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Preface

Dave

In 1994, a little boy and his family walked into the outpatient clinic at Children’s Hospital in Pittsburgh, Pennsylvania. That encounter would end up changing my professional life forever. My specialty at the time was childhood and adolescent stuttering. Yet as soon as I began to work with that charming three-year-old, his intense struggles to communicate and his mother’s high expectations inspired me to reach for new heights in what speech therapy can achieve. It was then that I found my life’s work, as they say, evaluating and treating children diagnosed with childhood apraxia of speech (CAS). Years later, I was honored to have been invited to join the American Speech-Language-Hearing Association’s Ad Hoc Committee on Apraxia of Speech in Children, a superb and dedicated group that spent four years preparing its 2007 *Position Statement and Technical Report on Childhood Apraxia of Speech*. While our profession has made significant strides in assessing and treating the disorder since the *Position Statement and Technical Report* were published, I am reminded daily how much more work we have to do to educate others about childhood apraxia.

The multisensory approach that I use for treating children with CAS has evolved over the years. I realized early on that I had to have a lot of “tools” in my toolbox (yes, pun intended with my last name “Hammer”) in treating children with CAS, as they are not a homogeneous group. My approach comes from an eclectic mix of programs and strategies that I have researched and experimented with over the years. I have incorporated my own ideas while being guided by the principles of motor learning along the way. Therapy may look like play to the untrained eye, but that can be very misleading; I embed precise goals within the drill-play activities I use. Parents are aware of the goals being targeted at any point in time, and, if unclear, I provide detailed explanations of my therapy focus.

In 2015, I had the pleasure of attending a full-day workshop presented by Cari Ebert on children in the 0-3 age range who are diagnosed with suspected CAS. Despite our mutual interest in CAS and our many years specializing in this area, I had not met Cari previously. As I listened to her presentation, I was struck by how similar our belief systems were, and how we used comparable terminology in describing our work. Even some of Cari’s pet peeves were right in line with mine! It was then that I knew with whom I wanted to write a guide on working with young children diagnosed with CAS. Combining our experience, we could cover the age range that is the most critical for early intervention and for developing the foundations of speech-motor-planning. I am honored to be writing this guide with such a passionate and creative professional, and I hope that you, our reader, can immediately sense how Cari and I were destined to collaborate on this project.

Cari

Browsing through the University of Iowa’s course catalog in 1989, searching for my second-semester freshman classes, I found myself drawn to one called *Introduction to Communication Sciences and Disorders*. I was captivated from the first lecture—and declared my major right away. I could have

never predicted how much my chosen field would affect me personally. As a young adult, my life seemed to be falling into place as one would expect—college, grad school, marriage, two healthy daughters—when the unexpected happened. We had a son. With special needs. With autism. With apraxia. And I was a speech-language pathologist. An expert. I had helped countless families over the years, but shifting from the role of “the professional” to “the parent” proved to be a trying and emotional experience. In 2004, my personal journey as a parent of a child with special needs began. I cannot even begin to express how much my son has taught me over the years. He has provided me with more hands-on, working knowledge of my profession than any book I have ever read and more than any course I have ever taken. Now that I’ve walked in the shoes of the parents with whom I work, I see things from a much different perspective. The importance of involving parents throughout the therapy process cannot be emphasized enough.

Fast forward to 2015. I had just begun my twentieth year as an SLP when I met a well-respected colleague named Dave Hammer. With our passion for treating childhood apraxia, our paths seemed destined to intertwine in some way, and the Childhood Apraxia of Speech Association of North America (CASANA) proved to be the catalyst for our professional relationship. After getting to know Dave, I became involved with CASANA, presenting webinars and in-person seminars on suspected apraxia. One day, Dave asked if I would be interested in partnering to create a childhood apraxia guide for SLPs. Having specialized in assessing and treating young children with suspected apraxia for almost two decades, and having given over one hundred presentations on apraxia for SLPs around the country, writing a therapy guide seemed like a reasonable next step.

The logistical issues arising from living 840 miles apart would prove to be the biggest obstacle in co-authoring a book. Only so much communication can be done via email, after all! The idea was born, a publisher was found, and the writing process began. Dave and I were amazed at how much we have in common regarding our therapy style and the way we intuitively approach the delicate process of building functional communication skills in our youngest clients. Dave is a brilliant yet humble professional, and I am grateful for having such a wise and articulate SLP to be my sounding board throughout the writing process. I am confident that you will benefit from our 60+ years of combined experience as we outline our recommended strategies for working with toddlers, preschoolers, and early school-aged children.

Introduction

Why write a book about childhood apraxia? We had to consider this important question before assuming anyone would be interested in publishing our work or buying it for their own use. We authored this book because speech-language pathologists (SLPs) from around the country and beyond attend our seminars on apraxia and consistently ask for more specific strategies and activities for use with their youngest clients. No one-size-fits-all type of therapy for treating childhood apraxia exists—yet certain distinct and notable strategies should be present in speech therapy based on the principles of motor learning. SLPs must possess a broad range of skills related to assessing, diagnosing, and treating across a wide range of disorders, but specific training on CAS varies greatly among clinicians. With this book, we hope to provide SLPs with a systematic overview of treating childhood apraxia along with some fun and effective therapy activities, covering the age range of toddlers through early school-aged children.

It can be difficult to package a single therapy approach for CAS due to the complex nature of this disorder. To treat children with apraxia effectively, SLPs often must use strategies and resources from a variety of different therapy approaches and programs. When treating children with phonological impairment and articulation disorders, SLPs are provided with more cut-and-dried procedures, based on developmental guidelines, on when and where to start speech therapy. The starting point for children with apraxia, on the other hand, is not always as clear, and thus CAS has historically been viewed by many SLPs as somewhat mysterious and challenging to treat.

Hopefully this book will inspire SLPs to merge their own intrinsic abilities with solid critical thinking skills as they treat children with apraxia and support their families along the way. Rather than designing an apraxia therapy “cookbook,” we intend this as a speech-motor-planning guide to support SLPs as they make critical decisions regarding how to get started and where to go next. SLPs are by nature flexible, creative, and eclectic professionals, and we understand that therapy strategies and activities will vary based on the unique strengths, needs, and interests of each child. Turning young children with apraxia into communication risk-takers is a critical first step in the therapy process...and this is the SLP’s super power. Put on your cape and let’s get started!

–Dave and Cari

Getting Started with the Minimally Verbal Young Child

SETTING THE STAGE

A 22-month-old, his mother, and the SLP are all present for the child's speech therapy session each week.

- ✓ The therapist spends each session focusing on play and language but has little success eliciting any verbalizations from the young child.
- ✓ The child's receptive language skills continue to grow, and he is using a variety of signs and pictures to express his wants and needs. His speech skills, however, are not progressing.
- ✓ At the end of each session, the child's mom questions (to herself) why the therapist *just plays* with her son instead of teaching him how to talk.
- ✓ At the end of each session, the therapist questions (to herself) why the child doesn't seem to be making any progress with speech development.

THERAPY FOR TODDLERS WITH SUSPECTED CAS

Toddlers are wildly fascinating human beings and can be a true joy to work with. They can also be our biggest challenge. Toddlers are, after all, stubborn and persnickety by nature. One minute they love something, the next minute they've lost interest! When CAS is suspected, the stubbornness issue can be a conundrum for SLPs, because we must determine if the lack of verbal attempts is a case of *I won't* (willful noncompliance) or *I can't* (motor-planning difficulties), which can be difficult to differentiate in toddlers. For good reason, this period of development is often referred to as the *Terrible Twos*—although we prefer to call it the *Declaration of Independence* phase to put a positive spin on it, as this is a critical stage in healthy emotional development.

Davis and Velleman (2000) identify two primary goals when working with young children with sCAS. First, the child needs to establish a consistent form of communication to be able to express his wants and needs, and second, the child needs to learn to talk. By focusing on functional

communication first, the child will experience immediate success, which will, in turn, increase the parent's confidence in the therapy process. "Research shows that children with communication challenges do best when introduced to augmentative and alternative communication as early as 12 months" (Davidoff, 2017). Whether AAC is gestural or pictorial, it should be simple and concrete enough for the young child to begin using right away.

Establishing a functional and consistent way for the toddler to communicate his wants and needs is a critical first goal in therapy.

"Unfortunately, some research indicates that many children with complex communication needs are not introduced to AAC until after the critical 12- to 24-month window" (Davidhoff, 2017).

Real-Life Scenario

During the first therapy session with 26-month-old Armando, he was trying to communicate to his mother that he wanted a cookie, but his verbal approximation ("kuh-kuh") sounded more like the word cracker. His mother handed him a graham cracker, and he instantly became upset. (Most of us can empathize and understand his frustration—under no circumstance is a boring cracker an acceptable substitute for a cookie!) The SLP knew that she could not leave this home until Armando had a way to communicate his desire for a cookie, so she immediately began the process of determining if signs or pictures would be most appropriate. After modeling the manual sign for cookie several times in context, Armando began using it to request another tasty treat. Thrilled with his immediate success, his mother asked the SLP for the sign for cereal bar, another one of Armando's favorites. Unfortunately, the SLP did not know the sign for this particular food, so she suggested cutting the picture from the box and allowing the child to use that to indicate when he wanted to eat a cereal bar. With the addition of just one sign and one picture, this little boy could now successfully request his desired snack, thereby reducing the frustration felt by both him and his mother.

Once functional communication is progressing, the SLP can move forward with teaching the child how to talk, based on the principles of motor learning. If CAS is suspected (whether it has been formally diagnosed or not), the therapy goals should address the underlying nature of the problem with apraxia, which is sequencing, timing, and motor planning accurate movements across sounds and syllables. It is important for SLPs to recognize that some children with sCAS are *already* effectively communicating their wants, needs, and feelings nonverbally, using a vast repertoire of gestures and homemade signs. These children are ready to learn to talk from the onset of speech therapy.

"We have no problem communicating with our son. We just think he should probably learn to talk sometime."

(Spoken by a parent of a young child with sCAS who had strong gestural communication skills, but did not speak a word.)

When therapy sessions occur in the home where distractions are prevalent, it can be a challenge for the SLP to be the most interesting thing in the room. It is recommended that SLPs work in tandem with parents to identify ways to reduce distractions during therapy time, such as turning off the TV before the SLP arrives and having the iPad out of sight. It is also beneficial for the SLP to join whatever activity is already in progress. If the child is finishing up his snack when she arrives at the home, she can model for parents how to embed motor-planning strategies into snack time. If the child is playing with his fire truck, the SLP can identify ways to embed motor learning into his play rather than expecting him to stop abruptly and attend to her agenda. While this requires increased mental energy and flexibility on the SLP's part, the payoffs are well worth the effort.

Very young children do not learn the same way older children and adults learn, because toddlers are going through an extraordinary period of brain growth that is unmatched across the human lifespan. The brain actually triples in size during the first two years of life (Christakis, 2011). Therefore, SLPs who provide therapy services to children under the age of three need to possess a unique subset of skills that may not have been specifically addressed in their graduate-school training. From experience, we can tell you that working with toddlers is physically and mentally exhausting at times! Acknowledging how young children learn best is critical for creating appropriate therapy sessions for toddlers.

- Young children learn through play that is relevant and meaningful to their lives, not through direct instruction, drill work, or flashcards.
- Young children learn best in context. One of the seven key principles of Early Intervention (EI) states that toddlers learn best through everyday experiences and interactions with familiar people in familiar contexts (Office of Special Education Programs, 2008).

SLPs who work with toddlers must identify ways to embed motor-planning strategies into each family's naturally occurring routines and activities (learning in context). It is also important to explain to parents that there will never be enough therapy.

The young child with sCAS will need to practice talking *every* day. If the SLP is the only adult who practices with the young child, progress with speech development will likely be minimal. When we consider optimal intensity of therapy in this phase of intervention, we can more confidently suggest fewer sessions per week *if* the parents are able to follow through with recommended home-practice strategies. Without active parent engagement and participation, therapy minutes will likely need to be increased.

The Early Intervention Program offered under Part C of the Individuals with Disabilities Education Act (IDEA) does not mirror the medical model of service delivery. Early Intervention (EI) is shifting away from direct therapy into more of a family-centered model where the emphasis is on coaching the caregiver.

When determining optimal therapy intensity, the SLP must factor in:

- level of parental participation and follow-through,
- severity of the disorder,
- child's temperament and willingness to participate in therapy activities, and
- time spent in other therapy sessions per week (to avoid the fatigue factor).