

PUBLIC TRANSPORTATION



Public transportation drives health by moving people.

PROBLEM In the United States, 45% of people have no access to public transportation,¹ making it difficult to access jobs, food, education, healthcare services, and social connections.

SOLUTION All modes of public transportation are important, but bus routes play a special role in the lives of Americans. Frequent and reliable bus routes allow for service to more destinations over a larger area and can adapt to meet the changing needs of communities. Buses are also used by more people who depend on public transportation, thereby providing greater equity benefits.²

RESULTS Increasing access to frequent, reliable public transportation can lead to fewer traffic vehicle crashes, reduced air pollution and associated respiratory illnesses, and increased physical activity levels.³ Even people who don't use public transportation benefit from less traffic congestion, less pollution, and lower community costs for healthcare. Buses can connect more people to everyday destinations by allowing riders to get closer to their final destinations.

What is Public Transportation?

Public transportation varies by community and includes many mobility options for the public such as:



BUSES



LIGHT RAIL



PARATRANSIT



SUBWAY SYSTEMS

How Can Public Transportation Improve Economic Development and Health?



PEOPLE

- Increases access to jobs, schools, grocery stores, and medical care
- Increases physical activity
- Reduces respiratory symptoms including asthma
- Helps conserve limited resources for families who would struggle to pay for a private vehicle
- Provides personal mobility and freedom



COMMUNITIES

- Improves air quality by reducing pollution
- Reduces injuries and deaths from motor vehicle crashes
- Reduces traffic congestion, improving air quality and quality of life for all
- Revitalizes communities and stimulates local economies

Minorities are more likely to depend on public transportation.



HOUSEHOLDS THAT DO NOT OWN A CAR:⁴

24%

African-American households

17%

Latino households

13%

Asian-American households

7%

White households



Over **two thirds** of riders walk to their stop or station.¹

87%

of trips on public transit directly affect the local economy.¹




CDC Foundation
Together our impact is greater





Frequently Asked Questions About Public Transportation and Public Health

What's the evidence behind public transportation and the impact on health?

The Centers for Disease Control & Prevention (CDC) has identified introducing and expanding public transportation as one of **14 key evidence-based interventions** that can improve health in five years or less and is cost effective. Direct health benefits include reducing injuries associated with motor vehicle crashes⁵ and reducing adverse health impacts associated with exposure to air pollution.⁶

 Public transportation use is associated with increased physical activity levels.^{7,8} Physical activity can

- lower the risk of chronic conditions; 
- improve aerobic fitness, mental health, and cognition; and
- help prevent weight gain.⁹

 Public transportation also plays a critical role during emergencies like the COVID-19 pandemic by

- transporting first responders and essential employees,
- evacuating vulnerable populations, and
- revitalizing the economy after emergencies.

Why should public health join forces with public transportation?

Public transportation improves access to jobs, schools, healthy food options, and medical care. It can also improve mental health and well-being by giving people of all abilities the independence to get around and connect with others in their communities. Working toward shared goals with allies from the public transportation sector is a win-win for public health practitioners and for transportation planners.

How can public health practitioners collaborate with transportation planners?

Although public health and transportation are two very different disciplines, many similarities exist between them. Both disciplines use data to make decisions and pilot projects to inform future efforts. Both have similar goals, such as improving public safety and connectedness. Contact local transportation planners to exchange information about your goals and projects to identify opportunities to collaborate.

What role can public health play?

Transforming the public transportation system to ensure more people who need it have access to it requires a multi-sectoral approach including public health. Public health can:



Bring public health, transportation, and land use decision makers together regularly to learn about upcoming projects and engage with the community before ground is broken.



Provide health data to decision makers that you already collect to build evidence for the need to increase access to public transportation.



Invite transportation planners and mobility managers to offer their perspectives on interventions you are planning, including what data to collect.



PUBLIC TRANSPORTATION SUPPORTS JOBS

430,000
JOBS Supported in total¹

50,000+
JOBS Supported for every \$1 billion invested¹

★ SUCCESS STORY



MICHIGAN Public Transportation Success

In 2015, Flint, Michigan had high unemployment but neighboring counties such as Livingston, 40 miles away, had a labor shortage and jobs to fill. The problem: Flint residents didn't have reliable transportation to get to these jobs. The solution: A new bus service. Now more than 30,000 riders take buses each month to job destinations in four neighboring counties.

Why is Public Transportation Such a Cost-effective Health Intervention?



Public transportation saves money

The average household spends about 15 cents of every dollar on buying, maintaining, and operating cars, the largest expenditure after housing.¹ In the United States, transportation expenditures are inversely correlated with income.¹⁰ When localities fail to provide transportation options, cars may be a necessity to get to work or school or access basic services, leaving low-income households with fewer options and greater financial burden.



Public transportation is a win-win for states and municipalities

- Each \$1 invested in public transportation generates **4x** as much in economic returns.¹
- Every \$10 million of capital investment in public transportation earns **\$30 million** in increased business sales.¹



Public transportation is a win-win for riders and drivers

Public transit investment has wide-ranging economic benefits for both those who ride it and those people who continue to drive, reducing health impacts of pollution, traffic congestion, and overall community health costs.



Public transportation comes with options

Public transportation comes in many shapes and forms, allowing decision makers to pursue the options that work for their residents. Buses are often an ideal introductory public transportation solution. Existing road infrastructure allows bus transit to be easily added, expanded, or changed as needs evolve.

Why Should Your Community Strengthen Support for Buses?

★ SUCCESS STORY



Maria's Story

Maria is a mother of two who could not reliably get her children to school and make it to her job across town when her older car needed too many repairs. When a city bus route added a reliable crosstown express service, she had another option to get around dependably. The added physical activity reduced her stress levels and brought her weight to healthy levels for the first time in years.



Buses are on one of the easiest modes to implement. Buses can operate on existing roads, which means lower capital costs and can allow for dedicated bus lanes.²



Sidewalks to bus stops can also increase physical activity and lead to more people meeting the **Active People, Healthy NationSM** goal of getting 27 million people more physically active by 2020.



Buses can reduce traffic congestion, which can improve air quality.



While many Americans may never have ridden a train or a subway, many are familiar with or have experience riding a bus.



\$355 Expanding public transportation to include bus rapid transit or high-quality urban rail generates nearly \$355 in per capita annual health benefits¹¹



10x SAFER

Public transportation is ten times safer per mile than traveling by car¹²

REFERENCES

1. American Public Transportation Association. (2020). *Public Transportation Facts*. Retrieved from <https://www.apta.com/news-publications/public-transportation-facts/>
2. Litman TA. (2020, June 5). *Evaluating Public Transit Benefits and Costs Best Practices Guidebook*. Retrieved from <https://www.vtpi.org/tranben.pdf>
3. Centers for Disease Control and Prevention. (2018, February 7). *CDC Transportation Recommendations - Brief*. Retrieved from <https://www.cdc.gov/transportation/>
4. Sanchez TW, Stolz R, and Ma JS. (2003). *Moving to Equity: Addressing Inequitable Effects of Transportation Policies on Minorities*. Cambridge, MA: The Civil Rights Project at Harvard University.
5. Beck LF, Delinger AM, O'Neil ME. (2007). Motor Vehicle Crash Injury Rates by Mode of Travel, United States: Using Exposure-Based Methods to Quantify Differences. *Am J Epidemiol*, 166(2):212-218. Retrieved from <https://academic.oup.com/aje/article/166/2/212/98784>
6. Caiazzo F, Ashok A, Waitz IA, Yim SHL, Barrett SRH. (2013). Air pollution and early deaths in the United States. Part I: Quantifying the impact of major sectors in 2005. *Atmos Environ*, 79:198-208.
7. Rissel C, Curac N, Greenaway M, Bauman A. (2012). Physical activity associated with public transport use—a review and modelling of potential benefits. *Int J Environ Res Public Health*, 9(7):2454-2478. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3407915/>
8. Boarnet MG, Hong A, Lee J, et al. (2013). *The Exposure Light Rail Line Study: a Before and After Study of the Impact of New Light Rail Transit Service*. Retrieved from https://pdfs.semanticscholar.org/b4cf/c9dbbe24f1e24021cabf2e0fcd7f8a99c68.pdf?_ga=2.209568530.1608347066.1596205714-139638376.1596205714
9. Centers for Disease Control and Prevention. (2019). *Physical Activity*. Retrieved from <https://www.cdc.gov/physicalactivity/about-physical-activity/why-it-matters.html>
10. Institute for Transportation and Development Policy. (2019). *The High Cost of Transportation in the United States*. Retrieved from <https://www.itdp.org/2019/05/23/high-cost-transportation-united-states/>
11. Litman T. (2020, April 3). *Evaluating Public Transportation Health Benefits*. Retrieved from <https://www.vtpi.org/tran-health.pdf>
12. Litman T. (2016 September). *The Hidden Traffic Safety Solution: Public Transportation*.

Actions for Public Health Practitioners

Identify action steps you can take to increase access to public transportation in the communities you work with.

