

VOWEL PRODUCTION CHANGES FOLLOWING MOTOR-BASED TREATMENT IN CHILDHOOD APRAXIA OF SPEECH

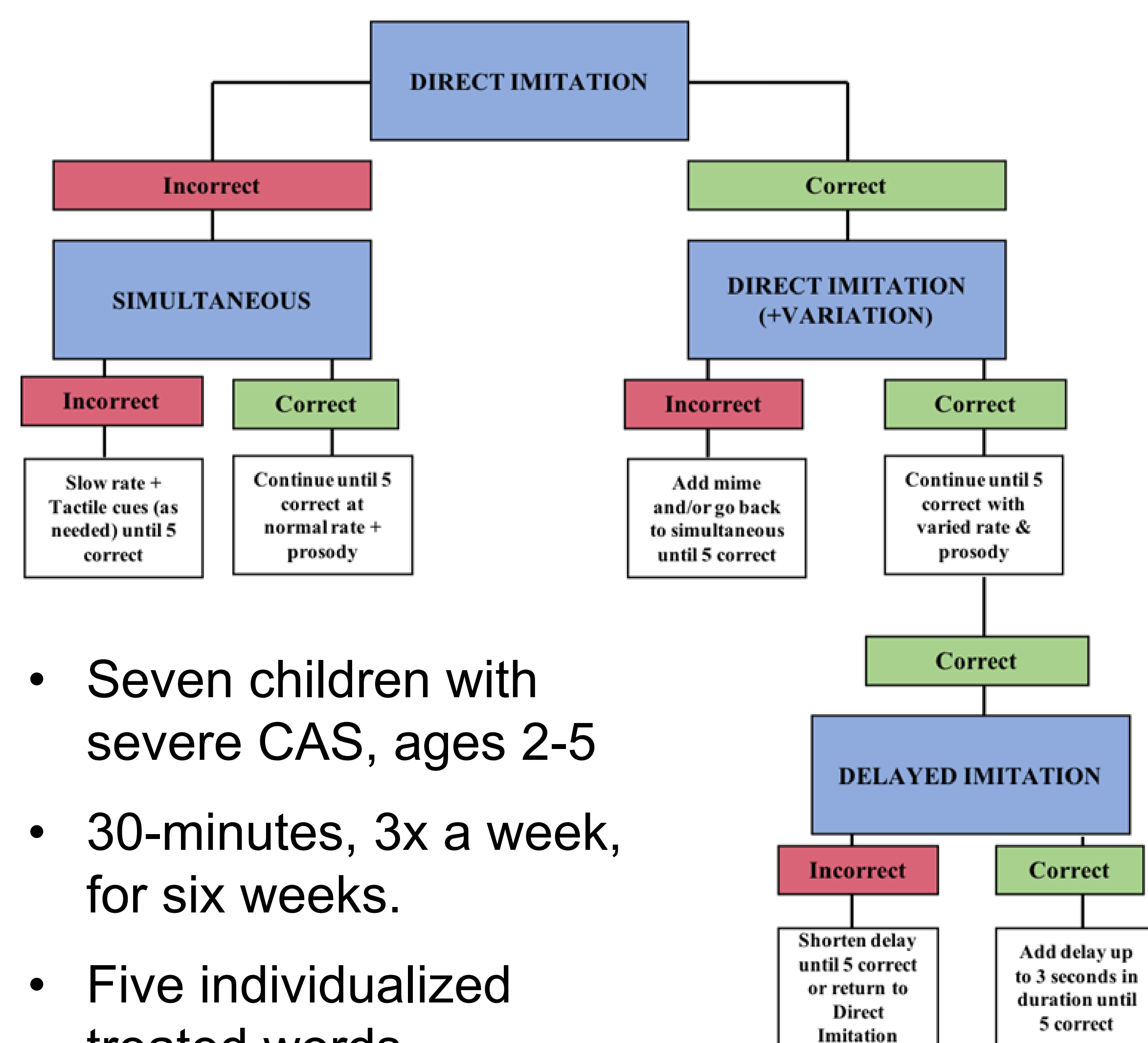
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Background

- Children with CAS make vowel errors and have higher vowel variability (Davis et al., 2005; Lenoci et al., 2020)
- There is very little research on intervention for vowel errors in CAS (Murray et al., 2014)

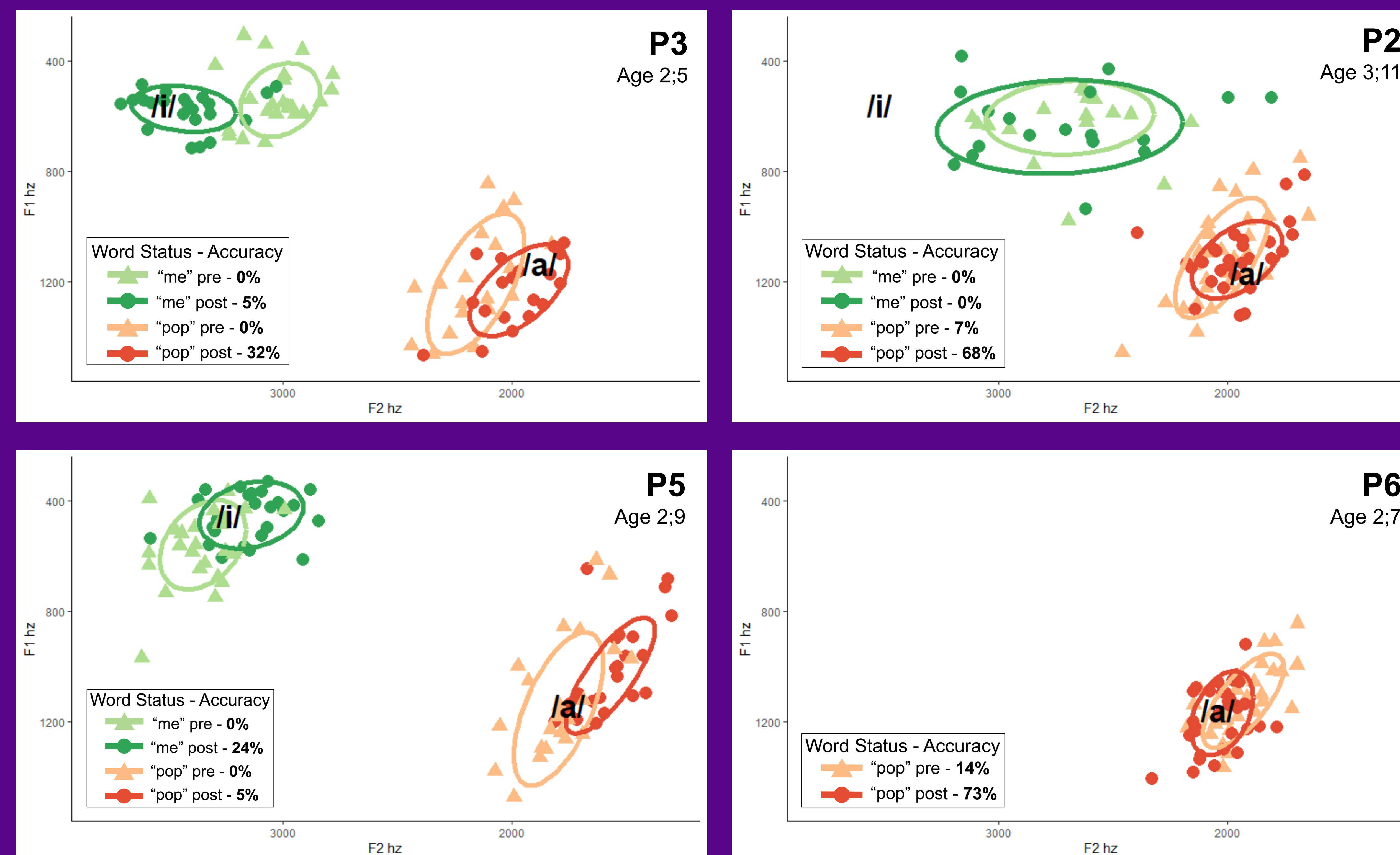
Treatment

- Dynamic Tactile and Temporal Cueing is a motor intervention for CAS (Strand, 2020)



- Seven children with severe CAS, ages 2-5
- 30-minutes, 3x a week, for six weeks.
- Five individualized treated words
- Audio recordings collected at several baseline and post-treatment sessions (immediate, short-term, long-term)

Main finding: in childhood apraxia of speech, vowel production may be impacted by a whole-word, motor-based intervention approach

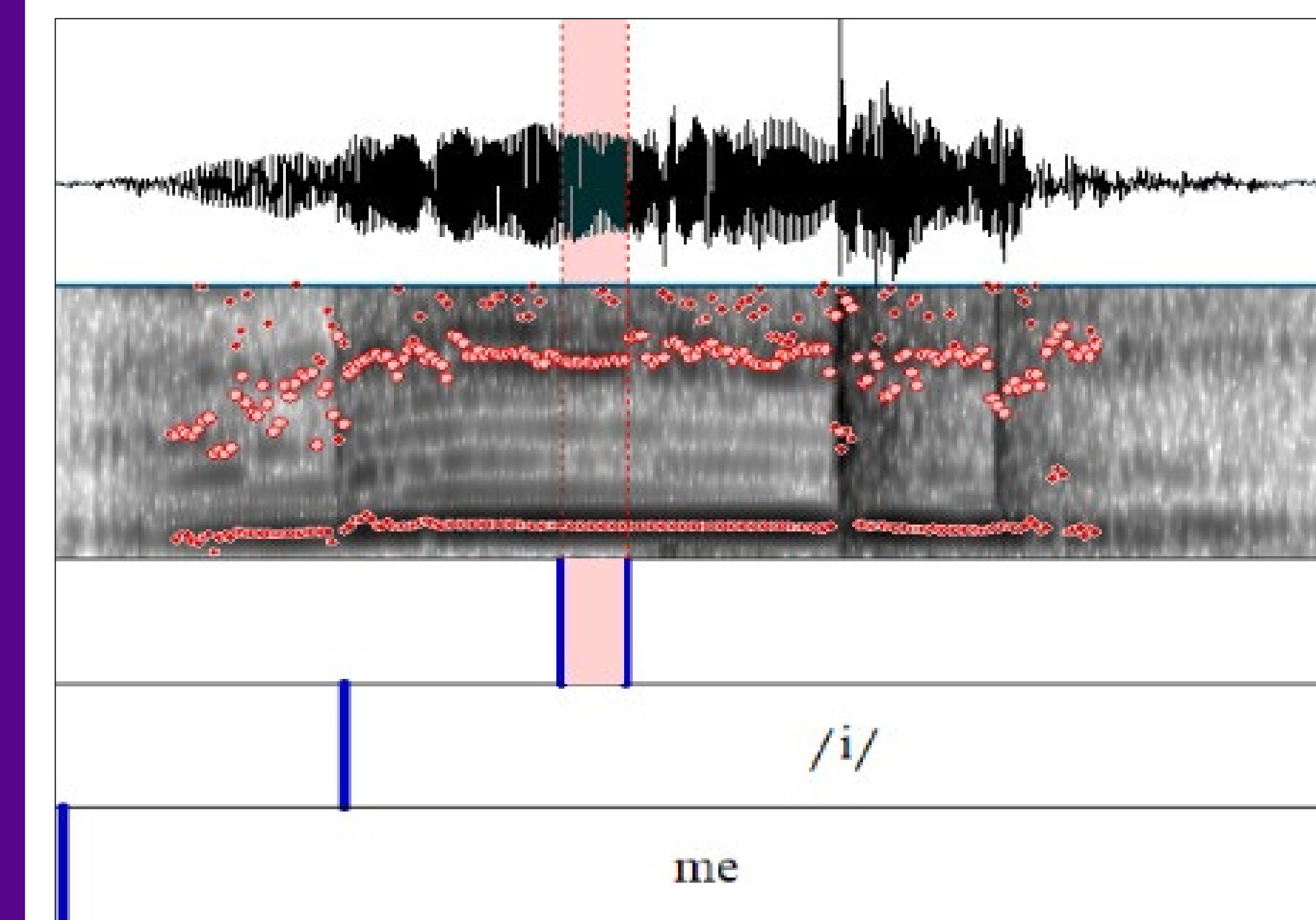


Research questions

- Does vowel accuracy change?
- Does vowel variability change?
- What is the relationship between the two?

Measurement

- Automated and manual vowel segmentation; automated steady-state formant estimation
- Accuracy: Euclidean distance from perceptually accurate productions
- Variability: spread of productions



Preliminary Results

- Pre to post movement trending away from centralized vowel space
- Pre to post trend towards perceptually accurate targets
- Inferential statistical analyses ongoing



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