



Disability Services

Information Sheet

Equipment ideas and tips for rural and remote communities

People living in rural and remote areas have similar needs for equipment and assistive technology to those living in urban areas. Due to environmental conditions, limited resources and isolated locations, there can be additional challenges in assessing for, accessing and maintaining equipment.



Common issues experienced by equipment users in rural/remote regions include:

- ▶ Difficulty sourcing equipment locally and accessing maintenance/repair services, spare parts or skilled technicians for complex modifications, and the increased cost associated with limited local resources.
- ▶ Difficulty accessing local health professionals who specialise in equipment assessment, prescription, training and follow up. Equipment providers may also have difficulty gaining and maintaining their equipment knowledge, particularly regarding highly specialised equipment, and may be limited in their ability to network with other equipment providers for advice and support.
- ▶ Increased wear-and-tear on equipment due to the physical terrain. For example, unsealed roads and footpaths can create additional stress on equipment; loose gravel can cause wheels, castors and ball bearings to become rough, gritty and/or bogged; dust can infiltrate gearboxes and other mechanical parts of powered wheelchairs and scooters.
- ▶ Weather conditions may affect parts and products. Excess rain can expose sensitive mechanisms of powered equipment to moisture damage; humidity or saltwater spray can lead to premature rusting of metal components; prolonged exposure to ultraviolet light can lead to cracking of vinyl upholstery and deterioration of plastic.
- ▶ Increased time and stress on items transported from metropolitan sales outlets to rural and remote areas. Vehicle vibrations can cause screws and bolts to loosen, or products can be damaged if not packed correctly.
- ▶ Lengthy delays in obtaining repairs or replacement products. Loan pools may be limited or inaccessible; therefore users may be without vital equipment for extended periods.

Selecting equipment for clients in rural/remote regions

- ▶ When selecting equipment for clients in rural and remote regions it is important to consider the individual needs of the user, as well as the local environment and the way the equipment will be used within this environment.

- ▶ Equipment needs to be safe and durable. Consider items and materials that are robust, stable and easy to use in rough terrain and will not require frequent repairs. Items that last longer may also be more cost effective due to reduced expenditure on repairs or replacement.

Materials

All materials have their pros and cons. It is important to weigh these up against the specific needs of the user.

- ▶ Where possible and appropriate, use materials that will not rust. Stainless steel does not rust but is heavier than aluminium. Some metal components can be treated with water-repellent lubricants to help prevent rust.
- ▶ Air-filled wheelchair tyres and tubes create an increased risk of punctures. Alternative materials such as solid tyres are available; however, this may create a rougher ride for users and may not be suitable for all terrains. Wider tyres may also be an option if travelling over soft ground surfaces.
- ▶ Upholstery materials such as vinyl can crack and deteriorate quickly. Alternatives to consider include open weave mesh, which dries quickly when wet and provides air circulation in hot and humid climates.
- ▶ Batteries are used in many motorised or electric equipment such as powered wheelchairs, scooters, electric beds and hoists. Wet cell batteries are generally less expensive and give longer power provision (and in the case of powered wheelchairs and scooters, greater distance). Gel cell batteries require less maintenance, as they are completely sealed and have a longer life expectancy. Gel cell batteries are also permitted on aeroplanes, which may be an important consideration for people living in remote areas.
- ▶ When choosing pressure management products, it is important to consider pressure distributing qualities versus cost, weight, durability, risk of damage due to environmental factors, and the impact and accessibility if repair or replacement is required. Foam products are generally cheap, easy to replace and not prone to punctures; however, foam can deteriorate quickly and may not be suitable for humid climates as it can retain heat and moisture. Products that use a honeycomb polymer are very hardy, can be washed, and allow air circulation to control heat and moisture build-up. Gel and viscous fluids provide good pressure reducing qualities and are easy to clean; however they can be heavy, and if punctured they are difficult to repair and may require placement.
- ▶ Inflated air filled products also generally provide good pressure reducing qualities, but require correct set-up and regular monitoring of inflation levels. They are also at high risk of punctures. Gel, viscous fluids and air-filled products may assist in providing shock absorption in situations where rough surfaces increase the level of vibration experienced by the user.

Design

- ▶ Consider equipment with fewer moving parts, such as a rigid-framed manual wheelchair. These are stronger and more durable, with fewer points for premature rusting or breakage.
- ▶ Front wheel drive wheelchairs are better designed to suit softer surfaces, and some powered wheelchairs are available in a four wheel drive model.

- ▶ Powered wheelchairs, scooters and manual wheelchairs may be available with suspension that can cope with rougher terrain.
- ▶ It is important to check the clearance height of mobility items to ensure there is sufficient clearance to negotiate the local terrain.
- ▶ Select equipment with sealed ball bearings, cables and battery packs to prevent grime, dust and dirt clogging up parts.
- ▶ Tyres with a wider and more grooved tread may be suitable for users travelling over terrain such as sand, grass, mud or other soft surfaces. Larger sized castors and wheels on wheelchairs and walking frames will cope with bumps and obstacles better than smaller ones.

Maintenance

Regular maintenance is essential for safety and will extend the life of equipment by preventing premature breakdown.

- ▶ When selecting equipment, consider what type of ongoing maintenance will be required. Is there someone locally who can provide assistance or will the item need to be sent elsewhere, and if so is a short-term replacement item available? Is there an emergency contact if critical items break down?
- ▶ Equipment users and/or carers and family members may be educated to carry out regular basic maintenance to minimise the need for repairs. This can include checking and maintaining pneumatic tyre pressure, inspecting frames for cracks and rust, treating metal components with water repellent lubricant, and general cleaning and removal of dirt, grime and salt build-up. A non-static spray polish can be used to help prevent build-up of dust
- ▶ Research local tradespeople or community groups who may have the appropriate skills to assist with general maintenance. Consider keeping a small stock of frequently used spare parts such as wheels, castors, tubes, brake cables, ferrules/stoppers.

Utilities

Some regional areas do not have a reliable water or power supply, which can affect equipment selection. Items such as powered wheelchairs, scooters and hoists require regular battery charging, while items such as electric beds, recliner chairs and pressure care mattresses generally require a constant power source to operate.

- ▶ In rural and remote areas where power surges and blackouts are common, consider purchasing a triple line filter, spike filter or surge protector to prevent damage to powered equipment and/or charging devices.
- ▶ Consider non-powered substitutes such as hydraulic hoists for items with a battery back-up system. For some items it may also be possible to use a portable solar panel to recharge batteries or to supply power in the case of power failure. Portable power supplies might be useful for critical equipment.
- ▶ In some remote areas, water supply may not be adequate to provide constant water pressure, which is essential if using equipment such as a handheld shower hose. If water supply is sporadic or contaminated, this may affect the ability to clean equipment sufficiently. No-rinse disinfectant and cleansing solutions may be useful in these situations.

General tips

- ▶ Consider what equipment has been used previously within the region. Where possible, staying with similar brands or types reduces confusion and provides increased opportunities for information sharing amongst users, carers and service providers regarding correct set-up, use, issues and maintenance requirements. It may also allow opportunities for sharing equipment for trialling within the local community.
- ▶ If users have limited access to follow up from equipment providers, it is important to leave culturally appropriate written or pictorial instructions for set-up, use and basic maintenance processes. This will provide a reference for future needs and should extend the life of the product through appropriate care, as well as reduce the risk of abandonment.
- ▶ If there is an increased risk of equipment being removed or lost, consider mounting equipment (such as wall-mounted shower seats) or permanently fixing removable parts (like wheelchair cushions). However, it is important to consider that some clients may specifically need portable items.

Contacting the Independent Living Centre

For further information or to make an appointment to visit the display please contact the Independent Living Centre. The Independent Living Centre offers free advice on equipment and techniques to help you with everyday tasks.

Independent Living Centre
11 Blacks Road
Gilles Plains SA 5086

Phone: 1300 885 886 (SA & NT callers only) or 8266 5260

Fax: 8266 5263

Email: ilcsa@dfc.sa.gov.au

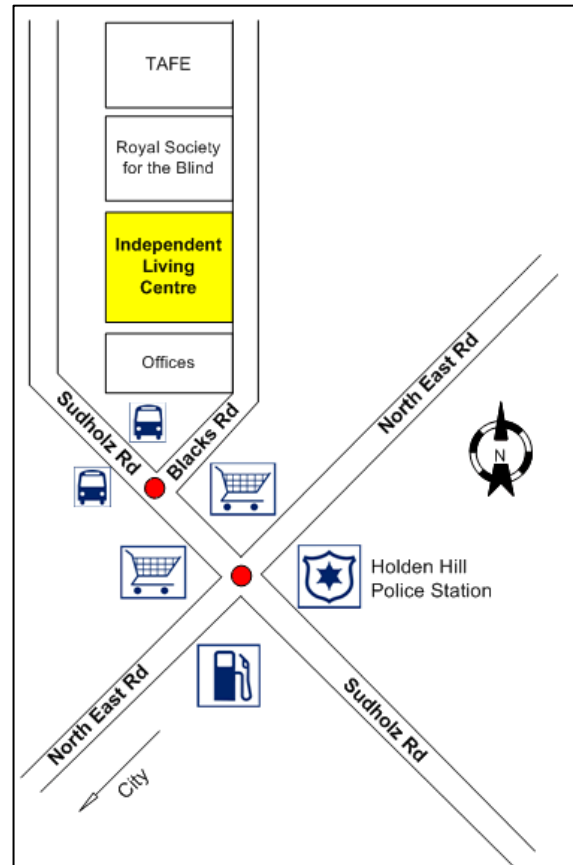
Website: www.sa.gov.au/disability/ilc

Accessible off street parking is available.

Bus routes:

From the city T500/T501 or 207/208 to Stop 28 Sudholz Road

Timetable information: 8210 1000



Copies of this publication are available from the Disability Information Service

Tel: 1300 786 117 Email: disabilityinfo@dfc.sa.gov.au Website: www.sa.gov.au/disability Version: July 2011



Licensed under Creative Commons <http://creativecommons.org/licenses/by/2.5/au/deed.en>
Attribute to: *The Department for Families and Communities, Government of South Australia*