

INTERVENTION

Safe Routes to School

PedNet Coalition
Columbia, MO



DISSEMINATION CATEGORY

Safe Routes to School is an emerging intervention based on its use of evidence-based strategies. Developed in practice, it shows promise but evidence in support of effectiveness is not yet available.

OVERVIEW

Intent of the intervention: The PedNet Coalition's Safe Routes to School (SRtoS) Program is an emerging intervention designed to increase children's physical activity levels by promoting biking and walking to school and providing safe environments for children to do so. A comprehensive SRtoS program addresses multiple levels of the socio-ecologic model with a primary focus on promoting individual and social group behavior change and changing the community environment to make it safer and easier for children to participate in active transport to school.

Intended population: SRtoS programs are intended for children and adolescents in grades K-12.

Setting(s): Community; Schools - Elementary, Middle, and High

Background: Promoting and providing active and safe ways to travel to and from school has the potential to improve the health of children and community at large. The National Center for Safe Routes to School outlines five complementary strategies that can be used as a framework for establishing a successful SRtoS program. Those strategies include Engineering, Education, Encouragement, Enforcement, and Evaluation.

- **Engineering** – includes the design, implementation, operation and maintenance of traffic control devices or physical measures, including low-cost as well as high-cost capital measures. Examples include the construction of sidewalks and crosswalks.
- **Enforcement** – children, parents, adult school crossing guards, school personnel and neighborhood watch programs working in conjunction with law enforcement to enforce rules for safe walking, bicycling and driving to and from school.
- **Encouragement** – generating excitement and interest in walking and bicycling through special events, mileage clubs, contests, on-going activities (such as organized group transport to school), and more.
- **Education** – teaching pedestrian, bicyclist, and traffic safety and creating awareness of the benefits and goals of SRtoS.
- **Evaluation** – determining if the aims of the program are being met and assuring resources are directed toward efforts that show the greatest likelihood of success. Evaluation often includes assessing the safety of walking/biking routes.

More information about each strategy can be found at:
<http://guide.saferoutesinfo.org/steps/index.cfm>.

PedNet has many programs and initiatives that work toward encouraging active travel, including a SRtoS program. PedNet's SRtoS program consists of Walk to School Days, a Walking School Bus program, Bike Brigades, and Youth Bicycle Safety Education that all children must complete before participating in a Bike Brigade. The PedNet SRtoS program incorporates all five complementary strategies.

Length of time in the field: PedNet organized its first Walk to School Day in October of 2003, incorporated the Walking School Bus program into its SRtoS program in the fall of 2005, and started the Youth Bicycle Safety Education in 2006 with the bike brigades to follow in 2008.

HEALTH EQUITY CONSIDERATIONS

PedNet's Safe Routes to School program is implemented in Columbia, MO public and private schools. In 2011-12, the racial breakdown of the Columbia School District student population was 63% White, 20% Black, 6% Hispanic, 5% Asian, and 6% Multi. The racial/ethnic representation of students participating in the SRtoS program is unclear. However, PedNet intentionally reaches out to low-income schools and neighborhoods and partners with the Columbia Housing Authority to provide the Walking School Bus to children living in public housing.

IMPLEMENTATION

Main Components

- **Build partnerships** - PedNet began its SRtoS program by first developing broad partnerships with a variety of agencies in the community to support the program. Partners included a public health agency, school districts, Partners in Education, National Safe Kids Coalition, police departments, elected representatives, local media, sports teams, and entertainers.
- **Assess the walking environment** - PedNet next assessed the walking environment that children would walk through to get to schools using the Safe Routes to School Walkability Assessment tool. This allowed PedNet to identify safe walking and biking routes and to identify aspects of routes that needed improving to become safe.
- **Get to know the population** - Pednet conducted surveys with parents and children to identify barriers and facilitators related to children walking to and from school.
- **Start with a Walk to School Day** - PedNet first organized dozens of Walk to School Days at various schools. Starting with one special event, like a Walk to School Day, helps to build support from community partners and to build momentum to design an on-going program. Walk to School Days also challenge the community's assumptions about what is possible, offer a new "normal," and create a culture shift that can be used to grow a regular program. PedNet recommends organizing a minimum of 2-3 Walk to School Days before organizing a Walking School Bus program.

A Walk to School Day is similar to other school events, such as field trips, sports days, fundraisers, fairs, etc. A Walk to School Day should make a big impact and ideally include hundreds of children (getting more than 50% of students to walk to school on one day is achievable at most schools). Components of such an event should include:

- Promotion
- Staging posts one mile from school
- Special guests
- System to track participation (for example, have children fill out card when they arrive at school to enter a drawing)
- A healthy snack

After each Walk to School Day, send thank you notes to everyone who participated; monitor all media stories about the event and distribute to participants; calculate distances walked by students and distribute to participants (may also calculate calories burned, gallons of gas saved, greenhouse emissions saved, etc.); and calculate the same numbers if 50% of all students walked to school every day and distribute to participants. These efforts lay the groundwork for an on-going program.

- **Expand to an on-going program** – Use a Walk to School Day to launch the Walking School Bus program, as it will create additional excitement around the program. Consider starting with a once-a-month Walking School Bus program or once a week Walking School Bus program (“Walking Wednesdays”). PedNet’s fall program runs from mid-September to Thanksgiving, while the spring program runs from early March to the end of school year. Some Walking School Bus routes run all year long.

The following steps should be taken to start a Walking School Bus program (the three main components of a program are highlighted in italics):

- Research funding opportunities and training in best practices.
- Identify parents/children who were particularly supportive and energized by the Walk to School Days and enlist their help.
- *Advertise the program and register children.* Develop a marketing plan and use Back to School Night, school newsletters, and parent information meetings to advertise and register children. Develop both a registration form that includes a liability waiver that can be signed by the parent and a system for receiving and processing registration forms.
- *Recruit volunteers from a variety of sources.* Volunteers might include parents, local colleges, community volunteers, and senior citizen groups. Define volunteers’ roles and responsibilities, decide whether to conduct criminal background checks, develop and organize one or more volunteer training sessions on pedestrian safety, and plan when and how to distribute route information to volunteers.
- *Plan the routes to school.* The National Center for Safe Routes to School’s “Walkability Checklist” is an excellent tool for assessing and documenting the safety and suitability of particular streets or street segments for Walking School Bus routes’ as well as for engaging city or county officials in discussions about whether the infrastructure is adequate for children to walk to school. Important factors to consider include the existence and condition of sidewalks, the speed and volume of traffic during the walk-to-school period, and neighborhood safety

concerns. In addition, a process is needed for plotting children's addresses on a map (or an electronic map) and for creating a route that links those homes and allows for transporting children to school within a reasonable time frame.

Keys to Success

- **A Walking School Bus Liaison** – Having a Walking School Bus Liaison at each school is a great way to build capacity at each school and monitor the program. This person should be a parent or teacher or an energetic community or neighborhood leader who has a passion for the program and children's welfare. The position should be a paid 3-10 hours/week position, as it is too much work to do solely as a volunteer.
- **Assess the program's progress on a regular basis** - Use winter and summer months to review successes and challenges, adjust policies and procedures, restock incentives and recruit new Walking School Bus participants/volunteers.
- **Explore policy initiatives** that institutionalize the program whenever possible.
- **Include the five complementary strategies** outlined by the National Center for Safe Routes to School – Below are examples of how PedNet incorporated the five strategies into its program:
 - Engineering – PedNet and the city of Columbia received a total of \$28 million in grants in 2006 to make roads more pedestrian safe, a substantial portion of which was focused around schools.
 - Enforcement – PedNet worked with the police department and the public works department to install speed feedback signs at entrances to schools.
 - Encouragement – PedNet implemented a social marketing campaign, including radio commercials and posters, and citywide Walk to School Days in conjunction with the Walking School Bus.
 - Education – PedNet trained their Walking School Bus volunteers to teach children pedestrian safety.
 - Evaluation – PedNet conducted a study with the University of MO that focused on academic outcomes associated with walking to school (the study included intervention and control schools). PedNet now tracks daily participation in the Walking School Bus through the Walking School Bus liaisons at each participating school.

Barriers to Implementation:

- **Funds** – PedNet received Safe Routes to School funding from the national and local levels to implement and expand their program. The amount of funding needed to operate a SRtoS program depends on the size and duration of the program.
- **Recruiting volunteers** – Volunteers are the foundation to a SRtoS program. PedNet's program relies on college students, but not every program will have access to college students. Identifying and recruiting a diverse group of volunteers may be a challenge depending on the community.

- **“Liability”** – In general, a school does not increase its liability exposure by organizing a Walking School Bus program if the following are in place:
 - A sensible safety code
 - The safety code is communicated clearly to all children, parents, school officials, and others involved in the program
 - Parents sign a liability waiver stating they understand the risks and accept them
 - Good policies for weather, behavior, safety, etc. are adopted and documented
 - The school maintains excellent communications with parents

RESOURCES REQUIRED

Costs: Program costs depend on the size and duration of the program.

- In general, a Walk to School Day budget for 50-200 students can range from \$200 to \$500 (including a stipend for a coordinator, advertising costs, raffle prizes, and snacks).
- A budget for a six-week Walking School Bus program for 20-50 students at one school can range from \$500 to \$2,000 (including a stipend for a coordinator, advertising costs, snacks, t-shirts, and incentives).
- A budget for a community-wide or district-wide (10 schools) Walking School Bus program with four daily routes that run all year can range from \$30,000 to \$60,000.
 - To maintain their program (450 children/12 schools), PedNet budgets \$50,000/year for staff time and direct purchases.

Staff: At a minimum, one full-time dedicated staff to act as Coordinator is needed to manage the program. This person’s role may include such responsibilities as:

- Planning and coordinating Walking School Bus program at 10-12 schools for 10-12 weeks each semester
- Increasing outreach to and walking school bus programs in public housing neighborhoods
- Planning and coordinating Walk to School Days in May and October as a strategy to increase participation in the Walking School Bus program
- Managing a team of independent Walking School Bus Liaisons
- Assisting with Bike Brigade programs
- Teaching pedestrian and bicycle safety classes

In addition, one volunteer per walking or biking route is needed to chaperone the walk or bike to school. If funding allows, a Walking School Bus Liaison at each school to coordinate and monitor the program is recommended.

Training: Volunteers need to be trained in pedestrian safety.

Materials: Flyers, posters, registration forms, letters (postage), maps, snacks, incentives, and Walking School Bus t-shirts.

Funding: Potential sources are a federal Safe Routes to School Non-infrastructure grant and foundation grants (such as the Robert Wood Johnson Foundation or a statewide foundation).

UNDERLYING THEORY/ EVIDENCE

Safe Routes to School is an emerging intervention and evidence in support of effectiveness is not yet available.

Strategies Used¹: Safe Routes to School programs are based on the following evidence-based strategies related to physical activity:

- **Community-wide campaigns to promote physical activity** are comprehensive programs that promote physical activity and use multiple intervention strategies within multiple settings in a community. PedNet's Safe Routes to School program targets individual student behavior while making the environment safer for active transportation to school and creating the organizational infrastructure to promote and encourage active transportation to school. Their program includes a media campaign and special events that involve the community.
- **Social support for physical activity** provides a supportive environment for individuals' attempting to increase their physical activity and to sustain routine physical activity. PedNet's Safe Routes to School program includes walking school busses and Walk to School Days that involve small to large groups of children walking and biking to school together.
- **Active transportation** increases physical activity by integrating activity into daily routines. PedNet's Safe Routes to School program makes biking or walking to school available most days each week for most of the school-year at participating schools.

POTENTIAL PUBLIC HEALTH IMPACT

Safe Routes to School programs ideally use all five complementary strategies outlined previously to reach all primary and secondary school children in participating schools, either through Walk to School Days, walking school busses, or bike brigades.

Reach: In general, Walking School Bus programs have the potential for broad reach. However, the evaluation data from PedNet's program show that 7.5% (n = 450) of children in participating schools are registered in the program, and it is unclear how representative these students are of the school district's elementary schoolchildren population. Yet, PedNet has demonstrated a steady increase in participation in their program since the program's start.

Effectiveness: The intervention is effective at facilitating school and community involvement and student participation as well as increasing awareness around active transport to school, particularly walking. In addition, this intervention may have changed student attitudes toward

¹ A full description of the intervention strategies used can be found at the Center TRT website with references to the sources of evidence to support the strategies.

active transport related to biking to school. At the school where two bike brigades were started, the negative perspective associated with biking to school shifted to a positive one.

Based on the information provided, it is difficult to determine how effective this intervention was at the intended outcome of increasing the number of children walking to school. The growth over time points toward effectiveness, but data were not collected prior to the initiation of the Walking School Bus, and therefore, no claims can be made about its effects on the number of children actively transporting themselves to school on a regular basis (i.e., it cannot be determined if more children are walking to school now than before the program began).

Adoption: This model seems highly adoptable. Eleven of the 19 schools in the district have adopted the program. This number has grown steadily over time providing support for the program's adoptability. This model may not be as adoptable to rural environments as it is for urban or suburban environments, where homes may be closer to schools. Access to a university or other significant volunteer populations also seems to be a factor in adoptability.

Implementation: Extensive materials are provided to support efforts to implement walking school busses. However, little information is provided on the fidelity of implementation. This model seems easily implemented with the guidance documents, materials, and protocol developed by PedNet. It should be noted that this model requires resources in the form of volunteers, paid coordinators, and funding for environmental changes if they are necessary to create safe walking and biking routes. Funding to maintain and grow a program is essential (See Resources Required section for estimated costs of program operation).

Maintenance: The program has been maintained and steadily grown since 2005 as shown by the number of schools and participants involved, suggesting that it can be maintained over time. Once in place, maintenance is feasible if external factors cooperate.

INTERVENTION MATERIALS

National Center for Safe Routes to School's Walkability Checklist – This tool helps assess the walkability of a neighborhood and provides solutions to potential problems.

<http://www.saferoutesinfo.org/program-tools/education-walkability-checklist>

Walking School Bus Materials

PedNet offers workshops (The "Walking School Bus Training Program") to help organizations and/or communities start a Walking School Bus program. Workshops are offered locally and nationally for a fee*. The following documents from PedNet's workshops can be downloaded from the [Center TRT website](#)

- School-based Liaison job description
- Walking School Bus brochure and registration form
- Walking School Bus parent letter and registration form
- Walking School Bus parent confirmation letter
- Walking School Bus volunteer application
- Walking School Bus training slides
- Walking School Bus leader policies and responsibilities
- Walking School Bus safety cards

* For more information on PedNet's training workshops, please contact:

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Information on PedNet's training workshops can also be found at:

www.pednet.org/consulting/organize-walking-school-bus-program.asp

EVALUATION MATERIALS

Center TRT Evaluation Materials:

Center TRT developed an evaluation logic model and evaluation plan for the PedNet Safe Routes to School (SRtoS) program. The logic model is intended to guide the evaluation process (as opposed to the planning process); the evaluation plan focuses on the implementation and effectiveness of the PedNet SRtoS program in changing safety and acceptability of environments for walking and biking to school, as well as active transportation behaviors among students. The evaluation addresses the reach, adoption, extent of implementation and effectiveness of the SRtoS program in changing environments and behaviors related to physical activity among children. The evaluation is a pre-post design with no comparison group. This evaluation plan provides guidance on evaluation questions and types and sources of data for both process and outcome evaluation. If you are interested in answering evaluation questions not listed in the evaluation plan, please refer to the list of additional evaluation questions [here](#). We suggest a variety of data collection tools throughout the evaluation plan.

Developer Evaluation Materials:

The PedNet Coalition Safe Routes to School Program evaluators created several materials for its evaluation that are also available for your use. Some of these tools have been incorporated into the evaluation plan that Center TRT developed. **Please note that Center TRT has not reviewed these tools.**

Please provide credit to the PedNet Coalition Safe Routes to School Program when reproducing materials in the original, or adapted, form:

National Center for Safe Routes to School's Walkability Checklist – This tool helps assess the walkability of a neighborhood and provides solutions to potential problems:

<http://www.saferoutesinfo.org/program-tools/education-walkability-checklist>

ADDITIONAL INFORMATION

Web links:

PedNet's website - <http://www.pednet.org/>

National Center for Safe Routes to School - <http://www.saferoutesinfo.org/>

Training/Technical Assistance available:

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www.pednet.org/consulting/organize-walking-school-bus-program.asp

Publications:

Thomas IM, Sayers SP, Godon JL, Reilly SR. Bike, walk, and wheel: A way of life in Columbia, Missouri. AM J Prev Med 2009;37:S322-S328.

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