

Cycling and Public Transit: How well do these mix for older adults?

Project 2553
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Carol Kachadoorian

This research project is intended to continue the work by [dbiTilde CORE, Inc.](#) on older adult mobility and wellness. While the benefits of cycling for older adults are well-established, the contribution of public transit to an older cyclist's mobility independence is an area that needs further study. The idea for this research came from several conversations about the cycling experiences of older adults, travel training intended to make transit use more likely, and our commitment to continue to tell the story of older adults who cycle. Thank you to Hugh Fuller, AVP and Project Director for Rail/Transit at HNTB, for reviewing and improving this article.

How do we design bike-with-transit so that older people can continue to cycle?

I feel that transit systems are increasingly important as we age, but less and less friendly because our needs are changing. This is true also of the bike network if it is not well-constructed and robust.

What do we know about older adults who cycle?

The 50+ Cycling Survey tells us that older adults are interested in cycling and want to continue to do so as they age. They tend to use bicycling facilities that offer separation from motor vehicle traffic, adjust the length and type of cycling based on their physical abilities, change the type of bicycle they use to continue cycling, and enjoy cycling with others for both socialization and physical fitness.

Some responses in the 50+ Cycling Survey convey that older cyclists feel self-conscious about continuing to cycle as they age, experiencing social pressure to stop. Using public transit may create some self-consciousness, particularly around their speed and agility in securing a bicycle onto a bus or holding it on a train. When asked about concerns around using bike racks on buses in the survey regarding bike-public transit trips, one person said, *Struggling awkwardly getting my bike on the rack as everyone watches.*

I have used the bus a few times as part of a cycling trip and found that bus operators are usually willing to help, especially by kneeling the bus. The trick is to feel like you're doing it fast enough to be courteous. But, if the bus operator is in a hurry, s/he won't kneel the bus.

How does public transit fit into this picture?

Multi-modal trips, i.e., those that include more than one form of transportation, are common. Even trips that are primarily done by motor vehicle are multi-modal in that people walk to and from the motor vehicle. Multimodal trips often include combining walking with using public transit. A dozen years ago some people replaced the walking portion with a bikeshare bike (although they had to walk to get the bike!).

People who cycle may use public transit to complete their trip because it can extend the distance they can travel. Whether by bus or train (street cars, light rail, heavy rail, inter-city rail), using public transit for a portion of the trip can also allow a cyclist to travel through an area that is not especially bike-friendly, travel farther, or provided relief from fatigue, weather, or time-constraints.

Advocacy by people that cycle and wanted their own bike when using public transit resulted in public transit vehicles and stations being refitted to accommodate bikes. As a result, most agencies accommodate bikes on buses and trains. Several bike on transit studies for a single transit agency or a broader study provide more detailed information, including topics such as bicycle parking. See the Appendix 2 for a selected list of references.

There are both benefits and challenges for older adults when using public transit to extend a cycling trip.

We conducted a short survey of older cyclists in four communities. A series of focus groups provided first-hand information on the pluses and minuses of using public transit as part of a cycling trip. The survey was distributed by local bicycle or active mobility organizations. The responses from 182 older adults and the 23 who participated in a focus group are described here.

While most responding to the survey use public transit as part of a cycling trip at least sometimes, others do not because it does not go where they are going or, in the case of one person responding: I just don't think of it. Those that do combine cycling with a transit trip do so for a variety of reasons, all of which add value to the cycling trip. For example, one person responding said s/he uses public transit to save my battery for the interesting part. In addition to learning the extent to which older cyclists make bike-public transit trips, we learned whether bike racks and other holding devices on



Figure 1. Branding used to promote the survey.

public transit vehicles are easy to use, especially given the impact of ageing on a person's strength and agility. Typical comments from the survey about how age affects transit use with a bicycle are:

- *[It's] hard for me to get it in and out. I'm short and old-ish.*
- *These devices can't hold heavier e-bikes. I'm older and need my ebike to remain active.*

Even for those older adults who cycle are fit and strong, using public transit as part of their cycling trips isn't always easy. The general impression is that bicycle facilities on buses are designed for younger, stronger, and taller (!) people. Accommodating bicycles to access a station, for vehicle boarding, and while on-board can also require strength and agility that decrease with age.

Access to public transit vehicles varies by mode and is easy or more difficult depending on each person. Access to the bus stop is affected by the quality of the bicycle network and roadway crossings. Responses to the 50+ Cycling Survey, Year 5 confirm that older adults prefer protected bike lanes and intersections that offer safe passage through an intersection. This means that bicycle networks along bus routes or otherwise providing access to bus stops can affect how and if older adults will use a bus as part of their cycling trip. Bus stops themselves are usually simpler to use, as they are typically at-grade, making it easy to board and alight the bus. A paved **level-landing area** with sufficient space to wait with a bike along with other passengers eases the process. While a bus shelter protects both the bike and rider from certain weather conditions, there may be competition for the sheltered space with other passengers.

Transit agencies now typically have a **2- or 3-bike rack** on the front of their buses. Those without bike racks on buses typically do not allow bikes on the bus. Communities with high bicycle use may have capacity problems on buses, causing denied trips. Capacity is due to both the limited number of bicycles that can be carried and because service is not frequent enough. 'Narrower' headways of 10 or 15 minutes encourage people to wait for the next bus. Some older adults wait for the next bus, bicycle the rest of the way to their destination, use an uber that can take a bicycle, or go back home and drive.

Ease of use of the bike rack depends on factors such as the height of the bike rack, how well racks are maintained so that the moving parts move easily, the weight of the bike and the width of the bike tires, and which position the person uses. Older adults have more difficulty with a position other than the first (outside) position, as lifting their bicycle over one or two others requires strength and height they may not have. One person responding to the survey answered the question of how to make the bus part of the trip better this way: The key with bike racks is to reduce the level of upper body strength to get your bike on the rack. This is the barrier.



Figure 2. While not included in the study, MARC requires cyclists to bring bungee cords to secure their bike.

Access to a train station varies by type of train and age of the station. The bicycle network quality and completeness for train station access can be more important, as more people who cycle are likely to use a railway station than at a single bus stop (although good cycling infrastructure along and to a transit corridor may be equally important. Some regional governments and transit agencies prepare bicycle access to transit plans and work in conjunction with local governments to ensure the bike network supports transit access. Once at the station itself, cyclists first need to enter a station area, which may require lifting a bicycle up steps, using an elevator or escalator, or simply walking up a platform. Boarding the train comes next. Little physical effort is needed to roll a bike onto a train when the platform and vehicle entrance are level, but more may be needed, for example to board an intercity train such as Amtrak where the platform is several steps below the train door. As with lifting a bike onto a bus bike rack, an older cyclist may have difficulty carrying a bicycle up steps or lifting it onto a train.

Only some Skytrains have bike areas. The bike “rack” is really minimal and only holds one bike, so it can be quite precarious.

Transit agencies usually allow bicycles on-board their trains, some offering designated places for bikes and 'holding' devices such as hooks or floor mounts. Lifting a bike onto a hook to hang it can be physically taxing. Removing panniers to do so creates another logistical issue of where to place them while lifting the bike on or off. When holding devices are absent, a bicycle must be held by the cyclist. Some agencies limit bicycles on trains either by type of train or service and time of day or day of week, often limiting the number of bikes per car. Others transit agencies with trains have bike cars.

For example, older train stations typically have smaller elevators intended to accommodate people with disabilities and parents with strollers. Introducing bicycles into the mix means larger elevators are needed; newer stations often have these. While some transit agencies allow people to use escalators instead of elevators, holding a bicycle on the escalator ‘...can be tricky.’ Train stations in The Netherlands typically have low-rise steps with a bicycle tray for people cycling to use.

Survey Details

Nearly 200 older adults responded to the survey, which was open from October 15 to December 31, 2024. Promotional efforts were cascaded during this period, depending on the timing of social media, newsletter, etc., from each participating organization. Vélo Québec translated the survey into French. Most organizations promoted the survey twice. Appendix 3 shows the survey, with notations for its skip logic.



Figure 3 Train stations in The Netherlands have shallow steps with a 'bike tray.'
SOURCE: Carol Kachadoorian.

Table 1 shows the cities where the survey was offered and the organization, the organization that promoted it, the number of responses, and the transit agencies respondents listed as using. Figure 2 is the survey promotion Bike Utah created and included in two issues of their newsletter.

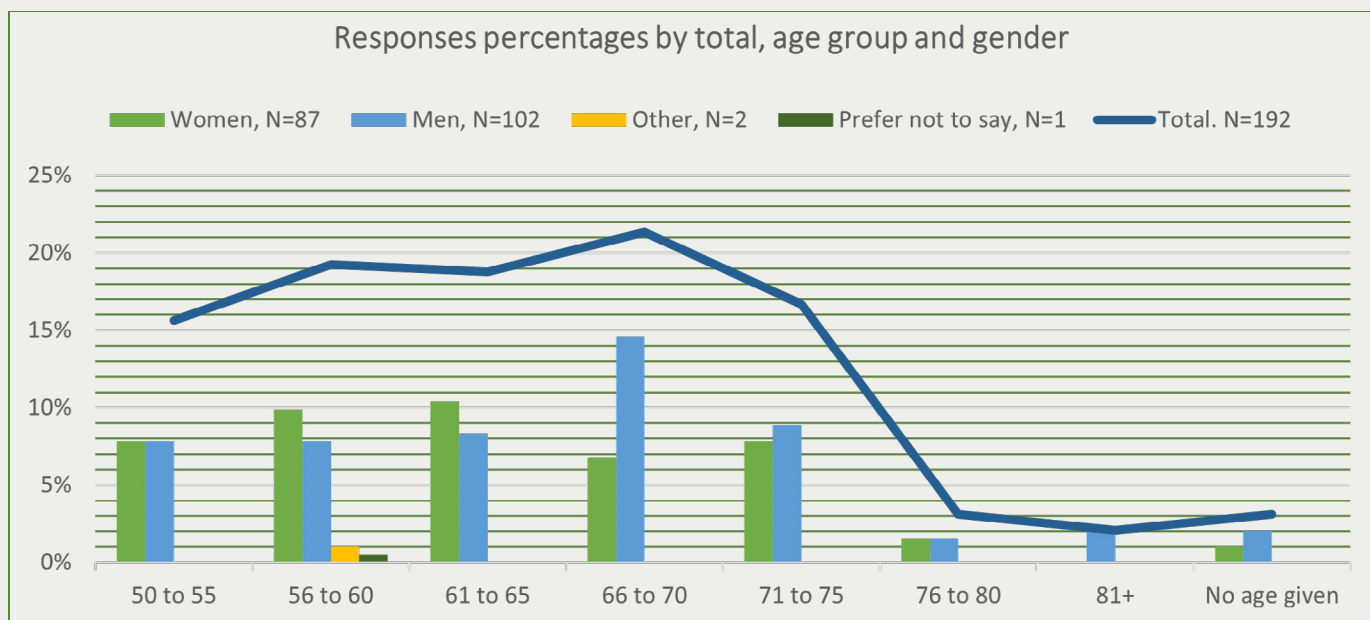
Table 1. Participating Cities and Regions, Participating Organizations

CITY OR BROADER REGION	SURVEY DISTRIBUTED BY	USABLE RESPONSES	TRANSIT AGENCIES USED BY RESPONDENTS
Montreal, QC Survey was in French)	Vélo Québec https://www.velo.qc.ca/	78	STM, Via Rail Canada, TACL, STO et OC TRANSPo, EXPO, RTC, TTC (Toronto), Reseau de transport de Longueuil, TriMet (Portland, OR)
Salt Lake City, UT	Bike Utah https://www.bikeutah.org/	15	UTA, Amtrak
Tucson, AZ	Cactus Cycling Club https://cactuscycling.org/	29	Sun Transit, Amtrak, MAX (Portland, OR)
Vancouver, BC	Hub Cycling https://bikehub.ca/	60	BC Transit, TransLink



Figure 3 Train stations in The Netherlands have shallow steps with a 'bike tray.'

SOURCE: Carol Kachadoorian.



All transit agencies cited by those responding to the survey accommodate bicycles to some degree. Links to one agency serving each city and an overview of how bicycles are accommodated is below. Transit agencies typically have more detailed information on their websites, often with 'how to use' videos.

[Amtrak](#) – Bicycles are allowed (even encouraged), one per passenger. A reservation is needed for the bicycle and there may be a charge.

[BC Transit](#) – Bikes are allowed on bike racks; folding bikes in cases are allowed on-board; e-bikes under a 55 pounds are allowed on bike racks.

[STM](#) – Bicycles are allowed on all transit vehicles midday on weekday and all day on weekends. Folding bikes are allowed anytime.

[Sun Transit](#) – Bikes are allowed on buses and streetcars. New buses will have a 3-position bike rack, instead of the current 2-position bike rack.

[Translink](#) – Bikes are allowed on almost all transit services, including bus, SkyTrain, SeaBus, and West Coast Express, with some restrictions.

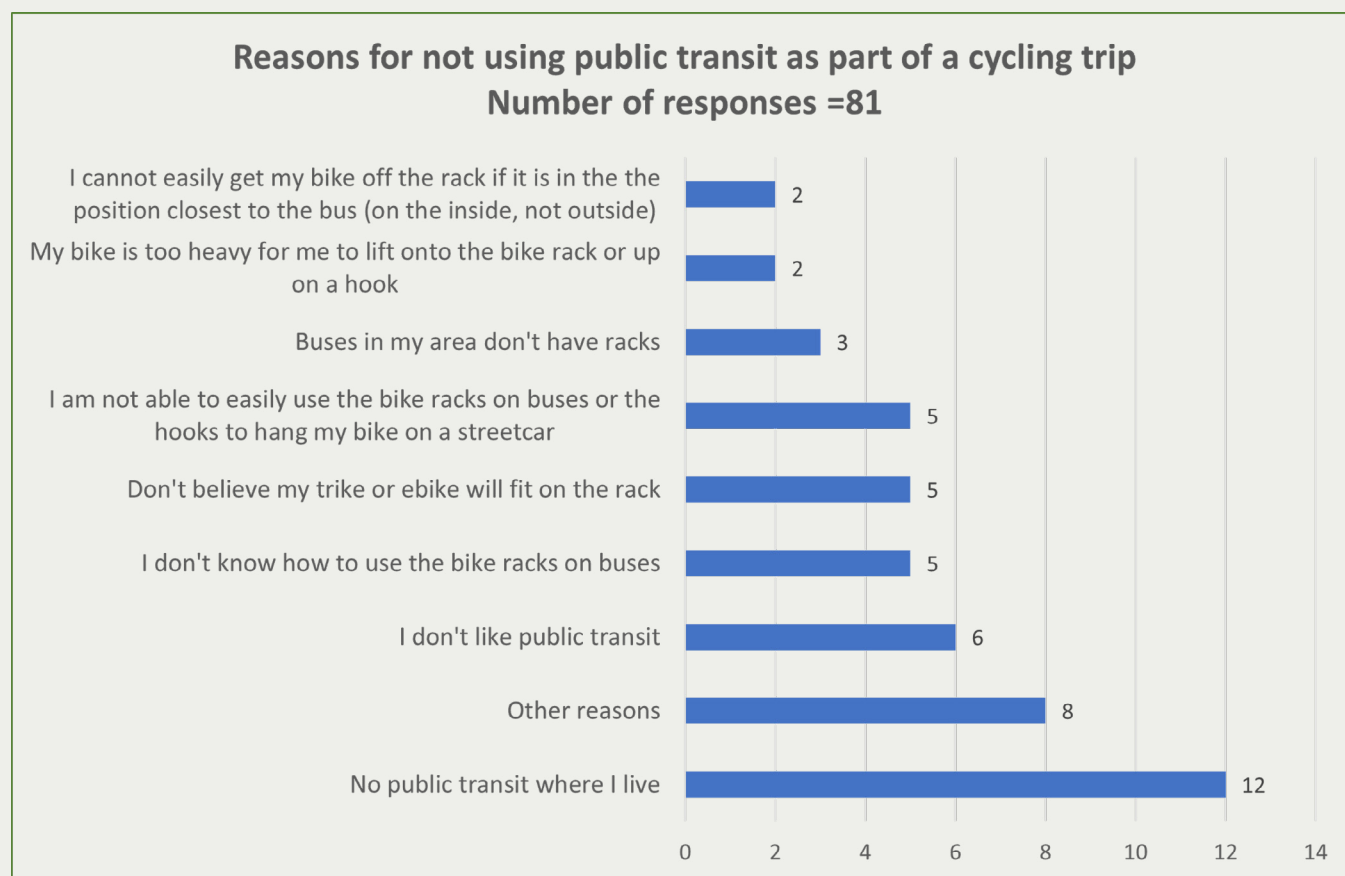
[Utah Transit Authority](#) – Bikes of any type are allowed on any bus, bus rapid transit (BRT), TRAX, S-Line, and Front Runners, as well as OnDemand if space allows.

[Via Rail Canada](#) – Interestingly, only folding bicycles are allowed on-board and are considered sports equipment.

The Survey: Older Cyclists and Public Transit Use

This section shows the results of the survey questions. Survey questions started with a general Yes or No question about using public transit, then asked specific questions based on the answer. Those who do not use public transit were asked why. Those that do use public transit as part of a cycling trip were asked whether they use buses or trains, why they use them, and any concerns they have. The survey ended with an invitation to participate in a focus group. Twenty-three people responding to the survey participated in one of 10 focus groups. Additional information from 10 focus groups follows the survey results discussion.

Those who don't use public transit. The reasons that older cyclists do not use public transit as part of a cycling trip vary but are mainly due to a lack of need. Eighteen (18) people responding to the survey said they do not combine public transit with a cycling trip, although some use public transit: I use either the bus or the bike and not both at the same time. One person said s/he just doesn't think of it. Two-thirds said there was no public transit where they live, or the service does not go to their cycling destinations: *Bus service doesn't go to Ogden or Logan Canyon.*



Other common reasons mirrored those of older cyclists who do use public transit: the lack of ease of getting their bike on a bike rack or in holding device; and the uncertainty about where their bike would fit on the racks or other holding devices.

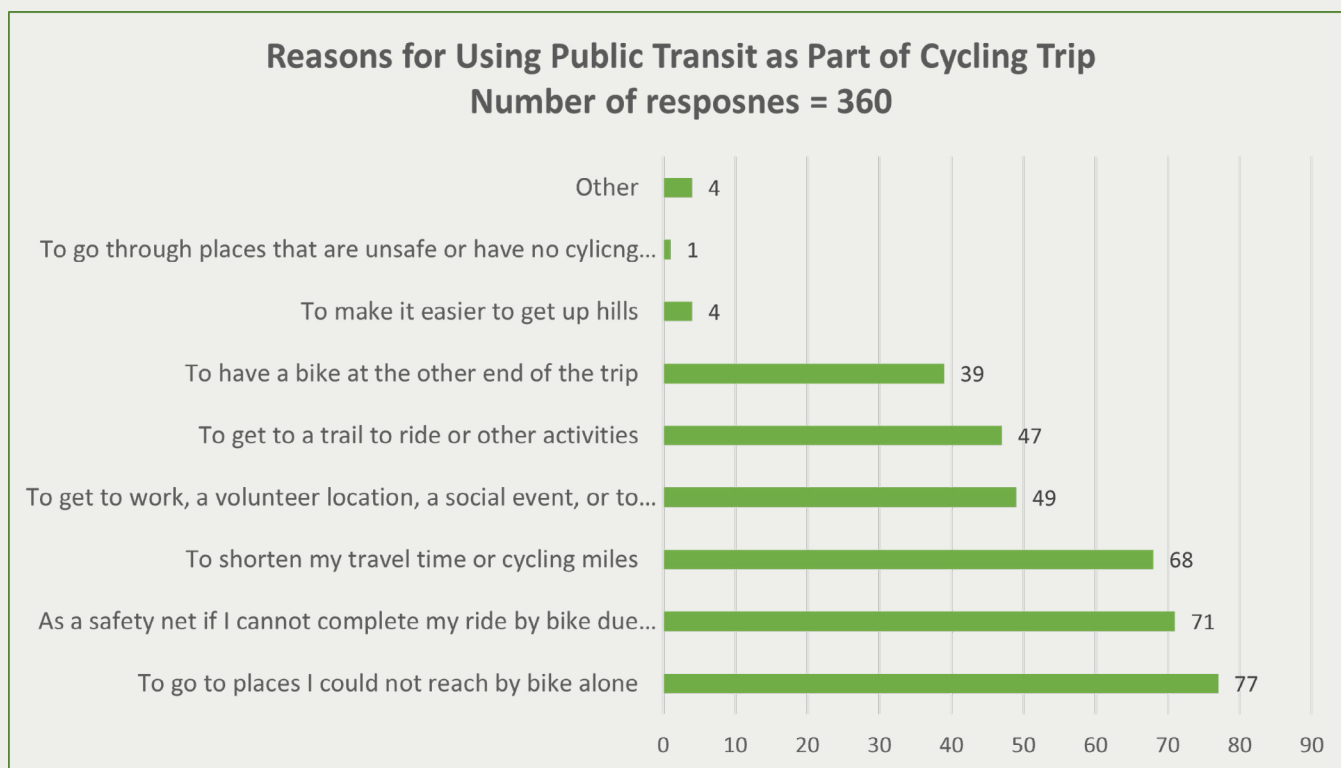
Those that do combine cycling with a transit trip do so for a variety of reasons, all of which add value to the cycling trip. Public transit extends the reach of a cycling trip by reaching places that offer other activities (For ferries, scenery, swimming in lakes/rivers/oceans and fun!) and as a safety net during a cycling trip. Using public transit also shortens the total travel time (I'm 77 years old... in the summer I cycle 50km a day, which takes me very far from home...I used the metro 4 times because of a flat tire because I was very, very far from home) and offers a safe way to travel through unsafe areas (To avoid a busy unsafe road that does not have cycling infrastructure).

Getting to a trail or having a bicycle for the entire trip are also popular reasons. Some transit agencies such as [Vancouver's](#) TransLink promote taking the bus to a trail, especially in summer months. The program uses a [Bike Bus](#), which has on-board holding devices. While some older cyclists use bikeshare bicycles instead of their own, especially when away from their home city, many prefer their own bicycles. Four responses mentioned the value of a public transit helping to get up hills: To deal with the steep grades to get to a more suitable location to start a ride.



Figure 6. TransLink's Bike Bus is fitted with on-board holding devices and serves area trails.

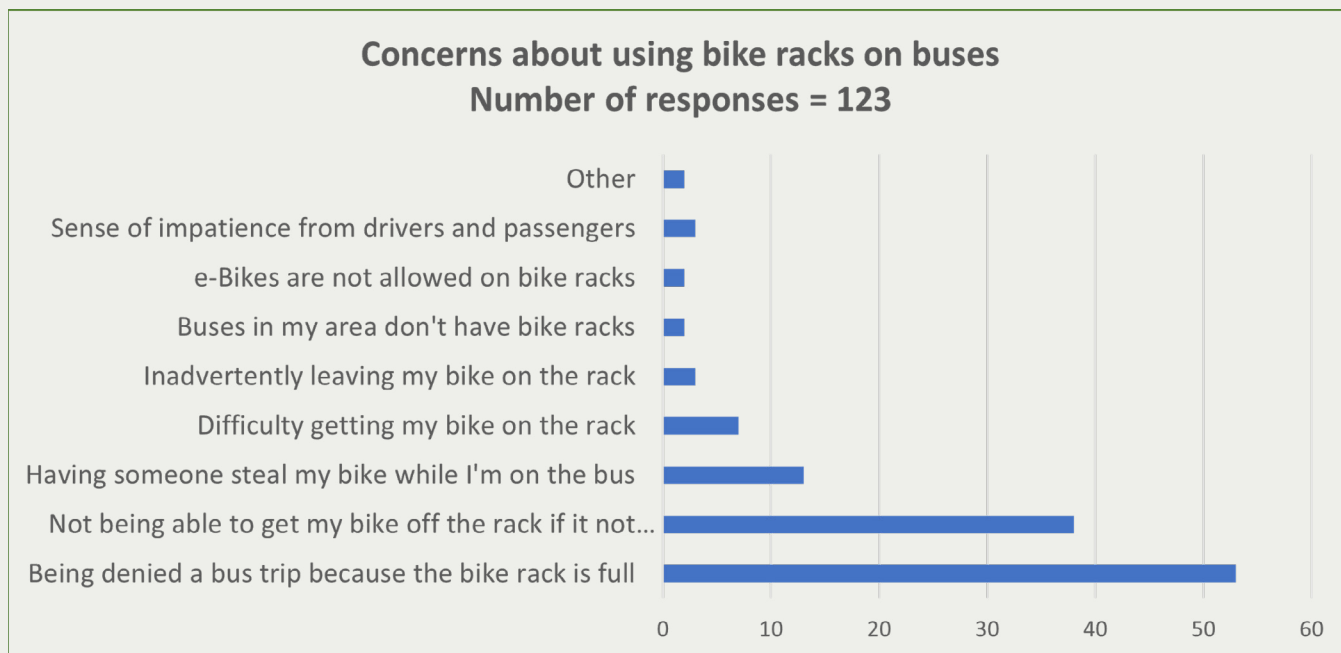
SOURCE: <https://buzzer.translink.ca/2024/06/this-summer-ride-the-900-bike-bus-to-tsawwassen-ferry-terminal/>



A bike-bus trip is not without concern for some older adults, primarily due to bike racks. Full bike racks top the list of concerns, as a full bike rack means they are denied a bus trip. However, those with folding bikes can board the bus, after folding the bike. In some cases, the folding bike must be in a case. Folding bikes are less common than other types of bicycles, such as an e-bike. Bike racks on buses typically have a weight limit that precludes e-bikes. In addition to their weight, e-bikes, trikes, and cargo bikes do not fit on these bike racks. One person responding to the survey noted that the limitations of transit vehicles accommodating e-bikes make public transit less useful as a safety net.

My first experience in using the bus as part of a cycling trip was 12 years ago. I rode 45 minutes to catch the bus to a place farther away, with the intent of cycling the rest of the way after getting off the bus. I arrived at the bus stop and while waiting for the bus, two men arrived with their bicycles. I put mine on first, leaving room for only one of the two men. This experience made me nervous about using the bus as part of a cycling trip since.

Using the racks themselves is of concern due to an older cyclist's strength, agility, and height. Just lifting the bike up to the rack or lifting it off can be problematic if the outside position is full or the bus operator doesn't kneel the bus. Whether it is the risk of theft or damage, one person responding to the survey said: I don't dare put my expensive bike on a bus rack.



Responses to the question, What do you do if you are denied a trip because the bike rack is full? an older cyclist will most likely wait for the next bus, cycle to their destination. Fewer will lock their bike or travel by their own car or an Uber to their destination, and as mentioned above, those with a folding bike will take it on-board.

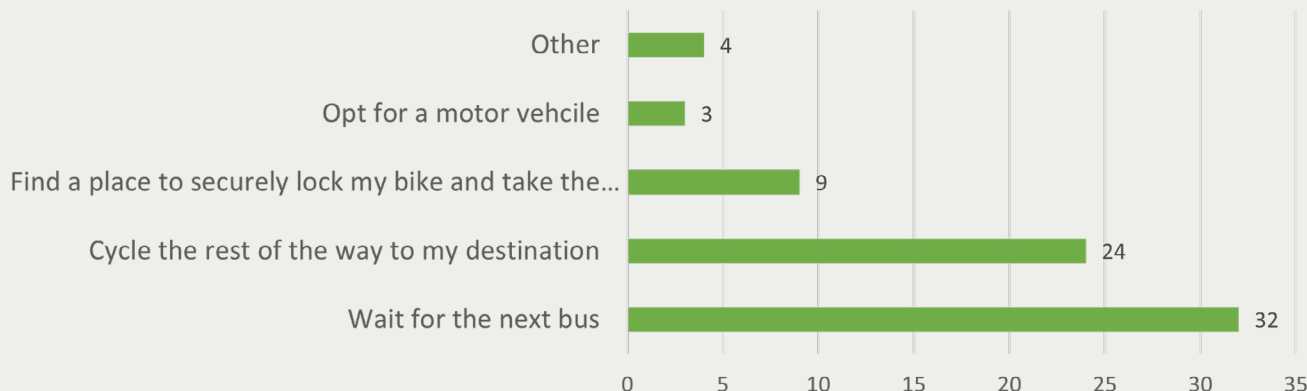
It's good to think outside the box to travel in different ways. I have combined driving with cycling. I have a part time job riding BC Ferries. To get there, I bike to a bus stop, then take the bus the rest of the way to work.



Figure 7. Ferries are a form of public transit that cyclists often use.
SOURCE: Carol Kachadoorian

What do you do if you are denied a trip because the bike rack is full?

Number of responses = 72

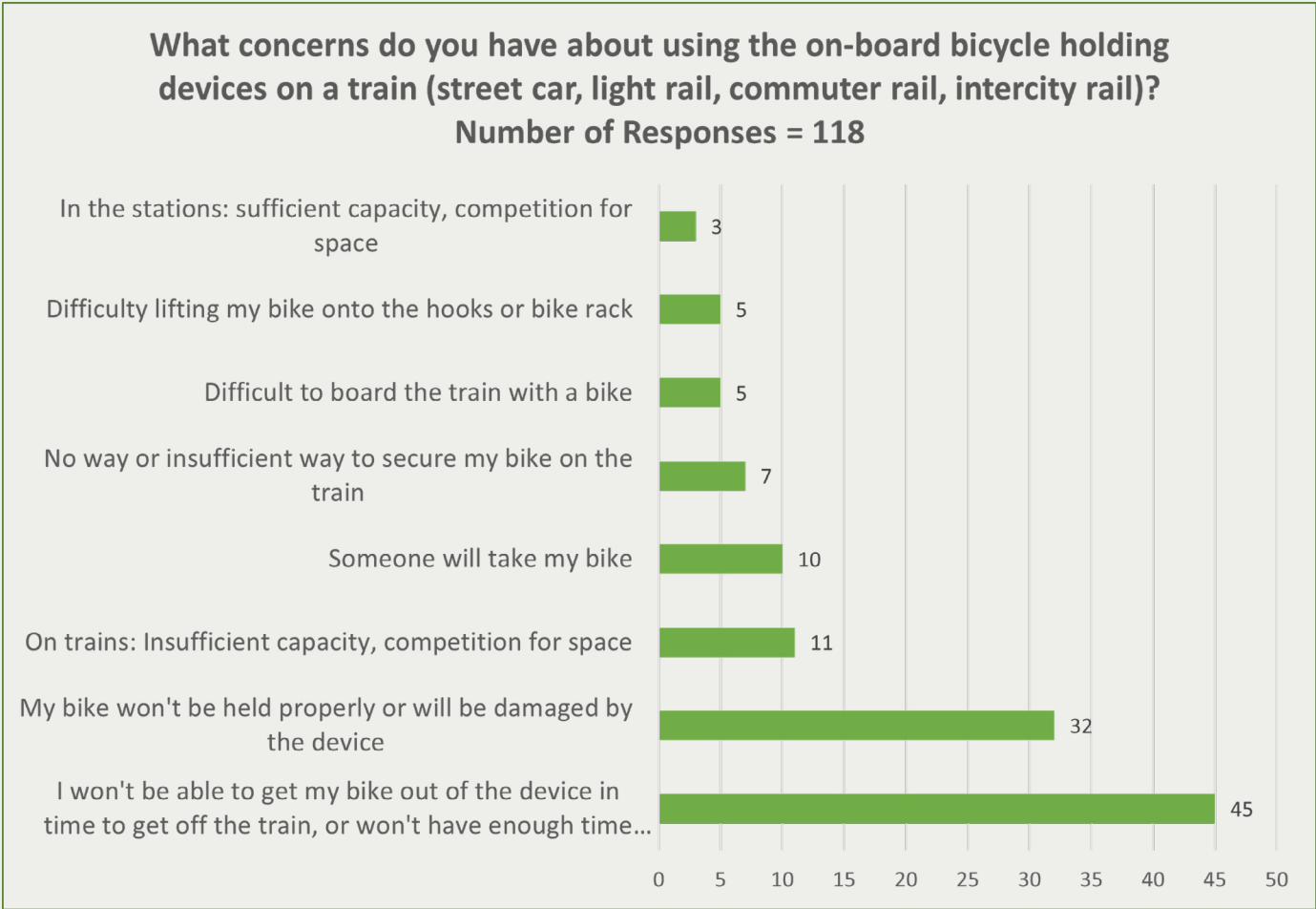


Bike-Train trips are not uncommon, especially for traveling farther distances. As discussed in the above section on accessing a station, platform, or a train, there are challenges, regardless of the type of train (streetcar, light rail, commuter rail, intercity rail). These concerns include ease of access, capacity, and stability. The top two concerns of older cyclists in making a bike-train trip are having enough time for all the maneuvers required getting on and off the train, including securing their bicycle; and concern about the utility of the holding device itself. One person stated her/his concern this way: Only some SkyTrains have bike areas. The bike "rack" is really minimal and only holds one bike, so it can be quite precarious. Another described her/his experience this way: Train too crowded for my bike, elevator not working and stairs and escalator is not wide enough – not bike friendly.

I occasionally take my bike on transit. I have an ebike, which cannot fit on some bus bike racks.

Also, the Front Runner commuter rail is very popular so I don't know if there will be space for my bicycle, especially since there are no official limits on the number of bikes. Bike racks on Front Runner aren't well designed for bikes. They don't hold onto the wheels very well.

Lots of the racks are designed for standard road bikes; no thought given to other types of bikes. Lots of times, I position my bike sitting up on the kickstand in the vehicle.



Focus Group Details

To provide more details about how and why older adults combine cycling and public transit, we offered those responding to the survey an opportunity to participate in a focus group. Forty-four (44) indicated they would like to participate and were offered several days and times that fit the time zone in which they lived. Those who did not respond to the initial email offering of a focus group were contacted a second time. Several who missed their originally scheduled day and time asked to be and were rescheduled. Twenty-three (23) joined one of 10 focus groups held between November 7 and December 19, 2024. The number of participants in each ranged from one to four. The ages of those participating ranged from mid-50s to late 70s and represented all regions included in the project.

There are a few different types of cars -- only one that has a conceived space for bikes. This is a small space saying 'bikes here' where there would be seats. The rest, you have to wrestle into a corner and hope you aren't in the way -- often not far from the door or in wheelchair spaces.

The focus groups atmosphere was informal and friendly. We encouraged participants to talk with each other and make connections. As a result, in one focus group, two participants realized they had a mutual friend; in another, the husband of one participant joined in and took the survey afterwards. In an odd turn of fate, the best friend of the son of one participant turned out to be this researcher's daughter's boss.

Each focus group started with an explanation of the project, then asked participants to offer any comments they had in mind. We asked a common set of questions in each focus group, as well as following up with questions about each participant's survey responses, if appropriate. The conversation often was free flowing, expanding to cycling in general, types of bicycles, and bicycle infrastructure. The common questions were:

- If you don't use public transit, would travel training help? (Did not ask this as all participants use public transit as part of their cycling trips.)
- Do you feel your age affects the ease or lack of ease in using racks and holding devices?
- If the train doesn't have holding devices, is it difficult to take your bike or are you less likely to do so?
- Can you see a time when using public transit as part of a cycling trip won't make sense?
- Did you choose where you live now because it allows you to use public transit in general or to use it for your cycling? If you were to move, what would you look for – good bicycle infrastructure, good transit service? Both?

From the focus group discussions, we learned about differences in bike-transit policies by transit agency and by mode (bus or rail). While nearly all transit agencies accept bicycles on buses and most trains, guidelines vary by type of bicycle, time of day or day of week, specific train service, and number of bicycles allowed. We also confirmed survey responses about the challenges to using bike racks on buses and accessing train stations and train vehicles based on design and maintenance, the age of these facilities, and the age of older cyclists using them.

Focus group conversations identified some recommendations for making it easier for older adults to use public transit when they cycle. Recommendations for making bike racks on buses easier to use include:

- Bus operator regularly kneels the bus (some said the operators do)
- Change the way the rack operates by having

Like any older system, it wasn't constructed with accessibility. They are just now starting to put elevators into stations. When I get a flat or the weather is bad, I take Metro home. Depending on which station I enter, there may or may not be an elevator. There isn't one at my home station, so I use the escalator, which isn't really allowed. This is a problem of accessibility for all.

it fold down like a rack used with a motor vehicle hitch

- Increase the weight limit so they can hold an ebike

Recommendations for making bike-train trips easier to make include:

- Easier station access with larger elevators, bike trays + shallow steps,
- More places for bicycles on board
- Fewer restrictions on specific trains, times of day, or days of week

Selected answers to the focus group questions provide more details about the lived experiences of older cyclists who use public transit as part of their cycling trips.

Question	FOCUS GROUP DISCUSSION RESPONSES
Do you feel your age affects the ease or lack of ease in using racks and holding devices?	<p>JoAnne says the bike racks on buses are fairly easy to use and doesn't feel her age affects her ability to use them. She feels comfortable asking the bus operator to kneel the bus which lowers the bike rack. In her experience, most bus operators are willing to help.</p> <p>Georgiana finds that bike racks on buses are easy to use; intuitive. The drivers are helpful if needed. The light rail trains are trickier. There are a couple styles on light rail – one can roll on; the other has three steps. She considers using the handicap ramp, but if the train is crowded that option doesn't work. All the trains have hooks for bicycles, which requires lifting the bicycle up onto it. When people are in the area, it is tricky to maneuver the bicycle.</p> <p>Melvin says that about half of the light rail network is fairly easy, especially with wheelchair ramps. The high floor older light rail vehicles are harder because you have to lift up the bike two or three steps. If you are younger and have a light bicycle, it's easy. He rides a non-standard road bike which is heavier. Mike has not taken his e-bike on the light rail routes requiring steps to board. While the front car has a wheelchair accessible rack, the train operator may or may not allow you to use it if you are not in a wheelchair.</p> <p>Steve believes he will be more likely to park his bike at the stations in a locker or use bikeshare when his age made it difficult to use bike racks on buses or holding devices on trains: Less flexibility means you have to better plan the trip.</p>
If the train doesn't have holding devices, is it difficult to take your bike or are you less likely to do so?	<p>Sally says it would be better for SkyTrain to have no limitations on the number of bikes per car. This can be done with dedicated places for bikes. Currently the trains have a place to slot the front wheel. If it is the 3rd bike you have to hold your bike.</p> <p>Steve prefers to hold his bike even when using trains with hooks. The commuter train has spaces to park bikes.</p> <p>Ralph -- On the local rapid transit (SkyTrain) there is a bracket to slip the front wheel into, and a side rail. One bungee cord with this works. On other trains, it's a mixed bag. The trolleys in San Diego, had to carry the bike up several steps to put it on the train.</p>

Question	FOCUS GROUP DISCUSSION RESPONSES
Can you see a time when using public transit as part of a cycling trip won't make sense?	<p>Sally will continue to use buses and trains as part of her cycling as long as she can lift her bike onto the bus's bike rack and use stations with a level entry.</p> <p>Bert cycles year-round. Will continue to use the bus as long as I could lift bike on rack.</p> <p>Willa – Yes. If cannot carry her bike up and down and there are no elevators.</p> <p>Van – While I take my bike on the bus now, I can see at some point it would be too unmanageable, especially if I get an ebike. Right now I can carry bike up the stairs in stations when I need to. Fortunately, the elevators in newer stations are larger and can accommodate more people with bikes, strollers, etc.</p> <p>Myles – No, not when I'm traveling within the City of Vancouver.</p> <p>Miriam – Yes. Since I retired and don't travel to work, I have less of a need to use public transit as part of a cycling trip. In fact, I use my e-bike to travel the whole distance I am going, which eliminates the need for adding public transit to a portion of the trip.</p> <p>Georgiana expects to continue using public transit as part of a cycling trip, when needed.</p> <p>Taylor anticipates a point in the future with an e-bike that his reasons for using public transit as part of a cycling trip will tend to fade away. In short, the e-bike will replace the benefits offered by public transit. One downside is that limitations on buses, in particular accommodating e-bikes, make public transit less useful as a safety net.</p> <p>Ralph won't use public transit for a short distance. If I ride farther than I have planned, I will use a bus or rapid transit to travel back. One of the rapid transit lines runs from downtown Vancouver to a few miles from my house. There is a stop at the top of a ridge where I get off then coast down home. Doing this is becoming more attractive; I expect it to continue over the next decade.</p>

Question	FOCUS GROUP DISCUSSION RESPONSES
Did you choose where you live now because it allows you to use public transit in general or to use it for your cycling? If you were to move, what would you look for – good bicycle infrastructure, good transit service? Both?	<p data-bbox="472 205 1492 380">Janis and her family of three small children moved to their current home 30 years ago to be in a rural setting to get acres and be on a mountain. The lifestyle worked for her family then, as because of the low traffic rural roads, cycling into town was possible. Over time, there is more motor vehicle traffic, which means she stopped cycling into town 5 years ago. She and her partner are not sure where they would move, but it would probably be more of a walkable, cycle-able, transit-friendly community.</p> <p data-bbox="472 407 1463 436">Josie and Simon– desirability of transit and lots of useful destinations that can access by bike.</p> <p data-bbox="472 464 1484 548">Dylan moved there from the East because the SkyTrain was convenient. Being on top of the SkyTrain is very desirable. Also it has a nice south view of the river. I can walk to grocery stores and restaurants.</p> <p data-bbox="472 606 1471 665">Sally – Yes. We bought a house in the city and want to stay in the city. Not hilly nor surrounded by hills.</p> <p data-bbox="472 693 1497 777">Declan lives close to all amenities. When shopping, takes his bike. His wife bikes to work. Moved to be close to work and to be close to getting what they need. It's very doable on the north shore, even with the hill. There are bike paths across the hills.</p> <p data-bbox="472 804 1497 888">Bert – it is the result. He lives where he lives because of the community, not the cycling. Adapted his cycling to where he lives, although he lives in a place where cycling is more difficult, and the city doesn't support cycling.</p> <p data-bbox="472 915 1312 945">Noah – I didn't choose where he lives to combine, but it is a happy coincidence.</p> <p data-bbox="472 972 1484 1056">Van and his wife made a conscious effort to live there because it's flat. Also, they wanted their children to learn to ride a bike. He rode to work except when there was crummy weather. The family walks to all daily activities. They have good access to transit, so they do not use their car.</p> <p data-bbox="472 1083 1479 1178">Georgiana chose to live where she does because she can bike year-round. Utah is progressive regarding on-road infrastructure including easy north-south routes. Last year the legislature authorized millions to build out a trail network throughout the state to support tourism.</p> <p data-bbox="472 1205 1497 1264">Myles lives in a community that is far from transit. If he were to move, he would choose the heart of the city and walk everywhere.</p> <p data-bbox="472 1291 1349 1350">JoAnne has lived in her home for most of her life. Cycling was her primary mode of transportation until she was 31. Her home is close to the bus</p> <p data-bbox="472 1377 1435 1436">stop. She is inclined to use the bus more, as her physical condition affects her tolerance for cycling the whole way to her destination.</p> <p data-bbox="472 1463 1438 1522">Taylor – No. I've lived where I live for almost 25 years. But I anticipate moving soon and the waiting for transit and biking is high.</p> <p data-bbox="472 1549 1497 1751">Lucille – I have lived in this place for a long time, choosing it because it was close to public transport. Since that time, the protected bike lanes were installed nearby. This means I have good access to both. During the summer, I will take other routes, but in the winter, I use the protected bike lanes. Because they are so well-separated from traffic and cleared from snow, I avoid the risk of a car sliding around or me slipping and falling. Winter cycling is more trepidatious, so I use tires with lots of tread. I cannot imagine living anywhere where I would have to use a car. As long as I continue cycling year-round, having a good, well-constructed and maintained cycling infrastructure is important.</p>

Other comments	
Bike racks on buses	Sally's experience is that the hinge arm on bike racks on buses can be sticky, making it difficult to pull out. It would be better to have regular maintenance of the racks. One woman Susan met said she wouldn't use the rack because the difficulty in using it intimidated her. Susan suggested she try one of the practice racks at various locations in the Vancouver area which the transit agency advertises. The agency also has mobile racks to take to groups.
Bike networks and access to transit	<p>Sally notes that much of the cycling infrastructure in Vancouver is regional; some is left to each local jurisdiction. HUB is working to get more and better bike infrastructure and parking.</p> <p>HUB wants to encourage anyone to bike. So we need to make it simpler. It's money and politics. The current provincial government was encouraged to put more money into cycling infrastructure, and they are doing things to make cycling more visible so more will cycle.</p> <p>June believes it is important to connect transit hubs. When live outside the city but still in metro Vancouver – TransLink – they push to get good infrastructure to get to the bus hub. If can't get there. Then they will take their car.</p> <p>Noah is getting too old and fragile to tolerate unsafe bike lanes. He'd like more outside the public right-of-way, such as through fields.</p> <p>Steve – some of the infrastructure is impressive. I have gotten so used to riding in safer areas, such as on protected bike lanes that I'm less likely to ride on just any road. This may be a function of age or the fact that there is good infrastructure – or both!</p>
Does it make sense to devote resources to improving bikes on transit?	Some of the older SkyTrain cars are difficult to get bikes on and off. The agency is working on it, especially for cars that go to the airport. It would be nice to have bus bike racks that are easier to use, especially when the 2 positions are full. Bigger thought is needed about how to handle more bikes. Maybe you don't have to take the panniers off.

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About the Author

Carol Kachadoorian has a breadth of knowledge and expertise in transportation planning and operations, which began in Alexandria, VA, where she served as a transit analyst before leading the City's first Office of Transit Services. After several years working with a family design-build company and at a major university, Carol returned to the transportation industry with the Washington, DC region's transit agency. There, she worked in operations and communications before focusing on pedestrian and bicyclists access to transit. Carol's work with Toole Design from 2008 to 2020 focused on school- and community-based active transportation plans and was named the Older Adult Mobility and Wellness practice lead in late 2019. She started dbiTilde CORE, Inc, in 2021 Collaborative in 2020, specializing in older adult mobility and wellness. She describes the motivation for this work this way: "At age 60, I began to consider what my professional and personal life would look like during the next 30+ years. Now a dozen years later, in my late 60's, I am working to improve mobility."

This report can be accessed at
transweb.sjsu.edu/research/2553



MTI is a transportation research center located within the Lucas College and Graduate School of Business at San José State University. Through research, education, workforce development, and technology transfer, we help create a more connected world.

APPENDICES

Appendix 1: Selected Focus Group Vignettes

Rafael is 66 and regularly uses both the buses and trains as part of some cycling trips. A typical multimodal trip is bike-bus-train-bike. Robert does not have trouble lifting his bike onto the rack on the bus, but suspects that in 10 years, he may not be able to. His wife at 72 does not have the strength to bike.

Rafael lives in the larger Vancouver metropolitan area, moving back there in 2015. He started cycling to work in 2018 incorporating Vancouver's SkyTrain into his trip. While he works from home now, he takes time to cycle – as much as 50K per week. When he uses the bus as part of his trip, he sits close to the front of the bus to keep an eye on his bike. When getting off the bus, he lets the bus operator know that he has to get his bike; bus operators are typically patient as he removes his bike from the rack. This task does take more time when the bike is in the inside position.

Rafael finds that some of Vancouver's transit stations have good bike parking, which he uses for some trips, especially when he doesn't need a bike when he gets off the train. He did not use TransLink's summer program that promoted using the bus to get to trails to ride. He has a series of routes he feels comfortable using – most of which have protected bike lanes.

Sally lives in Vancouver proper where bikes are a main way of getting around. So, she takes it for granted that people would expect bikes would be allowed on transit. No push-back from other riders. She will continue to use buses and trains as part of her cycling if she can lift her bike onto the bus's bike rack and uses stations with a level entry.

Van is a member of HUB. While in his early 60s and newly retired, he doesn't consider himself to be an older adult. Vancouver's linear design makes this possible for Van to get around the city without an e-bike. The City sits on a plateau and has some very hilly sections, but he can still manage it, at least for a while. Recently, Van rode 25K to get to blood donation headquarters, then took SkyTrain on the way back. He really enjoys cycling off-peak, especially within his neighborhood to get places to shop and go to the gym.

Van relies on the SkyTrain system to supplement his cycling and notes that lots of others rely on buses. But he doesn't understand how they can lift their bikes on the racks. This need to lift the bike would limit cyclists using the bus. Van feels the weight and mobility of e-bikes is a barrier to making bike-public transit trips. All told, Van enjoys the exercise component of riding a normal pedal bike. Normally he doesn't take the bus to get to the ferries. Has ridden his bike to the ferries – 50K away from his house. He can get everywhere he wants to go by bike (and SkyTrain).

Willa lives in New York City, where buses do not have bike racks, but bikes are allowed on the subway and Metro-North trains. She uses a Citi Bike bikeshare to get to the subway as her first mile/last mile mode. She said it has transformed her life. Although Citi E-bikes go too fast for her

liking and does not use them yet. Willa is agile in making long-distance bike-public transit trips. While working on the Harris Walz presidential campaign in 2024, she took her bicycle on Amtrak to an event in Pennsylvania, then rode to the event. Willa feels that Amtrak staff are good at accommodating people traveling with bicycles, such as making sure you get to the right track and get your bicycle on board.

Dylan, who is in the 76 to 80 age group, believes his cycling may be different than someone who is younger. He does not have the same fitness and stamina as when he was younger, in part due to a long hospital stay in which he lost a lot of muscle. This coincided with COVID, so cycling with a recreational group helped him find a way to ride as part of his recovery.

When Dylan was 50 and still working, he would ride the hills after work for exercise (he drove to work). He enjoyed these rides. At his age now, he continues to cycle, especially exploring different areas. Skytrain allows him to get up the hills he once cycled, the start his exploration rides on his bike. He takes his bike on the elevator to get to the platform and carries it up the stairs, especially if the elevator is out of service. Fortunately, he uses one of the newer stations, which have larger elevators that can accommodate two bicycles.

In addition to using SkyTrain to get up a hill to start his ride, Dylan uses it as a safety net while cycling, such as getting home after getting a flat tire. He also uses the bus on some rides. He says that using public transit just opens up a large area for riding to go somewhere to visit someone or for recreational rides.

Dylan doesn't have an e-bike but is considering getting one. He tried an e-bike and was impressed, but the accelerations was kind of frightening. He is concerned about crashing if he is not careful. So, for the time being, he seeks out more level rides.

Josie has put her road bicycle on the bus rack but has not tried her e-bike. She lives in the Bay Area and uses BART, which surprisingly allows bicycles on escalators. She believes it is because station elevators are small and cannot easily accommodate bicycles. Even though using the escalators solves this problem, her bicycle is hard to hold when using the escalator.

Appendix 2: Selected Resources for Bikes and Transit

1. BART Bicycle Plan: Modeling Access to Transit, Bay Area Rapid Transit, July 2012.
2. Bicycle Access Plan: Supporting Bicycle and Capitol Corridor Intercity Passenger Train Travel, Capitol Corridor Joint Powers Authority, February 2013.
3. Bicycle and Transit Integration: A Practical Guide to Bicycle Integration and Equitable Mobility, APTA SUDS-UD-RP-009-18, September 20, 2028.
4. Enhancing the bike-on-transit experience: How a simple technology upgrade can forge the link

between cycling and transit ridership, Mass Transit, November 2021.

5. Transit Street Design Guidelines, NACTO.
6. Tracking Bike Rack Usage on Buses with Automated Passenger Counter Technology, Metro Transit, Minneapolis, MN.
7. Transit to Trails Program, The Nature Conservancy.
8. TriMet Bike Plan, TriMet, June 2016.

Appendix 3: Survey PDF

Older Adults and Cycling with Public Transit

Page description:

People who cycle may use public transit to complete their trip because it can extend the distance they can travel. Using public transit for a portion of the trip can also allow a cyclist to travel through an area that is not especially bike-friendly. Transit agencies now typically have a 2-bike bike rack on the front of their buses. Transit agencies with trains (street cars, light rail, heavy rail, inter-city rail) may have designated places for bikes and 'holding' devices such as hooks or floor mounts. These accommodations for people who bike may or may not increase transit use, especially for older cyclists. [CLICK HERE](#) to see photos of typical bike racks on buses and 'holding' devices on trains.

This survey is aimed at learning if you as an older cyclist make bike-public transit trips. If you do, we want to learn about your experiences using public transit as part of your cycling trip. If you don't we want to learn what stops you from doing so.

We hope to talk with a small group of older cyclists about this topic. Please complete the form at the end of this survey or email us directly at Carol@dbITildeCORE.org.

Logic: Show/hide trigger exists.

2

1. Have you in the past or do you currently combine your cycling trips with public transit? *

- ☐ Yes
- ☐ No

LOGIC Show/hide trigger exists. Hidden unless: #1 Question "Have you in the past or do you currently combine your cycling trips with public transit?" is one of the following answers ("Yes")

3

2. Which type/s of public transit have you used as part of your cycling trip?

Check all that apply

- ☐ Bus
- ☐ Streetcar or light rail
- ☐ Subway or heavy rail
- ☐ Inter-city rail (such as Amtrak)

LOGIC Show/hide trigger exists.

35

3. Which public transit agency do you use?

- ☐ BC Transit
- ☐ TransLink (Vancouver BC)
- ☐ STM (Montreal)
- ☐ SunTran
- ☐ UTA
- ☐ Other, please specify

LOGIC Hidden unless: #3 Question "Which public transit agency do you use?" is one of the following answers ("Other, please specify")

37

4. Which other transit agency do you use?

Logic Hidden unless: #1 Question "Have you in the past or do you currently combine your cycling trips with public transit?" is one of the following answers ("Yes")

6

5. How do you use public transit as part of your cycling trip?

Check all that apply

- ☐ To get to a trail to ride
- ☐ As a safety net if I cannot complete my ride by bike due to fatigue, weather, time of day, or something else
- ☐ To get to work, a volunteer location, a social event, or to visit friends or family
- ☐ To go to places I could not reach by bike alone
- ☐ To have a bike at the other end of the trip
- ☐ To shorten my travel time
- ☐ Other - Write In (Required)

LOGIC Hidden unless: #2 Question "Which type/s of public transit have you used as part of your cycling trip?

Check all that apply is one of the following answers ("Streetcar or light rail", "Subway or heavy rail", "Inter-city rail (such as Amtrak)")

 34

8. What concerns do you have about using the on-board bicycle holding devices on a train (street car, light rail, commuter rail, intercity rail)?

- ☐ Someone will take my bike
- ☐ My bike won't be held properly or will be damaged by the device
- ☐ I won't be able to get my bike out of the device in time to get off the train
- ☐ Other - Write In (Required)

*

LOGIC Show/hide trigger exists. Hidden unless: #1 Question "Have you in the past or do you currently combine your cycling trips with public transit?" is one of the following answers ("No")

 4

9. Why have you not, or do you not, use public transit as part of cycling trips?

- ☐ No public transit where I live
- ☐ Don't like public transit
- ☐ I don't need to use it based on where I cycle and the distance I cycle
- ☐ I don't know how to use the bike racks on buses
- ☐ I am not able to easily use the bike racks on buses or the hooks to hang my bike on a streetcar
- ☐ Buses in my area don't have bike racks
- ☐ Other - Write In (Required)

*

Logic Hidden unless: #9 Question "Why have you not, or do you not, use public transit as part of cycling trips?" is one of the following answers ("I am not able to easily use the bike racks on buses or the hooks to hang my bike on a streetcar")

Q 8

10. What are the specific reasons you do not use the bicycle holding device on a public transit vehicle?

Click all that apply

- ☐ I have a folding bike and fold it to take it on board.
- ☐ I am too often denied a bus ride because the racks are full
- ☐ My bike is too large to fit on the bike rack or space provided.
- ☐ My bike is too heavy for me to lift onto the bike rack or up on a hook.
- ☐ My trike doesn't fit on the bike rack or in the space provided.
- ☐ My trike is not permitted on the train.
- ☐ I usually park my bike at or near the bus stop or train stop/station.
- ☐ The bike racks are usually full when the bus gets to my stop.
- ☐ I cannot easily get my bike off the rack if it is the in the position closest to the bus (on the inside, not outside)
- ☐ Other - Write In (Required)

Q 28

11. What is your gender?

- ☐ Woman
- ☐ Man
- ☐ Other
- ☐ Prefer not to answer

29

12. What is your age group?

- ☐ 50 to 55
- ☐ 56 to 60
- ☐ 61 to 65
- ☐ 66 to 70
- ☐ 71 to 75
- ☐ 76 to 80
- ☐ 81+

11

13. Yes, I would like to participate in an interview about bike-public transit trips.

First Name

Last Name

City

State

Zip

Country

Email Address

Phone Number

Mobile
Phone