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Coaching Behaviors used by Clinicians During Pediatric Feeding Therapy

by

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A thesis

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To the Graduate Faculty:

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List of Abbreviations

PFD Pediatric Feeding Disorder

SLP Speech Language Pathologist

OT Occupational Therapist

GP Guided Practice

NICU Neonatal Intensive Care Unit

CIS Conversation Information Sharing

O Observation

DTD Direct Teaching and Demonstrating

GP Guided Practice

CP Caregiver Practice

R Reflection

Coaching Behaviors used by Clinicians During Pediatric Feeding Therapy

Thesis Abstract-Idaho State University (2021)

The diagnosis of PFD is given when an individual has medical, nutritional, feeding, or psychosocial dysfunction (Goday et al., 2019). Effects of PFDs can include challenges with weight, dehydration, aspiration pneumonia, neurodevelopment, malnutrition, and sometimes death of the child (Goday et al., 2019). Coaching is an interactive process between a coach and a caregiver that promotes learning of a skill and a process that guides the caregiver in being able to independently refine and self-reflect on the learned skill(s). This independent response enhances caregiver confidence and competence to implement the skill independently at home with their child. The use of coaching for interventions has been widely used for treating delays/disorders of speech and language (Friedman et al., 2012, Harris & Graham, 2010, Rush et al., 2003, Kemp & Turnbull, 2014). In the area of Pediatric Feeding Disorders (PFD) the use of a coaching model for intervention has not been as well researched when compared to coaching for treating speech and language disorders

Key Words: coaching, pediatric feeding disorders, coaching behaviors, coaching model, guided practice

Chapter I: Introduction

Children with Pediatric Feeding Disorders (PFD) have significant needs that often cannot be met without the involvement of a skilled professional. Caregivers of children that struggle to feed or eat may feel frustrated or may even feel alone in the management of PFDs (Cleveland, 2008; Park et al., 2016). The developmental outcomes of a child with PFD may also be of concern if the signs/symptoms of the disorder are not addressed in an appropriate and timely manner. Coaching is an interactive process between a coach and a caregiver that promotes learning of a skill and a process that guides the caregiver in being able to independently refine and self-reflect on the learned skill(s). This independent response enhances caregiver confidence and competence to implement the skill independently at home with their child. The use of coaching for interventions has been widely used for treating delays/disorders of speech and language (Friedman et al., 2012, Harris & Graham, 2010, Rush et al., 2003, Kemp & Turnbull, 2014). In the area of Pediatric Feeding Disorders (PFD) the use of a coaching model for intervention has not been as well researched when compared to coaching for treating speech and language disorders; however Guided Participation (GP) (a term used primarily in the field of nursing) has been used to describe coaching-like behaviors in the area of PFDs (Pridham et al., 2018). There also is a limited amount of information available to practicing speech-language clinicians who specialize in assessment and treatment of PFDs, in how to implement a coaching type of model for intervention.

Pediatric Feeding Therapy

It is within the speech-language pathologist's (SLP) scope of practice to assess, treat, educate, and advocate for children diagnosed with PFDs. An SLP can begin assessment and treatment of a client from birth, often in the neonatal intensive care unit (NICU) (Shaker, 2017).

Feeding disorders and dysphagia (also called swallowing disorders) can occur as early as birth and can continually impact a persons' quality of life. When these disorders occur in children under the age of 18, they are referred to as Pediatric Feeding Disorders (PFDs) (Goday et al., 2019). This diagnosis of PFD is given when an individual has medical, nutritional, feeding, or psychosocial dysfunction (Goday et al., 2019). Effects of PFDs can include challenges with weight, dehydration, aspiration pneumonia, neurodevelopment, malnutrition, and sometimes death of the child (Goday et al., 2019).

The feeding process is a complicated process and goes beyond a simple transfer of nutrients to the infant. The parent-infant relationship is often built and strengthened through feeding routines and processes (Pridham et al., 2005). Negative feeding experiences for infants and children may cause stress that can possibly lead to aversive behaviors that can persist over time (Shaker, 2013). These aversive behaviors affect the feeding process and can contribute to parent's feelings of stress related to feeding routines and processes (Cleveland, 2008; Park et al., 2016). Therefore, because the parent-infant feeding relationship has a direct impact on infants feeding behaviors, focusing on the caregiver's role in PFD therapy is vital for safety, nutrition, and bonding with the infant, and a critical part of positive outcomes for the treatment of PFDs (Shaker, 2013).

The challenges of parents or caregivers of children with PFDs have typically been observed and researched most often in the NICU. The research outside of medical facilities in outpatient or in-home therapy settings, in regard to the challenge's parents/caregivers face as well as how to support these parents/caregivers, has also not been as widely researched in the area of speech-language pathology. Cleveland (2008) conducted a systematic review to explore the needs of parents/caregivers caring for infants in the NICU, and behaviors that support the care and feeding

behaviors of this fragile population. Of the 60 articles included in the systematic review, results indicated that parents' primary needs were: being included in the decision-making process related to infant's care, being able to protect the infant, being able to spend time with the infant, being perceived well by the nursery staff, needing personalized care, needing encouragement, and needing a good relationship with the nursing staff (Cleveland, 2008). The effective behaviors that supported parents were parent empowerment, a welcoming environment, supportive staff, parent education, and opportunities to practice skills (Cleveland, 2008). Health professionals need to be sensitive to the needs of the child but also need to be sensitive to the needs of the parents/caregivers involved with a child with PFD. Health professionals that are in outpatient and home therapy settings, such as SLPs, can and should be incorporating effective caregiver support into their intervention sessions. The importance of incorporating effective caregiver support in intervention sessions would most likely increase generalization of feeding skills, increase developmental outcomes and significantly decrease the frustration and stress of the caregiver, which would in turn provide positive outcomes for the child and the caregiver.

With the increased use of the coaching model in early intervention for speech and language skills and the positive outcomes attributed to increased skills and success of generalization, the use of a coaching model for feeding therapy is an important consideration for the profession of SLPs in the treatment of PFDs population to provide a means of intentional parent/caregiver support and scaffolding.

Coaching

Most likely many SLPs are naturally incorporating ways of coaching families through feeding intervention, and especially if they are guiding the parent/caregiver or child in mastery of a skill. The skills needed to coach a parent/caregiver to carryover a skill are crucial for an SLP

in order to impact outcomes and progress. In general, due to caseload demands of an SLP, many SLPs typically are only doing direct therapy one-two times per week. If the SLP or health care professional has the opportunity to increase the dosage of therapy, increase the independent use of a skill, or move from direct therapy to consultation, this in turn empowers the family/caregiver and significantly increases outcomes and can move children and their families off of waitlists. The reduction of time could possibly reduce healthcare cost and reduce the need for the SLP to be present for each progression or regression of skills. The use of guided practice/coaching models have been proven to reduce the number of sessions needed for speech and language therapy and also have been proven to increase competence of learned skills and generalization without the therapist needed to be present or directly available for each skill. To this date, there appears to not be a designated definition for coaching, or sequence for coaching that would be a "one size fits all" that is used by all health professionals when it comes to coaching and feeding. Coaching has been defined in multiple ways across professions. The challenge then in the variability in these terms and definitions across the health professions has created similarities and differences that provide advantages and disadvantages to practicing clinicians.

Kemp and Turnbull (2014) analyzed coaching definitions and models for early intervention, by a research synthesis, in the field of speech language pathology to assist in creating a clear definition and model for clinicians to follow. Their findings presented that out of the eight studies they analyzed, only three (Blauw-Hospers et al., 2011, Salisbury & Copeland, 2013, Vismara et al., 2012) had explicit definitions of "coaching" (Kemp & Turnbull, 2014). This lack of a clear definition or lack of clear processes or guidelines makes it challenging for practicing SLPs to provide this intervention with competency. There then appears to be a need within the profession to create and agree upon an operational definition for coaching (Kemp &

Turnbull, 2014, Friedman et al., 2012). Eight of the studies Kemp and Turnbull (2014) analyzed presented with improvement in therapy with coaching, some with significant increase, when changing or increasing a desired behavior in intervention. The parent outcomes of the studies presented with a variety of positive factors, such as decreased stress, increased responsiveness to children, and more confidence and competence (Kemp & Turnbull, 2014). The eight-studies review indicated that coaching is beneficial to therapy, but all of the studies had different definitions of coaching as well as the components of what constitutes coaching are not operationally defined. Further research needs to be done to find definitions that translate across healthcare professionals as well as research indicating the components needed for coaching, what steps or sequence or categories of coaching are done to improve outcomes in treatment of PFD.

Three studies provided definitions of coaching above in Kemp & Turnbull's (2014) research synthesis. Vismara and colleagues (2012) trained parents to use Early Start Denver Model and discussed their coaching model which is supposed to increase parent techniques used at home. The researchers stated they used joint planning, observation, active listening, reflective questioning, and planning coaching characteristics in their coaching model. Blauw-Hospers and colleagues (2011) have less specific coaching characteristics and discuss coaching is an ongoing partnership to treat, cope, and educate. The coaching characteristics in the above research should be considered when forming an effective universal coaching model. The individual coaching characteristics above are not clearly defined, which again makes it difficult for all SLPs to implement and recognize the strategies used in their therapy that may constitute as part of a coaching model. In the Salisbury and Copeland (2013) study, they based their coaching model outline from Friedman and colleagues (2012) model of coaching, which is outlined below. In the Salisbury and Copeland (2013) study twenty-one infants and toddlers, that were identified with

having various disabilities and all from a Part C early intervention. The program was designed to be a caregiver focused intervention program. The program was examined for child and caregiver outcomes. Salisbury and Copeland (2013) found an increase in competence, confidence, and in motor and social skills across clients. They also reported significant gains in developmental domains for the children outcomes, while using Friedman and colleagues (2012) coaching model. These three studies were successful in their coaching with caregivers and language therapy intervention. The coaching models they used proved to be successful with interventionists, the caregivers and most likely successful due to having a clearly outlined and defined coaching model to follow.

Friedman and colleagues (2012) used the following coaching categories as their model for intervention: conversation and information sharing, observation, demonstrating, direct teaching, caregiver practice with feedback, guided practice with feedback, problem solving, child focused, and not coaching as characteristics in their coaching model (Friedman et al., 2012). Twelve early intervention providers with a range of 3-13 years of experience tested these explicit definitions and their effectiveness Friedman et al., 2012). They videotaped their sessions to examine coaching strategies used in their sessions. The providers were separated into experimental groups that received different training before their videotaped sessions: (1) two-day training and monthly feedback, (2) 11-day training and weekly feedback, (3) initial training and monthly feedback. Outcomes of this study show that coaching was used in an average range between 67%-83% of the time during the different sessions. The coaching strategies most frequently used with the experimental groups during sessions were: (1) conversation and information sharing, observation, not coaching, guided practice with feedback, (2) guided practice with feedback, (3) conversation, observing, guided practice with feedback.

In a randomized control trial, (Roberts & Kaiser, 2015) parents of toddlers, with below average language scores, were providing caregiver implemented therapy or a usual therapy control group. If assigned to the intervention group parents were instructed by using the teach-model-coach-review method before providing intervention to their child. Teach-model-coach-review is one model that is used currently to provide coaching. The model is broken down into four parts: (1) strategy taught in the workshop and review strategy at beginning of session, (2) interventionist models strategy with the child, (3) caregiver practices the strategy with their child while interventionist provides coaching, and (4) review of the session (Roberts & Kaiser, 2015). It is important to note that only one part of this model is considered coaching and a description of what the interventionist provided as "coaching" what not provided or outlined. It could also be argued that all aspects of this 4-part model should be included under the umbrella term "coaching". Roberts and Kaiser's results revealed that caregiver's ability to use language facilitation strategies increased (Roberts & Kaiser, 2015). Parents felt their children's language was improving, they felt more confident in helping their child's language, and continued to use the intervention at home after this study was over (Roberts & Kaiser, 2015). Although there was no significant change in the children's language, there was some noticeable change to receptive language (Roberts & Kaiser, 2015). The lack of improvement in scores is mostly likely due to the intervention only being about three months, which is often normal for only three-month interventions. If the researchers continued taking data longitudinally there would mostly likely had been improvement of the children's language, when comparing the intervention and control group. It can be concluded that this 4-part model has effective strengths and should be considered when forming an operational definition of coaching.

Research has more clearly defined coaching when it comes to speech and language intervention or when working with families and caregivers in early intervention programs. When it comes to defining coaching within the field of speech language pathology or overall in the healthcare professions, there appears to be inconsistent use of a clear definition and the processes or the model of coaching is also not clear or concise. We do know that the evidence for the use of coaching is quite positive in the research and maximizes outcomes, but the consistency in the definitions and the model is quite unclear for the field of speech language pathology and overall in the health professions.

Coaching with Feeding Therapy

Effective intervention for children with PFDs will require SLPs to coach parents on how to feed their children in a safe and functional manner (Shaker, 2017). Unfortunately, coaching practices related to feeding and swallowing intervention are even less researched than coaching models at the early intervention level. Based on the literature review and review of current research in other areas that use coaching models, the framework or model again is not clear. With not having a clear definition or an appropriate framework, research also points out there are overall discrepancies in and between providers in providing coaching intervention to children and their caregivers (Friedman et al., 2012).

GP is the term that was found to be in literature to refer to intervention that is seen in PFD research, instead of "coaching". It has been found as an effective behavior that supports parents in the NICU. GP has been found in literature that is related to the field of nursing and PFD therapy. Pridham and colleagues (2018) define and discuss the use of GP as it is related to nursing. The authors discuss that GP is founded on many theoretical perspectives of multiple disciplines, such as culture, education, communication, and relationships (Pridham et al., 2018).

Based on the review of the literature, GP appears to be an overall fundamental strategy used within the coaching model, but GP appears to be only one piece of a coaching model based on the review of literature and research. It can also be assumed that due to the fact that GP is used in the NICU, generally the acute stage of treatment is generally just guided practice for the caregivers as the skills are generally not mastered in this type of acute setting. GP may be the best strategy for nurses or other health care providers to use with caregivers in an acute setting, but how effective would intervention be for the SLPs or Occupational Therapists (OTs) in those settings to be able to have caregivers independently be skilled in feeding their child. GP is an important stage within a model of coaching and does show the importance of the relationship between the child and caregiver, and how effective coaching is an essential part of the coaching process (Pridham et al., 2018, pg xix).

Pridham and colleagues (2005) also use the terminology GP to explain how to implement coaching strategies into PFD therapy. The authors wanted to see the impact GP would play a role on feeding competencies of mothers and their infants. Two groups were randomized, a GP group and a compare group who received as normal treatment. They defined their intervention, GP, as an intervention that develops caregivers' skills through past, present, and anticipated experiences (Pridham et al., 2005) During GP intervention the nurses attained joint attention, problem solved, educated, supported, and reflected with the child's caregivers (Pridham et al., 2005). 42 caregiver and child pairs were assessed longitudinally from 1 month to 12 months after birth (Pridham et al., 2005). Pridham and colleagues (2005) have shown that the mothers and children benefited from GP through growth in competency in regulating negative behavior while feeding. The goal to train caregivers in anticipated experiences through GP is the main goal for coaching, which is to train caregivers to treat their child's PFD independently at home safely and confidently. These

GP strategies were shown effective, but were not clearly outlined and defined, which would be difficult for SLPs or nurses to duplicate.

Thoyre (2016) and colleagues performed a study to test the effectiveness of GP when implementing Co-Regulated Feeding Intervention (CoReg). The researchers outlined GP as five Steps: 1. Establish goals related to the infants feeding needs 2. Observe and analyze the infant's feeding issues 3. Maintain the mother's engagement during sessions 4. Guide the mother in implementing techniques and making connections between how the infant responds 5. Guide the mother toward a sense of competence (Thoyre et al., 2016). Nurses implemented GP during five intervention sessions with the 13 mothers. Parents of these infants gained knowledge and confidence when feeding their infants for when they leave the hospital and go home. Further research needs to be done to find the effectiveness of GP and coaching as GP has similar qualities to coaching, but GP again appears to be one piece of the broader coaching model used in other interventions. GP implies that the professional is guiding, and the guiding will not end. The goal of coaching is that the guiding will eventually end, and the caregiver is able to implement a strategy independently.

With the research that has been reviewed for this thesis, the limited amount of research regarding coaching and PFDs in the field of speech language pathology, and initial attempts to partner with local SLPs during a pandemic (COVID-19), it became quite evident that the information available on the internet to clinicians, would be used to investigate what information families may be seeking during a challenging time. The following research questions were adapted, and the information was used to determine what types of coaching models exist on the internet for feeding therapy, are there videos available that would address the coaching model,

and what videos could we learn from and later provide or capitalize for future research in the areas of speech language pathology and coaching for PFDs.

Research questions:

1) How many videos exist on the internet that utilize some type of coaching practice(s) related to PFD?
2) How often are coaching techniques modeled as best practice in online resources related to pediatric feeding disorders?
3) Which coaching techniques are used most and least frequently?

Chapter II: Methods

This study conducted a review of existing PFD therapy videos that are available through the public domain. First a search using the terms "pediatric feeding swallowing therapy" and "pediatric coaching feeding swallowing therapy" were performed on the YouTube search engine. The videos were sorted and viewed in the order of relevance, which is the default option on YouTube. The inclusion criteria for the videos to be analyzed in the study are as follows: (1) PFD therapy is observed, (2) child is present, (3) caregiver is present, (4) therapist is present and providing therapy. Out of the 100 videos viewed under each search term number, 17 videos met the inclusion criteria and were analyzed in the study and the remaining videos were excluded.

Each of the videos were coded by the author. The videos were coded to determine the type and frequency of coaching strategies used during the session. The taxonomy of strategies, definitions, and examples in the coaching model outline were used during this process. The coaching strategies in Appendix A were created based on the research of Friedman and colleagues (2012). The following coaching behaviors in this coaching model are:

Table 1. Coaching Behaviors

Coaching Strategy	Coaching Definition
Conversation Information Sharing (CIS)	Strategy between caregiver and coach that allows shared information during therapy sessions. The relationship between coach and caregiver is formed during this time to build trust with one another. Coach and caregiver share information, ask and answer questions, and problem solve that is related to previous sessions, progress made, and future therapy that is related to child and family goals.
Observation (O)	The coach observes the caregiver's interaction with child and the child's interaction with the caregiver. The coach observes without offering feedback or suggestions. The coach observes a routine in the caregiver and child's natural, typical environment.
Direct Teaching (DTD) and Demonstrating	This strategy is used to teach the caregiver a skill that they can do independently at home. The coach scaffolds to the caregiver's knowledge and teaches them through a variety

	of instruction: verbal, print, video, visual. The coach then demonstrates the skills with the child by modeling the skill for the caregiver.
Guided Practice (GP)	Coach and caregiver may take turns practicing a skill with the child. The coach is able to offer verbal guidance, feedback, and recommendations throughout to support the caregiver.
Caregiver Practice (CP)	The caregiver is primarily implementing skill during therapy to increase independence. The coach provides feedback after the task/skill is completed. The Coach at this point is less directive and more in a stage of allowing the caregiver to increase independence and practice independently The Coaches statements at this point would be: what went well, how the child responded differently, and what could be done differently next time.
Reflection (R)	This strategy is used for caregiver reflection encouraged by the coach to discuss interactions with their child, what is going well, and what can be changed to improve their interactions. This helps the caregiver analyze their skills, which is done by the professional asking questions to help guide the reflection process.

Note. Coaching behaviors in coaching model created for PFD therapy based on Friedman and colleagues (2012) coaching model for language therapy. Examples of each coaching behavior can be found in Appendix A.

A sample of four YouTube videos were selected to determine if coaching criteria was adequate and if modifications were needed prior to retrieving a larger sample. From those four initial videos and referencing the research of Friedman and colleagues (2012) coaching strategies in Appendix A were identified, sorted and categorized as being most salient based on expert supervisor opinion and thesis student analysis. The identification, sorting, and categorization was based on coaching strategies' or patterns practicing clinicians in the field of speech language pathology would most likely use in working with children identified as having PFD and their caregivers. Each coaching strategy that was identified to fit into the categorization of a coaching strategy, in the YouTube videos, were given a score of 0 or a 1 by the thesis student. If a coaching behavior/strategy was absent and did not occur, it was coded with a 0. If a coaching behavior/strategy was present and did occur, it was given a 1. The YouTube videos were

analyzed for the following items to determine the quality of videos and for the possible use as an education tool: if an SLP is providing the intervention services in the video, the length of video, the references/sources listed, the authors/affiliations provided, the date content was posted. All of the videos for inclusion in the study were judged to be treatment PFD therapy sessions due to the fact that no coaching or coaching strategies would generally be being performed during the assessment process. If the video was an assessment video it was not included in the video selection for analysis.

To ensure reliability of coding a graduate student reviewed 25% of the chosen YouTube videos and coded them to ensure agreement and consistency amongst coding the videos. Students in the graduate program, who are HIPPA and CITI trained, and have had one, 16-week course in swallowing disorders at the graduate level, were asked to participate as the student coder. There were two training sessions where the student coder was trained in how to code coaching strategies based on the predetermined categories identifies initially. During the sessions the student coder and thesis student discussed each coaching strategy definition and category, viewed video clips that demonstrated each coaching strategy/category, and identified possible strategies that were being used in the therapy videos by practitioner in the video or the response of the parent/caregiver to the practitioner in the video. The author directly taught the student coder and identified overall competency of the student coder. The student coder was taught the coding after being taught the coding process, was also taught by the thesis student how to collect the data while reviewing the four videos identifies prior by the SLP supervisor and thesis student reviewed in determining the competency of the student coder in being able to identify coaching strategies in these four prior identified videos and the thesis student and student coder practiced

coding those same videos, and then compared reliability with the thesis student, prior to reviewing the 17 videos determined to have met the inclusion criteria.

Because this is an exploratory study, descriptive data was used to assess trends within and between videos. Quantitative data was collected to assess the frequency and type of coaching behaviors used for each provider as well as to note the trends that exists between the different videos.

Chapter III: Results

The videos included in this study were analyzed for other features to determine if they are best practice for online resources and learning resources. All of the videos were treatment PFD therapy sessions due to no coaching usually being performed during the assessment process. Of the 17 videos, only five of the videos stated what professional was providing the PFD therapy. One of the five professionals was a SLP, but the other professionals providing coaching during PFD therapy were occupational therapists (OT). No references were provided for any of the videos. Six of the videos stated their affiliation/author of the video (VA Early Intervention Professional Development, JCFS Marketing, CDC Prevention, Telehealth Share, Sage Care Therapy Services). The videos were posted to YouTube during the years of 2011-2020 to demonstrate a range of PFD therapy services. When reviewing the 17 videos, the videos did not clearly state what the age of the children and what disorders they had. From clinical observation by the study's author the children's ages were a couple 10-month old's, 2-year old's, and 5-year old's. Some children had down syndrome, an unknown syndrome, and delayed due to complication at birth. Some treatment consisted of g-tubes, oral motor exercises, desensitization to food, and PO trials.

Table 2. YouTube Video Information

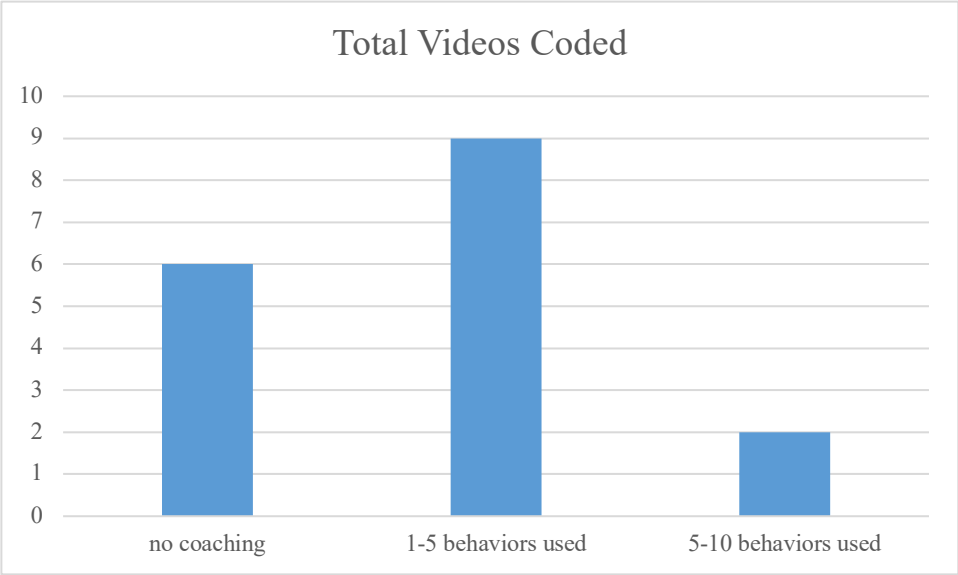
Video	Provider	Date Posted	Time	References	Affiliation
V1	Unknown	9/25/15	4:46	None	VA Early Intervention Professional Development
V2	Unknown	5/30/12	3:39	None	JCFS Marketing
V3	Unknown	9/29/15	1:53	None	CDC Prevention
V4	OT	7/18/13	11:44	None	no affiliation
V5	OT	4/11/20	1:42	None	Telehealth Share
V6	Unknown	3/20/18	12:57	None	no affiliation

V7	Unknown	5/11/15	0:41	None	Sage Care Therapy Services
V8	Unknown	*	2:15	None	no affiliation
V9	Unknown	6/13/19	2:15	None	no affiliation
V10	unknown	2/10/12	1:26	None	no affiliation
V11	OT	4/21/17	1:07	None	no affiliation
V12	SLP	10/3/18	4:04	None	no affiliation
V13	Unknown	9/26/18	2:25	None	no affiliation
V14	Unknown	4/10/16	1:10	None	no affiliation
V15	Unknown	8/26/13	1:31	None	no affiliation
V16	Unknown	8/26/11	4:47	None	no affiliation
V17	OT	4/11/20	2:30	None	Telehealth Share

Note. *Video is no longer available to be seen by the public on YouTube.

The following charts/graphs help display the results for the outcomes of the coaching strategies used in the studies PFD therapy videos found on YouTube. While reviewing the data from this study six videos did not have any coaching in them, so the coder created another strategy label, “No Coaching” in order to assist in the analysis of the data and have a category of videos that did not contain any observable coaching strategies/behaviors that could be identified based on the description/definitions of what meets a coaching strategy or behavior is. After searching for PFD videos that met the inclusion criteria, 17 videos were included in the study. After analyzing and coding these 17 videos, only 11 videos contained Coaching behaviors while six videos contained “No Coaching”. In the videos where “No Coaching” was seen, the clinicians were still providing therapy (PO trials, desensitization to food, oral motor exercises) and caregivers were present because that was a part of the inclusion criteria. The clinicians were treating the children, but were not discussing with the caregiver’s important clinical information, teaching them, or including them in the treatment process.

Figure 1. Number of Coaching Behaviors in each Video

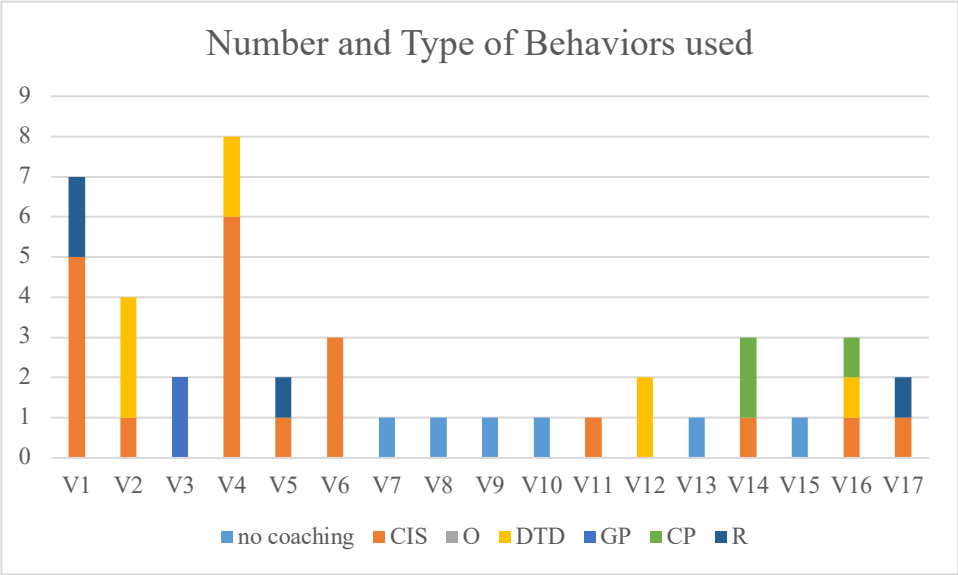


Note. No coaching= no coaching behaviors were observed during a video; 1-5 behaviors used= 1-5 coaching behaviors were observed during a video; 5-10 behaviors used= 5-10 coaching behaviors were observed during a video

The coaching behaviors coded for in this study are displayed in the graph on page 12 with their definitions to be used for reference.

The number of coaching behaviors used and what type of coaching behaviors used in the videos are displayed in a figure below. The table above defines the coaching behaviors displayed in the chart below. No coaching occurred in six videos, Conversation and Information Sharing occurred in nine videos, Observation occurred in zero videos, Direct Teaching and Demonstration occurred in four videos, Guided Practice occurred in one video, Caregiver Practice occurred in two videos, and Reflection occurred in three videos. All of these coaching behaviors are important and should be included in the coaching process.

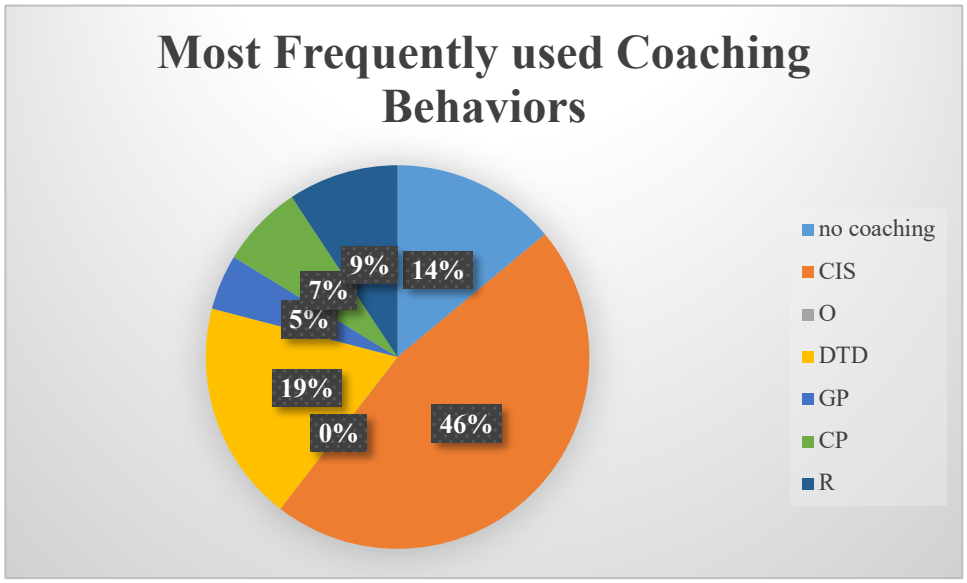
Figure 2. Number and Type of Coaching Behaviors in each Video



Note. No coaching= no coaching; CIS= Conversation and Information Sharing; O= Observation; DTD= Direct Teaching and Demonstrating; GP= Guided Practice, CP= Caregiver Practice; R= Reflection. Definitions and examples of each coaching behavior can be found in Appendix A.

Coaching strategies used most frequently in the coded videos are in the following order: (1) Conversation and Information Sharing, (2) Direct Teaching and Demonstrating, (3) No Coaching, (4) Reflection, (5) Caregiver Practice, (6) Guided Practice, (7) Observation. Conversation and Information Sharing was seen 46% of the time in the videos when observing coaching behaviors. Direct Teaching and Demonstrating was seen 19% of the time, No Coaching was seen 14% of the time, Reflection was seen 9% of the time, Caregiver Practice was seen 7%, Guided Practice was seen 5%, and Observation was seen 0% of the time when observing the videos for coaching behaviors.

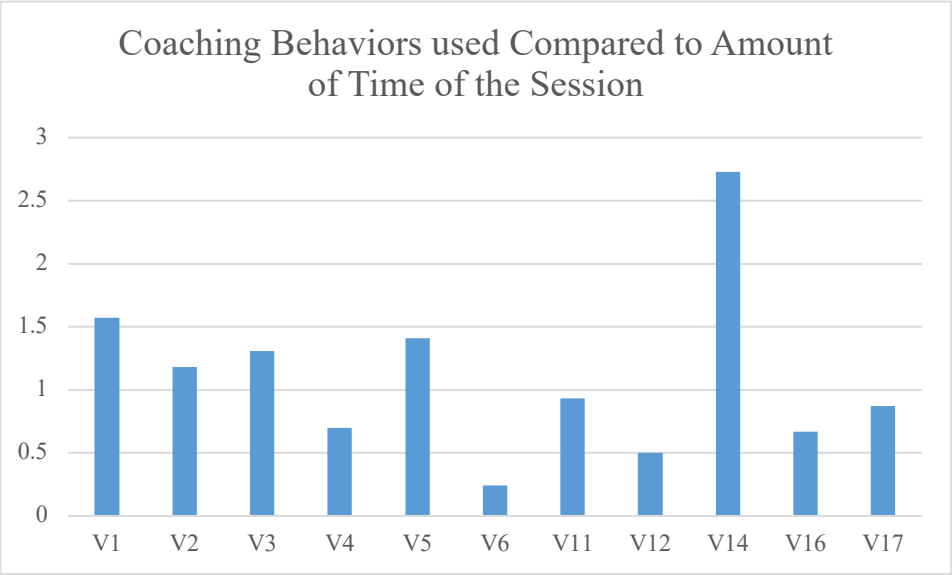
Figure 3. Percentage of Coaching Behaviors Observed to be used in YouTube Videos



Note. No coaching= no coaching; CIS= Conversation and Information Sharing; O= Observation; DTD= Direct Teaching and Demonstrating; GP= Guided Practice, CP= Caregiver Practice; R= Reflection. Definitions and examples of each coaching behavior can be found in Appendix A.

While creating inclusion criteria for the PFD therapy videos, found on YouTube, there was not a time limit set when developing the initial inclusion criteria and the methods for analysis. Due to the lack of a time limit being set, of the 17 videos analyzed, the total time of the videos ranged from 41 seconds to 12 minutes. The videos were reevaluated and calculated for overall time and then plotted according to amount of time. These videos had to be reevaluated because it was unfair to compare coaching behaviors between videos when the time of the sessions were not equal. The chart below displays the number of coaching behaviors used per video in a more equal manner.

Figure 4. Comparison of Coaching Behaviors used Compared to Length of Time of the Video



Note. Y-axis is number of coaching behaviors used during each video after the coaching behaviors were divided by the length of time of the videos in minutes.

Reliability was calculated by comparing the student coders results to the authors results to confirm coaching behaviors could be identified from the coaching model in PFD therapy videos. Comparing the number of coaching behaviors observed between both coders, 95% reliability was calculated. When comparing the specific coaching behaviors identified between both coders, 74% reliability was calculated.

Chapter IV: Discussion

This study is one of the first to create a Coaching model for PFD therapy and to analyze Coaching behaviors during PFD therapy sessions. The results will help guide researchers, educators, and clinicians toward better future therapy for children with PFDs and their caregivers. "No coaching" was the 3rd most used technique found in this sample of PFD therapy videos. The findings showed interesting characteristics that show how Coaching has not been being used in therapy. The top two most used Coaching behaviors were Conversation and Information Sharing and Direct Teaching and Demonstrating. The coaching behavior, Conversation and Information Sharing, is a coaching behavior judged to be used most often and occurred in 9 out of 17 of the videos analyzed. These top two most used behaviors are both important and needed in therapy sessions for the clinician and caregiver to communicate, educate, and learn from each other. Conversation and Information Sharing as seen in these videos is used often by clinicians, but it is important to move past this down the level of coaching to guided practice and reflection to demonstrate that parents/caregivers have gained competence to use the skill independently at home. Caregiver Practice, Guided Practice, and Reflection were judged to be used in the videos analyzed, but only a small amount of the time, which was below 9%. These three coaching behaviors are crucial for caregiver's confidence and competence in using the learned skills at home to help their children eat and swallow safely, and for those skills to generalize. The Coaching behaviors, Caregiver Practice, Guided Practice, and Reflection, were not distributed across videos as equally and the author would have liked to have seen these occur more often within the videos due to the importance of them. The behaviors are a higher-level coaching behavior and may not have occurred because the parents/caregivers in the videos were in earlier stages and not ready for the higher-level skills. Knowing this information

can help guide researchers in creating a clearer Coaching model and to help educate clinicians in the Coaching behaviors not used as often, so they are aware of these behaviors that should be used in the Coaching process.

During the search for videos to be included in this study out of 200, only 17 videos met the inclusion criteria. While reviewing the data to determine inclusion criteria and working to categorize coaching behaviors and the best practices, it should be noted that there were a small number of videos that provided information based on the provider, affiliation, and resources. Out of the 17 videos, more specific information regarding providing names, affiliation, and resources provided in this small number of videos were lacking. Specifically, none of the videos included information regarding references to levels of evidence or research as to support the reasoning for the type of intervention being provided to the families and clients and none indicated specifically what the clinicians were doing. Depending on the state either OTs, SLPs, or both will provide PFD therapy to children, due to it being in both their scope of practices. All but one of the videos clearly stated that an SLP was the specific health provider providing the intervention in the video. Telehealth Share provided two videos in this study that were posted in 2020 during COVID-19 which demonstrated their ability to Coach through Telehealth and treat PFD in therapy online. It is clear to the author that the current information provided on the internet is lacking in best practice and specific educational resources to support students, caregivers, and clinicians in Coaching behaviors and PFD therapy.

After the videos were reevaluated according to time (length of session), due to no time boundaries being set in inclusion criteria, the results changed between what videos used the most Coaching behaviors in their PFD therapy sessions. When the results were recalculated it was then fair to compare coaching behaviors between video sessions. Once the coaching behaviors

were divided by the length of the session V14 went from one of the videos who used the least number of Coaching behaviors to be the video who used the most Coaching behaviors, due to the short amount of the time the session occurred in. Three coaching behaviors were observed to be used in V14 (Conversation and Information Sharing, Caregiver Practice) in 1 minute and 10 seconds. This video demonstrates, although it is a short amount of time, that condensed videos can provide important information to the public. The same number of behaviors were used in V6 (three coaching behaviors), but it was 12 minutes and 57 seconds long. In V6 only Conversation and Information Sharing was used. This example demonstrates it is not just about *what* Coaching behaviors are used, but *how many* are being used during a session according to how long the session is. The amount of time spent Coaching is important as we can see from the results and should be considered by practicing clinicians and be evaluated by researchers in future research.

The previous methods of this study had to be changed due to the COVID-19 and Center for Disease Control guidelines. The methods in March of 2020 were approved by the prospectus committee and would have included PFD therapy videos of live, therapy sessions, not found on or having to reply on YouTube, of clinicians practicing in the Treasure Valley Idaho area. Due to COVID-19, clinicians and their facilities were not able to participate in the study as indicated by emails received by themselves or their upper administration. Clinicians were often providing PFD therapy services through Telehealth during the pandemic. A few clinicians reported they did not want to participate in this study once moving to a telepractice model because they were providing PFD therapy services over Telepractice and stated, "I do not feel comfortable doing this because it is not a reflection of my actual therapy" and "I am currently doing only telehealth and it would not be representative of me as a therapist since I am actually not doing Hands-On therapy with the child." Due to Telepractice services increasing and the importance of PFD

therapy, it is concerning clinicians did not feel they were providing their best services to these children and their parents/caregivers. According to the American Speech Language Hearing Association, practitioners/clinicians are expected to provide clients and their families evidence-based practices and services regardless of the mode of therapy (American Speech-Language-Hearing Association, n.d.). It should not matter the mode, online or in person, we owe it as professionals to provide evidence-based practices regardless of the mode of therapy or whether we are in a pandemic or not. The change from in person therapy to Telepractice therapy was fast and many clinicians indicated through e-mail when contacted about doing this study that they did not have time to adjust accordingly, especially in intervention needed for PFDs and ways to support families during this time. Clinicians need education in Coaching, coaching behaviors, and consider the use of a Coaching type model to best treat these high-risk children and their caregivers. The use of a coaching model could assist clinicians in determining the level of support a parent/caregiver may need from one session to the next. The clinician could determine, quite easily if using a coaching type model, if the skills were carried over from the previous session, For example, if the parent/caregiver was at the "reflection" level (the least supported level of this model presented in this paper) at the prior session and then the very next scheduled session the parent/caregiver presents with more "conversation and information sharing", this then for example, would indicate that there is more education or training that the parent/caregiver is seeking from the practitioner. Based on a quick reference to the levels of a coaching model a clinician has access to, the clinician could immediately provide the support needed and assist the parent/caregiver back to the more independent level. One could also assume that the use of coaching during this challenging time may have supported outcomes and

confidence levels of parents/caregivers having to rely less on the immediate contact with a clinician.

Recent literature discusses the impact COVID-19 has had on PFD therapy. Clinicians reported they were not providing coaching to their clients and caregivers prior to the pandemic Caplan-Colon, 2021). They would have the caregivers wait in the waiting room to watch the session on an iPad and then would come in at the end to review the session and receive homework (Caplan-Colon, 2021). They chose this approach to focus on the child during the session and avoid distractions from the home or caregivers (Caplan-Colon, 2021). This approach unfortunately does not focus on how caregivers respond or practice a skill that the practitioner is teaching the child or implementing during therapy. This is a concern because the parent/caregiver is the one who spends the most time with the child. The clinicians were reportedly worried about the efficacy of PFD therapy through Telepractice (Caplan-Colon, 2021). Through the sudden change of in person feeding intervention to them having to implement coaching during Telepractice during PFD sessions, the clinicians reportedly found that the use of the following coaching behaviors were most useful in their Telepractice sessions: observation, practice, joint problem-solving and planning, and allowing time for feedback and reflection (Caplan-Colon, 2021). They reportedly found the caregivers became more confident and competent when the practitioner used a Coaching model during their Telepractice sessions, and it was then later determined that the clinicians reportedly wanted to continue to use Coaching when they return to in person services (Caplan-Colon, 2021). The author did not state what Coaching model they used and did not provide provided definitions of the Coaching behaviors they found most effective. The improved therapy outcomes they found using Coaching; however, show how important this research is and SLPs need to be educated in

Coaching and the importance of its implementation it into PFD therapy whether if it is in person or through Telepractice.

It is clear to see from the results and opinions of practicing clinicians that coaching is not being used in PFD therapy. This is concerning because PFD therapy is crucial for parent infant relationships, neurodevelopment, nutrition, the safety and health of the child (Goday et al., 2019). Coaching teaches the parents to feed their child safely at home independently in a confident manner. When "No Coaching" was observed during the YouTube videos, clinicians were providing therapy to the children, but parents were not being taught how to feed their children safely. Children with PFDs are at risk for aspiration and aspiration pneumonia. If their parents are not taught how to feed them safely then the children are at a increased risk for aspiration and aspiration pneumonia, which increases their risk to be admitted to the hospital and life threatening illnesses (Goday et al., 2019). This is evidence to prove a coaching model is needed to support clinicians coaching treatment and more clinicians needs to be educated in coaching, especially if they are providing PFD therapy to ensure their safety and development.

When reviewing reliability between the student coder and the study's author. The amount of coaching behaviors reliability is appropriate at 95%, only decreased form 100% because of one behavior not being identified. The amount of type of coaching behaviors identified between both coders' reliability is 74% is most often due to disagreements between "Conversation and Information Sharing" and "Reflection", and "Conversation and Information Sharing" and "Direct Teaching and Demonstrating". It is understandable that "Conversation and Information Sharing" and "Reflection" could be confused between each other because they both involve discussion between the caregiver and coach. The difference is, during reflection the caregiver analyzes what they have learned and is able to problem solve. When creating a coaching model, this should be

considered and analyzed to create a better coaching model that can be used by all clinicians, such as creating better definitions to be able to identify the difference between “Conversation and Information Sharing” and “Reflection”.

Limitations

The coaching strategy “Observation” was judged to not be used in any of the 17 analyzed videos. In a coaching model the use of observation is critical in intervention. The coaching behavior of “observation” in the coaching model used in this study is, “The coach observes the caregiver’s interaction with child and the child’s interaction with the caregiver. The coach observes without offering feedback or suggestions. The coach observes a routine in the caregiver and child’s natural, typical environment.” When analyzing the videos this skill was not clearly seen as being implemented. This may have been due to the fact that most often when people are posting media to YouTube they generally edit or pick the most, what they determine, salient information. This is an important step in the coaching and therapy process because observation allows the clinician to directly observer the caregiver and be able to determine what support is then needed for generalization of skills on the side of the caregiver/parent and client. This allows the clinician to directly observe and determine the strengths and weaknesses that might be present and create a treatment plan to best treat the client and their family. It may also be that during the assessment process, lots of observation is completed, and because no assessment PFD sessions were specifically included for analysis in this study, this behavior is generally assumed and happening at the assessment level, but clinicians should be reminded of the importance of the continual intentional skill of observation during intervention as well as during assessment.

Due to the small sample of YouTube videos in the study there was less data to analyze. The inclusion criteria and search terms uses were very specific and could have impacted the results of the small sample size. More videos contained PFD therapy, but did not fit the inclusion criteria that was created for this study. Anyone can post a video on YouTube or a PFD video on YouTube,. A few organizations (CDC, VA early intervention) clearly stated who was posting the video and it was most likely for an educational purpose for the community. Other videos did not clearly state what affiliation they were a part of. A parent, clinician, facility, etc. can post a PFD video. Having a parent post a PFD therapy video most likely decreases the quality of the video and it often not posted for education purposes. The reasoning for posting these videos and who posted them could have impacted the quality of the videos and decreased the quality of the videos for this study.

Conclusion

The videos analyzed in this study indicated that it is clear that clinicians, specifically Occupational therapists and Speech Language Pathologists specializing in PFDs are using types of coaching behaviors during intervention. What is not clear and is worth further analysis of the coaching behaviors identified in this study are: Is there a progression of coaching behaviors that clinicians should be intentionally seeking during therapy with PFD clients and their families?; Does the use of a coaching model increase the confidence levels of the clinician and outcomes if the behaviors of coaching are clearly defined and documented?; Can the use of a coaching type model assist clinicians in determining the level of support or if a skill has generalized for a client and their families? Because of the small number of videos anticipated for this project, the results will not be generalizable to all SLPs who provide services to children with PFD. However, we believe this will provide an important first step in examining the use of coaching behaviors of

SLPs who provide PFD therapy. A larger sample size of clinicians and longer therapy sessions would provide more information that is a true representation of Coaching behaviors and use of Coaching models in PFD therapy. This study shows the number of Coaching behaviors being used are important, but the quality of Coaching behaviors provided is important too, not just the quantity. The quality of Coaching behaviors were not formally assessed in this study, but should be in future research. Even though a clinician is demonstrating all types of Coaching behaviors, it does not determine if the caregiver is learning this skill to effectively input at home independently. The coach needs to be providing high quality coaching to ensure the caregiver can feed their children safely independently and should be addressed in future research.

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Appendix: Coaching Model

Coaching: An interactive process between a coach (SLP) and a caregiver that promotes learning of a skill and a process that guides the caregiver in being able to independently refine and self-reflect on the learned skill(s) so that the caregiver has confidence and competence to implement the skill independently at home. (Friedman et al., 2012, Harris & Graham, 2010, Rush et al., 2003)

Coach: Trained and certified speech language pathologist.

Steps in Coaching: (Friedman et al., 2012)

Setting the Stage

1. Conversation and information sharing
2. Observation
3. Direct teaching and demonstrating

Application and Feedback

4. Guided practice

Mastery

5. Caregiver practice
6. Reflection

Feedback: Verbal statements by the coach to the caregiver that reinforces the caregivers' actions with their child.

Stages of Coaching	Coaching Strategy	Coaching Definition	Coaching Examples
Setting the Stage	Conversation Information Sharing (CIS)	Strategy between caregiver and coach that allows shared information during therapy sessions. The relationship between coach and caregiver is formed	- Mother shares two days ago during breakfast toddler got upset and refused to

		during this time to build trust with one another. Coach and caregiver share information, ask and answer questions, and problem solve that is related to previous sessions, progress made, and future therapy that is related to child and family goals.	taste preferred food item. - Mother shared infant has been having reflux.
Setting the Stage	Observation (O)	The coach observes the caregiver's interaction with child and the child's interaction with the caregiver. The coach observes without offering feedback or suggestions. The coach observes a routine in the caregiver and child's natural, typical environment.	- Coach watches caregiver prepare a meal or bottle and child's response to preparation. - Coach watches caregiver present food trials to child and the child's response.
Setting the Stage	Direct Teaching (DTD) and Demonstrating	This strategy is used to teach the caregiver a skill that they can do independently at home. The coach scaffolds to the caregiver's knowledge and teaches them through a variety of instruction: verbal, print, video, visual. The coach then demonstrates the skills with the child by modeling the skill for the caregiver.	- Coach and caregiver watch a video of a new skill. - Coach demonstrates, by positioning a child for safe intake. - Coach provides a handout on a new skill and explains it to the caregiver. - Coach demonstrates, by placing bolus on spoon and presenting it to the bottom lip of the child, and discusses the importance of the

			placement and type of spoon.
Application and Feedback	Guided Practice (GP)	Coach and caregiver may take turns practicing a skill with the child. The coach is able to offer verbal guidance, feedback, and recommendations throughout to support the caregiver.	- While caregiver was feeding the child with a bottle, the coach reminds the caregiver of pacing strategies that were specifically taught over several sessions prior. - Child gags when food is presented on a spoon and then coach reminds caregiver to touch food to check first before lips, verbal guidance and feedback as well as recommendations were given to caregiver in response to the child gagging.
Mastery	Caregiver Practice (CP)	The caregiver is primarily implementing skill during therapy to increase independence. The coach provides feedback after the task/skill is completed. The Coach at this point is less directive and more in a stage of allowing the caregiver to increase independence and practice independently The Coaches statements at this point would be: what went well, how the child	- Caregiver bottle feeds using new nipple size and adjusts placement of infant. The Coach the provides reflection to the caregiver that leaving the baby upright after feeding was good. That the response to leave

		responded differently, and what could be done differently next time.	the infant in the infant carrier is good and caregiver states that this has significantly reduced reflux after feeding and that they continue to leave infant upright after feedings.
Mastery	Reflection (R)	This strategy is used for caregiver reflection encouraged by the coach to discuss interactions with their child, what is going well, and what can be changed to improve their interactions. This helps the caregiver analyze their skills, which is done by the professional asking questions to help guide the reflection process.	- Coach asks caregiver questions: 1. Was it less stressful to feed the child in that position this week? 2. How did the child respond during mealtime yesterday? 3. After bottle feeding today, did you notice anything different?