ALTER G® Case Study

Functional Decline

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Who: **72-year-old male hospitalized with GI bleed and acute blood loss anemia. Significant medical history and morbid obesity contributed to functional decline after hospitalization.**

What: **Pt. was Mod Independent with transfers and ambulation with Rollator Walker prior to hospitalization. Upon admission to rehab facility patient was Mod Assist for transfers and Max Assist for ambulation. Pt was classified as possible hospice candidate, but after rehab care, including walking program with the AlterG, patient was able to be discharged to home.**

Why: **Body weight support technology was incorporated into this treatment program to improve the patient's standing tolerance and gait distance. Pt was able to incrementally increase load to improve endurance and improve gait mechanics with the Visual Monitoring System (VMS).**

Introduction

The patient is a 72-year-old male hospitalized with a GI bleed and acute blood loss anemia. His medical history includes CHF with left ventricular dysfunction, left ventricular ischemic cardiomyopathy, EF = 30%, atrial brillation, CAD, HTN, COPD, continuous O2 @ 2L/min, PVD, diabetes, peripheral neuropathy, chronic venous stasis, chronic kidney disease (stage III) and morbid obesity. Prior to hospitalization, the patient was Modi ed Independent with transfers and ambulation > 500 feet on a variety of surfaces using a Rollator Walker (RW). However, upon admission to this rehab facility, the patient required Moderate Assist for transfers and Max Assist for ambulation x 3 steps using RW. His standing activity tolerance was less than one minute.

Goals

- Modifed Independence with sit-stand/bed-chair/toilet transfers.
- Modifed Independence with ambulation > 500 feet on even/uneven surfaces with RW.
- Return home with family assistance prn.

History

- Signi cant functional decline after initial hospitalization.
- Classifed as possible Hospice candidate.
- Demonstrated hypotensive episodes with position changes.
- O2 saturation level < 90% with standing, frequent rest periods required. O2 saturation recovery above 90% required 1.5 minutes.
- Initiated core strengthening program to improve balance and trunk control to facilitate safe transfers.

- Gradual increase in repetitions and resistance during ther ex with patient supine, seated, and standing.
- Educated patient on energy conservation techniques.
- Second hospitalization for anemia and C-diff 4 weeks after facility admission.
- Initiated use of AlterG Anti-Gravity Treadmill 9 weeks after patient's initial admission to this rehab facility.
- Used AlterG Anti-Gravity Treadmill x 4weeks.

Progression Table

Days	Initial WB%	Speed	Incline (%)	Time	Frequency
Week 9	45%	0.2	0	2 mins	3 x daily
Week 10	50%	0.4	0	6 mins	4 x daily
Week 11	55%	0.5	0	10 mins	4 x daily
Week 12	60%	0.6	0	20 mins	5 x daily

Results

This patient received PT services 5x/week over the course of 100 days. He demonstrated progress with transfer ability and core strength using conventional treatment methods, but had limited improvement with standing activity tolerance and gait distance. With the combination of conventional treatment and the AlterG Anti-Gravity Treadmill, the patient was able to return home with his family at a SBA level for transfers and ambulation > 500 feet on even and uneven surfaces using a RW.

When use of the AlterG Anti-Gravity Treadmill was initiated, patient:

• Ambulated 80 feet on even surfaces with frequent rest periods using RW

• Required Mod Assist of 2 to step into the cockpit of the AlterG

• O2 saturation levels often dropped below 90%.

After 4 weeks of combined treatment methods, patient:

• Ambulated > 500 feet with RW

• Required only SBA to enter/exit the treadmill.

• O2 saturation level consistently above 90%

To summarize, the AlterG Anti-Gravity Treadmill was incorporated into this treatment program to improve the patient's standing tolerance and gait distance. He could not walk without frequent rest periods due to his cardiopulmonary de cits. The AlterG Anti-Gravity Treadmill allowed the patient to incrementally increase his body weight, leading to improvement in endurance and greater distances ambulated on even and uneven surfaces. In addition, the cameras and TV monitor provided the necessary visual input to improve the patient's step length and base of support during ambulation.

The AlterG was a vital component of this patient's treatment plan and recovery. Use of the Anti-Gravity Treadmill, combined with conventional treatment methods, allowed the patient to achieve his ultimate goal-to return home.