

Falls Prevention Awareness in Public Transportation



For Drivers, Mobility Managers, Travel Trainers
and Others Concerned with Safety
in Senior Transportation

NCST

National Center on
Senior Transportation

Falls Prevention Awareness in Public Transportation

Falling can be a very serious threat to older adults using public transportation. Suffering a fall can cause critical injury, which can have a direct impact on an older adult's ability to lead an active and independent life. Fear of falling can make public transportation use a very stressful experience for seniors. Older adults unfamiliar with navigating public transportation may be reluctant to ask the driver for assistance or hesitate to mention a safety hazard that they notice.

Older adults are at risk of falls during sudden vehicle acceleration, braking or swerving. As an individual ages, slower reflexes can lead to poor balance and make it difficult to step over obstacles in the aisle such as packages. Falls can happen when boarding, paying the fare, riding and leaving the bus.

Yet older adults depend on transit for shopping, medical appointments, employment, volunteering, to attend religious services or to visit relatives and friends. For older adults who have to give up driving, public transportation helps them continue to participate in society and live independently. The fact that transit users walk more has the added health benefit of strengthening legs and increasing balance. This publication was developed to help older passengers use public transportation independently, safely and without fear. Making transportation drivers and providers aware of the risks of falling and potential safety measures within public transportation vehicles is also an important goal.

Did you know?

According to the Centers for Disease Control and Prevention, falls are the **leading cause of fatal and nonfatal injuries** among older adults.

It is estimated that 37,000 injuries requiring emergency medical care occur annually as older adults **board and exit vehicles**. (Study published in the Journal of the American Geriatrics Society, 2008).



Falls result from a number of factors.

Personal factors can include vision impairment, a fear of falling, and balance issues due to a health condition or medication. **Environmental factors** include low lighting, obstacles or steps. **Activity-specific factors** place someone at risk for a fall when the difficulty of the activity exceeds the individual's ability. For example, a risky activity on transit would be trying to walk from the fare box to a seat as the bus accelerates and turns into traffic.



Public transportation fall risks such as traffic pathways, stairs, crowds, lighting or noise can impact older adults' safety. Fall hazards directly related to transit are listed below.

- **Steps** can be challenging for people with balance problems, poor vision or a fear of falling. A step is almost always necessary between a vehicle and the sidewalk. Steps become problematic if they are too high, lack handrails or have unmarked edges.
- **Frequent or sudden stops or starts** can be difficult for an older adult with balance issues. A sudden lurch in the vehicle can cause an individual to lose footing.
- **Slippery surfaces** due to winter weather or rain any time of the year reduce traction or friction between the shoe and the ground, increasing the potential for an individual to lose their balance.
- **Crowded vehicles** may not have enough seating or available handrails or straps for individuals to grab for support, which are essential when a vehicle is making frequent stops. Reserved seating for seniors and people with disabilities may not always be available during peak ridership.
- **Personal items in the aisle** may create a fall hazard for riders as they move to a vacant seat.
- **Dark interiors** are hazardous, especially at night. Adequate lighting can help make the above risks more visible and is especially important for individuals with diminished vision.

Falls Prevention Programs and Resources

Evidence-based falls prevention programs have focused primarily on addressing risks in the home environment. Recently, there has been increased interest in applying falls prevention interventions to public transportation. The programs and professionals listed below may be useful resources to help you evaluate fall risks.

Evidence-Based Falls Prevention Programs focus on practical strategies to reduce the fear of falling and increase activity levels through muscle-strengthening and balance-retraining exercises. These programs may be available in your community, usually through your local Area Agency on Aging (AAA), hospitals or county public health office. For further information on these programs, visit www.ncoa.org/healthy-aging/falls-prevention/falls-prevention-programs-for-older-adults or find your local AAA at www.n4a.org.

Occupational Therapists (OTs)

focus on how an individual functions in their day-to-day environment. OTs can help older adults and people with disabilities better understand their own fall risks and identify interventions. OTs work in most health care facilities so contacting local hospitals or long-term care centers is the best first step in finding an OT in your area. General information on occupational therapy can be found at www.aota.org.



Physical Therapists (PTs) help reduce the risk of falls by assessing an individual's physical ability and designing an exercise program to improve balance and strength. PTs work in most health care facilities, so contacting hospitals or long-term care centers is the best first step in finding a PT in your area. General information on physical therapy can be found at www.apta.org.

Transit Falls Prevention in Practice

Safety is a priority for Mountain Empire Transit, which provides rides to individuals with a variety of mobility needs, including those who use canes, walkers and wheelchairs. Senior transportation is the largest percentage of total trips provided. Mountain Empire Transit is run by Mountain Empire Older Citizens (MEOC), the designated Area Agency on Aging in Big Stone Gap, VA. Currently, seniors utilize public demand-response transportation, shuttles, and specialized transportation (volunteer driver, veteran transportation, passenger assistance, door-to-door and door-through-door service).

Drivers are the first point of contact for senior riders and often provide valuable information to program staff.

When unsafe situations are identified, information is relayed on an incident report to the Mobility Manager. The Mobility Manager may conduct a home visit or contact the passenger's caregiver or emergency contact to clarify the rider's needs and discuss falls prevention strategies. Special instructions may be noted on the driver's manifest for future reference. The Mobility Manager also notifies MEOC's Care Coordination Department of the incident so the case manager can follow up with the rider to ensure that proper supports are in place.

MEOC's comprehensive process helps ensure Mountain Empire Transit users remain safe riders and continue to actively participate in community life.



Located in Big Stone Gap, VA, Mountain Empire Older Citizens serves three counties and one city in the rural, mountainous southwestern part of the state.

Community Resources

A number of community agencies have a vested interest in preventing falls and supporting aging in place. To find an existing falls prevention program or professional, contact any of the following resources in your community.

Area Agencies on Aging (AAAs)

provide long-term services and supports in most communities in the U.S., promote healthy aging and often provide falls prevention programs.

www.n4a.org

Aging and Disability Resource

Centers (ADRCs) serve as single points of entry into the long-term services and supports system. www.adrc-tae.acl.gov

Centers for Independent Living

(CILs) provide peer support, travel training and independent living skills training. www.ilru.org

Title VI Native American Aging

Programs support healthy aging and often provide falls prevention programs for older American Indians, Alaska Natives and Native Hawaiians.

www.n4a.org

Visit the NCST website to download a printable version of this booklet and find additional resources on falls prevention and transportation.

www.seniortransportation.net
1-866-528-NCST (6278)



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Tips for Drivers

- 1 Customer Service:** Driver attitude can create a comfortable atmosphere for riders. Please be patient and courteous to older passengers who may have issues with stability and balance and have a fear of falling.
- 2 Environmental Hazards:** Please be aware of falls hazards on the ground, such as curbs, pot holes, uneven surfaces, puddles or ice. If providing curb-to-curb service, drivers should ensure that ambulatory passengers are steady on the sidewalk before leaving.
- 3 Passengers using assisted mobility aids** such as canes, walkers or crutches may need more time to maneuver narrow aisles. Please ensure that passengers using those devices are stable prior to moving the bus forward. After a wheelchair or scooter user leaves the vehicle, make sure that securement devices are properly stowed.
- 4 Crowding:** Your vehicle likely has seats designated at the front for seniors and individuals with disabilities, but priority seating may not be readily available when the bus is crowded. If a seat is not available, ensure that older passengers have access to a handrail. Encourage crowds to move to the rear of the vehicle to make room for individuals boarding at the front.
- 5 Excess Belongings in the Aisles** can become fall hazards as passengers move through the vehicle. Please check the aisle periodically and encourage passengers to keep their belongings from blocking the aisle.
- 6 Vehicle Stop/Go:** Please wait to move the vehicle until all passengers have an available seat or have a secure grip on a railing. Some riders may need to sit, extract their fare, then make payment at the next stop.
- 7 Weather Conditions:** Older adults can easily slip and lose balance inside the vehicle on a wet floor. Snow drifts, leaf piles or rain puddles are all potential fall hazards.

Tips for Older Riders

- 1 Choose Footwear Wisely:** The best footwear is flat shoes. Be careful to avoid wearing shoes with too little tread. Slippery soles can cause sliding.
- 2 Slow Down:** Avoid the risks of falling by taking your time to navigate the steps and aisle of the vehicle you're entering. Slower and smaller steps can help retain your balance if you encounter a slippery floor.
- 3 Maintain Stability:** Look for designated priority seating in the vehicle. If there are no seats available, find the accessible handrails or grip the overhead handles to maintain balance during a ride. Use railings to climb steps or lean on the vehicle door frame for support when climbing steps.
- 4 Watch out for packages in the aisles.** In addition, avoid carrying large packages or bags that obstruct your vision or prevent you from maintaining a firm grip on the accessible vehicle supports.
- 5 Ask Questions:** Drivers are expected to treat passengers with courtesy and respect. Do not be afraid to ask for help. Ask the driver to point out where the available seating might be or ask them to wait until you are seated to continue moving. And let the driver know if there are items blocking the vehicle aisle that you see as a hazard.



Falls are Preventable!

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