the sake of comparison, in 2017, the federal government allocated $835 million to the Transportation Alternatives Program, which provides funding to help local governments build bicycle and pedestrian improvements. That means that each year, the United States spends seven times as much money on medical costs alone to treat people killed or injured while walking and biking than it does on preventing those deaths and injuries through putting in sidewalks, crosswalks, bike lanes, and other infrastructure that keeps people safe.

PREVENTING THE DEATH OF JUST ONE CHILD WALKING OR BIKING IS ESTIMATED TO SAVE APPROXIMATELY $1.4 MILLION IN LIFETIME MEDICAL AND WORK-LOSS COSTS.

SHRINKING THE HIGH COSTS OF OBESITY

Obesity is widespread today – affecting approximately 34 percent of adults and 17 percent of children.[10] People with obesity are at increased risk for many significant health conditions, including diabetes, heart disease, stroke, and some cancers.

An examination of health data, comparing 1988 data to 2010, found that the percentages of Americans reporting no leisure-time physical activity doubled for women (to 51.7 percent) and quadrupled for men (to 43.2 percent). These researchers concluded that decreased physical activity levels, more than daily caloric intake, correlated with increases in body mass index (BMI).[11]

Besides its impact on the health of individuals, obesity is also a drag on the economy. In 2008, medical costs to treat obesity and its related conditions and diseases were estimated to be $147 billion.[12] The lifetime medical costs for a child with obesity are estimated to be $19,000 greater than a child at normal weight, translating to roughly $14 billion in lifetime costs just to treat 10-year olds with obesity.[13] Researchers have also found that an obese employee costs an employer approximately $4,000 extra each year in medical costs, disability or workers compensation claims, and sick days.[14] There is even some evidence from economists that wages are lower for people with higher BMIs.[15]

Active transportation is a proven way to get healthy levels of physical activity, which is part of addressing the obesity crisis. People who walk or bike regularly have lower weight and blood pressure and are less likely to become diabetic.[16] People who live in communities with safe infrastructure for walking and biking exercise more and are less likely to have high BMIs.[17] And, one-third of transit users get the recommended daily amount of physical activity simply by walking to and from transit stops.[18]

This is another area in which disparities exist, exacerbating the impact on low-income communities and people of color.

Unfortunately, low-income communities have less safe infrastructure for walking and biking than high-income communities—with fewer sidewalks and marked crosswalks, less street lighting, and fewer traffic calming features.[19] People with low incomes, Latinos, and African Americans have the highest rates of obesity.[20] People in low-income communities have lower activity levels and higher BMIs.[21] The rates of obesity and overweight among Latino and African American young people are 40 to 60 percent higher than in white young people.[22]

The earlier that obesity can be tackled, the more likely such health outcomes can be avoided. Research has documented that increasing rates of obesity among children corresponded with a slide in rates of walking and biking, physical education, and outdoor play along with an increase in sedentary behaviors and screen time.[23] A recent analysis of data from more than 10,000 children found that increasing physical activity and decreasing screen time were key to preventing obesity and reducing BMIs.[24] Getting into the habit of physical activity early and maintaining daily physical activity throughout the teen years is also key to preventing the development of obesity in young adults.[25]

IN 2008, MEDICAL COSTS TO TREAT OBESITY AND ITS RELATED CONDITIONS AND DISEASES WERE ESTIMATED TO BE $147 BILLION.

Walking and biking to school can be a key strategy to increasing physical activity and addressing obesity and its related economic burden. Researchers have documented that children who walk or bike to school have better cardiovascular fitness,[26] higher levels of physical activity, and lower BMIs[27] than children who do not actively commute to school.

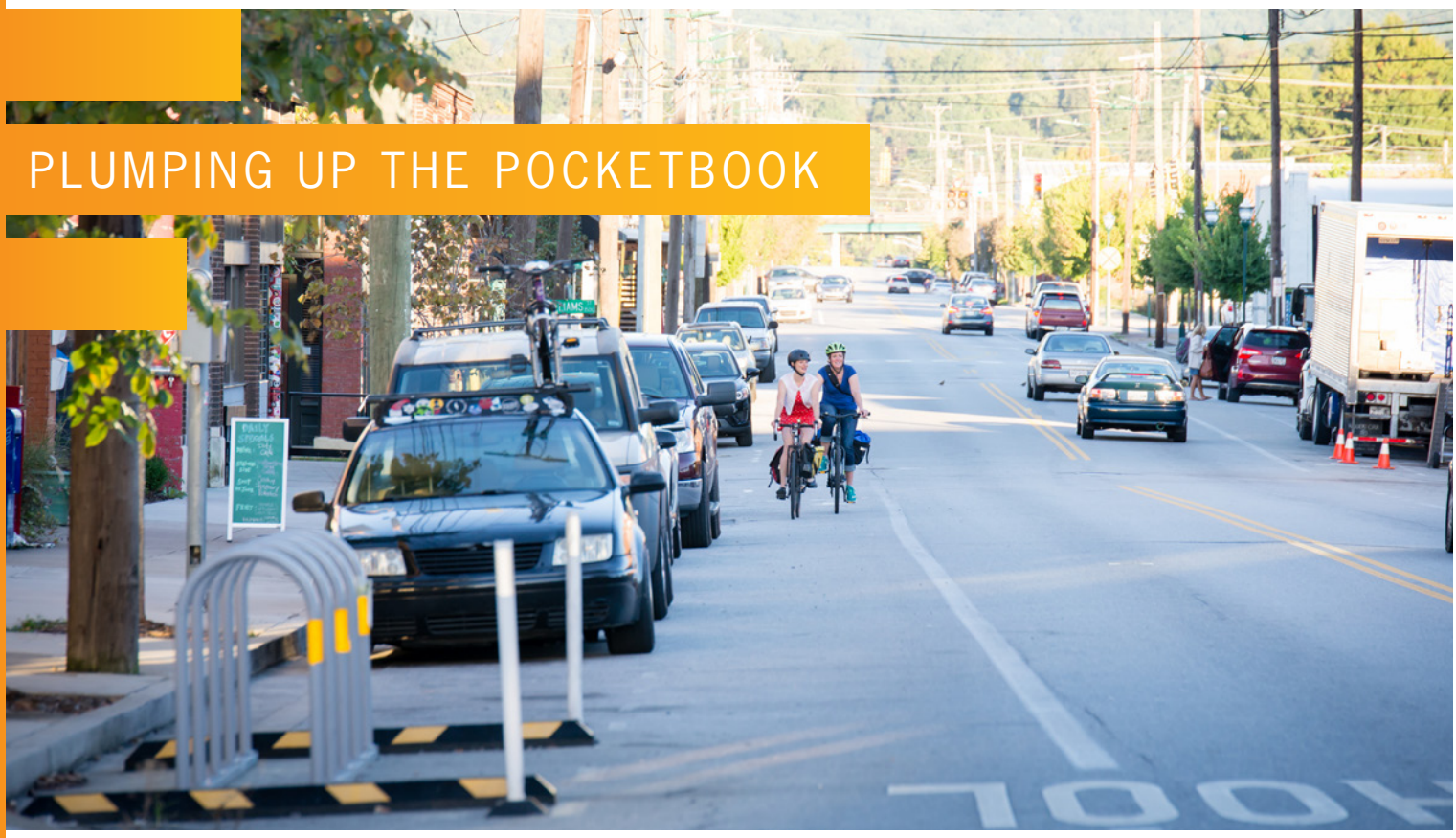
Safe Routes to School initiatives have been shown to help get more kids walking—thus experiencing the associated health benefits. A study of more than 800 schools in four states found that Safe Routes to School interventions increased walking and biking to school by 31 percent over five years.[28]

Another study examining 53 schools in four different states found walking and biking to school increased 37 percent after Safe Routes to School projects were implemented.[29]

A few studies have tried to estimate the economic benefits from the health changes from increasing active transportation. One study projected that if half of short trips in the summer months in Midwestern cities were taken by bike instead of car, the benefits of better air quality and higher levels of physical activity would be approximately $8 billion per year.[30] Another study found that investing in sidewalks would generate $1.87 from increased physical activity and improved air quality for every $1 invested over a 10-year period.[31] Another researcher estimated that Portland's planned investments in bicycling would at minimum pay for themselves and could potentially generate a four-fold return on investment from health care cost savings and fuel savings.[32]

While active transportation alone cannot solve our nation's challenges with obesity, it is clearly a significant factor in moving children and adults towards healthy weights. Besides the health benefits, communities that spend money on active transportation as a way of increasing physical activity will recoup their investment through medical savings.

PLUMPING UP THE POCKETBOOK



If the impressive health benefits are not convincing on their own, active transportation—particularly when combined with land use strategies to ensure convenient access to jobs and amenities—comes with monetary and economic benefits for businesses and local governments.

Specific to the business sector, investments in active transportation have been linked to increased foot traffic, retail sales, and tourism revenue. A number of states and localities have performed studies to capture the economic benefits generated from investments in active transportation. Utah found that bicycle-related business and tourism contribute $425 million each year and 3,500 jobs.[33] Active transportation infrastructure, businesses, and events added $497 million and 4,108 jobs to New Jersey's economy in 2011—eight times greater than the $63 million invested in bicycle and pedestrian infrastructure that year.[34] A case study of the Outer Banks in North Carolina examined the impact of $6.7 million invested in a network of bike paths, lanes, and trails—finding that it generates $60 million per year in tourism revenue and 1,400 jobs each year.[35] Vermont identified that, in 2009, biking and walking contributed $82.7 million to the state's economy from tourism, construction, and retail that supported 1,400 jobs—stemming from $9.8 million in spending that year to improve bicycle and pedestrian infrastructure.[36] New York City has been measuring the impact of its changes to make streets safer for biking and walking: building a protected bike lane in Manhattan led to a retail sales increase of 49 percent—compared to just a 3 percent increase in retail sales elsewhere in the borough.[37]

Walkability can also contribute to increased rents and property values, as well as making properties easier to sell or rent. However, improvements in walkability should be tied with access to neighborhood amenities and services to maximize the impact. An examination of home sales in Austin, Texas found that a 1 percent increase in walkability yielded a $1,300 increase in property values—but that these benefits were only seen in neighborhoods with places (such as restaurants or retail) to walk to.[38]

Increases in property values can provide improved financial security for property owners. At the same time, as discussed further below, rapid increases in home and rental values can lead to gentrification and displacement, challenges that can be ameliorated through thoughtful community planning and housing protections.

> WALKABLE LOCATIONS HAVE HIGHER PROPERTY VALUES AND INVESTMENTS IN BICYCLE AND PEDESTRIAN IMPROVEMENTS GENERATE JOBS AND REVENUE—ALL OF WHICH CREATES GREATER TAX REVENUE FOR THE LOCAL GOVERNMENT.

Several studies examine the impact of WalkScore rankings, which factor in walkability and amenities, on pricing and value. A study of commercial properties such as office, retail, and apartment buildings found that a ten-point increase in walkability increased the property value by 1 to 9 percent.[39] Homes in areas with above-average walkability scores command $4,000 to $34,000 more than houses with average walkability, with the higher values found in denser cities.[40] The Urban Land Institute recently profiled ten development projects in the United States built near trails or bike lanes, finding that relatively small investments from the developers into bike-friendly amenities allowed for higher rents and improved marketability. The report also identified how developers can partner with local governments to expand active transportation facilities, further increasing the economic benefits to both the developer and the government.[41]

The economic benefit to local governments comes from increased revenue plus greater savings. First, **walkable neighborhoods are more desirable, meaning that it is easier for communities to attract and retain residents.** A survey by the Urban Land Institute found that the majority of Americans—particularly those in the millennial generation—want to live in neighborhoods that are walkable and where owning a car is optional.[42]

The National Association of Realtors found similar results: 85 percent of respondents rated sidewalks and places to walk as important to choosing a place to live and 48 percent of respondents preferred to live in a house with a small yard within easy walking distance of amenities. One-quarter of respondents living in a single-family home would have preferred to live in an attached home in a more walkable location.[43]

As previously discussed, walkable locations have higher property values and investments in bicycle and pedestrian improvements generate jobs and revenue—all of which creates greater tax revenue for the local government. Two studies in Sarasota County, Florida and Asheville, North Carolina found that the property taxes generated by walkable, denser downtowns far outstripped those generated by sprawling big box stores—so much so that a downtown 17-story building on one acre would generate as much property tax revenue as 145 acres of big box stores.[44] A similar study of Glenwood Springs, Colorado found that nine acres of mixed-use buildings generated as much property and sales tax revenue as 43 acres of a suburban mall-style development.[45]

More compact development that relies less on cars can reduce road and utility costs—and even school busing costs—saving local governments on both one-time and annual expenditures. Salt Lake City found that steering its growth towards more walkable, denser housing along road and rail lines would save approximately $2 billion in transportation costs and $2.5 billion in water, sewer, and utility costs.[46] One study looked at development options in South Carolina and Arizona, finding that walkable, mixed use, denser development could save somewhere between 30 to 50 percent in infrastructure costs over the traditional suburban development pattern.[47] In a review of 17 different studies, Smart Growth America found that smart growth development—which is characterized by more compact walkable centers—reduces initial infrastructure investment costs in roads and utilities by 38 percent plus 10 percent less for ongoing infrastructure delivery.[48] School busing costs are 20 to 40 percent lower in medium density communities compared to low-density communities,[49] allowing school districts to invest more taxpayer dollars in academics instead of transportation.

While these economic benefits are welcome news for local business and government, **these investments must be made with care and thought to ensure that low-income families are not priced out of their neighborhoods.** When a city invests in active transportation or transit in low-income neighborhoods, it can be met with justified apprehension as residents fear that rents and property taxes will soon rise, pushing them out. When considering housing and transportation costs together, compact mixed-use neighborhoods are more affordable.[50] But if rents rise, tenants may be forced to move to the suburbs, resulting in lost community ties, less access to amenities, longer commute times, and increased commute costs. Governments must consider carefully how to pair walking and biking improvements with strategies such as expanding affordable housing options and freezing or deferring property tax increases on low-income residents to avoid displacement.

PULLING IT ALL TOGETHER: INFLUENCING POLICY AND INVESTMENTS

Given the significant health and economic benefits that can come from greater investments in biking and walking, it is no surprise that some jurisdictions are taking these factors into account when shaping future growth and transportation investments.

The Southern California Association of Governments (SCAG) is the largest metropolitan planning organization (MPO) in the country. It is responsible for transportation planning for six counties, 191 cities (including Los Angeles), and 18 million people. Long known for its car culture, the region is setting a new path. Already, 13 percent of trips are taken by biking and walking, but SCAG wants to do more. As part of its 2016 Regional Transportation Plan/ Sustainable Communities Strategy, which guides transportation planning through 2040, SCAG chose to quadruple the amount of funding allocated for active transportation and to consider public health and environmental justice impacts in transportation planning.

SCAG then created a health and economic impact study to assess the ultimate contribution of these active transportation investments to the region. SCAG found that the current rate of active transportation in the region saves consumers more than $6 billion in transportation costs, prevents tens of thousands of cases of diabetes, heart disease, and hypertension, and saves nearly $200 million in medical costs. Looking at the planned $12.9 billion in active transportation investments over a twenty-year period, SCAG calculated that these investments would more than pay for themselves. For every dollar spent on active transportation, the study estimates $5.20 in value added to the region — $70 billion in all—from construction costs, labor productivity increases, medical cost savings, and household transportation savings. A total of 11,500 new jobs would be created every year.[51] The strength of these findings builds a powerful case for SCAG and its partners across the region to stay true to their planned investments in biking and walking.

Colorado is a state recognized for its thousands of miles of trails for biking and walking, and the Colorado Department of Transportation dedicates approximately 2.5 percent of its budget to active transportation. Governor John Hickenlooper launched a project to invest in biking and walking to make Colorado the healthiest state in the nation. As part of this initiative, the state commissioned a report[52] to document the health and economic benefits resulting from its strong commitment to biking and walking. Researchers found that the state garners approximately $1.6 billion each year in economic benefits from active transportation, generated from household spending, tourism, retail, and manufacturing. In addition, more than 300 deaths are prevented each year due to the state's levels of people walking and biking, creating health savings of $3.2 billion per year. The report goes on to estimate the significant additional economic and health benefits tied to increasing rates of walking and biking in the state—providing further incentives for the state to follow through on Gov. Hickenlooper's pledge.

Nashville, Tennessee is another location where the benefits of active transportation helped change how the region thinks about its transportation funding. The Nashville Area Metropolitan Planning Organization (Nashville MPO) knew it had to find ways to improve the health and physical activity level of its residents. Officials conducted a series of surveys to better understand the health of residents and their transportation patterns. Using a modeling tool called ITHIM *(Integrated Transport and Health Impact Modeling Tool)*, the Nashville MPO was able to estimate how shifts in active transportation would impact physical activity, air pollution, and injuries. The model found that a moderate increase in levels of walking and biking would prevent 70 deaths each year from chronic conditions and save approximately $30 million each year in medical costs.[53]

> ADVOCATES FOR PUBLIC HEALTH AND ACTIVE TRANSPORTATION CAN UTILIZE THIS REPORT'S FINDINGS AND RESULTS TO HELP RESIDENTS ENVISION WHAT THEY WANT FOR THEIR COMMUNITIES AND THEIR OWN LIVES AND TO PUSH FOR GREATER INVESTMENTS IN WALKING AND BIKING.

With those results in hand, the Nashville MPO had the data needed to transform their transportation funding decisions. The region developed a new scoring matrix for choosing transportation projects that puts a high value on projects that improve health or safety or address equity. As a result of applying the scoring matrix, more than 75 percent of projects included in the region's 2015 long-range transportation plan include an active transportation component—an exponential increase from the 2 percent of projects included in the prior plan.[54]

The examples from Southern California, Colorado, and Nashville help demonstrate the power of data about health and economic benefits to secure greater funding for Safe Routes to School, walking, and biking. Advocates for public health and active transportation can utilize these findings and results to help residents envision what they want for their communities and their own lives and to push for greater investments in walking and biking. Clearly, the return on investment is there, no matter how you look at it.

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