APHA

AMERICAN PUBLIC HEALTH ASSOCIATION

For science. For action. For health.

THE BIKING & WALKING BENCHMARKING REPORT WEBSITE:

An Online Tool to Support Health Equity

Photo courtesy Adobe Stock photos.

Table of Contents

This white paper was made possible through a contract between the American Public Health Association and Dovetail Projects funded through cooperative agreement 5U38OT000131-03 between the Centers for Disease Control and Prevention and APHA. The contents of this document are solely the responsibility of the authors and do not necessarily represent the official views of APHA or CDC.

Cover photo: Courtesy Wikimedia Commons

EXECUTIVE SUMMARY

THE AMERICAN PUBLIC HEALTH ASSOCIATION and the Institute of Transportation Engineers, in partnership with the League of American Bicyclists, with support from the Centers for Disease Control and Prevention and the Federal Highway Administration, have unveiled an online tool that makes active transportation data more accessible.

The Benchmarking Report Website (bikingandwalkingbenchmarks.org) was developed to share data and findings from the biennial Bicycling and Walking in the United States: Benchmarking Report.

As public health professionals work to advance health equity in their communities, the Benchmarking Report Website is a valuable resource to help inform decision makers, illustrate data and inspire advocates to action.

The online tool has been developed with public health practitioners, researchers, planners, engineers, students, and bicycle/pedestrian coordinators and advocates in mind, offering opportunities to explore the data in several ways. Ready-made graphics and data tables make it easy to find and present key data points, such as bicyclist and pedestrian fatality rates, active commuting levels and state funding provisions for bicycle and pedestrian infrastructure projects. Users can select up to four states or cities included in the report to compare the data provided by the tool.

For researchers and advocates who want to dig deeper into the data, spreadsheets with all data collected for the Benchmarking Report are available to download from the website. Hundreds of rows of data have been compiled into two spreadsheets — one for states and one for cities included in the Benchmarking Report. Each data set is identified with its source, helping analysts find more detailed information about the methodologies for data collection.

In addition to exploring the raw data by state and city, visitors to the Benchmarking Report Website can explore the broader trends of active transportation and equity. "Make Your Case," Part III of the full 2016 report, is reproduced online with easily browsable links to topical summaries of bicycling and walking trends and benefits.

Each topic summary reviews studies and analyses relevant to active transportation, health and equity. Most summaries additionally include real-world stories and applications, highlighting the impact of biking and walking on whole communities.

Photo courtesy Dan Burden Pedibikeimages.org

Photo courtesy Adobe Stock photos

INTRODUCTION

Purpose of this Paper

PUBLIC HEALTH PRACTITIONERS, RESEARCHERS, AND ADVOCATES have a long history of working in vulnerable communities to advance health equity. Health equity is a guiding principle and core value of the American Public Health Association. The Benchmarking Report Website provides a comprehensive snapshot of biking and walking data in the United States. This white paper will demonstrate how to use active transportation data provided to assess and inform efforts toward health equity.

Defining Equity

To effectively work toward equity, it is important to first define and understand the term. This paper is guided by a definition put forth by Safe Routes to School National Partnership in the report, *At the Intersection of Active Transportation and Equity.* Equity is achieved when people are able to overcome the unique challenges they face to live healthy, fulfilling lives.

> *"Equity addresses the effects of power imbalances and the social, economic, and political differences that generate disparate outcomes for people in arenas like health, education, and employment. Equity recognizes that different people have different barriers to living healthy, fulfilled lives. In order to allow people to get to the same outcome, we need to understand the different barriers and opportunities that affect different groups, and craft our approaches, policies, and programs with those various challenges and needs in mind."*[1]

Health equity, then, is the opportunity for everyone to attain their highest level of health. The Office of Minority Health's National Partnership for Action to End Health Disparities, in its National Stakeholder Strategy states, "Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities."[2] Achieving health equity is a priority for public health professionals and working across sectors is essential to achieve equitable outcomes.

Equitable Processes for Equitable Outcomes

Equity cannot happen unless the process itself engages the people most affected by inequities.

> *"A key concept is that equity can be considered both a process and an outcome. For the outcome to be equitable, the process to get there should also be equitable and based on the principles of transparency, inclusiveness, respectfulness, and building trustworthy relationships with the community."*[4]

For decades, public health professionals have been influenced by principles of the environmental justice movement, which promotes self-determination and community-led change. For example, the U.S. Department of Health and Human Services states its commitment to "meaningful involvement through community partnership and engagement" in policy development, education, research, and service delivery.[3]

> *2012 HHS Environmental Justice Strategy, Guiding Principles*[3]
> *1. Create and implement meaningful public partnerships;*
> *2. Ensure interagency and intra-agency coordination; and*
> *3. Establish and implement accountability measures.*

The City of Seattle provides one example of how an environmental justice lens can facilitate real progress toward equity in the way city services are prioritized.

In 2015, Mayor Murray launched the Equity and Environment Initiative, a partnership of the city, the community, several city departments, and private foundations to deepen Seattle's commitment to race and social justice in environmental work. The cornerstone of the initiative is the Equity and Environment Agenda, which "serve[s] as a blueprint…to advance environmental equity in Seattle."[5]

To develop the framework for the agenda and guide community conversations, Mayor Murray appointed 16 leaders from communities and community-based organizations to the Community Partners Steering Committee. CPSC worked with the city's Office of Sustainability and Environment to lead community activities with the people most impacted by highways and heavy industry — people of color, immigrants, refugees, people with low incomes, youth, and limited English-proficiency individuals.

> *"The first step to realizing equity is building trust."*[5]

Environmental justice principles were at the core of how this committee functioned and how the community participated. The process of building the Equity and Environment Agenda promoted community leadership and transparency, working to broaden the conversation about environmentalism in Seattle to the larger community.

Photo courtesy Adobe Stock photos.

Photo courtesy Adobe Stock photos

CPSC hosted a variety of activities to engage people in community engagement conversations through storytelling, surveys, conversations, living room forums, community dinners, intergenerational focus groups, workshops and more. These examples are reflective of the ongoing conversations occurring in communities.

These formats encouraged not only diverse participation, but also self-determination and goal-setting from the community itself. As a result of CPSC's work and collaboration, more than 800 community members were involved in the development of the Equity and Environment Agenda, which was released on Earth Day 2016.[5]

The Equity and Environment Agenda developed by CPSC includes strategies for the following identified goals:

- Healthy Environments for All
- Jobs, Local Economies & Youth Pathways
- Equity in City Environmental Programs
- Environmental Narrative & Community Leadership

To advance these goals, the agenda also includes community-identified actions that have significant support from community members.

ASSESSING PROGRESS TOWARD HEALTH EQUITY

Social Determinants of Health

"Health begins where we live, learn, work and play."[6] The Robert Wood Johnson Foundation conducted a study to test several ways of talking about social determinants of health that would transcend political motives and speak to a broad audience. This was one of the highest-scoring statements.

Of course, interpreting health outcomes requires a much more nuanced understanding of the social, political, and economic conditions that impact a person's opportunity to attain good health. In 2008, the Commission on Social Determinants of Health, formed within the World Health Organization, released a report. It serves as a global call to action to improve daily living conditions for people around the world and to tackle the inequitable distribution of power, money, and resources.

The report makes the case for actions ranging from free public education for both boys and girls, to widely available affordable housing, to a living wage that takes into account the real and current cost of healthy living. These actions, the report claims, would address systemic inequities that are the cause of wide health disparities between and within countries.[7]

Healthy People 2020 adopted a "place-based" approach to understanding social determinants of health, stating that where a person lives ultimately determines his or her opportunities to make healthy choices. Objectives fall into the following five categories:[8]

- Economic stability
- Education
- Social and community context
- Health and healthcare
- Neighborhood and built environment.

Photo courtesy Laura Sandt Pedibikeimages.org

Photo courtesy Ann McGrane Pedibikeimages.org

"We know that taking care of ourselves by eating well and staying active, not smoking, getting the recommended immunizations and screening tests, and seeing a doctor when we are sick all influence our health. Our health is also determined in part by access to social and economic opportunities; the resources and supports available in our homes, neighborhoods, and communities; the quality of our schooling; the safety of our workplaces; the cleanliness of our water, food, and air; and the nature of our social interactions and relationships."[8]

A Role for Active Transportation

Numerous studies show an association between physical activity and public health benefits, including improved physical health, mental health, and social stability.[9,10]

The National Institutes of Health, for example, highlighted a study that found that not only are higher levels of moderate to vigorous physical activity associated with lower rates of obesity, but for women, the proportion of neighbors who walk to work was associated with lower BMI and lower obesity risk. For men, the proportion of neighbors who bike to work was associated to lower BMI and lower obesity risk.

The study concluded that, if these associations are causal, increasing walk-to-work proportions from 2 to 4 percent could reduce the average weight for women by about 1.5 pounds. Increasing bike-to-work proportions from 0.4 to 0.8 percent could reduce the average weight for men by about 2.3 pounds.[11]

Advocates and professionals in the transportation and public health fields recognize, however, that not all populations have the same opportunities to include active transportation in their daily lives. Access to safe options for physical activity continues to be disproportionately lacking for people of color, people with low incomes, people with disabilities, and senior citizens.4 These same populations also suffer disproportionately from higher rates of obesity, diabetes, and asthma.[12]

Safety while walking is itself a concern for people of color and people living in low-income neighborhoods. Studies have shown that pedestrian fatalities and collisions involving pedestrians are higher in census tracts with higher poverty rates.[13,14] There is also research that suggests people of color are more likely than people who are white to be passed by motorists while waiting at a crosswalk.[15]

"By working to establish policies that positively influence social and economic conditions and those that support changes in individual behavior, we can improve health for large numbers of people in ways that can be sustained over time."[8]

While having transportation infrastructure designed specifically for pedestrians and bicyclists has been shown in numerous studies to increase levels of biking and walking,16–18 the specialized infrastructure may also have negative unintended consequences, such as displacement and gentrification.[19] Active transportation advocates and planners are increasingly faced with addressing these concerns.

Historically, the civic bodies that advise on and inform decisions about biking and walking often have not been representative of the affected community. There is evidence, though, of growing emphasis on equitable planning within these bodies by highlighting equity, diversity, and inclusion in policies and planning documents.[20]

The Benchmarking Report Website

In 2017, APHA, in collaboration with the Institute of Transportation Engineers and the League of American Bicyclists, unveiled the Benchmarking Report Website. This online tool provides access to comprehensive data on active transportation trends, originally compiled for the Benchmarking Report by the Alliance for Biking & Walking and the League. The Centers for Disease Control and Prevention and the Federal Highway Administration provided funding for development of the website.

The *Bicycling & Walking in the United States: Benchmarking Report* was first published in 2007. It is currently published every two years with updated data, graphics, and research findings. Whenever possible, the project team collected data from uniform national sources managed by public agencies and organizations, including the

- American Community Survey (ACS),
- Centers for Disease Control and Prevention Web-based Injury Statistics Query and Reporting System (WISQARS),
- Federal Highway Administration Fiscal Management Information System (FMIS), and
- National Highway Traffic Safety Administration Fatality Analysis Reporting System (FARS).

In addition, unique data were collected in biennial surveys developed by the Alliance and the League, and sent to staff at each State Department of Transportation, as well as to local officials, engineers, planners, and advocates with knowledge of conditions in their city. The surveys requested information on local legislative and policy priorities, education and advocacy initiatives, existing infrastructure for biking and walking, and administrative planning progress for improvements.

Photo courtesy Adobe Stock photos

Photo courtesy Gnarly Pedibikeimages.org

The Benchmarking Report Website now houses these data and makes them available to the public for free download and sharing. Users will find a wealth of information related not just to transportation trends, but also health and safety statistics.

The 2016 Benchmarking Report, featured on the website, was the first of the series to integrate an equity perspective into the discussion of biking and walking trends, and highlights issues of equity throughout the topic discussions. The website is particularly valuable as a tool when compiling data for evaluative mechanisms of health equity, such as Health Impact Assessments and Equity Atlases, and when preparing informational materials for public discussion.

There are three main ways to put the Benchmarking Report Website to use. The quickest way to access the data is to retrieve statistics specific to a state or included city. A second use of the website, for those professionals with data management and statistical analysis skills, is to download the raw data in the form of spreadsheets, which provide the opportunity to perform a multitude of potential analyses.

Lastly, the website presents the "Make Your Case" section of the 2016 report in an easily browsable table of contents for access to topic-based research findings and stories from the field. These techniques are described in more detail in the following three sections.

The Alliance for Biking & Walking initiated the Benchmarking Report in 2003, compiling data on biking and walking trends in all 50 U.S. states and the 50 most populous U.S. cities.

The Alliance's biennial benchmarking report, Biking and Walking in the United States, has provided a comprehensive look at active transportation trends for nearly a decade. The report updates have become a highly anticipated resource for professionals and advocates tracking active transportation trends.

The main objectives guiding the project include promoting biking and walking data collection, providing a measure of progress to evaluate trends, and highlighting the relationship between active transportation and healthy lifestyles.

Five reports were published during 2007-2016. Major funding was provided by Centers for Disease Control and Prevention and AARP. The League of American Bicyclists began managing the project after the publication of the 2016 report.

ACCESSIBLE GRAPHICS

THE BENCHMARKING REPORT WEBSITE OFFERS many ways to access and work with the compiled data. The quickest way to make use of the website is to explore the data by location. This is the best option for researchers and advocates who want to access some base numbers for their state or for one of the cities included in the Benchmarking Report.

The Benchmarking Report focuses data collection efforts on the 50 United States and the 50 most populous U.S. cities. The cities studied for this project have shifted over the years, due to changing populations and the addition of small and midsized cities to the 2014 Benchmarking Report. Once added, previously studied cities with smaller populations continue to be included, to take advantage of the already-collected data.

In addition, Washington, DC, is discussed as one of the 50 most populous cities, rather than the states. Currently, 68 cities are included in the Benchmarking Report. The data is designed to populate 15 charts for each state and 16 charts for each city. These charts are pre-formatted and ready to save, print, or share through social media.

Online Charts for States

Dedicated State Budget Funds to Bicycle/Pedestrian Projects
State DOT Full-Time Equivalent Staff that Work on Bicycle and Pedestrian Projects
Routes and Trails for Bicycling and Walking (in miles)
Policy Goals that are Published as Part of an Adopted Plan
Commuters (by mode share)
Percent of Commuters Who Bicycle to Work
Percent of Commuters Who Walk to Work
Percent of Commuters Who Take Transit to Work
Fatality Rates
Bicyclist Fatalities per 10k Bicycling Commuters
Pedestrian Fatalities per 10k Walking Commuters
Walking Commuters by Income and Race
Percent of Walking Commuters Who have Low Incomes
Percent of Walking Commuters Who are People of Color
Health Indicators
Percent of Adults Who are Obese
Percent of Adults Who have Diabetes
Percent of Adults Who have Asthma
Percent of Adults Who have High Blood Pressure

Photo courtesy Adobe Stock photos

Photo courtesy Adobe Stock photos

Online Charts for Cities

Commuters (by mode share)
Percent of Commuters Who Bicycle to Work
Percent of Commuters Who Walk to Work
Percent of Commuters Who Take Transit to Work
Fatality Rates
Bicyclist Fatalities per 10k Bicycling Commuters
Pedestrian Fatalities per 10k Walking Commuters
Walking Commuters by Income and Race
Percent of Walking Commuters Who have Low Incomes
Percent of Walking Commuters Who are People of Color
Health Indicators
Percent of Adults Who are Overweight or Obese
Percent of Adults Who have Diabetes
Percent of Adults Who have Asthma
Percent of Adults Who have High Blood Pressure
Bicycle and Pedestrian Infrastructure
Miles of Protected Bicycle Lanes
Miles of Unprotected Bicycle Lanes
Total Bicycle Infrastructure Miles per Square Mile
Miles of Public Sidewalks
Policy Goals
Goals that are Published as Part of an Adopted Plan

An Overview for Accessing Charts

You will be first directed to select a state or city as your "target." Two comparable states or cities (based on population size) will be automatically set up to show data in addition to your target location. For example, if Indiana is selected, Tennessee and Arizona are suggested comparisons; if Indianapolis is selected, San Francisco and Jacksonville are suggested comparisons.

You can manually change either or both of the suggested comparisons; add one additional city or state to the two suggestions; or remove all comparisons to focus on just your target location.

Once you have selected a state or city, data for your target location and any comparison locations will be displayed in several charts. You can then click on any of these charts to see the data broken down further. For example, clicking on the dedicated funding chart for a state will take you to another chart that shows the most recent data next to the last two dataset years. This chart also shows comparison data for the nation as a whole and any additional states or cities you have selected. You have the option of viewing these more detailed charts either as illustrated or as a table.

Saving and sharing the charts is easy with four circle icons that appear when you roll over the chart area. The top link bookmarks the chart, making it easy to return to it later. You can also save multiple charts this way and compile them into a printable report of your customized charts.

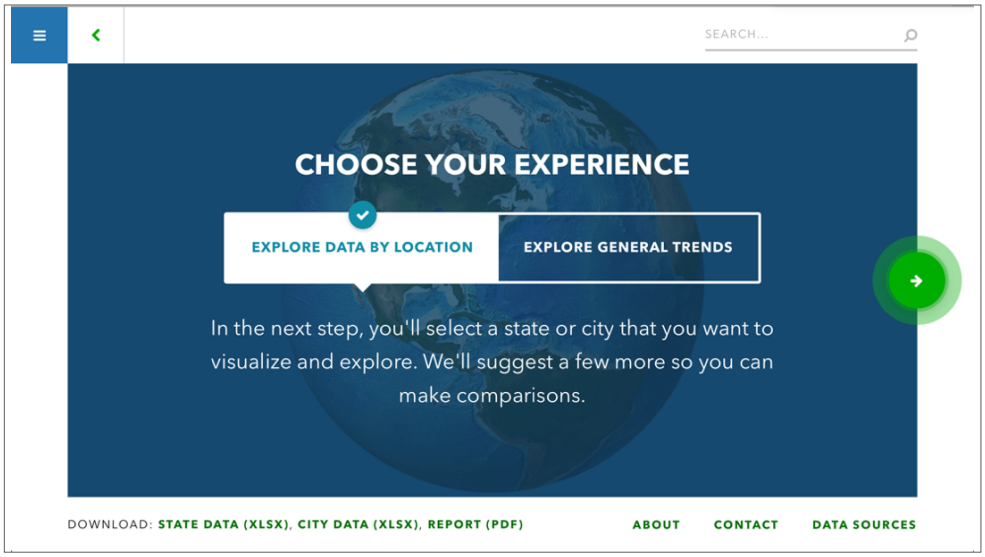
The second link allows you to download a single chart immediately. The third and fourth links make it easy to share your chart on social media through Facebook and Twitter.

Try It Out!

Objective #1: You are interested in how biking levels in Atlanta compare to other cities of similar size.

Step 1. Choose your cities

From the homepage (http://bikingandwalkingbenchmarks.org/), click the arrow in the green circle located on the right side of the screen. Make sure "Explore Data by Location" is selected and click the arrow in green again.



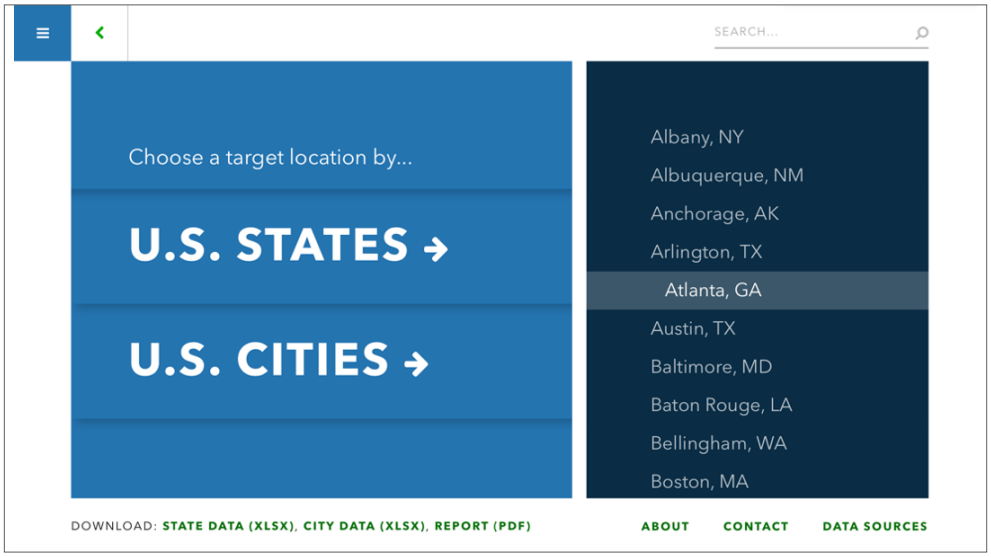


Photo courtesy Adobe Stock photos

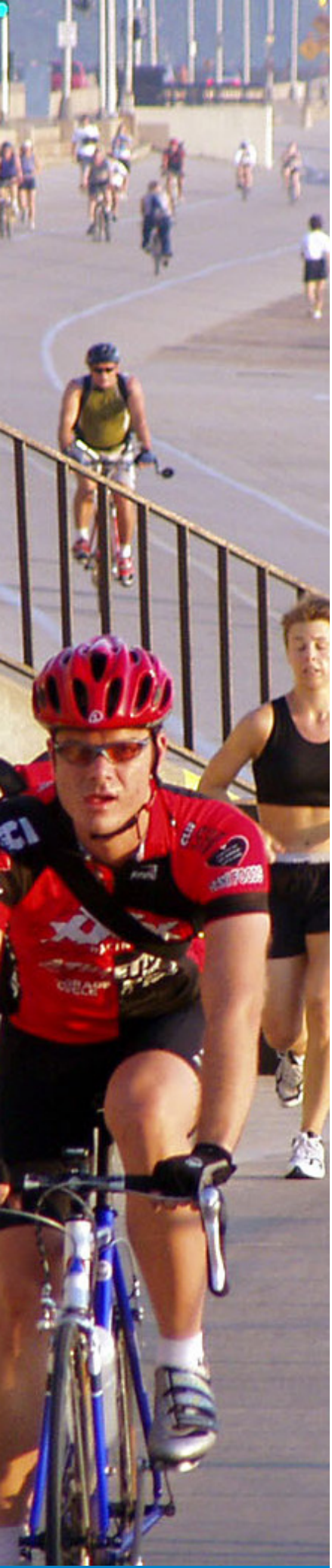
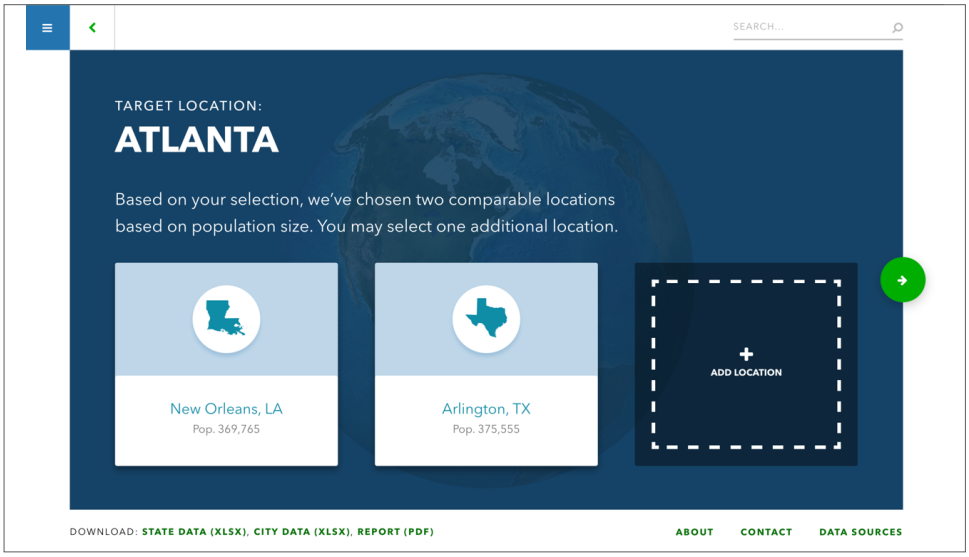


Photo courtesy Dan Burden Pedbikeimages.org

Click on “U.S. Cities” and then “Atlanta, GA.”

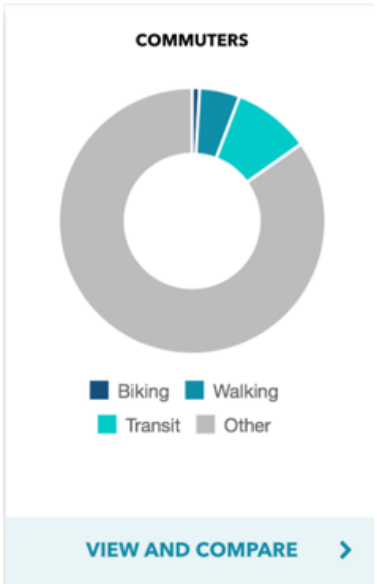
New Orleans, Louisiana, and Arlington, Texas, have been automatically selected as comparison cities, based on population size. Decide if you want to make changes to these two cities or add a third city.



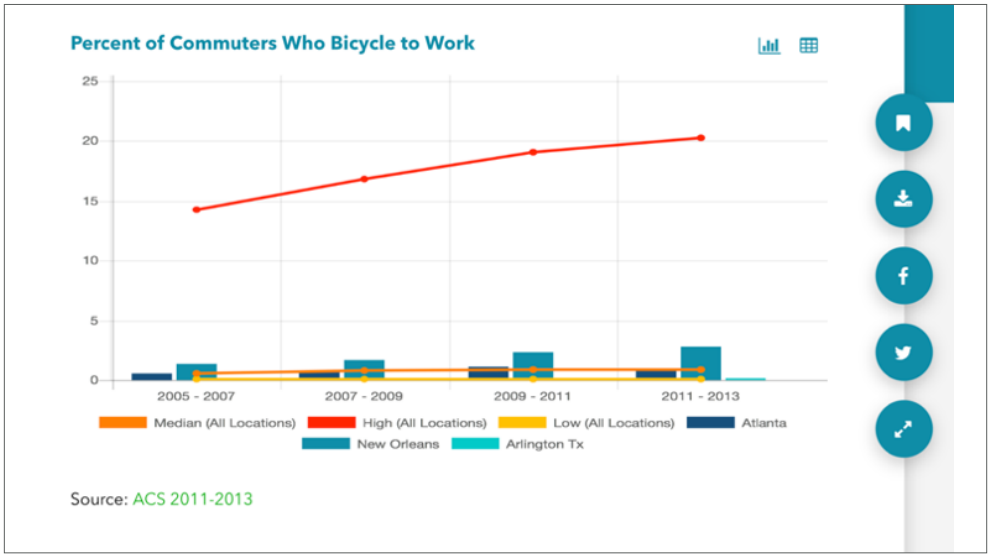
When you are satisfied with your choices, click the arrow in green to continue.

Step 2. Select your dataset

Scroll down the page of summary charts to find the “Commuters” graphic. Click on “View and Compare.”



Three charts will show data. “Percent of Commuters Who Bicycle to Work” is the first chart.



Step 3. Interpret the chart

The chart shows four data points from two-year spans. The bars on the chart reflect data for Atlanta and the other cities you chose to include in the comparison. The lines reflect data for the highest value of all large cities, the lowest value, and the median value.

By rolling over the chart, you can see the result for each data point.

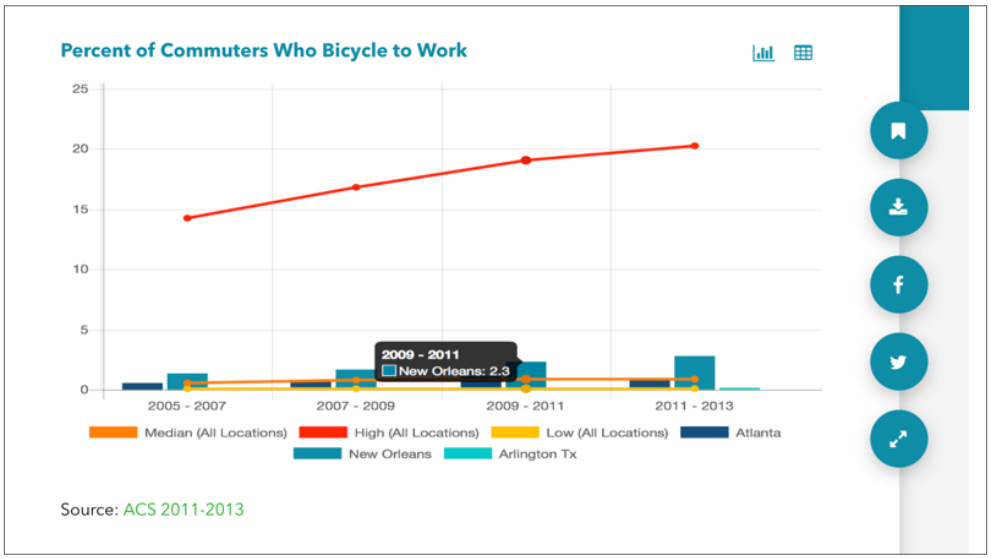


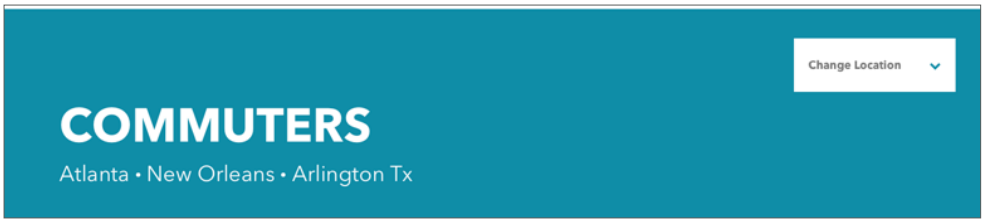
Photo courtesy Wikimedia Commons

Photo courtesy Dan Burden Pedbikeimages.org

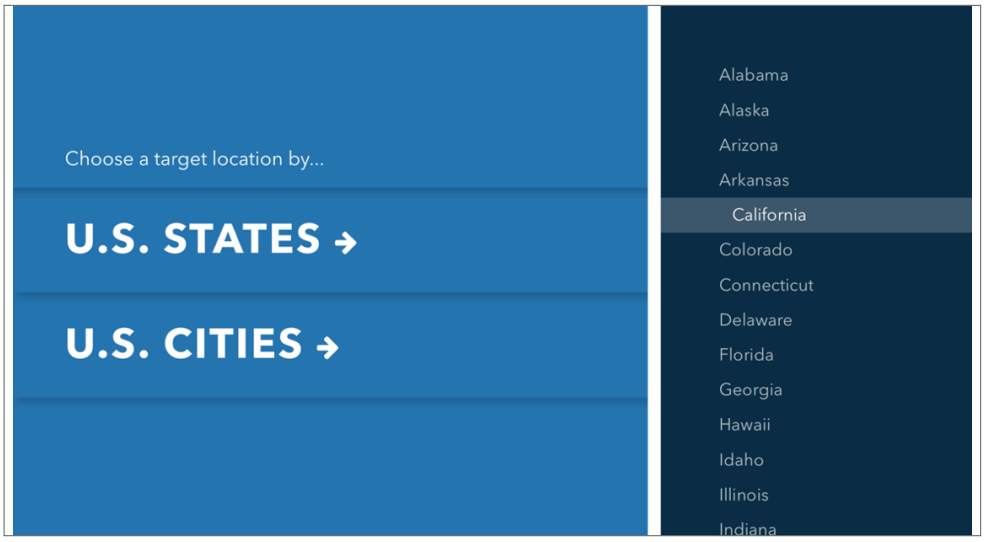
Objective #2: You want to know how pedestrian fatality rates have changed in California over the years.

Step 1. Choose your state

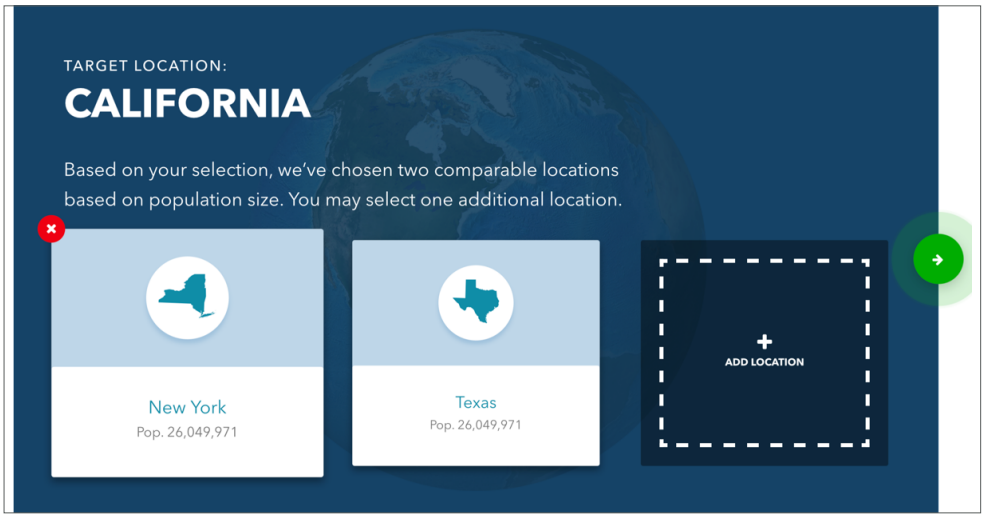
Scroll to the top of the screen and hover over the "Change Location" button on the top right. Click on "Change Target Location."



Click on "U.S. States" and then select California.



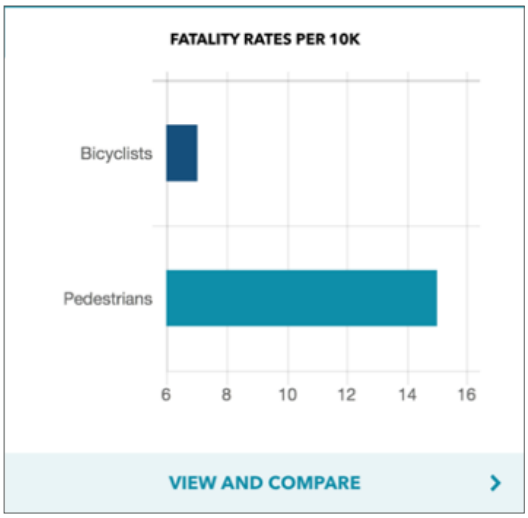
Because you only want to know how rates have changed in California, you can remove all other states from the comparison to simplify the charts displayed. To do this, roll over the names of the suggested comparison states, and a red circle with a white x will appear. Click the x, and the state will be removed from the analysis.



Click the arrow in the green circle to continue.

Step 2. Select your dataset

Click “View and Compare” under the chart titled “Fatality Rates per 10k.”



Scroll down to the chart “Pedestrian Fatalities per 10k Walking Commuters.”

Step 3. Interpret the chart

The chart shows data from three data points from two-year span. The bars on the chart reflect data for California. The lines reflect data for the highest value of all states, the lowest value, and the median value. By rolling over the chart, you can see the result for each data point.

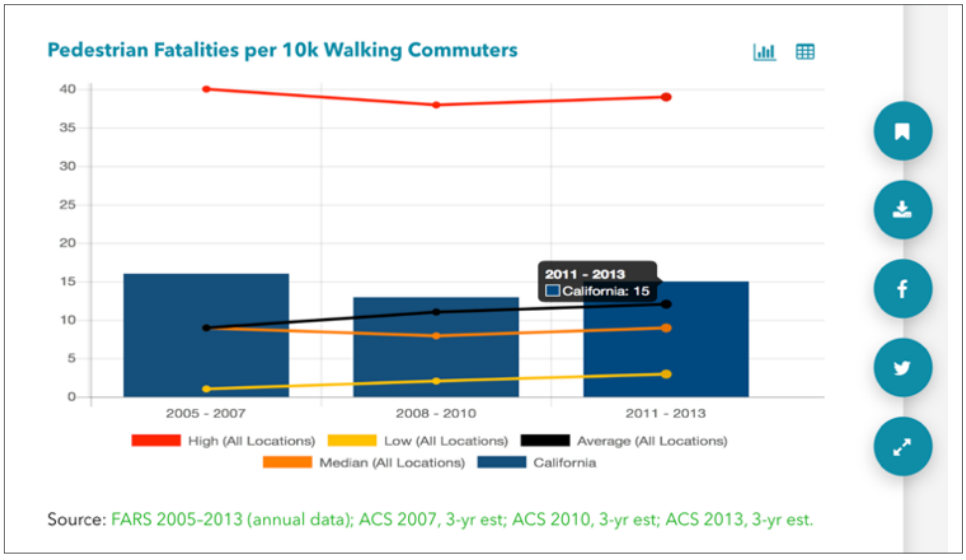


Photo courtesy Wikimedia Commons

Photo courtesy Shawn Turner Pedibikeimages.org

Objective #3: You want to find out if Utah has adopted a goal to increase physical activity levels in the state.

Step 1. Choose your state

From the California data page, hover the mouse arrow over the "Change Location" box in the top right corner of the screen. A dropdown list will appear. Click on "Change Target Location." Click on "U.S. States," and then select Utah.

Add or remove comparison states as you like. Click the arrow in the green circle to continue.

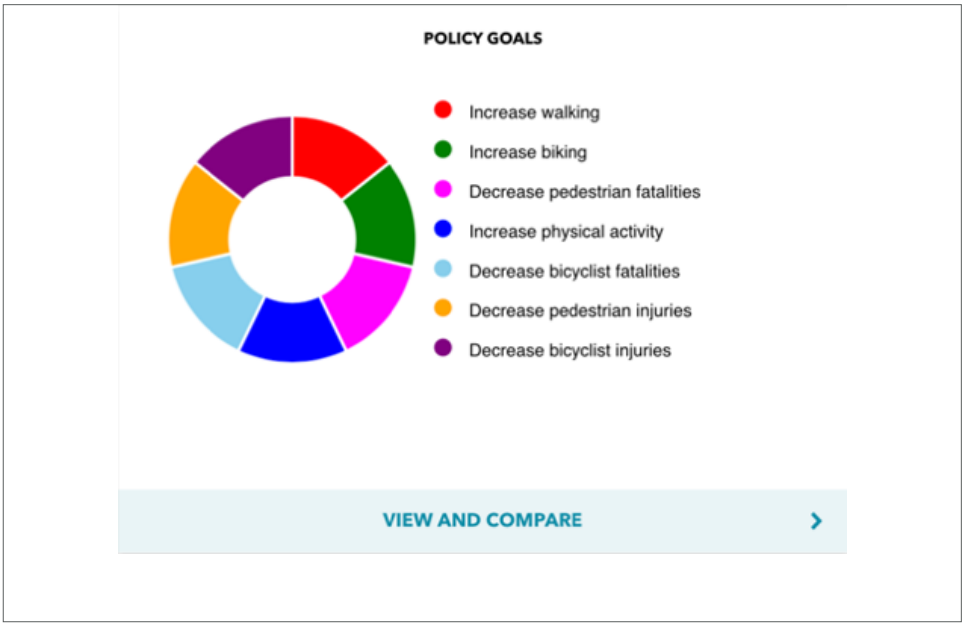
Step 2. Select your dataset

Scroll down to the last chart on the page titled "Policy Goals." Click on "View and Compare."

Step 3. Interpret the chart

All states are represented in this chart, even if you did not select any as a comparison to Utah. However, the state initials for Utah (UT) and any other state you chose to compare will be highlighted in blue text color.

Each ring of the chart represents a different policy or goal that was tracked for states. The dark blue ring is for the goal to increase physical activity levels in the state. If the box in the ring is colored in for the state, then the state has adopted the goal.



RAW DATA

BEYOND THE DATA THAT IS available as ready-made charts, the Benchmarking Report Website also allows users with data management and statistical analysis skills to download spreadsheets of all data collected for the Benchmarking Project. Two spreadsheets are available: one for states and one for cities.

By downloading these spreadsheets, researchers have access to a full directory of raw data, ready for customized analyses and illustrations. This is the most powerful option for those who want to work with the data themselves.

The spreadsheets contain hundreds of data points—some that were discussed in the published reports and some that were not, because of space limitations. Each row is labeled with the data source, unless it is a calculation within the workbook.

Download links are located at the bottom of each page of the website.

Photo courtesy Adam Coppola Pedibikeimages.org

Photo courtesy Wikimedia Commons

Photo courtesy Adobe Stock photos

RELATED RESEARCH AND STORIES FROM THE FIELD

FOR THOSE WHO WANT MORE background on the issues that affect access to active transportation opportunities, the full 2016 Benchmarking Report is available to download in portable document format. Part III of the report, "Make Your Case," may be of particular interest. This section is also replicated on the Benchmarking Project Website to read online.

The Make Your Case section summarizes accepted research findings and recent developments in eight topic chapters:

- Healthy Communities
- Safe Transportation
- Strong Economies
- Connected Routes
- Multimodal Infrastructure
- Effective Governance
- Dedicated Resources
- Engaged Public

Each of these topics explains the relevance of notable trends to broader opportunities for biking and walking. Each topic also steps into the discussion of equity from an active transportation perspective.

National data and trends are summarized in these sections, and all original studies and reports are cited at the end of each topic chapter.

For example, the "Healthy Communities" section discusses the positive association between physical activity and public health, as well as the related inequities. National data from the American Community Survey, Behavioral Risk Factor Surveillance System, and CDC's National Center for Health Statistics is featured throughout the text and in dynamic graphics.

Getting beyond quantifiable data, real world examples of advocacy, policy adoption, and educational programming tell the story of challenges and successes across the United States. For instance, the "Healthy Communities" chapter highlights GirlTrek, a network of more than 25,000 women across the country that addresses the health inequities affecting African American women.

Photo courtesy Girl Trek

The feature on GirlTrek also explores how the organization not only encourages walking, but also is providing a platform that is creating advocates for walkable communities. Other featured efforts throughout the Make Your Case section include Health Impact Assessments, Programs to Educate all Cyclists, and Every Body Walk! Collaborative.

Photo courtesy Adobe Stock photos

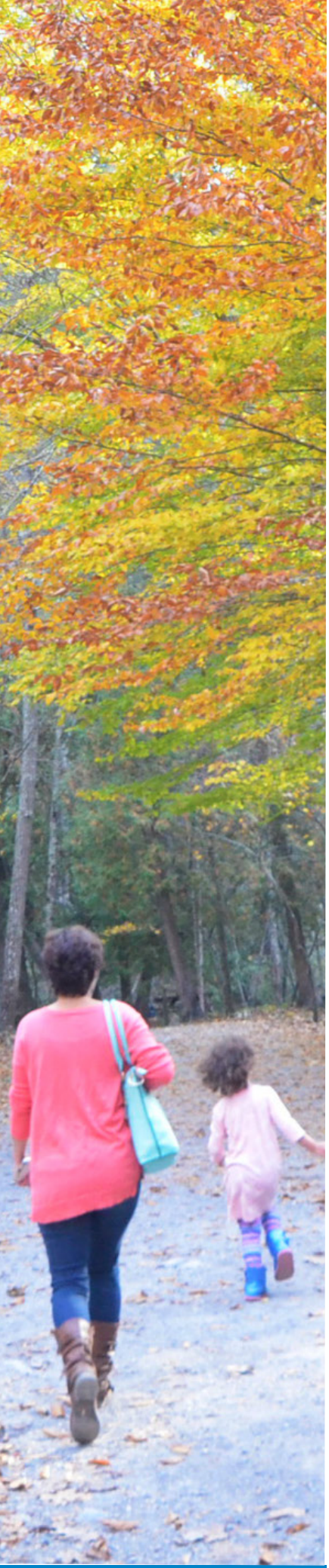


Photo courtesy Wikimedia Commons

CONCLUSION

As public health professionals work to advance health equity in their communities, the Benchmarking Report Website is a valuable resource to help inform decision makers, illustrate data, and inspire advocates to action. Numerous studies show an association between physical activity and public health benefits, including improved physical health, mental health, and social stability.[9,10]

The website was created to offer the invaluable information included in the Benchmarking Report in an easy-to-understand and more accessible format. The website compiles active transportation data into ready-made charts, spreadsheets of state- and city-level data, and written summaries of research findings.

As public health practitioners, researchers, planners, engineers, students, bicycle and pedestrian coordinators and advocates work to advance health equity in their communities, the Benchmarking Report Website presents opportunities to explore the data and present key data points, such as bicyclist and pedestrian fatality rates, active commuting levels, and state funding provisions for bicycle and pedestrian infrastructure projects.

For researchers with data analysis skills, the website offers spreadsheets with all data collected for the Benchmarking Report available to download.

Visit bikingandwalkingbenchmarks.org to learn more about the connections between active transportation and health.

REFERENCES

1. Zimmerman S, Lieberman M, Kramer K, Sadler B. *At the Intersection of Active Transportation and Equity.;* 2015.
2. U.S. Department of Health and Human Services, Office of Minority Health. National Stakeholder Strategy for Achieving Health Equity. Section 1: Development of The National Stakeholder Strategy. https://minorityhealth.hhs.gov/npa/files/Plans/NSS/CompleteNSS.pdf. Accessed February 28, 2018.
3. Sandt L, Combs T, Cohn J. *Pursuing Equity in Pedestrian and Bicycle Planning.;* 2016. http://www.pedbikeinfo.org/cms/downloads/PBIC_WhitePaper_Equity.pdf. Accessed September 6, 2017.
4. HHS. *2012 Environmental Justice Strategy and Implementation Plan.;* 2012. https://www.hhs.gov/sites/default/files/environmentaljustice/strategy.pdf?language=es. Accessed December 22, 2017.
5. Community Partners Steering Committee. *Equity and Environment Agenda.* Seattle, WA; 2016. http://www.seattle.gov/Documents/Departments/OSE/SeattleEquityAgenda.pdf. Accessed December 17, 2017.
6. Robert Wood Johnson Foundation. *A New Way to Talk About the Social Determinants of Health.;* 2010. https://www.rwjf.org/content/dam/farm/reports/reports/2010/rwjf63023. Accessed December 23, 2017.
7. CSDH. *Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health. Final Report of the Commission on Social Determinants of Health.* Geneva; 2008. http://apps.who.int/iris/bitstream/10665/43943/1/9789241563703_eng.pdf. Accessed December 23, 2017.
8. Office of Disease Prevention and Health Promotion. Social Determinants of Health. Healthy People 2020 Topics and Objectives. http://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health. Published 2015.
9. Cohen JM, Boniface S, Watkins S. Health implications of transport planning, development and operations. *J Transp Heal.* 2014;1(1):63-72. doi:10.1016/j.jth.2013.12.004.
10. Mindell JS, Cohen DL, Shelton NJ, Sutaria S, Hayward A, Watkins SJ. Transport and clinical practice. J Transp Heal. 2014;1(1):73-80. doi:10.1016/j.jth.2013.08.001.
11. Brown BB, Smith KR, Hanson H, Fan JX, Kowaleski-Jones L, Zick CD. Neighborhood Design for Walking and Biking: Physical Activity and Body Mass Index. *Am J Prev Med.* 2013;44(3):231-238. doi:10.1016/j.amepre.2012.10.024.
12. NCHS. *Health, United States, 2014: With Special Feature on Adults Aged 55–64.* Hyattsville, MD; 2015. https://www.cdc.gov/nchs/data/hus/hus14.pdf.
13. Anderson CL, Vaca FE, Chakravarthy B. Socioeconomic Disparities in Pedestrian Injuries. *Inj Prev.* 2010;16(Suppl 1):1-289. http://injuryprevention.bmj.com/.
14. Maciag M. *America's Poor Neighborhoods Plagued by Pedestrian Deaths.* Washington, DC; 2014. http://media.navigatored.com/documents/Governing_Pedestrian_Fatalities_Report.pdf. Accessed December 23, 2017.
15. Goddard T, Barsamian Kahn K, Adkins A. *Racial Bias in Driver Yielding Behavior at Crosswalks.* Portland, OR; 2014. doi:10.15760/trec.130.
16. Clifton KJ, Muhs C, Morrissey S, Morrissey T, Currans K, Ritter C. Examining Consumer Behavior and Travel Choices. *Civ Environ Eng Fac Publ Present.* 2013;(February):70.
17. McDonald N. Impact of Safe Routes to School programs on walking and biking. 2015:1-5. http://activelivingresearch.org/sites/default/files/ALR_Review_SRTS_May2015.pdf.
18. Monsere C, Dill J, McNeil N, Clifton K, Foster N, Goddard T. Lessons from the Green Lanes: Evaluating Protected Bike Lanes in the U.S. 2014;(June):179. doi:NITC-RR-583.
19. Stehlin J. Cycles of Investment: Bicycle Infrastructure, Gentrification, and the Restructuring of the San Francisco Bay Area. *Environ Plan.* 2015;47(1):121-137. http://journals.sagepub.com/doi/pdf/10.1068/a130098p.
20. Advocacy Advance. *Active Transportation Equity: A Scan of Existing Master Plans.;* 2015.

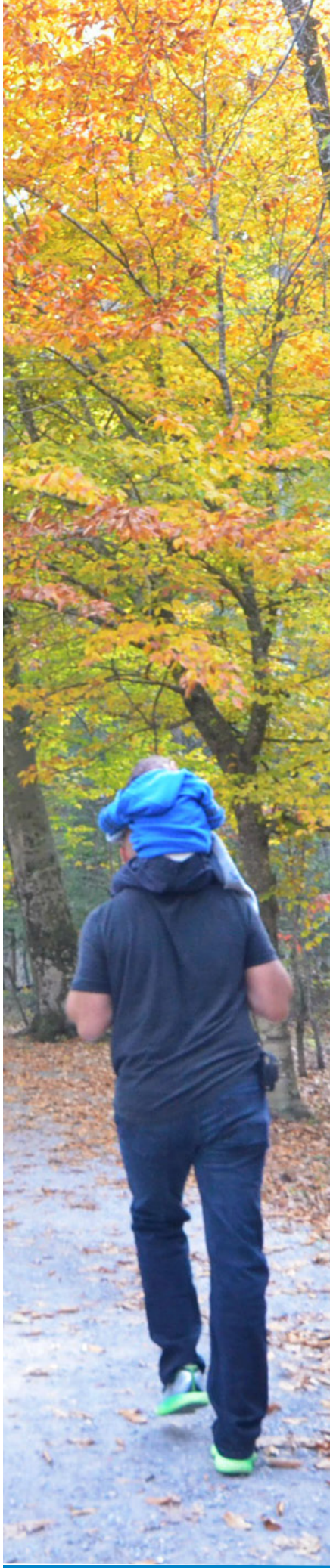


Photo courtesy Wikimedia Commons

The American Public Health Association champions the health of all people and all communities. We strengthen the public health profession. We speak out for public health issues and policies backed by science. We are the only organization that influences federal policy, has a nearly 150-year perspective and brings together members from all fields of public health. APHA publishes the *American Journal of Public Health* and *The Nation's Health* newspaper. At our Annual Meeting and Expo, thousands of people share the latest public health research. We lead public awareness campaigns such as Get Ready and National Public Health Week. Together, we are creating the healthiest nation in one generation. Learn more at www.apha.org.