An Overview of the Diagnosis and Treatment of Childhood Apraxia of Speech

Childhood Apraxia of Speech (CAS) is a developmental disorder that affects the processes of motor planning and programming for sequences of motor movement involved in speech production. CAS is typically detected in childhood and can exist on its own as a primary diagnosis or comorbidly with other congenital and developmental disorders. The three hallmark characteristics of CAS are inconsistent articulation errors, lengthened and disrupted coarticulatory transitions, and inappropriate prosody. Diagnosis of CAS is usually determined through clinical judgment of the presence of these core symptoms of CAS, though standardized testing can also be beneficial. Historically, most cases of CAS were thought to be of idiopathic origin, but emerging research suggests that CAS may be caused by reduced neural connectivity, mutation of the FOXP2 gene or deletion of gene16p11.2. Researchers have found that children with a stand-alone diagnosis of CAS may benefit from using sign language or communication devices while working with a Speech-Language Pathologist to resolve their CAS. However, a broader range of children with CAS can benefit from treatments such as Rapid Syllable Transition Treatment (ReST), The Nuffield Dyspraxia Programme (NDP3), and the Prompts for Restructuring Oral Muscular Phonetic Targets (PROMPT) method. ReST improves intelligibility by targeting syllable transitions and syllable stress in nonwords. The NDP3 uses a tiered approach to target words of increasing complexity. The PROMPT method involves an SLP serving as a temporary source of planning and programming for the individual with CAS, providing tactile cues to aid in speech production.

The purpose of this presentation is to provide an overview of CAS, both for individuals involved in Speech-Language Pathology as well as those who may be less familiar with the field. Current issues will be highlighted, including advances in the criteria for diagnosing CAS, recent research on possible etiologies of CAS, as well as evidence-based treatment approaches.