Best Practice Resource Guideline for Pediatric Stroke

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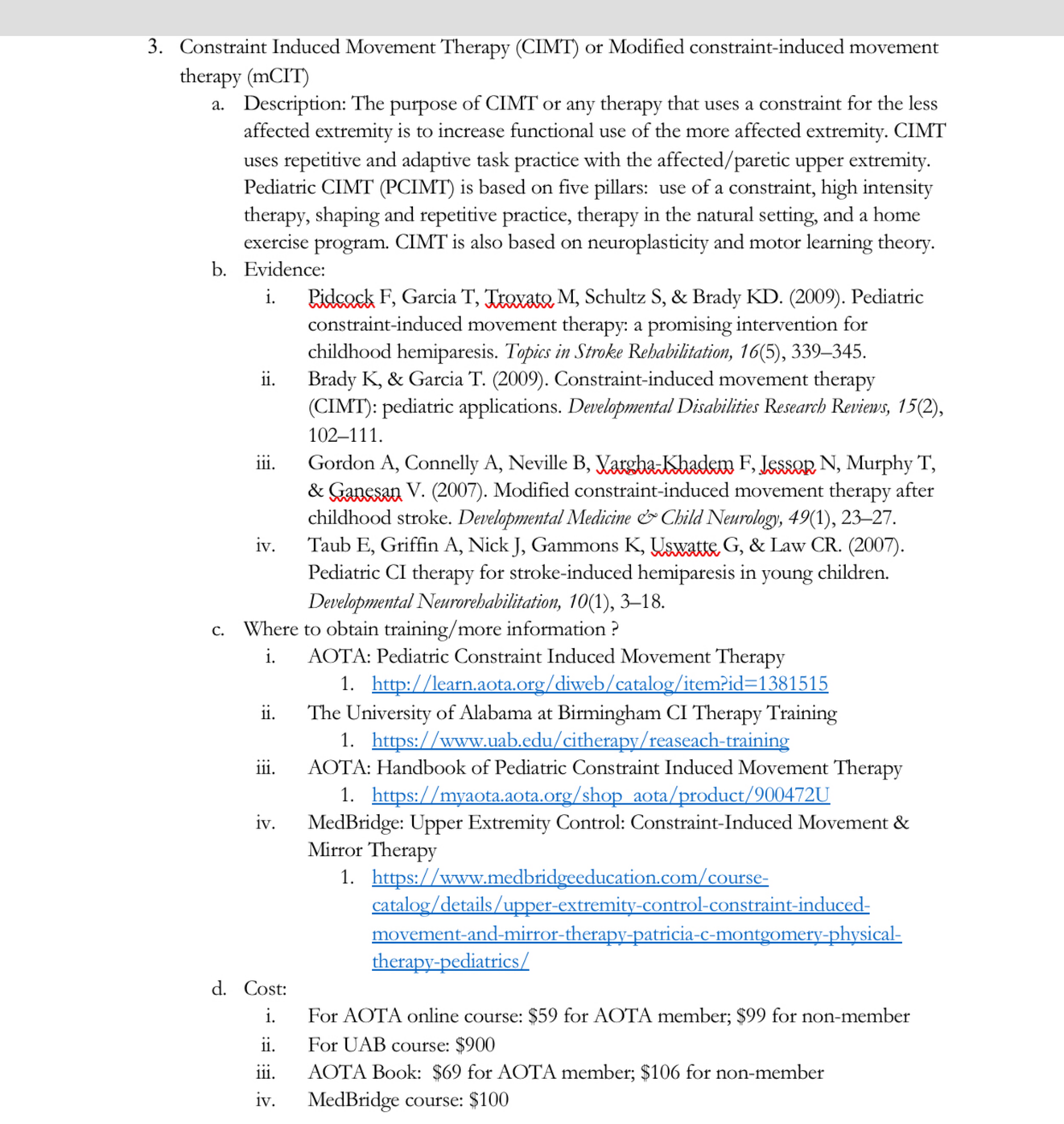
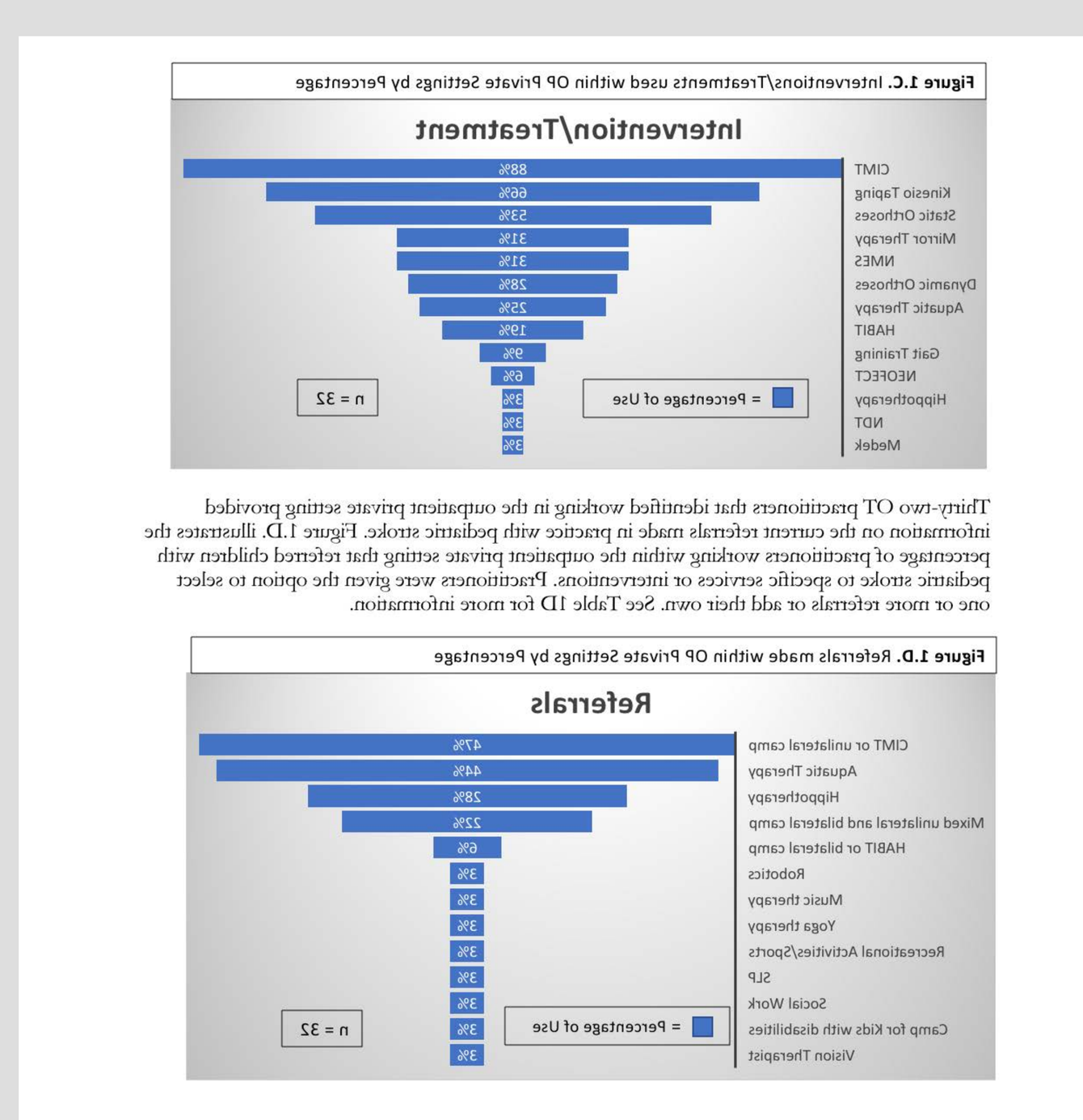
Needs Assessment & Literature Review

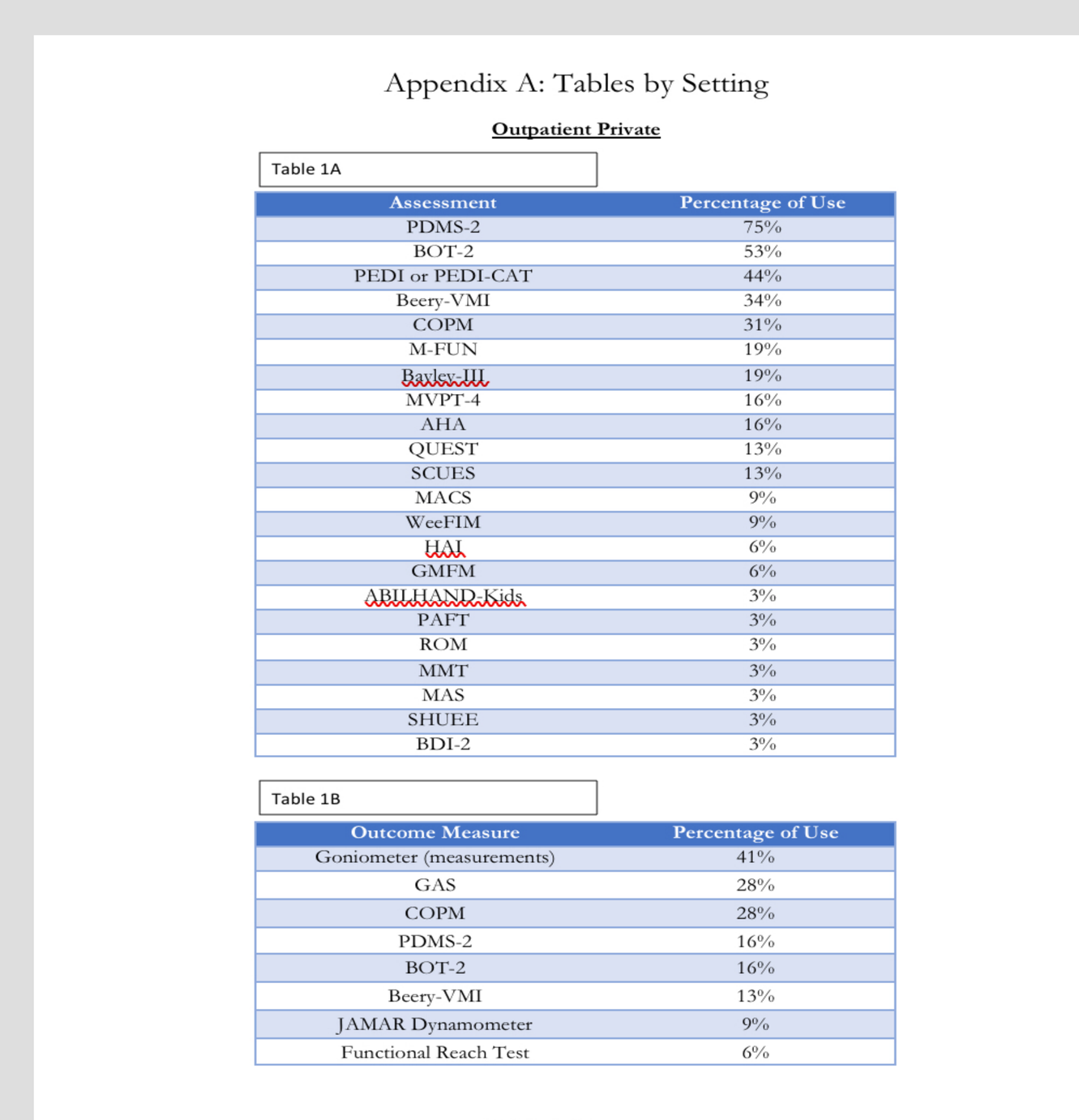
Pediatric stroke/CVA can be classified as either perinatal stroke (during fetal or neonatal life until 1 month after birth) or childhood stroke (from 1 month after birth to 18 years). Pediatric stroke/CVA can be a result of trauma, brain bleed (hemorrhagic), or blood clot (ischemic). Research indicates that ischemic stroke occurs in approximately 1/3500 live births and hemorrhagic stroke occurs in approximately 1/16,000 live births. The incidence of childhood stroke is estimated at approximately `2 to 13/100,000 children per year (Atkinson, Nixon-Cave, & Smith, 2018). Pediatric stroke/CVA is considered a lifelong disability especially when compared to adult stroke/CVA (Galvin, Hewish, Rice, & MacKay, 2011). Around 30 to 60% of children who experience a CVA will have a physical disability, 20 to 40% will have a cognitive or neuropsychological disability, and 16 to 37% will have behavioral problems (Hartel, Schilling, Sperner, and Thyen, 2004).

A main area of concern to an occupational therapist (OT) is patient function and independence in activities of daily living (ADL). An OT focuses on "… purposeful activity or interventions designed to achieve functional outcomes … and which develop, improve, sustain or restore the highest possible level of independence" (Legg et al., 2007, p. 922). According to Hebert et al. (2016), occupational therapists are one of the professions that are part of the core pediatric stroke rehabilitation team, along with physicians, physical therapists, speech-language pathologists, nurses, parents, and more.

Although there has been a slight increase in awareness of pediatric stroke as a diagnosis, and some research regarding assessments and interventions for treatment with this population, there is a gap in knowledge of what is best practice for treatment and assessments in this specialty area (Ferriero et al., 2019).







Project Description & Site

Purpose: Occupational therapy (OT) practitioners are vital members in the treatment of pediatric stroke. However, there is no best practice resource guideline for an OT practitioner to know what assessments, outcome measures, and interventions are available or useful to provide the best treatment to a patient with pediatric stroke. Through the current project, a best practice resource guideline will be designed that can be utilized by OT practitioners. The best practice resource guideline will fill in the gap for an OT practitioner wondering what are the best assessments to use to measure baseline in pediatric stroke, what are the best outcome measures to monitor progress during treatment of pediatric stroke, and what treatment intervention will help a child with pediatric stroke improve and succeed.

Location: Crossway Pediatric Therapy in Charlotte, North Carolina.

Expert Mentor: Shelley Dean, over 20 years of providing treatment and research regarding pediatric stroke.

Mission & Vision Statements

Vision Statement:

To provide occupational therapy practitioners and occupational therapy students with an evidence-based and peer-reviewed best practice resource guideline for assessing and treating pediatric stroke to improve accuracy and quality of treatment, as well as quality of life.

Mission Statement:

To gain advanced knowledge and skills regarding the treatment of pediatric stroke and to develop an evidence-based and peer-reviewed best practice resource guideline to be utilized by occupational therapy practitioners and students.

Project Completion and Outcomes

❖Creation of a Best Practice Resource Guideline for OT practitioners assessing and treating pediatric stroke.

❖Hands-on training and experience with multiple interventions including CIMT, bimanual training, kinesiology taping, NMES, and robotics (NEOFECT and RES bike).

❖Continuing education courses to understand the etiology and treatment for pediatric stroke and to learn how to create a CIMT cast and create a CIMT program for children.

https://www.facebook.com/InternationalAllianceForPediatricStroke/photos/a.123807257792160/536049323234616/?type=3

Deliverables

1. Evidence-based and peer-reviewed best practice resource guideline for OT practitioners assessing and treating pediatric stroke.
   - Created a guideline that was reviewed by both expert and faculty mentor . Guideline was created based on experience, survey results, and research .
2. Survey results from at least one pediatric stroke program/clinic or OTR/L treating children who have sustained a CVA.
   - I was able to receive survey results/data from 125 practitioners.
3. The completion certificate of 2 Continuing Education courses.
   - CAST Module 9: Pediatric Stroke & AOTA CIMT course

Future Implications for OT

The guideline provides OT practitioners with resources regarding what options there are for assessment and treatment for pediatric stroke and how to monitor progress during throughout intervention and care.

The guideline provides current evidence for the use of specific assessments, outcome measures, and interventions for pediatric stroke, there is a need for further evidence for use of these assessments, outcome measures, and interventions among the pediatric stroke population.

KEY REFERENCES

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