


## Bilinguals with CAS: You've Got This!

A 3-part training program to increase SLP skills in serving individuals with CAS with different language needs.

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1

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## Modules

- 1 Overview, Myths, Bilingualism & CAS
- 2 Assessment of CAS in Bilinguals
- 3 CAS Treatment Approaches for Bilinguals

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2

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## Disclosures

- Relevant Financial Disclosures
  - Christina is employed as a professor at Portland State University
- Relevant Non-Financial Disclosures
  - Christina is a member of Apraxia-Kids Professional Advisory Council
  - Ashley, Brenda, and Izela have no non-financial disclosures.

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3

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Bilingual CAS Treatment Strategies



Bilinguals with CAS:  
Module 3

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4

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Learning Objectives

- The participant will be able to
  - utilize motor learning principles in treatment for bilingual or non-English speaking children with CAS
  - select appropriate segmental, phonotactic and suprasegmental goals for bilingual children with CAS
  - understand ways to incorporate caregivers in treatment in the home language.

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Intervention Research

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6

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### Evidence-Based Treatment for SSDs<sup>34,35</sup>

- Many studies of treatment for SSDs in the last 50 years!
  - 134 between 1979 and 2009
  - Over 100 more speech treatment studies between 2009 and present
- Growth in studies over the last 10 years! Quality of evidence
  - ~15 % randomized control trials
  - 50% experimental studies non-RCTs
  - 35% nonexperimental and case studies

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### Evidence-Based Treatment for CAS

- Increased dramatically over the last 20 years
- Quality of evidence increasing
- Research on different aspects of treatment
  - Targets
  - Approaches
  - Treatment conditions
  - Feedback

8

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### Evidence Treatment for SSDs: Multilingual Studies<sup>31, 36, 37, 38, 39, 40, 41, 42</sup>

- A total of 8 studies published in English
  - 4 studies between 1979 and 2009
  - 4 studies between 2009 and 2021
- 10 children total; all learning English
  - 2 Spanish-English, 2 Punjabi-English, 2 Cantonese-English, 1 Arabic-English, 1 Xhosa-English, 1 Portuguese-English, 1 Hindi-Gujarati-English
- Quality of Evidence
  - 7 case studies
  - 1 experimental design

9

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### Bilingual Treatment for CAS Evidence<sup>31</sup>

- A total of 1 study published in English
- 1 Spanish-English (subset of SSD study)
- Experimental single-subject design

10

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### Bilingual Treatment Summary Findings

- Most researchers found cross-generalization occurred
  - improvement in phonetic inventory, accuracy measures, and intelligibility in languages that were not treated or that received less intervention.
- A variety of intervention approaches and settings were successful.
  - Individual differences in
    - when to treat each language,
    - order of treatment of languages,
    - when to switch languages,
  - Importance of treating and monitoring both languages

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### Some Research on Intervention Approaches

- Treat in 1 language
  - Most likely to see transfer from home to L2
- Treatment for both languages eventually needed
  - Some effects of treatment won't transfer
  - Some sounds need specific instruction if different across languages.

12

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### Multilingual Children

- Similar needs as monolinguals
- Treatment approach must fit CAS characteristics
- Need to decide which language(s) to treat in, emphases on language properties
  - Consider past, present and future needs in language choice(s).

13

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### Intervention for SSD

- Monolingual & Bilingual children need individualized
  - Treatment approach
  - Plan for language(s) of intervention
- Heterogeneous nature of bilinguals
  - Who speak languages with
  - Proficiency
  - Use

14

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### Goals for Multilingual Speech Intervention

- Increase intelligibility, sound and word shape inventory and prosody
- Increase overall communication in both languages
- Increase functional use of speech
- Address academic setting needs as appropriate
- Consider interplay between phonological systems of languages
- Treat languages efficiently and effectively
- Transfer strengths across languages

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## Prognosis

- Same for bilingual as for monolingual
  - When each child receives best intervention for their motor planning needs

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16

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## Intervention Approach

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17

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## Overall Treatment Goal

- Facilitation of overall communication
- Includes
  - Intense motor-based speech treatment
- Likely will include
  - Augmented or alternative communication
    - Promote language development
    - Increase intelligibility
    - Low- or high-tech

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18

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### Importance of Bilingual Therapy<sup>7</sup>

- Children with speech and/or language disorder
  - Need as rich a communication environment as possible
    - Reduced child internal factors affecting motor planning
    - Need for enriched external factors
- Bilingual children with CAS need intense therapy in both languages

19

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### Bilingual CAS Treatment

- Bilinguals with CAS at greater risk of losing their L1
- Bilingual child needs support in their two-phonological system
  - Same prognosis for success as monolingual
- Generalizability deficit in CAS

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### Benefits of Bilingual CAS Therapy

- Comprehensible to child and family
  - Family can support treatment in L1
- Child with CAS may have more difficulty generalizing new skills to second language.
- Facilitate learning of both languages (interrelated)
- Encourages generalization

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### Using L1 in Treatment<sup>30, 31</sup>

- Can use L1 to strengthen L2 (English)
- Learn new information in stronger language, transfer to second language
- If start with home language
  - More efficient
  - More opportunities for generalization of treatment

22

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### Difficulties in CAS

- Motor planning and programming that all aspects of speech, including
  - Phonemes, phonotactics, prosody
  - Sequencing movements
  - Generalization to new environments

23

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### Treating Speech Motor Planning Deficits

- Looking to increase
  - Motor planning and programming for speech movements
- Building to
  - Automaticity of movements
  - Generalization of knowledge

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## Principles of Motor Learning<sup>14, 32</sup>

- Process of acquiring the capability for producing skilled action
- Attention must be on intent to learn & improve *movement*
- Occurs as a result of experience and practice
- Motor performance vs. motor learning differ
- Foundation of most treatment approaches for CAS

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## Precursors to Motor Learning

- Learner is the locus of control. Improvement greatest if
  - Motivated
    - by success
    - by transfer
  - Focused attention
  - Appropriate supports
  - Language needs and interests
- Critical for Bilingual CAS

26

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## Treatment Conditions

- Drill to Natural Setting
- Frequency & length of sessions
- Language(s) of bilingual sessions
- Variability
- Generalization – Transfer of Motor Learning

27

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### Other Principles

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- Feedback
- Rate
- Self-Monitoring

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28

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### Motor Learning Approaches Require

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- Best # and type of stimuli to facilitate motor performance & motor learning
- Ample opportunities
- Quality practice (focused attention & feedback)
- Mass practice & functionality

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29

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### CAS Motor Learning Treatment Approaches<sup>33</sup>

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- DTTC, ASSIST, ReST, PROMPT
- General motor treatment components for CAS
  - “Watch me, listen to me, and do it with me”
  - Cueing strategies for motor movements
  - Attention to/modification of rate for success
  - Prosodic components

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30

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### Formal Treatment Approaches

- Mostly a starting point
- Combine treatment approaches
  - Take what works best for a particular child
- Assess your efficacy
- Be ready to adapt
  - Incorporate additional elements as understand needs of child

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### Language of Intervention Factors

- How well does child speak L1 and English
- Is it possible to conduct treatment in English?
- What language is spoken in home? Who speaks it and in what situations? How frequently is child around it?
- Is maintenance of L1 important to the family? The client?
- Is there support from school, academic setting for home language?

32

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### Bilingual Intervention Approaches<sup>31,36,37,38,40</sup>

- Effective for Improvement in both languages
  - May be more efficient than monolingual treatment
- If treat in 1 language, treat more in L1 (stronger language)
  - Most likely to see carryover from L1 to L2
- Treatment for both languages eventually needed
  - Some effects of treatment won't transfer

33

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### Which Language to Focus On?

- In most cases, a multilingual child needs intervention in all languages
- Bilingualism is the best choice
- Need both for social & communicative function
- Without both, limit future opportunities
- Intervention of L1 won't jeopardize attainment of L2

34

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### Timing, Language Choice, Future Planning

- Elective vs. Circumstantial Bilingual
- Simultaneous vs. Sequential Bilingual
- Languages families speak
- Current language environment of child
- Who the family interacts with
  - Daily/Annually/Occasionally
  - Value of language for
    - Family
    - Child

35

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### Exceptions to Treating Both Languages

- Only home language
  - Not in school yet
    - English not yet functional. Wait!
  - Home language immersion
  - Child with severe CAS or other disabilities
    - Who needs strong foundation in communication first
  - Limited exposure to school language
- Not now doesn't mean not ever!
- Only school language
  - Speech and communication skills functional in both
  - Focus on school with transfer to home
  - Communication skills for English academics poor
    - If home language English and L2 is elective(?)

36

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### Consider Language(s) of Intervention

- Current communication needs
- Future communication needs
- What other supports they are receiving
  
- Language needs will change over time

37

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### Some Models for Bilingual Treatment

- Bilingual SLP only
- Monolingual + Bilingual SLP
- English SLP + Bilingual Paraprofessional
  - Well-trained in treatment methodology
- SLP & Interpreter with Parent
- English SLP + SLP-Trained L1 Interventionist
  - English portion – SLP
  - L1 – SLP Trained & Monitored individual

38

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### Select Language(s) of Intervention

- Monolingual in L1
- Monolingual in L2
- Bilingual
  - Skills common to both languages treated in both languages
- Crosslinguistic
  - Attention to specific aspects of either Spanish or English

39

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### If You Don't Speak Child's L1

- Learn the phonological, articulatory, phonotactic, and suprasegmental properties of L1.
  - And relationship to L2
- Find out important words and phrases in both languages (FCPQ)

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40

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### Difficulties in CAS

- Motor programming
- Consonants, Vowels, Suprasegmentals
- Sequencing
- Generalization

- Want to consider adding new information, generalizing what child can already do

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41

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### Other Thoughts on Targets

- Meaningful stimuli
  - Relevant to child's communication
  - Appropriate phonetic complexity
- Impact on language
- Impact on intelligibility

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42

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### Bilingual SLP Intervention

- Treat in both languages
  - Determine ratio of therapy to child's current communication needs
- Ratio will change over time
- Emphasize functional communication<sup>43</sup>
  - Treatment goals (sound, word shape, prosody)
  - Key words & phrases in both languages that contain goal sounds
  - Functional parent communication questionnaire – English & Spanish

43

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### Bilingual Target Selection Approaches

- Use functional targets in both languages
  - Within context of motor planning and execution complexity
  - Key utterances
- Consider:
  - Shared L1 & L2 phonemes/properties
  - Overall effect
    - Greater generalizability

44

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### Choosing Across-Language Targets

- Errors rates similar in both languages
- Consider importance of syllable or segmental property in both languages
  - Phonologically, morphologically

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### Unshared L1 & L2 Targets

- Intervention only required in one language
- Typically selected after treated cross-language targets
  - May treat earlier if
    - Language treated in is of greater functional importance to child
    - Large effect on intelligibility

46

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### Transfer Effects in English

- Select targets and procedures that yield the greatest amount of transfer possible in shortest amount of time
  - Intra-linguistic generalization results in improved performance on untreated targets in a variety of conditions
  - Inter-linguistic generalization can increase communication across L1 & L2.

47

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### General Consonant Phoneme Categories

- Early
  - Stops, nasals and glides – labial & alveolar
- Middle
  - Velar / Other places
  - Voicing distinctions
  - Frication
- Late
  - Liquids
  - Elaborated consonants
- Consider
  - Function & frequency of sounds
  - Acoustic properties
  - Cross-linguistic effects

48

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### Initially Use Early Speech Properties

- Consonants: /p, b, t, d, m, n, w, j/
- Vowels: /i, ɪ, e, ε, ə, a, æ/
- Word shapes: CV, CVCV, CVC, CVCVCV
- CV Frames
  - Labial + Central Vowels
  - Alveolar + Front Vowels
  - Velar + Back Vowels
- Prosodic patterns

49

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### Bilingual SLP Intervention Planning

- Think of language properties in one language as treat other.
  - E.g., Longer phrases in English prepare for longer words in Spanish
  - And vice versa
  - Complex word shapes in Russian prepare for complex word shapes in English
  - If few final consonants in home language, focus on other properties in English initially so can transfer
    - Not producing final consonants may not be a sign of disorder in this case
- Ratio of English to L2 will differ dependent on child's current need

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### Encourage Cross-linguistic Transfer

- Promotes
  - generalization
  - depth of linguistic understanding
  - bilingual facility

51

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### Ways to Encourage Cross-linguistic Transfer

- Look at cross-linguistic correspondences, differences
- Activity possibilities
- Translating from one to other
- Highlight similarities and differences
- E.g., home interviews, discuss in therapy
- Back-and-forth vocabulary books

52

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### Bilingual Intervention Approach

- Teach metaphonological transfer
- “We said words with /s/ in phrases today. What are /s/ words in Spanish? Yes, those have /s/ sounds! Now let’s say them a few more times, and in some longer phrases!”
- “I was listening to you working with Maestra Marquez. You said lots of words in Spanish with /l/. Do you remember some? Now let’s practice some in English!”

53

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### Bilingual CAS Treatment Methods

#### Frequency and Intensity

- Provide frequent and intensive treatment in both languages
  - For example:
    - Per week, 2 sessions in L1 and 2 sessions in L2
    - In a single session, 20 minutes in L1 and 20 minutes in L2
    - Do 5 targets in L1 and 5 targets in L2

54

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## Bilingual Treatment

- Drill play, narrative, storybook
- Prepractice target words
- Alter languages per session?
  - Begin (or end) session with 10 minutes of application to 2nd language
  - Coming up with functional words and phrases in other language that meet goals
  - Practice a few words in other language, then build story around it.
- Think improvement in whole system

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## Other Ways to Support Home Language

- Teacher training
- Teacher collaboration
- Create peer-mediated intervention strategies in L1
  - Planned play with typical peers
  - Classroom peer mentors
  - Social language groups (around school topics, events)

56

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## Other Ways to Support Home Language

- Caregivers/Sibling training (with interpreter)
  - Seminars, workshops on CAS
    - Motor planning deficits
    - Principles of motor learning
  - Brainstorm ways to encourage target phrases
    - Prepractice with SLP, activities at home
    - Talk about feedback, rate, precursors
  - Sibling-mediated activities

57

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### Parents as Communication Partners

- Intervention by trained parents as effective as by SLPs
- Consistent with federal mandates for partnerships between parents & professionals

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58

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### Interpreter Role

- During consultation, meetings
  - Traditional interpreter role
- Direct child interactions
  - Direct communication in L1 when appropriate
  - Interpret your guidance to communication partner
  - Explain what SLP is doing if SLP:Child Interaction

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59

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### Involve Others

- Bilingual SLPs
- Paraprofessionals
- Teachers
- Parents
- Siblings
- Extended family
- School buddies

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60

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### Importance of Bilingual Considerations<sup>18</sup>

“Language treatment approaches and considerations for bilingual families may be impacted not only by differences in families but also by the clinician’s cultural lens, experiences, expectations and implicit bias.”

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### Importance of Parent Collaboration

- Differences across cultures in parent “knowledge” of child development
    - Individualistic US household or collective Spanish-speaking household
  - Family “buy-in”
    - Parent education, Functional communication in both languages
  - Language environment to support carryover and generalization
    - Motor skills and motor learning
      - Means, Opportunities
    - Parent report as a screening tool and guide for functional targets
- Motives

62

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### Professional Misconceptions

- Cultural Perspectives
  - Views on disability
  - Parent involvement will look different in different cultures
    - Parent-child interaction
    - Parent-SLP interaction
- Barriers and facilitators to services and resources
  - Language barriers, transportation reliability, work flexibility

63

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### What to Tell Parents

- Children communicating at highest level with parents
- Continuing to develop language and cognitive skills
- Encourage them to continue using L1 at home with children
  - Provide complex, accurate language model
  - Any use of L1 at home, both oral and written, will benefit the child's cognitive development.
    - This will transfer to cognitive and academic development in L2 when students acquire L2 communicative patterns.

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## Treating a Bilingual Child with CAS

### SPANISH-ENGLISH BILINGUAL APPLICATION

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### Thinking About CAS in Spanish

- Spanish has
  - Fewer vowels, larger vowel space for each vowel
  - No voiceless stops or fricatives
- Few meaningful contrasts of
  - Final consonants
- More meaningful contrasts of CV syllables in multisyllabic words
- Syllable-timed language
- Prosody patterns dependent on length of word (stress second to last syllable)

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### Angel - 3;9 Spanish Preschool (2 years)

- Evaluation in Spanish.
- Found
  - Inconsistent repeated production of words
  - Excess equal stress
  - Difficulty transitioning, errors increase as get longer
  - Inconsistent consonant and vowel errors
  - Vowels <60% correct
- Diagnosis of severe CAS

67

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### Angel - Treatment Plan at 3;9

- Intervention considerations in a non-English speaking child
  - Current and future communication needs
  - What other supports they are receiving
- Treatment Spanish-only
  - Strengthen phonological foundations in motor planning
  - More articulatory practice possibilities
  - Meaningful practice at home
  - Goal to eventually transfer from stronger (L1) to weaker (L2) language

68

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### Angel at 3;9: Spanish-Only

- Bilingual SLP
- 2x/week, two 50 minute sessions
- Integral Stimulation Approach. Backward chaining
- Targets
  - Early /Shared Phonemes
  - Sequencing of meaningful CV syllables in words & phrases
  - Multisyllabic Spanish words
  - Prosodic factors
- Apply to future multi-word utterances in English

69

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### Angel's Spanish Treatment Provided

- Lots of practice in functional words
  - Will not be in English environment for 1½ years
  - More rapid progress if functional speech goal
  - Home practice in functional settings to support treatment
- Increased speech output
  - Existing consonant & vowel inventory
- Work on functional word length in Spanish. CVCV
  - Work on sequencing sounds
  - Practice long words & phrases with simple syllable shapes in Spanish

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### Angel: 5;6 Shift in Intervention

- Angel in Kindergarten
  - Lost contact
  - Treatment in English (at school with English-only SLP)
  - Not effective
- Contacted by English-only SLP about Angel
  - Reassessed to determine
    - current language level
    - CAS factors
- Bilingual approach, English at school, Spanish in clinic

71

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### Angel – 6;3 to 8;9 (1<sup>st</sup> through 3<sup>rd</sup> Grade)

- Sequential Bilingual
- Collaborative Model (university clinic / school)
  - 1 hour/week English – School SLP
  - 2 hours/week – PSU clinic
    - 3 out of 4 sessions Spanish, 1 English
      - Homework assignments, family involvement in clinic

72

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### Angel: Intervention Goals in L1 & L2

- Both languages
  - Longer word shapes
  - Reduce /s/ distortion
  - Working on phonological properties that transfer
  - Increase multisyllabic words & phrases; cluster-level accuracy
- Language-specific
  - Rhotics in Spanish and English
  - Treatment in English for vowels

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### Angel - Emerging Bilingual in 3<sup>rd</sup> grade

- Treatment in both languages
  - Academic focus (literacy, narratives, homework)
  - Crosslinguistic practice
- Support academic skills in Spanish for depth of learning
- Transition to English-only therapy

74

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### Angel – Intervention Summary

- Early treatment in Spanish-only
  - Strengthen phonological foundation
  - More articulatory practice possibilities
  - Meaningful practice at home
  - Easier to transfer from stronger (L1) to weaker (L2) language
- Bilingual treatment later to match educational setting

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Examples of Different  
Bilingual Approaches to  
Meet Different Needs of  
Children with CAS

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76

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Rubén, 5;4  
Severe CAS

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Sequential Spanish-English  
Initial Focus on Home Language

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Rubén: Background

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- Home 90% Spanish
  - Mother monolingual Spanish
  - Father Spanish dominant
  - 2;0 sister
- Kindergarten 75% English
- CAS Intervention
  - 5;0 – 5;6 English-only
  - Little to no progress
  - Factors: primarily English, not intensive format

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78

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### Rubén: Change in Intervention

#### Treatment study (University Clinic)

- 5;6 – 5;8 Spanish & English (3:1)
- Significant changes in Spanish and English
- When Spanish/English treatment,
  - Speech improved in both languages
  - Parent & teachers note greater overall change when Spanish included

79

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### Shift in Language Use & Intervention

#### In-between (Kindergarten)

- 5;10 – 6;4 English-only
- Moved one hour away
- Treatment in English (at school with English-only SLP)
  - Not effective

80

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### Shift in Language Use & Intervention

#### Return to University Clinic 2 times/week, 1 hour

- 2:1 Spanish to English. Focused on Spanish because
- Children’s skills stronger in Spanish
  - Parents could aid with practice – words, phrases
  - Children could discuss and apply information from Spanish to English
- Assistance in generalization through application

#### Move to full English by 2<sup>nd</sup> grade

81

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### Rubén – CAS Intervention Approach

- Integral stimulation
  - Treatment emphasis on Spanish
  - Strengthen overall phonological foundation, motor planning skills, learn new articulatory movements
  - More articulatory practice possibilities
  - Meaningful practice at home
  - Easier to transfer from stronger (L1) to weaker (L2) language

82

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### Rubén: Bilingual Treatment Summary

- Early treatment focused more on Spanish than English
  - Children's skills stronger in Spanish
  - Parents could aid with practice – words, phrases
  - Children could discuss and generalize information from Spanish to English
- Some treatment in English
  - English targets same as Spanish within different context
    - Shorter English words in carrier phrases
    - Learning new vocabulary
  - Improvement in both languages
- Transition to treatment in English
  - Spanish as foundation to learn new concepts

83

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### Xavier, 9;2 Severe CAS

Expressive English, Receptive Bilingual  
Add Home Language

84

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### Xavier – English-only “Choice”

- Diagnosed with severe CAS at 2.
- Parents monolingual Spanish
- Home environment Spanish-English
  - Older sibling speaks English. All others Spanish-only
- Parents told
  - CAS too difficult for bilingual
  - Accept only English from Xavier (more important)
  - Learn to speak English
  - CAS intervention in English

85

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### Xavier – Current Situation

- Receptive Spanish
- Expressive English
- Concerns
  - Academic
  - Behavioral
  - Communication

86

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### Xavier – Decision

- Speak in Spanish at home
- Switch therapy in Spanish/English
  - Parents can support him
  - He can communicate with community

87

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**Jean, 4;6**  
**Moderate CAS**

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English-French Home Environment  
 English therapy, French generalization

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88

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**Jean: Background**

- Mother English-French bilingual
  - Maternal family French or French-English
- Father English, some French
- Older siblings French/English
- SLPs advised to speak English-only

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89

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**Jean: English-French “Elective” Bilingual**

- Consultation
  - Goals for child
  - Needs for communication with family
  - Shared experiences with siblings
- Parent decision to enroll in bilingual school
  - Continue French-English
  - Parent learning strategies to support French

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90

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**Jean: 2 years later**

- In bilingual kindergarten
  - Better in English, basic French
- Therapy in English, home application in French
- A bilingual child with CAS
- Positive Outcomes
  - Same languages as sibling
  - Communicate with extended family
  - Full family participant in language situations

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91

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**Kaitlin, 5;4**  
**Moderate-to-Severe CAS**

English-Only Home Environment  
Spanish-English Intervention

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92

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**Kaitlin: Elective Bilingual**

- English-only child
  - Family L1 – English
  - Siblings in Spanish-immersion school
  - Place in bilingual school?
- Family factors
  - Same experience as siblings
  - Advantages in overall language learning
  - Many Spanish-speakers in community
  - Bilingual SLP
- Decide immersion and bilingual intervention approach

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93

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### Kaitlin: 7;6 (3 Years Later)

- Therapy 2 hours/week in English, ½ hour per week in Spanish
  - Improvement in both languages
  - Increase from 65% to 85% intelligibility in English
  - Late developing consonants not accurate in both languages yet
- Better at shared phonemes of English in Spanish
  - Simpler syllable shapes?

94

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### Kaitlin: 7;6 (3 Years Later)

- Thriving
  - *Other kids learning Spanish, too!*
  - *Everyone gets corrected in Spanish*
  - Confidence and participation increase
- Still has CAS
  - Struggles in both
  - Resorts to gestures at times

95

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### Cruz, 11;0

Moderate-to-Severe CAS  
Focus on Academic Language

96

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### Cruz: Background

- Born in U.S., older sibling
- Attended English-only preschool
- First assessment at 4
  - Only communication delay
- Moved to Mexico at 5
  - Stronger English at that point, but little spoken language.
  - Parents told “would speak when ready”
  - One hour per week of services to speak
  - Little education?

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97

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### Cruz - Background

- Return to US at 9
- Highly unintelligible
- Pre-literacy level
- Limited academic instruction
- Bilingual SLP requests additional assessment/consult
- Co-assessment with English-only SLP

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98

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### Cruz: Intervention Planning

- Full assessment in both languages
- FCPQ (adapted for older kids) - English
- Input from teachers and aides
- Moving to middle school
  - English-only? Life skills?
- Family fine with Spanish
  - Communicates with friends
- Child's goals
  - No AAC

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99

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### Cruz: Intervention Phase 1 (3 months)

- Intense Spanish approach
- Teach about CAS and about therapy in Spanish
- Used DTTC approach
  - Single words to longer phrases
  - Full consonant production
  - Smooth movements between sounds
  - Prosody
  - Self-monitoring, rate, drill, cueing strategies
- Focus on academic language

100

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### Cruz: Shift to English Intervention

- Initially resistant
- Start single words in English
- Apply same goals as Spanish to English
- Discuss important words & phrases
- Work with interpreter on application of strategies in Spanish to English

101

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### Cruz – Intervention Summary

- Start with Spanish targets
- Learn about CAS treatment in Spanish
- Move to English with Spanish consult
  - Same targets as Spanish within different context
- Shorter English words in carrier phrases
- Learning new vocabulary
  - Easier to transfer from stronger (L1) to weaker (L2) language

102

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Working with Parents

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103

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Different Needs – Similar Consulting

- Both Spanish-speaking families from Mexico
- Both children were suspected of CAS by their school SLPs.
- Both were assessed and determined to have CAS
- Provided intervention twice a week for 50 minutes
- 30 minute parent coaching sessions once a week

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104

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Memo 5;6  
Severe SSD Sequential Bilingual

- Effectively monolingual Spanish speaker
- 1st year in public school (kindergarten)
- First IEP
- Family in the U.S for 2 years.
- Lives at home with mom, dad, and two older brothers (10 and 14 years old)
- Relies heavily on his 10 year old brother for communication support
- Receiving speech therapy at school primarily in Spanish

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105

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**Memo: Treatment Approach**

- Sequential bilingual
  - Spanish-only treatment
- Treatment during Covid
  - Zoom school and treatment
- Teaching cueing strategies to family
- Working with 10-year-old brother
- Generalization opportunities!

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106

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**Kamila 8;6  
Moderate CAS. Sequential Bilingual**

- Parents monolingual Spanish-speakers
- 13-year-old bilingual brother
- Receiving speech therapy at school in both English and Spanish
- Kamila prefer English and avoids speaking Spanish
  - Understands Spanish but responds in English
  - Spanish made her stomach hurt

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107

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**Kamila – Intervention Approach**

- Treatment was mostly in Spanish
  - Honored English communication attempts
- DTTC cueing & hierarchical approach
  - Principles of Motor Learning
- Bilingualism is a superpower!

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108

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### Kamila – Outcomes

- Participating in tx sessions using L1 spontaneously.
- Demonstrating increased codeswitching.
- Self-reported increase in liking Spanish, confidence in Spanish
- Willing to try Spanish at home
- Has “3” languages
- Parent-reported Kamila using L1 more frequently in the home spontaneously.

109

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### Parents: Education on CAS

#### Prior

- One parent had heard about CAS but had no information about what it was.
- Other had never been told what disorder was
- Family did not have appropriate strategies to support communication
- Families thought errors were sign of lack of effort

#### After providing information on CAS

- Trained in feedback types
- Demonstrated appropriate strategies
- Learned that inconsistencies are part of CAS and do not reflect the child’s effort.
- Safe environment- for making mistakes.
- Valuing effort/participation rather than accuracy

110

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### Information on Bilingualism - Prior

- Misinformed about bilingualism.
  - hesitant about receiving tx in L1.
- Wanted best language for
  - Parent wanted to focus on English for their child to have success in this country.
- Misinformation about code-switching
- Did not understand the importance of supporting L1.
  - No plan in promoting L1.

111

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### Bilingualism is a Superpower: Kamila

- Immediate changes
  - Change in perspective on bilingualism
  - Child increases in willingness to speak L1
  - Found ways to support L1 in the home.
- Changes over time:
  - Increase in communication partners
  - Increase in L1 use
  - Child willing to talk with L1 speakers
  - School SLP: L1 improvement and increase in L1 participation

112

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### Parents: Bilingualism is a Superpower!

- Informed parents about bilingualism
- Addressed myths of bilingualism confusing children
- Valuing heritage language and identity
  - Increases communication with family, culture, & community.
- Benefits of supporting L1
- What parent can do to promote L1 in the home
- Provide information about code switching
- Ongoing consult with parents

113

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114

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# Final Comments

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115

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## Bilingual CAS Approaches

- Speech improves in both languages
- Treatment focuses change depending on
  - Language environment
  - Sequential vs Simultaneous
  - Parent supports

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116

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## Social Justice Lens

- Focus on whole child and family
- Integration of social and academic needs
- Value of home language
- Functional goals

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117

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**Summary**

- Use motor learning treatment approach
- Each bilingual child with CAS is unique
  - Language(s) & targets of intervention based on individual needs
  - Consider each language's phonological properties in treatment decisions
- Select goals based on present and future needs of multilingual child
- Consider changes to decisions over time
- Work with family, if possible

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118

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**Summary**

- Determine priority vocabulary and utterances
- Teach building blocks in stronger language
  - Generalize to functional activities
- Monitor effects on both languages through treatment probes
- Alter treatment as necessary

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119

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**Which Language to Focus On?**

- In most cases, a multilingual child needs intervention in all languages
  - Bilingualism not a choice but life's circumstance
  - Need both for social & communicative function
  - Without both, limit future opportunities
  - Intervention of L1 won't jeopardize attainment of L2

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120

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## Final Summary

- Bilingual children have CAS
  - CAS will not go away or get better if they become monolingual
- Monolingualism for a bilingual child
  - Is isolating
  - Creates an impoverished communication environment
- Bilingual children with CAS need us to support them with
  - Bilingual assessment
  - Bilingual intervention
  - Family involvement
  - CAS and bilingualism advocacy

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121

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122

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