

Meeting the Needs of Older Passengers with Vision Loss: Guidance for Transportation Providers

A Resource Guide



AFB American Foundation[®]
for the Blind

Expanding possibilities for people with vision loss

This is a joint publication of the National Aging and Disability Transportation Center and the American Foundation for the Blind.

Since 1921, The American Foundation for the Blind (AFB) has been a leader in addressing the most pressing needs of people with visual impairments and their families, breaking down societal barriers and promoting broad systemic change. Publisher of the Journal of Visual Impairment & Blindness for over a century and counting, AFB is also proud to steward the accessible Helen Keller Archive, honoring the legacy of our most famous ambassador. AFB's mission is to expand pathways to leadership, education, inclusive technology, and career opportunities to create a world of no limits for people who are blind, deafblind, or have low vision.

The National Aging and Disability Transportation Center (NADTC) is a program funded by the Federal Transit Administration and administered by Easterseals and USAging with guidance from the U.S. Department of Health and Human Services, Administration for Community Living. NADTC's mission is to increase accessible transportation options for older adults, people with disabilities, and caregivers nationwide.

Introduction to Aging & Vision Loss

Vision loss is a pervasive and often an invisible or unrecognized age-related physical change that affects many older adults. **At least half of Americans age sixty-five and older are at high risk of eye diseases that can lead to some degree of visual impairment.** A recent study estimated that 12.5 million Americans age 40 and older have significant difficulty seeing, resulting in reduced ability to engage in necessary daily tasks



Photo Credit: Indianapolis Public Transportation Corp., Indianapolis, IN

or activities they once found enjoyable. Among older Americans, 7.3 percent report blindness or low vision. By 2050, the population of people with vision impairment is expected to increase by 118 percent, with the largest increases among women, older adults, African Americans and Hispanics.¹

Older adults with vision loss experience higher rates of diabetes, falls, and hearing loss, increasing the need for transportation services and potentially making it more difficult to provide these services. Other functional limitations that impact the ability of older adults with vision loss to use transportation services include cognitive decline, physical limitations that require the use of a walker or wheelchair, trouble standing for long periods of time, difficulty with extreme temperatures and other disabilities that may or may not be hidden.²

Age-related vision changes make it hard to navigate the world safely. Older adults may experience blurry vision, poor night vision, sensitivity to glare, difficulty adjusting to bright or low light settings, reduced contrast sensitivity and reduced ability to focus on fine detail. Light levels play a critical role in the ability to see and get around in both familiar and unfamiliar settings. If too much glare exists, light can effectively “blind” someone or create shadows that may appear to be obstacles. Vision changes can also cause poor depth perception. When older adults have better vision in one eye than the other, it is difficult for them to judge the height of steps or curbs, increasing their risk of tripping or falling.

1 VisionServe Alliance, United States’ Older Population and Vision Loss: A Briefing (2022), p. 8.

2 VisionServe Alliance, Vision Impairment and Vision Rehabilitation in the Lives of Older People in the United States, November 2020, pp. 6-7.

For some older adults with vision loss, no viable options are available in their communities that help them get where they need and want to go. Some have been forced to give up driving. Others may live alone or have no family nearby to provide transportation, even on an occasional basis. If public or private transportation options are available, older adults who are accustomed to driving may not know those options exist, be unfamiliar with how to use them or be fearful about trying to use them. They may not be able to walk to nearby destinations due to physical limitations, a lack of sidewalks or other safety concerns. Older adults with vision loss may not be able to safely navigate their environment.

For many older adults and people with disabilities, including those with vision loss, it can be daunting using curb-to-curb or door-to-door transportation. To address this, Orientation and Mobility (O&M) specialists can help educate consumers about skills necessary for safe and independent travel. Older adults with vision loss may not know about these services or feel hesitant to use them.

Understanding Vision Loss

Vision loss varies by eye condition and by individual. It is important to know that:

1. Various eye conditions cause different types of vision loss.
2. Different types of vision loss result in varying abilities to see.
3. Vision loss affects each older person's ability to function in different ways.

The most common causes of vision loss among older adults are age-related macular degeneration, glaucoma, diabetic retinopathy and cataracts. **Low vision** means that even with regular glasses, contact lenses, medication or surgery, it is difficult to perform everyday tasks, including walking, reading and recognizing people.

The term **legal blindness** (a definition used by government agencies to determine eligibility for certain services) means that a person has a visual acuity of 20/200 or worse in the better-seeing eye with best correction (regular glasses or contact lenses) or a visual field (the total area an individual can see without moving their eyes from side to side) of 20 degrees or less (also called tunnel vision) in the better-seeing eye. Most states do not allow people with acuities worse than 20/40 or 20/60 to drive and some states have set field-of-vision requirements that must be met in order to maintain a driver's license.

Older Adults with Vision Loss Face Unique Challenges

Adults who experience vision loss as they age often do not recognize how vision loss impacts their ability to live independently and are less likely to seek vision rehabilitation services. Older adults with vision loss may not be easy to identify and they may differ greatly in their need for assistance with transportation.

- Some have been blind or visually impaired for most or all of their lives and have used transit services for years.
- Some have had vision loss for a long time but may have newfound difficulty traveling independently because of recent changes in their vision.
- Some are new to vision loss and may not have used public transportation until after they had to stop driving.



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In addition, older adults with vision loss, especially those who have not yet been diagnosed by a medical professional or received vision rehabilitation services:

1. May not recognize that their vision has gradually gotten worse and may not think of themselves as someone with a visual impairment.
2. May not use a long white cane or have had the opportunity to learn travel skills taught by an O&M specialist. They may not even know about O&M training.
3. Are twice as likely to fall as other older adults, so safety issues are a primary concern.
4. May not be able to read signs or posters and most do not know braille.

Transportation Challenges

Transportation for many older adults, including those with vision loss, can be challenging. Issues that typically affect older adults and people with disabilities include:

- lack of sidewalks;
- lack of bus shelters with places to sit;
- limits on the number of packages passengers can bring on the bus; and
- the need to travel with a companion which often adds to the cost of a ride.

These difficulties require both awareness and flexibility by transportation programs to ensure that community transportation services are available to meet the needs of all who live in a community. Older adults with vision loss face the following unique transportation challenges:

1. **Accessing a Vehicle.** Driver assistance will depend on their awareness of this issue. (See the companion publication, *Drivers Make the Difference for Older Adults with Vision Loss*, for helpful assistance.)
 - a. Older passengers may be able to use their peripheral vision to get around but unable to see the driver's or another passenger's face, find an empty seat or read written material.
 - b. Older adults who lack good central vision may not be able to insert a fare card correctly.
 - c. Older adults who have tunnel vision, which may be due to glaucoma, retinitis pigmentosa or even dementia, will have difficulty seeing objects to the right, left, above and below where they are looking. This can result in not seeing someone approach from the side or tripping and falling over steps or curbs.

2. **Uncertainty whether their ride has arrived.** This particular challenge may surface at different points.
 - a. When making reservations, it is advisable to incorporate questions about vision loss into the ride scheduling process—and to ensure the drivers have the answers to these questions. It is important to be specific about where the rider should stand to wait for the ride and to ask what the rider will be wearing.
 - b. If on the phone with the rider at the time the ride is expected, asking questions can help facilitate connections between the passenger and driver. Questions could include: Are you standing outside the main door at the pickup location? How far are you from the nearest spot a car or van can stop to pick you up? What are you wearing?
 - c. If the vehicle has arrived at the destination, the driver should be instructed to honk the vehicle's horn once to determine whether the rider can locate the sound or look around to identify the passenger.



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3. **Unable to find the bus stop.** Older adults with vision loss may have trouble finding the right vehicle or transfer point, especially if there is a long line of buses or the usual location has changed. Also, older riders who experience blind spots or blurred vision will have difficulty reading signs. Many drivers recognize their frequent passengers, know that certain riders have vision loss and know to be on the lookout for them. However, this level of awareness and proactive approach is not possible in all circumstances. Interventions might include:



Photo Credit: Milwaukee County Transit System, Milwaukee, WI

- a. A bus shelter or a tactile pole identifier at bus stops and clearly identified bus stop locations in an app or a website;
- b. Beacon wayfinding systems in transit centers, train stations and other large, hard to navigate locations; and
- c. Visual interpreting services such as Aira or BeMyEyes for assistance in locating a bus stop, onboarding a particular bus or navigating a transit center or train station. (See Resources for more information.)

4. **Changes to a bus route, ride schedule or designated paratransit pickup location.** Changes should be communicated in a timely and accurate manner and in a variety of accessible formats. Recommendations for communicating include clear automated announcements on buses and trains, updated beacon information, accessible signage and revised schedules on an accessible website and app (with app or text message notifications for those who use smart phones). Additionally, make available printed notification of changes and revised print schedules in large print (18-point Arial is recommended) and braille.³ Drivers should also be trained to alert passengers to upcoming or unexpected changes.

3 American Council of the Blind, Best Practices and Guidelines for Large Print Documents Used by the Low Vision Community, p.2.

- a. Changes in the way transportation services operate, such as the requirement to board at the rear of the bus, a change implemented by many transit systems during the COVID-19 pandemic, can also lead to confusion and missed rides. Communicating such changes as discussed earlier is critically important. Equally important is weighing the consequences of such changes and adopting inclusive practices to engage riders in developing policies and practices that respond to rider needs.
- b. When new transportation options become available or changes in services occur, older adults with visual impairments may not find out right away or know how to use a new service. Recommended strategies include:
 - Targeting outreach to riders with vision loss and organizations that serve them (e.g., Area Agencies on Aging) and blindness organizations (see Resources);
 - Offering passenger information in accessible formats;
 - Holding passenger information sessions (possibly in partnership with community organizations) before changes happen;
 - Expanding mobility management programs and training for mobility managers related to vision loss;
 - Partnering with O&M specialists to ensure that accurate information is available to individuals with vision loss.

“...Finding out about the route changes has been difficult – the websites are not very accessible, and the texting options are not up to date. Trying to contact the bus company to plan routes if you are on a flex schedule is impossible and the map apps are not accurate.”

- Transit rider with vision loss

5. **Technology challenges.** Accessibility and usability of transportation websites and apps can be a challenge. Older adults with vision loss may have difficulty using a smartphone. It is important to ensure that the interface is accessible and can be operated with screen reading technology. When developing apps, involving older adults with vision loss who use apps can help avoid problems and ensure better accessibility. Develop simple instructions for using the website and consider providing training on how to use the app and/or website with accessibility features. And of course, keep in mind that many passengers will not have smartphones or be computer savvy, so they will need to receive information in alternative formats, such as via standard telephone interface, large print or braille. (**Note:** Some community organizations offer peer-to-peer computer or app training.)

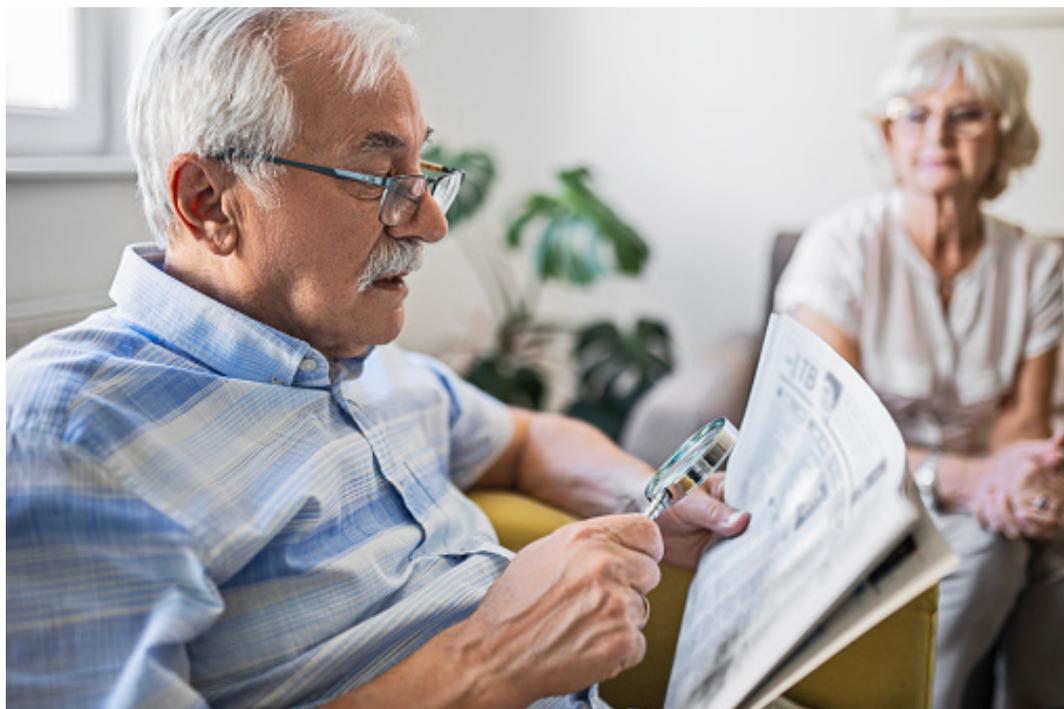
- a. New payment systems may add to the travel challenges facing older adults with vision loss.
- b. Options for reloading fare cards should be flexible, including adding cash to fare cards at transit centers and using credit or debit cards by telephone, at retail outlets and via the website or app. Some programs have made it easier to identify the front of the fare card by cutting the same corner off each card so it can be properly inserted at the gate or in the machine.

See the companion publication, *Drivers Make the Difference for Older Passengers with Vision Loss*, for additional examples.

Effective Communication Is Critical

For transportation programs, the key to good customer service, whether on the phone or in-person, is patience and attentiveness to the needs of the rider. It is important to consider the potential impact of vision loss on older passengers, to practice empathy rather than express sympathy and above all, to offer help. Older adults with vision loss may ask more questions and need more detailed information than other travelers. Although it will not always be clear why certain information is requested, a particular piece of information could be absolutely vital for reassuring passengers with vision loss and enabling them to enjoy a safe and comfortable ride.

Ensuring that all printed materials are accessible is crucial. Consider using large print (font size 18 is recommended for large print documents. Use bold on semi-bold style).⁴ As noted previously, some older adults with vision loss will not have access to a website or mobile app; others will not be able to read large print or braille materials and signage. Some passengers, particularly those with vision loss, will need verbal instructions in addition to, or instead of, written information. Consider providing verbal information about transportation services via free public service announcements or ads on TV or radio. Such approaches may be more effective methods for reaching older adults with vision loss and their families.



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⁴ Ibid., p.2.

Travel Training and Orientation and Mobility (O&M) Training

Orientation and Mobility (O&M) training and travel training are very different. Orientation and Mobility training is intended to prepare an older person with vision loss to travel safely in the community, whether walking or using various transportation services. While an older rider who just gave up driving because their vision has diminished may benefit from travel training, O&M training should be provided first to ensure that they can travel safely in the community, whether walking, crossing the street or using public transit. Even seasoned travelers who have used public transit for many years may benefit from O&M if they have experienced a recent vision loss.

What Transportation Providers Can Do to Better Serve Older Riders with Vision Loss

While there is a general lack of awareness of the needs of older adults with vision loss, there are several ways to increase awareness of vision loss when providing transportation services.

Learn from Riders with Vision Loss. Hold focus groups and conduct surveys of riders, specifically targeting older riders with vision loss. Invite older riders with vision loss to serve on transit boards, rider councils and committees. Ask them to share their expertise in training sessions for drivers, dispatchers, customer service representatives and mobility managers.

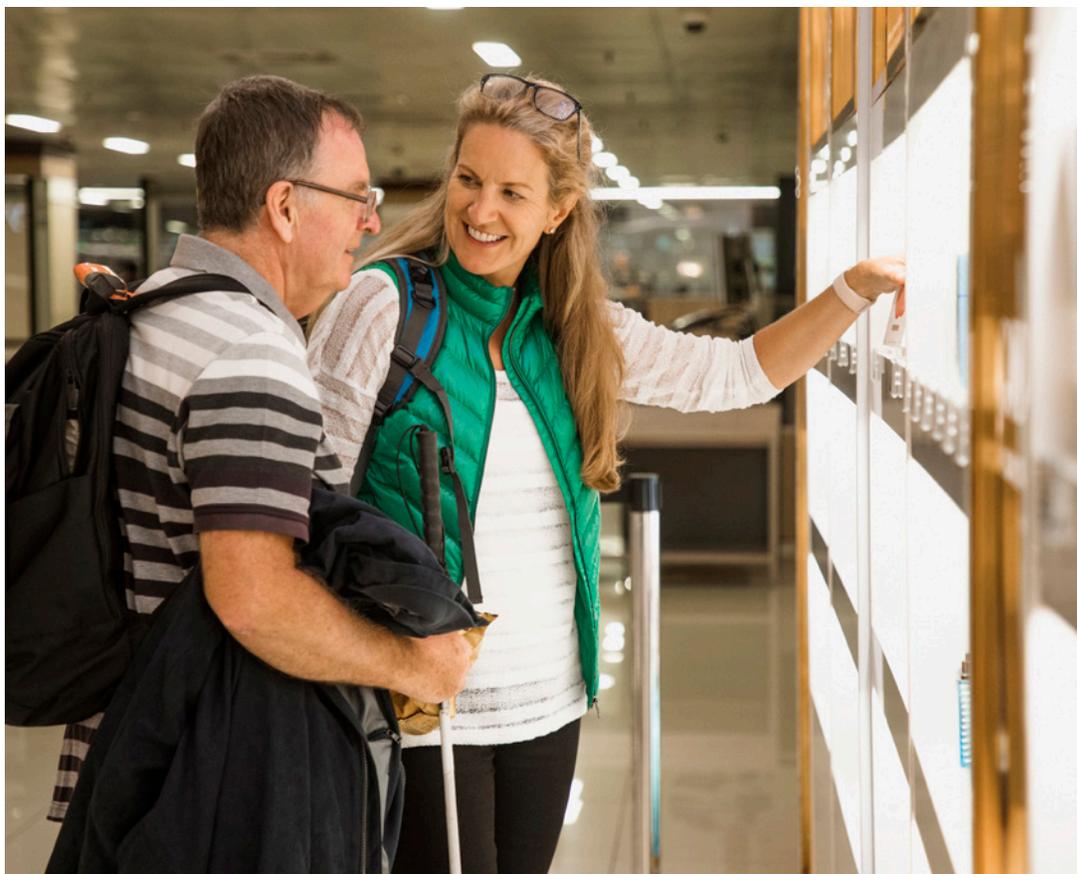
Provide Training for Drivers on Serving Passengers with Vision Loss. Address the issues discussed in *Drivers Make the Difference for Older Passengers with Vision Loss* as well as issues that have arisen when serving this population locally. Ideally, older adults with vision loss who live in the community should be invited to present their own experiences and provide advice for handling transportation challenges.



Photo Credit: The Center for Volunteer Caregiving Cary, NC

Conduct Outreach.

Since many older adults who need transportation services will be new to vision loss, they may not know about the services available to help them. They may have tried unsuccessfully to use a fixed route bus when paratransit services would have better served them. If they have had a bad experience, such as getting lost or feeling unsafe, they may have given up on using transportation services altogether. Transportation is vitally important to their



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continued ability to live independently and stay connected to the community, so they need to learn about the travel options available to meet their needs and how to use them.

Many older adults newly experiencing vision loss do not identify as being blind or low vision and thus may not yet have found help through vision rehabilitation service providers. In such situations, an older person with vision loss who can no longer drive safely may be left in a transportation vacuum. Providing transportation information at senior fairs, churches, public safety offices, or aging services may be effective in reaching older adults and family members. It is important to ensure that all printed materials are available in large print.

Make Connections with Experts in Vision Loss. Connections between transportation providers, aging and disability service providers and especially vision rehabilitation programs makes a difference. According to the PROJECT VISITOR survey conducted by the American Foundation for the Blind (see References), local agencies, including local vision rehabilitation services, are often not aware of available transportation services. Outreach to service providers such as the Lighthouse for the Blind, associations for the blind, state independent living services, aging programs and disability programs are good places to start. It is especially important to connect with Vision Rehabilitation Specialists and other community organizations that serve older adults with vision loss to share information about the full array of community transportation services you offer. (See Resources)

Conclusion

The expected increase of older adults who are blind or have low vision is a national crisis that transportation providers must address effectively. This resource was created to raise awareness, suggest some possible solutions to common challenges and provide resources to expand knowledge. Transportation providers are encouraged to invite older adults with vision loss and subject matter experts to get involved in developing good practices for better serving this population. By connecting with colleagues, passengers, community stakeholders and vision professionals, transportation programs can ensure that the important services they provide are fully accessible to the entire community, including older adults who are living with vision loss.



Photo Credit: NADTC

Resources

As described in the Outreach Section, transportation providers are encouraged to make connections to the community and state organizations that offer expertise and direct services to individuals who are blind or have low vision. The resources and terms defined below will help you understand vision rehabilitation and identify vision rehabilitation service providers that serve your geographical area, whether a city, a county, multiple counties or a region of your state.

Agencies and Organizations Serving People Who Are Blind or Have Low Vision

1. **A National Information & Referral System, APH ConnectCenter**, has a toll-free number staffed by I&R specialists available Monday through Friday to answer questions as well as an I&R email. Contact: 1-800-232-5463; email: connectcenter@aph.org.

Note: This resource is the easiest and most expedient way to find vision rehabilitation services and a good contact for older riders who are experiencing vision loss and are unaware of where to get help.

The APH ConnectCenter houses VisionAware.org, which provides information about living with vision loss and a national directory of state and local agencies (such as Lighthouses) that serve people with vision loss including guide dog programs: [APH Directory of Services – VisionAware](#)

2. **State Services.** Every state in the US provides rehabilitation services to people of all ages who are blind or have low vision. State programs specific to people with vision loss who are 55 and older can be located at: [Welcome to Time to Be Bold: Finding Services for Vision Loss | OIB-TAC](#)
3. **National Consumer groups.** There are three national groups that may have local chapters in your service area. These groups are made up of people who are blind or have low vision themselves and are often the first place a person experiencing vision loss goes to find help. These organizations will welcome information about transportation services through local and state affiliates, as well as on a national basis.
 - American Council of the Blind ([ACB.org](#))
 - Foundation Fighting Blindness ([fightblindness.org](#))
 - National Federation of the Blind ([NFB.org](#))

Types of Services Provided by State and Local Agencies and Related Terms

Orientation and Mobility (O&M): O&M training is a comprehensive individualized training program that teaches people with limited or no vision to orient themselves (figure out where they are and how to get to where they want to go) and to move safely from point A to point B using a variety of approaches (e.g., using remaining vision, a human (or sighted) guide, a long white cane, or a guide dog). Walking through neighborhoods and business districts, crossing streets, using public or paratransit or other transportation options, soliciting help from bystanders and problem solving are but a few of the typical goals of an individual receiving O&M training. Many agencies that serve people with vision loss provide or can provide connections to organizations that offer O&M training. Transit companies sometimes hire these specialists to work with people with vision loss to use public transit and to acquaint them with changes in transportation services. O&M specialists provide in-depth instruction that travel trainers are not trained to provide.

Vision Rehabilitation Services: State agencies, nonprofit organizations and individual contractors provide rehabilitation services to help a person keep, regain, or improve skills and functioning for daily living that were lost or impaired due to vision loss.

Wayfinding: Wayfinding techniques are information systems that guide people through a physical space. For individuals with vision loss, these include beacon systems, texture changes and lighted pathways.

Understanding Vision Loss: The National Eye Institute provides [photos of eye conditions](#)⁵ that can be used in training staff and drivers to help them better understand what older riders with vision loss can see, depending on the eye condition. NEI also developed a virtual reality mobile app and has the video depictions on their site:

- [See What I See: Virtual Reality Eye Disease Experience | National Eye Institute \(nih.gov\)](#)⁶
- [Understanding People Living with Dementia and Vision Loss - The National Research & Training Center on Blindness & Low Vision \(instructure.com\)](#)⁷
- [Normal Vision Changes - VisionAware](#)⁸
- [How to Walk with a Guide - VisionAware](#)⁹
- [Using Large Print - VisionAware](#)¹⁰
- [AVLNC Awareness Campaign Resources – VisionServe Alliance](#)¹¹

5 <https://www.nei.nih.gov/learn-about-eye-health/outreach-campaigns-and-resources/see-what-i-see-virtual-reality-eye-disease-experience>

6 <https://www.nei.nih.gov/learn-about-eye-health/outreach-campaigns-and-resources/see-what-i-see-virtual-reality-eye-disease-experience>

7 <https://nrtc.catalog.instructure.com/courses/dementia-and-vision-loss>

8 <https://visionaware.org/your-eye-condition/eye-health/normal-vision-changes/>

9 <https://visionaware.org/everyday-living/essential-skills/an-introduction-to-orientation-and-mobility-skills/how-to-walk-with-a-guide/>

10 <https://visionaware.org/everyday-living/essential-skills/reading-writing-and-vision-loss/large-print/>

11 <https://visionservealliance.org/avlnc-awareness-campaign-resources/>

References

1. Council of Citizens with Low Vision International, An Affiliate of the American Council of the Blind, Best Practices and Guidelines for Large Print documents Used by the Low Vision Community (<https://acb.org/large-print-guidelines>)
2. Flatten Inaccessibility: How COVID-19 Impacted Adults Who Are Blind, Have Low Vision, or Are Deafblind Early in the Pandemic (www.afb.org)
3. PROJECT VISITOR: Visually Impaired Seniors' Independent Travel Opportunities and Resources (www.afb.org)
4. VisionServe Alliance: United States' Older Population and Vision Loss: A Briefing (2022), St. Louis (To access the document, it is necessary to register at: VisionServe Alliance: Big Data Project Reports) (<https://visionservealliance.org/reports>)
5. VisionServe Alliance: Vision Impairment and Vision Rehabilitation in the Lives of Older People with Vision Loss. November 2020, St. Louis ([Vision Rehabilitation and Aging Brief Final 12.14.20.docx - Google Docs](#))



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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.

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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

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