




Big Questions on Clear Speech and Effective Treatment

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Thomas Center for Down Syndrome

- Evaluations & treatment planning based on best practices and standard of care
- Education and advocacy
- Transition planning
- Care coordination, support, and assistance throughout childhood




The Big Questions




Messages to...

- Our children (including those without DS)
- Our family members
- Our friends
- Our communities
- The world at large




“Differences are not intended to separate, to alienate. We are different precisely in order to realize our need of one another”
Desmond Tutu



Influences

- Biological
- Medical
- Social/Culture
- Family
- Other?



Importance of Strengths

- Use strengths to encourage learning
- Bridge the gap between comprehension and verbal expression
- To understand what supports to use in order to bypass difficulties
- What are *your* strengths?

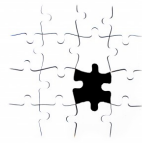


While children with Down syndrome have similar ways they learn to listen, learn, and talk -

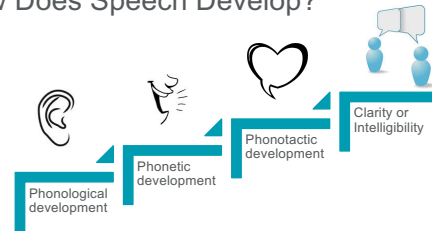
Each child has his or her own path.



Speech in Children with DS



How Does Speech Develop?

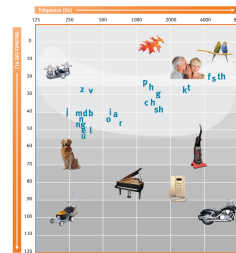


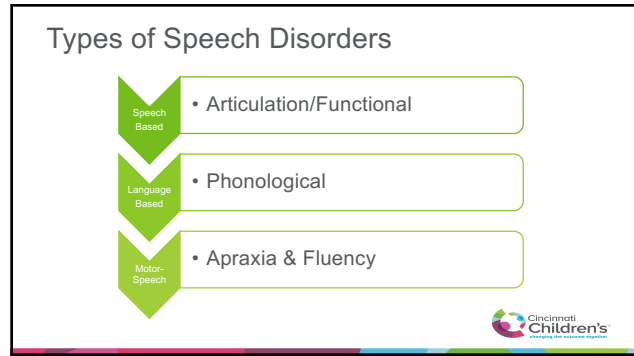
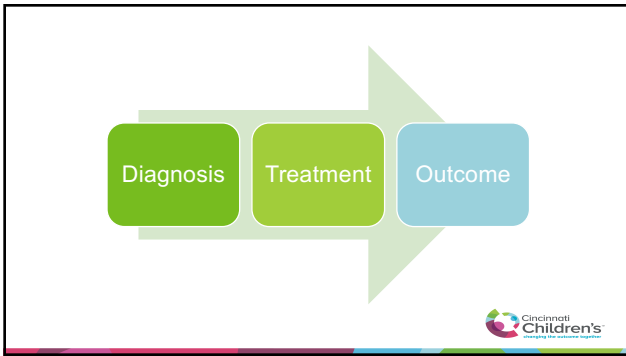
Sign Language

Dual modality (sign and speech) **increases** recognition of vocabulary words (Raining Bird, 2000)



Speech Banana





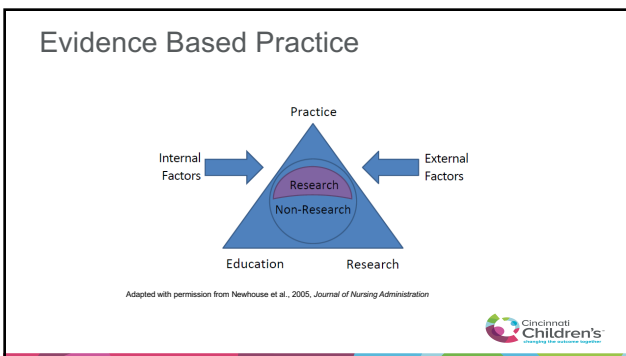
Speech Disorders

- In children with Down syndrome speech disorders may be related to:
 - Structural differences in the mouth
 - Persistent ear infections or fluid-filled ears
 - Other health problems that interrupt development

How to Choose Therapies

“...There has to be as solid a scientific basis as possible, based on well-grounded theory and good quality research, for any approach, technique or “tool” to be used in therapy.”

[Caroline Bowen, PhD](#)



Traditional Therapy?

What is “traditional” therapy?

Evaluating Treatment Tools

“In our quest to help ... we are always looking for the newest and best treatments... Although many of these treatments are valid and have potential use, many others advertised may not live up to their promised result.”

» [ASHA Leader, July 5, 2011](#)



Speech Based Disorders Diagnosis

- One or a few sound errors
- A child may substitute the “y” in the word *yes* with a /w/ changing the word to “wes”
- Even a few errors may make it hard for people to understand your child



Speech Based: Cause

- Largely unknown
- Is different from dysarthria (muscle weakness), apraxia (muscle coordination), or phonological disorder



Speech Based: Treatment

Treatment:

- Show how to produce the sound correctly
- Teach the child to recognize correct and incorrect sound productions
- Practice & play
- Transition



Language Based Disorders

- This disorder is related to the *rules of speech production*
- Children naturally simplify speech as they are learning to talk – this is called using [phonological processes](#)
- [Eventual replacement](#) of this child-like form in typical development
- Continued use of processes may lead to a phonological disorder diagnosis



Language Based Disorders

- Not related muscle weakness or poor coordination
- Difficulty organizing sounds and understanding the *rules* that govern their production
- Ultimately a *language* problem
- Techniques that focus on strength or coordination often prove ineffective when trying to improve speech accuracy



Language Based: Treatment

- Therapy targets each process or class of sounds
- Starts with [group of sounds](#) that mature or are established first



Motor-Speech Based

- Childhood Apraxia of Speech (CAS)
- It is not due to muscle weakness
- Brain has difficulty planning the movements of the muscles that create speech
- Other signs of CAS include:
 - Limited consonant and vowels
 - An appearance of 'groping' movements
 - Inconsistent sound errors that are not the result of immaturity or other speech disorder



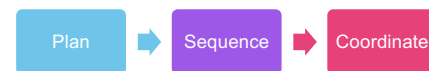
On CAS in DS

"...the speech disorders reported here are not wholly accounted for by phonological delays/disorders or hypotonicity and the children do present with difficulties in motor planning and programming..."

[Cleland et al., 2010](#)



Motor-Speech: Treatment



Motor-Speech: Treatment

- Strengthening exercises are ineffective for CAS treatment
- Frequent practice of speech transitions: moving from syllables to specific word structures or combinations
- Multi-modality: auditory, visual, & tactile cues helpful



Stuttering/Cluttering: Diagnosis

- Disruptions of speech sounds, also called disfluencies
- Most people produce brief disfluencies from time to time
- Number and types of speech disfluencies produced in various situations



Stuttering/Cluttering: Treatment

- Teach specific skills or behaviors that lead to improved oral communication
- Control and/or monitor the rate at which they speak
- Learn to start saying words in a slightly slower and less physically tense manner
- Transition to different situations
- Follow-up to maintain skills



Oral Motor Update

- Continued use despite evidence showing its ineffectiveness
- Easy, step-by-step, "doing something"
- [Research update on oral motor](#)



Practical Ideas

- Car time
- Daily routines
- Brag books
- Game time
- Containers
- Phone
- Echo Microphone



More BIG Questions



"How old is too old for therapy?"

- Considerations
 - Hearing status
 - **Motivation**
 - **Motivation**
 - Stimulability
 - Ability to work on communication strategies
 - **Motivation**
 - Family support
 - Frequency and duration of therapy



Alternative Communication

- Augmentative Communication (AC or AAC)
- Will AC **prevent** speech from developing?
- Benefits of AC or other forms of assistive technology



Alternatives to Speech

What if the words don't come?



Questions



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