School Transportation Management

Overview

School transportation management (STM) is a catchall term for strategies that encourage students, parents and staff to cut automobile trips and use alternative modes of travel to and from school.

STM encompasses a variety of actions and policies that support active and sustainable transportation programs and maximize accessibility.

This issue paper explores the most common barriers and benefits of STM initiatives and provides examples of successful programs.

Selected Resources

1. Victoria Transport Policy Institute. *School Transport Management*.
2. Centre for Sustainable Transportation. *Child-Friendly Transport Planning*.
3. Go for Green. Active and Safe Routes to School program.

References are found at the end of this issue paper.

Context

Recent research suggests that, given the choice, most children would prefer to walk or cycle to school than take a bus or be driven by their parents. During the International Walk to School Day 2000 event, 6,369 Ontario students completed a survey that asked questions about their usual travel mode and their preferred travel mode. The study found that 75% of the children surveyed said they would prefer to walk or cycle to school (Ontario Walkability Study, 2001).

However, fewer than half of all Canadian children walk to school, two out of three children do not meet average physical activity guidelines to achieve optimum development, and more than one-quarter of all Canadian children are overweight (O'Brien 2001).

Young people are also spending more time in cars than ever before. Between 1986 and 2001, weekday travel by car for 11-15 year olds increased 83%, while the per capita increase for adults was only 11% (TTS 2001).

Like other transportation demand management programs, school transportation management offers multiple benefits to a wide variety of stakeholders: increased physical activity for young people; time and cost savings for parents and caregivers; environmental benefits; and the potential to stretch school budgets further.

School Transportation Management

School transportation management (STM) can include one or more of the following strategies:

- Walking, cycling and ridesharing programs
- Infrastructure programs to construct, improve and/or maintain sidewalks, construct or improve bicycle paths or provide bicycle racks
- Traffic calming, speed reduction and anti-idling initiatives around schools
- Parking management, such as decreasing the number of parking spaces available
- Encouraging the use of public transit through subsidized or discounted bus passes for students and staff
- Data collection and surveys that determine travel behaviours that can inform how STM programs are developed and delivered
- Communication materials, such as fact sheets and guides for implementing STM programs

School boards, parent organizations or students typically initiate STM programs, often in response to traffic, safety or parking issues. STM programs can, however, also be implemented as part of a community traffic management program (VTPI 2005).

Although this paper will look at some programs for youth and young adults, it should be noted that the majority of STM programs focus on elementary schools rather than high schools, colleges or universities.

The Centre for Sustainable Transportation suggests that part of the reason why STM programs may not exist for these age groups is that, by the time a child reaches a particular age, parents no longer need to supervise how they travel to and from school and are also less likely to

drive them. Lacking a ride to school by car, youth may already be walking, cycling or taking transit. In addition, once a youth turns 16, there is "a major preoccupation in securing an automobile or access to one, and the license and other means to drive" (CST, 2005).

Barriers & Actions

Although there are many barriers to STM, none are insurmountable. An exploration of the most common barriers follows, with examples of STM strategies that address them.

Physical infrastructure and neighbourhood design

Poorly maintained or non-existent sidewalks, bicycle lanes or paths can be physical barriers for children wanting to walk or cycle to school. This type of barrier may be site-specific, but may also be characteristic of a neighbourhood designed for automobile use and not for a mix of transportation modes.

Program examples

The U.S. *Safe Routes to School* (SRTS) program provides $612 million in funding for states to invest specifically in schools, such as improvements to buildings, infrastructure and pedestrian and cycling facilities.

As part of California's SRTS program, for example, 16 elementary schools were studied before and after infrastructure improvements were made around each school. Improvements included upgrading sidewalks, constructing new bicycle lanes, installing traffic signals and improving traffic intersections.

Prior to sidewalk improvements and the addition of a pedestrian and bicycle crossing at Valley Elementary School in Yucaipa, California, only 58% of children were observed using the existing sidewalk or walking along the road shoulder—a major safety concern cited by parents.

After the improvements were made, almost all children (96%) were observed using the sidewalk (University of California, 2003).

The SRTS program also helped finance the installation of speed humps on streets around schools in Greenwich, Connecticut. The speed humps were part of the city's long-term plan to slow neighbourhood traffic and make walking for children safer. Results showed that once the speed humps were installed 85% of all cars reduced their speed by between five and 10 miles per hour (8-16 km/h).

Safety and security issues

Many parents believe that it is unsafe for their children to walk or cycle to school. Statistics show, however, that cycling and walking is actually safer than driving. In 1995, for example, motor vehicle crashes killed 3,347 Canadians and injured 241,800. By contrast, during the 10 years from 1986 to 1995, 5,179 pedestrians were killed by motor vehicles and 157,703 injured (Transport Canada, 1995). In addition, Safe Kids Canada reports that motor vehicle crashes are the leading cause of preventable death to children up to the age of 14.

The Ontario Walkability Study (OWS) found that 25% of children surveyed mentioned that drivers did not "behave well," leading the study's authors to suggest that public education for drivers is warranted to address the impact of traffic on children and greater respect overall for pedestrians (OWS, 2001).

Media reports of high-profile crimes committed against children can also affect how people perceive crime rates. However, the national crime rate in Canada has been relatively stable since 1999 (declining by 5% between 2004 and 2005) and the violent crime rate was unchanged between 2004 and 2005 (Statistics Canada, 2006).

Program examples

The *Walking/Cycling School Bus* was developed not only to reduce traffic around schools, but also to alleviate safety and security fears. The *Walking/Cycling School Bus* is an active transportation system that involves volunteer parents and caregivers taking turns walking or cycling with children to and from school.

As the first step, program organizers assess their school neighbourhood for safety and traffic issues, identify any problems or barriers, and then develop solutions to overcome those barriers (Go for Green, 2004). Safety and security fears are addressed at this stage because all stakeholders—children, their parents and school staff—are involved in developing the best transportation routes from the outset.

Bike Smarts is a Province of B.C. program that encouraged children to cycle to school. When it first began the primary barrier was not a lack of interest from students, but the safety concerns of parents. Organizers kept parents well informed of the program, particularly with respect to safety issues. Parents were also encouraged to participate along with their children so they could see for themselves the skills the children were acquiring.

Skills Training

Many cities offer, often through local NGOs, bicycle and other safety training for children. The Ottawa Safety Council, for instance, runs a "safety village," a miniature streetscape designed to give youngsters the opportunity to learn to ride a bicycle safely, while the Council's *School Bus Safety* program teaches children how to get on and off a school bus safely.

Children learn cycling skills at Ottawa's Safety Village. Photo:

Sharon Boddy

Involving parents in STM programs is a key element because it provides parents with a hands-on opportunity to teach their children about many important safety issues.

Lack of awareness

Children and their parents may want to use active transportation but simply may not know how to get started, the benefits to be had, or the safest routes to school. Most STM programs have elements that are designed to overcome these types of barriers.

A good example of building awareness of the issues and benefits is *Off Ramp*, a program developed for high schools by Better Environmentally Sound Transportation (BEST) in Vancouver. Delivered by youth for youth, *Off Ramp*'s goal is to change attitudes towards sustainable transportation and create programs that help students choose active modes. BEST provides a how-to handbook and a series of ideas of activities that can be undertaken by students. Details of two *Off Ramp* programs can be found in UTSP Case Studies #16 and #20.

Parents may believe that the distance their child needs to travel to school is too great. Most schools base their busing programs on distances that are age-appropriate and these can be used by STM program organizers to determine the distance that children can reasonably be expected to travel. For example, many school boards do not provide busing to kindergarteners who live less than one kilometre from school and the distance gradually increases with the age of the child.

Funding issues

School boards are often stretched for funding and thus, finding funds to invest in STM programs can be a difficult barrier to overcome.

However, many school-based transportation programs recognize this barrier and offer free on-line resources to teachers, parents, or other stakeholders interested in implementing some form of STM program.

Resources

British Columbia's *Way to Go* program, for example, offers free materials that will help develop an STM program. *Way to Go* offers generic student and parent surveys that can be used to gather important data about the school and the surrounding neighbourhood, and gauge the interest in active transportation, as well as strategies on developing safe walking and cycling programs.

The *Walking/Cycling School Bus* program also offers several free resources including a guide on setting up the program, sample letters to parents, and even MP3 files with songs to sing while walking to and from school.

Existing school bus programs

In some cases, schools that offer busing programs can discourage parents from letting their children walk or cycle to school because busing is seen as more convenient, requires less planning, and saves them time.

However, for children who live less than one kilometre from school, walking or cycling is often the fastest mode and the least expensive option for parents; it also increases children's physical activity.

Public transit

Where school bus programs do not exist and the distance to school is too great to walk or cycle, many children take public transit to get to and from school. In the case of younger children, however, parents may choose to drive them to school because of safety fears revolving around public transit systems. Children themselves may also be fearful of taking public transit.

Program Examples

The *You Can Clear the Air* program is a good example of how to overcome these fears. As part of the Grade-3 curriculum in the Regional Municipality of Waterloo, the program educates children and their parents about public transit. Children learn how to board a bus safely and are quizzed on the neighbourhoods they travel through. This allows children

to feel safer and more comfortable using public transit.

For older students, including high school and university students, most transit authorities in Canada offer student discounts or other types of reduced student fares.

In the Greater Vancouver Regional District, the *U-Pass* program created by the region's transit authority serves college and university students. The *U-Pass* program provides all students at participating post-secondary institutions with unlimited access to transit services in the GVRD.

Photo courtesy of TransLink.

Simon Fraser University (SFU) and the University of British Columbia (UBC) made the *U-Pass* mandatory as part of annual student fees. The cost of the pass differs between institutions, but since the program began in 2004 students have saved an average of $200 to $800 per four-month semester on transportation costs. As a result of the program, automobile traffic to SFU and UBC also decreased by 10% and 12% respectively during the first year of the program.

Discounted transit pass programs for school staff are also an important consideration when developing STM programs.

OC Transpo, Ottawa's public transit service provider, for example, offers the *EcoPass* program to any interested employer. Employees purchase the pass through payroll deduction and can save up to 15% each year on the cost of a bus pass. Translink's *Employer Pass* is a similar initiative that is offered to any employer with 25 employees or more.

Policy Considerations

School funding formulas

According to Active and Safe Routes to School (ASRTS), school boards spend approximately 12% of their total budget on transportation, the majority of which goes towards school buses.

Jacky Kennedy, the ASRTS program manager for Ontario, reported that current school funding formulas for transportation are based on the number of children needing to be bused. Unfortunately, the formula offers few, if any, incentives to decrease those numbers and, by turn, save money. In other words, if a school board implements STM programs—and in the process cuts its school bus costs—their budgets are often cut by an equivalent amount.

Legislative alternatives

A promising alternative is to create mandatory STM programs as has been done in several European countries. In the UK, for example, the *School Transport Bill* requires schools to create school travel plans and the federal government provides the necessary funding to establish the programs.

Building new v. renovating older schools

School boards and municipalities need to consider the pros and cons of building new schools versus refurbishing older ones.

Once again, school funding formulas tend to favour building new and larger schools, rather than retrofitting older ones. In some cases, these new schools may be in suburban areas that are beyond age-appropriate cycling or walking distances or are close to major arterial roads that create safety issues for children.

Although cost savings may be achieved in the short-term (e.g., a larger school is able to accommodate more students and therefore fewer schools are needed), the funding formulas do not take into account long-term benefits such as lower health care and environmental costs (O'Brien, 2005).

One solution is to eliminate minimum space requirements for new schools, which favour larger, suburban schools. The State of Maryland's *Public School Construction Program* did just that, leaving all new school site decisions to local communities. The State now gives preference to reinvestment in existing schools rather than building new schools (VTPI, 2005).

Urban planning and neighbourhood design

The way our communities are planned has an effect on the way people travel. As detailed in the UTSP issue paper *The Links Between Public Health and Sustainable Active Transportation*, many suburban neighbourhoods have looping streets, with few or no sidewalks, bicycle paths or pedestrian crossings. This can make walking and cycling—by adults and children—a less safe and less attractive option.

An article published in the American Journal of Preventative Medicine found that, controlling for age, income and education, the odds of being obese decreased with communities that had a greater mix of uses. In other

words, when people were able to walk or cycle to school, work and other daily destinations, they were less likely to be overweight or obese.

Municipal governments, therefore, have a key role to play in providing sound urban planning that includes alternative transportation and reflects the needs of all citizens, including children.

For a more detailed discussion on how municipal governments and other stakeholders can support child- and youth-friendly active transportation infrastructure, see the UTSP issue paper, *Transportation for Young People*.

Benefits

The single greatest benefit to implementing STM programs is that our children will be healthier.

Greater physical activity reduces the incidence of a number of diseases including obesity, type II diabetes, respiratory illnesses, and certain mental illnesses such as depression. As detailed in the UTSP case study, *The Social Implications of Sustainable and Active Transportation*, active transportation can also promote greater social interaction among children, leading to greater self-esteem and a sense of independence.

There is also evidence to suggest that when active travel habits are instilled at an early age, these habits tend to carry over into adulthood.

The health care cost savings are significant. For society as a whole, the Canadian Medical Association has estimated that the annual economic burden of physical inactivity is $5.3 billion. Promoting greater physical activity among all age levels is one way to reduce these health care costs.

It's also much less expensive to accommodate cyclists and pedestrians than it is to wide roads to accommodate more cars. The Ontario Ministry of Transport, for example, estimated that providing paved shoulders for cyclists costs between $50,000 and $100,000 per kilometre and $250,000 per kilometre for paved pathways. The cost to widen an urban arterial road to four lanes, on the other hand, costs roughly $1.3 million per kilometre.

Safety is of primary concern to parents when it comes to their children to using active transportation modes. It stands to reason that if active routes are safe for children to use, then they are also safe for the rest of society, including other vulnerable populations such as the elderly or the disabled.

Finally, environmental costs should also be factored in. Transport Canada has estimated that the environmental costs of transportation are between $14 billion and $36 billion each year. Reducing the number of cars on the road by helping parents choose active transportation for their children, improves local air quality and reduces smog.

Stakeholders

Even though most STM programs are put in place as a result of traffic or safety issues, STM strategies need not be solely the domain of schools or parents. Any organization with a stake in children's wellbeing—be it health organizations, municipal governments, social advocacy groups, or environmental NGOs—can play a role in promoting and implementing STM strategies.

Calgary's *City Hall School* brought together many stakeholders—schools, school boards, the municipal government, the local transit authority, children and their parents—in a program that educates children on a range of environmental and community issues. Transportation is addressed as part of the curriculum.

Children begin the week-long program by taking a Calgary Transit bus to city hall; in some cases, this is the first time students have ever ridden a city bus. Children are also given the opportunity to speak directly with city planners and make suggestions on how to make their neighbourhoods more youth-friendly.

Similarly, the Montreal region's *On the Move to School* active transportation program also involved the local government. A stakeholder committee includes representatives from the municipality who assist in data collection and in establishing safe routes for children. More than 30 schools are now involved in the program.

Lessons Learned

Many of the programs used as examples in this issue paper highlight the need to address parental concerns about safety and security.

Whether these concerns are actual or perceived, ensuring that parents are well informed about any STM initiative, is paramount. The Centre for Sustainable Transportation's *Child- and Youth-Friendly Land-Use and Transport Planning Guidelines* states involving parents, parent councils and children in program development greatly contributes to success (CST, 2006).

Funding for STM programs will almost always be a challenge. STM program organizers should remember, however, that they don't need to "reinvent the wheel" as there are several excellent, and often free, resources available to them. Many of these resources are included in the ***References*** section below.

Conclusion

Many of the strategies used to promote active transportation among school-aged children are similar to transportation demand strategies, used successfully for years at workplaces across North America. For those stakeholders not yet engaged in the discussion, STM also provides an opportune way to begin a discussion of the

need to encourage active transportation throughout all levels of society.

School transportation management offers an opportunity to instill healthy transportation habits in children, habits that can last a lifetime. The primary benefit of STM programs is improved health and physical fitness levels of children, but these programs also have a wider impact, reducing GHG emissions and health care costs, saving time for parents, and promoting greater social equity.

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