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Car adaptations to facilitate driving

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The mobility allowance was introduced in 1976, there was little provision for disabled drivers apart from a small, blue 3-wheeled vehicle that could only transport the driver.

Disability Living Allowance (DLA)

The Mobility Component of the DLA is a weekly benefit for people under the age of 65 years old with a disability that causes walking difficulties, even when wearing or using an aid or equipment (DirGov, 2009). The lower rate is £18.65 (paid if guidance or supervision is needed out of doors) with a higher rate of £49.10 (paid if there are severe walking difficulties). Healthcare assistants (HCAs) and assistant practitioners (APs) will encounter people that may be eligible for this allowance. DirGov (2009) provides details of the eligibility criteria.

The mobility component can assist with payment of public transportation, taxis and general travel costs. If a person receives the higher rate of the mobility component of DLA, this may be used to fund a car using the Motability scheme. Several cars have easy-to-manage driving controls that avoid the need to adapt a car.

Motability

Motability is a UK organization, formed in 1977 to supply vehicles to disabled people. Its services are available to anyone who receives the higher rate of the mobility component of the DLA or the War Pensioners Mobility Supplement. There must be at least 12 months' award period remaining when they apply. This allowance can also be used to purchase or lease a powered scooter. If a child over the age of three, or a non-driver receives the higher rate, a parent or carer can apply on their behalf for a vehicle.

Ninety-five per cent of customers choose the lease option (Motability Operations, 2009). One of the benefits of this Motability scheme is that the car is leased for only 3 years, so possible deterioration in the customer's condition need only be considered over that period. However, should the condition deteriorate during the lease period, Motability may agree to terminate the existing contract and start a new one on a more suitable vehicle. A précis of this scheme is provided in *Box 1*. The only additional costs are the advance payment, fuel costs, and driving or parking fines. Vehicles include convertibles and 4x4s.

Abstract

When considerable functional problems cause difficulties with driving, extensive modifications may be needed to an existing vehicle or a purpose-made car may be required. Most production vehicles can be adapted to cope with complex disabilities. This article examines the mobility allowance, some car adaptations and looks at additional sources of funding a vehicle.

Key words

Driving Motability Vehicle adaptations Accessibility
Independence Freedom

Box 1. Motability

Motability currently provides over 500 000 people and their families with affordable, convenient, trouble-free motoring through the provision of a new car. Powered wheelchairs and scooters are also available.

How does it work?

Customers transfer their mobility allowance to lease or purchase a suitable vehicle. The Contract Hire Scheme, which includes comprehensive insurance, tyre and windscreen replacement, servicing, breakdown cover and road tax. A similar all-inclusive hire plan is available for powered wheelchairs and scooters. Cars are supplied through a national network of some 4500 Motability Dealer Partners. There is also a network of accredited suppliers of powered wheelchairs and scooters.

Adaptations to cars

A standard production car is suitable for most customers. Special adaptations are needed for around 10% of customers, to enable them to drive safely or travel in comfort as a passenger. As part of the Contract Hire package, a range of adaptations is available at no additional cost, such as push-pull hand controls and leftfoot accelerators.

Providing additional financial help

Motability may also be able to assist those customers who need additional financial help to obtain the mobility solution they need. As well as administering governmentfunded grants, Motability raises funds and provides financial assistance to customers that require complex adaptations.

Source: Motability, 2008

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Figure 1. Steering ball and push-pull lever



The dealership's Motability specialists are trained to understand the many problems of disabled people and answer questions on their range of vehicles to identify the best car and adaptations; they will also deal with the paperwork. There are no medical checks, credit checks or waiting lists. If adaptations to standard vehicles are needed, they can be fitted by the Mobility-accredited suppliers before delivery to the customer.

Care home residents who receive the mobility component can also obtain vehicles via the Motability scheme, provided the benefit is not used to fund their placement. An opendriver policy can be applied for to enable any member of staff, relative or friend to be insured to drive the car.

Vehicle adaptations

Equipment and adaptations can enable a disabled person



Figure 2. Vehicle with wheelchair-lifting apparatus

to drive; HCAs and APs can explain the sources of help to a patient. It is important that if any major adaptations are being considered, specialist advice is obtained to ensure that they are suitable both for present and future need. Some specialized suppliers will come to the person's home to assess the modifications that are needed, and will collect and re-deliver the vehicle to the owner. Adaptations vary from additional mirrors to major reconstruction of a vehicle to provide wheelchair access.

Smaller adaptations

Advice on assistive equipment, such as a transfer board, a key turner or a swivel seat, can be obtained from several sources, including occupational therapists. Some local authorities may provide such items, or they may be obtained privately. Ricability and the Disabled Living Foundation (see *Further Information*) are useful resources to identify assistive equipment. Items such as pedal guards can be used with hand controls if co-ordination problems of the lower limbs cause inadvertent kicking of the pedals while driving. Local garages may be able to provide small adaptations such as:

- Steering balls (*Figure 1*)
- Pedal guards
- Pedal extensions
- Internal and external mirrors
- Basic push-pull levers (*Figure 1*)
- Easy-release handbrakes
- Swivel seats.

Larger adaptations

Some of the common larger adaptations include:

- Left foot accelerator
- Push-pull lever combined with indicator switch
- Wheelchair hoist
- Roof-mounted wheelchair stowage
- Specialized seats
- Wheelchair accessible vehicles (WAVs).

Examples of adaptations

The case studies (1-2 below) are examples of adaptations that have been made for people with a variety of upper and lower limb problems.

Case study 1:

Jane is a wheelchair-user and owing to paraparesis (partial paralysis of the lower limbs) is unable to use the foot controls. A steering ball (Figure 1), installed on the steering wheel, enables her to steer more easily. A push-pull lever (Figure 1) allows Jane to operate the accelerator and brakepedal. The car has an automatic gearbox so selecting drive and releasing the handbrake gives Jane full control of the vehicle.

Case study 2:

Jim underwent a right below-knee amputation after injuries sustained in a motorcycle accident. His car is fitted with

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a left-foot accelerator pedal. As the car has an automatic gearbox, this pedal is fitted where the clutch pedal for a manual gearbox would be. The usual right-foot accelerator pedal remains in position, allowing the vehicle to be driven by his non-disabled wife.

Transporting wheelchairs

Wheelchair users will need a car large enough to transport their wheelchair(s). Most cars accommodate a folding wheelchair in the boot, and have removable parcel shelves or fold-down back seats. The majority of hatchback style cars have a 'lip' into the boot, which can sometimes cause problems while lifting a wheelchair in. Most hatchback cars have a raised sill around the boot, which can sometimes cause loading problems, while some estate cars have a boot with level access, facilitating lifting a wheelchair in and out. Both types of car can be tried out at dealerships. Some cars have sufficient room for the driver to transfer into the car, then to lift a wheelchair into the front passenger seat or behind the driver's seat. Three-door cars have a larger driver's door that provides more space and opens wider. While this is suitable for the majority of people, alternative vehicles are available to transport a seated wheelchair user or to enable a wheelchair user to transport their own chair (Case study 3).



Figure 3. Rear ramped access to vehicle (Courtesy of Widnes Car Centre)

Case study 3:

Steve has a post-polio syndrome, but can stand for short periods and can transfer from a wheelchair to a driver's seat. Steve uses an electric wheelchair to his car then transfers to a lighter, manually-operated wheelchair that is kept in the boot. A 1500kg remote-controlled wheelchair hoist enables Steve to lift the heavy electric wheelchair into the boot.

Steve uses the manual wheelchair to get to the driver's seat. He transfers to the driving seat and operates the remote control to lift the lightweight wheelchair into the storage box (Figure 2) that is sited on the car's roof. The hatch opens and lowers a cable which is attached around the wheelchair. The remote control is operated and the wheelchair is pulled into the storage box. Steve drives away in his vehicle using the steering ball and push-pull lever. His vehicle is equipped to enable him to manage independently.

Wheelchair-accessible vehicles

Mobility can also supply wheelchair accessible vehicles (WAVs) with rear (*Figure 3*) or side ramps (*Figure 4*). Although these vehicles undergo vigorous adaptation, many are standard production vehicles.

The modifications may include lowering the boot floor or providing side access to provide direct wheelchair access.

The disabled passenger

A disabled passenger's needs must also be addressed, for they may have greater mobility problems. *Table 1*

Table 1. Problems faced by the disabled passenger

Problem	Suggested solution
Accessing car	Use of a transfer board (stowaway or portable) Low or no sills Lifting belts and leg lifters Avoid bucket seat Swivel-cushion or swivel- seat Additional handgrips 3-door car provides greater access than 5- door Hoist
Back pain	Alter position of the seat Electric seat unit Higher seat position
Locking car	Remote and central locking
Turning ignition key	Enlarged key Push-button starter
Operating light, horn and wiper controls	Infra-red controls
Wheelchair storage	Store in back-seat well
	Roof-top wheelchair store
Lifting a heavy wheelchair	Wheelchair hoist in boot

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Figure 4. Side ramped access to vehicle (Courtesy of Motability)



Key Points

Adaptations range from mirrors to wheelchair access.

- The mobility component of the Disability Living Allowance helps with transportation costs.
- Vehicles can be funded though the Motability scheme.
- Many adaptations are included at no additional cost.

lists some problems and options that can be considered. Passenger comfort, the type of luggage to be carried and, most importantly, fuel economy are factors that affect the choice of vehicle.

Conclusion

Everyone is an individual and often will have complex needs, particularly if the driver has a variety of medical problems or several functional difficulties. HCAs and APs may encounter many people who have problems driving,

Further Information

Disabled Living Foundation 380 - 384 Harrow Road London W9 2HU Local rate Helpline: 0845 130 9177 (10am to 4pm) Textphone: 020 7432 8009 www.dlf.org.uk/

Motability Operations City Gate House 22 Southwark Bridge Road London SE1 9HB Customer Helpline: 0845 456 4566 Minicom: 0845 675 0009 www.motability.co.uk

Ricability (2009) Mobility reports http://tinyurl.com/dx5efw

or indeed, drivers who have problems when helping disabled passengers to gain access. Some of these problems can be dealt with by dealerships and local garages, while complex needs may require specialized assessment.

Over the last 30 years, there has been an expansion in the number of cars available under the Mobility Scheme and adaptations are more easily available. The cost of purchasing a car can be prohibitive but the provision of the mobility component of the DLA provides financial help to disabled people. HCAs and APs can inform patients with severe mobility problems of the help that is available to them to be able to lease and run a car. BIHCA

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