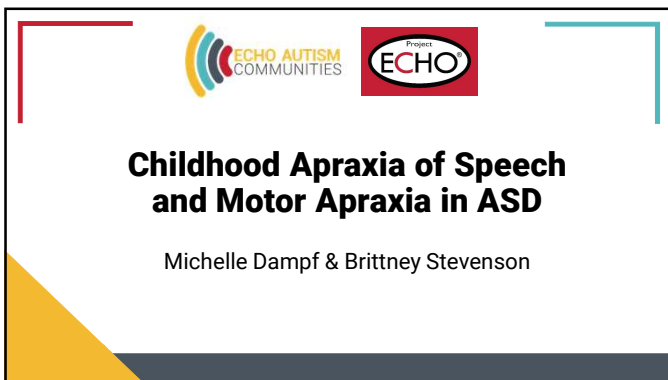
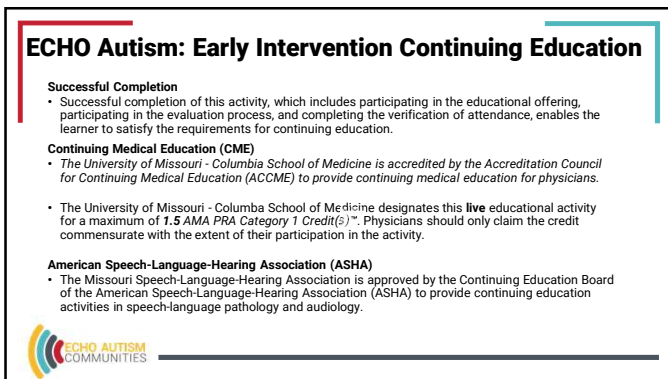




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ECHO Autism: Early Intervention Speaker Disclosure

LPC, Social Work, Psychology, 50-minute hour CEs

The University of Missouri Continuing Education for Health Professions (CEHP) is part of an accredited university in the state of Missouri. As such, this program meets the requirements for Licensed Professional Counselors, Psychologists, and Social Workers with Missouri licenses. CEHP attests that this program contains 1.5 clock hours of instructional time. Licensed professionals measuring CE credit based on a 50-minute hour may claim up to 1.8 Contact Hours for full attendance at this program.

Relevant Financial Relationship Disclosures

Current ACCME (Accreditation Council for Continuing Medical Education) rules state that participants in CE activities should be made aware of any relevant affiliation or financial interest in the previous 24 months that may affect the planning of an educational activity or a speaker's presentation(s). Each planning committee member and speaker has been requested to complete a financial relationship reporting form for the ECHO Autism: Early Intervention Series

Kristin Sohl, MD,FAAP receives support:

•Cognoa Behavior Health – research support

•Quadrant Biosciences – medical science collaborator

All relevant financial relationships for the presenter(s) have been mitigated.

No other speaker or planning committee member has a relevant financial interest



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Learner Objectives

- 1: The learner will identify the signs of childhood apraxia of speech and motor apraxia in children with ASD.
- 2: The learner will identify evidence-based strategies for treating childhood apraxia of speech and motor apraxia in children with ASD.
- 3: The learner will identify resources to help parents support their children who are diagnosed with childhood apraxia of speech and motor apraxia in children with ASD.



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Childhood Apraxia of Speech (CAS) or Verbal Dyspraxia

- Neurological childhood (pediatric) speech sound disorder in which the precision and consistency of movements underlying speech are impaired
- May occur as a result of known neurological impairment, in association with complex neurobehavioral disorders of known and unknown origin, or as an idiopathic neurogenic speech sound disorder
- Impairment in planning and/or programming of movement sequences results in errors in speech sound production and prosody.
(ASHA, 2007b, Definitions of CAS section, para. 1).



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Signs of Childhood Apraxia of Speech (CAS)

- Inconsistent errors on consonants and vowels in repeated productions of syllables or words;
- Lengthened and disrupted coarticulatory transitions between sounds and syllables;
- Inappropriate prosody, especially in the realization of lexical or phrasal stress;
- articulatory groping—articulatory searching prior to phonating;
- consonant distortions;
- difficulty with smooth, accurate movement transitions from one sound to the next;
- increasing difficulty with longer or more complex syllable and word shapes;
- schwa additions/insertions—insertion of schwa between consonants or at the end of words;
- slower than typical rate of speech
- syllable segregation—pauses between sounds, syllables, or words that affect smooth transitions;
- voicing errors—voiceless sounds produced as their voiced cognates; and
- vowel errors—vowel distortions or substitutions.



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Video Clip of CAS

Mayo Clinic clip of CAS Evaluation Examples:

- <https://www.youtube.com/watch?v=CE0y3dPLA-g>



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Evaluation of CAS with ASD

- Increase challenge during evaluation process
- Be cautious if too young or developmentally challenged
- Need to have a little speech to evaluate
- Assess response to strategies such as:
 - Imitation
 - Attention to verbal model




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Treatment Strategies for CAS

- Motor programming
- Linguistic programming
- Combination approach
- Rhythmic approach (i.e. MIT)
- ** Consider ACC/SGD to help to facilitate expressive language


• High treatment dosage for children with CAS (increased # of minutes per week)



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Resources for CAS


- www.apraxia-kids.org
- www.asha.org
 - https://www.asha.org/practice-portal/clinical-topics/childhood-apraxia-of-speech/#collapse_6



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Signs of Motor Apraxia

- Aka Developmental Coordination Disorder (DCD); aka Dyspraxia
 - Performance in daily activities that require motor coordination is substantially below that expected given the person's chronological age and measured intelligence. This may be manifested by marked delays in achieving motor milestones (e.g., walking, crawling, sitting), dropping things, "clumsiness," poor performance in sports, or poor handwriting.
 - Motor coordination problems which interfere with academic achievement or activities of daily living.
 - The disturbance is not due to a general medical condition (e.g., cerebral palsy, hemiplegia, or muscular dystrophy) and does not meet the criteria for a Pervasive Developmental Disorder.
 - If an intellectual disability is present, the motor difficulties are in excess of those usually associated with it.




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Signs continued...difficulty with:





- Self-care include difficulty with dressing, managing buttons and zippers, tying shoelaces, using a knife and fork, and toileting.
- School related tasks: copying, drawing, painting, printing, handwriting, using scissors, organizing, and finishing work on time.
- Physical education and riding a bicycle.
- Significant secondary emotional and mental health concerns, e.g., low self-worth and self-esteem, high rates of anxiety and depression, and emotional/behavioral disorders.



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Co-morbidities



- DCD often co-occurs with other developmental disorders.
 - ADHD (Up to 50% of kids with DCD)
 - LD
 - Speech/language impairment
- A clinical study showed that more than 50% of children identified with severe dyslexia (or those in the bottom 5% of school-aged readers) showed definite motor coordination difficulties for which motor intervention would be recommended.

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Evaluation of Motor Apraxia


- Standardized motor testing, watch for repeat trials
 - PDMS-2
 - BOT-2
 - PEDI
 - VMI
- Informal observation of gross and fine motor skills

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Treatment Strategies for Motor Apraxia

- Deficit-oriented approaches include sensory integration therapy, sensorimotor-oriented treatment, and process-oriented treatment (remediation for overall improved task performance).
- Grounded in current theories of motor control and motor learning, **task-oriented approaches** include task-specific intervention, neuromotor task training, Cognitive Orientation to daily Occupational Performance (CO-OP), and ecological intervention. Evidence for task-specific interventions is promising, with some agreement that this approach is preferred over deficit-oriented approaches.



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Resources for Dyspraxia


- <https://dyspraxiafoundation.org.uk>
- <https://occupationaltherapy.com.au/dyspraxia>




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Resources/References

- www.asha.org
- www.apraxiakids.org
- **Mayo Clinic:**
 - <https://www.youtube.com/watch?v=cEQy3APLA-g>



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