HealthyWay CONSULTING

London CANADA

Bike Train Program Development Research Project

Developing preliminary evidence on how to create, implement, and sustain a Bike Train program in the City of London and the surrounding region

On behalf of City of London
London, Ontario, Canada

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Definition of Terminology

Active School Travel. Any form of human powered travel to and from school and the school bus stop, such as walking, biking, and scootering.

Bike Train. A group of people who cycle along a set route to school, collecting children at Bike Train stops along the way. The program is called many different things in different communities, including Bike Bus. The terminology was made consistent within this report to avoid confusion for the reader.

Bike Train Conductor. Responsible for leading the train through the route each day and ensuring all kids are picked up, follow the rules during the ride, and arrive at the school safely.

Bike Train Facilitator. Responsible for leading the development of the route and schedule, recruiting and coordinating volunteers, promoting the program, recruiting participants, and ensuring everything runs smoothly in the day-to-day operation of the program.

Walking School Bus. A group of children who walk along a set route to school with supervising adults, collecting children at bus stops along the way.

Definition of Acronyms

ASRTS. St Thomas Elgin London Middlesex Oxford Active & Safe Routes to School Steering Committee

LDCSB. London District Catholic School Board

OSBIE. Ontario School Board Insurance Exchange

TVDSB. Thames Valley District School Board

Introduction

In 2019, London City Council declared a climate emergency at the urgence of the community to prioritize actions within the City to achieve net-zero greenhouse gas emissions by 2050. A Climate Emergency Action Plan (City of London, 2022) was developed to create milestones, workplans, and key requirements for implementation success to achieve the City's net-zero goals. One area of focus within the action plan is Transforming Transportation and Mobility, which encourages Londoners to shift their travel from personal vehicles to more sustainable modes, such as walking, bicycling, and public transit. One way to shift more people to sustainable modes of transportation is through encouraging the use of active school travel. Active school travel is any form of human powered travel to and from school and the school bus stop, such as walking, biking, and scootering.

Active school travel is not only a practical way to reduce transportation-related carbon emissions, but is also a way to reduce traffic congestion around the school and minimize associated road safety hazards. Children participating in active school travel also receive physical and mental health benefits, including better cardiovascular fitness (Larouche et al, 2014). When children are active, they are less likely to develop health problems, such as diabetes, heart disease, obesity, and some forms of cancer, later in life (Heath et al, 2012). Additionally, regular physical exercise has been shown to improve cognitive performance (Bailey et al, 2018).

Despite all of these benefits of active school travel, there are still many families that drive their children to school most days. Research conducted by Wilson and colleagues (2018) identified barriers to active school travel, including distance, having no one to walk with, poor perceptions of safety (i.e., speeding, traffic congestion), and parental convenience. These barriers impact parents' comfort level to allow their children to use active school travel each day. Intervention programs are required to help address and overcome these barriers to make parents and children feel more comfortable using active school travel. One such intervention that directly targets these barriers is a program called a Bike Train. A Bike Train is a group of people who cycle along a set route to school, collecting children at Bike Train stops along the way (Pinnacle Research and Policy Ltd, 2007). While Bike Train programs have been utilized in Europe for a few years, they are relatively new to North America and have never been formalized in Ontario. The purpose of this project is to develop preliminary recommendations on what is needed to create and implement a Bike Train program in local elementary schools within London and the surrounding region.

This report is organized as follows: (1) A description of the methodology used to assess the data; (2) A summary of the literature review; (3) A summary of the findings from the Expert Consultation; and (4) Recommendations that should be considered when developing a made-in London Bike Train program.

Methodology

This project uses two methodologies to better understand how a Bike Train program could be implemented in London, Ontario following the best practices of previous work and recommendations from partners across the province who have experience running similar programs. The following is an overview of the methodology used to assess both the literature review and expert consultation.

Literature Review

A rapid literature review was conducted to provide an overview of existing Bike Train & Bike Bus programs across the world, with a focus on North America, Europe, and Oceania. The literature review included academic and gray literature to ensure all important information was identified and collected. The goal of this work was to develop a set of best practice guidelines and recommendations identifying how a Bike Train program could be implemented. The results of the literature review included 23 grey literature and academic papers directly connected to Bike Train programs. A full list of the documents reviewed with associated links can be found in the References list below. The literature review focused on the following topics and research questions:

1) Insurance / Liability:
    a. What legal responsibilities and liabilities are associated with starting a school run Bike Train?
    b. How can insurance policies protect Bike Train participants, including students, parents, and volunteers?
2) Mechanics of Organization & Setup
    a. What logistical challenges might arise when organizing a Bike Train, and how might these challenges be overcome?
    b. How can community involvement contribute to the successful organization of a Bike Train?

3) Ongoing maintenance of the program
    a. What steps can schools take to maintain a Bike Train?
    b. How can parental involvement help to maintain a Bike Train?
4) Lessons learned / Things to be aware of
    a. How can Bike Train Facilitators and Conductors ensure the safety of participants?
    b. What lessons can be learned regarding the scalability of a Bike Train program to accommodate different age groups, school sizes, or geographical locations?

Expert Consultation

Interviews were conducted with key informants that have aided us in understanding what is needed for a Bike Train program to succeed and the barriers that may get in the way of success. Partners were identified by Healthy Way Consulting and the City of London, then recommendations were made by the interviewees of other informants that might provide information that would help to inform the project. Each interview lasted 30 to 60 minutes with detailed notes being taken to ensure accurate recall of the conversations. Two informal interview guides, as shown in Appendices A & B, were created and used to guide the conversation. The first interview guide (Appendix A) was used when interviewing current or potential future Bike Train Facilitators. It focuses on the following topics: (1) Start up considerations and models that could work; (2) Liability & Insurance; (3) Ongoing program maintenance; and (4) Lessons learned for success. The second interview guide (Appendix B) was used when interviewing school board staff and other system level organizations. It focuses on the following topics: (1) School Capacity; (2) Where the Bike Train fits in the school; (3) Liability & Insurance; and (4) Policies and partnerships to consider.

The following is a list of the organizations who participated in the expert consultations. The first group were Facilitator-level experts who were able to provide feedback based on how the program could be operated within the schools:

- Orchard Park PS Bike Train Facilitators;
- Mountsfield PS Bike Train Facilitator;
- Waterloo Region Bike Train Facilitators;

- Walking School Bus Program Coordinator, Waterloo Region; and
- London Cycle Link.

The second group were system-level experts who were able to provide high level feedback based on how the program would need to be organized within the school board or region.

- Staff at Thames Valley District School Board (TVDSB), including superintendent of school safety, manager of community programs, environmental education principal, and manager of insurance & liability;
- Staff at London District Catholic School Board (LDCSB), including superintendent of school safety and recreation manager;
- Canadian Cancer Society Walking School Bus Program Director;
- Student Transportation Services of Waterloo Region, School Travel Planning Director; and
- Ontario Active School Travel Lead, Green Communities Canada.

Literature Review

Active school travel interventions have shown promise in the ability to minimize barriers to active school travel and increase the number of children who use active school travel most days (Larouche et al, 2018; Buttazzoni et al, 2018). While much of the research is still mixed, as with all public health interventions, there is enough evidence to warrant a deeper investigation into how to implement such interventions. This literature review has focused specifically on the Bike Train program. The following sections provides an overview of what both grey and academic literature report from the early implementation of such programs around the world. The focus of this literature review is on four main topics: Insurance and liability; Mechanics of organizing a Bike Train; Ongoing maintenance required to run a Bike Train; and Lessons learned from existing programs.

Insurance & Liability

Legal Responsibilities

Legal responsibilities and liability fit into three categories: (1) safety concerns; (2) legal responsibility for property; and (3) legal responsibilities of adult volunteers and parents. The safety concerns are a problem for many different Bike Train programs as volunteers are generally responsible to help the students travel

safely to and from school. While there were generally Bike Train Conductors, parents of younger children were invited to join the Bike Train in its journey, decreasing the ratio of children to adults and ensuring safety along the route (Here Comes the Bike Bus! , 2023). The legal responsibility for property, or their bikes, was the responsibility of the parent, as it is the parent and child's responsibility to ensure that they properly lock up their bike and have the necessary insurance against theft (Pinnacle Research and Policy Ltd, 2007). The legal responsibilities of adult volunteers and parents comes down to the responsibility of the Bike Train Facilitator creating protocols that will ensure the Bike Train Conductors are properly trained to lead a Bike Train program. An example of such a protocol can be taken from the Waterloo Region's Walking School Bus program. Their adult volunteers were responsible to "act within the scope of their role" and complete training to be Walk Leaders (Risk Management for Walking School Bus, Canadian Cancer Society). There was also clear protocol for when Walk Leaders were absent so that children would not be walking alone to school. Parents and legal guardians were made responsible for their children safely joining the Walking School Bus, and they were recommended to wait with their child until they reached the Walking School Bus. As it was possible for adult volunteers to access sensitive information about students, it was "essential to take reasonable measures to protect and maintain confidentiality of personal information" (Risk Management for Walking School Bus, Canadian Cancer Society).

Insurance Policies

Insurance policies were found to affect one of three groups: (1) the school board; (2) child walkers; and (3) volunteers. The Waterloo Region's Walking School Bus "strongly recommend[ed]" that schools and school boards consult with their insurance provider "to fully understand the risks of operating a Walking School Bus and learn how to manage [those] risks", with school board insurance providers helping them gain further insight into what additional measures could be taken (Risk Management for Walking School Bus, Canadian Cancer Society). A waiver was signed by both parents and the child walkers showing they understood the risks of participation and did not hold the school board, employees, volunteers and officials, and the Canadian Cancer Society liable for any "injuries, illnesses, or death, or other damage" that might result "indirectly" from participating in the Walking School Bus (Walking School Bus Conditions of Participation, Canadian Cancer Society, 2020). Adult volunteers signed their own waiver that agreed not to hold the school board, employees, volunteers and officials liable should any illness, death or other damage result from their volunteering with the Walking School Bus (Canadian Cancer

Society, 2020). In waiving claims from child participants and volunteers should anything go wrong, the Waterloo Region's Walking School Bus operated on the basis of informed consent (Canadian Cancer Society, 2020).

Mechanics of Organizing

Logistical Challenges

Themes of logistical challenges appeared often in the literature, including issues around route planning, scheduling, road and weather conditions, and distance. Route planning is complex and should be planned meticulously to ensure all logistics are considered (Stutts, 2023). Through this planning process there are many different conditions that need to be considered, such as where volunteers come from, traffic congestion, difficult turns, hills, and locations of existing bike infrastructure. The Waterloo Region's Walking School Bus program determines routes based on areas where volunteers live, but also identifies routes based on where kids live and then recruits volunteers to be Walk Leaders (Canadian Cancer Society, 2021). Dellinger and Staunton (2002) cite traffic danger as a barrier to active forms of transportation to school, with 40% of respondents considering it a barrier. To address this barrier, route planning must ensure a safer route by avoiding busy streets with heavy traffic (Johnson, 2023), large hills (Pinnacle Research and Policy Ltd, 2007), and busy intersections (Here Comes the Bike Bus!, 2023). Route planning also included a practice ride among the volunteers and Bike Train Conductors to identify and address challenging areas, while finding locations where the Bike Train could pull over to allow the group to bunch up again (Bicycling Together: A Bike Train Planning Guide).

When planning the Bike Train route, both the maximum distance children can bike and a realistic time limit must be considered. This is especially important as distance was found to be the most important variable when choosing a mode of transportation to school, with students who lived further away being less likely to choose an active mode of transportation (Larsen, et al., 2009; McDonald, 2007; Schlossberg, Greene, Phillips, Johnson, & Parker, 2006; Timperio, Crawford, Telford, & Salmon, 2004). Considering the School Boards set a walking distance cut-off for elementary school students of 1.6-km (or 1-mile), most Bike Trains routes will occur within 1.6-km of school. Although, there are many students that may want to take part, even if they live outside of "walking distance". Previous research by Mendoza and colleagues (2017) recommends a maximum route distance of 3.2-km, with the total length of the route taking under 45 minutes (Mendoza et al, 2017).

Scheduling of a Bike Train can vary based on the need of the program and availability of volunteers. For instance, some programs run every day, while other programs only run once a week. It is important to discuss whether the Bike Train would be only in the morning or roundtrip. Morning-only coverage would be dependent on each individual parent coordinating their students' ride home. Parents' work schedules and students' after school activities are also crucial considerations. (Bicycling Together: A Bike Train Planning Guide). In most cases, the schedule of when the Bike Train runs is directly related to the availability of volunteers (Bicycling Together: A Bike Train Planning Guide). Scheduling Bike Trains to run when traffic congestion is lower is crucial for safety. For instance, in Hamilton the Westcliffe Bike Bus described traffic congestion at drop off times as being “hectic”, leading them to avoid the congestion by meeting at a nearby park (Here Comes the Bike Bus!, 2023). Leaving a little earlier and taking a more direct route to school could also minimize car presence (Stutts, 2023). Finally, when scheduling the Bike Train, Bike Train Facilitators also need to consider the time of year when they should run, as considered by Newfoundland’s Bishop Field Elementary Bike Bus who avoided snowy and icy weather (Here Comes the Bike Bus!, 2023).

Community Involvement

Community involvement is a vital component to developing a Bike Train program. Sam Balto, who started a Bike Train in Portland, Oregon, has remarked that the Bike Train has helped create a sense of community, and that people loved coming together for the children (Johnson, 2023). Ron Johnson states in his guide to implementing a Bike Train that in addition to reaching out to the school community, “engag[ing] with local community forums, school newsletters, or social media to gather interest” results in a snowball effect of support for the project (Bike Buses: A Global Trend in Active School Transportation, 2023). Indeed, London’s own Orchard Park Bike Train engaged with local children who already cycled to help spread news of the program to their peers (Here Comes the Bike Bus!, 2023). Strong community ties are vital for initial and sustained success, which is supported by the fact that positive social dynamics and support within a local community are known facilitators of active school travel (Buttazzoni et al, 2023). In contrast, weak community ties were found to prevent active travel (Ross, 2007). Engaging the community while launching a Bike Train program could include coordinating with local bike advocates, using local bike shops as a pickup-up point, and engaging local neighbourhood groups as volunteers (Tip Sheet #2: Organizing Bike Trains). An example of such a program is

Barcelona's BICIBUS, which relies on parents and community volunteers, and is facilitated by an easy volunteer application available online (Xu, 2023).

The Australian program recommends that schools, parents, and municipal council's road safety coordinator connect; having connections throughout the community, including in local government, lead to more meaningful and sustainable partnerships, which made the process of staring a Bike Train easier (Pinnacle Research and Policy Ltd, 2007). As pilot studies are launched and programs succeed, word of mouth can provide an integral part in expanding a program to more schools. For example, Tampa Bay's Walking School Bus and bicycle train program had only one school choose to participate initially, but when news of the Bike Train spread, it resulted in 15 schools actively participating (Tip Sheet #2: Organizing Bike Trains). Community organizations were also excellent facilitators, with organizations, such as Active & Safe Routes to School "mobiliz[ing] key community [partners] to promote [active school travel] (Buliung, et al., 2011).

Ongoing Maintenance

School Involvement

Maintaining a Bike Train program in a school community requires school partners to engage in the program, either formally or informally. Teachers drew positive attention to the Bike Train when they saw the children ride, saying, "Hey, that's the bike bus!". It was a significant way to make Bike Train Facilitators feel good about what they were doing and motivated them to continue their efforts. (Here Comes the Bike Bus!, 2023). For example, a parent-teacher association at Brooklyn's Public School 372 helped encourage families to join the Bike Train and assisted in getting space to store bicycles at the school (Stutts, 2023). Bike Trains that were supported by teachers who stayed at a school long-term were found to enjoy the greatest longevity, inspiring participation and inspiration from one generation to the next (Honey-Rosés, 2023). If schools are willing to take an even larger role in developing and implementing such a program, Bike Trains can easily become a part of the school's daily operations (Stutts, 2023). This is especially important as school-based implementation of a Bike Train intervention increases cycling to school, suggesting that a formalized plan may be able to lead to the behaviour change that these programs so often struggle to achieve (Shönbach et al, 2020).

School community support is essential to establishing a successful Bike Train program (Cycling Friendly: Guide to setting up and running a bike bus, 2019). Maintaining a Bike Train program requires holding the interest of the school community (Pinnacle Research and Policy Ltd, 2007), which could include advertising in a school newsletter, reminding the students about Bike Train routes, and networking with other schools to plan a special cycle train day or event. Waterloo Region's Walking School Bus created a website where each school that participated posted their routes and maintained their roster of volunteers and walkers to allow for each updating as the program evolves and people change. Networking sessions for schools and school community leads addressed barriers to participation and ways to promote a Walking School Bus (WSB Transition Document, Canadian Cancer Society, 2021).

Parental Involvement

Bike Train programs depend on parental support for success, including acting as advocates for the Bike Train, volunteering to facilitate or participate, and to assist in communication. The values of parents and communities are known to drive children's school-based travel modes, as children generally do not choose where they live or how they get to school (Agar, 2016). Of the 17% of parents that reported driving their children to school less frequently in an evaluation of school travel planning of 103 Canadian schools, 83% had switched to active transportation (Agar, 2016). If programs, like the Bike Train, increase buy in from parents and help parents to understand the value of active transportation, the cultural shift toward active transportation will happen faster with greater impact.

Parents advocating for the Bike Train program have been seen to be one of the primary catalysts for success of Bike Train programs. Parents at one Toronto school started a Traffic Safety Committee together before one parent suggested organizing a Bike Train. The result was a regularly scheduled Bike Train that attracted 20 - 25 students (Etsey, 2023). Barcelona's BICIBUS faced early opposition when police tried to shut down the program after running for only two weeks. Parents' pushback in the face of this opposition prolonged the program and it has become one of the premier Bike Train programs in the world (Johnson, 2021).

The success of a Bike Train also depends on parental support and involvement on many different levels, including consent for child participation, Bike Train Conductors, or facilitating the program (Johnson, 2021). Parent-led Bike Trains, such as London's Orchard Park Bike Train, enjoy consistent support from parent Conductors during rides (Here Comes the Bike Bus!, 2023). Additionally, recruiting families that

were already avid cyclists to take on leadership roles to help "run routes and coordinate the group" has been seen as beneficial to a program (Stutts, 2023). A bottom-up approach to running Bike Trains can also lead to success, such as Sam Balto's Portland-based program, where parents develop and run the Bike Train (Honey-Rosés, 2023). Top-down programs can also be successful if implemented correctly, as Waterloo Region's Walking School Bus program has a regional program director who appoints a school lead in each participating school, such as a parent, grandparent, or community member (WSB Transition Document, Canadian Cancer Society, 2021).

Parent-led communication is another area where parent engagement with the Bike Train program can be beneficial. Having parents develop group text chains, WhatsApp groups, or Facebook groups can provide an avenue for communicating reminders, schedule changes, and dealing with issues that occur during the ride. Orchard Park's Bike Train in London has been very successful in achieving these outcomes (Here Comes the Bike Bus!, 2023). The communication from parents can also take place with the external community through an awareness campaign, the purpose of which would be to help increase awareness and acceptance of cycling, increase understanding about the program, and to facilitate conversations around bike safety (Pinnacle Research and Policy Ltd, 2007).

Lessons Learned

Safety

There are many elements of safety as it relates to the Bike Train program, including road safety, cycling infrastructure, child to adult ratio, bike education, supervision, and equipment. The following are ways to mitigate some of these safety concerns. Road safety is a significant concern for many parents of children who bike to school as well as a barrier to why many parents do not allow their children to bike to school. Some precautions to mitigate safety risks on the road include safety in numbers (Here Comes the Bike Bus!, 2023; Jacobsen, 2003), following traffic rules (Johnson, 2023), and familiarizing children with the route (Xu, 2023). Warsh and colleagues (2009) recommend students follow routes that avoid mid-block crossing to reduce safety risks.

A push for better cycling infrastructure is a long-term way to improve the safety of students in a Bike Train, although current funding and urgency for such infrastructure is missing in many communities. In running a Bike Train in London, Etsey (2023) reports a need for "better infrastructure for active travel,

along with better land use planning and supportive services, programs, and education". Similarly, St. John's has identified a lack of cycling infrastructure and a car-centric approach to transportation planning (or land use?), but were able to mitigate that concern by their Bishop Field Bike Bus meeting at a city park along their route (Here Comes the Bike Bus!, 2023). Conditions such as "narrowing paths or lack of paved road" were significant barriers to active travel for European youth (Bourke, 2017; Ross, 2007; Simons et al., 2013), and "issues around road maintenance, insufficient lighting on roads and paths, and uneven surfaces" led to people avoiding active travel out of safety concerns (Kirby & Inchley, 2009; Van Hecke et al., 2016). As already mentioned, developing routes that utilize existing infrastructure while avoiding areas with dangerous infrastructure will increase safety and comfort for the Bike Train.

The ratio of children to adults was also a recurring theme. In [city} all of the volunteers were required to have completed a recent vulnerable sector check as an essential safety precaution (Pinnacle Research and Policy Ltd, 2007). Megan Ramey, a Bike Train leader in Oregon, recommends a ratio of one adult for every four kids (So, 2023), while Cycling Friendly's Guide to setting up and running a Bike Train (2019) recommends a ratio of 1 adult for every 3 children. A ratio of one adult for every 3-6 children is Pinnacle Research and Policy Ltd,'s (2007) recommendation, with Bike Train Facilitators deciding the level of adult supervision needed based on the age and skill of riders. Xu (2023) recommends limiting Bike Trains to have 50 riders or less, as more people would face increased risk to participants during the ride due to safety hazards.

While ensuring the route is safe and supervised is important, bike skills education and training also needs to be considered to increase safety. Volunteers running a Bike Train program should take a course on group riding, family riding, or riding with children (Bicycling to School Together, 2017). Parents are also encouraged to assess the riding skill of their children before deciding whether to allow them to join a Bike Train (Bicycling to School Together, 2017). Basic training in bicycle safety, such as Can-Bike or London Cycle Link's Ride to Thrive education program, was considered mandatory for all schools that participate in the program (Tip Sheet #2: Organizing Bike Trains). A bicycle safety course should include units on learning "how to ride on city streets, rules of the road, signalling, and... communicating with other riders in the group" (Mendoza, 2017).

The age that students are allowed to participate in the Bike Train varies based on the policies of the individual program. Children younger than 10 cannot "accurately judge speed, distance, or sound of

oncoming traffic", so it is reasonable for adults to supervise Bike Trains that include young children (Tip Sheet #2: Organizing Bike Trains). Safe Kids Worldwide (2015) also recommends that children under 10 be directly supervised by an older family member in order to participate in the Bike Train. Agyeman and colleagues (2023) noted in their review article that instituting adult supervision "revived" an interest in active modes of transportation for school children who otherwise would have been perceived as being unsafe during their commute.

Having the right equipment was also an important way to increase the safety of Bike Train participants. Safe Routes to School recommends that all students have an appropriate bike with proper legal equipment and wearing a properly fitted helmet (Tip Sheet #2: Organizing Bike Trains). Bike Train Conductors should also have a first-aid kit and a cell phone with parents' contact information (Tip Sheet #2: Organizing Bike Trains), as well as puncture repair kits and tire pumps to make minor repairs if a problem occurs (Agyeman, 2023). The idea of visible clothing is also emphasized throughout the literature, with many programs asking all riders to wear "bright clothing, a jacket or vest" so that they can be seen by drivers and people know that they are participating in a group ride (Tip Sheet #2: Organizing Bike Trains; Pinnacle Research and Policy Ltd, 2007; WSB Transition Document, Canadian Cancer Society, 2021).

Scaling a Program

The scaling of the Bike Train program needs to be considered to fully understand how such a program should be developed. Discussion between volunteers, community organizations, and school partners was paramount in "break[ing] down barriers and scal[ing] bike buses" (Johnson, 2023). There are Bike Train schemes that are easy to replicate, allowing Bike Train Facilitators opportunity to choose a model that works best for their school community (Burgen, 2023). One way Sam Balto suggests increasing the scale of a Bike Train would be to have "paid municipal staff devoted to promoting active transportation similar to work being done by Mehan Ramey in Hood River, Oregon" (Honey-Rosés, 2023).

Scalability related to age groups for Orchard Park's Bike Train meant keeping all age groups together (ages 5-12), which presented some challenges, although it created a welcoming and inclusive environment for students (Here Comes the Bike Bus!, 2023). For younger age groups, it was recommended they be trained in basic bike skills, especially in locations where there is a trend for Bike Train participant ages to skew younger, such as Barcelona, where the average age of Bike Train riders was estimated to be 7.8, and "some bike buses reporting an average age of 5" (Honey-Rosés, 2023).

Adolescent riders might require a different approach, as they have been shown to require different intervention strategies in studies of active transportation interventions (Shönbach, 2020). Pinnacle Research and Policy Ltd, 2007 (2007) discovered that Bike Trains were popular with older children, while Walking School Buses were more popular with younger children.

The option of including the full catchment area (i.e., area that the school draws students from) around the school would be a way to increase the scale of a Bike Train (Here Comes the Bike Bus!, 2023). The location of the route itself could vary depending on how many students were participating in the Bike Train (Xu, 2023), and biking was shown to be better for longer distances, while Walking School Buses were more suitable for shorter distances (Agar, 2016).

Finally, a gradual approach led to an expansion of Waterloo Region's Walking School Bus, which involved starting small with a pilot program, assessing its success, and allowing it to grow from there (WSB Transition Document, Canadian Cancer Society, 2021).

Expert Consultation

The expert consultation provided an extensive understanding of some of the lessons learned from existing Bike Train programs as well as how future programs may be able to operate within the City of London and surrounding region. This analysis is divided into two sections: (1) Facilitator-level Feedback; and (2) System-level Feedback.

Facilitator-Level Feedback

The current or future Facilitators that were interviewed as part of the expert consultation provided valuable feedback that will help to determine the best ways to adapt the best practices identified from Bike Train programs from around the world to London, Ontario. The topics discussed include (1) Start up considerations; (2) Liability & Insurance; (3) Ongoing program maintenance; and (4) Lessons learned for success.

Start Up Considerations

Current Bike Train Facilitators within Southwestern Ontario use two different models: Grassroots approach; and School-Involved Approach. There were also a couple of organizations that have run regional programs that provide insight into potential approaches that could work.

Regional Approach. While there has yet to be a regional Bike Train program in Ontario, the Canadian Cancer Society's Walking School Bus program has been run extensively throughout Ontario and Quebec, with Waterloo Region having the most comprehensive version of the program. Their program includes an Implementation Guide, Risk Management Guidelines, Waivers, and Training Modules that allow any potential partner to implement the program within their region. For these regional programs, a paid regional coordinator was hired to recruit schools and volunteers to run each school-based program, train the volunteers, and help facilitate the programs. In some cases, the school-based Facilitator was also a paid staff member, although that was based on funding availability. In the regional programs, the school board were partners and assigned staff members to help support the program. Recently program ownership has been taken on by Waterloo Region Student Transportation Services, thus the local school boards now have complete oversight of the program.

School-Involved Approach. Mountsfield PS had a one-day pilot Bike Train that took a much more formal approach to development. The Facilitator started the process by requesting a legal opinion (See Appendix C) regarding the ability for such a program to exist and to better understand the liability of running such a program. To address the liability, he became a member of the school's Home & School Association (HSA), which provides insurance to volunteers at HSA events. Once the ride was sanctioned as an HSA event, the school was allowed to completely engage in the program, including administration and staff promoting the program through school channels.

Grassroots Approach. At Orchard Park PS, the Bike Train used an informal, grassroots approach to develop their program; the idea to start a Bike Train was spawned from a conversation between neighbours and children were informally invited to join. As the Bike Train grew, new families joined with both parent and child attending each week's ride. The Bike Train was paused in the Fall of 2023 as concerns were brought forward about liability and insurance. Another version of the Grassroots Approach is at Empire PS in Waterloo, where a local cycling advocate worked with parents to build a Bike Train program that ran once a week. The volunteers developed a route that encompassed half of the school catchment area, taking a circuitous route from the start point to the school to pick up as many children as possible throughout the neighbourhood. In both examples, the schools were aware of the program but did not actively promote or advertise the program, the programs were built organically through word of mouth.

Cycling Skills. All of the Bike Train Facilitators took an inclusive approach to their program, where all were welcome to participate. At Empire PS, the program allowed everyone to participate, including younger children on bikes with training wheels or on scooters. The younger children rode at the front of the train to ensure that the speed of the ride matched that of the youngest participants. As parents were generally attending the Orchard Park Bike Train, there was little concern about varying skills of riders. The Mountsfield Bike Train presented concerns about the varying speeds children were able to ride, so they suggested creating two groups: older children who can ride faster; and younger kids who are slower cyclists. There were mixed opinions on skill versus age of riders, with some saying skill trumped age and other believing around 9 years old being the age when children generally have the skills to ride safely.

Both groups were concerned about having a formal approach to training and skill testing as it would take away the magic and fun of the program, although Facilitators suggested that bike education programming, such as Ride to Thrive and Bike Rodeos, could shift school culture to one that sees cycling as a viable form of transportation. When discussing cycling skills and the Bike Train with London Cycle Link, they see the need for a much more rigorous training process to ensure volunteers and participants have the knowledge, skills, and ability to ride their bikes confidently on the road. For example, they recommend all Conductors receive Can-Bike 4 training and children receive Ride to Thrive training for participants.

Route Planning. Route Planning was a concern at schools who operated the Bike Train program in London. Their intention was to carefully choose routes with less traffic and aimed to cross fewer busy streets, but it was not always possible. In the case of Mountsfield, the school is on Wortley Road, which is a busy street, especially with Ridout Street closed for construction when the Bike Train ran. The school catchment area is also mostly south of the school, meaning that any commute requires crossing a main arterial road in Commissioners and along a busy collector road in Baseline Road. Avoiding these streets was not possible, so the Bike Train entered the school property from the rear of the school and scheduled their ride to arrive at the school 30 minutes before the start of the school day to avoid the additional school commute traffic. Orchard Park expressed similar concerns, with their route along Lawson Road being a common cut through for commuters traveling to Western University. While they decided to continue to ride along the route, the traffic did add some additional stress to the commute. Like Mountsfield, Orchard Park did avoid the traffic congestion at the front entrance to the school by entering school property at the back of the school. Route planning at Empire PS was not as much of a concern as

the school was in a quieter suburban neighbourhood. The route planning was more interested in ensuring as many children could be picked up along the route, with a desire for additional routes to be added in the future so more children can participate.

Liability & Insurance

Liability was a concern or barrier for all the Facilitators consulted. Despite taking reasonable precautions, issues arose as the scale of Bike Trains increased. Bike Train Conductor parents were concerned about being sued by other parents, as they would be held responsible for the children they led. As already mentioned, the Mountsfield PS Bike Train leader sought legal advice to determine how to best address the liability concerns regarding leading a Bike Train program. The resulting opinion letter (Appendix C), provided an overview of best practices to address the liability concerns faced by Facilitators: (1) Insurance for Bike Train Facilitators; (2) Waiver for parents; (3) Acknowledgement of Risk form; (4) Route Planning; (5) Safety Briefing prior to the ride; (6) Group Ride Training for Conductors and participants; (7) Group Ride Etiquette that should be enforced; and (8) First Aid and Bike Repair kits available. These recommendations are similar to what was discussed by the Canadian Cancer Society Walking School Bus program, whose Risk Management Guidelines and Waivers were approved by the Ontario School Board Insurance Exchange (OSBIE).

The most complicated aspect of the recommendations is related to the insurance holder who is responsible for covering the liability for the program. The Opinion Letter does provide a few options, including through Bike Train Conductors being members of the school's Home & School Association, insurance policy through a cycling club affiliated with Ontario Cycling, or through event insurance applied for by a lead organization. Bike Train Conductors could also get a Personal Liability Umbrella policy to cover their own liability.

Ongoing Program Maintenance

As the program is launched and aspects of the Bike Train need to be adjusted, there are some key conditions required to set a solid foundation, including school administration and staff involvement, continuous feedback loop that allows the program to evolve over time, strong communication between Conductors and families, and a posted route and schedule to allow new participants to join. Bike Train programs are dependent on volunteers, so Bike Train Facilitators need to be sure there are enough

volunteers that substitutes can be found when someone is unable to act as Bike Train Conductor. One Facilitator suggested that besides having a robust volunteer base, a paid conductor position could be created to ensure stability and minimize volunteer stress about finding enough people to lead the Bike Train.

Lessons Learned for Success

Existing programs have been focusing on piloting their Bike Train programs with the intention of using the lessons learned to expand the programs to more days and more routes. The following are some of the key lessons learned for success: (1) Training for Bike Train conductors and children; (2) Accounting for varying skill levels; and (3) Communication. Training of Bike Train Conductors and participants is an important aspect of a successful program. Having trained volunteers understanding how to lead a group ride is vital to ensure that the children are safe and that the program minimizes the risk associated with participation. For children, programs such as Ride to Thrive and Bike Rodeos, are effectively and efficiently ways to build the skills of a lot of children at the same time. Although, there were mixed feelings from facilitators about requiring formal training and skill tests, as it could limit who participates in a program. The Orchard Park Facilitators suggested that having parents accompany their children on the Bike Train put some of the onus on the parents to ensure their child was able to ride safely to school. The concern from some Facilitators is if the program was regimented too much, there would be too many barriers, making it challenging to facilitate and run the program.

Along with the need for more training, Facilitators operating Bike Trains need to consider the variable skills and speeds at which children ride their bikes. While they may have the skills to be part of the group ride, being unable to keep up to the speed of the group could lead to problems for Bike Train Facilitators. Facilitators suggested to possibly have two groups, one that rides faster and one that rides slower. Another option suggested was to have enough volunteers so that if the ride starts stretching out, the children will still be appropriately supervised. The Empire PS Facilitator also suggested moving the younger children to the front of the Bike Train, so that the speed travelled was determined by the slowest riders. Stopping at Bike Train stops and identifying locations to group up before crossing busy intersections will help avoid some of these concerns as well.

Finally, the Bike Train Facilitators discussed the importance of communication between Bike Train volunteers and to parents. This is vital to ensure that everyone knows the plan as the program runs. As the number of riders grows, more routes are added, and new Conductors are recruited, having a common method of communication provides an important foundation that can be built upon. Orchard Park discussed their use of a text message chain to which all volunteers and parents are members. Mountsfield is currently building a communication group using WhatsApp to allow community members to connect ahead of their planned spring launch of a weekly program. Empire PS has very strict weather cut-offs for when the Bike Train runs, so communication between Conductors and families is not required. The bike train runs if temperature is greater than 10ºC or between 1ºC and 9ºC with no precipitation. Communication also needs to go out to the wider school community and local neighbourhood through social media and neighbourhood organizations to let them know about the program. School community members can sign up their children or simply keep an eye out for the Bike Train while commuting to school. Neighbourhood residents can sign up to be volunteers or just be made aware of additional bikes being on the road on the days that the Bike Train is running.

Overall, the Bike Train Facilitators hear that children want the Bike Train to run, as once they participate, they do so repeatedly. Feedback Bike Train Facilitators receive from parents also support the idea that parents what their children to cycle to school but are concerned about the numerous bike-related safety hazards they perceive in their neighbourhood. If a Bike Train program can be developed to address the safety and liability concerns associated with such a program, there will be success. Many of these issues can be overcome by a willing volunteer who can facilitate and operate the program within a school.

System-level Feedback

The expert consultation interviews with school board staff and other system-level organizations focused on the following topics: (1) School Capacity; (2) Where the Bike Train fits in the school; (3) Liability & Insurance; and (4) Policies and partnerships.

School Capacity

The issue of school capacity has always been a concern, but the impact of the COVID-19 pandemic on student learning has led to more pressures being placed on schools by school boards, the Ministry of Education, and parents. This decline in school capacity means that optional programs, like the Bike Train,

may not be a priority to the school boards, school administration, or school staff. School board representatives suggest that the most successful programs at school, are ones that include buy-in from the school principal who provides oversight and support. In some cases, this can still happen, as principals determine which activities take place at their school; although, expecting universal administration support is not reasonable. Additionally, if liability concerns can be addressed, classroom or specialty teachers (e.g., STEM leads, physical education teachers) may be able to support a Bike Train program by volunteering, treating the Bike Train program as an extra-curricular activity. While the current climate in schools is that they lack the capacity to add any new programs, it is predicted that this will change for the better over time. Areas without feeder roads, for example, would be good candidates for a Bike Train, and some schools would seize the opportunity to participate in such a program.

Although it is possible to run a successful Bike Train with little to no involvement from school administration, in this case parents and teachers would need to champion the program as Facilitators and Conductors. It would be wise to recruit parents and teachers who are already passionate about cycling and eager to share their passion with child riders, as was the case with three local Bike Train programs interviewed for this project. Ultimately, a successful Bike Train would depend upon a mixture of parent volunteers and the occasional experienced student that were assigned to ride at different positions in the Bike Train, ensuring the safety and supervision of children.

Where the Bike Train Fits in the School

The Bike Train program takes place outside of the school day, so it makes it challenging for schools to completely engage in the program, making it difficult (but not impossible) for educators to lead. Despite this limitation, there are some curriculum connections along with existing school board partnerships that could increase support for the Bike Train program in schools.

- Cycling skills, active transportation, and sustainability are tied to grades 1 to 8 curriculum in various subjects, including environmental education, geography, social sciences, and physical education, which is highlighted by the Toronto District School Board.
- Safe and Inclusive Schools plan includes plans on how children safely travel to & from school (e.g., TVDSB).
- EcoSchools & Healthy Schools Certification programs have modules on active school travel.

- RiskWatch is being implemented in schools as an injury prevention-based program stressing child safety in the home and at school, which could include active school travel.
- The Ride to Thrive program run locally by London Cycle Link already provides students in grades 5 & 6 with one week of cycling training in some TVDSB schools.

There are different places for the Bike Train program to fit within current school operations, but it will take creativity, leadership, and determination to build momentum and receive support within the school board administration. Advocating for its implementation through senior leadership and elected trustees will help provide a path for implementation in the future.

Liability & Insurance

As mentioned in both the literature review and the Facilitator-level feedback, liability and insurance are frequently the greatest barrier in implementing a program such as the Bike Train. As school travel takes place before and after school, this means it fits into a gray area for liability. From a system level, one solution that has been implemented in the past is for the program to be insured through OSBIE. A recent communication between TVDSB staff and OSBIE suggests this type of arrangement: "Past agreements reviewed by OSBIE with other community-based Walking School Bus/Bike Train clearly places the ownership and associated risk/liability of the program on to the school board. We'd be happy to review any draft agreement and provide comment." Although, the relationship can be tricky as noted by the same OSBIE representative: "If the school board is acting as an active participant in the promotion of this type of program, could muddy the waters with the community if they take this promotion that the board is involved with and overseeing the actual program. Clear communication would be key to help here."

OSBIE's involvement with Waterloo Walking School Bus demonstrates their caution when approaching the program. OSBIE agreed to approve any activity depending on how much risk the school was willing to take on. This approach involved risk management and reducing negligence. A training form for volunteers was also required. Waterloo's Walking School Bus program did not encounter any problems related to liability, and any issues with children misbehaving was dealt with by the school (it was not the responsibility of Conductors). The emphasis was on reducing negligence; everyone involved in the Walking School Bus acted predictably and normally, so no one was liable.

Policies and Partnerships

There are few school board policies that directly impact a potential Bike Train program, as the Bike Train occurs outside of the school day. Two policies that were mentioned in our discussion with a TVDSB superintendent: School bus eligibility and Third-party insurance provider policy. Students are eligible for a school bus if they live farther than 1.6-km of the school using the road and pedestrian network. Understanding this policy and the general walking boundary for a school can allow the Bike Train Facilitators to plan where possible routes could start. The third-party insurance provider policy would have to be addressed if a service provider was running cycling education programs in the school or were operating a Bike Train program. In the case of TVDSB, London Cycle Link already is approved as a third-party provider through their delivery of the Ride to Thrive Program. The London District Catholic School Board noted that they would need to have a formal partnership agreement with any external partnerships if they did not have an existing one already.

There are plenty of existing partnerships that exist within the school boards, including Active & Safe Routes to School Steering Committee, London Cycle Link, City of London, and Middlesex London Health Unit that could assist in supporting and promoting a Bike Train program within the schools. These partnerships deliver important programming that support student success and safety, but there is room to grow to expand partnerships into new areas to increase impact and further student opportunities and benefits. New partnerships could be added to support future growth of the Bike Train program, such as the CAA, Canadian Cancer Society, and Vélo Canada Bikes.

Recommendations

The recommendations are developed by building on the best practices from around the world by integrating existing experience and expertise that will be ideal to implement a Bike Train in London and the surrounding region. The purpose is to develop preliminary recommendations on what is needed to create and implement a Bike Train in local elementary schools within London and the surrounding region. The recommendations also identify gaps that need to be filled as the next steps are determined.

The organization of these recommendations are as follows: (1) Implementation Recommendations for Formal Bike Train Programs; (2) Implementation Recommendations for Infromal Bike Train Programs; (3) Recommendations for School Boards; (4) Recommendations for the City; and (5) Recommendations for a Lead Organization.

Implementaton Recommendations for Formal Bike Train Program

A formal approach to a Bike Train involves the program being run by an organization that is not directly connected to a school board, such as the City of London, London Cycle Link, or CanBike London. To implement a formal Bike Train program, the following steps would need to take place.

Step 1: Build Partnerships & Advocacy

The first step of building a Bike Train program is to build partnerships and advocacy to create the program. In the ~~C~~ity of London and surrounding region, there is the Active & Safe Routes to School (ASRTS) Steering Committee. ASRTS is made up of community partners from several organizations throughout the Counties of Elgin, Middlesex, Oxford, and the cities of London and St. Thomas working together to promote and sustain programs that encourage children and families to choose active transportation to and from school. This local partnership has an over 20-year history of advocating for active school travel within the London and surrounding region and includes a long list of partners that would be instrumental in leading the development of and piloting a Bike Train program. While this group would be an excellent starting place for the program, the partnership would need to work together to identify and recruit a lead organization that could run the Bike Train program, as the ASRTS steering committee is a partnership and cannot apply for grants or assume risk and liability for such programs.

Step 2: Identify a Partner to Assume the Risk & Liability

Once the partnership is established and a lead organization is identified, the partners need to establish which partner will assume the risk and liability for the Bike Train program. According to an Opinion Memo written by David Issac, associate lawyer at Lerners Lawyers, an "insurance policy is the best way to reduce personal liability". There are a few different methods that could be used to ensure that the Bike Train program is insured:

a) An external organization could facilitate the program with all volunteers receiving training and covered under that organization's insurance policy. Essentially, the Bike Train Facilitators and Conductors would be volunteering for the organization and not the school. The organization would be required sign a third-party service agreement and letter of understanding with the school boards. The school would be able to promote and support such a Bike Train program at arms-length but not be able to be involved in the day-to-day tasks associated with running the program.

This is a similar arrangement as to when the Walking School Bus program was run by Block Parent London.

b) Schools that have a Home & School Association, could run a Bike Train program as a daily, weekly, or monthly local Home & School Association event. All volunteers would have to register as a member of the Home & School Association (membership is $20 per/ family) and the volunteers would be insured by the Ontario Federation of Home & School Associations policy. The benefit of this arrangement is that the school would be able to fully support the program and any school administration or staff could be involved if they join the association, including acting as Bike Train Facilitators or Conductors for the program.

c) Insurance could be provided by the OSBIE through an agreement with the local school board. In this type of situation, a community partner may help facilitate the program at a system-level, but the day-to-day facilitation of the program would be conducted by a school volunteer.

Overall, the recommendation on what works for liability and insurance will be determined by the organization best positioned to lead the program. Example organizations who could facilitate this type of program within London and the surrounding area are as follows (Note: these are example organizations and have not volunteered to act in such a role):

- *London Cycle Link.* They already facilitate cycling programs within the schools and are a natural fit due to their current advocacy role for cycling.
- *Individual Home & School Associations*. These associations would have the insurance and liability coverage to run such a program, but not all schools have a home & school association and not all volunteers would be interested in joining their school's association.
- *Southwestern Ontario Student Transportation Services*. Other student transportation consortiums already run these types of programs in other jurisdictions (e.g., Waterloo Region, Ottawa) and their purpose is to support student transportation.

Step 3: Create an Implementation Guide & Resources

The literature reviewed as part of this project provides some guidance as to how a Bike Train program could be implemented; however, most of the existing implementation guides are from outside of Canada (e.g., New Zealand, United States, Spain) or for another mode of travel (e.g., Walking School Bus in Ontario). As a result, a *Made-in-London Bike Train School Implementation Guide* will need to be created

by combining some of the best practices from around the world with the local context provided by the experts. Recommendations for an Implementation Guide for a formal Bike Train are listed as follows in Steps 5 to 10.

Step 4: Identify Schools to Participate

Schools should contact the lead organization to identify their interest in participating in the Bike Train program. The program should start small with a few pilot schools who have buy-in and are already participating in cycling-related activities, such as Bike Rodeo or Ride to Thrive. The schools should be from different environments (urban, suburban, small town) with varying levels of neighbourhood socioeconomic status. As the program finds success, the program can continue to grow and add more routes and schools.

Step 5: Recruit Bike Train Facilitator and Conductors

The first step for developing a Bike Train program is to recruit volunteers within the school community for the roles of Facilitator and Conductors of the Bike Train. The Facilitator is responsible for leading the development of the route and schedule, recruiting and coordinating volunteers, promoting the program, recruiting participants, and ensuring everything runs smoothly in the day-to-day operation of the program. The Bike Train Conductors are responsible for leading the train through the route each day and ensuring all kids are picked up, follow the rules during the ride, and arrive at the school safely. The volunteers should be confident cyclists who understand the rules of the road and how to cycle.

Parents, neighbourhood residents, bike enthusiasts, and school staff who want to help get kids to school safely are all encouraged to volunteer to help lead this program in some way. All parents must be registered volunteers at the school or the applicable community organization, and have approved vulnerable sector screenings completed following the school board policy for volunteers. The process of recruiting volunteers can be varied, including social media, presentations, school and neighbourhood newsletters, school messenger and other school-based apps, and word of mouth. While a lot of the literature and experts are vague about the process of recruiting volunteers, a few best practices have been identified:

- Create an online application form that allows volunteers to indicate their interest in volunteering, identify their address and availability, and upload their Vulnerable Sector Screening Check so it is easy for the facilitator to manage and maintain.
- Consider community members who are retired and still able to ride their bike, as they are a captive audience that may have time to spare.
- Do not feel that it is necessary to have an entire group of volunteers set up before starting. Once there are route(s) established, recruit new volunteers who live along the route to supplement the existing group.

Step 6. Recruit Participants

The recruitment of participants generally starts with a registration going home to families. The registration form would provide the opportunity for parents to indicate their children are interested in participating in a Bike Train program. The registration form would include their name, grade, address, contact information, and a digital waiver signed by the parent. The waiver would state the conditions by which the Bike Train program is being operated, the rules the child is expected to follow, the risks associated with participating, and the rights the person is giving up.

After the initial set of children are registered for the Bike Train program, the Facilitator should promote the program to encourage new children to join. The most successful recruitment includes classroom presentations, canvassing by knocking on doors along the route, and social media / school newsletter promotion. Registration should be an ongoing process, where new children are allowed to join the Bike Train program if they register and their parent signs a waiver allowing their participation.

Step 7. Plan the Route

Planning the Bike Train route to school is one of the most complicated pieces to organizing a Bike Train, due to the number of factors that need to be considered, such as:

- Volunteer home locations;
- Children home locations;
- Street conditions (e.g., traffic volume, number of lanes, speed limit, busy streets to cross, cycling infrastructure);
- School entry point; and

- School catchment area & walking zones.

The literature recommends either starting where volunteers live or building a route based on where children live and then finding volunteers to lead the route. When starting up a program, building around a volunteer is probably the best solution, as finding people willing to pilot a program can sometimes be challenging. Once a starting place is established, it is important to develop a route that considers the other factors, including stop locations, how to maximize the number of children that are picked up, length of the route, minimizing the number of dangerous situations the Bike Train will encounter, and where to enter the school grounds.

While each school community has unique challenges that are difficult to foresee in a universal implementation guide, there are some standard rules of thumb when planning a route that minimizes risk to participants:

- A route should be a maximum of 45 minutes from start to finish, including waiting at Bike Train stops.
- Bike Train stops along the route should be at locations that allow participants to be off the road and protected from traffic, such as a park, the driveway of a volunteer, or an unused parking lot (e.g., church, strip mall not yet open).
- A route should avoid busy streets with heavy traffic, large hills, and busy intersections whenever possible. If a route is required to utilize these types of spaces due to a lack of alternative routes, try to utilize existing cycling infrastructure to increase safety. If there is no cycling infrastructure, there is an opportunity for the school to advocate to the municipality for new cycling infrastructure along the route.
- Identifying a location where the Bike Train arrives at the school is also important, as experts have suggested that arriving at the front of the school where there is a lot of conflict with bus drop off, kiss and ride, and the parking lot can increase safety risks. Sometimes a back entrance or arriving through a connected park can increase safety and pleasure of the ride. If these types of locations are utilized, students must walk their bikes across the school yard to the bike racks once arriving on school property.
- Once the route is finalized, the Facilitator and Conductors will conduct a group ride during the morning commute to identify any concerns along the route and adjust as required.

Step 8. Train Volunteers

Volunteers who are strong bike riders with cycling experience are imperative to creating a safe and sustainable Bike Train program. To help the volunteers safely travel with a group of children, some basic training is required.

Required Training: The lead organization should develop training modules for all Facilitators and Conductors. Every volunteer should be required to complete the training annually to ensure that they understand their role in the Bike Train, as well as the rules and regulations they must follow while participating in the program.

- Facilitator training will teach the Bike Train Facilitator on the steps and rules required to develop a Bike Train program at a school.
- Conductor training will instruct each Bike Train conductor with the general rules and regulations associated with leading children on a route to school.

Optional Training: Although optional, at least one Bike Train Conductor per route is recommended to complete the following two training courses:

- CAN-BIKE Level 2 & 4 (branded as *Ride to Thrive Instructor Training*) provided by London Cycle Link or another CAN-BIKE certified organization.
- First Aid Certification.

Step 9. Train Participants

While all children are welcome to participate in the Bike Train program, they must be able to safely operate their bike so that they are not putting themselves or fellow riders at risk. The recommendation by existing bike train programs is for parents to assess their child's ability to ride a bike safely on the road. In cases where children may not have the appropriate skills, parents are encouraged to join the Bike Train with the child to accompany them and take responsibility for their safety. Children who are unable to ride their bikes safely, will have the ability to join the Bike Train on a scooter (with helmet) or on training wheels to ensure they are safe.

Despite the universal approach to the Bike Train program, it is recommended that schools that offer a Bike Train also participate in a cycling education program. The programs most popular in the region

include Ride to Thrive offered by London Cycle Link, CAN-BIKE offered by CAN-BIKE London, and a neighbourhood organized Bike Rodeo program.

Step 10. Create a Schedule

Creating a schedule will start with the availability of the Conductors. A recommendation is to start with one day a week before school to determine what works. As the program gains momentum and increases its capacity of volunteers, the schedule can run more frequently, and could include a trip home from school. Although, most Bike Train and Walking School programs are strictly run before school due to the issue of finding volunteers after school. With more volunteers and interest, new routes can be planned and more children participate in the program.

Creating the schedule will also involve identifying when the Bike Train will arrive and leave at each stop along the way and determine when the train will arrive at the school. In the London region, schools generally welcome children to the school yard 15 minutes prior to the school day starting, so Bike Train programs may want to schedule their arrival right at (or a little before) the 15-minute mark to avoid traffic congestion associated with the trip to school. This is especially important in cases where there is only one entrance to the school property, which is the same location where cars and busses are arriving.

Once the schedule is created, the Bike Train routes and Bike Train stops should be posted for the school community to see on a school portal, Google Classroom, or School Messenger. This will allow parents to know about the route and determine where their child will meet the Bike Train each day. Conditions around when the Bike Train will run should also be established, including weather policies and not having enough volunteers. Finally, a method of communication regarding schedule changes, Conductor changes, and general implementation information should be developed to ensure that volunteers and parents understand the process and when they will be notified of potential changes. This could include usage of an app (e.g., WhatsApp, Facebook, Band), a text message chain, or email list that would allow two-way communication for all families.

Step 11. Start Riding

Once all the planning is complete, it is time to start riding! The ride should start with children wearing helmets, and riding their properly maintained bikes. Children should also have a bike lock to ensure their bike is able to be stored safely at the school. While riding to school, the Bike Train Conductors should be

wearing reflective vests to identify that they are part of a Bike Train with some of the younger children having the option to wear a vest as well. Younger children should be at the front of the train so that the speed of travel is dictated by their abilities. The Conductors should also have a first-aid kit, bike repair kit (e.g., pump, flat tire repair, socket wrench), and their cell phone with a contact list for the parents and school.

Implementaton Recommendations for Informal Bike Train Program

An informal approach would involve parents or community volunteers from a school to go through the following steps to implement the Bike Train program. This approach will not formally involve the school in the process, although schools can share information on behalf of the Bike Train Facilitator just like with any other community initiative that involves students at the school (e.g., community sports, music programs, community events).

Step 1. Create Interest within the Community

With an informal approach, parents would be required to take the initiative to implement a Bike Train program. These parents would act as Bike Train Facilitators and Conductors, organizing and promoting the program within the school community. Word of mouth can be used to generate interest, with parents and children promoting the program to their friends, neighbours, and classmates. As more people find out about the Bike Train, more people will want to join.

Step 2. Create a Risk & Liability Plan

The liability for an informal Bike Train program would fall on those who are organizing the Bike Train program. Liability insurance may not be necessary for the Bike Train program, as discussed by the Waterloo Region Student Transportation Services and the Canadian Cancer Society, the common-sense liability laws mean that if Bike Train Conductors act reasonably, they have very limited liability risk to lead the Bike Train. Conductors can further limit their risk by clearly outlining the expectations for the program in writing, asking parents and children to sign waivers and acknowledgements of risk letter before participating, and ensuring all participants follow the rules outlined on the waiver. This is the same concept that was used for the Walking School Bus program that was initially run by the Canadian Cancer

Society and approved by OSBIE. Other liability insurance options for informal Bike Train programs include:

a) Schools that have a Home & School Association, could run a Bike Train program as a daily, weekly, or monthly local Home & School Association event. All volunteers would have to register as a member of the Home & School Association (membership is $20 per/ family) and the volunteers would be insured by the Ontario Council of Home & School Associations policy. The benefit of this arrangement is that the school would be able to fully support the program and any school administration or staff could be involved if they join the association, including acting as Bike Train Facilitators or Conductors for the program.
b) Personal Liability Umbrella Policy are designed to cover someone's liability above their regular insurance policies.

Step 3. Recruit Participants

The recruitment of participants generally starts with the few families and children that know about the program already through word of mouth. Ideally an online registration, waiver and acknowledgement of risk would be sent to families who indicate they are interested in participating. This allows the Facilitators to get an idea of the number of people involved and address the rules and risk associated with children participating in the Bike Train. The waiver would state the conditions by which the Bike Train program is being operated, the rules the child is expected to follow, the risks associated with participating, and the rights the person is giving up. Parents should be invited to join the Bike Train along with their children to ensure they understand the process. Ongoing recruitment through word of mouth can continue with new participants being required to submit a waiver and acknowledgement of risk.

Step 4. Plan the Route

Planning the Bike Train route to school is one of the most complicated pieces to organizing a Bike Train, due to the number of factors that need to be considered, such as:

- Volunteer home locations;
- Children home locations;
- Street conditions (e.g., traffic volume, number of lanes, speed limit, busy streets to cross, cycling infrastructure);

- School entry point; and
- School catchment area & walking zones.

The literature recommends either starting where volunteers live or building a route based on where children live and then finding volunteers to lead the route. When starting up a program, building around a volunteer is probably the best solution, as finding people willing to pilot a program can sometimes be challenging. Once a starting place is established, it is important to develop a route that considers the other factors, including stop locations, how to maximize the number of children that are picked up, length of the route, minimizing the number of dangerous situations the Bike Train will encounter, and where to enter the school grounds.

While each school community has unique challenges that are difficult to foresee in a universal implementation guide, there are some standard rules of thumb when planning a route that minimizes risk to participants:

- A route should be a maximum of 45 minutes from start to finish, including waiting at Bike Train stops.
- Bike Train stops along the route should be at locations that allow participants to be off the road and protected from traffic, such as a park, the driveway of a volunteer, or an unused parking lot (e.g., church, strip mall not yet open).
- A route should avoid busy streets with heavy traffic, large hills, and busy intersections whenever possible. If a route is required to utilize these types of spaces due to a lack of alternative routes, try to utilize existing cycling infrastructure to increase safety. If there is no cycling infrastructure, there is an opportunity for the school to advocate to the municipality for new cycling infrastructure along the route.
- Identifying a location where the Bike Train arrives at the school is also important, as experts have suggested that arriving at the front of the school where there is a lot of conflict with bus drop off, kiss and ride, and the parking lot can increase safety risks. Sometimes a back entrance or arriving through a connected park can increase safety and pleasure of the ride. If these types of locations are utilized, students must walk their bikes across the school yard to the bike racks once arriving on school property.

- Once the route is finalized, the Facilitator and Conductors will conduct a group ride during the morning commute to identify any concerns along the route and adjust as required.

Step 5. Create a Schedule

Creating a schedule will start with the availability of the Conductors. A recommendation is to start with one day a week before school to determine what works. As the program gains momentum and increases its capacity of volunteers, the schedule can run more frequently, and could include a trip home from school. Although, most Bike Train and Walking School programs are strictly run before school due to the issue of finding volunteers after school. With more volunteers and interest, new routes can be planned and more children participate in the program.

Creating the schedule will also involve identifying when the Bike Train will arrive and leave at each stop along the way and determine when the train will arrive at the school. In the London region, schools generally welcome children to the school yard 15 minutes prior to the school day starting, so Bike Train programs may want to schedule their arrival right at (or a little before) the 15-minute mark to avoid traffic congestion associated with the trip to school. This is especially important in cases where there is only one entrance to the school property, which is the same location where cars and busses are arriving.

Once the schedule is created, the Bike Train routes and Bike Train stops should be posted for the school community to see on a school portal, Google Classroom, or School Messenger. This will allow parents to know about the route and determine where their child will meet the Bike Train each day. Conditions around when the Bike Train will run should also be established, including weather policies and not having enough volunteers. Finally, a method of communication regarding schedule changes, Conductor changes, and general implementation information should be developed to ensure that volunteers and parents understand the process and when they will be notified of potential changes. This could include usage of an app (e.g., WhatsApp, Facebook, Band), a text message chain, or email list that would allow two-way communication for all families.

Step 6. Start Riding

Once all the planning is complete, it is time to start riding! The ride should start with children wearing helmets, and riding their properly maintained bikes. Children should also have a bike lock to ensure their bike is able to be stored safely at the school. While riding to school, the Bike Train Conductors should be

wearing reflective vests to identify that they are part of a Bike Train with some of the younger children having the option to wear a vest as well. Younger children should be at the front of the train so that the speed of travel is dictated by their abilities. The Conductors should also have a first-aid kit, bike repair kit (e.g., pump, flat tire repair, socket wrench), and their cell phone with a contact list for the parents and school.

Recommendations for School Boards

Identify School(s) for a Pilot Program

Once the *Made-in-London Bike Train School Implementation Guide* is created, schools can be selected to take part in a pilot program. A pilot program should be a short-term, fair weather program that can test how a Bike Train program could work in the London and surrounding region. Pilot schools should be selected based on having a culture for cycling (e.g., are active participants in Ride the Thrive, host a Bike Rodeo, have tried a Bike Train program), as they could provide an ideal test case on how a program could be successful. If multiple schools are selected to be part of the pilot program, the schools should be from both school boards and of differing socio-economic status to ensure equality in the program. The purpose of the pilot program would be to refine the implementation guide and to create a readiness checklist of what conditions need to be met to have a successful Bike Train program.

Support an Active Transportation Charter

Local school boards should work with the ASRTS, local municipalities, and the health units to sign an Active Transportation Charter, as has been done in Waterloo Region, to promote and encourage students the use active school travel each and every day. This will increase buy in needed at the school board and school level to increase the commitment to make a Bike Train happen in London and the surrounding region.

Perform a Bike Train Program Evaluation

To ensure that the program is developed effectively, it is recommended a partnership be created between the lead organization and the school boards to assess the success of the program and identify areas of change / improvement. While an outcome evaluation to understand the benefit of a Bike Train program to children's health and well-being would be ideal, this may not be feasible in today's school climate. Instead, an implementation study should be completed to understand the qualitative benefits of the

program for those involved and the conditions required for a Bike Train program to have sustained success.

Bike Train Liability Review with OSBIE

After communication with OSBIE around the potential for a Bike Train program, their representative suggested that a final Bike Train School Implementation Guide be sent to OSBIE for feedback. This would allow OSBIE to provide legal advice as to the risk a Bike Train program would have to the organizers and ways to strengthen the implementation guide to further minimize the risk of liability of the Facilitators and Conductors.

Recommendations for the City

Develop Implementation Guide & Templates

One of the initial steps of developing a Bike Train program is to transform this report into a *Made-in-London Bike Train School Implementation Guide*. The guide requires step-by-step instructions on how to implement the program and templates (e.g., waivers, assumption of risk, recruitment material) that can used by the Facilitators to help them get started.

Bike Train Liability Review with OSBIE

Work with the school boards to submit the Bike Train School Implementation Guide to OSBIE for feedback. This would allow OSBIE to provide legal advice as to the risk a Bike Train program would have to the organizers and ways to strengthen the implementation guide to further minimize the risk of liability of the Facilitators and Conductors.

Assess Current Infrastructure

As was noted by many of the experts consulted, a lack of cycling infrastructure is a barrier in starting a Bike Train. Assessing the current infrastructure would involve evaluating current bike routes and paths in areas of London that would be suitable for a Bike Train program. Noting areas that could be repaired or having traffic control or wayfaring signs installed in school neighbourhoods could help to ease some safety concerns. This assessment could connect to the City's Mobility Master Plan (MMP) and play a part in shifting transportation in London to cycling, walking, and using public transportation as viable alternatives to single driver vehicles.

Institute Equity Programs

One of the key considerations of any public health intervention, such as a Bike Train, is to understand how the program can be implemented in a way that considers equity. Equity refers to fairness or justice in the way people are treated, where a program like a Bike Train considers the fact that different school communities have different needs to ensure they all have access to the program. In terms of a Bike Train program, there are two major equity concerns that need to be considered: Access to a bike and associated equipment; and parent volunteers.

When considering developing a Bike Train, having access to a bike and associated equipment can be a barrier to participation, as the cost mean many children are not able to afford one. In these cases, schools may consider running a Walking School Bus along with a Bike Train to allow children without a bike or limited skills, to participate in a similar, more affordable program. Another potential solution is for schools to partner up with organizations, such as the Big Bike Giveaway and Helmets on Kids, who can provide inexpensive or free bikes (and associated equipment) to children in need. In the future, funding could be sought to buy bikes, helmets, bells, and locks to ensure all kids can participate in such a program.

Schools located in lower socioeconomic status neighbourhoods also typically struggle to find parent volunteers to assist in school activities, such as a Bike Train program. The literature and experts agree that parent volunteers are the foundation of many Bike Train-like programs, and without them there is little chance of sustained success. Unfortunately, parents in low-income families are more likely to be working multiple jobs, work more hours, and to be single parents compared to their higher-income counterparts, making it much more challenging to volunteer to help support the school. In many cases, these schools will need more external support to run a Bike Train program. One option is to create a funding stream where a school can apply for funding to support a paid Bike Train Facilitator and Conductor(s), which would increase the chances of running a program in those schools.

Other Recommendations

Connect Programs & Other Organizations

A Bike Train program is connected to many existing programs and organizations throughout London and the surrounding area. The main organization that aligns with this program is the ASRTS Steering

Committee. This committee has been the leading advocate for Active School Travel in the region for over 20 years. Their flagship program, School Travel Planning, has been run in over 25 schools across the region and utilizes the 6 E's (i.e., education, encouragement, engineering, enforcement, equity, evaluation) of road safety to increase the number of children traveling actively and safely to and from school each day. Their programming includes curriculum connected education activities, wayfinding signs, advocacy for pedestrian and cycling infrastructure, and encouragement campaigns.

Other organizations and programs that are connected to ELMO ASRTS and a possible Bike Train program include the following:

- *London Cycle Link:* A non-profit organization that has the mission to "help Londoners ride bicycles more [by] building skills and confidence, advocating for safe streets and paths, and fostering a thriving cycling culture". Their education programs (e.g., Ride to Thrive Instructor Training, Ride to Thrive school program) can be utilized to provide both Conductor and children the information they need to successfully participate in a Bike Train program. They also have an existing relationship with TVDSB and are actively programming within their schools.
- *Big Bike Giveaway:* A non-profit organization that has the mission to "acquire low-to-no cost bicycles and distributes them for free to London residents in order to get more people cycling and to encourage heathier lifestyles". This program could provide students from equity-seeking groups access to free bicycles so that they can take part in the program.
- *Helmets on Kids:* A partnership between the school boards and health organizations within the region, with the goal of putting "a helmet on the head of every child who needs one and provide education and awareness about bicycle helmet use". This program could provide students from equity-seeking groups access to free helmets so that they can ride their bike safely.
- *City of London (and other municipalities):* The City of London provides funding through several avenues that could help support programs that are related to a Bike Train program, including Bike Parking and Wayfinding Signs.

Overall, these programs could be used together to help maximize the impact that a Bike Train program could have on students within the community. A narrative example describing of how these different partnerships could work together is outlined as follows:

A school identifies they are facing traffic and congestion problems around their school and want to increase the number of children who use active school travel. They connect with ASRTS and sign up to be part of the School Travel Planning program. One of the barriers identified by the School Travel Planning Profile is that children want to bike to school, but don't have the skills or confidence to do so. The school also identifies there are problems with existing bike parking. The school signs up to receive the Ride to Thrive program from London Cycle Link for their grade 5 and 6 students. Three students in the group cannot afford a bike, so they are provided one for free by Big Bike Giveaway along with helmets from Helmets on Kids. The school applies for Wayfinding Signs from ELMO ASRTS to help families understand the distance to school. The school receives new Bike Racks from ELMO ASRTS to help safely park their bikes during school hours. A volunteer at the school decides to facilitate the Bike Train program and sends out a registration form to families to sign-up their children and volunteer as a conductor. Volunteers from the school take part in the Bike Train Facilitator training, Bike Train Conductor training, Ride to Thrive Instructional training, and First Aid Training. The Bike Train Facilitator works with the lead organization to complete the implementation guide to develop their Bike Train route. The Ride to Thrive program is run in the schools, the wayfinding signs are installed by the City of London and the bike racks are installed by the school board. At the end of the Ride to Thrive program, a Bike Rodeo is hosted by the school to provide safety training for all children in the school and to celebrate the new bike culture that is being developed at the school. The following week the Bike Train program begins!

Work to Increase Sustainability

While the success of Bike Train and programs are volunteer driven, universally partners identify a need for funding to help sustain these types of programs. The funding could come in different forms, whether that is in-kind staff support, purchasing of equipment, funding training opportunities, or applying for grants to support the program. Here are some of the funding needs for the Bike Train to be sustainable:

- Lead organization to develop and run Bike Train training programs and to support Bike Train Facilitators as they start up programs;
- Bike Train Conductor Equipment, such as vests, first aid kits, and bike repair kits;
- Bike Repair Services;
- Cycling gear for equity-seeking groups, such as a bike, helmet, bell, reflector, and bike locks; and

- Funding to hire staff to facilitate the program in schools with lower volunteer rates; and
- Funding to hire London Cycle Link, or a similar organization, to run Ride to Thrive Instructor Training and the Ride to Thrive Program in schools.

Once funding is established, the issue of sustainability turns to developing succession plans at each school to ensure the responsibility of the Bike Train is transferred as people leave the school. The Walking School Bus program in Waterloo Region used a knowledge transfer document to provide all needed information for those who were newly assuming leadership responsibility.

References

Agar, L. (2016, May 3). Metrics for evaluating walking school bus programs: A case study of Waterloo Region, Ontario. https://uwspace.uwaterloo.ca/handle/10012/10441

Agyeman, S., Alimo, P. K., Donkoh, V., & Cheng, L. (2023). Toward cleaner production of walking school buses and bicycle trains: A systematic review. Journal of Cleaner Production, 426, 139031. https://doi.org/10.1016/j.jclepro.2023.139031

Ascentale. (2023, September 22). How to start a Bike Bus (or Bike Train) to help kids joyfully bike to school - ASCENTALE. ASCENTALE. https://ascentale.com/starting-a-bike-train-to-help-kids-bike-to-school

Bailey, A. W., Allen, G., Herndon, J., & Demastus, C. (2018). Cognitive benefits of walking in natural versus built environments. *World Leisure Journal*, *60*(4), 293–305. https://doi.org/10.1080/16078055.2018.1445025

Bailey, A. W., Chew, A., Holmberg, H., & Peyer, K. (2021). Cognitive and neurological impacts of a biking program in public schools. *Journal of Physical Education and Sport*, *21*(04), 1659–1668.

Bourke, J. (2017). Children's experiences of their everyday walks through a complex urban landscape of belonging. *Children's Geographies*, *15*(1), 93–106. https://doi.org/10.1080/14733285.2016.1192582

Burgen, S. (2023, October 4). The bicibús: how Barcelona got kids cycling safely to school – and loving it! The Guardian. https://www.theguardian.com/lifeandstyle/2023/oct/04/bicibus-how-barcelona-got-kids-cycling-safely-to-school

Buliung, R. N., Mitra, R., & Faulkner, G. (2009). Active school transportation in the Greater Toronto Area, Canada: An exploration of trends in space and time (1986–2006). *Preventive Medicine*, *48*(6), 507–512. https://doi.org/10.1016/j.ypmed.2009.03.001

Buttazzoni, A., Nelson Ferguson, K., & Gilliland, J. (2023). Barriers to and facilitators of active travel from the youth perspective: A qualitative meta-synthesis. *SSM - Population Health*, *22*, 101369. https://doi.org/10.1016/j.ssmph.2023.101369

Estey, C. (2023, October 6). ONTARIO BIKE BUSES ARE REVAMPING STUDENTS' ROUTES TO SCHOOL. Green Communities Canada. https://greencommunitiescanada.org/ontario-bike-buses-are-revamping-students-routes-to-school/

Guide to setting up and running a bike bus. (2019). Cycling Friendly. https://cycling.scot/mediaLibrary/other/english/5539.pdf

National Center for Safe Routes to School. (n.d.). Bicycling to School Together: A Bike Train Planning Guide. https://www.walkbiketoschool.org/wp-content/uploads/2017/01/SRTS_BikeTrain_final.pdf

Heath, G. W., Parra, D. C., Sarmiento, O. L., Andersen, L. B., Owen, N., Goenka, S., Montes, F., & Brownson, R. C. (2012). Evidence-based intervention in physical activity: lessons from around the world. *The Lancet*, *380*(9838), 272–281. https://doi.org/10.1016/S0140-6736(12)60816-2

Honey-Rosés, J. (2023, May 11). Building a global 'Bike Bus' community. TheCityFix. https://thecityfix.com/blog/building-global-bike-bus-community/

Huang, C., Dannenberg, A. L., Haaland, W., & Mendoza, J. A. (2018). Changes in Self-Efficacy and Outcome Expectations From Child Participation in Bicycle Trains for Commuting to and From School. *Health Education & Behavior*, *45*(5), 748–755. https://doi.org/10.1177/1090198118769346

Jacobsen, P. L. (2003). Safety in numbers: more walkers and bicyclists, safer walking and bicycling. *Injury Prevention*, *9*(3), 205–209. https://doi.org/10.1136/ip.9.3.205

Johnson, R. (2021, November 4). Barcelona bicycle school bus program a hit. Momentum Mag. https://momentummag.com/barcelona-bicycle-school-bus-program-a-hit/

Johnson, R. (2023, November 14). Bike buses: a global trend in active school transportation. Momentum Mag. https://momentummag.com/bike-buses-a-global-trend-in-active-school-transportation/

Kirby, J., & Inchley, J. (2009). Active travel to school: views of 10-13 year old schoolchildren in Scotland. *Health Education*, *109*(2), 169–183. https://doi.org/10.1108/09654280910936611

Larouche, R., Saunders, T. J., John Faulkner, G. E., Colley, R., & Tremblay, M. (2014). Associations Between Active School Transport and Physical Activity, Body Composition, and Cardiovascular Fitness: A Systematic Review of 68 Studies. *Journal of Physical Activity and Health*, *11*(1), 206–227. https://doi.org/10.1123/jpah.2011-0345

Mattson, M., Hollifield, , Christi, & Egan, C. A. (2022). Increasing Physical Activity: Implementing Bike Education. *Strategies*, *35*(4), 9–14. https://doi.org/10.1080/08924562.2022.2069622

Mendoza, J. A., Haaland, W., Jacobs, M., Abbey-Lambertz, M., Miller, J., Salls, D., Todd, W., Madding, R., Ellis, K., & Kerr, J. (2017). Bicycle Trains, Cycling, and Physical Activity: A Pilot Cluster RCT. *American Journal of Preventive Medicine*, *53*(4), 481–489. https://doi.org/10.1016/j.amepre.2017.05.001

Pedestrian safety. (2015). Safe Kids Worldwide. http://www.safekids.org/walkingsafelytips

Pinnacle Research and Policy Ltd. (2007). Developing school-based cycle trains in New Zealand. In https://www.nzta.govt.nz/resources/research/reports/338/ (No. 0-978-0-478-30948-5 ISSN 1177-0600). Land Transport New Zealand.

Ross, N. J. (2007). 'My Journey to School …': Foregrounding the *Meaning* of School Journeys and Children's Engagements and Interactions in their Everyday Localities. *Children's Geographies*, *5*(4), 373–391. https://doi.org/10.1080/14733280701631833

Schönbach, D. M. I., Altenburg, T. M., Marques, A., Chinapaw, M. J. M., & Demetriou, Y. (2020). Strategies and effects of school-based interventions to promote active school transportation by bicycle among children and adolescents: a systematic review. *International Journal of Behavioral Nutrition and Physical Activity*, *17*(1), 138. https://doi.org/10.1186/s12966-020-01035-1

Simons, D., Clarys, P., de Bourdeaudhuij, I., de Geus, B., Vandelanotte, C., & Deforche, B. (2013). Factors influencing mode of transport in older adolescents: a qualitative study. *BMC Public Health*, *13*(1), 323. https://doi.org/10.1186/1471-2458-13-323

So, A. (2023, January 27). I started a bike bus, and you can too. WIRED. https://www.wired.com/story/how-to-start-a-bike-bus/

Stutts, E. (2023, January 9). How to set up a bike bus at your school. Edutopia. https://www.edutopia.org/article/set-up-bike-bus-school/

Tip Sheet #2: Organizing Bike Trains. (n.d.). In Safe Routes to School National Partnership. https://www.saferoutespartnership.org/sites/default/files/pdf/OrganizingBikeTrains-TipSheet_Final.pdf

van Hecke, L., Deforche, B., van Dyck, D., de Bourdeaudhuij, I., Veitch, J., & van Cauwenberg, J. (2016). Social and Physical Environmental Factors Influencing Adolescents' Physical Activity in Urban Public Open Spaces: A Qualitative Study Using Walk-Along Interviews. *PLOS ONE*, *11*(5), e0155686. https://doi.org/10.1371/journal.pone.0155686

Wirtz, N. (n.d.). Risk Management for Walking School Bus. Canadian Cancer Society.

Wirtz, N. (2020, January 29). WSB Conditions of Participation. Canadian Cancer Society.

Wirtz, N. (2021, June 6). WSB Transition Document. Canadian Cancer Society.

Ontario Active School Travel. (2023, June 7). Here comes the bike bus! | Active School Travel Canada Spring 2023 Panel discussion [Video]. YouTube. https://www.youtube.com/watch?v=99E90Mr8VJM

Xu, J. (2023, July 17). Exploration of the active mobility on children's school commute in the city of Barcelona. https://upcommons.upc.edu/handle/2117/394643

Appendix A: Interview Guide for Operators & Potential Operators

Thank you for joining us today. My name is Andrew Clark and this is my colleague Nadia Tirolese, and we are from Healthy Way Consulting. We have been hired by the City of London to do some preliminary work to develop preliminary recommendations on how to develop and implement the Bike Train program within local elementary schools in the City of London and surrounding region. If you aren't familiar with the Bike Train, it is a group of people who cycle along a set route to school, collecting children at train stops along the way.

To start, tell us what you think about the Bike Train program?

- If a current operator: Why did you decide to start and / or participate in the development of a Bike Train program?
- If potential operator: How does the Bike Train connect to your current program offerings?

Describe the process you went through to start up the Bike Train at your school?

- What models did you / have you considered when implementing your Bike Train?
- How did the program evolve from what you were originally planning to what you ended up implementing?

Have you addressed any of the liability concerns with the Bike Train program?

- How has the school addressed any liability concerns?

Since launching your program, how has the program evolved and changed?

- How have you addressed communication with the school community and families to build attendance and ensure safe pick up / drop off?
- Has bike parking been an issue or has the Bike Train highlighted the need for more/better bike parking?
- Have you considered the sustainability of the program as parents move on and new families join the community?

What are the recommendations you would give to a new group of parents or school community that were interested in starting a Bike Train program?

- What lessons have you learned since starting?
- What would you do differently if you were to launch this program again?

Appendix B: Interview Guide for School Boards & System Organizations

Thank you for joining us today. My name is Andrew Clark and this is my colleague Nadia Tirolese, and we are from Healthy Way Consulting. We have been hired by the City of London to do some preliminary work to develop recommendations on how to create and implement the Bike Train program within local elementary schools in the City of London and surrounding region. If you aren't familiar with the Bike Train, it is a group of people who cycle along a set route to school, collecting children at train stops along the way.

To start, tell us what you think about the idea of a Bike Train program?

From a School Capacity standpoint, where could the Bike Train program fit?

- Who could facilitate the program?
- How could the program be led by parents with support from the school?
- Is there any other connections to existing programs / opportunities where the Bike Train Program could work?

I want to turn to a discussion around liability & insurance. We know that the Bike Train program, like the Walking School Bus program before it, can have some liability concerns regarding its implementation. Do you have any recommendations on the path to take to address these liability concerns?

- Who at the school board / OSBIE should we talk to in order to better understand the liability concerns / processes?
- How could your organization help support a bike train program?

Are there are any policies and partnerships that need to be considered by the school board, schools, or parent groups who are interested in piloting and implementing a Bike Train program?

As we look into the idea of bike trains and more families wanting to ride their bikes to school, there will be greater interest and need for more and higher quality bike parking. To what extent have schools been advocating for improved bike parking?

- If there was funding available for improved bike parking, would the school board be willing to partner with the City of London, Student Transportation Services, and ELMO ASRTS to help schools install new bike racks?

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Appendix C: Legal Opinion Letter for Bike Train Liability

David Isaac
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June 2, 2023

FILE NUMBER 127072-00001

Delivered Via E-Mail

Andrew McClenaghan
390 Wortley Rd
London, ON N6C 3S5

Dear Mr. McClenaghan:

Re: Opinion Letter re: Liability of Cycling Event Organizers

You have asked me to provide you with an opinion regarding the potential liability of event organizers for cycling events, along with ways to mitigate that liability. More specifically, the organizers of a bike bus event and the organizers of a "critical mass" style ride.

As we have discussed, there is no way to completely insulate an event organizer from liability. However, in addressing the issues of Duty of Care, Standard of Care and Causation, there are ways in which a prudent organizer can limit their liability. Furthermore, a carefully prepared waiver can limit liability and insurance can reduce the risk with respect to an Organizer's personal assets.

There is no technical definition of an "event" that is applicable here. However, virtually all cases where a person publically invites others to participate in a bike ride could be considered an "event" which would have "Organizers".

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I. Negligence

If a participant in a group ride is injured, the organizer's most likely source of exposure would be in negligence. It is possible that if there was some sort of contract in place, there could be other sources of liability for breach of contract, but that is not likely to be the case in these sorts of rides and is outside the scope of this opinion (although I would note that waiver can be used to shield an organizer from liability in contract).

As a preliminary note, the reality of a personal injury lawsuit is that if a participant suffers a serious injury, the organizer will likely be sued. This does not mean that the lawsuit will be successful against the organizer, but it is still an unpleasant and expensive experience to be the subject of litigation. In many cases, it is not clear who was responsible for an injury or whether multiple people are each responsible to varying degrees. The plaintiff's lawyer will need to sue everyone in order to protect the plaintiff's rights. As such, lawyers often take a shotgun approach and sue everyone involved, and let people out of the lawsuit once it becomes clear who was responsible (and who has money to pay). Even if the plaintiff does not want to sue the organizer, a defendant can bring a third-party claim against the organizer. For example, if a driver strikes a participant in a group ride, and the participant sues the driver, the driver can bring a claim against the organizer alleging that they failed to take steps to ensure the ride was safe and are partly responsible for the plaintiff's damages. This can occur even if the injured person does not want to involve the organizer.

Lawsuits are very expensive to defend, and there is no guarantee that an Organizer who truly was not liable for the injuries will succeed at trial or that they will be able to recover any of their legal fees if they are successful. While most matters settle before a trial, it would not be unusual for a lawyer to charge an initial retainer of $10,000.00 or $20,000.00 in order to being defending the action. If it did proceed to trial, it could very well cost a minimum of $50,000.00 in legal fees to defend. Defence lawyers do not work on "contingency" (where the lawyer only collects a fee if they win) so this money would need to be paid up front. While the successful party often recovers their legal fees at the end of a trial, they do not typically recover all their fees. In the event of a settlement, it is somewhat rare for a defendant to be let out of a lawsuit and be paid for their legal fees in defending it, especially at an early stage.

To prove that a person was negligent, the plaintiff must show that the defendant owed them a duty of care, that they breached the standard of care, and that the negligence caused their damages.

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(a) Duty of Care

A defendant owes a duty of care to a plaintiff when they are in a relationship of proximity, where what happened to the plaintiff was reasonably foreseeable and where there are no policy considerations that would negate a duty of care.

Whether two parties are in a relationship of proximity depends on the individual circumstances of a case. There is no firm list of indicators of a relationship, but it will depend on expectations of the plaintiff, representations made by the organizer, reasonable reliance on the organizer and other interests involved. Broadly speaking, the more heavily involved in the event an organizer is, the more likely there is to be a relationship of proximity. A clear relationship would exist where the organizer plans the route, promotes the event (and in particular if they hold the event out as being safe in some way, such as being child-friendly) and leads the ride. In such a case, a participant would be justified in expecting that the organizer was in a sufficiently close relationship to the participant that they could expect the organizer to take care of them.

With respect to foreseeability, this again depends on the individual facts of any particular incident. The question is whether someone with the defendant Organizer's knowledge and experience would have foreseen that the specific type of harm was likely to occur. While there are many sorts of harms that could occur during a bike ride, the most likely types of harm would be a collision with a vehicle, a collision with a stationary object, a fall from a pothole or debris on the road, and a collision with another cyclist. These types of harms could certainly be foreseeable.

There are no real reasons of public policy that would negate a duty of care in the context of a cycling event.

In the context of a bike bus ride with a single organizer or a small number of organizers, it is likely that there would be both proximity and foreseeability. Because the organizers would be involved in substantive aspects of the planning and running of the event, it would be reasonable for participants to rely on organizers to keep them safe. Likewise, a harm that might occur to a participant would likely be foreseeable to someone who was involved in most or all aspects of the organization.

If the bike bus event is framed as a "bike your kid to school" event, there could be some room to reduce the possibility of a duty of care, as this framing would reduce the implication that the participants could

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rely on the organizer in any meaningful way. If the organizer makes it clear that no one has any obligation to ride in a particular way or on a particular route, but they are riding and anyone is free to ride with them, they are making it clear that they have less responsibility for the safety of others. In such cases, an organizer would have to be careful to ensure that they do not simply state this once, but ensure this is clear from their actions. In other words, it would likely not be sufficient for someone to organize an event, and then simply deny that they are an organizer. Courts will look to actions not just words in determining whether a duty of care was owed.

In the context of a critical mass ride with a diffuse organizational structure, it is less clear whether there would be foreseeability. However, anyone involved in any meaningful way with the organization of the event would likely be in a proximate relationship. If there were multiple people each of whom took on one or part of one aspect of the planning, then depending on what harm occurred it might not be foreseeable for some of them. In other words, the foreseeability must align with the harm. For instance, if a participant was injured due to a collision with another cyclist, then the organizer who was responsible for making sure that people knew how to ride safely in a group might have been able to foresee this harm, but an organizer whose only role was planning the route might not. It should be noted that if there was mutual accountability or oversight within the organizers then there might be liability for all the organizers despite a diffuse structure. For example, if several people looked at the planned route, and the harm occurred because of the route choice, they all should have been able to foresee the harm. Similarly, if there was a group chat where all the organizers discussed their plans, a Court might find that there was sufficient foreseeability and proximity to create a duty of care for all the Organizers.

(b) Standard of Care

The standard of care is typically expressed as what a reasonable person with similar training and experience would do in the circumstances. If an organizer is found to owe a duty of care, the court must also find that they breached the standard of care before they can be found liable. Broadly speaking, this means that they did something unreasonable or failed to do something reasonable that they should have done. This means that if an organizer meets the standard of care, they will not likely be found liable even if someone is injured. The standard owed is not perfection, but reasonableness in the circumstances.

Industry or association guidelines are typically good indicators of what the standard of care is, although if these standards are found to be unreasonable then they will not be considered to meet the standard of care.

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In the case of inherently risky activities, what constitutes an unreasonable risk that a participant might be exposed to depends on what perils a person engaged in that activity might reasonably expect to encounter. Risky activities include such things as races, skiing and swimming, but it is not clear whether something like a casual bike ride would be considered risky.

Organizers should have several years of experience in group rides and ideally some form of training before leading a ride. Some cycling organizations offer training in group ride best practices. The basics of group riding safety should be reviewed with all participants before starting the ride.

Similarly, organizers with less experience planning a route should check with a more experienced group rider to ensure that the route is safe for the age and experience of the participants. A short fun ride where less experienced cyclists and children would likely be present should avoid roads with fast speed limits and large hills. The ride should be timed to avoid riding in the dark if possible. If this is not possible (or in the case of a glow ride, deliberately avoided) then make sure all riders have bright lights and reflectors.

Because blocking intersections is illegal, a Court would be very reluctant to find that doing so meets the standard of care even if that is what most group rides do. As such, while in many cases it may be safer to block the intersection, if there is a collision which results from the intersection being blocked, the organizer would very likely be found to have breached the standard of care.

In rides where children are present, the standard of care owed to the children is higher than reasonableness. In such cases, organizers would owe them the same sort of care similar to that owed by a reasonably prudent parent. In other words, think about what a parent would do when riding with their children, and make sure the group ride would be something that a parent would do. The following factors may affect the standard of care owed to children:

- the number of children being supervised at any given time;
- the nature of the exercise or activity in progress;
- the age and the degree of skill and training which the children may have received in connection with such activity;
- the nature and condition of the equipment in use at the time;
- the competency and capacity of the children involved.

(c) Causation

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The final stage of liability is whether what the organizer did caused the plaintiff's injury. If a participant is injured, but the injury was not caused by the organizer, the organizer will likely not be found liable. Most serious injuries that would be likely to occur in the context of a bike ride would be caused by another party (most likely a driver or the municipality). However, if the organizer contributed to a situation which caused the injury then they could be held liable as well. For instance, if someone was injured due to colliding with a piece of wood on the road where the road was under construction the construction company would likely be primarily liable. If the organizer knew of construction on the route but chose it anyway, they could also be found to be partly liable.

(d) Damages

Once a determination of liability has been made, the final remaining issue is what compensation an injured person might be entitled to. The calculation of damages is very fact-specific. For minor injuries a lawsuit would be very unlikely because the damages would be very small. But for the worst case scenario (a catastrophically injured child who will require attendant care for many years) the damages could be well into the millions.

If a person is injured by a motor vehicle, they would likely be entitled to Accident Benefits through their own or the driver's car insurance.

When calculating damages, the concept of "contributory negligence" is important. Where the injured person negligently contributed to their injury, the amount they would be entitled to decreases based on how much they contributed to the injury. For instance, if the injured person was not using lights while riding at night and was hit by a car, they would likely be found to have significantly contributed to the collision and could have their damages reduced by a large amount (although again this is impossible to predict without specific facts).

II. Waivers

Waivers are contracts that allow people to participate in an event in exchange for waiving certain rights, typically the right to sue. A well-drafted properly-signed waiver can provide a complete defence to a lawsuit. From a pragmatic perspective, even an improper waiver can be effective because a person may decide not to sue if they have signed a waiver and believe it will be effective.

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Waivers must clearly state the rights the person is giving up, and the importance of the waiver must not be diminished. There are five reasons a waiver typically fails:

- The signer, through no carelessness on his or her part, is mistaken as to the document's nature and character;
- The signer is induced to sign the contract by fraud or misrepresentation;
- Where it is unreasonable for a person relying on the signed contract to believe that the signer really did assent to its terms;
- Was the contract formed in unconscionable circumstances (e.g., unequal bargaining power, being preyed upon, lack of education); and,
- There is an overriding public policy that outweighs the very strong public interest in the enforcement of contracts (In the context of a sports event such as a bike race, waivers are common and it would not violate public policy).

Waivers must be specific to each event and accurately describe the risks of the event. They must clearly state that the participant is giving up their right to sue if they are injured as a result of the Organizer's negligence. Care must be taken to ensure that participants have time to read and sign the waiver without being rushed. Electronic waivers signed in advance of a ride can be helpful in this regard, but Organizers should be careful to ensure that each person has actually signed one – for instance by reviewing a copy of a confirmation email.[1] Bringing paper copies for people to sign if they are not able to sign electronically would be prudent. If you have event insurance (discussed below), it may be a condition of insurance that a waiver is signed and they may be able to provide you with a waiver to use.

As waivers are contract, it is not likely that a waiver would be successful if signed by or on behalf of a minor. Again from a pragmatic perspective, having parents sign a waiver or an acknowledgment or assumption of risk on behalf of their child could be helpful in terms of reducing the chances of a lawsuit.

III. Insurance

An insurance policy is the best way to reduce personal liability on the part of event organizers. It is not uncommon for plaintiffs to confine their damages to the limits of the insurance policy, because most

[1] Race Roster has the ability to embed a waiver in the registration page for an event.

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people do not have assets that are easily seized. However, in very serious cases (for example, a catastrophic brain injury or paralysis) it is more common for plaintiffs to seek larger amounts beyond the policy limits. If the organizer has assets such as a house, investments, or a good income, these could be seized if there is no insurance policy or if the claim exceeds the policy limits.

In addition to the financial benefit of having a policy, insurers will in most circumstances provide legal counsel. So if an organizer is named in a lawsuit, they will not have to go to the expense of hiring a lawyer privately. As discussed, in the event of a lawsuit it is common for plaintiffs to name everyone who might be liable. Without the benefit of counsel through the insurer, it can be very expensive to defend a claim, even if there is no finding of liability. It is not always possible for a defendant to recover any legal costs from the plaintiff, even if the case against them is dropped.

In Ontario there are a few different ways to secure insurance for cycling events. For a bike bus school ride, it may be possible to get insurance through the Ontario Federation of Home and School Associations. Their website indicates that they have an insurance policy which covers members at sanctioned events.[2] If the event is sanctioned and run through a cycling club affiliated with Ontario Cycling, it may be possible to get insurance through Ontario Cycling.[3] It is also possible to purchase event insurance for special events. Some insurance brokers offer specific packages for sports liability that are designed to cover recreational or charity bike rides.[4]

In addition to these options, a Personal Liability Umbrella Policy ("PLUP") may provide additional peace of mind. Umbrella policies are designed to cover someone's liability above their regular insurance policies. For example, if the organizer had $1,000,000.00 of special event insurance, and an umbrella policy for $5,000,000.00, they should be covered up to the higher amount if they were sued for more than the special event policy limits. Note that as a general rule, the holder of a PLUP needs to have their home and automobile insurance through the same provider as the PLUP.

IV. Best Practices

[2] https://ofhsa.on.ca/wp-content/uploads/2019/09/Home-and-School-Association-Membership-Form-September-2019.pdf

[3] https://www.ajg.com/ca/insurance/programs-partnerships/cycling-provincial-collective-insurance-program/

[4] https://www.palcanada.com/index.php/en-us/policies/event-hosts/special-events-liability

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The following are a list of best practices for event organizers to keep in mind when considering liability:

1. Insurance – Organizers should carry insurance that covers them for all potential liability in organizing the event.

2. Waiver – All participants should sign a waiver which clearly sets out the risks involved and waives the right to sue organizers for any injury no matter how caused. Ideally these should be provided or signed ahead of time so participants do not feel rushed.

3. Acknowledgement of Risk – In addition to the Waiver, participants should sign an Acknowledgement of Risk that states they understand the risks involved in the activity. This should include an acknowledgement that the participant's equipment is in good working order, they have reviewed the planned route and believe they are capable of riding it, and they will obey the rules of the road and follow group ride etiquette.

4. Route Planning – The route should be carefully planned in order to avoid places with high traffic volume, high speeds, construction, or any other dangerous situations. Rides should be planned to avoid riding in the dark if possible.

5. Safety Briefing – Before starting the ride, the organizers should review group ride etiquette, basic rules of the road, and basic safety precautions with all participates. Organizers should ensure there is time for people to ask questions if they have any. At the same time, organizers should make it clear that everyone is responsible for following the rules of the road and ensuring their equipment is functional. If children are present, Organizers should confirm with the guardian that the child is capable of participating in the ride safely. Ideally this would be done in writing as part of the Acknowledgment of Risk.

6. Group Ride Training – Organizers should ensure at least one of them has received some form of training in planning and running group rides. Similarly, the organizers should have experience participating in and ideally assisting with organizing group rides in the past.

7. Group Ride Etiquette – Organizers should ensure compliance with group ride etiquette and safety precautions, and make it clear that anyone not following the rules will be asked to leave the ride.

8. First Aid and Repair – There should be a first aid kit available during the ride and at least one of the organizers or participants should have basic first aid training. On longer rides, ensure that there is a repair kit available so that participants can fix simple issues.

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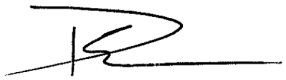
V. Conclusion

I trust this opinion will be useful to you in your cycling activities and organization. If you have any further questions arising from the above, I would be happy to discuss them with you at your leisure.

Yours truly,



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