

# SAFE TRANSPORTATION OF PEOPLE WHO USE WHEELCHAIRS

*Take your time. Be Safe.*



Massachusetts Department of Developmental Services  
March 2016

Presented By:  
Tom Mercier

Director,  
Assistive  
Technology  
Services for  
DDS

## RECENT INCIDENTS

- Multiple recent incidents with **people in wheelchairs** falling while getting **on or off vehicles** or **while waiting** to transport.
- Resulted in serious injuries and tragically, 3 deaths.



## ACCIDENTS CAN HAPPEN IN THE BLINK OF AN EYE



## TRANSPORTING CAN BE RISKY

- People can **fall** from **vehicle lifts** if wheelchair brakes are not used or power chair is not off and in gear. People can also **fall from lifts** if not secured properly.
- People can **roll out** of an open vehicle door.
- People can **roll down hills** while waiting to transport.
- People **can fall** on their way to or from the vehicle.
- People **can be injured** in a car accident if wheelchairs are not tied down properly.



## HOW CAN YOU PREVENT ACCIDENTS?

Take your time      **Pay attention**

**Understand the risks**

Regularly check wheelchair parts

**Practice** →

Operating the lift  
Tying down the wheelchair  
Loading and unloading  
Applying wheelchair brakes  
What to do after a fall



## TODAY'S TRAINING WILL:

- Introduce DDS recommended guidelines for safe wheelchair transportation.
- Discuss safe loading and unloading procedures.
- Show how to operate a vehicle lift.
- Show how to properly tie down a wheelchair.
- Describe what to do if someone falls.



# DDS RECOMMENDED GUIDELINES FOR SAFE WHEELCHAIR TRANSPORTATION

## RECOMMENDED GUIDELINES

Safe transportation is especially crucial for people who use wheelchairs, as people can be especially vulnerable in accidents.

Recommended practice guidelines:

- 1) Safe Vehicles: Providers are encouraged to schedule regular inspections of vehicles used for transport.
- 2) Safe Wheelchairs: All wheelchairs should be in good repair.



## GUIDELINES CONTINUED

3. Safe Procedures: Staff who are involved in transportation should all be trained in the correct procedures for transporting people who use wheelchairs.
4. Safe Planning: Have a plan for how many staff will be needed for safe transportation for each outing and what they are expected to do.
5. Emergency Safety Procedures: Staff should know what to do if an accident occurs.



## SAFE LOADING AND UNLOADING PROCEDURES

## WHERE DO PEOPLE WAIT?

- Transportation be a **busy time** for staff and the people they support.
- People may **need to wait** while staff safely load or unload one person at a time.
- People should generally **wait inside**.
  - It may seem efficient to have people wait next to the vehicle. However, it is generally safer to ask people to wait inside.
  - The risk of falling next to the vehicle is too great.



## AVOID INCLINES

- People should not be left in unsafe conditions, including inclines.
- Even small inclines can be risky.
- It may seem safe, but always consider the risks:
  - Brakes can fail.
  - Someone may unlock their own breaks.
  - Staff may forget to lock the brakes.



**Don't forget the breaks. Always lock the breaks between every transition step.**



## GETTING TO AND FROM THE VEHICLES

- Some people drive their own power chairs.
- People may need help identifying obstacles that are in the way.
- Check that paths are clear of ice, snow and objects.
- Help the person drive on sidewalks, if necessary, to avoid any part of the wheel going over a curb – this may cause a fall.



## LOADING PASSENGERS

Ensure that the vehicle is parked on a level, stable surface and that the lift is level to the ground. Engage the emergency brake on the vehicle.



Lift is level to the ground.



In snow, ensure lift is on a cleared, level spot.

Avoid inclines. This increases a risk of the chair tipping backwards. Passenger vans are the exception.



## SAFE LOADING

1. Deploy the lift and lower until it is level to the ground.
2. Assist the person to the vehicle.
3. Back the person onto the lift platform (side-loading vehicles) or roll the person forward onto the lift (rear-loading vehicles).
4. Lock the breaks OR power off the wheelchair and place it in gear.
5. Use a lift platform safety strap.
6. Safety gate should be up.



## VIDEO: SAFE LOADING

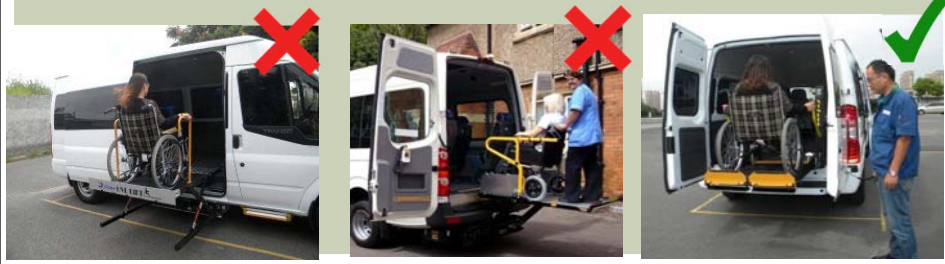
Video clip showing how to load individual onto the van  
<https://youtu.be/qOdDp7ltbHc>





## WHERE DO STAFF STAND?

- Staff should stay on the ground and not ride on the lift.
- Never leave the person unattended on the lift. Watch from the ground so you can intervene if needed.



## TRANSPORTATION COMPANIES

- Many people use transportation companies to ride to and from day programs.
- Program staff should bring the person to and from the transportation provider and stay close by in case support is needed.
- The transportation provider has the responsibility to operate their equipment and to ensure the person is secured safely.
- Everyone's goal is to keep the person safe.



## WHEELCHAIR TIE DOWN

### HOW TO TIE DOWN

1. Secure the runners to the floor
2. Attach the tie-down to the transfer ready hook in the front and rear wheelchair
3. Restrain the occupant using vehicle shoulder belts.
4. Remove loose accessories from wheelchair.
5. Remove parts that can injure the person during an impact.



# WHEELCHAIR TIE DOWN VIDEOS

Tie-down with chairs that have transport hooks <https://youtu.be/D1KMgddeb8A>



# SECURE THE SHOULDER STRAPS



Secure the straps to the floor runner



Bring long strap around the other side



Bring the short strap up and under the person



Snap the belt together



## SHOULDER STRAP VIDEOS

Link to video demonstrating proper procedures:

<https://youtu.be/-ycDeEDFxcw>



## OCCUPANT RESTRAINT “BEST PRACTICES”

- Use both pelvic and shoulder belts in the vehicle to restrain the passenger.
  - Do not rely on the wheelchair seatbelt. The wheelchair seatbelt is not designed for transportation safety.
- Lead vehicle restraints over bony anatomy.
- Avoid placing belt on soft tissues (abdomen).
- Remove belt slack.
- Use a retractor to reduce upper torso belt slack.



*Transportation Safety for Wheelchair Occupants*



## UNLOADING PASSENGERS


### SAFE UNLOADING

1. Bring the lift up.
2. Detach the shoulder straps and wheelchair tie downs.
3. Roll wheelchair onto the lift .
4. Ensure brakes are on or chair is powered off and in gear.
5. Ensure the safety gate on the end of the lift platform is engaged.
6. Use the lift platform safety strap.
7. Lower the lift.



**SAFE UNLOADING VIDEO**

<https://youtu.be/YoNrJR64a8M>



**SAFE PLANNING**

## VEHICLE PROTOCOLS

Plan for transportation:

- How many staff are needed?
- Who is responsible for what?

Plan logistics ahead of time:

- A vehicle protocol may be needed for each house.
- Consider the best order for loading and unloading passengers. This will depend on individual support needs and other factors.



## WHAT TO DO AFTER A FALL?

## WHAT IS A WHEELCHAIR FALL?

- Wheelchair tips over sideways
- Wheelchair tips over backwards or forwards



## WHEELCHAIR FALLS CAN BE SIGNIFICANT

- Not a typical fall.
- The impact of a chair in motion is potentially more severe than a typical fall.
- There is high risk of significant head and spinal cord injury after a wheelchair fall.
- Wheelchair falls should be treated as a potentially serious event.





## WHAT TO DO AFTER A FALL

- Assume the fall is a serious event.
- Always err on the side of caution.
  - Never assume the person is OK just because there are no visible injuries.
- Do not move the person unless they are in an unsafe area (i.e. middle of traffic).
- Stay with the person and call 911.
  - The person should be evaluated by a medical doctor for possible head and spinal injuries.



## OTHER EMERGENCY PROCEDURES

- Staff should have access to a cell phone.
- Immediately call 911 if a person in a wheelchair is impacted by an accident, if they fall out of a wheelchair, or if there is any question of an injury.
- After calling 911, providers may have other protocols for staff to follow; calling a supervisor or others at their agency for notification and back up, etc.



## OTHER CONSIDERATIONS

### WHAT IF SOMETHING IS UNSAFE?

- If you suspect that a wheelchair is broken:
  - Immediately report it to your direct supervisor
  - Follow your agency's protocol for wheelchair repair
  - If you're unsure, safety checklists can help identify the problem
  - Consult with DDS AT Centers
- If the vehicle lift is broken, report it to your supervisor. Don't ignore it. Don't let it go!



## RESOURCES

- Kelly Assistive Technology Center: Passenger Assistive Techniques
- Rehabilitation Engineering and Assistive Technology Society of North American (RESNA) [www.Resna.org](http://www.Resna.org)
- Ride Safe: Wheelchair Transportation Safety <http://wc-transportation-safety.umtri.umich.edu/ridesafe-brochure>
- DDS Safe Procedures for Transporting People who Use Wheelchairs



## THANK YOU!

Please direct questions or comments to:

Paula Potvin, Director of Risk Management  
Massachusetts Department of Developmental  
Services

[Paula.Potvin@MassMail.State.MA.US](mailto:Paula.Potvin@MassMail.State.MA.US)

