

PATIENT NAME: _____
DIAGNOSIS: SPINAL CORD INJURY - PARAPLEGIA
DOB: _____ **MR#** _____

LIFESTAND HELIUM

DURABLE MEDICAL EQUIPMENT PRESCRIPTION
AND
LETTER OF MEDICAL NECESSITY

EVALUATION AND TREATMENT PRECAUTIONS

No precautions were indicated per physician referral.

PERTINENT INFORMATION

Information was obtained from patient report, chart review, and caregiver report. *PATIENT NAME* is 30 year old young woman who presents to this assessment with her husband who is her primary caregiver. *PATIENT* currently does not own any type of mobility equipment and is using a borrowed ultra-lightweight manual wheelchair while receiving inpatient rehabilitation services. *PATIENT* is a college graduate and worked as a computer programmer prior to her injury. *PATIENT* hopes to continue working in this capacity and would like to be as independent as possible. She is an extremely active young lady who enjoys playing and watching sports, attending festivals, and other community activities. *PATIENT* also is active in her church community and sings in the choir. *PATIENT* is in need of an ultra-lightweight manual wheelchair with standing to improve her overall independence and manage her medical needs. *PATIENT* is adapting her home to allow wheelchair access via ramp and is looking into accessible vehicle options for transportation/driving. *PATIENT* has chosen to work with *DME SUPPLIER NAME* for her equipment needs.

SUMMARY AND IMPRESSIONS

PATIENT NAME is an extremely bright 30 year old young woman who is currently being limited functionally by her lack of mobility resulting from a snow boarding accident resulting in T5 complete tetraplegia (spinal cord injury). Without wheelchair mobility, *PATIENT* would be unable to participate independently in any functional activities and would be bed or chair confined. *PATIENT* is completely non-ambulatory and is unable to functionally propel a standard, lightweight, or high-strength lightweight manual wheelchair requiring an ultra-lightweight manual wheelchair to reduce the risk of shoulder overuse injury and chronic pain. The patient's diagnosis results in upper extremity weakness, decreased range of motion, decreased activity tolerance, pain and/or abnormal tone. The patient is able to propel an ultra-lightweight wheelchair and perform frequent activities of daily living that cannot be accomplished in a standard or lightweight wheelchair. The patient requires adjustability in the back height; axle plate; and seat angle to accommodate decreased balance, posture and/or abnormal tone. The adjustable axle plate will allow adjustment in the center of gravity of the wheelchair which will provide the most efficient hand position for self propulsion. The axle plate will also allow adjustment in squeeze or dump in the wheelchair which will provide more stability for this patient's upper trunk while seated in the wheelchair. She demonstrated safe use of a the requested ultra-lightweight manual standing wheelchair (LifeStand Helium)

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during this evaluation, and her operational skills are not in question. She requires standing in her wheelchair to promote maximum independence with MRADLs, improve wheelchair tolerance, provide range of motion, reduce the risk of skin breakdown, and achieve the medical benefits of standing. By having standing incorporated into her wheelchair base, *PATIENT* will be able to independently perform her standing program – improving overall compliance and the medical benefits of standing and supporting her functional needs and vocational goals. Without the standing wheelchair, *PATIENT* would be confined to her bed. There is NO other wheelchair that would meet her mobility and positioning needs appropriately. Please refer to RESNA’s position on wheelchair standers for a comprehensive review of these medical and functional benefits. (http://www.rstce.pitt.edu/RSTCE_Resources/Resna_position_on_wheelchair_standers.pdf)

Therapeutic Problem List

This assessment revealed the following problems:

1. Non-ambulatory requiring ultra-lightweight manual wheelchair for independent functional mobility.
2. Risk for further bone mineral density deficits.
3. Lower extremity spasticity.
4. Absent sensation below level of lesion increasing risk for skin breakdown.
5. Bowel/Bladder dysfunction (history of UTI, constipation)

Patient and Family Education

Patient and husband verbalized and demonstrated knowledge and understanding of the condition and their role in maximizing functional independence.

Written and/or verbal education was provided to the patient and husband concerning wheelchair mobility, standing benefits, and funding options.

Patient and husband verbalized understanding of education provided.

RECOMMENDATIONS AND PLAN

LifeStand Helium – K0009/E2230

The LifeStand Helium is the *lightest* weight manual standing wheelchair available in today’s market. It has been uniquely designed to provide assisted sit to/from stand through the use of gas cylinders. The motion required to get in and out of standing mimics manual wheelchair propulsion and utilizes bilateral upper extremities making it more efficient and safe to complete this essential activity. The Helium is specifically for active users who want to stand throughout their day for both functional and medical benefits.

The LifeStand Helium is adjustable in seat depth and width and can accommodate a user up to 220 pounds. It comes standard with tension adjustable upholstery in the seat and back, backrest angle adjustability, removable knee support, and wheel axle adjustability.

Standing has numerous medical benefits including:

- Improved Bone Density
- Reducing the risk of Pressure Ulcers

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- Reducing the risk of Skeletal Deformities and/or Joint/Muscle Contractures
- Reducing the risk/incidence of Urinary Tract Infections
- Management of Spasticity
- Improved Respiratory function
- Improved Gastro-Intestinal function
- Improved Bowel/Bladder function
- Improved Cardiovascular function

The functional benefits of standing include but are not limited to:

- Improved vertical range of reach (i.e. kitchen counters, medicine and kitchen cabinets, refrigerator, sinks, drawers, closets, clothes hangers, thermostats, light switches, etc.)
- Improved productivity at work or at school (i.e. not having to pause/stop tasks to tilt/recline for pressure management)
- Improved psychological well being (i.e. seeing eye-to-eye with peers, greater confidence, etc.)
- Improved participation in Mobility Related Activities of Daily Living (MRADLs)
 - Toileting (upright positioning promotes bladder emptying – whether catheterizing or self eliminating)
 - Feeding (promotes access to food preparation including grocery shopping, cooking, reaching items in kitchen cabinets and refrigerator)
 - Dressing (may reduce spasticity for improved ability to complete dressing tasks, improves access to closets, hanging clothes, and drawers)
 - Grooming (increased vertical position improves access to bathroom mirrors, sinks, and medicine cabinets – keeping medications out of children’s reach for better safety)
 - Bathing (improved access to obtain bathing supplies such as towels, soap, etc.)

The LifeStand Helium will allow a user to independently utilize standing frequently throughout the day to achieve both the medical and functional benefits listed above. The ultra-lightweight frame also reduces the risk of shoulder injury due to overuse.

ROHO Low Profile Quadro Seat Cushion

Due to a loss of motor function, the patient is unable to adequately perform weight shifts to relieve pressure over the sitting surfaces. This, combined with the impairment of sensation over the sitting surfaces, makes the patient highly susceptible to the development of pressure sores. The pressure equalizing and redistribution effects of the ROHO cushion greatly decreases the likelihood of pressure sore development.

Spinergy Wheels

Patient requires these light weight Spinergy wheels for efficiency with propulsion and decreased energy expenditure during self propulsion.

Adjustable Tension Back Upholstery

The adjustable tension back upholstery is required to provide adequate support and appropriate trunk/pelvis alignment.

Pelvic Positioning Belt

The pelvic positioning seat belt is necessary to position and secure the patient’s hips at the back of the wheelchair for safety and symmetrical weight bearing.

Chest Strap

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The chest strap is necessary to secure the patient's upper trunk for safety during functional activities and while standing.

ASSESSMENT RESULTS

Report of Symptoms

No pain was reported during evaluation.

Medical History

History of present condition: Spinal Cord Injury – due to snow boarding accident December, 2009 – resulting in complete T5 tetraplegia

Past Medical History: unremarkable prior to accident

Physicians/clinics involved in care: Dr. _____ (Neurosurgery), Dr. _____ (Rehabilitation), Dr. _____ (Orthopedics)

See patient's medical record for complete medical history.

Range of Motion

Upper extremity passive range of motion: passively within functional limits

Lower extremity passive range of motion: passively within functional limits except for: tightness noted in bilateral hamstrings and heel cords due to immobilization – expected to improve with consistent standing program.

Trunk range of motion: at risk for scoliosis/kyphosis due to decreased postural control.

Strength

Strength was absent below level of lesion (lower extremities, trunk, and limited activity of upper extremities – gross movements initiated at shoulder).

Muscle Tone

(+) Spasticity in bilateral lower extremities.

Endurance

Muscle fatigue was present throughout all innervated muscle groups.

Endurance was fair.

Tolerance to upright was normal in sitting and standing.

Sensation

Sensation was absent below level of lesion due to spinal cord injury.

Functional Skills

Head control: within normal limits

Upper extremity function: unable to functionally propel a standard or lightweight manual wheelchair requiring ultra-lightweight frame for safety and independence.

Trunk control and sitting balance: sat with upper extremity support for postural control

Lower extremity function: no functional movement

Transfers: independently – currently using sliding board

Cognitive function/behavior: alert, appropriate cognitive skills, and adequate for safe use of recommended equipment.

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Therapist Name _____
Date Signed: _____

Physician Name _____
Date Signed: _____