

# PREPARING FOR TRAVEL

## CREATE A PACKING CHECKLIST

One of the first steps to a stress free vacation for SCI individuals is to create a list of everything used on a day to day basis. The goal is to create a personalized travel checklist including basic items like clothes and hygiene needs, medications, and any SCI-related items. The newest and biggest change in packing for a trip is the consideration for the individual's mobility and ADL needs. This section primarily discusses different types of portable durable medical equipment, how to travel with DME, as well as precautions and troubleshooting tips while traveling.

## BUILD A MOBILITY AND ADL NEEDS CHECKLIST

One of the most daunting tasks in preparing for travel is addressing any and all durable medical equipment. We recommend creating a packing checklist specifically dedicated to the day-to-day mobility needs to function as independently as possible. If any personal equipment is not travel accessible, there are options for portable durable medical equipment that can be bought or rented for the duration of the trip.

Because of the heterogeneity of the spinal cord injury population, assistive devices will vary depending on an individual's functional status. We provide the following list of equipment as a starting point, which can be edited as needed based on your travel plans and personal needs. This is not an exhaustive list, but covers what we consider to be basic needs with respect to Durable Medical Equipment (DME) and travel.

<b>Wheelchairs</b> <ul style="list-style-type: none"><li>• Power wheelchair, cushion, charger</li><li>• Manual wheelchair, cushion</li><li>• Manual wheelchair, cushion, power add on system and charger</li></ul>	<b>Other Assistive Devices</b> <ul style="list-style-type: none"><li>• Walkers / Rollators</li><li>• Canes / Crutches</li><li>• Lower extremity orthotic devices / Braces</li></ul>	<b>Transfer Aids</b> <ul style="list-style-type: none"><li>• Transfer board</li><li>• Gait / Transfer belt</li><li>• Travel (Hoyer) lift</li></ul>
<b>ADL Equipment</b> <ul style="list-style-type: none"><li>• ADL Kit</li><li>• Universal cuff / Upper extremity splints / braces</li><li>• Modified utensils</li><li>• Handy wiper</li><li>• Leg Lifter</li><li>• Bowel and bladder equipment (consider bringing extra supplies!)</li></ul>	<b>Positioning Equipment</b> <ul style="list-style-type: none"><li>• Harness belt</li><li>• Wedges / Bolsters</li><li>• Maxi slide</li><li>• Travel bed rails</li></ul>	<b>Miscellaneous Supplies</b> <ul style="list-style-type: none"><li>• Travel compatible batteries</li><li>• Back up batteries for electric devices</li><li>• Tool kit</li><li>• First Aid kit</li><li>• Medical information (including medical history as well as medication list)</li></ul>

Table 1: Basic DME for travel (Adapted from Tamayo, Zuziak, Conetsco, Zillich, Lash, Kuemmel, 2018)

## DURABLE MEDICAL EQUIPMENT FOR TRAVEL

Traveling with DME is perhaps one of the more challenging aspects of travel for the SCI population. The thought of taking one's wheelchair, assistive device or any of the other equipment that have been aforementioned can be a cause of anxiety and a deterrent to travel. Many of the durable medical equipment, however, are portable! This section reviews these portable pieces of equipment and special considerations for DME.

### Wheelchairs and Assistive Devices

For some SCI individuals, the biggest piece of equipment they may bring is their wheelchair. For others, it may be their walker, rollator, or scooter. Some may have customized or adapted parts. Perhaps the greatest cause of anxiety is an individual's wheelchair or assistive device breaking in transit or while at their chosen destination. Thus, we recommend knowing the model and serial number of one's device in case replacement parts need to be ordered online and delivered to the individual's particular destination. We also highly recommend that travelers contact their vendors for specific recommendations regarding the care of their wheelchairs. See the section on Preparing DME for Travel for more information.

#### Power Wheelchair



#### Manual Wheelchair



#### Power Assist



### Transfer Aids

Portable transfer aids can be extremely helpful to have on hand during travel. We recommend keeping a gait/transfer belt or a portable transfer board in carry-on luggage for bus, air, or train travel, especially if travelers are unable to sit in their own wheelchairs and will need to transfer to a designated seat. Consideration should be given to size, equipment portability, and weight limitations for travel transfer aids. If looking to purchase a travel transfer board, we recommend looking for a lightweight but sturdy, and compact (i.e. easily packable) board.

For individuals who may need a Hoyer lift system, there are portable, foldable travel lifts available for purchase or for rent. Similarly to wheelchairs, these travel lifts have various components, and travelers should discuss with vendors regarding specific care of their equipment. Being familiar with the lift's parts and having information regarding replacements in case of damage will help in travel emergencies.

While we provide a few examples of transfer aids that PwDs may utilize, there are a variety of brands and types of transfer aids on the market. Here are some examples:

### Portable Transfer Board

<https://www.etac.com>



Immedia E-Board. Etac R82, Inc.

- Available with wings along one side that can be bent up or down or as a compact board for more active and independent users
- Both boards come in two lengths (small and medium)
- Max weight of the user: 330 lbs

### Transfer Gait Belt

<https://www.etac.com>



Transfer Belt Lifestyle Essentials

- Product Weight: 1 lbs
- Product Height: 0.5"
- Product Length: 30"
- Product Width: 2.5"
- Primary fabric is nylon with vertical and horizontal loop handles for easy and safe gripping

### Portable Transfer Lift

<https://www.etac.com>



Travel Lift: MoLift Smart 150 Etac R82, Inc.

- This is one example of an electric, portable, light weight, agile patient lifter
- Product weight: 57lbs
- Max 330lbs weight capacity
- Max 66in lifting height
- Multiple lifting speeds
- Lightweight rechargeable battery (3 hours battery charge time)

## ADL Equipment

Travelers can also consider bringing ADL equipment that they use on a daily basis. Most ADL equipment are already travel ready and fit in standard sized luggage. We include the following pieces of equipment for consideration while planning for travel. Many of these can be ordered online or procured at a medical supply store in case they break or need to be replaced.

### Adaptive Utensils



### Plate Guard



### Adaptive Bowls



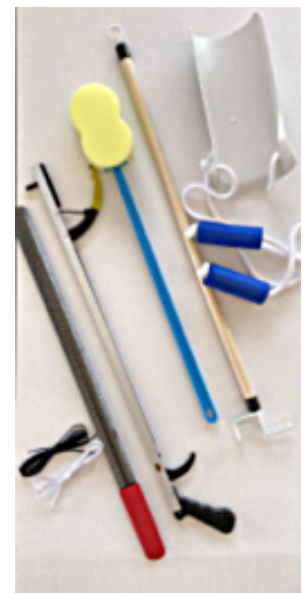
### Leg Lifter



### Dorsal Wrist Support with Universal Cuff



### ADL Kit



## Bowel / Bladder / Shower Supplies

These are portable options for bowel, bladder, and shower supply needs. Of note, many hotels have accessible bathrooms with built-in pieces.

### Portable Travel Shower/Commode Chairs

<https://www.nuprodx.com>



Portable Tub transfer bench with carry-on luggage case.

- Product Weight: 20lbs
- Weight capacity: 300lbs
- Versatile design enables use with ADA compliant toilets and most bathtubs/showers
- Complies with Federal Aviation Administration (FAA) requirements for carry-on luggage (comes standard with unit)



Portable Roll-in shower chair with luggage case.

- Product Weight: 24lbs
- Weight capacity: 300lbs
- Design enables use over standard and taller ADA compliant toilets and can roll into barrier-free showers
- May be disassembled and fit into a FAA compliant carry-on bag (comes standard with unit)



All-in-one commode chair, tub access slider system with luggage case

- Product Weight: 42lbs
- Weight capacity: 300lbs
- Easy to change slide direction depending on bathroom configuration
- Fits over standard and taller ADA compliant toilets and fits into almost any bathtub
- Removable connector bridge to close shower curtain for privacy
- Designed for easy disassembly, can be packed into included roller carrying case

## Positioning Equipment

Individuals who are traveling with poor truncal support may need to bring positioning devices like harnesses for transport, wedges, bolsters, and maxi slides. There are also portable bed rails for a more supportive sleep environment while traveling. Here are a few examples of portable positioning devices which can be obtained in a medical supply store or online:

### Positioning Equipment

<https://www.amazon.com>

Inflatable Air Wedge  
<https://www.travelwedge.com>



Portable Patient Transport Unit (Sheet)  
<https://www.grainger.com>



Bed Rail Advantage Traveler  
<https://www.healthproductsforyou.com>



Positioning Vest  
<https://www.vitalitymedical.com>



## Miscellaneous Supplies

Traveling with durable medical equipment requires special preparation for emergencies. Supplies to consider bringing include back up parts like batteries, special tool kits, and a first aid kit. This list can be modified based on an individual's experience with their DME.

Tool Kit	First Aid Kit
<ul style="list-style-type: none"><li>• Lubricant</li><li>• Bolts / Screws</li><li>• Screw driver</li><li>• Duct tape</li><li>• Heavy duty sewing kit (recommend a kit with larger needles to help repair thicker materials like slings)</li><li>• Wrenches</li><li>• Standard Allen keys</li><li>• Metric Allen keys</li><li>• Zip ties</li><li>• Dycem mat / materials</li><li>• Zip lock bags</li><li>• Patch kits</li><li>• Extra tubes</li><li>• Cane tips</li><li>• Cushion pump</li></ul>	<ul style="list-style-type: none"><li>• Gloves</li><li>• Band aids</li><li>• Antiseptic wipes</li><li>• Straws</li><li>• Medical tape</li><li>• Instant and reusable cold compresses</li><li>• Hand sanitizing gel</li><li>• Saline solution</li><li>• Blood pressure monitor</li><li>• Thermometer</li><li>• Pulse oximeter</li></ul>

Table 2: Miscellaneous travel DME (Adapted from Tamayo, Zuziak, Conetsco, Zillich, Lash, Kuemmel, 2018)

## PREPARING DURABLE MEDICAL EQUIPMENT FOR TRAVEL

After deciding what equipment to take, the SCI traveler now has to prepare their equipment for travel. Part of maintaining a stress-free vacation is knowing how to handle DME before and during travel. In this section, we go over information on how to prepare DME for travel and for unexpected emergencies.

PwDs and their travel companions should be familiar with how each piece of equipment works. This includes the various components, what can and cannot be broken or replaced, and if applicable, how they can be disassembled and reassembled for travel. Contact the DME vendors for trouble-shooting tips and for information on how to procure replacement parts in case of breakage. Here are some questions to ask vendors regarding DME and travel:

## WHEELCHAIR QUESTIONS

### General Wheelchair Questions (applicable to manual / power wheelchair)

- What parts of my wheelchair can break? What are the most common parts of my wheelchair that can break?
- What parts of my wheelchair can withstand the wear and tear of travel?
- Are there environments I should avoid to prevent breakdown of my wheelchair parts?
- What parts of my wheelchair can / cannot be replaced if it breaks?
- How do I dismantle my wheelchair or parts of my wheelchair?
- Are there any regular maintenance or precautions I should take with my wheelchair before travel?
- What special information about my wheelchair should an airline know?

### Power Wheelchair Questions

- What precautions should I take for any electrical components of my wheelchair?
- Where can I get an extra battery? Will insurance cover this expense? How do I install the battery?
- What other electrical components can be replaced?

### Vendor and Replacement Part Questions

- If a chair part breaks, can the vendor ship replacement parts to where I am going?
- How long would it take to get replacement parts?
- Are there suppliers, distributors, or vendor branches located where I am going that could help if my chair or parts of my chair malfunction?
- Would the vendor be able to provide quick fixes/solutions if parts are unavailable?
- Do you offer rental services if my chair is unsafe to use for the rest of my travel?

### Warranty Questions

- What does the warranty cover on my chair?
- What is NOT covered by my warranty?
- What is the time period covered by my warranty?
- Does my warranty apply outside of the state/country?
- What is the warranty coverage on replacement parts ?
- What types of things void the warranty? Are there any quick fixes that void the warranty?
- Is preventative maintenance covered? Can the chair be taken in to ensure all parts are in appropriate working condition prior to travel?



## PRE-TRAVEL PREPARATION:

Prior to leaving, there are safeguards and precautions that travelers should take to protect and reduce damage to their equipment. There are also special considerations with regards to packing DME, and traveling with specialized batteries and travel adapters for country specific electrical outlets. Here are some additional tips to do before travel:

- Examine all travel DME / adaptive equipment to ensure all parts are properly functioning and no pieces are missing.
  - Power / manual wheelchairs should go through a safety check by a wheelchair clinician.
  - If there are any pieces that need replacements, we recommend having this done prior to leaving.
- Take pictures of all travel equipment, especially manual / power wheelchairs.
  - This is helpful if equipment sustains any damage during travel.
- Remove any loose parts and cover or wrap any other parts that cannot be taken off for protection.
- Have the measurements of the manual or power wheelchair handy. Knowing this information can help travelers advocate for their needs when booking hotels, restaurants, and attractions. We recommend doing the same for any mobility device for ambulation. Travelers can adapt the table below for their own assistive devices and carry this in their wallet with their medical information.

Wheelchair Measurements		
Width of wheelchair (widest part of chair)	Manual:	Power:
Length of wheelchair (toes to furthest point on back of wheelchair)	Manual:	Power:
Knee height (floor to about one inch above knee)	Manual:	Power:
Total height with user sitting in wheelchair (floor to the tallest part of user)	Manual:	Power:
Total weight with user sitting in wheelchair (user + wheelchair)	Manual:	Power:

Table 3: Wheelchair measurements

## DME Packing

- Remember to pack all durable medical equipment together. In 1986 the Air Carrier Access Act (ACAA) was signed. It states that all medical equipment can fly for free with no extra charge.
- Separate DME from other belongings during travel to avoid incurring extra fees. This is especially important if traveling by plane.
- To reduce any risk of damage, provide written instructions on how to handle equipment to transportation staff.
  - Attach these instructions directly to the DME.
  - If possible, travelers should speak directly to the individuals caring for their equipment during transport and provide verbal instructions in addition to written ones.
  - If traveling with a power wheelchair, there is a risk of damage with each check-in, so staying involved with the process is vital.
- If renting a vehicle, make sure to pack a disabled parking permit!

## Battery Considerations

- If applicable, know the type of battery the wheelchair may require. Due to certain restrictions for travel (see General Airline Travel Tips), batteries may need to be disassembled prior to leaving and then re-assembled at the destination.

## Electrical Outlet & Charging Considerations

- Know the electrical requirements for the power wheelchair to ensure compatibility with the destination's electricity setup.
- Make sure to have proper outlet adapters and voltage transformers or procure a battery charger that works with the host country's electricity.

## Carry-On Considerations

- Traveling has its own hazards, and losing luggage is one of them. In addition to an individual's personal effects and travel documentation we recommend that carry-on luggage includes the following items:
  - Medications / Insurance cards (We recommend keeping medication in clearly labeled bags and in their original containers if possible. Otherwise, make sure to keep a list with dosage and frequency for emergencies.)
  - Emergency contact information
  - Extra change of clothes including underwear, socks, and Depends (We recommend packing about 3-5 days worth with more underwear than outerwear.)
  - First Aid Kit
  - Hygiene Kit and extra bowel / bladder supplies (3-5 days worth)
  - Splints / wheelchair cushion / portable positioning equipment
  - Cell phone / laptop and respective chargers
  - Extra batteries
- Consider using packing cubes which allows travelers to pack more due to the added compression and keeps belongings organized.
- Take extra precaution as PwDs are unfortunately a target for thieves and pickpockets. Any personal effects should be in secure travel bags with zipper clips, locks, cut-resistant straps, and hidden pockets for more valuable items.
- Consider the type and size of luggage or backpack to use as a carry-on. Luggage with spinner wheels can be fastened to a wheelchair for easy towing, and backpacks can easily be secured onto a wheelchair.

## EMERGENCIES

Planning for emergencies during travel is enough to cause anxiety even before the vacation starts! DME emergencies can certainly lead to headaches, and it is important to remain flexible. Add extra time in case things do not go as planned. Remember that quick fixes may require some creativity. Check out our trouble-shooting section for more ideas. Here are some other suggestions to help in cases of emergencies:

### Repairs

- Identify the nearest wheelchair or bicycle repair shop in case equipment breaks.
- Vendors may be able to provide information on replacement parts while traveling or locations of domestic / international branches that can help with potential repairs.
- Nearby medical supply stores may also be able to provide assistance.

## Troubleshooting

- Assemble an emergency kit of frequently broken or worn parts and tools (lubricant, bolts, wrenches, Allen keys, duct tape, patch kits, extra tubes, cane tips, extra stump socks, or shrinkers etc). If traveling to rural areas or developing countries, parts and repair may be expensive, or even impossible. Learning to do simple fixes is important to making trips stress free.
- Trial temporary fixes prior to travel with an emergency kit as some destinations may not have nearby repair shops or resources to address issues with DME. Having a toolkit handy can help with quick and safe fixes until returning home for a more permanent solution.
- Travelers can ask their vendors or even their therapists for troubleshooting solutions as well.

## Other Resources

- Some of the best resources are fellow wheelchair users who have experience with travel. Connect with your local SCI chapter / support group and ask for any suggestions on how they managed traveling with their equipment.
- There is also a large and helpful online wheelchair travel community. They share firsthand experiences of their travels with DME, and some may even offer guides! Use social media platforms like Instagram, Facebook, Youtube, or even Google to find blogs and web pages from a variety of wheelchair travel influencers.

## RENTING AND ADVANCED DELIVERY OF EQUIPMENT

If packing all necessary equipment seems like an impossible and anxiety inducing task, there is the option of renting medical equipment to make the traveling process a little easier. DME can be rented from medical supply stores or national and local medical equipment agencies. In addition, hotels and cruises may have available equipment. If utilizing a travel agent, they may have access to an extended variety of options compared to what may be available at a hotel. They can also arrange for DME to be delivered to the traveler's destination.

Rental services can include equipment delivery to a specific travel destination, equipment repair, and even personalized nursing care. We recommend personally contacting these companies for product availability and asking about special services available. When renting equipment know the following information and include both metric and imperial measurements about your device:

- Equipment brand
- Make and model of device with serial number (if applicable)
- Device dimensions (height, width and depth)
- Weight of the device
- Type of battery and voltage

Knowing the above information will allow rental companies to find the closest item that best matches the traveler's personal equipment. The following are some resources for medical equipment rentals. Contact the insurance company for more information or do a quick internet search by zip code or by destination to find a local rental company.

## RESOURCES FOR MEDICAL EQUIPMENT RENTALS

### Domestic

Rental Company	Website
<b>Medicare</b> Use the Medicare Supplier Directory to search by ZIP code for local suppliers	<a href="https://www.medicare.gov">https://www.medicare.gov</a>
<b>No Insurance Medical Supplies</b> Purchase or rent equipment with domestic shipping	<a href="https://www.noinsurancemedicalsupplies.com">https://www.noinsurancemedicalsupplies.com</a>
<b>Lexon Medical Supply</b> Wheelchair and mobility scooter rentals in the Washington DC area, NYC, Las Vegas, Orlando and across the US	<a href="https://www.lenoxmedicalsupply.com">https://www.lenoxmedicalsupply.com</a>
<b>Brevard Medical Equipment</b> Equipment rental located in Merritt Island, FL	<a href="https://www.brevardmedicalequip.com">https://www.brevardmedicalequip.com</a>
<b>Monroe Wheelchair</b> Equipment rental servicing NY and Tri-State area	<a href="https://www.monroewheelchair.com">https://www.monroewheelchair.com</a>
<b>Fold and Go Wheelchairs</b> Rent a folding electric wheelchair - may be taken internationally	<a href="https://www.foldandgowheelchairs.com">https://www.foldandgowheelchairs.com</a>
<b>Scootaround</b> Rental, sales, and repair for scooters, wheelchairs, powerchairs, and rollators at >2,500 locations across NA and Europe	<a href="https://scootaround.com">https://scootaround.com</a>
<b>Buena Vista (Florida)</b> Scooter and wheelchair equipment rental in Florida.	<a href="https://buenavistascooters.com/travel">https://buenavistascooters.com/travel</a>

### International

Rental Company	Website
<b>Wheelchairs to Go</b> Australian based equipment rental	<a href="https://www.wheelchairstogo.com.au">https://www.wheelchairstogo.com.au</a>
<b>EZ-4U</b> Israel-based scooter / wheelchair rental	<a href="https://ez-4u.co.il">https://ez-4u.co.il</a>
<b>Axsol Location</b> France-based scooter / wheelchair rental	<a href="https://www.axsol-location.com">https://www.axsol-location.com</a>
<b>Mobility Equipment Hire Direct</b> Offers equipment rentals in multiple domestic and international regions	<a href="https://www.mobilityequipmentthiredirect.com">https://www.mobilityequipmentthiredirect.com</a>

Table 4: Domestic and international resources for DME rentals

When it is time to negotiate with the rental company, make sure to determine the terms and conditions regarding their rental policies, delivery options, coverages for damages, and insurance. Here are questions to help travelers guide their discussion with the DME rental company.

## RENTAL AND DELIVERY QUESTIONS

### Rental Questions

- What rental options are available?
- What is the cost / quote for each?
- Do you offer discounts?
- How fast can I get my rental?
- How far in advance should I reserve my rental?
- Do you offer same day rental services if I need my rental ASAP?

### Delivery

- Do you offer pick up or delivery services to obtain my rental?
- Can you deliver to my destination or will you deliver to my home?
- What are delivery fees?
- Will you pick up my rental at the end of my rental term?

### Damages & Insurance

- What happens if my rental gets damaged, lost or destroyed?
- What service / replacement options are available if something happens to my rental?
- Is the rental covered by my insurance?
- Do you offer insurance coverage?



View from Museum Campus, Chicago, Illinois, USA.

## INSURANCE AND DURABLE MEDICAL EQUIPMENT FOR TRAVEL

First time travelers should also consider travel insurance. While travel insurance does not typically cover durable medical equipment related to a preexisting condition, they may assist with claims for damaged equipment, getting rental equipment, and coordinating repair services. Check with personal medical insurance regarding these services prior to obtaining travel insurance. Also check if medical care outside of the United States is covered. The following are helpful resources regarding travel insurance options:

- Travel Insurance Review: <https://www.travelinsurancereview.net/>
- Square Mouth: <https://www.squaremouth.com>
- Insure My Trip: <https://www.insuremytrip.com>
- Travel Insured: <https://www.travelinsured.com>

For individuals whose durable medical equipment was originally paid for by Medicare, the cost to repair or replace any damage or loss due to an emergency or disaster will be covered by Medicare in certain cases. Medicare may also cover the cost of rentals for items (like wheelchairs) during the time equipment is being repaired.

## TROUBLESHOOTING DME

A great vacation can be easily ruined if DME fails. Here are ways to troubleshoot DME during a travel emergency.

First, survey the equipment. Are there parts loose? Missing? Torn or broken? Determine if the DME can handle a temporary fix or if it needs to be brought to a repair shop. Utilize a tool kit and sewing kit for any quick DME repairs! Make sure all bolts are appropriately tightened, and remember that duct tape can always be used for simple fixes. When equipment fails, we recommend using the vendor as the first resource, since they are able to give specific guidance about that piece of equipment. Therapists and wheelchair specialists are also great resources and can offer tips to help troubleshoot. Some solutions for common DME issues can even be found on platforms like YouTube.com.

If what is broken needs bigger mechanical repairs, we recommend taking it to a local bicycle shop for repairs and replacements. Local hardware stores may also be very useful resources as many employees have previous professions in trade skills and may be able to provide advice or help with a simple repair. Hardware stores may also carry commonly used bolts and screws if items go missing.

If replacement parts are necessary, contact the vendor for availability. We recommend knowing the various parts of the equipment as certain parts may even be available on sites like Amazon, which can provide 1-2 day shipping around the US and can deliver internationally to over 100 countries. Tool kits, wheelchair parts, tire tubes and more are also available for purchase. If the damage is beyond repair, and a temporary fix may cause further damage to the assistive device or injury to the individual, it may be easier to replace it entirely. Standard assistive devices that may be found at a local pharmacy or a medical supply store includes: two / four wheeled walkers, rollators, canes (quad/single point canes), Lofstrand crutches, and various orthoses.

In the following sections, we provide a troubleshooting guide on the most common issues that can occur with DME while traveling and some (hopefully) quick and feasible solutions. Here are two additional resources that provide great tips:

- The Model Systems Knowledge Translation Center's maintenance guide for power and manual wheelchairs: <https://msktc.org/sci/factsheets/maintenance-guide-users-manual-and-power-wheelchairs>
- Mobility International USA's tipsheet on ways to avoid broken equipment: <https://www.miusa.org/resource/tipsheet/equipment>

## POWER WHEELCHAIR

Equipment	Issues	How to Troubleshoot
<i>Charger and Adapter</i>	<ul style="list-style-type: none"> <li>• Frayed wire</li> <li>• Disconnected</li> <li>• Electrical malfunction</li> <li>• Forgot charger</li> </ul>	<ul style="list-style-type: none"> <li>• Bring a back-up charger or contact a local vendor.</li> <li>• Contact a hardware store for a replacement battery / charger if available.</li> <li>• If unable to locate the charger, direct someone to disengage the motor and manually push to destination, though not ideal.</li> </ul> <p><i>*Be sure to always have a charger and plug adapter available. Make sure it is possible to plug in the variable voltage power chair charger when traveling abroad.</i></p>
<i>Backrest / Armrest Joystick Controller</i>	<ul style="list-style-type: none"> <li>• Loose bolts</li> <li>• Broken thread</li> <li>• Missing screw or bolt</li> </ul>	<ul style="list-style-type: none"> <li>• Tighten with Allen keys using old/new bolts and screws.</li> <li>• Utilize duct tape/zip ties to secure if needed for temporary fix.</li> </ul>
<i>Cushion</i>	<ul style="list-style-type: none"> <li>• Leaking or deflated air cell</li> <li>• Tear in cover</li> </ul>	<ul style="list-style-type: none"> <li>• Submerge cushion in water to locate the exact point of air loss.</li> <li>• Utilize patch kit from vendors or duct tape for temporary repair.</li> <li>• If the cover is tearing and causing decreased skin integrity, use a sewing kit to fix.</li> </ul>
<i>Harness and Body Strap System</i>	<ul style="list-style-type: none"> <li>• Torn area</li> <li>• Broken latch system</li> </ul>	<ul style="list-style-type: none"> <li>• Repair with a small gauge needle and thread.</li> <li>• For latch system, such as a seat belt, utilize Velcro or duct tape for temporary repair.</li> </ul>
<i>Electrical Error</i>	<ul style="list-style-type: none"> <li>• Contact with water</li> <li>• Frayed or loose wires</li> <li>• Error displayed on screen</li> </ul>	<ul style="list-style-type: none"> <li>• If the power wheelchair will not turn on due to electrical error, inspect for disconnected or damaged wires.</li> <li>• If the chair comes in contact with water, allow it to air dry for 24 hours prior to trying to turn on. Disconnect and reconnect the power source, then turn the power on.</li> <li>• Contact the vendor if basic repairs are unable.</li> </ul>

Table 5a: Troubleshooting tips for power wheelchair

## MANUAL WHEELCHAIR

Equipment	Issues	How to Troubleshoot
<i>Push Rims</i>	<ul style="list-style-type: none"> <li>• Damaged, frayed metal</li> <li>• Safety guard worn/damaged</li> </ul>	<ul style="list-style-type: none"> <li>• Wrap duct tape or Coflex tape around to prevent hand injury.</li> <li>• Wear thick gloves when pushing the chair.</li> </ul>
<i>Locks</i>	<ul style="list-style-type: none"> <li>• Loose or damaged wheel lock</li> </ul>	<ul style="list-style-type: none"> <li>• Check to ensure tires are properly inflated.</li> <li>• Ensure bolts are tightened.</li> <li>• Maneuver wheel lock to proper position than retighten or move using a mallet for last resort.</li> </ul>
<i>Cushion</i>	<ul style="list-style-type: none"> <li>• Leaking or deflated air cell</li> <li>• Tear in cover</li> <li>• Missing air pump</li> </ul>	<ul style="list-style-type: none"> <li>• Submerge cushion in water to locate the exact point of air loss.</li> <li>• Utilize patch kit from vendors or duct tape for temporary repair.</li> <li>• If the cover is tearing and causing decreased skin integrity, use a sewing kit to fix.</li> <li>• Utilize a free air pump at a gas station or purchase an air mattress pump with the proper valve connector if a cushion air pump is unavailable.</li> </ul>
<i>Tires</i>	<ul style="list-style-type: none"> <li>• Flat or leaking tire</li> </ul>	<ul style="list-style-type: none"> <li>• Local bike shops may be able to install new tubes or locate holes to fill temporarily with rubber / sealant.</li> <li>• Remove tires and remove any glass or debris from the wheel that may cause further issues to tubing.</li> </ul>
<i>Backrest/Armrest</i>	<ul style="list-style-type: none"> <li>• Loose or unsecure due to missing bolt/screw</li> </ul>	<ul style="list-style-type: none"> <li>• Visit a local hardware store for replacement parts.</li> </ul>
<i>Caster Wheel</i>	<ul style="list-style-type: none"> <li>• Bent</li> <li>• Cracked axle</li> </ul>	<ul style="list-style-type: none"> <li>• Consider replacing it with a wider front caster to access uneven terrain.</li> <li>• A freewheel may be considered to lift casters for easier access to multiple terrains.</li> </ul>

Table 5b: Troubleshooting tips for manual wheelchair



## TRAVEL SHOWER / COMMODE CHAIR

Equipment	Issues	How to Troubleshoot
<i>Backrest/Armrest</i>	<ul style="list-style-type: none"> <li>• Torn fabric</li> <li>• Ripped padding</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize duct tape or a sewing kit to repair damaged areas temporarily.</li> <li>• Complete skin check pre- and post-use when damage to direct contact area is apparent.</li> </ul>
<i>Caster Wheels</i>	<ul style="list-style-type: none"> <li>• Broken lock</li> </ul>	<ul style="list-style-type: none"> <li>• Utilize a heavy item to block the wheel to secure the chair for transfers (only use the chair if absolutely necessary).</li> <li>• Go to the hardware store to repair broken lock(s) if able.</li> </ul>
<i>Legs</i>	<ul style="list-style-type: none"> <li>• Broken pin</li> <li>• Bent / damaged</li> </ul>	<ul style="list-style-type: none"> <li>• Contact a local vendor for a replacement part. If unavailable, trial a temporary part from a hardware store to repair a locking pin or swap out a walker leg if available.</li> <li>• If the leg is bent / damaged, do not use it as it is a safety risk. Utilize local resources, connect with local SCI / wheelchair / disability organizations to locate a new replacement leg.</li> </ul>
<i>Fasteners</i>	<ul style="list-style-type: none"> <li>• Screws/washers loose</li> <li>• Missing screws/washers</li> </ul>	<ul style="list-style-type: none"> <li>• Bring extra screws / washers for travel.</li> <li>• Visit a local hardware store for missing fasteners if applicable.</li> <li>• Tighten all fasteners prior to every use.</li> </ul>

Table 6: Troubleshooting tips for travel shower / commode chair

## OTHER DME

Equipment	Issues	How to Troubleshoot
<i>Sling</i>	<ul style="list-style-type: none"> <li>Torn/damaged</li> </ul>	<ul style="list-style-type: none"> <li>Utilize a patch kit or sewing kit with a small gauge needle to repair.</li> <li>Ensure that the integrity of the straps are secure prior to transfer.</li> </ul>
<i>Battery</i>	<ul style="list-style-type: none"> <li>Dead/malfunctioning</li> </ul>	<ul style="list-style-type: none"> <li>If able, bring a backup charger / battery for the device.</li> <li>Utilize manual mode on the device to safely complete transfer.</li> </ul>
<i>Wheels</i>	<ul style="list-style-type: none"> <li>Broken/bent wheel</li> </ul>	<ul style="list-style-type: none"> <li>Locate a replacement part from the vendor or hardware store and install prior to use.</li> </ul>

Table 7: Troubleshooting tips for other DME



Hilton Hawaiian Village, Waikiki Beach, Hawaii, USA.