



WEBINAR SERIES

Title: Community Access: Navigating the Neighborhood with a Disability

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Disclosures

- Alicia Cooley, EMOT, OTR/L, there are no conflicts to disclose.

Following This Session:

You should be able to:

1. Define community mobility and why it is important
2. Understand why community mobility and safety of people with disabilities should be concerns of everyone on the road
3. Outline the underlying skills needed to allow for successful community navigation
4. Improve driver education and awareness of community travelers, especially those with disabilities



What is Community Mobility?

Community mobility, an instrumental activity of daily living (IADL) is defined as “moving around in the community and using public or private transportation, such as driving, walking, bicycling, or accessing and riding in buses, taxi cabs, or other transportation systems”

(AOTA, 2008).

For today’s purpose we are discussing pedestrian mobility only.



Individuals with Disabilities & Community Safety

- Lack independence in transportation
- May lack a healthy sense of danger, have impaired attention to cars, traffic lights, and lack of practice
- May have scheduling difficulties (accessible transit)
- Face discrimination from drivers
- Youth may have parents who are overprotective or who have lower expectations for independence

(Lindsay & Lamptey, 2018)

SAFE STEPS Road Safety: Pedestrians

The Prudence Foundation, the community investment arm of Prudential; in partnership with National Geographic Channel and FIA Action for Road Safety

SAFE STEPS Road Safety – Pedestrians Link:

<http://www.youtube.com/watch?v=ntn4SKgpjwY>



Why is This a Concern?

NHTSA- 2016 statistics

- 26% of pedestrian fatalities occurred from 6:00-8:59pm. Why?
- In 2016, one-fifth (20%) of children 14 and younger killed in traffic crashes were pedestrians.
- More than two-thirds (70%) of the pedestrians killed in traffic crashes were male.

6,482

Pedestrians killed in traffic crashes in 2018, the highest since 1990. This is a 3.4% increase from the previous year!
(Traffic Safety Tips, NHTSA, 2018)



Risk Factors for Injury

In a study by Xiang et al (2006) studying vehicle-pedestrian and vehicle-bicyclist collisions in children from ages 5-17 in the U.S., they found, “...children with disabilities were found to be more than five times more likely to have ever been hit by a motor vehicle as a pedestrian or bicyclist. Children with reported traffic difficulties as a pedestrian were at even higher risk of collision” (p. 1069).



Other Risk Factors

- Typically Males
- Any age group
- Low family income (affects neighborhood, characteristics of play areas, flow of traffic, etc.)

Executive Function Skills Needed for Successful Planning

- Route planning
- Ability to determine if a destination is accessible to them
- Communication skills needed for making transportation arrangements (i.e. AccessLink)
- Are they able to process the information that they will be facing in that environment?
- **Can they make safe decisions?**

Executive Function Skills Needed for Successful Navigation

- Being able to distinguish between traffic lights
- Waiting to cross the street until the path is clear
- Recognition of useful landmarks
- Ability to recognize if they are lost and be able to call for help
(*Taber, et al, Obtaining Assistance When Lost in the Community Using Cell Phones. 2002*)
- Looking left, right, and left again before attempting
- Be visible to drivers!

Attention, Attention, Attention!

- If you aren't paying attention, you can't avoid danger, won't remember new information, and may get lost
- Put the distractions away
- Hearing aids and glasses should be worn, if needed



Pedestrian Safety

- Tall flag on back of wheelchair or bike
- Reflective clothing
- Make eye contact with drivers
- Stay in crosswalks
- Be aware of distracted drivers
- Be alert in parking lots for cars backing out!
- Bring a phone for emergency calls
- If glasses or hearing aids are needed, they should be worn



How Can Occupational Therapy Help?

- Practice in the natural setting vs. simulation in a clinic
- Provide education on safety, facilitate planning and problem-solving for the trip
- Use of virtual and augmented reality-VIRTOOLS, Kinect2Scratch, Google Maps, IMAGINE GPS, & GAWA
(*Lindsay & Lamptey, 2019*)
- “Traveling independently, either as a pedestrian or taking public transit, is a critical component to maintaining quality of life, health, social inclusion, and community integration. Lacking access to independent travel can negatively impact employment, physical activity and exercise, health care, and leisure activities”
(*Lindsay & Lamptey, p. 2617*)

Other Ways Occupational Therapy Can Help

In preparation for improving pedestrian safety and the ability to find their way in the community:

“Clinicians and educators need to carefully consider developing other essential life skills that are related to transportation (e.g., literacy, time management skills, problem-solving, and other cognitive process skills) before engaging youth in travel training interventions”

(Lindsay & Lamptey, 2019)

Occupational therapy can also help with:

- Learning or re-learning how to use public or private transportation such as buses and taxis, Lyft, Uber, etc
- Communication skills needed to set up services, advocate for themselves, and ask for help to decrease their risk of victimization.



What to Consider Before Venturing Out

Level of Physical or Cognitive Impairment

- What is the person's physical ability/disability?
- What is their cognitive status like?
- Can they call ahead to ask if a business is wheelchair accessible?
- Would they benefit from external memory aids?

Mobility Device (if needed)

- Do they have good safety awareness?
- Do they need cues or assistance for use of a device?
- Will they be able to carry packages safely?
- **Can pedestrians see them?**

Terrain and Weather

- Will they be traveling in a vehicle or using power mobility?
- Always master travel in good weather before adding an increased challenge of rough terrain or inclement weather.

Walking Safely

Know the Basics—Pedestrian Safety

10 Walking Safety Tips

1. Be predictable. Follow the rules of the road and obey signs and signals.
2. Walk on sidewalks whenever they are available.
3. If there is no sidewalk, walk facing traffic and as far from traffic as possible.
4. Keep alert at all times; don't be distracted by electronic devices that take your eyes (and ears) off the road.
5. Whenever possible, cross streets at crosswalks or intersections, where drivers expect pedestrians. Look for cars in all directions, including those turning left or right.



Walking Safely Cont'd

Know the Basics—Pedestrian Safety

10 Walking Safety Tips, Continued

6. If a crosswalk or intersection is not available, locate a well-lit area where you have the best view of traffic. Wait for a gap in traffic that allows enough time to cross safely; continue watching for traffic as you cross.
7. Never assume a driver sees you. Make eye contact with drivers as they approach to make sure you are seen.
8. Be visible at all times. Wear bright clothing during the day, and wear reflective materials or use a flashlight at night.
9. Watch for cars entering or exiting driveways, or backing up in parking lots.
10. Avoid alcohol and drugs when walking; they impair your abilities and your judgment.

NHTSA's Know the Basics- Pedestrian Safety

<https://www.nhtsa.gov/road-safety/pedestrian-safety>



Typical Suburban Intersection

- There may be no lights to rely on.
- Drivers may not be expecting youth on skateboards, bikes, scooters and wheelchairs to be ready to cross the road (no crosswalks).
- There may be circles or roundabouts inside a residential development
- Youth or those with disabilities may come out between parked cars or suddenly appear out of a driveway, causing an accident

Typical Urban Intersection

This is a LOT of information to process! The person's judgment, visual scanning skills, and ability to act quickly are tested.



Typical Rural Intersection

High speed limits, T-bone intersections, lack of lights and crosswalks can make crossing treacherous.



Teaching Youth with ID How To Use a Phone When Lost

Taber et al performed a study in 2003 on youth with mod-severe intellectual disabilities, training them to recognize when they were “lost,” described as not being able to see the teacher that they came with when shopping in a store, and then follow the necessary steps to use a phone to call for help. This showed that they were able to teach the youths to use a cell phone with speed dial (teacher’s number).

Obtaining Assistance When Lost in the Community Using Cell Phones, 2003.

Teaching Clients to Use Landmarks

- Virtual reality training with typically developing children and youth/adults with WS. Originally the WS group made perseverative errors. With training on 3 environments, they showed that the WS group could learn the ability to navigate with useful vs. less useful landmarks (*Farran, et al, 2012*).
- Clients with ABI who had difficulty with cardinal directions (east/west), tend to do better with landmarks (*Lemoncello, et al., 2010*).
- “Landmarks are also effective in teaching both youth with and without disabilities navigation and wayfinding skills, but the ones strategically positioned along routes or described produce the best results” (*Lindsay & Lamptney, p.18*).

Driver Education

Be aware of hidden disabilities:

- Just because a person looks “neurotypical” does not mean that they will behave that way
- Be on the lookout for impulsive moves, or appearing unaware of approaching vehicles
- Be prepared for defensive driving, if needed.
- Yield to pedestrians in crosswalks



What Else Should We Teach Drivers?

- Be aware of all surroundings, especially when backing out of driveways and parking spaces
- Look for the tall orange flag to identify a wheelchair user
- Don't just be reliant on backup cameras as they are required on all new vehicles, and older vehicle cars may not have them

What's Next for Occupational Therapy?

- Consider consulting, research, teaching ...

"Occupational therapists' expertise in human development and aging, activity analysis, low vision, and occupation in the context of daily living make them well suited to embrace the needs of the population in the neighborhood environment with team members including public health and urban planners" *(Chippendale and Bear-Lehrman, p. 98).*



Questions?





Thank you!



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