Alianza family services

WHEELCHAIR SECUREMENT ORIENTATION TRAINING INSTRUCTIONS

The following are recommendations for those contractors whom serve individuals that are confined to a wheelchair.

Lift Operation and Securement

Life Operation
Always refer to manufacturers instructions. The following are guidelines to follow when boarding or debarking an individual on a lift:

- Stop the vehicle on level ground;
- Watch for obstacles that may create problems during boarding or debarking of wheelchair lift;
- Put the vehicle in park;
- Set the emergency brake;
- Turn the vehicle key to the on position;
- Turn hazard lights on;
- Operate the lift from the ground;
- Back wheelchair onto the lift, unless passenger request otherwise;
- Set wheelchair brakes;
- If lift is equipped with seatbelt, fasten seatbelt (if the lift is equipped with a front safety barrier make sure it is locked);
- Let the rider know you are about to raise lift and raise the lift to vehicle floor level;
- Tell passenger you are entering the vehicle; and
- Release the wheelchair brakes and maneuver the chair into the wheelchair station.

Manual Lift Operation
An emergency situation is not the time to learn how to operate the lift manually. All Ride Connection vehicles with lifts are equipped with a hydraulic manual pump. This pump is located in the housing on the side of the lift. A pump arm is found on the outside of the housing. Instructions are posted on the housing. Provide hands on practice in manual operation.

Ramps
Always refer to manufacturers instructions. Ramps vary from vehicle to vehicle. The following are best practices to follow when boarding or debarking a customer on a ramp:

- Park on level ground (note: it is very difficult to push a wheelchair up a severe incline);
- Stand to the side of the ramp;
- Pull the ramp forward and out from the top and swing the lower section out;
- As the ramp straightens, allow it to fall slowly into position on the ground (bend you knees not you back when lowering) and
- Do not drop the ramp.

Ideally, the driver or another individual should be below the wheelchair on the ramp; this gives better leverage and control.

Wheelchair Securement

There are many different styles of securement systems. Drivers and escorts should be provided with manufacturers instructions for review. The following are guidelines that must be followed when securing a wheelchair:

- Do not take short cuts!
- Use the four tie-down straps (two in the front and two in the rear).
- Tie-down straps must be placed on a non-moving, frame portion of the chair. Do not secure straps on a removable (footrest, armrest) part of the chair.
- Attach the straps as high on the chair as possible, but no higher than the arm rests.
- The ideal angle for securement is 45 degrees out from the chair frame.
- Each strap should be secured in a straight line. Do not bend around a wheel or foot rest.
- Tighten all straps, starting with the strap that is the hardest to reach (if the area around the chair is tight, leave the wheelchair out a few inches, attach the rear straps and them move the chair back in to the proper position to tighten the straps).
- Test the chair to be sure it doesn't move.
- Set the brakes.
- Secure the customer with the lap and shoulder belt.

Equipment Program

Clinical Considerations for Prescribers

Motor Vehicle Transport of People in Wheelchairs

Government of South Australia
Department for Communities and Social Inclusion

February 2013

Background

The safest way for any person to travel in a vehicle is using the seat and seatbelt fitted by the vehicle manufacturer.

However, some clients are unable to transfer from their wheelchair into the vehicle seat due to the level of their disability or need for postural support. These prescriber notes look at some of the considerations for transportation of a wheelchair and occupant in a vehicle. There are a number of different wheelchair types which need different considerations and also different vehicle types. Consideration should be given at the time of prescription of a wheelchair where a client indicates that they intend to travel in a vehicle while seated in the wheelchair.

Note: The DCSI Equipment Program does not provide vehicles or modifications to vehicles to put a wheelchair and occupant in a vehicle and does not provide wheelchair occupant restraint systems.

1. Clinical Considerations

- What type of wheelchair does the client have?
- What type of vehicle(s) does the client intend to travel in? (see section 3. Wheeled mobility device & restraint types suitable for motor vehicle seating below) Different vehicles may require different methods.
- How does the client transfer? If it is possible for the client to transfer from their wheelchair into the vehicle seat and wear the seatbelt, this is the safest option.

If the client cannot transfer out of the wheelchair:

- Does the wheelchair being considered have indicated tie-down points? Wheelchair should be secured by main frame, not removable parts such as leg rests or footplates. If not labelled, advice must be sought from the supplier or DES on location of appropriate tie down points on the wheelchair. New wheelchairs must have tie-down points labelled with tie-down instructions.
- If the client has their own vehicle with a restraint system fitted, they should consult the supplier of the restraint system on the appropriate way to secure the new wheelchair.
- Ensure that all people who may assist transporting the person in their wheelchair are made aware of the tie-downs and how to access information on the safe use of both the wheelchair and the wheelchair occupant restraint system in the vehicle being used. ie. from the relevant suppliers
- Any wheelchair used as a seat in a vehicle must have a sturdy backrest to the height of the top of the shoulder with a headrest fitted. (See specific details under section 3. Wheeled mobility device & restraint types suitable for motor vehicle seating below.)

2. Safety Considerations

- Any loose accessories such as trays and communication devices and their mounts should be removed from the wheelchair for travel and secured within the vehicle preventing them from becoming loose projectiles in a vehicle impact. There are approved compartments that can be fitted for this purpose available from after market vehicle storage manufacturers. Any accessories that protrude from the footprint of the wheelchair should also be removed and secured if they cannot be folded to be within the dimensions of the wheelchair. A cargo barrier is recommended for station wagons.

- Only approved restraint systems should be used. Never use untested straps such as those purchased from a hardware store as tie-downs. These may look the same as other vehicle tie-down straps but the load rating is likely to be insufficient to secure a wheelchair and occupant in the event of an impact.
- Harnesses and seatbelts on the wheelchair are provided as postural supports and are not suitable for restraint of the person in a vehicle. An approved wheelchair occupant restraint system fitted to the vehicle must be used regardless of whether any postural supports are in place.
- Any wheelchair that is showing signs of rust or deterioration may no longer be suitable for transportation. Contact DES to arrange a maintenance check and report.
- There is a clearspace requirement of 650 mm in front of the client where a lap-sash belt is used and this is increased to 950 mm where a lap only belt is used, as well as 400 mm behind the head. Refer to AS/NZS 3696:19 for further information.

3. Wheeled mobility device & restraint types suitable for motor vehicle seating

Scooters Not currently tested to standards and unable to comply with clearspace requirements in front of the person. Clients should not travel in a vehicle while seated in a scooter and should always transfer to the vehicle seat

Adult Postural Chairs/ Air Tilt Chairs Not designed to be used with vehicle occupant restraint systems. Clients should not travel in a vehicle seated in this type of chair.

Strollers Not suitable for transport when occupied. Children should be transferred to an approved child safety seat.

Type 1 and 2 Manual Wheelchairs (folding) Occupied folding wheelchairs are generally unsuitable for safe restraint. Some folding wheelchairs have been crash-tested under specific conditions. Client weight, backrest height, headrest and configuration of seating and wheelchair will affect the wheelchair's performance in an impact. Wherever possible the person should transfer to the vehicle seat. If there is no other option than for the client to travel in a vehicle seated in this type of wheelchair, contact DES to find out which wheelchairs have been crash-tested. If the client must travel in a vehicle while seated in this type of wheelchair, the backrest should be to the top of the shoulder height with a headrest fitted.

Type 3 Manual Wheelchairs (rigid frame) In most cases, the backrest on this type of wheelchair is too low and without the required headrest to safely transport a person seated in this type of wheelchair in any van, modified car or access cab. The wheelchair area on buses and trains is usually fitted with a rigid padded backboard and the person can travel safely in a rearwards facing direction with their back against this backrest.

Type 4 Manual Wheelchairs (Tilt in space) If the client has indicated that they will travel in a vehicle while seated in this type of wheelchair, the backrest should be to the top of the shoulder height with a headrest fitted. Consult the supplier or DES at the time of prescription about the appropriate tie-down points on the wheelchair.

Type 1 Powered Wheelchairs (folding) Folding wheelchairs are generally unsuitable to be safely restrained with an occupant. If the person intends to travel in the wheelchair and is unable to transfer to the vehicle seat, a different type of Powered wheelchair should be prescribed.

Types 2-4 Powered Wheelchairs If the client has indicated that they will travel in a vehicle while seated in this type of wheelchair, the backrest should be to the top of the shoulder height with a headrest fitted. Consult the supplier or DES at the time of prescription about the appropriate tie-down points on the wheelchair.

4. Restraint of the wheeled mobility device and occupant

A load (including wheelchair and occupant) should be secured to the vehicle floor according to the Australian/ New Zealand Standard 3696:19 Wheeled Mobility Devices for use as seats in motor vehicles. Any lap belts or other harnesses fitted to the wheelchair as part of the seating are not suitable for transportation purposes and are not designed to be vehicle restraints.

5. Standards and Regulations

Australian/NZ Standard 3696:19 Wheeled Mobility Devices for use as seats in motor vehicles
AS/NZS 10542:4 Technical Systems and Aids for the Disabled
AS/NZS 10542:5
Transport Taxi Cabs Regulations 2008
Australian Road Rules

6. Other information and References

- Transport Safety Guidelines for People with a Disability - TRANSPORT NSW
- Safe transportation of People with Disabilities – Robert Bingham, Rehabilitation Engineering Unit, Royal Perth Hospital
- Guidance on the Safe Transportation of Wheelchairs – Medical Devices Agency, UK