**Title:** Pediatric Physical Therapists Use of the Congenital Muscular Torticollis Clinical Practice Guidelines; a Qualitative Interview Study on Its Implementation

***Identification of the research problem****:* The clinical practice guideline for CMT was developed in 2013. The CPG was developed to decrease the variation in practice. The developers conducted presentations, research study and were interested how the CPG was being utilized and implemented in the treatment of infants diagnosed with CMT in clinical practice. The CPG was studied from a quantitative prospective and there was interest in the participants views from a qualitative perspective.

**Purpose:** The research study is a follow-up to the quantitative survey to examine the perceptions of pediatric PTs about the application of the 2013 CMT CPG.

**Reviewing the literature**: A review of the literature related to the diagnosis, PT evaluation and treatment of infants with CMT. Also reviewed the literature related to the goal and development of CPGs.

***Methods:***

**Qualitative approach-** Inductive phenomenological approach

**Researcher characteristics and reflexivity-** The first author KNC, a pediatric PT and experienced qualitative researcher, conducted the interviews; she neither wrote the CMT CPG nor assisted with the quantitative survey. She had no prior contact or professional relationships with any of the participants and made a conscious effort not to engage in clinical discussions about personal experiences treating infants with CMT.

**Context**- One-on-one, semi-structured telephone interviews were recorded with an online conference audio recording system

**Sampling strategy**- In order to achieve breadth and depth of application of the CMT CPG. The participants were selected from the volunteers using a purposive sampling technique. This subset of pediatric PTs had completed the quantitative survey and either read the CMT CPG or attended APTA or APPT presentations about it; all had experience treating infants with CMT.

**Human subjects**- Chatham University’s Institutional Review Board approved the study.

**Data collection methods**- The qualitative strategy used in this study was semi-structured interviews which gathered demographic information about the participant and then focused the participant’s knowledge and experience with the CMT CPG. One-on-one, semi-structured telephone interviews were recorded. Randomly assigned code numbers maintained participant anonymity. Questions were derived from iterative discussions by the authors. In total, 13 semi-structured interviews were conducted over the course of a month. The 45 - 60 minute interviews were recorded and transcribed. The interview transcriptions, as well as the CMT CPG, were used in developing the study’s primary narrative.

**Data collection instruments**- The researchers used an interview format with developed semi-structured interview questions. An online conference audio recording system was used.

***Data analysis****-* An inductive phenomenological approach was used to analyze the data. Initially, the researcher managed the data and later N-vivo software was useful in managing the data.

Through constant data comparison, several ideas/points emerged from the interview transcripts

and these were coded into key concepts. Initial codes were developed to organize and sort interview content based on the CMT CPG, the quantitative survey data, and literature on CPG development and knowledge translation. Analysis began with an open coding strategy, allowing for independent interview data analysis, followed by content thematic analysis to identify emerging themes using an axial coding.

This iterative data analysis process via thematic analysis identified main themes.

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|  | Examples of coded data that were organized into each of the three themes. | | |
| Themes | Knowledge and Evidence for Practice | Clinician Education | CPG Structure/Components that influenced practice (positive and negative) |
|  | * Improved use of Evidence in practice/Evidence-based practice (EBP) * Increased knowledge of congenital muscular torticollis (CMT) * Confirmed Intervention/approach to treatment * Established of the CPG CMT Classification grades and Decision tree * Established the CPG recommendations * Challenged alternative approaches - evidence in CPG was not inclusive of alternative approaches | * Identified staff to work through the CMT- CPG and educate the staff clinicians * Provided continuing education courses * Used for education/ communication with clinicians in practice * Contributed to practice setting specific practice guidelines * Shared CPG with other PTs * Provided a resource tool for clinician education and practice * Pulled out specific aspects to use as a ready reference during examination/ intervention | * Appreciated objectivity of the process * Appreciated practicality of Classification grades and Decision tree * Increased reputation of physical therapy and distinguishes the   practice   * Created positive impact on practice behaviors * Validated current practice/ increased confidence in practice * Complexity of the document/ considered overwhelming and long |

***Rigor, Transparency and Trustworthiness***- Interview data were triangulated with the CMT CPG, the quantitative survey results and the authors’ clinical expertise. Triangulation processes cross verify the same information to increase the validity and reliability. Triangulation by all authors supported thematic agreement. To ensure rigor, transparency and trustworthiness, KNC maintained an audit trail and was immersed in the data throughout the study. A second trained qualitative researcher (RLD) coded the data for good to excellent percent agreement of 91%.