09/26/2012

To Whom It May Concern:

The following is a letter of medical necessity justifying the need for a Permobil C500 VS wheelchair for [CLIENT NAME]. A new wheelchair is required for the following reasons:

**REASON(S) FOR NEW CHAIR**

- Does not currently have an appropriate mobility device; newly disabled client.
- Client does not own a wheelchair.

Other wheelchairs that were considered, but determined to be inappropriate include:

1. Lightweight/Ultralight weight manual wheelchairs (K0003/K0004/K0005).  
   **REASON:** Unable to functionally propel due to decreased strength and poor endurance.

2. Group 3 Power Wheelchair (K0861) and Separate Sit to Stand standing device – (E0637)  
   **REASON:** Unable to independently use or achieve frequency of standing required for health outcomes and functional use with separate standing device. Need for various methods (not just sit to stand) to achieve standing for proper alignment and to manage orthostatic hypotension. Cost comparable to integrated standing wheelchair being recommended.

**JUSTIFICATION FOR COMPLEX REHAB TECHNOLOGY**

- Client has a mobility limitation that significantly impairs the ability to participate in one or more mobility related activities of daily living (MRADLs) such as toileting, feeding, dressing, grooming, and bathing in customary locations in the home.
- Client is unable to ambulate, even with an assistive device such as a cane or walker.
- Client is unable to functionally and efficiently propel any type of optimally configured manual wheelchair due to a weakness, limited range of motion, and fatigue.
- Client is unable to use a scooter/POV for functional mobility due to inadequate balance/stability as well as lack of seating and positioning options.
- Client's mental capabilities (e.g. Cognition, judgment) and physical capabilities (e.g. Vision) are sufficient for safe mobility.
- Client's weight is less than or equal to weight capacity of power wheelchair recommended.
- Client's home provides adequate access for the recommended wheelchair.
- The use of the recommended wheelchair will significantly improve the Client’s ability to participate in MRADLs in the home.
- Client's mobility limitation is due to a neurological condition.
- Client requires powered seating (e.g. Tilt, Recline, ELRs, Standing, Seat Elevation) which will be used on the recommended power wheelchair.
HISTORY/DIAGNOSIS:
• 25 years old, Primary Diagnosis: C2-T4 Spinal Cord Injury due to Cancer
• Secondary or tertiary diagnoses as relevant to mobility or seating: Abnormal posture, Decreased bone mineral density, Constipation, Impaired respiratory function, Decline in functional performance
• Height: 5’6”
  Weight: 175 pounds

Number of hours per day in wheelchair: 10-12 hours

Mobility:
• Non-Ambulatory
• Cannot propel any type of manual wheelchair efficiently for any functional distance
• Various terrain to be negotiated in normal routine, i.e. slopes, ramps, grass, gravel, etc.
• Transfer method – sit pivot/sliding board (independent from elevated seat; mod assist from standard seat height)

Function: (Strength, ADLs)
• Severe muscle weakness (limited Active ROM), upper extremities, trunk, and lower extremities – unable to complete overhead reaching activities
• List normal routine, time spent alone, ability to do self care activities

Cognitive ability: Appropriate for safe use of prescribed equipment

Tonal Patterns: Notable spasticity in bilateral lower extremities

Respiratory Status: Shallow breathing when seated; improved breath support when standing

Skin Condition/Sensation:
• Sensation impaired/absent
• Risk of skin breakdown due to inability to complete effective weight shift

Vision/Hearing: vision and hearing within functional limits

Endurance/General Health: Endurance is poor – requires power mobility and power seat functions (especially standing) to complete daily activities

Environment:
• Home environment and accessibility
• Outdoor environment and accessibility
• Work environment
• School environment
• Social activities
• Outdoor environment and accessibility
• Transportation

RECOMMENDATIONS:
As a result of this evaluation, the following wheelchair and components are recommended:

C500 Group 4
The C500 is a stable front wheel drive wheelchair base with programmable electronics, rugged dual independent suspension and quiet motors. It is made to handle well in indoor as well as rugged outdoor terrain. Its large front and rear casters provide a smooth ride and improved navigation over obstacles and thresholds. Front-wheel drive provides the tightest turning around corners/doorways, improved access forward, and has open space for greater lower extremity positioning options while keeping the seat to floor height low. The C500 has excellent stability to support a variety of seating systems, power seat functions, and driving controls to meet individual needs. The Enhanced Steering Performance (ESP) tracking system is included on this power wheelchair base.

**VS**

The VS (Vertical System) is a complete powered seating system with full recline, power tilt, elevating legrests, vertical seat elevation and various ways of achieving the standing position. Standing is accomplished from either a seated, semi-reclined, or fully reclined position. Recline-to-stand allows the body to be extended before the weight is transferred onto the feet and mimics standing on a tilt table or supine stander. This method improves standing alignment by reducing buckling at the knees or slipping at the hips. The benefits of standing in a power wheelchair are many:

1) Allows independent weight bearing multiple times a day, which is essential to reducing osteoporosis, reducing the risk of joint contractures, facilitating normal bone and joint development, reduction of depression and other psycho-social issues.
2) Transfers pressure away from the scapulae, sacrum, coccyx, and ischial tuberosities reducing the risk of skin breakdown.
3) Assist with digestion, respiration, and bowel/bladder management.
4) Slowly coming to stand from reclined position, stopping as needed, can reduce the risk of orthostatic hypotension, control abnormal or primitive reflexes, and provide spasticity management.
5) Provides improved compliance with standing program by having standing feature readily available for use while client is in the wheelchair.
6) Improves access to toilets, sinks, counters, cabinets, and closets while using the stand and drive feature.
7) Improves psychosocial status – allowing the user to see eye-to-eye with peers.
8) Supine standing allows the user to safely stand despite having poor head and trunk control
9) Increases reach for functional access, and enhances interaction with others making the user more productive at home, school and/or work
10) Allows user to stand and drive making standing more functional and facilitating independent performance of MRADLs.

The VS grows from 16 – 22” in seat depth and up to 23” in width. The seating system has a 265 pound weight capacity and can be adjusted for seat depth, seat width, backrest size, lower leg length, footplate angle, seat to back angle, armrest height and angle, etc. The backrest width can differ from the seat width allowing a truly custom fit.

In addition, the system comes standard with: knee supports and a chest bar for safe and stable positioning while standing, lumbar support which can be adjusted to follow the person’s natural spinal curves and/or provide posterior pelvic stabilization, and modular removable lateral wedges to provide seamless but stable midline positioning. More aggressive lateral trunk and thigh supports can be easily added to the seating system if necessary.

**Batteries**

The batteries are gel sealed, and two are necessary to power the wheelchair. They are maintenance free and are safe for travel on the road or in the air. They are necessary to provide reliable use of the power wheelchair on a single charge.
Swing-Away Joystick Mount
A swing away joystick mount allows the joystick to swing in or out at any angle to allow closer access to tables, desks, and counters. It also can facilitate forward transfers by safely moving out to the side. The joystick can also be placed at any angle for appropriate hand access.

Power Adjustable Seat Height
The power adjustable seat height allows vertical adjustment of the seat height by the wheelchair user. Elevation increases reach and provides independence with MRADLs. It promotes safety with and improved independence with lateral transfers by allowing a level transfer or transfer from a higher to lower surface, which is gravity-assisted. It also facilitates forward transfer by allowing legs, hips to be more extended, thereby lessening the strength required for the user to perform a stand-pivot transfer.

Power seat elevation also allows the user to have eye contact with others and reduces cervical strain and pain (including headaches from poor positioning). Vertical rise also provides psycho-social benefits of being on peer level and speaking eye-to-eye. Additionally, seat elevation allows certain medications to be kept out of reach of children but remain accessible to the user.

Power Tilt and Recline
Power tilt and recline provide independent adjustment of back and hip angle and has multiple medical and functional benefits:

• Offers maximum pressure re-distribution and postural support to reduce the risk of skin breakdown
• Offers functional positions for eating, self care, reaching, and repositioning
• Provides appropriate positioning for bowel/bladder management (catheterization, urinal, and/or diapering)
• Recline alone can cause sliding forward and increase posterior pelvic tilt, the addition of tilt reduces shear when returning to neutral position from recline.
• Provides positioning for blood pressure management (orthostatic hypotension)
• Provides positioning to control autonomic dysreflexia events
• Allows multiple changes in position for improved sleeping
• Promotes sitting tolerance and relieves pain
• Provides edema control when combined with elevating legrests
• May reduce respiratory distress
• Facilitates therapeutic interventions
• Provides more options for transfers with one or two assistants, or independently
• Tilting before reclining minimizes shearing along the trunk promoting skin health

Power Articulating Elevating Legrest
Power articulating elevating legrests allow legrest elevation and articulation, which provides leg extension while elevating. These legrests can improve circulation and reduce or prevent edema (when combined with tilt/recline. They allow passive stretching and range of motion for tight hamstrings and can accommodate range of motion deficits. Power articulating elevating legrests provide change of position due to pain or neuropathy and can facilitate improved bowel/bladder management. Additionally, these legrests can improve ground clearance to navigate thresholds and slopes and still allowing the legs to achieve a tight 90 degree position for typical driving conditions. This position shortens the overall functional wheelbase for improved maneuverability.

Expandable Controller and Harness
The expandable controller is the power module located in the base of the chair that allows the input device to communicate with the drive motors and gear box. The harness is required with the expandable controller
and provides the necessary connectors for operation. The expandable controller is needed for multiple power options on a base because the non-expandable controller (in the form of an integrated joystick and controller) will not accommodate these features. An expandable controller is used in conjunction with an upgraded joystick (Pilot + or R-net). An expandable controller is also required when any alternate drive controls are being used on a power wheelchair. With R-net, the expandable controller can accommodate up to six different types of drive inputs.

**R-Net BT Mouse Module**

The R-Net Blue Tooth Mouse Module provides a method for the user to access computer mouse emulation through the wheelchair controls when the user is unable to use a standard or adapted computer mouse and keyboard for completing work on the computer due to impaired motor control. This is required for school work and other activities that require use of a computer.

**Multiple Seat Function Control Kit**

The Multiple Seat Function Control Kit describes the electronic components that allow the user to control two or more of the following actuators from a single interface (proportional or non-proportional drive control): power wheelchair driving, power tilt, power recline, power articulating elevating legrests, power seat elevation, power standing. It includes a function selection switch which allows the user to select the mode and/or actuator that is being controlled and an indicator feature for visual feedback indicating which function has been selected. This feature is contained both in a separate switch box and integrated into the wheelchair drive interface.

**Ergo Seat**

The Ergo seat cushion is made from various densities of foam and has a removable, easily washable upholstered cover. It provides contours to match the normal anatomic contours of the pelvis to provide stability, positioning, and improved sitting tolerance.

**Ergo Back**

The Ergo back is a uniquely designed ergonomic contoured backrest, and is a component of the Corpus 3G seating system. Aside from providing improved sitting tolerance, it appropriately supports the unstable trunk due to poor postural control. Standard planar seating systems are inadequate for appropriate postural support. This backrest, combined with provided lumbar support and lateral wedges increases stability, safety, and improved function. This recommended backrest simulates the contours of the trunk and provide stability for positioning and may reduce the risk of developing spinal deformities. The backrest is customizable upon ordering, and is further adjustable with the use of postural supports and in conjunction with seat functions.

**Sliding Backrest (VS/VS Junior)**

The sliding backrest is necessary to provide skin protection by reducing shear and to keep seating/positioning components (e.g. lateral trunk supports) properly aligned while using power seat functions. It is also necessary to provide proper head support when using recline or standing features of the chair – keeping the headrest at the correct height for appropriate support.

**Calf Supports**

The calf supports are angle and height adjustable pads that attach to the legrests. These padded calf supports are necessary to support the lower legs when the leg is elevated, or to keep feet from falling behind the footplates when in the neutral seated position. Calf supports are especially important when using a tilt-in-space power seating system and/or power articulating elevating legrests. The padding provides an additional surface to distribute pressure, and has a mild contour to accommodate the lower leg.

**Stand and Drive Legrest Assembly (VS/VS Junior)**

The stand and drive legrest assembly allows the standing seat to be driven while in a standing position providing improved functional independence and medical benefits of the stander. Driving while standing provides the low magnitude, high frequency forces associated with dynamic standing, which have been
shown to reduce osteoporosis and decrease muscle spasms. This feature is required on the VS and VS Junior power wheelchairs. It includes additional electronics necessary to allow the wheelchair to be driven while standing as well as an additional set of wheels that are attached beneath the footplates, supporting them and allowing them to roll across the floor as the chair is driven in the standing position.

**Separate Flip-Up Footplates (VS/VS Junior)**

The separate flip-up footplates for the VS provide individual adjustability (angle and height) to accommodate a leg length discrepancy or asymmetrical ankle range of motion. Additionally, for users who complete stand pivot transfers, the flip-up footplates fold completely out of the way to allow safe performance of stand pivot transfers.

**BodyPoint Padded Hip Belt**

The padded hip belt provides safety, stability and the additional padding promotes improved tolerance and compliance (especially for individuals with abnormal muscle tone.)

**Headrest with Adjustable/Removable Hardware**

A contoured adjustable angle headrest is medically necessary to provide posterior and lateral support to the cervical spine and head. This headrest is used for positioning and head control (especially necessary for use with power seat functions.)

**Stealth Lateral Supports with Swing-Away Hardware**

Thoracic lateral supports are curved, removable, height adjustable swing-away trunk supports for the Ergo backs. These are necessary to provide lateral support to the trunk and spine, which will promote midline positioning and reduce falling or leaning to either side. Lateral trunk supports assist a weak trunk by providing aggressive support to sit in a functional upright position. They also assist in reducing the risk of spinal deformity and are mounted on removable swing-away hardware for safety with transfers.

**Thigh Supports with Adjustable/Removable Hardware**

Thigh supports are multi-position, angle adjustable pads with removable hardware. These pads can be placed at the hips or anywhere along the length of the thigh to properly align the legs due to abnormal tone or windswept deformity. They can also be used to control excessive abduction and external rotation of the hips.

**Upper Extremity Support with Adjustable/Removable Hardware**

An Upper Extremity Support tray is necessary to provide appropriate support for upper extremities and a functional work surface. It can assist in promoting thoracic extension for improved function and respiratory capacity. The necessary hardware to mount the upper extremity support to the wheelchair frame is angle adjustable and removable for improved vision and to facilitate extension at the thoracic spine.

This recommendation is the most appropriate and cost effective option for meeting the client’s functional and medical needs. Please authorize payment for the wheelchair and components.

Sincerely,

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CLINICIAN NAME, TITLE

FACILITY