

THE 2017 UNITED STATES REPORT CARD ON
**WALKING
AND
WALKABLE
COMMUNITIES**



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ABOUT THE NATIONAL PHYSICAL ACTIVITY PLAN ALLIANCE

The Advisory Panel responsible for developing this report was empaneled by the National Physical Activity Plan Alliance (the Alliance), a nonprofit organization that is committed to ensuring the long-term success of the National Physical Activity Plan (NPAP). The Alliance is a coalition of national organizations that have come together to ensure that efforts to promote physical activity in the American population will be guided by a comprehensive, evidence-based strategic plan. The Alliance is governed by a Board of Directors composed of representatives of organizational partners and at-large experts on physical activity and public health (see the NPAP's website below for a complete list of Board of Directors members and Alliance partners).

About the NPAP

The NPAP is a comprehensive set of policies, programs, and initiatives that aim to increase physical activity in all segments of the American population. It is the product of a private-public sector collaborative. Hundreds of organizations are working together to change our communities in ways that will enable every American to be sufficiently physically active. With the NPAP, the Alliance aims to create a national culture that supports physically active lifestyles. Its ultimate purpose is to improve health, prevent disease and disability, and enhance quality of life.

The NPAP has a vision: **One day, all Americans will be physically active, and they will live, work, and play in environments that encourage and support regular physical activity.**

The first U.S. National Physical Activity Plan was released in 2010, and it was modified, updated and re-released in 2016. The 2016 NPAP is comprised of recommendations organized in nine societal sectors:

- Business and Industry
- Community Recreation, Fitness, and Parks
- Education
- Faith-based Settings
- Healthcare
- Mass Media
- Public Health
- Sport
- Transportation, Land Use, and Community Design



Each sector presents strategies aimed at promoting physical activity and provides specific tactics that communities, organizations, agencies, and individuals can use to implement the strategies. In addition, the NPAP includes several overarching priorities that focus on critical cross-cutting initiatives aimed at increasing population-level physical activity.

For more information on the NPAP or The Alliance, visit: www.physicalactivityplan.org

PHYSICAL ACTIVITY GUIDELINES

FOR AMERICANS

The 2008 Physical Activity Guidelines for Americans recommend at least 150 minutes (2 hours and 30 minutes) a week of moderate intensity physical activity, such as brisk walking, for adults.¹ Walking is a multi-purpose activity that provides opportunities for adults to incorporate physical activity for exercise, leisure, and transportation into their busy lives. It's accessible, inexpensive, and safe for almost everyone. Walking also provides a simple way for people who are inactive to become physically active, because it can be adapted to fit a wide range of needs and abilities. As a result, promoting walking is an essential strategy to help adults meet the physical activity guidelines and to enhance overall public health.²

From the *2008 Physical Activity Guidelines for Americans*¹

Guidelines for Adults

- All adults should avoid inactivity. Some physical activity is better than none, and adults who participate in any amount of physical activity gain some health benefits.
- For substantial health benefits, adults should do at least 150 minutes (2 hours and 30 minutes) a week of moderate-intensity, or 75 minutes (1 hour and 15 minutes) a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity. Aerobic activity should be performed in episodes of at least 10 minutes, and preferably, it should be spread throughout the week.
- For additional and more extensive health benefits, adults should increase their aerobic physical activity to 300 minutes (5 hours) a week of moderate-intensity, or 150 minutes a week of vigorous-intensity aerobic physical activity, or an equivalent combination of moderate- and vigorous-intensity activity. Additional health benefits are gained by engaging in physical activity beyond this amount.
- Adults should also do muscle-strengthening activities that are moderate or high intensity and involve all major muscle groups on 2 or more days a week, as these activities provide additional health benefits.

Guidelines for Children and Adolescents

- Children and adolescents should do 60 minutes (1 hour) or more of physical activity daily.
Aerobic: Most of the 60 or more minutes a day should be either moderate- or vigorous-intensity aerobic physical activity, and should include vigorous-intensity physical activity at least 3 days a week.
- **Muscle-strengthening:** As part of their 60 or more minutes of daily physical activity, children and adolescents should include muscle-strengthening physical activity on at least 3 days of the week.
- **Bone-strengthening:** As part of their 60 or more minutes of daily physical activity, children and adolescents should include bone-strengthening physical activity on at least 3 days of the week.
- It is important to encourage young people to participate in physical activities that are appropriate for their age, that are enjoyable, and that offer variety.

2017 U.S. REPORT CARD ON WALKING AND WALKABLE COMMUNITIES ADVISORY PANEL

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OBJECTIVE OF THE 2017 U.S. REPORT CARD ON WALKING AND WALKABLE COMMUNITIES

The primary goal of the 2017 United States Report Card on Walking and Walkable Communities (the Report Card) is to assess the extent to which the U.S. population and U.S. communities meet selected standards for participating in walking and providing physical and social supports for walking behavior. The 2017 Report Card is the first comprehensive, national assessment of walking and walkability in the U.S.



METHODOLOGY

An expert panel, established by the Board of Directors of the National Physical Activity Plan Alliance, developed the U.S. Report Card on Walking and Walkable Communities. The following steps were involved in developing the Report Card:

Creation of the Panel. The Alliance established the Advisory Panel on Walking and Walkable Communities, which included members representing a wide range of expertise across multiple sectors. These included non-profit and for-profit organizations as well as academic institutions. All members brought extensive experience in promoting walking as part of the broad effort to increase physical activity in the U.S. population.

Initial Development of the Report Card. As a first step, the Panel identified the factors that best reflect the status of walking behavior in the United States and efforts to support walking for transportation, work, leisure and exercise. Panel members selected nine factors, two that reflect person-level participation in walking and seven that reflect community characteristics that influence walking behavior.

Definition of the Factors. To guide subsequent research and decision-making, the Panel developed a formal definition of each factor. Members drafted, reviewed, and revised the definitions and the full Panel approved the final definitions.

Identification of Data Sources. For each of the nine factors, a Panel member led the process of identifying possible data sources for evaluating that factor. The Panel then discussed the identified data sources and selected the most appropriate source for each factor.

Specification of Indicators. After considering the definition of each factor and the data sources, members identified a specific indicator for each factor. They then used the indicators to evaluate the status of each factor in the U.S.

Adoption of a Grading System. The Panel adopted an A to F grading system based on either the percentage of persons in the U.S. who engaged in a specified walking behavior or the percentage of states that met a standard for community-level factors. The grading rubric is summarized in the table below.

Assignment of Grades to Factors. The Panel then assigned a grade to each factor, using the grading system.

Report card grading rubric:

| Grades | Percentage of persons who engaged in a specified walking behavior | Percentage of states that met a specified standard |
|--------|---|--|
| A | 90-100% | 90-100% |
| B | 70-89% | 70-89% |
| C | 50-69% | 50-69% |
| D | 30-49% | 30-49% |
| F | < 30% | < 30% |
| INC | Incomplete. At the present time, there is insufficient information available to assign a grade. | |

SUMMARY OF REPORT CARD GRADES

| FACTORS | GRADE |
|--|--------------|
| ADULT WALKING BEHAVIOR | C |
| CHILDREN AND YOUTH WALKING BEHAVIOR | F |
| PEDESTRIAN INFRASTRUCTURE | F |
| SAFETY | F |
| PEDESTRIAN POLICIES | D |
| INSTITUTIONAL POLICIES | F |
| PUBLIC TRANSPORTATION | F |
| WALKABLE NEIGHBORHOODS | D |
| WALKING PROGRAMS | INC |

ADULT WALKING BEHAVIOR C

Definition: Adults in all demographic subgroups report walking on a regular basis for transportation, work, recreation, and/or planned exercise.

Indicator: Percent of adults who report walking for transportation or leisure in at least one bout of 10 minutes or more in the preceding 7 days

Surveillance System: National Health Interview Survey 2015, Cancer Control Supplement

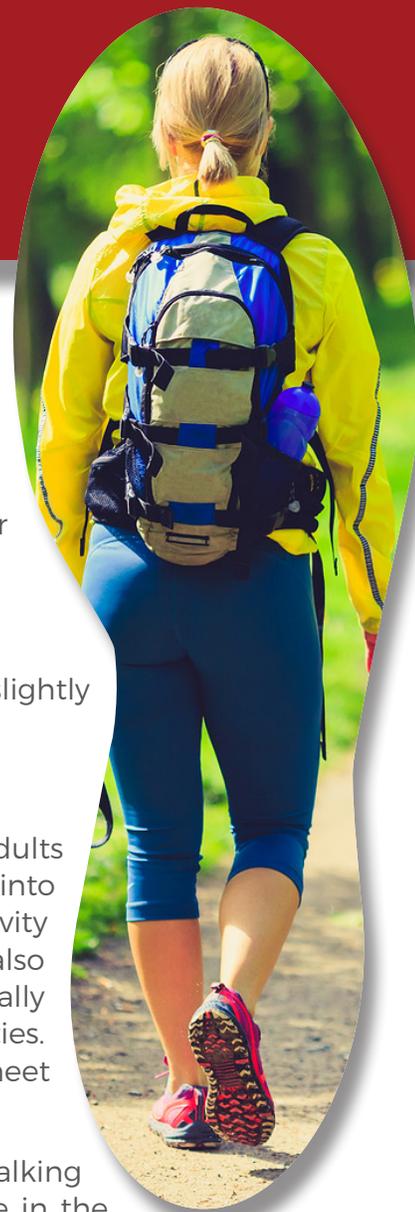
Percent Compliance: 63.9%

Grade and Rationale: The United States receives a grade of C because slightly more than half of adults report walking for transportation or leisure.

Walking is a multipurpose activity that provides many opportunities for adults to incorporate physical activity for exercise, leisure, and transportation into their busy lives. Walking is generally an accessible and inexpensive activity and has a lower risk of injury than vigorous-intensity activities. Walking also may be a simple way to help people who are inactive become physically active because walking can be easily adapted to fit their needs and abilities. As a result, promotion of walking is an essential strategy to help adults meet physical activity guidelines and to enhance overall public health. ²

The United States receives a C because 63.9% of adults reported walking for transportation or leisure in at least one bout of 10 minutes or more in the preceding 7 days. The prevalence of walking for transportation or leisure was higher among women (65.1%) than men (62.8%).³ Although the overall prevalence of adult walking behavior increased significantly from 2005 to 2015, there has been little improvement from 2010 to 2015. ³ However, among women, there was a significant increase (2.6 percentage points) in the prevalence of walking from 2010 to 2015.³

Limitations of the data source: Prevalence of physical activity and compliance with current physical activity guidelines among adults in the United States are measured through a variety of federally administered surveillance systems. All of them rely on respondent self-report and are subject to the inaccuracies associated with this type of data collection method. In addition to NHIS, four other surveillance systems measure walking behavior: the American Community Survey (ACS), the American Time Use Survey (ATUS), the National Household Travel Survey (NHTS) and the Behavioral Risk Factor Surveillance System (BRFSS).⁴ Each surveillance system varies with respect to the frequency and format of the questions. For example, ACS measures mode of transportation to work,⁵ ATUS is a daily log of activities,⁶ and NHTS assesses walking for travel.⁷ Although the BRFSS collects data at the state level, it does not ask respondents specifically about walking behavior.⁸ Rather, it asks respondents to



report the two most frequent physical activities, with walking being an option.⁸ This is different than asking respondents about their walking behavior. Periodically, BRFSS has inquired about walking behaviors in subsets of the population such as people with arthritis.⁹ State-specific data on walking for transportation and leisure is needed to assess this important behavior.

Another limitation is the inability of these data sources to reflect the evolving definition of “walking” that is more inclusive of individuals with disabilities who rely on wheelchairs or other mobility aids. Questions posed on future national surveys should be framed to account for, and encourage, physical activity comparable to walking in able-bodied individuals.

Figure 1. Prevalence of walking for transportation or leisure for at least one bout of 10 minutes on the past 7 days, by gender and race-ethnicity, 2015 National Health Interview Survey³

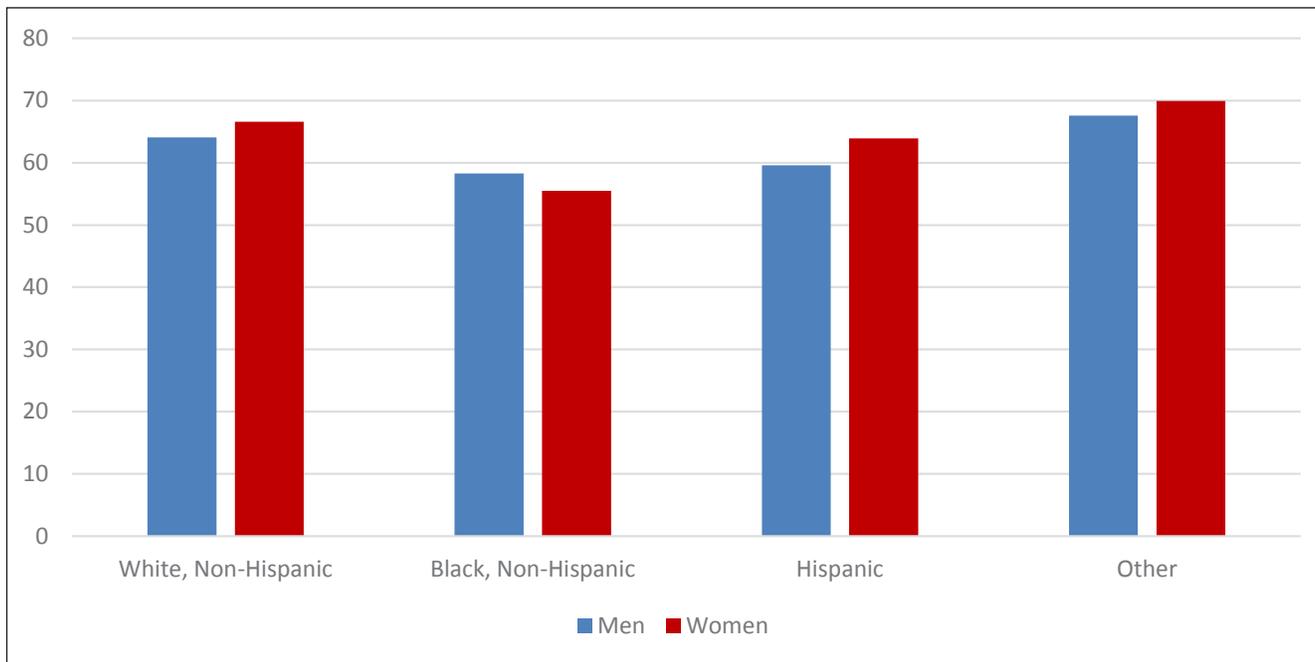
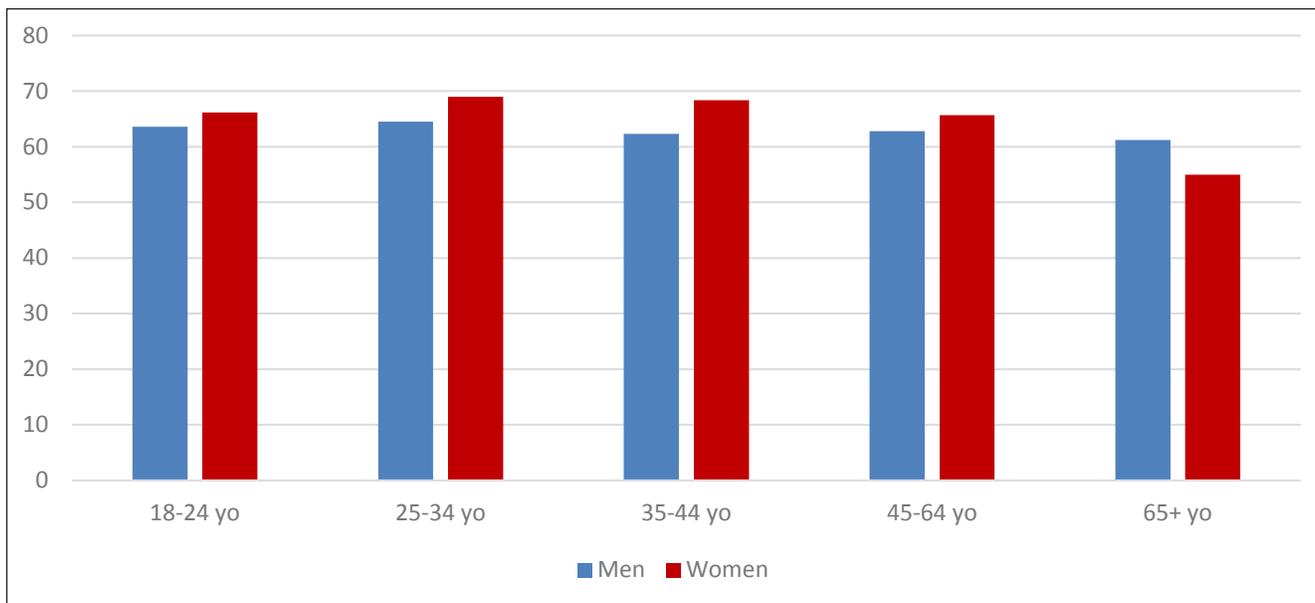


Figure 2. Prevalence of walking for transportation or leisure for at least one bout of 10 minutes on the past 7 days, by gender and age, 2015 National Health Interview Survey³



CHILDREN AND YOUTH WALKING BEHAVIOR

F

Definition: School-age children and youth walk to and from school on a regular basis.

Indicator: Percent of K-8 students who usually walk to and from school, parent reported

Surveillance System: National Household Travel Survey 2009

Percent Compliance: Walking to school 11.7%, walking from school 15.0%

Grade and Rationale: The United States receives a grade of F because less than 30% of children and youth walk to and from school on a regular basis. Only 11.7% of students usually walk to school and only 15% usually walk home, as reported by parents.

The trips to and from school provide prime opportunities for children and youth to walk, allowing for physical activity to be built into daily life and encouraging positive lifelong habits. Studies show that children who walk and bicycle to school are more physically active,^{10,11} have lower body mass index scores and obesity levels,^{12,13} and are more likely to meet physical activity guidelines¹⁴ than students who ride to school. Evidence suggests that for children and youth, physical activity has a positive impact on body composition, bone health, cardiovascular health, cardiorespiratory and muscular fitness, depression, and anxiety.¹⁵

Despite the numerous health benefits of walking to and from school, the majority of students today travel to school by personal vehicle, a significant change from just two generations ago. In 1969, almost 48 percent of elementary and middle school students walked or bicycled to school.¹⁶ Now, more than 45 percent of students ride to school in a personal vehicle.¹⁶ The National Household Travel Survey (NHTS) collects information about how children travel to and from school from parents and guardians, as well as through student travel diaries.⁷ Data from the NHTS informed the grade for children and youth walking behavior.

This shift in travel mode is associated with a number of factors, including distances between school and home, traffic, and other environmental barriers. Parents and guardians responding to a Centers for Disease Control and Prevention (CDC) survey in 2004 cited four major barriers to walking to school:

- Long distances (61.5%)
- Traffic danger (30.4%)
- Adverse weather conditions (18.6%)
- Crime danger (11.7%)¹⁷



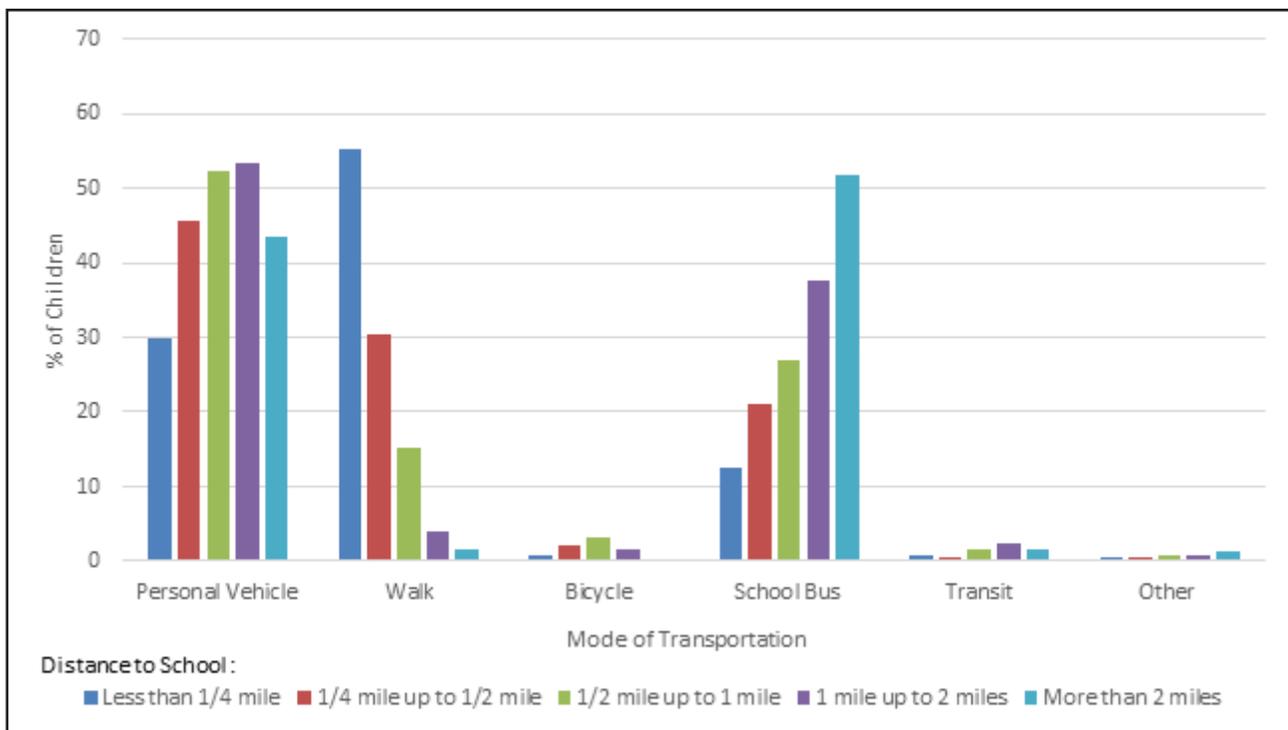
The United States receives a grade of F because less than 30% of children and youth walk to and from school on a regular basis. Only 11.7% of K-8 students usually walk to school and only 15.0% walk home from school, as reported by parents.¹⁸

The distance from a child’s home to his or her school is a strong determinant of travel mode, and nearly half (49.8%) of U.S. students live farther than 2 miles away from their school.¹⁶ Therefore, attaining a grade above a C is highly unlikely without changes to school siting. For students who do live within a walkable distance from school, the environment around the school and along the routes to school can facilitate or deter walking. Places to walk, including sidewalks and pathways, safe street crossings, traffic calming mechanisms, pedestrian-scale lighting, and shade trees all encourage walking.

Limitations of the data source: While the National Household Travel Survey provides the most comprehensive data on student travel modes at the national level, the Department of Transportation conducts the NHTS only periodically. The most recently-published NHTS was conducted in 2009. In addition, the NHTS only captures behavior of students in kindergarten through eighth grade. High school students are not included and national data about high school student travel modes is not available. Lastly, the NHTS relies on respondent self-report and like other national surveillance systems, is subject to the inaccuracies associated with this type of data collection method.

Secondary indicator: The National Household Travel Survey also collects information about the distance from students’ homes to school. These data are presented by usual travel mode to school in Figure 3. Even among students who live within one mile of school, a large portion travel to school by personal vehicle or school bus. This offers an opportunity to increase active transportation among the students who live within one mile of school.

Figure 3. Usual Travel Mode To School by Distance for K-8th Grade Students¹⁶



PEDESTRIAN INFRASTRUCTURE.....F

Definition: Communities provide sidewalks, walking trails, and other infrastructure that supports safe and enjoyable walking.

Indicator: Percent of states with at least \$5.26 per capita funding for biking and walking projects

Surveillance System: Federal Highway Administration (FHWA), as cited in the 2016 Benchmarking Report

Percent Compliance: 10%

Grade and Rationale: The United States receives a grade of F because less than 30% of states (n = 5) meet the standard of \$5.26 per capita funding for biking and walking projects.

Safety concerns and community design are two barriers to walking that directly relate to pedestrian infrastructure.² Safety concerns include pedestrian deaths and injuries, perceived traffic dangers, and fear of crime or perceptions of an unsafe neighborhood.² In 2015, a total of 5,376 pedestrians were killed and 70,000 were injured in motor vehicle crashes.¹⁹ Lack of sidewalks and crosswalks, poor lighting, streets with high-speed traffic, and poorly timed crossing signals increase risk for pedestrians.² Community design is associated with walking behavior. In a recent survey of bicyclist and pedestrian attitudes and behaviors, 23% of respondents do not use sidewalks because there are no sidewalks along their desired route, and 32% of respondents did not have any sidewalks in their neighborhood.²⁰ Improvements to pedestrian infrastructure could increase walkability and increase walking behavior.

Active transportation experts recommend spending 3% of the surface transportation budget on biking and walking projects, a doubling of the current budget (1.5%). The congressionally authorized (via the FAST Act) FY17 budget for surface transportation is approximately \$57 billion dollars, which includes the FHWA (\$44 billion), FTA (\$12.17 billion), and NHTSA (safety) FY17 budgets.

We calculated the per capita funding standard based on 3% of the surface transportation budget in two steps. First, 3% of \$57 billion is \$1.71 billion. Second, \$1.71 billion divided by 325 million people (population of the United States) is \$5.26 per capita for biking and walking projects. For comparison, the national average is \$2.47 per capita. We based the grade on the percentage of states that meet



or exceed the \$5.26 per capita for biking and walking projects. Currently, only 5 out of 50 states (or 10%) meet the standard, which is equivalent to a grade of F. The five states that meet the \$5.26 per capita standard²¹ are listed in Table 1.

Table 1. States that meet the standard of at least \$5.26 per capita for biking and walking projects

| State | Per Capita Funding |
|--------------|--------------------|
| Alaska | \$11.58 |
| Rhode Island | \$10.29 |
| Vermont | \$8.50 |
| Delaware | \$8.28 |
| Montana | \$5.49 |

Limitations of the data source: This standard includes both bicycling and walking, but it isn't possible to separate walking or pedestrian infrastructure spending from bicycling infrastructure spending. In addition, the data don't necessarily represent the amount of safe, pedestrian infrastructure on the ground that people can access. The highest per capita states are those with low populations. Currently, there is no surveillance system that assesses the amount of sidewalks.



SAFETY F

Definition: Communities create infrastructure and establish policies and practices so that pedestrians are safe from motor vehicles, criminal behavior, and other personal threats.

Indicator: Percent of states with fewer than 0.75 pedestrian fatalities per 100,000 population

Surveillance System: National Highway Traffic Safety Administration Fatality Analysis Reporting System, 2015

Percent Compliance: 8%

Grade and Rationale: The United States receives a grade of F because less than 30% of states (n = 4) had fewer than 0.75 pedestrian fatalities per 100,000 population.

Environments that provide safe and comfortable access for all forms of transportation, including walking, decrease pedestrian fatalities and increase walking for leisure and utilitarian purposes.² Environmental characteristics, such as proper lighting, separate travel lanes for cars and people, and lower traffic speeds, increase walking behavior, while vehicle traffic and safety concerns decrease walking.²

Pedestrians are over-represented in all traffic deaths. Although trips by walking make up only 10.9 percent of all trips,²² in 2015 pedestrians made up 15 percent of all traffic fatalities.¹⁹

In 2015, the pedestrian fatality rate was 1.67 per 100,000, with the highest rate in Delaware (3.70) and lowest in Idaho (0.48).¹⁹ The standard is fewer than 0.75 pedestrian fatalities per 100,000 population. Currently, only 4 out of 50 states (8%) meet the standard, which is equivalent to a grade of F.

Table 2 . States that meet the standard of fewer than 0.75 pedestrian fatalities per 100,000 population in 2015 ¹⁹

| State | Pedestrian fatality rate per 100,000 population |
|---------------|---|
| Idaho | 0.48 |
| South Dakota | 0.58 |
| New Hampshire | 0.60 |
| Minnesota | 0.71 |



Five states are close to meeting the standard: Rhode Island (0.76), Vermont (0.80), Iowa (0.80), Kansas (0.82), and Wyoming (0.85).¹⁹ To reach a grade of D, 30% (or 15 states) must reach the standard.

No number of pedestrian fatalities should be considered acceptable. The ultimate goal of zero fatalities is ideal and one that every community should strive to achieve. For example, if every state achieved a pedestrian fatality rate of 0.75 pedestrian fatalities per 100,000 population in 2015, more than 2,900 lives would have been saved. However, the percentage of pedestrian fatalities in traffic crashes increased from 2005 to 2014,²³ and in 2015, the number of pedestrian fatalities was the highest it has been since 1996 (5,376), with approximately 15 pedestrians killed daily.¹⁹



Communities should work to provide all community members with safe access to pedestrian routes. Design and infrastructure improvements and policy changes can increase pedestrian safety and promote changes in population-level walking behaviors.

Limitations of the data source: One of the challenges with this indicator is that rural states are more likely to meet or come close to meeting the standard. It may be difficult to highlight useful parallels for states with high population density. However, lessons learned from the states that have significantly lowered their pedestrian fatalities in recent years can be applied to other states and local communities. Those states and communities can tailor what works and adapt safety measures within their own contexts (e.g., geography, urban/rural, resources available).

Real or perceived safety from violence, crime, harassment, and other unsafe surroundings can alter one's walking behaviors. Traffic safety is often addressed at the community-level through infrastructure changes, yet personal safety reaches beyond infrastructure enhancements alone and into the social environment.²⁴ More data should be collected at the state- and community-level to address the interactions between the built and social environment and its impact on perceived safe and comfortable walking opportunities. As demographics change, and there is a larger population of older adults and those living with disabilities, safe and comfortable places that encourage walking will be more important than ever. Also, those who live in low-income and/or rural communities often have fewer safe walkways, and more data should be collected to better understand what works in a variety of contexts.

The National Highway Traffic Safety Administration also conducts the National Survey of Bicyclist and Pedestrian Attitudes and Behavior.²⁰ These data are useful to gauge perception, which is also a powerful indicator of walking behavior. However, the survey data currently are shared in aggregate and not segmented by state.

PEDESTRIAN POLICIESD

Definition: Communities have adopted policies that are consistent with a complete streets model; that is, streets are built for all users, including pedestrians and bicyclists.

Indicator: Percent of states earning at least 20/30 points on Complete Streets Policies

Surveillance System: Safe Routes To School, National Partnership, 2016 State Report Cards

Percent Compliance: 42%

Grade and Rationale: The United States receives a grade of D because less than half of states (n = 21) meet the standard of at least a score of 20 on the 30-point scale of Complete Streets Policies developed by the Safe Routes To School (SRTS) 2016 State Report Cards.

Complete Streets policies are critical tools for fundamentally reversing the decades-old emphasis on designing and building roadways focused exclusively on providing safe and effective transportation for automobile drivers.²⁵ Although the policies vary in scope and substance from one jurisdiction to the next, a meaningful Complete Streets policy will compel transportation planners to consider not only the needs of automobile drivers, but also pedestrians and bicyclists.²⁵

The Complete Streets section of the 2016 Safe Routes to School National Partnership State Report Card represents comprehensive research categorized in a manner that reflects the pedestrian policy construct and the multi-faceted nature of Complete Streets policies.²⁶ The Complete Streets Policies section includes three categories. First, to earn the full 15 points in the Adoption of a Strong Core State Commitment category, a state's Complete Streets policy must include "mandatory requirements for clear action that demonstrate the state's intent to meet the needs of all users."²⁶ Second, to earn the full 5 points in the Additional Jurisdictions category, a state's Complete Streets policy must include "language addressing the applicability to or role of county or municipal jurisdictions."²⁶ And finally, to earn the full 10 points in the Implementation category, a state's Complete Streets policy must include "two or more clear implementation steps."²⁶

The standard is for states to obtain at least a score of 20 on the Complete Streets section. Currently, only 21 states (42%) meet the standard, which is the equivalent to a grade of D.



Table 3. States that meet the standard of at least 20 points on Complete Streets²⁶

| State | Score |
|---|-------|
| California, Colorado, Georgia, Minnesota, Connecticut, New Jersey | 30 |
| New York, Louisiana | 26 |
| Utah, Indiana, Michigan | 25 |
| Massachusetts, Tennessee, Washington, Virginia, Vermont, Florida, Illinois, Maine, North Carolina, Rhode Island | 21 |

Four states are close to meeting the standard: Hawaii (17), West Virginia (17), Maryland (16), and South Carolina (15). To reach a grade of C, 50% (or 25 states) must reach the standard.

Limitations of the data source: The SRTS Report Cards only reflect Complete Streets policies adopted at the state level. A more complete assessment of pedestrian policies would include a detailed assessment of county and municipality policies. At least one organization, Smart Growth America, has performed excellent research on Complete Streets policies adopted by multiple levels of governing bodies. A synthesis of the work completed by SRTS and Smart Growth America would be a powerful data source.



INSTITUTIONAL POLICIESF

Definition: Workplaces, schools and other institutions have adopted policies that support safe and enjoyable walking.

Indicator: Percent of states earning at least 25/35 points on Safe Routes To School funding and practices

Surveillance System: Safe Routes To School, National Partnership, 2016 State Report Cards

Percent Compliance: 20%

Grade and Rationale: The United States receives a grade of F because less than 30% of states (n = 10) have state legislation and appropriations for a Safe Routes to School Program.

The mission of Safe Routes to School (SRTS) is to increase the number of children who safely walk or bike to school. Safe Routes to School programs help communities and schools build safer sidewalks and crosswalks, map the best routes for travel, and promote active transportation to school.²⁷ Many SRTS programs within communities, districts, or schools stem from higher-level policies. Policies, particularly at the state level, can guide local and organization practice.²⁸ A state law (not just a resolution) that establishes criteria or provides guidance for schools to develop SRTS programs is an important first step in making active transportation programs more commonplace.

However, these laws need to be accompanied by adequate and systematic funding for programs throughout the state.²⁶ In addition to funding, state legislation provides oversight and puts into place systems for distributing these funds. Dedicated appropriations for active transportation education or infrastructure can facilitate promotion of walking and encourage representation of disparate communities. Infrastructure development or improvement projects, such as sidewalks, crosswalks, or other pedestrian-friendly features, benefit not only students, but all residents of the surrounding community.

Twenty-five points were awarded based on three funding criteria (provides special consideration for STRS (10), obligated previous funds (10) and/or dedicated state funding for SRTS (5) for a total of 25 points; in addition to 10 other points for additional supports related to having a state SRTS coordinator (5) and/or providing assistance to SRTS initiatives (5)).²⁶ For a state to meet the standard, it must have received at least 25 out of 35 criterion points. Currently, only 10 of 50 states (or 20%) meet the standard, which is equivalent to a grade of F.



Table 4. States that meet the standard of at least 25 points for SRTS funding and practices²⁶

| State | Score |
|-------------------------|--------------|
| Florida, Minnesota | 35 |
| Washington | 34 |
| Massachusetts, Michigan | 30 |
| Ohio, Oregon, Utah | 29 |
| California, Colorado | 25 |

Five states are close to meeting the standard: Virginia (24), Maryland (24), Georgia (19), Vermont (19), and Maine (19). To reach a grade of D, five more states must reach the standard.

Limitations of the data source: Data for the indicator came from the Safe Routes To School National Partnership, Making Strides: 2016 State Report Cards. This indicator focused on policies and practices around schools and student travel. There is not a known data source for policies at workplaces and other institutions. There is a need to develop and implement a system for monitoring the existence of such policies.



PUBLIC TRANSPORTATIONF

Definition: Community members have access to and utilize a well-developed public transportation system.

Indicator: Percent of states with at least a 6% public transportation commute share

Surveillance System: American Community Survey, 2011-2015

Percent Compliance: 14%

Grade and Rationale: The United States receives a grade of F because less than 30% of states (n = 7) have a public transportation commute share greater than the standard of 6%.

Research indicates that regular transit users are likely to get meaningful amounts of physical activity as part of their transit trips, most likely due to the need to walk to and from the transit stop or station at each end of the trip. For example, in one study nearly one-third of regular transit riders accumulated 30 minutes of physical activity as part of their trips, and half got at least 19 minutes of daily physical activity.²⁹ Others have shown that “active” commuters who use some combination of walking, bicycling, and transit have lower body mass index and obesity risk, and a better overall metabolic profile.^{30,31} And a number of studies have demonstrated that access or proximity to a quality transit network is associated with more physical activity.^{32,33}

In the US, 5.1% of commute trips to work involve public transportation, and transit mode shares across the country range from 0.4% in Mississippi and Arkansas to over 9% in Illinois, 11% in New Jersey, and 27% in New York.³⁴ The standard is for at least 6% of commuting trips to work in all states to be made by transit, which would dramatically raise the national total. Evidence from successful states and other countries suggests this is an attainable target. Currently only 7 out of 50 states (or 14%) meet the standard, which is equivalent to a grade of F.



Table 5. States that meet the standard of at least 6% of commuting trips to work made by transit, 2011-2015 ³⁴

| State | Percent of trips by transit |
|---------------|-----------------------------|
| New York | 27.8 |
| New Jersey | 11.1 |
| Massachusetts | 9.8 |
| Maryland | 9.0 |
| Illinois | 9.1 |
| Washington | 6.0 |
| Hawaii | 6.5 |

Three states are close to meeting the standard: Pennsylvania (5.6%), California (5.2%), and Connecticut (4.8%).³⁴ To reach a grade of D, 30% (or 15 states) must reach the standard. Notably, seven additional states are at transit mode shares of 3.5% or higher.

Limitations of the data source: A challenge with this indicator is that public transportation systems are more likely to be developed and successful in more urbanized and densely developed regions, which gives an “advantage” in this category to states with more urbanized areas. A look at the states meeting the standard reveals that all have one or more large cities that have well developed transit systems. However, interest in developing and utilizing transit in more rural settings is increasing, due to the great benefits to low-income and senior populations and people with physical disabilities. And many of the states with lower transit mode share include urban areas that are, or could be, working to improve transit coverage and use, which will raise their levels over time. Although the target of 6% may be challenging, it clearly is attainable even in states with large rural areas (New York, Illinois, Washington) if transit is effective in and around the cities and towns.

A limitation of this data source is that it only captures commute trips to work. Ideally, transit as a percentage of all trips would provide a more complete indicator of access to and use of public transportation systems. However, for now, commute trips to work is the best indicator available.

Secondary indicator: Per capita expenditure on public transportation is a secondary indicator of success in this category. Comparing per capita expenditures on transit can give a sense of a state’s investment in transit, even before use and ridership increase. It also gives credit to states that are investing in rural transit systems (such as the successful North Central Montana Transit system) that effectively serve areas with lower population densities.

WALKABLE NEIGHBORHOODSD

Definition: Neighborhoods are designed to support walking for transportation, work, recreation, and planned exercise.

Indicator: Percent of states with at least 30% of the population living in highly walkable neighborhoods

Surveillance System: U.S. Environmental Protection Agency

Percent Compliance: 32%

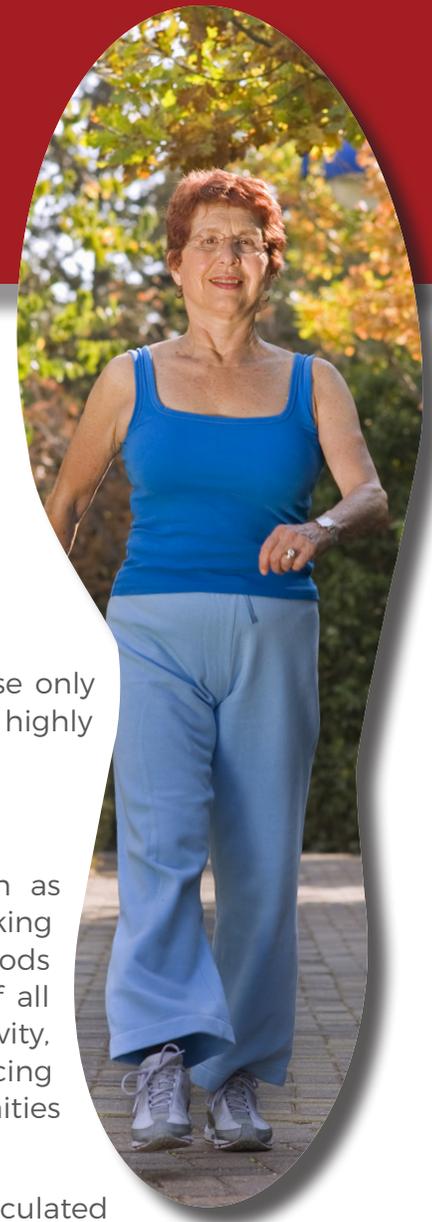
Grade and Rationale: The United States receives a grade of D because only 32% of states (n = 16) meet the standard of $\geq 30\%$ of residents living in a highly walkable neighborhood.

Neighborhoods with sidewalks, transit stops, and destinations, such as parks, stores, and places of employment that encourage walking and biking can be described as walkable communities.^{35,36} Walkable neighborhoods support walking for leisure and utilitarian purposes among people of all ages.^{37,38} Because walking is an easy and convenient form of physical activity, it can help people meet physical activity guidelines.¹ Therefore, enhancing walkability promotes public health goals, and creating walkable communities should be a high priority for public policymakers.

Walkability scores for all census block groups in all 50 states were calculated using publically available data from the US Environmental Protection Agency's Smart Location Mapping database.³⁹ Population density, employment and household entropy, and street intersection density were extracted and used to create a standardized measure of walkability for census blocks using the formula: $population\ density + entropy\ index + intersection\ density/3$. Walkability scores were divided into quartiles, and the top 25% of census block groups were designated as "highly walkable areas." Population data used for the calculation are from the 2010 decennial census at the block group level.

Currently, scientific literature does not provide evidence-based standards for neighborhood walkability. Neither do studies indicate the level of walkability needed to support positive health outcomes. Because there are multiple ways to compute walkability scores, with different variables involved,^{40,41} the lack of set thresholds for walkability standards is not surprising.

For this Report Card on Walking and Walkability, the standard for walkability was set at 30% or more of residents living in a highly walkable neighborhood. A 30% standard provides states with an achievable benchmark to guide environmental and policy changes. Currently, only 16 out of 50 states (or 32%) meet the standard, which is equivalent to a grade of D. States that meet the standard are Arizona, California, Colorado, Florida, Illinois, Massachusetts, Nebraska, Nevada, New Jersey,



New York, North Dakota, Oregon, Pennsylvania, Rhode Island, Utah, and Washington. Twenty-two states are close to meeting the standard, with 20-29% of their population living in highly walkable areas. In order for the US to reach a grade of C, 25 states (an additional 9 states) must reach the standard of 30% or more population of their population living in highly walkable areas.

Limitations of the data source: A strength of the data used to assess walkability is that it includes information on all census tracts in all states. However, the data do not capture subjective measures of neighborhood environment, primarily perceived safety, greenness (e.g., street trees) and aesthetics.³⁶ Such measures will be available in future surveillance systems. For example, the EnviroAtlas, under development by the US EPA,⁴² will contain metrics specifically related to green space and health, such as estimated walking distance to a park entrance, percent of residential population within 500m of a park, estimated percent tree cover within 26m of a road edge, and tree canopy/green space along walkable roads. Additional information on EnviroAtlas is available at <https://www.epa.gov/enviroatlas>.

WALKING PROGRAMSINC

Definition: Structured, organized activities that promote and enable walking for transportation, work, recreation, and/or exercise.

Indicator: Percent of states within which communities consistently provide structured programs that promote and enable walking for transportation, work, recreation, and/or exercise.

Surveillance System: Not available

Percent Compliance: Not available

Grade and Rationale: A grade of Incomplete was assigned because no existing database or surveillance system monitors provision of community walking programs on a national basis in the United States.

STEP IT UP!, the Surgeon General’s Call to Action to Promote Walking and Walkability includes the following goal: “Promote programs and policies to support walking where people live, learn, work and play”.² Associated with that goal is this strategy: “Promote community walking programs and policies that make it safe and easy for residents to walk.”² Consistent with this important Call to Action, numerous communities across the United States have launched programs to promote and enable walking. Nonetheless, few best practice models exist, and those that do exist have not been widely disseminated. Most existing programs have limited reach – i.e., they engage a small percentage of community members – and inconsistent or no evaluation. As noted above, no system exists for monitoring the availability of walking programs in communities across the U.S.

Despite these limitations, some outstanding examples of community-based programs to promote walking do exist. These include:

Wheeling Walks is a comprehensive, community-wide social marketing campaign in Wheeling, West Virginia.⁴³ It operates primarily through the mass media and is designed to motivate residents to walk in their community. The campaign also encourages community leaders to implement policy and environmental changes that support walking. For more information, please visit: <http://www.wheelingwalks.org/>.

Walk to Fly uses point of decision prompts, in the form of attractive signs, to encourage travelers to walk between concourses in Atlanta’s Hartsfield-Jackson International Airport.⁴⁴ The program has been evaluated extensively and shown to be effective at increasing the percentage of people who select walking rather than riding a train through the airport. For more information, please visit: <http://www.cdcfoundation.org/blog-entry/atlanta-airport-walk-to-fly-program>.



Walk with a Doc is a national program that involves walking with a physician. Dates, times, and places for walks are posted on-line. Walks are led by local physicians who respond to health-related questions during the walks. For more information, please visit: <http://walkwithadoc.org/>.

Sound Steps is a program of Seattle Parks and Recreation. The program targets seniors and offers weekly walking programs at numerous locations. The program links participants to other walkers who are on a comparable level and provides with tools to measure progress. For more information, please visit: <http://www.seattle.gov/parks/seniors/soundsteps.htm>.

Limitations of the data source: No adequate data source was identified. There is a need to develop and implement a system for monitoring the status of U.S. communities with regard to providing programs aimed at promoting walking.

Table 6. States meeting the standards for walkable communities

| State | Pedestrian Infrastructure | Safety | Pedestrian Policies | Institutional Policies | Public Transportation | Walkable Neighborhoods |
|---------------|---------------------------|--------|---------------------|------------------------|-----------------------|------------------------|
| Alabama | | | | | | |
| Alaska | X | | | | | |
| Arizona | | | | | | X |
| Arkansas | | | | | | |
| California | | | X | X | | X |
| Colorado | | | X | X | | X |
| Connecticut | | | X | | | |
| Delaware | X | | | | | |
| Florida | | | X | X | | X |
| Georgia | | | X | | | |
| Hawaii | | | | | X | |
| Idaho | | X | | | | |
| Illinois | | | X | | X | X |
| Indiana | | | X | | | |
| Iowa | | | | | | |
| Kansas | | | | | | |
| Kentucky | | | | | | |
| Louisiana | | | X | | | |
| Maine | | | X | | | |
| Maryland | | | | | X | |
| Massachusetts | | | X | X | X | X |
| Michigan | | | X | X | | |
| Minnesota | | X | X | X | | |
| Mississippi | | | | | | |
| Missouri | | | | | | |

| State | Pedestrian Infrastructure | Safety | Pedestrian Policies | Institutional Policies | Public Transportation | Walkable Neighborhoods |
|----------------|----------------------------------|---------------|----------------------------|-------------------------------|------------------------------|-------------------------------|
| Montana | X | | | | | |
| Nebraska | | | | | | X |
| Nevada | | | | | | X |
| New Hampshire | | X | | | | |
| New Jersey | | | X | | X | X |
| New Mexico | | | | | | |
| New York | | | X | | X | X |
| North Carolina | | | X | | | |
| North Dakota | | | | | | X |
| Ohio | | | | X | | |
| Oklahoma | | | | | | |
| Oregon | | | | X | | X |
| Pennsylvania | | | | | | X |
| Rhode Island | X | | X | | | X |
| South Carolina | | | | | | |
| South Dakota | | X | | | | |
| Tennessee | | | X | | | |
| Texas | | | | | | |
| Utah | | | X | X | | X |
| Vermont | X | | X | | | |
| Virginia | | | X | | | |
| Washington | | | X | X | X | X |
| West Virginia | | | | | | |
| Wisconsin | | | | | | |
| Wyoming | | | | | | |

LIMITATIONS AND CHALLENGES

In pursuing the task of developing the first U.S. Report Card on Walking and Walkable Communities, the Panel encountered some important challenges and, of necessity, was required to work within certain limitations. The key limitations and challenges were:

- **Data Sources.** As noted in the preceding sections, the Panel’s ability to evaluate the status of walking and walkable communities in the United States was limited by the availability of suitable surveillance systems and other data sources. The Panel sought data sources that included metrics that were closely aligned with the definition of the factor, that provided state-level information, and that were part of an ongoing, national surveillance system. For some factors included in the Report Card, the Panel readily identified suitable data sources meeting those criteria (e.g., adult walking behavior, safety). However, in some cases, data sources that were acceptable, but less than ideal, were used (e.g., public transportation, institutional policies, pedestrian infrastructure). In the case of Walking Programs, the Panel found no acceptable data source.
- **Urban Bias.** The Panel acknowledged that the process of establishing a comprehensive system for evaluating the status of walking and walkable communities in the U.S. was influenced by the nature of the existing research base. Further, the process was limited by the types of professional experience that has informed best practices up to the present. The Panel also acknowledged that, to date, much more research has been conducted and much more professional experience has been gained in urban and suburban areas than in rural areas. Accordingly, the evaluation scheme represented in the Report Card may better reflect the status of the U.S. in its more populous communities.
- **Inclusion and Equity.** Walking is the most common form of physical activity, and successful promotion of increased population-level physical activity will almost certainly require more persons to walk more frequently for transportation, work, leisure and/or exercise. However, the Panel recognized that disability precludes walking, defined in the traditional sense, as a form of physical activity for many persons. Increasingly the term “walking” is being operationally defined to include movement supported by wheelchairs and other assistive devices such as walkers and canes (Lakeshore Research Collaborative). The Panel supports this trend and intends for the factors and indicators included in the Report Card to be applied in a manner that is inclusive and that supports greater equity in walking and walkability in the future.
- **Establishing a Baseline.** The Panel selected standards and opted for a grading scheme that resulted in assignment of D and F grades for most of the factors included in the Report Card. However, it was the Panel’s view that each of the standards is attainable, as evidenced by the fact that many individuals were found to meet the person-level standards and some states met each of the community-level standards. This Report Card is the first of its kind in the U.S., and it should be viewed as providing a baseline against which future progress can be evaluated. The Panel recognized that many important initiatives are being implemented across the U.S., and as those come to fruition, it is anticipated that future Report Cards will demonstrate positive trends and improved grades.

DATA SOURCES

American Community Survey (ACS)

The American Community Survey (ACS) is the “long” on-going version of the United States Census, conducted by the United States Census Bureau. The ACS includes questions about demographic, social, economic, housing, and community characteristics. Data on commuter modes of transportation from 2011 to 2015 informed the Report Card. For more information on the ACS, please visit:

<https://www.census.gov/programs-surveys/acs/>.

Fatality Analysis Reporting System (FARS)

The Fatality Analysis Reporting System (FARS) is produced by the National Highway Traffic Safety Administration (NHTSA), an agency within the United States Department of Transportation. FARS provides data from motor vehicle crashes that result, within 30 days of the crash, in the death of an occupant of a vehicle or a non-motorist. Reports are released yearly. Data collected in 2015 informed the Report Card. For more information on FARS, please visit

<https://www.nhtsa.gov/research-data/fatality-analysis-reporting-system-fars>.

Fiscal Management Information System (FMIS)

The Fiscal Management Information System (FMIS) is managed by the Federal Highway Administration (FHWA), an agency within the United States Department of Transportation. The FMIS is a comprehensive system that records apportionment and allocation data and then tracks project obligations and expenditures against those balances. FMIS data from FY 2012-2014 were reported in The Alliance for Bicycling and Walking 2016 Benchmarking Report. This report informed the Report Card. For more information on the FMIS or the FHWA, please visit: <https://www.fhwa.dot.gov/about/>

National Health Interview Survey (NHIS)

The National Health Interview Survey (NHIS) is a surveillance system conducted by the National Center for Health Statistics, U.S. Centers for Disease Control and Prevention. The NHIS monitors the nation’s health through personal household interviews of noninstitutionalized civilians. The interview consists of two parts: a core set of questions administered yearly and supplemental questions that change from year to year. The 2015 Cancer Control Supplement to the NHIS informed the Report Card. For more information on the NHIS, please visit: <https://www.cdc.gov/nchs/nhis/index.htm>.

National Household Travel Survey (NHTS)

The National Household Travel Survey is a nationally representative survey conducted by the Federal Highway Administration, U.S. Department of Transportation. Data are collected on all trips taken on a randomly assigned day. The 2009 survey included special sections that collected information on students’ travel to and from school. Data from the 2009 NHTS informed the Report Card. For more information on the NHTS, please visit: <http://nhts.ornl.gov/introduction.shtml>.

Making Strides: State Report Cards on Support for Walking, Bicycling, and Active Kids and Communities

Safe Routes to School National Partnership is a nonprofit organization that focuses on quality of life for kids and communities by promoting healthy living, safe infrastructure, and physical activity, starting with bicycling and walking to school and beyond. The Complete Streets score of the Safe Routes to School National Partnership State Report Cards of 2016 informed the Pedestrian Policies grade. The Safe Routes to School funding and supportive practices score informed the Institutional Policies grade. For more information on Safe Routes to School National Partnership, please visit: <http://www.saferoutespartnership.org/>

Smart Location Database (SLD)

The Smart Location Database (SLD) is housed in the United States Environmental Protection Agency (EPA). The SLD is a nationwide geographic data resource for measuring location efficiency. It includes more than 90 attributes summarizing characteristics such as housing density, diversity of land use, neighborhood design, destination accessibility, transit service, employment, and demographics. Most attributes are available for every census block group in the United States. Data from the SLD informed the Report Card. For more information on the SLD and the EPA, please visit: <https://www.epa.gov/>.

Abbreviations and Definitions

| Abbreviation | Definition |
|-----------------|---|
| ACS | American Community Survey |
| ATUS | American Time Use Survey |
| BRFSS | Behavioral Risk Factor Surveillance System |
| CDC | Centers for Disease Control and Prevention |
| DHHS | Department of Health & Human Services |
| EPA | Environmental Protection Agency |
| FARS | Fatality Analysis Reporting System |
| FAST Act | Fixing America's Surface Transportation Act |
| FHWA | Federal Highway Administration |
| FMIS | Financial Management Information System |
| FTA | Federal Transit Administration |
| INC | Incomplete |
| K | Kindergarten |
| NHIS | National Health Interview Survey |
| NHTS | National Household Travel Survey |
| NHTSA | National Highway Traffic Safety Administration |
| NPAP | National Physical Activity Plan |
| SLD | Smart Location Database |
| SRTS | Safe Routes To School |
| The Alliance | National Physical Activity Plan Alliance |
| The Panel | Report Card Advisory Panel |
| The Report Card | The 2017 US Report Card on Walking and Walkable Communities |

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NATIONAL Physical Activity Plan



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