



## Bicycle Transportation For Older Adults and People with Disabilities

Bicycle transportation is a fun, easy way to get from point A to point B, and research indicates that it promotes physical and mental health. For people with disabilities, cycling can be easier than walking, easing joint strain and improving balance. Bicycle programs may also help people with disabilities feel included and more independent.

According to AARP, depending on where a rider lives, biking can save the cost of owning a car. Bike-sharing programs have the added advantage of saving users the cost of owning, maintaining and storing a bicycle.

Two of NADTC's grant programs touched on bicycle transportation: one grantee started a community bicycle transportation program geared to older adults, while another conducted research on adaptive bicycles and e-bikes as part of an effort to develop a shared-ride option for older adults and people with disabilities.

### Research on the Feasibility of Shared Bikes for Older Adults

As part of its NADTC grant, **Shared Mobility, Inc.** in Buffalo, NY, partnered with the University at Buffalo's Center for Inclusive Design and Environmental Access (IDeA Center) to research inclusivity in bike-sharing programs and related issues, barriers and opportunities. A focus group event sought feedback from 28 older adults, people with mobility impairments, and people with visual impairments. The event also included pre and post-surveys to determine participants' familiarity with shared ride programs, frequency of use, travel patterns, overall mobility and related factors. The research team conducted additional outreach with people with cognitive disabilities and the deaf community.

**ADAPTIVE BIKES:** Adaptive bikes come in different forms for different populations: handcycle, side-by-side tandem, heavy duty cruiser, standard tricycle, recumbent tricycle and cargo tricycles, among others. No single adaptive bike is an across-the-board solution.

*Source: Shared Mobility, Inc.*

A majority of the target population surveyed said they would be interested in using adaptive bicycle options as part of bikeshare, with assistance available for using the system—including mounting the bicycle, storing wheelchairs and other mobility devices, and providing a staff member to assist. More than 80 percent of focus group participants had never used an adaptive bike before, though many people expressed that it would be a new recreation option for them.



*Credit: Getty Images*

*This best practice is based on the experiences of grant programs funded by the National Aging and Disability Transportation Center (NADTC) from 2017 to 2019 to support innovative programs to increase the accessibility of community transportation services for people with disabilities and older adults.*

The research concluded that adaptive bicycles could not be deployed into a bike share system like conventional shared bikes, because of the differences in adaptive bicycles spread across multiple locations. A bicycle rental model that includes assistance for users would be needed. Target population members generally agreed the rental location would need to be close to transit with access to multi-use and bicycle-specific trails and facilities.

**ELECTRIC-ASSIST BIKES:** Electric-assist bicycles, or e-bikes, add power from an electric motor to boost riders’ pedaling. No extra effort is needed as the bike travels up to 20 miles per hour, with a 40-50-mile range on each charge.

*Source: Shared Mobility, Inc.*

Nearly half of all participants in Shared Mobility’s focus groups and 60 percent of the older adults surveyed said they believed e-bikes would help to increase their community mobility. Many were excited and felt that this technology would reduce the physical stress of riding, allow them to ride further, and make them feel more comfortable alongside automobiles and other bikers. E-bikes are presently being deployed in cities nationwide using the same shared concept as a traditional bikeshare, in a self-service model.

## Program Offering Free Use of Community Bikes for Older Adults

In **Hernando, MS**, an effort to improve the health of older adults and help them access a local farmers market led to the creation of a bikeshare program. Now, adults can check out bicycles for free from a local community center, take them on the city’s new bike paths and on roads, and temporarily store them at bicycle racks around town.

Hernando’s small fleet of community bikes includes four adult tricycles with baskets, four cruisers with baskets and four trek bikes best suited for a more-active rider. Bicycles are available for check-out Monday through Friday during work hours when the community center is open. Helmets are offered as well and are disinfected after each use. Thanks to advice from a local bike advocacy group, bike racks have been placed in strategic spots in the historic downtown area.

While any adult is welcome to check out bicycles, the program focuses on older adults. Currently the bicycles



*Credit: Getty Images*

are housed at the community center where the Young at Heart senior group meets. Bikes and trikes can be used to ride with the walking group and to the farmers market, corner market, public library and other businesses on the town square.

At the start of the program, three group rides were offered as an incentive to prospective users. A police officer led these initial rides each week, showing adult riders, including some older adults, the best routes to take in the city. Now, older adults ride bicycles as part of the senior fitness classes offered to the community.

## Accessibility

The addition of community bicycles and trikes gave Hernando an opportunity to leverage funding from a Blue Cross & Blue Shield Foundation of Mississippi grant it was awarded to improve accessibility of walking and biking. A 1.73-mile multi-use trail, near the community center where the bicycles are housed, opened in early 2020. Older adults now can ride to the trail and the 10-acre Renasant Park. Crosswalks are up and a bridge is completed, making it safer and easier for older adults to leave the community center on bicycles.

The new trail comes as part of the Hernando’s vision for a dynamic system of bicycle and pedestrian improvements. The city adopted a 20-year Bicycle & Pedestrian Master Plan in June 2019. The plan includes nearly 23 miles of multi-use pathways, nearly five miles of bicycle lanes and 25 miles of shared road routes. It will provide strong connections to public open spaces, downtown, commercial areas, neighborhoods and industry. A new two-mile multi-modal trail is almost complete on the other side of Interstate 55, opening up an opportunity to connect the two trails and thus allow bike access to the historic downtown and the business district. Hernando also hopes to become a Bicycle-Friendly Community.

As these improvements are made, the bicycle program will become even more important. Area seniors will be able to use the bikes and trikes to enjoy the natural surroundings for physical, social and mental health—and to get to shops, restaurants and services. But usage remains low: on average, the bicycles are used just a few times a month.

For next steps, Hernando is considering taking bicycles to a nearby senior community, hosting an intergenerational ride, and encouraging riders to participate in the city’s annual holiday festival. Expanding bike checkout hours past 5:00 PM is a goal, to encourage more ridership among younger seniors who work during the weekday.



Credit: NADTC

## Overall Learnings

The grantees interviewed for this best practice were asked to provide insights into key takeaways they gathered through the implementation of their grants. Below are summaries of the most critical concepts for others seeking to develop or enhance their bicycle transportation programs.

- **Bike share programs are easy to implement, compared to other transportation programs.** If the community has safe access to a network of bicycle paths or bike lanes that connect local destinations and services, a bicycle share program can offer an affordable and simple transportation option that may also have health benefits for riders.
- **Consider the potential of e-bikes for older adults and people with disabilities.** While Shared Mobility concluded that adaptive bicycles and e-bikes are most suitable to enhance recreational options for older adults and people with disabilities, rather than using the bicycles for point-to-point travel, e-bikes could be used in a model similar to that of Hernando’s. It is worth noting that electric-assist technology could be applied to adaptive bicycles as well, for populations with uniform needs and enough riders to support a program.

## Learnings on Logistics

- **Locate bikes near safe and accessible places to ride.** In Hernando, the community center is located near an area considered unsafe by some potential riders. However, the new crosswalks and bike paths added as

part of the city’s bicycle and pedestrian master plan are providing new, safe infrastructure.

- **Find a place to house and rent the bicycles that has long hours.** The City of Hernando is currently using a community center that closes at 5:00 PM on weekday evenings and is closed weekends. They believe if they could stay open into the evening, they would have more riders, especially younger seniors who would like to use the bicycles after work. Libraries may be a good option: riders could use a library card and not need to leave a driver’s license and riders would have access for more days and hours and could check out bicycles from multiple library branches.
- **Address safety and liability issues.** Offering helmets to riders is an important safety measure that programs should adopt. To check out bicycles in Hernando, riders need to sign a liability form and leave a driver’s license to show they know the rules of the road. The need to leave the license prevents 24-hour rentals in Hernando, as riders would not have access to their licenses during that time. An attorney can help plan for these issues.
- **Find bicycle advocates.** Tap a local bike advocacy group for advice on local biking. Encourage a bike-riding advocate to lead a group ride, such as biking to area businesses for ice cream or snacks. Based on learnings from other programs, the City of Hernando believes that having a bike buddy for companionship would encourage more people to try bicycle transportation.

- **Offer education and do outreach.** Ask if your local police department will lead a program that tells riders about the rules of the road, introduces them to bike lanes and shares the best routes to avoid busy roads. As a new bikeshare program begins, it is important to hold a launch event to draw attention to it and encourage users.

## Funding

For the City of Hernando, the Parks Department budget covers the minimal maintenance needed for the bicycles.

## Resources

- For Hernando, the [Free Bike Share Program](#) of the Greater North Penn Area Transportation Management Association in Montgomeryville, PA, provided valuable advice on how to structure a bicycle share program.
- Bicycle transportation is best for those who live in bike-friendly communities. NHTSA has a [Bikeability Checklist](#) to help evaluate your community.
- The National Safety Council has information on the importance of [wearing helmets](#).
- NADTC: [Trends Report on Accessible Bikeshare](#) (2016).



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## Who We Are

Established in 2015, the NADTC is a federally funded technical assistance center administered by Easterseals and USAging based in Washington, DC.

The **National Aging and Disability Transportation Center** is funded through a cooperative agreement of Easterseals, USAging, and the U.S. Department of Transportation, Federal Transit Administration, with guidance from the U.S. Department of Health and Human Services, Administration for Community Living.

**USAging** is the 501(c)(3) national association representing and supporting the network of Area Agencies on Aging and advocating for the Title VI Native American Aging Programs. Our members help older adults and people with disabilities throughout the United States live with optimal health, well-being, independence and dignity in their homes and communities. USAging is dedicated to supporting the success of our members through advancing public policy, sparking innovation, strengthening the capacity of our members, raising their visibility and working to drive excellence in the fields of aging and home and community-based services. [www.usaging.org](http://www.usaging.org)

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