

8-7-2022

Identifying OT's Role with Individuals with Long-Term Neurological Conditions: A Capstone Project

Jencey McLain
jm5035@mynsu.nova.edu

Follow this and additional works at: https://nsuworks.nova.edu/hpd_ot_capstone

Share Feedback About This Item

NSUWorks Citation

Jencey McLain. 2022. *Identifying OT's Role with Individuals with Long-Term Neurological Conditions: A Capstone Project*. Capstone. Nova Southeastern University. Retrieved from NSUWorks, . (98)
https://nsuworks.nova.edu/hpd_ot_capstone/98.

This Entry Level Capstone is brought to you by the Department of Occupational Therapy at NSUWorks. It has been accepted for inclusion in Department of Occupational Therapy Entry-Level Capstone Projects by an authorized administrator of NSUWorks. For more information, please contact nsuworks@nova.edu.



Identifying OT's Role with Individuals with Long-Term Neurological Conditions: A Capstone Project



Jencey McLain, OTD-S

George Palang, Lead Neuro-Recovery Specialist/Floor Supervisor, & Stay in Step Brain and Spinal Cord Injury Facility

Dr. Christina Kane, Ed.D., MS, OTR/L



(Stay in Step Logo)

Introduction

- There are approximately 17,810 new SCI cases each year in the United States (National Spinal Cord Injury Statistical Center, 2020)
- The majority of Long Term Neurological Conditions have serious impacts on areas of functioning such as loss or impairment of sensory and motor function (NSCISC, 2020)
- Sensory, automatic function deficits, and pain in the upper extremities cause difficulty when completing activities of daily living such as self-feeding and toileting

Site Description

Stay in Step Brain and Spinal Cord Injury Facility

- Non-Profit Outpatient Activity Based Therapy (ABT) and Physical Therapy facility located in Tampa, FL
- Target population: Adults 18+ with various long-term neurological conditions
- Mission Statement:
 - To provide a STEP forward to recovery through long-term rehabilitative care, treatment and hope to all our clients whose lives have been impacted by suffering from a spinal cord/traumatic brain injury and/or any neurological disorder. We seek to create a motivating, nurturing and faith-centered environment where our clients and their families can learn how to overcome limitations and navigate their challenges together. We strive to change lives one STEP at a time and help all our clients STAY the path towards recovery.

- Services Offered:
 - Evaluation and Consultation
 - 2 hour, one-on-one ABT based on the individual needs of each client
 - Locomotor Training
 - Functional Electrical Stimulation
 - Virtual Reality

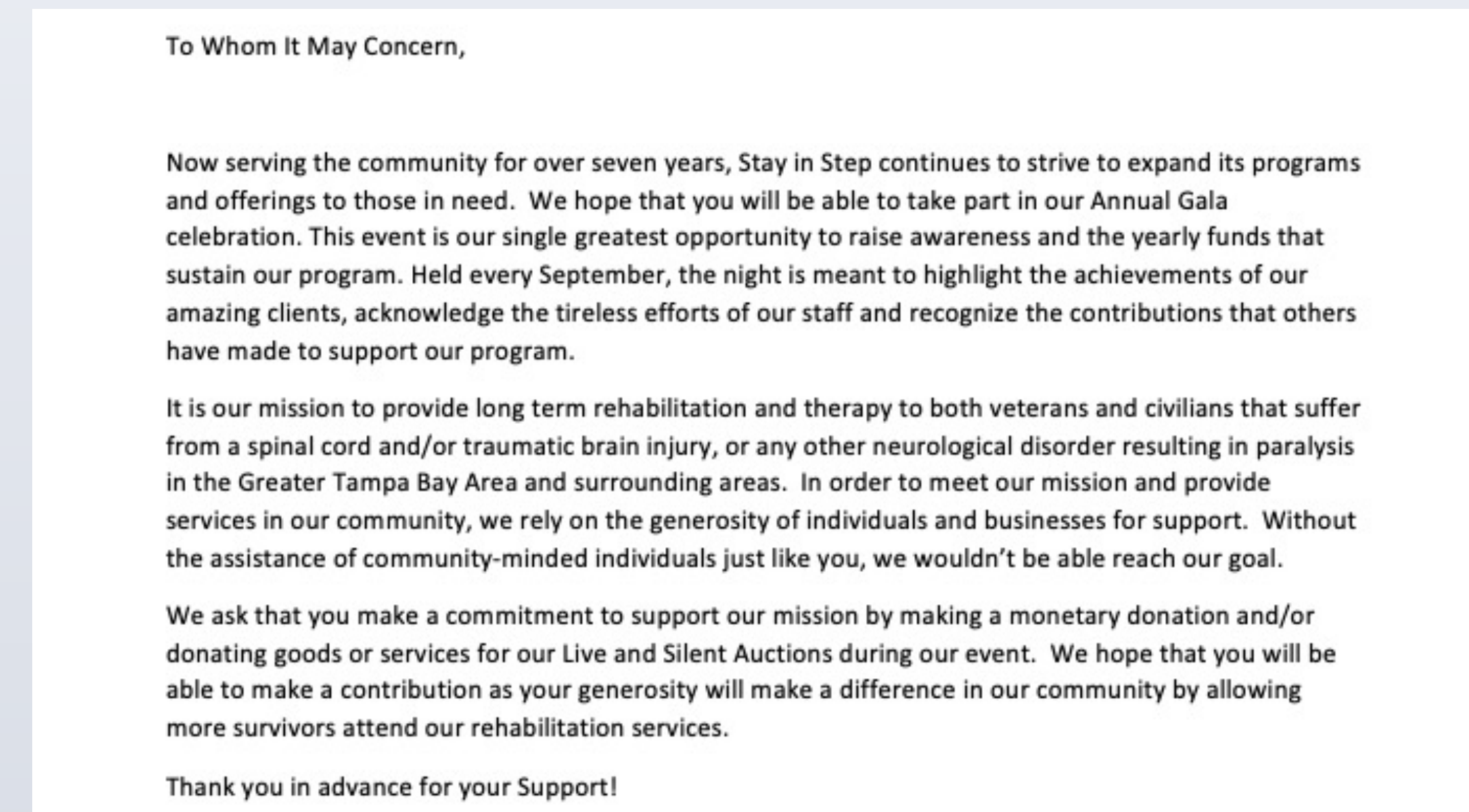
Summary of Needs Assessment

Identified Needs of the Site:

- Justification on the benefit of integrating OT services to the facility
- Development of a virtual ABT Set-Up and New Employee Manual
- Continued advocacy and funding through client testimonials, social media, and community outreach

Literature Review Summary

- ABT to treat clients, which is a type of high intensity, high frequency, therapy that stimulates below the level of lesion in order to optimize nervous system recovery and promote neuroplasticity (Martin, n.d.)
- Neuroplasticity is the ability of the nervous system to change its activity in response to intrinsic or extrinsic stimuli by reorganizing its structure, functions, or connections after injuries, such as a stroke or traumatic brain injury (Puderbaugh, 2022)
- Many individuals with LTNCs do not receive all of the medical care necessary for optimal recovery due to caps on the amount of therapy allowed per person (American Physical Therapy Association, 2021)



(Sample of Letter Sent to Community Partners for Donation and Funding Requests)



(Sample of Social Media Marketing Content)

Capstone Project Description

Project Goals:

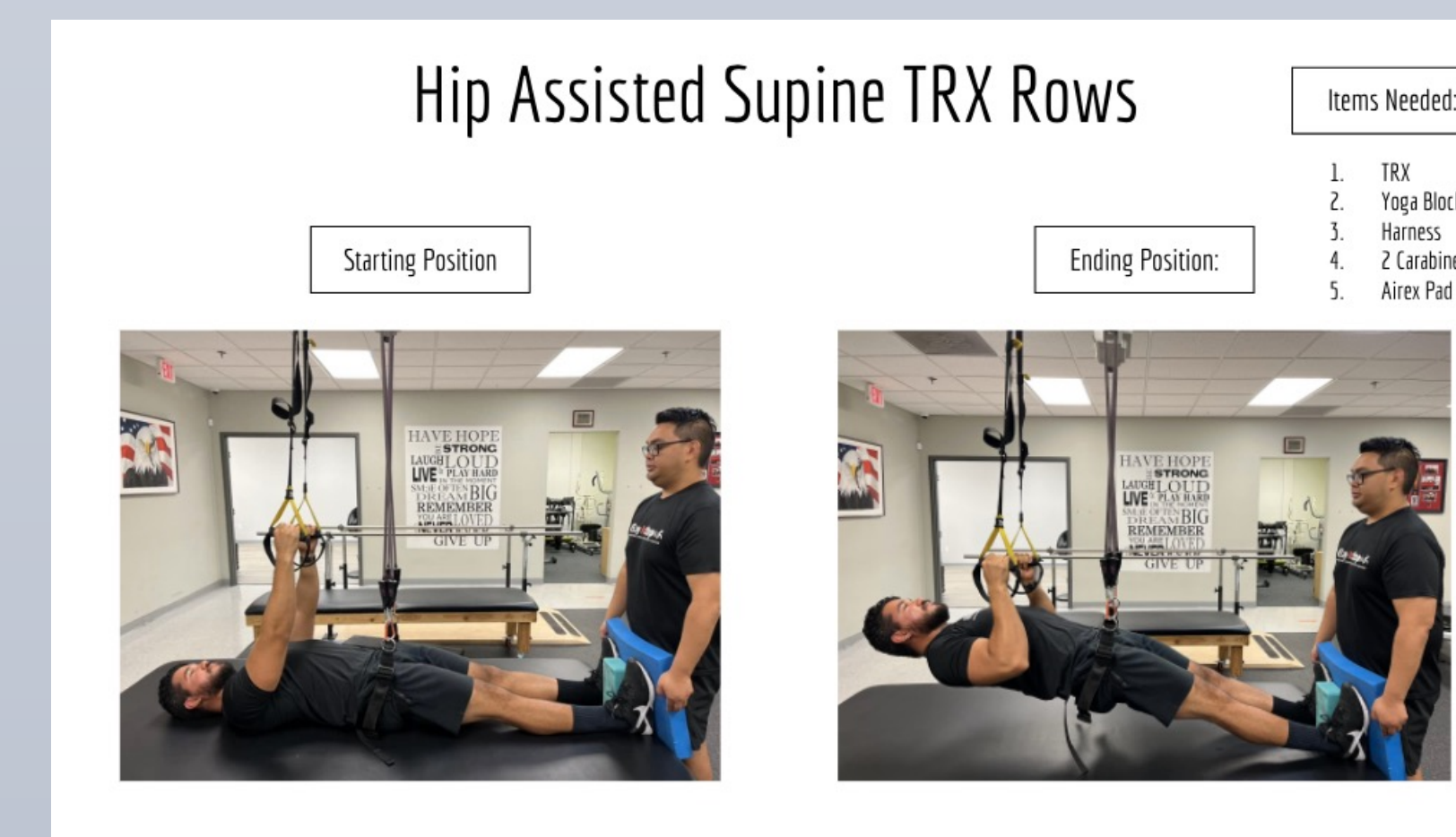
1. Justify the importance and benefit of offering OT services to the client population at SIS.
2. Provide new trainers/aids with a photo booklet in which they can learn common ABT setups utilized at SIS, as well as education on the basics of commonly seen neuro conditions.
3. Bring further awareness to community about SIS to receive additional grants, funding and donations.

Project Outcomes:

- Justification of OT services were met through presentation of a proposal including a SWOT analysis, Marketing Plan, Timeline, Individual Services Offered, Essential Equipment, Pricing, and a Job Description.
- SIS is moving their services to a larger facility in September, and have set aside a room in the building where OT treatment will take place.
- ABT Setup photo booklet and employee manual was completed and will be immediately utilized
- Community outreach resulted in various donations from local businesses that will be used at the SIS Annual Fundraising Gala.

SCI Levels and Function	
<p>→ After a spinal cord injury, the connection between the brain and body is disrupted, and areas below the level of lesion may no longer be able to send or receive information from the brain properly.</p> <p>→ Four sections of the spinal cord: cervical, thoracic, lumbar, sacral</p> <ul style="list-style-type: none"> • Each section plays an important role in protecting nerves that control the body. <p>→ The severity and level the injury occurs at determines what part of the body will be affected.</p>	
<p>Cervical</p> <ul style="list-style-type: none"> - Located at the top of the spinal cord - 7 vertebrae (C1-C7) - Generally the most serious SCI - Affects the head and neck above the shoulders 	<p>Thoracic</p> <ul style="list-style-type: none"> - Located in the upper and middle back - 12 vertebrae (T1-T12) - Affects the upper chest, mid-back, and abdomen - Arm and hand function is usually normal
<p>Lumbar</p> <ul style="list-style-type: none"> - The lowest major portion of the spinal cord - 5 vertebrae (L1-L5) - General loss of function of hips and legs 	<p>Sacral</p> <ul style="list-style-type: none"> - Located below the lumbar spine and above the tailbone - Five bones fused together (S1-S5) - Affects the hips, back of thighs, buttocks and pelvic organs

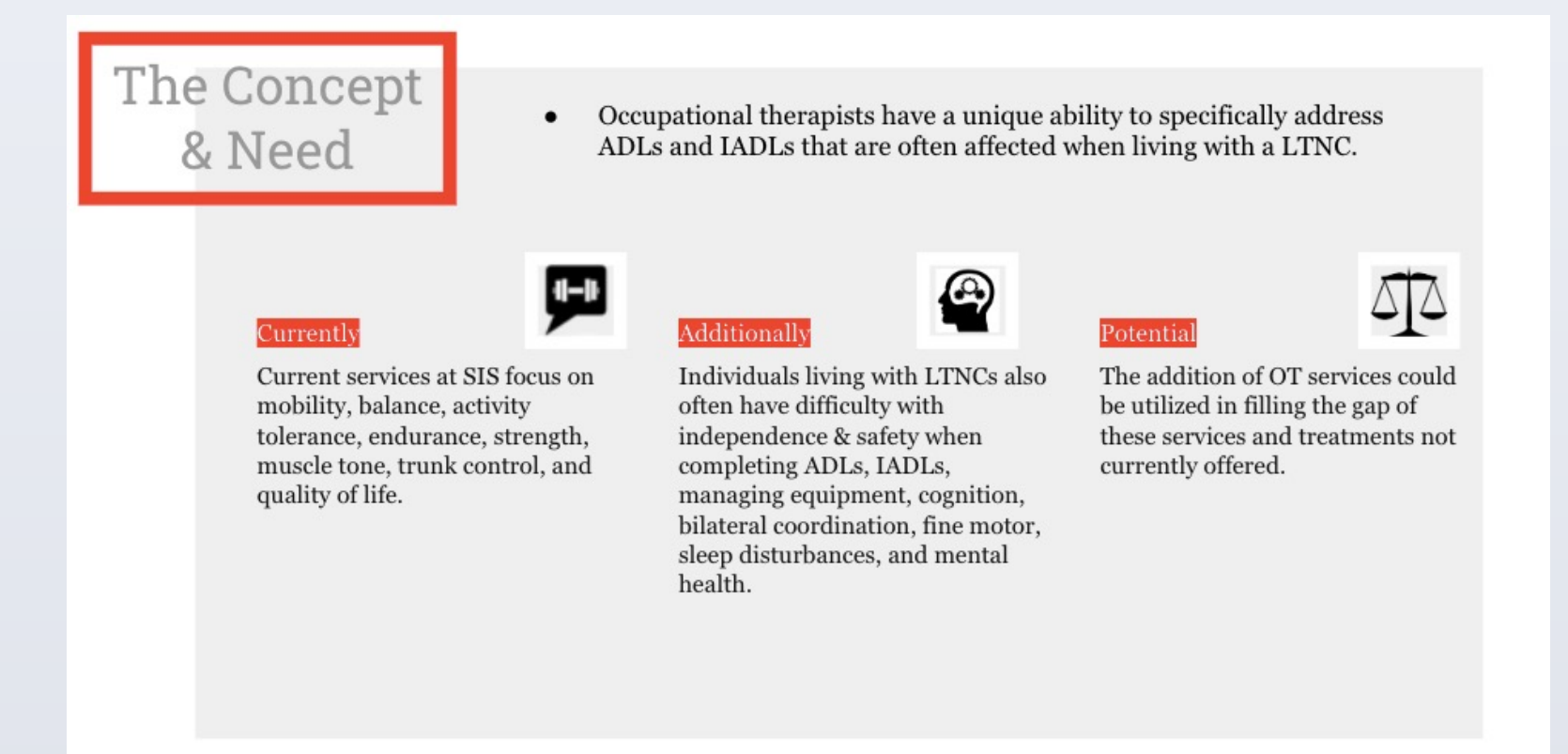
(Employee/Student Manual SCI Levels & Function)



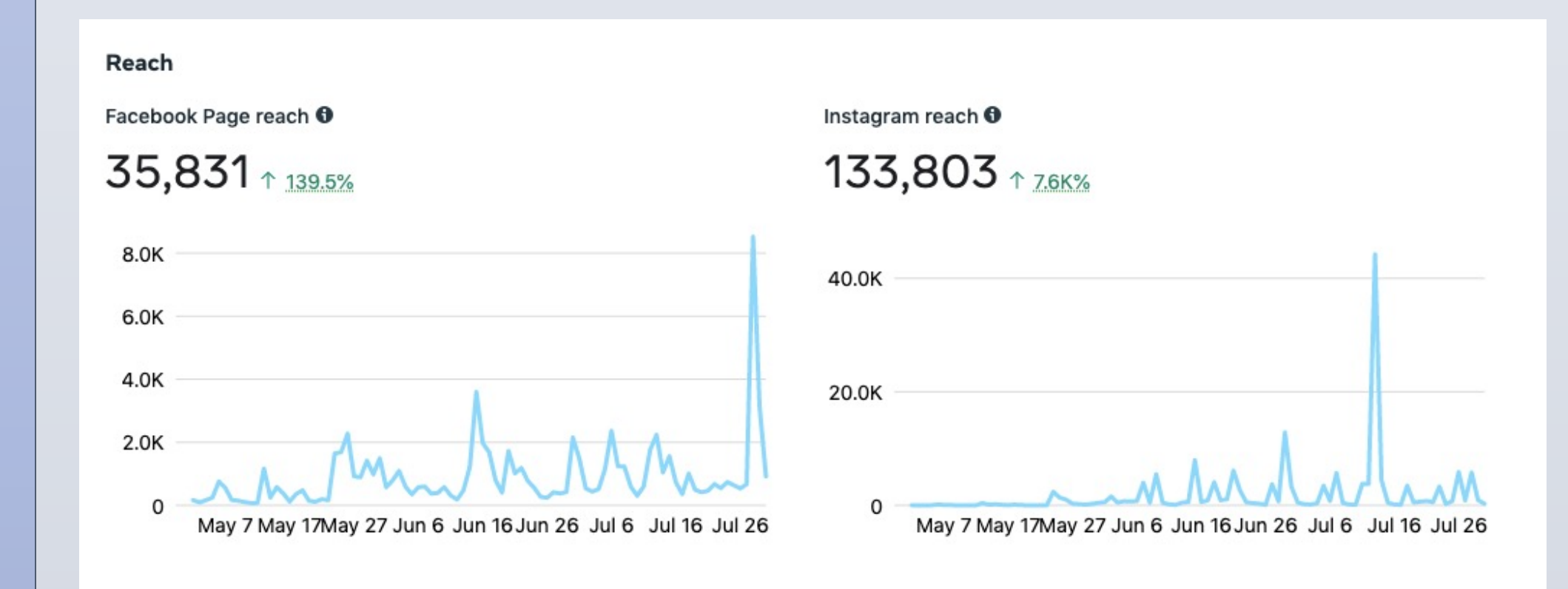
(Page from ABT Setup Booklet)

Learning Objectives Achieved

1. Developed plan & business proposal to hire appropriate practitioner and begin implementation of OT services at SIS.
2. Created virtual ABT photo booklet & manual to be utilized by new employees and students.
3. Continued advocacy for clients/facility through social media marketing, community outreach, and testimonials.



(Concept & Need of OT Services Presented)



(Social Media Growth Since May of 2022)

Implications for OT Practice

Implementation of OT services at SIS could significantly aid in the rehabilitation process of current and future clients.

- While SIS aims to meet many of the recovery needs of their clients, difficulties with activities of daily living, and other functional deficits are not currently being addressed.
- There is research supporting the use of ABT interventions in OT treatment.
- This aligns with Stay in Step's current therapy methods, as ABT is heavily utilized, and current clients testify that they have seen improvements due to this form of treatment.

REFERENCES & ACKNOWLEDGMENTS

My deepest appreciation goes to Dr. Christina Kane, Ed. D., MS, OTR/L, George Palang, Lead Neuro-Recovery Specialist/Floor Supervisor, and the staff & patients of SIS, for all their meaningful support, guidance, and knowledge that contributed to the completion of this capstone project.

References Available Upon Request