Facility Model for Incorporating Second Step, Inc. GHS

The Center for Spinal Cord Injury Recovery® Rehab Institute of Michigan Detroit, Michigan

The Center for Spinal Cord Injury Recovery® (CSCIR) is a unique, internationally renowned setting where innovation is the focus and recovery is the goal. Second Step, Inc. is currently partnering with the Rehabilitation Institute of Michigan's CSCIR, which is using the Gait Harness System® as part of its long-term, high-intensity, non-traditional physical therapy program for clients with SCI.

Since the early 2000's, CSCIR has extensively used several GHSs, including a pediatric GHS, daily with many clients. Much of our work with RIM reflects our use of the GHS with e-stim, KAFO and AFO braces, and for prosthetic and orthotic fittings. (See **Success Stories** under our **Clinicians** webpage, notably clients Eric, Bob, Amy, Abby, and John).

Having several GHSs onsite means the therapists and trainers can engage more than one patient in competitive activities.

Bill Thornton, Senior PT at CSCIR, has used the GHS with individuals working side by side on speed bags, and in races, gait for distances. This type of activity is not possible with Body Weight Support Treadmill Training systems (BWSTT).

The GHS also allows clients at RIM to engage in forced use with numerous therapeutic exercises in various environments. Most BWSTT are fixed, and staff at RIM has found that LiteGait is not that user friendly or practical on uneven surfaces.

Bill describes that the GHS has several distinctions that make it unique when compared to body weight support systems. First, the GHS does not directly off-load the individual's weight. Weight reduction (if needed) is performed actively by the individual in the System. A key difference between the GHS and BWSTT is the GHSs safety and ease of use for both the patient and therapist.

Second, the harness used in the GHS directs supportive forces (or fall recovery forces) through a much larger surface area on both thighs. Other over-head harnesses direct these forces through the sensitive pubic area, which often leads to decreased treatment time and intensity.

Lastly, the GHS allows for reinforcement of newly learned gait patterns in a real world situation. The GHS is designed for over-ground gait training, on real world floor surfaces. Body weight support treadmill training can be difficult and labor intensive. For body weight support treadmill training to be effective, any progress made needs to

be safely reinforced with over-ground training. The GHS allows for coupling of the UE/LE during activities, a walker does not.

Many SCI clients at RIM have been able to successfully walk again using e-stim, AFO or KAFO bracing, and the GHS in conjunction, a feat not accomplished with any other equipment. The GHSs have allowed the CSCIR program at RIM to be very challenging, efficient, and safe at the same time.

"The GHS has allowed our program to be very challenging, efficient, and safe at the same time. Many of the higher level activities would require two or three staff members if it were not for the GHS. I cannot say enough about the ease of use and its ability to reduce the fear of falling."

"I use the GHS daily with almost all my patients. I have had great success using the GHS with and without braces (generally carbon fiber KAFOs with stance control knee), with tetras and paras of all levels. The unique harness is extremely comfortable, works very well with the braces, and reduces the number of seated rest breaks with any standing activity."

William Thornton, MPT, Lead Physical Therapist, The Center for Spinal Cord Injury Recovery®, Rehab Institute of Michigan, Detroit MI

"I have a group of patients at a facility who were all told they would never walk again—after using the Gait Harness System, only two now use a wheelchair as their primary locomotion."

"The GHS allows for reinforcement of newly learned gait patterns, in a real world situation. Reinforcement of various qualities of gait during land-based activities is a must for the activity to become functional."

"The harness used in the GHS directs supportive forces (or fall recovery forces) through a much larger surface area on both thighs. Other, over-head harnesses direct these forces through the sensitive pubic area, which often leads to decreased treatment time and intensity."

"Proper attention should be to the Gait Harness and its ability to transfer a variety of individuals (obese, tall…) without compromising skin integrity. I can personally attest to skin tears (acute and in-patient). Your Gait Harness allows therapist to safely transfer their patients from a bed to a wheelchair. The GHS as a whole allows for the therapist to efficiently address the needs of a patient from the acute to chronic setting. I see the application as encompassing everything from acute to outpatient."

William Thornton, MPT, Lead Physical Therapist, The Center for Spinal Cord Injury Recovery®, Rehab Institute of Michigan, Detroit MI

“Most individuals will not have home access to a body weight support treadmill training system after they leave the clinic, but may be able to implement an over-ground system, like the GHS, that allows for efficient over-ground training reinforcement. I use the GHS in the clinic, and refer it for home use, to accomplish this reinforcement.”

William Thornton, MPT, Lead Physical Therapist, The Center for Spinal Cord Injury Recovery®, Rehab Institute of Michigan, Detroit MI