

INFO BRIEF

Who is Walking or Biking to School?

Patterns from the 2017 National
Household Travel Survey
and Future Directions



Pedestrian and Bicycle
Information Center
www.pedbikeinfo.org

Introduction

Information about school transportation mode share and the factors associated with active travel to school can be used by organizations for planning, prioritization, reporting, and evaluation. While local and State-level data collection practices and uses vary, the U.S. Department of Transportation's National Household Travel Survey (NHTS) is the only source for national-level surveillance data about school travel. These data can be used to measure movement toward achieving national health objectives and as benchmarks for local communities evaluating their own mode shares.

Estimates from the most recent NHTS, conducted in 2017, show that while rates of walking and bicycling to school are consistent with estimates from the past two decades, the estimates are still far below rates from the 1960s and 1970s. An analysis of the 2017 data, conducted by the Pedestrian and Bicycle Information Center in collaboration with the UNC Department of City and Regional Planning, found that 10.7% of students 5-17 years old usually participated in active travel to school (9.6% walked; 1.1% biked).¹ These findings were consistent with Federal Highway Administration's analysis.² When the analysis was limited to grades

K-8, active travel to school was slightly higher at 11.1%. These numbers provide a snapshot, but when interpreting results and planning interventions for walking and bicycling, practitioners need to consider the complex combination of factors that affect a student's ability to walk or bike to school and the distance and routes they must travel, including: the built environment, perceptions of safety, school policies, availability of other transportation options, school assignment/school choice, and school siting.

2017 School Travel – By the Numbers

In 2017, roughly one in ten students age 5-17 commuted to school by walking or bicycling. Walking levels were highest for elementary grades, while biking levels were highest for middle schoolers. This finding is consistent with the fact that elementary schools tend to have smaller catchment areas and the fact that middle school students (and their parents) tend to be more confident in their ability to bike to school. The median distance to school in 2017 was 2.7 miles (elementary 2.1 miles, middle 3.2 miles, and high school 3.6 miles).

The strongest predictors of walking and bicycling to school were a household's distance to school and the population density of the surrounding area. While this result is not surprising and conjures images of active travel in urban and suburban settings, walking is the most common mode in both urban *and* rural areas when considering students that live within a half-mile of the school they attend. For all households, rates of walking decrease with distance and rates of biking peak when the distance to school was between a half mile and one mile.

It is commonly accepted that walking and bicycling could be a realistic option for school trips that are less than one mile, so studies about school travel usually examine the correlates of active travel to school for this subset of households. A regression analysis of the 2017 NHTS suggests that race, ethnicity, and gender were not significantly related to



active travel to school. Other factors like the student's school grade, household vehicles per driver, and household income were associated with the decision to walk or bike to school.¹



Pockets of Success for Active Travel to School

While the NHTS data offer a national-level snapshot of student travel, they cannot tell the full story of individual communities. There are some parts of the country, measured at the core-based statistical area (CBSA)—a geographic area that consists of one or more counties anchored by an urban center with a population of at least 10,000 people and connected via patterns of commuting—that have exceptionally high bike-to-school rates.

Investigating how places with much higher than average walking or biking rates have instituted robust walking and biking to school practices provides an opportunity for more places to replicate their practices.

The Pedestrian and Bicycle Information Center has a study underway to compare a small number of communities with much higher than average (i.e., nationwide in 2017, 1.2% of students in

elementary and middle school usually biked to school¹) bike-to-school rates to communities in similar geographic areas and with similar student demographics that have low or typical biking rates to identify those characteristics, practices, and policies that create an environment that results in more biking to school. Look for findings from this study in early 2020.

Putting the Numbers in Context

Increasing the proportion of students who walk and bike to school remains a national health goal and surveillance data about active school travel helps measure progress while considering how rates of active travel vary according to demographic and geographic factors. However, surveillance data do not help answer the questions of “why” and “how” behind rates of walking and bicycling. For example, analysis of the 2017 NHTS suggests that active school travel decreases as household income decreases, but ultimately further research is needed to show whether more affluent households have greater access to safer bicycling and walking infrastructure and whether such active school travel income-based disparities parallel income-based health disparities.

Differences in survey methodology for NHTS survey years make it challenging to assess whether students are living further away from the school they attend compared to previous decades. Growing geographic distance between home and school may be an important part of the conversation about active school travel, but perhaps it is a topic best studied at the local-, regional-, or State-level given differences in school choice, school assignment, and the siting of new schools in growing areas. Conversations about school commute distances and school-related congestion can be informed by the 2017 finding that 50% of all students usually reached school by car. School-related trips during the morning peak corresponded to 10% of total vehicle trips and 8% of the total vehicle miles traveled during the 7:00am-9:00am time period.

While there are some instances where States, regions, and local communities want to know the absolute number of student walking and bicycling to school (e.g., infrastructure project prioritization or evaluation), this type of data collection effort isn't always necessary for efforts intended to improve conditions for walking and biking to school. Conducting observations and engaging in community conversations with a careful eye towards assuring inclusion of traditionally disinvested neighborhoods are often the fastest ways to identify and immediately begin addressing barriers to active school travel. Talking to students, parents, school staff, district staff, and local agency planners about the changes they have observed over time is also another important form of data collection when it comes to understanding who is walking and biking to school and the "why" or "how" behind those decisions so that problems can be addressed and successes can be celebrated and replicated.

Notations

¹ Kontou, R., McDonald, N., Brookshire, K., Pullen-Seufert, N.C., & LaJeunesse, S. (2019). U.S. Active School Travel in 2017: Prevalence and Correlates. Manuscript submitted for publication.

² U.S. Federal Highway Administration (2019). Children's Travel to School 2017 National Household Travel Survey, FHWA NHTS Brief. Available: https://nhts.ornl.gov/assets/FHWA_NHTS_%20Brief_Traveltoschool_032519.pdf.



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Since its inception in 1999, the Pedestrian and Bicycle Information Center's (<http://www.pedbikeinfo.org>) mission has been to improve the quality of life in communities through the increase of safe walking and bicycling as a viable means of transportation and physical activity. The Pedestrian and Bicycle Information Center is maintained by the University of North Carolina Highway Safety Research Center with funding from the U.S. Department of Transportation Federal Highway Administration and the National Highway Traffic Safety Administration.



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