

Transportation Options for People who are Blind or have Low Vision

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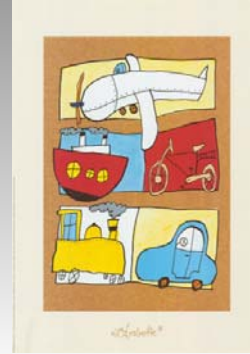
The importance of transportation

- Transportation is essential for autonomy, independence, health, and quality of life (Dickerson, et al. 2007)
- Transportation provides us with the ability to engage in various activities (working, shopping, socializing) and fulfillment of roles
- Transportation enables us to engage in our favored activities and meaningfully connect our lives to our world (Gourley 2002)



Compensatory strategies for decreased community mobility = transportation options

- What options are available for our clients?
 - Public transportation
 - Paratransit services
 - Specialized transportation
 - Commercial and human service transportation
 - Walking & other forms of transportation
 - Rides with others



Types & Levels of service

- Type of services
 - Fixed route
 - Flexible route
 - Demand-response
- Levels of service
 - Curb-to-curb
 - Door-to-door
 - Door-through-door
 - Escort services



Trips & trip chaining

- A trip
 - Considered one-way travel
 - Home to grocery store = 1 trip
 - Home to grocery store, grocery store to home = 2 trips
 - Home to grocery store to bank to home = 3 trips
 - Trip chaining
 - Any travel involving 3 or more trips
 - Ability to chain trips dependent on mode of travel



Public transportation

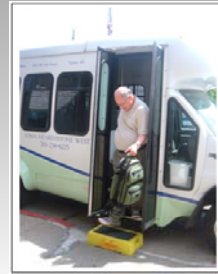


- Typically includes buses, but may also include rail, shuttles, etc
- Fixed route, set schedule, curb-to-curb service
- Low cost
- Often present in urban and suburban areas; rare in rural areas
 - 65% have limited or no access (Freeman 2006)



Functional abilities required for public transportation use

- Physical function
 - Public transportation has a walking component at each end of the trip
 - Waiting at the bus stop
 - Climbing steps
- Cognitive abilities
 - Route planning, transfers
- Vision
 - Reading bus schedules, recognizing stops
- Psychosocial
 - Interactions with operator, other passengers
 - Dealing with unexpected situations



Barriers to public transit use

- Real: sidewalks, walking distance, bus stops/shelters, features of the vehicle, limited destinations
- Perceived: dirty, unsafe, untimely, confusing, unreliable, costly
- Personal: decreased vision, cognition, physical functioning, lack of confidence



Barriers to the use of public transportation to people who are visually impaired

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- Route, timetable, fare, and customer service brochures that are available only in print format
- Maps, print or graphic information on signs
- Bus stop locations:
 - Before or beyond the corner, mid-block
- Ticket vending machines



ADA requires removal of barriers to those with visual impairment

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- Providing large-print, high-contrast, and non-glare informational signs
- Placing braille and tactile information regarding available service at consistent locations
- Installing a tactile domed high-contrast warning surface along platform edges.
- Making stop announcements inside transit vehicles at main points along the route.
- Providing external speakers that announce vehicle identification information.
- Providing ticket vending machines with braille and large-print markings, or audible output devices.
- Training transit personnel to meet the specific needs of persons with visual impairments



Promoting public transportation use



What is Travel Training

- Travel training
 - Originated in New York (~1970) (Wolf-Branigin 2009)
 - Provides one-on-one, individualized travel instruction in travel skills
 - Includes the trainer riding with the client while using the system
 - Increase user confidence and ability
 - Travel trainers typically work in the community and are employed by non-profits, for-profits, transportation agencies, and schools
 - Travel trainers may be available through public transportation agencies, local aging/human service organizations



Association of Travel Instruction: <http://www.travelinstruction.org/>



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Promoting public transportation use

- Locus of control: Independence (versus depending on family and friends)
- User-friendly services
 - Ergonomic vehicles
 - Operator sensitivity
- Bus buddies
- Technology



Special Transportation Services (STS)

- Americans with Disabilities Act (ADA) requires paratransit services be provided for people who cannot use public transportation
 - Eligibility requirements
 - Depends on an individual's inability to use fixed-route services versus the presence of a disability
 - Proximity to fixed route system
 - Typically use vans and/or w/c accessible buses for non-medical emergency trips
 - Shared rides
 - Flexible route, door-to-door service



MDC STS

- Service to/from destinations $\frac{3}{4}$ mile from fixed route service
- Uses privately contracted sedans and vans, some equipped with w/c lifts
- Service available 24/7
- Reservations made 24 hours in advance
- No trip restriction
- \$3/one-way trip
- 1.5 million rides in 2009-10
- 2011 Budget: \$37 M
- 2011 Revenue: \$ 4 M



Photos: <http://mta.maryland.gov/images/LIFTBUS.jpg> ;
www.gwdc.org/CTTRANSIT%20Paratransit%20Van%20in%20the%20Gr eater%20%20Water%20bury%20Area%2002.jpg



Technology to enhance accessibility for people with visual impairments

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- Computer screen interfaces reads aloud information presented in video monitors
- Ticket machines that include speech output
- Information kiosks with tactile maps that can “talk” about places of interest and destinations
- Route planning software available on transit Websites
- GPS technology monitors location, triggers stop announcements
- Infrared and radio transmitters broadcast virtual messages that can be “heard” by voice output receivers



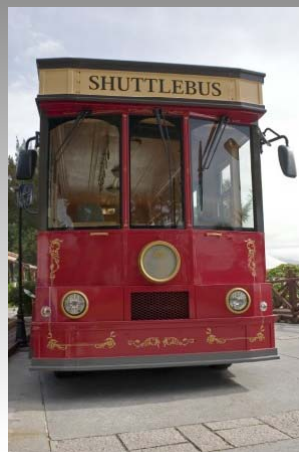
Sign-up for Miami-Dade Transit Rider Alerts and we will notify you about disruptions affecting our transit system.



Specialized transportation

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- Hospital-based transportation
- Business shuttles
- Senior center buses
- Adult day services
- Retirement community shuttles



Commercial transportation

- Taxis
 - Most similar mode of transportation to the private car
 - Where you want to go, when you want to go there
 - Real and perceived barriers to usage:
 - Wait times, reliability, punctuality, driver issues, unfamiliarity, not knowing services exist, cost, maintenance of vehicles, vehicle design, assistance with packages, mobility devices
 - Facilitators:
 - High satisfaction rate (Kostyniuk 2003), flexibility, assistance with packages, mobility devices



Rides from others

- Most common mode of transportation after driving (Davey 2007)
 - Family
 - Spouse, daughters, daughter-in-laws (Taylor and Tripodes 2001)
 - Friends
- Paid & Volunteer driver programs (Supplemental Transportation Programs (STPs))
 - Commonly operated by faith-based and non-profit organizations
 - Various models of volunteer driver programs
- Volunteer service organizations
 - Red Cross, American Cancer Society



Walking & other



- Walking
 - Two walking trips are required for each transit trip
 - Requires physical ability and stamina
 - Most walking occurs in urban areas where sidewalks are available and destinations are close together
 - Risk of injury/death greater than as a driver
- Bicycling
- Golf carts



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Pedestrians



Connecting clients with transportation

- Considerations for transportation options
 - Eligibility
 - Affordability
 - Accessibility
- Mobility managers
 - Guide clients through transportation resources and services
 - Assist consumers in choosing the best options to meet their travel needs



Source: Transportation Options for Older Adults



Questions to ask of transportation options programs

- Program questions
 - What hours and days does the program run?
 - What are the service areas?
 - Are there limits to the number of rides, destinations?
 - Is assistance available for persons with packages, mobility devices?
 - Is assistance available for persons with visual, cognitive, or physical disabilities?
 - Is pre-registration required?



Source: The Hartford's "Getting There Worksheet"





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