

Clinical Decision Making for Childhood Apraxia of Speech: A Research Application Project

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Introduction

- Childhood Apraxia of Speech (CAS) is a neurological childhood speech sound disorder of the motor speech programmer and planner.
- It involves deficits that result in inconsistent vowels, difficulty planning the movement and timing of sound sequences, and issues with prosody.
- **Signs and Symptoms of CAS:**
 - ☐ Inconsistent errors
 - ☐ Loss of previously produced words
 - ☐ More difficulty with volitional speech responses than automatic
 - ☐ Limited babbling and/or a variation within babbling
 - ☐ Limited phonetic diversity

Aims & Objectives

The purpose of this project was to apply the principles of evidence-based practice to a case study and to utilize a decision-making map to ensure evidence, clinical judgement, and client needs are thoroughly considered when making clinical decisions.

Case Study

- Evangeline, a 4 year, 3-month-old female
- Attends Pre-K 4 program
- Recently diagnosed with moderate-severe Childhood Apraxia of Speech
- Progress in treatment for has been impacted by that fact that her parents recently moved to Monroe, LA
- Struggles to adapt to the change in location and school
- Avoids speaking in class and on the playground
- Parents came to us for additional support

Methods

Client Needs

- Social support, family involvement, consistency, confidence, & self-regulation

Clinical Expertise

- The DTTC treatment is more contextualized than the ReST, and the target words have the ability to provide more generalization for the client. This improvement in everyday language can help the client with social interactions.

Research Literature

- Research indicates that CAS treatment should occur frequently for at least 45 minutes a session. Several treatments, including DTTC and ReST, have shown positive improvement when used with moderately severe children. Family support, meaningful contexts, and social opportunities play a large role in the child's motivation and progress.

Results

- Due to the age and severity level of our client, we recommend the implementation of Dynamic Temporal and Tactile Cueing (DTCC) since it is contextualized, and it will help with generalization of the target words.
- If no improvement is shown using DTTC, we recommend the implementation of the Rapid Syllable Transition (ReST) treatment.
- Implementing the DTCC or ReST with additional support will help the child in achieving success and it will help with generalization of the goals.

Discussion

Regarding our recommendation:

- The Dynamic Temporal and Tactile Cueing treatment was chosen to treat our client because the goal of this treatment is to improve the child's ability to assemble, retrieve, and execute motor plans for speech.
- This treatment is supported by research and ASHA's evidence map for CAS. It also will help our client progress toward effortless social interaction.
- Using high-frequency words and phrases would allow our client to gain confidence in speaking and provide her with opportunities to use these words in her everyday encounters.

Regarding our alternate recommendation:

- Although ReST treatment is less contextualized, it has the potential, through frequency and intensity, to help our client improve her speech in a limited amount of time.

Conclusions

- Critical thinking and elements of evidence-based practice contributed to our clinical decision-making process in order to determine an appropriate recommended treatment plan for our client.
- Evidence-Based Practice, clinical judgement, and client's needs are essential in developing a successful and individualized plan when treating any client.
- Several treatments for CAS , including DTTC and ReST, have shown positive improvement when used with moderately severe children. Family support, meaningful contexts, and social opportunities play a large role in the child's motivation and progress.
- By utilizing these recommendations, the overall quality of our client's life will be improved.