

Transportation Safety Tips for Professionals Involved with Prescribing and/or Providing Wheelchairs

Attention: clinicians, therapists, wheelchair suppliers, and wheelchair seating & mobility specialists

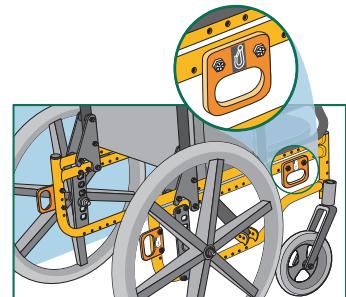
For more information on best practice for providing transportation safety for passengers and drivers seated in wheelchairs, refer to the *Ride Safe* and *Drive Safe* brochures as well as other educational materials that can be obtained online at

wc-transportation-safety.umtri.umich.edu

- 1) Encourage clients who are able to transfer safely from their wheelchair to the vehicle seat to do so and encourage them to use the available occupant-protection systems provided by the vehicle manufacturer.
- 2) If the client indicates that they intend to remain in their wheelchair when traveling as a passenger in motor vehicles, prescribe a wheelchair that has been designed and tested for use as a seat in a motor vehicle, often referred to as a “WC19 wheelchair” or “transit wheelchair.” A list of wheelchairs that comply with WC19 is provided at:

wc-transportation-safety.umtri.umich.edu/crash-tested-product-lists/wheelchairs

WC19-compliant wheelchairs have four easy to see, and easily accessible, attachment points for securing the wheelchair to vehicles using four-point, strap-type tiedown systems. These attachment points are clearly marked with a hook symbol as shown in the drawing.

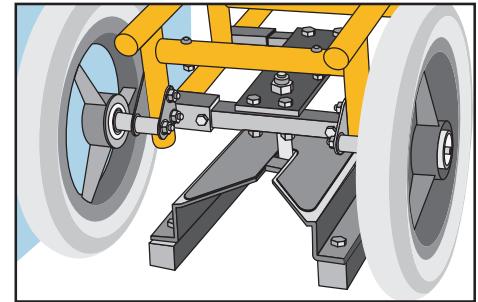


WC19 wheelchairs have been crash tested when secured with a four-point, strap-type tiedown system while loaded with an appropriate-size crash-test dummy, and are labeled with this circular symbol or with the words “Complies with WC19.”

- 3) WC19 wheelchairs also provide the option of using a crash-tested wheelchair-anchored lap belt to which the lower end of an aftermarket shoulder belt provided by the tiedown system manufacturer can be attached near the passenger’s hip to form a complete three-point seatbelt system.
 - If the client would like to use a wheelchair-anchored lap belt and one is not provided with the wheelchair, refer to the wheelchair user’s manual for information on the specific lap belt to purchase, and where it can be obtained. Crash-tested wheelchair-anchored lap belts will also be labeled with the symbol above or with the words “Complies with WC19”.

4) If the client prefers to use a lap belt that is anchored to the vehicle floor, refer to the wheelchair user's manual for ratings on how easy it is to properly position a lap belt on the occupant and whether or not a good belt fit can be easily achieved. WC19 wheelchairs are rated from poor to excellent with regard to accommodating the proper use of vehicle-anchored belt restraints.

5) If the client will be driving while seated in their wheelchair, or would like to use a docking-type securement system while riding as a passenger, prescribe a wheelchair that complies with WC19 but that also can be equipped with add-on hardware to allow it to be effectively secured by the particular docking-securement device, such as an EZ-Lock, Dock'N'Lock, Q'Straint QLK, or Permolock, that will be installed in the vehicle.



- With these securement systems, the wheelchair is automatically locked into the docking securement device fastened to the vehicle floor when it is moved into the wheelchair station.
 - It is very important to check with the wheelchair and securement-system manufacturers to make sure that the particular wheelchair model has been successfully crash tested for use with the specific docking securement system.
- 6) Encourage the client to select a wheelchair with a total width of less than 29 inches and a weight that will not result in a combined wheelchair-plus-occupant weight of more than 600 lb.
- Wheelchair with a width of less than 29 inches will allow easier movement of the wheelchair onto vehicle ramps and lifts, and will also make it easier to maneuver the wheelchair inside the vehicle.
 - Keeping the occupant-plus-wheelchair weight less than 600 lb will ensure that the weight capacity of most wheelchair lifts is not exceeded.
- 7) If the client will be driving a personally licensed vehicle while seated in a power wheelchair, prescribe a wheelchair with a fold-away or retractable joystick controller. This feature can be used to avoid interference with accelerator and brake hand controls.



8) Encourage the client to choose a wheelchair with a back-support height that reaches up to the shoulders, and that has a headrest that extends higher than the user's ears and can be positioned within 2 inches from the back of the head to help reduce the risk of neck injuries in rear-end crashes.

9) Whenever possible, prescribe a wheelchair with armrests that are completely open at the front (for example, armrests that are attached to only the back support posts). This is especially important for clients who plan to drive a vehicle while seated in their wheelchair since open-front armrests will allow a lap belt to be more easily positioned properly under the armrests and in contact with lower pelvis and upper thighs so that it fits snugly around the hips.



- 10) Inform the client that postural supports attached to the wheelchair, such as lap and chest positioning belts and lateral trunk supports, should be used when traveling in a motor vehicle.
 - Postural supports can be helpful for maintaining a more upright seated posture during travel and can therefore help improve the positioning and effectiveness of crashworthy seatbelts.
 - However, **clients must be strongly warned that postural supports should not be relied on for protection in a crash and that they should always use a crashworthy seatbelt system with both lap and shoulder belt restraints as the primary occupant-protection system during travel.**