

Promoting Safe Walking and Biking to School: The Marin County Success Story

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Walking and biking to school can be an important part of a healthy lifestyle, yet most US children do not start their day with these activities.

The Safe Routes to School Program in Marin County, California, is working to promote walking and biking to school. Using a multipronged approach, the program identifies and creates safe routes to schools and invites communitywide involvement. By its second year, the program was serving 4665 students in 15 schools.

Participating public schools reported an increase in school trips made by walking (64%), biking (11.4%), and carpooling (91%) and a decrease in trips by private vehicles carrying only one student (39%).

WALKING AND BIKING TO school provide a convenient opportunity to incorporate physical activity into a child's daily routine, yet only about 1 US child in 9 starts the day by walking or biking to school. About one third of children take a bus to school and half are driven in a private vehicle.¹ Increasing the proportion of children walking and biking to school are 2 of the national health objectives for 2010.²

THE PROGRAM

Marin County is a middle- and upper-class community on the California coast just north of San Francisco. Its population of 247 707 includes about 35 000 school-aged children.³ In 1999, 2 local residents began working

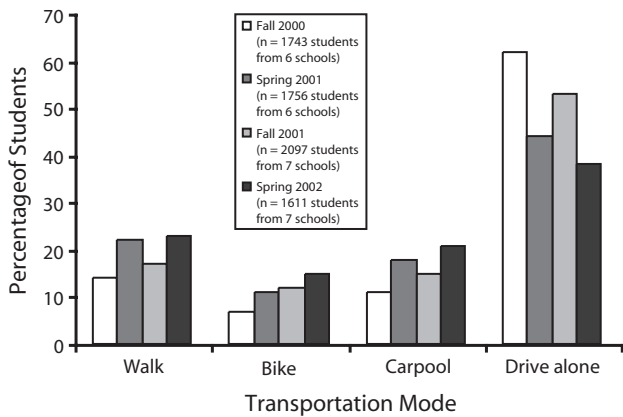
to increase the number of Marin County children walking and biking to school and to decrease the number of school trips made by private vehicles. By 2000, the Marin County Safe Routes to School Program, initially funded by a grant from the Marin Community Foundation, had been established. In August 2000, the program received a \$50 000 grant from the National Highway Traffic Safety Administration. During the 2000–2001 school year, the program served about 3500 students in 9 schools (7 public and 2 private); by the 2001–2002 school year, 4665 students in 15 schools (12 public and 3 private) were enrolled; in the 2002–2003 school year, 7609 students in 21 schools (17 public and 4 private) are participating. Enrolled schools include elementary and middle schools.

The program has only 4 paid staff. One of the 2 founding members is the program director, and the other works several hours a week supervising and promoting the program. A full-time educator is employed to develop the program's school curriculum and oversee classroom education. A traffic engineer assists in identifying and creating safe routes for participating students. A private consulting firm,

hired during the second year, oversees and evaluates the program. The Marin County Safe Routes to School Program relies heavily on parent, teacher, and community volunteers to carry out its broad range of activities (Table 1). The program requires each school to identify a volunteer team leader prior to enrolling.

During the first 2 years of the program, modes of school transportation were determined by student surveys. For 3 consecutive days in the fall, prior to the start of the program, and then again in the spring, prior to the end of school, volunteers visited classrooms and, using a show of hands, asked children to indicate the transportation mode they used in traveling to school that morning. Results from the 3 days were averaged. Because the survey relied on inexperienced volunteers, results were often incomplete; some schools did not conduct the surveys at all and other schools did not survey all classrooms. Six of 9 schools participated in the fall 2000 and spring 2001 surveys. Seven of 15 schools participated in the fall 2001 and spring 2002 surveys.

By spring 2002, more than \$1 million in additional funding had been received, including dona-



Note. A “carpool” is defined as 2 or more students per private vehicle, and “drive alone” is 1 student (with driver) per private vehicle.

FIGURE 1—Transportation choices in the public schools participating in the Marin County Safe Routes to School Program, 2000–2002.

tions from local foundations, local businesses, and grants from the Marin Community Foundation, Marin County, the City of San Rafael, and the California Departments of State Services and Transportation. Funding for the 2002–2003 school year is expected to exceed \$2 million. Much of this funding is earmarked for infrastructure changes (Table 1) to decrease the traffic danger faced by students walking and biking.

EVALUATION

The student transportation surveys (Figure 1) reveal an increase in walking, biking, and carpooling in the participating public schools during the first 2 years of the Marin County Safe Routes to School Program. From fall 2000 to spring 2002, there was a 64% increase in the number of children walking, a 114% increase in the number of students biking, a 91% increase in the number of students carpooling, and a 39% decrease in the number of children arriving by

private car carrying only one student.

The data in Figure 1 include 6 schools for the first school year and 7 for the second school year. Only 2 schools participated in surveys both years. Analysis restricted to these 2 schools produced results similar to those in Figure 1 (data not shown). School bus trips are not shown

because only 2 schools offered bus transportation. Of the 3 private schools, data were collected in only 2 of the schools and only during the second year of the program. These 2 private schools, with a total of 401 students (data not included in Figure 1) drawn from larger geographic areas than in the public schools, recorded only modest increases in walking (1%) and carpooling (5%) and small decreases in biking (–1%) and “drive alone” transport (–4%). As discussed below, improved and expanded program evaluation is planned.

DISCUSSION

The Marin County Safe Routes to School Program provides a successful model for promoting safe walking and biking to school. Decreased rates of walking and carpooling and increased rates of “drive alone” in fall 2001 may be secondary to the addition of new schools, lack of program activities over the summer, or both. The program is

making an important difference to participating communities by enhancing health, reducing traffic congestion, and helping build a greater sense of community. Although barriers to walking and biking to school, such as distance, traffic danger, crime, and the availability of volunteers, will vary by community, many aspects of this program will be useful to other interested communities.⁴ Efforts to create safe and accessible routes for children to walk and bike to school can facilitate safe walking and biking for people of all ages.

NEXT STEPS

The program, now in its third year, has maintained its base curriculum while planning an expansion to recruit more schools, including high schools. Future goals include expanding and perfecting data collection and analysis by using professional statisticians. Further analysis could include evaluating the effectiveness of the individual program activities, analyzing transporta-



Lagunitas School students get help from a volunteer crossing guard.

TABLE 1—Activities of the Safe Routes to School Program: Marin County, California, 2000–2002**Mapping Safe Routes to School**

- Town-wide programs established to identify and create safe routes for walking and biking to each school.
- Volunteers walk the routes and report findings to the group documenting routes for their school.
- Findings pooled on a master map.
- Solutions to make walking and biking safer are designed (sidewalks, improved pedestrian signage and crossings, a pedestrian bridge, extension of existing bike trail, bike lanes, etc.).
- Funds for needed traffic infrastructure changes are obtained through grant applications, public presentations leading to donations, and local government funds.

Walk and Bike to School Days

- All schools participate in “International Walk to School Day” (beginning of October); many schools also have scheduled monthly or even weekly “Walk to School Days.”
- Many schools provide drinks and treats to children walking or biking to school.
- “Staging Areas” are established where students who live too far away can be dropped off and then walk the rest of the way to school.
- Some schools also encourage children to take school buses rather than travel by private vehicle.

Frequent Rider Miles Contest

- Children are issued “tally cards” with 20 possible points per card.
- Children earn 2 points for walking or biking and 1 point for taking the bus or carpooling.
- At 20 points, children get a small prize and can enter a raffle for larger prizes.
- Children are encouraged to submit multiple cards for the raffle during the contest period.

Classroom Education

- Safety training is provided through videos, discussions, presentations, and hands-on “bicycle rodeos.” A “toolkit,” developed by the program and available to all participating schools, includes curriculum guidelines for teaching pedestrian and biking safety.
- Using age-appropriate, local examples, children were taught about transportation choices and the environment, physical activity for health, the power of community involvement, and the interrelatedness of all species and habitats.
- In one middle school, children produce their own videos on “the role bicycles play in our society.”

Walking School Buses and Bike Trains

- Organized groups of children that walk and bike together are called “walking school buses” and “bike trains,” respectively. These groups allow parents to share the responsibility of supervising children’s trips and provide the children with a group of friends to travel with.
- Geographic mapping systems showing the homes of the participating children facilitate establishment of these walking and biking groups. Some schools posted these geographic maps along with parent contact information to facilitate formation of “walking school buses” and “bike trains.”

Newsletters and Promotions

- Throughout the year, the volunteer team leaders at each school are supplied with template flyers, fact sheets, posters, and newsletters (newsletters are also mailed to elected officials, town staffers, and other interested parties).
- Local newspapers have run feature articles about the program.
- The program uses an e-mail listserv, an e-mail distribution list, and a Web site (see “Resources”).
- An annual countywide forum is held to welcome new schools to the program and allow participating teams of volunteers at all schools to meet and talk with one another.

Networking and Presentations on the State and National Level


- Safe Routes to School staff have been invited speakers at numerous state, national, and international conferences.

KEY FINDINGS

- Marin County’s Safe Routes to School Program has been successful in promoting walking and biking to school.
- Much of the program’s success can be attributed to the contributions made by parents, teachers, and community volunteers.
- This community-based program also led to an increased rate of carpooling to school and a substantial drop in the use of private vehicles for transporting students to school.


4 Fantastic Reasons to Walk & Ride
It's Fun • Less Pollution • It's Healthy • Less Traffic

It's Healthy



"When I wake up, I'm tired, but when I walk, by the time I get to school I'm ready to go. I've got a lot more energy and I feel more athletic."
— Seventh Grader

FACT: Physical Activity during childhood helps build and maintain healthy bones, muscles, and joints, control weight, build lean muscle, and reduce fat and is related to higher levels of self-esteem.
— Centers for Disease Control and Prevention




SAFE ROUTES TO SCHOOLS
MARIN COUNTY
saferoutestoschools.org

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4 Fantastic Reasons to Walk & Ride
It's Fun • Less Pollution • It's Healthy • Less Traffic

It's Fun!

"I like riding my bike because you can go anywhere you want. In a car you can only fit like four kids, but with bikes it's fun to go with as many as you want."
— Lagunitas Middle School Student



FACT: Nine out of ten parents who walk their children to school see it as an ideal way to meet new people.
— Department of Transport, Local Government and the Regions, England



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Promotional posters made and used by the Marin County Safe Routes to School program.

tion modes by travel distance, assessing health outcomes such as improved physical fitness, having closer surveillance for travel-related injuries, measuring changes in traffic congestion, and using comparison communities. ■

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This report was accepted May 21, 2003.

Contributors

C.E. Staunton reviewed the study design, research methods, and data analysis and then wrote the report. D. Hubsmith and W. Kallins, who founded and continue to run the Marin County Safe Routes to School Program, were central in collecting and analyzing the data presented in the report and also reviewed the report.

Acknowledgments

While writing this article, Catherine Staunton was supported by funds from the CDC/Oak Ridge Institute for Science and Education fellowship program. Some information for this article was provided by the Marin County Safe Routes to School Program Evaluation (August 2002) produced by Nelson/Nygaard Consulting Associates, with principal authors Bonnie Nelson and Ezra Joseph Catten.

We also thank Andrew Dannenberg, Jairam Lingappa, and Elizabeth Fortenberry for reviewing the manuscript and making valuable suggestions.

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4. Centers for Disease Control and Prevention. Barriers to walking and biking to school—United States, 1999. *MMWR Morb Mortal Wkly Rep*. 2002; 51:701–704.

Resources

- Marin County Safe Routes to School. Available at: <http://www.saferoutestoschools.org/>.

- "Kids Walk-to-School" Program. Available at: <http://www.cdc.gov/nccdphp/dnpa/kidswalk/resources.htm>.
- Walk to School Day USA. Available at: <http://www.walktoschool-usa.org>.
- International Walk to School Day. Available at: <http://www.iwalktoschool.org>.
- National Highway Traffic Safety Administration. Available at: <http://www.nhtsa.dot.gov/people/injury/pedbimot/ped/saferouteshtml/toc.html>.
- National SAFE KIDS Campaign. Available at: http://www.safekids.org/tier3_cd.cfm?folder_id=183&content_item_id=3410.