**Stander Evaluation Date**: 00/00/2017
**Payor Information**: zzzzzzzzzzzzzzzzz of zzzzzz
**Insurance ID**: XXX XXXXXX
**Patient Name**: D. L.
**Date of Birth**: 00/00/0000
**Gender**: Male
**Weight**: 50 (pounds) **Height**: 45 (inches)

Summary of Medical Condition

**Primary diagnosis**: Spinal Cord Injury (SCI), **date of onset** Birth
**Secondary Diagnosis(s)**: UTI, Spasticity,
**Treatment Diagnosis(s)**: Spasticity management, LE ROM, BMD,

**Co-morbid conditions**:

Lower extremity spasticity, range of motion deficits, at risk for pressure issues, and history of UTI's, at risk for Low BMD.

**Chief complaints/presenting problems**:

D.L. was referred today for an evaluation for a standing device. Both D.L. and his parents are very interested in all they can do to increase his health and keep him out of the hospital.

D.L. is a 7-year-old with a diagnosis of quadriplegia. Due to an unknown cause, he has
a gap in his spinal cord from C5 to T1. He is incontinent of bowel and bladder. His hearing and vision are both intact.
D.L. has decreased trunk strength. Without trunk support, he is unable to sit. He can
actively move his upper extremities. He has no active movement of his lower extremities.

Clinician Expert Credentials

Mary Jane, PT, MPT, ATP, SMS
Program Director, Altimate Medical Inc.
**Areas of Practice**: Pediatric Birth to 21-years-old

I have a MPT from XXXXXX University and have been a pediatric Physical Therapist at XXXXXXXXX Rehab for over 10 years. Previously I worked for 5 years at ZZZZZZZZZZZ home care treating both pediatric and adult clients.

Physical Assessment

**Range of motion**

D.L. current lower extremity passive motion is within normal limits, but due to his LE spasticity and sitting in a w/c for the majority of the school day he is at high risk of contractures.

Standing has been shown to delay the appearance of contractures and improve those that already exist (Vignos,1996). Because D.L. lacks the strength to stand independently, the standing frame will help to keep him in a good position to stretch these muscles for extended periods. This stretch will maintain and improve his lower extremity range of motion.

**Tone/Spasticity**

D.L. has ankle clonus and Ashworth 1-2 spasticity. Currently, D.L. does not have any
spinal or pelvic deformities.

D.L. has spasticity throughout his lower extremities. Standing has been shown to
decrease spasticity (Tremblay,1990). Decreasing his spasticity will assist in maintaining range of motion and improve his overall level of function.

**Skin Integrity**

D.L. cannot move himself independently to shift his total body weight. This puts him at an increased risk of developing decubitus ulcers (Dunn,1998)

People who stand for at least 30 minutes a day have less pressure sores than those who do not stand (Walter,1999). Standing is also one of the best methods to off load the IT's (Sprigle, 2010) for those with SCI.

**Bladder/Urinary**

D.L. has a history of reoccurring UTI's.

D.L. will benefit from a standing frame that can position him properly in an upright standing position.
 This position will help to facilitate better emptying of his bladder, which can decrease his risk of developing further urinary tract infections (Dunn,1998)

**Other Physical Issues**

D.L. is at increased risk of developing osteoporosis due his inability to stand
independently (Whedon,1982, Henderson, 2004).

Gudjonsdottir, and Mercer studied the effects of dynamic versus static
standing on bone mineral density in children with cerebral palsy. All subjects were nonambulatory.
Half the subjects underwent dynamic standing, the other half static standing. All but
one of the subjects showed an increase in bone mineral density in the lumbar spine, proximal
femur and distal femur (Gudjonsdottir 2002). Additionally, (Goemaere, 1994), and (Lanyon, 1984) compared SCI individuals who conducted standing 1 hour, 3 times per week with those that did not. It was found that bone mineral densities were significantly higher in the long leg bones of the standing group (Goemaere, 1994).
This standing frame will allow D.L. to bear weight through his lower extremities. Because it is easy to move the frame from a seated to a standing position and it is a dynamic stander, his parents will be able to change his position frequently.

Lanyon and Rubin compared static versus dynamic loads and their influence on bone remodeling in animal models (Lanyon, 1984). They found that static loads did not have an effect on remodeling whereas a similar load that was applied intermittently in a dynamic manner was associated with a substantial increase in bone mass. The dynamically loaded group instead of bone loss demonstrated a mean increase in bone cross-sectional area. With the Glider, he will get dynamic loading of his bones rather than just static loading.
Research has shown that more dynamic weight bearing results in less of a loss in bone mineral density (Thompson, 2000). This will provide him with the maximal benefits from standing.

Functional Status

Documentation of Other Standing Devices Considered

**One Position Stander**

Both a prone and supine stander were considered for D.L. Since one person will be doing the transfers and with D.L.’s spasticity, moving from a sitting position to a lying position would be unsafe and impractical as well take away any independence that D. L. has. So both types were ruled out.

**Sit to stand Stander**

At this time, D.L. has a Sit to Stand- EasyStand Magician stander. He uses the stander daily. Because of the good trunk support, he uses it while he works on different reaching activities, such as turning pages in books and playing with toys.
His mother transfers him independently at home and she continues to need a standing
frame that can be operated by only one person.
D.L. has outgrown this stander. Without a new stander, he will not be able to continue his standing program. As a sit-to-stand stander remains the most appropriate type of stander for him, this is the least costly and most medically appropriate device to allow him to continue to stand and to get the most medical benefits from standing.

Documentation of Trialed Devices and Outcomes

04/01/2017
PNG50187 Glider Medium

D.L. used this unit on numerous trial occasions with excellent results. Video can be provided if necessary. His mother was able to set up the system and complete transfer and positioning help as needed.

D.L maintained medical stability through all trials with the Glider.

Per D.L. mother, who is very careful about making sure all technology will fit and be used, the Medium Glider with footprint of 26.5”x 41” will fit perfectly into the family room where his current EasyStand Magician resides.

See the appendix for documentation.

Standing Program Goals

Our goal with D.L. is to decrease his LE spasticity, increase his LE ROM, maintain or increase his BMD, and decrease his frequency of UTI's

**Recommended Standing Program:**

D.L will use the stander for 30 minutes, 2 times a day, at a minimum of 5 days a week to get the maximum benefits from static and active standing. His gliding will start at 1 minute intervals every 10 minutes, increasing as he is able.

Justification of the Selected Device

Make/Model/Size of Device Selected: PNG50187 Glider Medium
Transfer Considerations:

His mother was able to set up the system and complete transfers (sliding board) and positioning help as needed.

Evidence patient ability to use device:

During D.L.'s trials and his previous use of the EasyStand Magician, D.L has used the device with easy and confidence.

Growth Considerations:

The Medium Glider fits individuals from 4’0-5’6″ and up to 200 lbs. Since D.L is at 45" and 50 lbs, he has more than 5 year of growth.

Necessary support or positioning components:

**PNG50187 EasyStand Glider Medium**

**PNG50378 Glider Base**
**PNG50187 Glider Configuration**
Standing challenges the cardiovascular system by requiring the heart to pump the blood flow against gravity in an upright position. The EasyStand Glider also provides upper body strengthening that D.L. is able to complete while he is standing further conditioning the cardiovascular system. The increase in cardiovascular function further decreases skin breakdown risk due to increased oxygenation to the tissues.
D.L. is at high risk for long term osteoporosis due to lack of weight bearing and muscle stress on the long bones. The increase in calcium can contribute to real stones which can lead to significant debilitation and increased cost of care. Normalizing weight bearing and stress on the long bones as provided by the active motion of the Glider may assist in reducing these medical complications.

**Actuator Location:**Right Side
**Lift Mechanisms:**Manual Hydraulic Actuator with Handle
**PNG50044 Quad Grip Handle Extension**
Given D.L.'s decreased ability to grip the actuator to raise and lower himself, this grip extension is necessary so that he can hold onto the actuator. Without this, he will not be able to independently raise and lower himself in the Glider.

**Standard Glider Tray & Chest Pad**
**Standard Glide Handles**
**PNG30031 Secure Foot Straps**
With D.L.'s spasticity, it is difficult to keep his feet positioned properly. The foot straps will assure that his feet stay on the footplates so that he gets the necessary benefits of standing. With the Glider feature, it is especially important that his feel remain properly positioned to prevent misalignment or injury to his legs.

**PNG50345 Hip Supports Medium**
With D.L.'s decreased trunk control he needs Lateral Hip Supports to position his hips in symmetrical alignment from sitting to standing to eliminate or minimize wind swept or asymmetrical positions.

**PNG50068 Contoured Back 19"**
The contoured back for the Glider is very similar to the contoured back on his wheelchair. It is needed to provide him with the necessary lateral postural trunk support. The 19" contoured back on the Glider has a 2" lateral side contour to center trunk and give a slight lateral assist for symmetrical alignment in sitting and standing.

**PNG30029 Velcro Hip Belt**
The 2” wide positioning belt has a D-ring Velcro® closure, which provides centering of the pelvis, and hip stability for D.L. Without it, he will be at increased risk of an asymmetrical pelvic alignment and would decrease safety, due to falling out.

**PNG50224 Lateral Supports 9-15"W**
The lateral supports are multi-adjustable (up, down fore, aft) and removable (for transfers) to give D.L. lateral trunk and spine support and alignment in sitting and standing for his weight bearing program. These will work with the hip supports to properly position him in alignment, and allow him to remain in the stander for the entire duration of this standing protocol.

**PNG50034 Accessories Mounting Bracket**
The back support and an accessories mounting bracket is required for attaching the lateral supports, which are both needed for posterior and lateral support and alignment.

Signed:

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