

Getting Results: SRTS Programs That Increase Walking and Bicycling to School

SafeRoutes

National Center for Safe Routes to School



Communities initiate Safe Routes to School (SRTS) programs for a variety of reasons. Most SRTS programs aim to increase the number of students who safely walk or bicycle between home and school. As a result, monitoring progress toward achieving this goal is critical in determining the effectiveness of program efforts and whether program changes are needed.

This brief summarizes trends in walking and bicycling to school, provides an overview of eight programs that sought to increase walking and bicycling rates and measured their achievements, and outlines methods that local SRTS programs can use to measure the progress of their activities.

What's the Problem?

The rates of children who usually walk or bicycle to school have decreased dramatically over the past four decades, from 48 percent in 1969 to 13 percent in 2009. In 1969, of students living less than one mile from school, 89 percent usually walked or bicycled to school. In 2009, 35 percent of students living less than one mile from school usually walked or bicycled to school.¹ Distance to school, traffic and weather are commonly cited by parents as barriers to their child walking and bicycling to school.²



Location	Results
Walking and Bicycling	
Coconino County, AZ: Kinsey Elementary	Increase in walking and bicycling from 6% to 25%
Boulder, CO: Foothill Elementary	Increase in walking and bicycling from 22% to 30%
Indianapolis, IN: St. Thomas Aquinas School	Increase in walking and bicycling from 15% to 38%
McCook, NE: McCook Elementary	Increase in walking and bicycling from 10% to 25%
Walking	
Revere, MA: A. C. Whelan School	Increase in walking from 9% to 15%
Columbia, MO: West Boulevard Elementary	Increase in walking from 5% to 22%
Bicycling	
Arlington, MA: Hardy Elementary	Increase in bikes parked at bike racks from 11 to 26
Stevensville, MI: Roosevelt Elementary	Increase in bikes parked at bike racks from 6 to 65

Benefits of Walking and Bicycling

The benefits of walking and bicycling to school extend to students, families and communities. Time spent walking and bicycling to school can contribute toward the recommended 60 minutes of daily physical activity that children need.³ Some educators report that walking and bicycling students arrive at school on-time, energized and ready to learn. From the school community and neighborhood perspectives, more students walking and bicycling to school can help foster parental involvement with the school, increase sense of neighborhood and decrease traffic congestion. Many communities around the country recognize the value of walking and bicycling to school and have SRTS programs to increase walking, bicycling or both.

Communities Are Making Improvements

SRTS programs encourage walking and bicycling to school in a variety of ways. Activities include installing or upgrading pedestrian and bicycle infrastructure, conducting education and encouragement campaigns, and increasing law enforcement along the route to school.

Evaluation and measurement play a critical role in helping SRTS programs understand the barriers to students walking and bicycling to school and the outcomes associated with their activities. The programs described on the following pages aimed to increase walking and bicycling rates, used different strategies to make the change and were able to quantify progress toward their goals.



Success Stories: Increases in Walking and Bicycling



Coconino County, Arizona: Kinsey Elementary

Arizona's open enrollment policy and Coconino County's hot climate were two major barriers to walking and bicycling at Kinsey Elementary. The school implemented a comprehensive safety education and encouragement program called "Walk. Bike. Get Fit." Activities included a punch card incentive program and bicycle rodeos. In addition, Kinsey students completed a photojournalism project to increase awareness of child pedestrian safety issues.

In order to measure the results of the program, teachers tracked the number of students walking and bicycling to school using the National Center for Safe Routes to School's Student Travel Tally. Kinsey Elementary measured a fourfold increase in walkers and bicyclists, from 30 students at the beginning of their SRTS program to 120 students. As a result, student walking and bicycling rates rose from six percent to twenty-five percent. This program was supported by a \$39,000 award from the Arizona Department of Transportation.



Boulder, Colorado: Foothill Elementary

Foothill Elementary School had been participating in International Walk to School Day for many years before a group of parents decided to start a Safe Routes to School Program. Initial encouragement activities like "Walk and Wheel Wednesdays" increased the number of student walkers and bicyclists. Foothill Elementary also benefited from nearby infrastructure improvements, including repair of a shared-use path and construction of a sidewalk connecting the path to the school. The school also started using a frequent biker program called "Boltage," which uses a scanner to identify bicyclists via helmet tags and walkers via backpack tags. The Boltage system uploads this information into a school travel database.

In addition to counts from the Boltage system, Foothill teachers conducted in-class student travel counts. These measurements uncovered an increase in student walking and bicycling rates from 22 percent to 30 percent. This program was supported with a \$1,000 non-infrastructure grant from Bicycle Boulder, the City of Boulder and the Boulder Valley School District, and two larger awards from the Colorado Department of Transportation totaling \$223,000 that were split between six area schools.

Indianapolis, Indiana: St. Thomas Aquinas School

St. Thomas Aquinas School is a private, Catholic school in Indianapolis with about 200 students. Though 85 percent of students lived within walking distance of the school, less than 15 percent of students walked or bicycled to school. A coalition of parents, neighbors, teachers and administrators designed a Walking School Bus program and advocated for new road signs and increased pedestrian crossing times. Local law enforcement also increased their presence and placed several speed trailers around the school.

The school measured changes in student walking and bicycling rates using the National Center for Safe Routes to School's tools to survey parents' perceptions of active travel to school and conduct in-class student travel counts. The program measured an increase in students who walked or bicycled to school from less than 15 percent to 38 percent. The St. Thomas Aquinas SRTS activities were made possible with the assistance of a \$52,000 award from the Indiana Department of Transportation.



McCook, Nebraska: McCook Elementary

Despite a majority of students living within walking distance of McCook Elementary, only a few students usually walked or bicycled to school. With the goal of encouraging more students to walk and bicycle regularly, McCook partnered with the Southwest Nebraska Public Health Department to create a SRTS program. Activities included educating McCook families on the benefits of walking and bicycling to school, encouraging students to walk and bicycle through organized Walking School Buses and a school-wide walking contest, and increasing law enforcement presence along the routes to school.

In order to measure students' walk and bicycle participation, teachers used the Student Travel Tally, and parents completed an online Parent Survey. These efforts helped measure an increase in the rate of students walking and bicycling from 10 percent to 25 percent. The program was funded through a portion of an \$8,761 award from the Nebraska Department of Transportation.

Success Stories: Increases in Walking

Revere, Massachusetts: A. C. Whelan School

A. C. Whelan School started their Safe Routes to School program in the hopes of increasing the number of students who walked to school and reducing traffic congestion. Educational activities included SRTS informational packets for families and encouragement events like "Walk to School Wednesdays" and the "Golden Shoe Contest," which held friendly walking competitions between classes.

In order to measure changes in the number of students walking and their miles walked, the school created and distributed different color-coded walking passports based on an individual student's walking route. Parent volunteers then punched a hole in the student's passport for each day walked. The school's student-led environmental group, the "Green Team," also counted the number of cars dropping off students at school each morning. A. C. Whelan measured an increase in the percentage of students walking, from nine percent to fifteen percent, and a forty-eight percent increase in the number of miles walked. The program was supported by a \$1,000 mini-grant from the National Center for Safe Routes to School.



Columbia, Missouri: West Boulevard Elementary

While twenty-five percent of West Boulevard Elementary's 300 students lived within walking distance, less than five percent regularly walked to school. In an effort to change this, their SRTS program created a well-organized Walking School Bus system, established new walking routes and re-routed school buses to a new drop-off location that enabled bused students to walk to school for ten minutes every day. Children driven by their parents were also given access to the alternate drop-off location.

West Boulevard asked teachers to keep track of walking students. The tracking revealed an increase in the percent of walking students from less than five percent to twenty-two percent. This program was initially funded by a grant from the Robert Wood Johnson Foundation and later by a \$15,725 award from the Missouri Department of Transportation.

Success Stories: Increases in Bicycling



Arlington, Massachusetts: Hardy School

As a result of the temporary closing of another Arlington elementary school, Hardy Elementary School's student body was scheduled to increase by more than 100 students. In response to this planned influx of students, Hardy partnered with the East Arlington Livable Streets (EALS) Coalition to encourage students to walk and bicycle to school regularly. Education and encouragement activities included an informational campaign, the creation of a Bike Train and the development of a neighborhood map, which featured walking routes and the Bike Train routes and pickup times.

In order to measure the number of students who bicycled to school, daily counts were conducted of the number of bicycles parked at the school's bicycle racks. Hardy School measured an increase in the number of bicycles parked at its bicycle racks from 11 to 26. The education and encouragement activities were supported through a \$1,000 mini-grant from the National Center for Safe Routes to School.

Stevensville, Michigan: Roosevelt Elementary School

Roosevelt Elementary School is located in a semi-rural community on a busy street that lacked sidewalks. This lack of sidewalks created a major safety concern for students walking or bicycling to school. The school's SRTS program received funding to install sidewalks on the main road and for the construction of "Roosevelt Crossings," a trail built on the north end of the school that is outfitted with street signs and a working traffic light to help educate students about safe ways to walk and bicycle. The Roosevelt program also provided families with educational materials and created an incentive system for students who walked and bicycled to school.

In order to keep track of the number of students who bicycled to school, teachers would perform daily counts of bicycles in the bicycle racks. The average number of bicyclists at Roosevelt rose from six bicyclists to 65 bicyclists. The program received a \$306,708 award from the Michigan Department of Transportation for both infrastructure and non-infrastructure activities.

How to Measure Student Walking and Bicycling Numbers

Measuring walking and bicycling can help a local SRTS program evaluate its work, identify needed improvements, pursue additional funding or even market its efforts. A simple way to gauge progress is to take an initial measurement of walking and bicycling before any strategies are implemented and then repeat the measurement after efforts have been under way for a time.

Naturally, it's important to consider additional factors unrelated to the SRTS program that may have contributed to results, such as weather. SRTS programs described on the previous pages used a variety of straightforward methods that condense into three steps:

1. Before taking any action to address the number of students walking and bicycling to school, measure the current walking and bicycling participation.

Walking and bicycling rates can be measured using several approaches:

- The National Center's Student Travel Tally and Parent Survey were designed to capture student walking and bicycling rates;
- Direct observation, such as counting bicycles stored during the school day;
- Electronic identification and tracking systems, which scan student-specific barcodes attached to helmets and/or backpacks;
- Student punch cards, which can be used to record the number of trips made on foot or by bicycle. A color-coded punchcard system can even help schools estimate the number of miles walked.

2. Conduct activities intended to increase student walking and bicycling. The National Center for Safe Routes to School's SRTS Guide contains a broad range of examples of education, encouragement, enforcement and engineering solutions. Available at: <http://guide.saferoutesinfo.org>.

The National Center's Shifting Modes study examines program elements linked with increases in walking and bicycling to school. A brief summary document and in-depth report are available at: <http://saferoutesinfo.org/program-tools/shifting-modes-report>.

3. Repeat the count method used in Step 1 while encouragement activities are underway and, if possible, at a logical end-point like the end of a school semester or after the completion of an infrastructure improvement. Compare the measurements and look for changes over time.



Conclusion

Increasing the number of students walking and bicycling to school is central to the efforts of many Safe Routes to School programs, and many programs have successfully attained this goal. Incorporating evaluation and measuring the targeted behaviors before implementing activities allows SRTS programs to track progress and show-off their achievements.

For more information on program evaluation, see the SRTS Evaluation Guide at: <http://guide.saferoutesinfo.org/evaluation/index.cfm>.

For more information on the National Center's Student Travel Tally and Parent Survey, visit: <http://www.saferoutesinfo.org/data-central/data-collection-forms>.

For additional SRTS program success stories on a variety of topics, visit: <http://www.saferoutesinfo.org/data-central/success-stories>.

¹ The National Center for Safe Routes to School (2011). How Children Get to School: School Travel Patterns from 1969 to 2009. Accessed April 12, 2012. Available at: http://saferoutesinfo.org/sites/default/files/resources/NHTS_school_travel_report_2011_0.pdf.

² The National Center for Safe Routes to School (2010). Safe Routes to School Travel Data: A Look at Baseline Results. Accessed April 20, 2012. Available at: http://saferoutesinfo.org/sites/default/files/SRTS_baseline_data_report.pdf.

³ U.S. Department of Health and Human Services (2008). Physical Activity Guidelines for Americans (ODPHP Publication No. U0036). Available at: <http://health.gov/paguidelines/pdf/paguide.pdf>.

