

Curriculum Vitae

Date Prepared: 12/4/2022

Name: Karen Virginia Chenausky, Ph.D., CCC-SLP

Office Address: Room 215
Building 79/96
MGH Institute of Health Professions
Charlestown Navy Yard
36 1st Avenue
Boston, MA 02129

Home Address: 40A Cottage Street
Watertown, MA 02472

Work Phone: (617) 726-2405

Work Email: kvchenausky@mghihp.edu

Place of Birth: Willimantic, CT

Education:

6/1989	S.B.	Philosophy and Linguistics	Massachusetts Institute of Technology
12/1992	M.A.	Linguistics	University of Connecticut
5/2005	M.S.	Speech Pathology	Boston University
5/2015	Ph.D.	Speech, Language, and Hearing Sciences	Boston University

Postdoctoral Training:

6/2015-6/2019	Research Fellow	Neurology Department (G. Schlaug, mentor)	BIDMC/HMS
6/2018-12/2019	Postdoctoral Fellow	Speech, Language, and Hearing Sciences (H. Tager-Flusberg, mentor)	Boston University
4/2020-11/2021	Postdoctoral Fellow	Communication Sciences and Disorders (J. Green, mentor)	MGH Institute of Health Professions

Faculty Academic Appointments:

12/2019-	Instructor	Department of Neurology	BIDMC/HMS
12/2021-	Assistant Professor	Communication Sciences and Disorders	MGH Institute of Health Professions

Other Professional Positions:

1989-1992	Instructor, English as a Foreign Language	University of Connecticut
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1992-1993	Research Affiliate, Artificial Intelligence Laboratory	Massachusetts Institute of Technology	
1993-1997	Research Affiliate, Research Laboratory of Electronics	Massachusetts Institute of Technology	
1997-2009	Scientist	Speech Technology & Applied Research Corp.	
2001-2006	Clinician	Ely Associates Speech Pathology	
2004-2007	Clinical Consultant	Trauma and Learning Policy Initiative, Harvard Law School	
2006-2007	Clinical Fellow	Occupational Therapy Associates Watertown	
2006-2009	Consulting Speech Pathologist	YouthCare (now ASPire) at MGH Hospital for Children	
2006-2011	Consulting Speech Pathologist	EDCO Educational Collaborative	
2010-2012	Senior Scientist	Speech Technology & Applied Research Corp.	
2011-2013	Graduate Intern	Office for Disability Services, BU	
2013-2015	Research Assistant	Center for Autism Research Excellence, BU	
2015-2018	Postdoctoral Fellow	Beth Israel Deaconess Medical Center	
2018-2019	Postdoctoral Fellow	Sargent College, BU	
2019-	Visiting Researcher	Department of Psychological and Brain Sciences, BU	
2019-2020	Clinical Research Staff Scientist (K99 Fellow)	Beth Israel Deaconess Medical Center	
2020-2021	Postdoctoral Fellow (K99 Fellow)	MGH Institute of Health Professions	
2021-	Assistant Professor	MGH Institute of Health Professions	100%

Professional Societies:

1999-2009	American Speech-Language-Hearing Association	Member without Certification
2000-	Acoustical Society of America	Member
2009-	American Speech-Language-Hearing Association	Member with Certification
2015-	International Society for Autism Research	Member
2018-	Academy of Neurologic Communication Disorders and Sciences	Member
2018-	American Society of Neurorehabilitation	Member

Grant Review Activities:

2019-2020	New Jersey Governor's Council for Medical Research and Treatment for Autism	Ad-hoc reviewer
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2022 American Speech-Language-Hearing Foundation Ad-hoc reviewer

Editorial Activities:

- **Ad hoc Reviewer**

American Journal of Speech-Language Pathology (Editorial Board Member, 2020)

Autism

Autism and Developmental Language Impairments

Autism Research

Clinical Linguistics and Phonetics

Folia Phoniatica et Logopaedica

Journal of Autism and Developmental Disorders

Journal of Neurodevelopmental Disorders

Journal of Speech, Language, and Hearing Research

Language, Speech, and Hearing Services in the Schools

PLOSOne

Scientific Reports

Honors and Prizes:

1994	S. Klein Prize for Science and Technical Writing	Massachusetts Institute of Technology	
2014	Research Mentor/Trainee Pair Awardee	American Speech-Language-Hearing Association	Career development award
2017	Outstanding Poster Award	Neuromusic Association	
2017	Research Mentor/Trainee Pair Awardee	American Speech-Language-Hearing Association	Career development award
2017	Trainee	MIT IMPACT Career Development Program	
2018	Lessons for Success Trainee	American Speech-Language-Hearing Association	Career development award
2019	Research Trainee	Institute for Educational Sciences Single-Case Design Research Institute	Career development award
2022	New Investigator Award	MGH Institute of Health Professions	
2022	TIGRR Trainee	Training in Grantsmanship for Rehabilitation Research	Career development award

Report of Funded and Unfunded Projects

Past

1999 “Automatic Analysis and Diagnosis of Dysarthria.”
NIH-NIDCD SBIR R43-DC004244

PI
Computerized diagnosis of dysarthria based on acoustic measures.

2000 “Landmark Analysis of Dysarthric Speech.”
NIH-NIDCD SBIR R43-DC004651

PI
Acoustic analysis of dysarthric speech for treatment monitoring.

2014 “Markers of Early Speech Development in Children At Risk for Autism.”
Autism Science Foundation Mini-Enhancement Grant

PI
Perceptual and acoustic analyses of speech development in siblings of children with autism.

2016 “Identifying Signs of Childhood Apraxia of Speech in Minimally Verbal Children with Autism.”

American Speech-Language-Hearing Foundation Clinical Research Grant
PI

Acoustic and perceptual analyses to diagnose and characterize a comorbid motor speech disorder in minimally verbal children with autism.

Current

2021-2022 “Relating Auditory Perception to Expressive Language in Minimally and Low-Verbal Children with ASD.”

Autism Speaks-Royal Arch Masons Pilot Grant 12872

PI (total direct costs \$60,000)

The goal is to test children’s ability to discriminate similar-sounding words like “ball” and “doll”, to investigate whether impaired phonetic perception contributes to delays in expressive language in low- and minimally verbal children with autism.

2019-2024 “Identifying and Treating Childhood Apraxia of Speech in Minimally Verbal Children with Autism.”

NIH-NIDCD R00-DC017490

PI (total direct costs \$992,600)

The main goal is to quantify the effect of comorbid motor speech disorder on speech intelligibility in minimally verbal children with autism and apraxia of speech; develop appropriate treatment.

2019-2024 “Predicting and Optimizing Language Outcomes in Minimally Verbal Children with Autism Spectrum Disorder.”

NIH-NIDCD P50-DC018006

Co-Investigator, Project 1 (total direct costs \$1,162,858)

The long-term objective is to advance the assessment and treatment of children with ASD-related spoken language impairments through a deeper understanding of the motor basis for these impairments.

2022-2023 “Communication and motor impairments in children with CSNK2A1 and HIVEP2 mutations.”

Simons Searchlight (Simons Foundation for Autism Research)

Co-Investigator (total direct costs \$9,000)

Projects Submitted for Funding

2022 “Validation of a Remote Speech and Motor Data Collection Protocol for Minimally Verbal Autistic Children.”

2022 Autism Science Foundation Profound Autism Pilot
 Co-Investigator (total direct costs \$35,000)
 “Validation of a Remote Speech/Motor Assessment Protocol for Neurodevelopmental Disorders.”
 Tufts Clinical and Translational Science Institute
 Co-Investigator (total direct costs \$50,000)

Report of Local Teaching and Training

Teaching of Students in Courses:

1989-1992	English as a Foreign Language Doctoral students in the sciences	University of Connecticut 70h/yr
1998-2003	Speech Science M.S. students in speech pathology	Northeastern University 70h/yr
1998-2003	Phonetics M.S. students in speech pathology	Northeastern University 70h/yr
2013	Autism Spectrum Disorder Professionals and paraprofessionals working with children with autism in educational settings	College of Our Lady of the Elms 24h/yr
2022	Advanced Autism Elective M.S. students in speech pathology	MGH Institute of Health Professions 24h/yr

Research Supervisory and Training Responsibilities:

2019-	M.S. Thesis Research Supervisor M.S. students in speech pathology Ph.D. Thesis Mentor Ph.D. students in Rehabilitation Sciences	MGH Institute of Health Professions 18h/mo MGH Institute of Health Professions 18h/mo
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Formal Teaching of Peers (e.g., CME and other continuing education courses):

No presentations below were sponsored by 3rd parties/outside entities
 Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

2001	“Hands-On Acoustic Analyses for the Speech Clinician”, American Speech-Language-Hearing Association	1 talk New Orleans, LA
2020	“Playing Around with CAS: Techniques for Choosing Therapy Targets and Activities for Children with Emerging Speech”, Apraxia-Kids	1 talk Remote, by Zoom

Report of Regional, National and International Invited Teaching and Presentations

No presentations below were sponsored by 3rd parties/outside entities

Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified.

Regional

- 2019 “Minimally Verbal Autism: Speech Matters.” Invited Presentation, Communication Sciences and Disorders Research Day, Sargent College, Boston University.
- 2019 “What Can a Disordered DIVA Tell Us About Minimally Verbal Children with Autism?” Oral Presentation, Speech Motor Control Working Group, Boston University.
- 2021 “Communication Comorbidities in MV ASD: What do we know? What do we want to know?” Oral Presentation (via Zoom), Communication Sciences and Disorders Department, University of New Hampshire, Durham, NH.
- 2021 “Therapy Techniques for Emerging Speech” Oral Presentation (via Zoom), Department of Communication Sciences and Disorders, Northeastern University, Boston, MA
- 2022 “How Can We Predict Expressive Language Growth in Minimally Verbal Autistic Children?” Oral Presentation (via Zoom), Communication Sciences and Disorders Department, University of New Hampshire, Durham, NH.
- 2022 “Choosing Therapy Targets and Activities for Children with Severe Speech Sound Disorders.” Oral Presentation (via Zoom), Department of Communication Sciences and Disorders, Emerson College, Boston, MA.
- 2022 “Assessing and Treating the “Spoken” Part of Spoken Language in Minimally Verbal Autistic Children.” Oral Presentation (via Zoom), Proven Behavior Solutions, Norwell, MA.

National

- 1999 “Computer Analysis of Infant Babbles: Development and Deviance.” Oral presentation, American Speech-Language-Hearing Association. San Francisco, CA.
- 2001 “Training a Vowel Contrast using Visual Articulatory Feedback.” Oral presentation, Acoustical Society of America, Chicago, IL
- 2010 “Automatic Methods to Monitor the Speech of Parkinson’s Patients with Deep Brain Stimulators.” Invited oral presentation, Speech Communication Session, Acoustical Society of America, Baltimore, MD
- 2014 “Speech Development in Children at High and Low Risk for Autism.” Invited presentation, Emory University Autism Center of Excellence Workshop on Analysis and Assessment of Early Vocal Behavior. Atlanta, GA
- 2016 “Comparison of Two Speech Therapies for Minimally Verbal Children with Autism.” Poster presentation, International Meeting for Autism Research, Baltimore, MD.
- 2016 “Effect of Auditory-Motor Mapping Training and Speech Repetition Therapy on Consonant and Vowel Accuracy in Minimally Verbal Children with Autism Spectrum Disorder.” Poster presentation, Acoustical Society of America, Salt Lake City, UT
- 2017 “Childhood Apraxia of Speech in Minimally Verbal Children with Autism: Preliminary Findings.” Oral presentation, American Speech-Language-Hearing Association, Los Angeles, CA.
- 2018 “Behavioral Predictors of Improved Speech Output in Minimally Verbal Children with Autism.” Oral presentation, American Speech-Language-Hearing Association, Boston, MA
- 2019 “The CAS Hypothesis of Minimally Verbal ASD: There’s More to the Story.” Oral presentation, American Speech-Language-Hearing Association, Orlando, FL
- 2020 “What Works (For Me).” Oral presentation (via Zoom), American Speech-Language-Hearing Association’s Lessons for Success Workshop, Rockville, MD
- 2021 “Investigating Speech Severity and Intelligibility in CAS.” Oral presentation, Apraxia-Kids Annual Conference (Virtual)

- 2022 “Communication and Motor Impairments in Children with CSNK2A1 and HIVEP2 Variants: Preliminary Data.” Oral presentation, Simons Searchlight (virtual).

International

- 2016 “Comparison of Auditory-Motor Mapping Training and Speech Repetition Therapy for Minimally Verbal Children with Autism Spectrum Disorder.” Oral presentation, International Conference for Clinical Linguistics and Phonetics, Halifax, NS.
- 2017 “From Intuition to Intervention: Developing an Intonation-Based Treatment for Autism.” Invited presentation, The Neurosciences and Music Conference (International), Boston, MA.
- 2017 “Predictors of Speech Improvement in Minimally Verbal Children with Autism Undergoing an Intonation-Based Therapy.” Poster presentation, The Neurosciences and Music Conference (International), Boston, MA.
- 2018 “Apraxia of speech in aphasia maps to lesions in the arcuate fasciculus.” Poster presentation, Academy of Aphasia (International), Montreal, QC.
- 2018 “Childhood Apraxia of Speech in Minimally Verbal Children with ASD.” Poster presentation, International Society for Autism Research, Rotterdam, NL.
- 2018 “Behavioral Predictors of Improved Speech Output in Minimally Verbal Children with ASD.” Poster presentation, International Society for Autism Research, Rotterdam, NL.
- 2018 “Childhood Apraxia of Speech in Minimally Verbal Children with Autism: Preliminary Findings.” Invited presentation, Murdoch Children’s Research Institute, Melbourne, VC, Australia.
- 2019 “Motor Speech Impairment Predicts Concurrent Expressive Language in MV ASD.” Poster presentation, International Society for Autism Research, Montreal, QC, Canada.
- 2020 “Using DIVA to Understand the Speech of Minimally Verbal Children with Autism: A Preliminary Analysis.” Poster presentation, Madonna Rehabilitation Motor Speech Conference (International), Santa Barbara, CA.
- 2020 “Factor Analysis of Signs of Childhood Apraxia of Speech.” Poster presentation, Madonna Rehabilitation Motor Speech Conference (International), Santa Barbara, CA.
- 2021 “Speech Production in Minimally Verbal Children with Autism: Not a Contradiction in Terms.” Invited presentation, McGill University, Montreal, QC, Canada.
- 2022 “Vowel Distinctiveness and Expressive Language in Low- and Minimally Verbal Autistic Children.” Poster presentation, Madonna Rehabilitation Motor Speech Conference (International), Charleston, SC.
- 2022 “Vowel Distinctiveness and Expressive Language in Low- and Minimally Verbal Autistic Children.” Poster presentation, International Society for Autism Research, Austin, TX.
- 2022 “Vowel Distinctiveness and Expressive Language in Low- and Minimally Verbal Autistic Children.” Poster presentation, International Conference for Motor Speech, Groningen, The Netherlands.
- 2022 “Child Formant Measurements from Remotely-Collected WAV and M4A Files are Similar.” Poster presentation, International Conference for Motor Speech, Groningen, The Netherlands.

Report of Clinical Activities and Innovations

Current Licensure and Certification:

- 2009 Certificate of Clinical Competence, American Speech-Language-Hearing Association.
- 2009 Massachusetts Educator’s License.

Practice Activities:

- 2006-2013 Speech pathology practice with school-aged children, primarily in educational or private-practice environments. Specialty: autism spectrum disorder.
- 2015-2018 Speech pathology practice with minimally verbal children with autism.

Report of Scholarship

Peer-Reviewed Scholarship in print or other media:

Research Investigations

1. H. Fell, J. MacAuslan, **K. Chenausky**, & L. Ferrier (1999) Automatic Babble Recognition for Detection of Speech Related Disorders. *J. Behaviour and Information Technology*, **18**:1, 56-63.
2. L. Ferrier, L. Reid, & **K. Chenausky** (1999) Computer-Assisted Accent Modification: A Report on Practice Effects. *Topics in Language Disorders*. **19**:4.
3. **K. Chenausky** & J. MacAuslan (2000) Utilization of Microprocessors in Voice Quality Improvement: the Electrolarynx. *Current Opinion in Otolaryngology and Head & Neck Surgery* **8**, 138-142 (April).
4. R. McGowan, S. Nittrouer, & **K. Chenausky** (2008) Speech production in twelve-month-old children with and without hearing loss. *Journal of Speech, Language, and Hearing Research* **51**: 879-888. DOI:10.1044/1092-4388(2008/064).
5. **K. Chenausky**, J. MacAuslan, & R. Goldhor (2011) Acoustic analysis of PD speech. *Parkinson's Disease*. DOI:10.4061/2011/435232.
6. **K. Chenausky** (2011) Effective treatments for auditory sensitivities in autism. *North American Journal of Medicine & Science* **4**(3):151. DOI:10.7156/v4i3p151.
7. **K. Chenausky**, A. Norton, H. Tager-Flusberg, & G. Schlaug (2016) Auditory-Motor Mapping Training: The Effects of a Novel Speech Treatment Compared to a Control Treatment for Minimally Verbal Children with Autism. *PLOS One*. DOI:10.1371/journal.pone.0164930.
8. **K. Chenausky** & H. Tager-Flusberg (2017) Acquisition of Voice Onset Time in Toddlers at High and Low Risk for Autism Spectrum Disorder. *Autism Research*. DOI: 10.1002/aur.1775.
9. **K. Chenausky**, C. Nelson, & H. Tager-Flusberg (2017) Vocalization Rate and Consonant Production in Toddlers at High and Low Risk for Autism. *Journal of Speech, Language, and Hearing Research*. DOI:10.1044/2016_JSLHR-S-15-0400.
10. **K. Chenausky**, J. Kernbach, A. Norton, & G. Schlaug (2017). White Matter Integrity and Treatment-Based Change in Speech Performance in Minimally Verbal Children with Autism Spectrum Disorder. *Frontiers in Human Neuroscience* **11**:175. DOI: 10.3389/fnhum.2017.00175K.
11. **K. Chenausky**, A. Norton. & G. Schlaug (2017) Auditory-Motor Mapping Training in a More Verbal Child with Autism. *Frontiers in Human Neuroscience*. DOI: 10.3389/fnhum.2017.00426.
12. **K. Chenausky** & G. Schlaug (2018) From Intuition to Intervention: Developing an Intonation-Based Treatment for Autism. *Annals of the New York Academy of Sciences*. DOI: 10.1111/nyas.13609.
13. Brignell, **K. Chenausky**, H. Song, J. Zhu, C. Suo, & A. Morgan (2018) Communication interventions for autism spectrum disorder in minimally verbal children. Cochrane Database of Systematic Reviews 2018, Issue 11. Art. No.: CD012324. DOI: 10.1002/14651858.CD012324.pub2.

14. **K. Chenausky**, A. Norton, H. Tager-Flusberg, & G. Schlaug (2018) Behavioral predictors of improved speech output in minimally verbal children with autism. *Autism Research*. **11**:1356–1365, DOI: 10.1002/aur.2006.
15. **K. Chenausky**, A. Brignell, A. Morgan, & H. Tager-Flusberg (2019) Motor speech impairment predicts expressive language in minimally verbal, but not low verbal, individuals with autism spectrum disorder. *Autism and Developmental Language Impairment* **4**:2. DOI: 10.1177/2396941519856333.
16. **K. Chenausky**, S. Paquette, A. Norton, & G. Schlaug (2019) Apraxia of speech involves lesions of dorsal arcuate fasciculus and insula in aphasia patients. *Neurology: Clinical*. DOI: 10.1212/CPJ.0000000000000699.
17. **K. Chenausky**, A. Brignell, A. Morgan, D. Gagné, A. Norton, H. Tager-Flusberg, G. Schlaug, A. Shield, and J. Green (2020) Factor analysis of signs of childhood apraxia of speech. *Journal of Communication Disorders*. DOI: 10.1016/j.jcomdis.2020.106033.
18. **K. Chenausky**, A. Brignell, A. Morgan, A. Norton, H. Tager-Flusberg, G. Schlaug, & F. Guenther (2021) A modeling-guided case study of disordered speech in minimally verbal children with autism spectrum disorder. *American Journal of Speech-Language Pathology*. DOI: 10.1044/2021_AJSLP-20-00121.
19. C. La Valle, **K. Chenausky**, & H. Tager-Flusberg (2021) How do minimally verbal children and adolescents with autism spectrum disorder use communicative gestures to complement their spoken language abilities? *Autism and Developmental Language Impairments* DOI: 10.1177/239694152111035065.
20. **K. Chenausky**, D. Gagné, K. Stipancic, A. Shield, & J. Green (2022) The relationship between single-word severity and intelligibility in childhood apraxia of speech. *Journal of Speech, Language, and Hearing Research*. DOI: 10.1044/2021_JSLHR-21-00213.
21. **K. Chenausky** & H. Tager-Flusberg (2022) Importance of deep speech phenotyping in neurodevelopmental and genetic disorders. *Journal of Neurodevelopmental Disorders*. DOI: 10.1186/s11689-0220-9443-z.
22. **K. Chenausky**, A. Norton, H. Tager-Flusberg, & G. Schlaug (2022) Auditory-motor mapping training: Testing an intonation-based spoken language treatment for minimally verbal children with autism spectrum disorder. *Annals of the New York Academy of Sciences*. DOI: 10.1111/nyas.14817
23. **K. Chenausky**, M. Maffei, H. Tager-Flusberg, & J. Green (2022) Review of methods for conducting speech research with minimally verbal individuals with ASD. *Augmentative and Alternative Communication*. DOI: 10.1080/07434618.2022.2120071
24. **K. Chenausky**, A. Verdes, & A. Shield (2022) Concurrent predictors of supplementary sign use in school-aged children with childhood apraxia of speech. *Language, Speech, and Hearing Services in the Schools*. DOI: 10.1044/2022_LSHSS-22-00017
25. H. Rowe, S. Shellikeri, Y. Yunusova, **K. Chenausky**, & J. Green (2022) Quantifying articulatory impairments in neurodegenerative motor diseases: A scoping review and meta-analysis of interpretable acoustic features. *International Journal of Speech-Language Pathology*. DOI: 10.1080/17549507.2022.2089234.
26. **K. Chenausky**, B. Baas, R. Stoeckel, T. Brown, J. Green, C. Runke, L. Schimmenti, & H. Clark (in press, 2022) Comorbidity and Severity in Childhood Apraxia of Speech: A Retrospective Chart Review. *Journal of Speech, Language, and Hearing Research*.

Thesis:

K. Chenausky (2015) "Speech Development in Toddlers at High and Low Risk for Autism."
<https://hdl.handle.net/2144/13665>

Narrative Report

I believe that all people deserve a way to communicate that does not involve hurting themselves or others. I am a speech pathologist, speech scientist, and clinical researcher, driven by a desire to understand why so many children do not learn to talk on their own. I use acoustic, perceptual, and instrumental methods to understand the nature of the spoken-language deficits in children with neurodevelopmental and genetic disorders and to develop evidence-based treatments to improve their communication skills.

My research career, always aimed at helping people with communication disorders, began with my employment at Speech Technology and Applied Research (STAR) Corp. and earned two SBIR grants from NIDCD. One was to develop automatic computerized methods for diagnosis of motor speech disorders in adults and the other for automatic recognition of their disordered speech. I found research satisfying but product development less so, so in 2000 I returned to school to study speech pathology. There, I fell in love with autistic children and sought out opportunities to work with them in medical outpatient, private practice, and school environments.

My master's program introduced me to the joys of clinical work, but I still felt the pull of research and continued on to earn a doctoral degree. Marrying work I had done at STARCorp on acoustic analyses of baby babbles with my clinical specialization in autism, in my dissertation I identified subtle acoustic differences in the developing speech of toddlers at familial risk for autism, versus toddlers not at risk.

My work took an unexpected turn in 2014, when I was working as a research assistant at Boston University under Dr. Helen Tager-Flusberg while completing my dissertation. There, I first met minimally verbal autistic children – a group of complex individuals with severe challenges, multiple comorbidities, and, often, intellectual disability. Because of their high rates of aggressive and self-injurious behavior, they are considered "difficult" and are rarely included in research. Yet what I discovered during my first postdoctoral research position under Dr. Gottfried Schlaug at BIDMC, serving as a therapist on his randomized controlled trial comparing two forms of speech therapy for these children, is that despite how tremendously difficult talking is for them and despite not being particularly socially rewarded by their interactions with adults, they still *children* – and they work incredibly hard in therapy.

My experience on the RCT put me in an optimal position to examine the so-called "CAS hypothesis". CAS, or childhood apraxia of speech, is a developmental motor speech disorder that makes speech imprecise, inconsistent, and imprecise. Speech pathologists have wondered since the 1990s whether comorbid CAS might be one reason that some autistic children remain minimally verbal. My postdoc work was the first to document that upward of 25% of minimally verbal autistic children do in fact meet criteria for CAS, and that their speech production ability is significantly related to their expressive language ability. These findings led to a K99/R00 grant, currently resuming in-person data collection, which aims to test whether CAS-specific speech treatment, appropriately modified for children with autism, does in fact improve their speech. Interestingly, in the past few years, CAS has been identified as part of the phenotype of many other neurodevelopmental and genetic disorders.

I am also investigating the effect of yet another comorbidity, auditory processing disorder, on speech development in minimally verbal autistic children. With funding from Autism Speaks, I am testing whether these children have a diminished ability to hear the difference between similar-sounding words like “ball” and “doll”. If so, not only would this make it difficult for them to discriminate between different words, but it would also make it difficult for them to hear whether they are mispronouncing words – and thus to use their auditory feedback to refine their intelligibility over time as typically developing children do. Behavioral assessment of speech perception in minimally verbal children with autism is completely novel and unstudied.

During the pandemic, of course, in-person data collection shut down. I had modest hopes for the remote data collection paradigm I cobbled together with colleagues, but together we collected data from 100 low- and minimally verbal autistic children over Zoom – far surpassing our expectations. This success, combined with a consistent flow of journal articles documenting the prevalence of CAS in children with genetic disorders, sparked a game-changing realization: I could use this remote data collection paradigm to collect speech production data, longitudinally, from a large number of children with rare genetic disorders who would be logistically infeasible to assess in person. Remote assessment would yield a data set of unprecedented size and depth, giving us the statistical power to investigate how genetic and neurological differences affect children’s ability to acquire spoken language and, I hope, leading to a quantum improvement in our ability to identify and treat children at risk for remaining minimally verbal.

In addition to research, another major thread in my career is teaching, especially to learners at Harvard and its affiliated institutions. My first teaching experience was English as a Foreign Language, to fellow graduate students at the University of Connecticut. Later, I taught Speech Science and Phonetics to speech-pathology master’s students at Northeastern University and a course on autism at College of Our Lady of the Elms in Chicopee, MA to adult learners. I now direct the Speech in Autism and Neurodevelopmental Disorders (SPAN) Lab at MGH IHP and mentor two research assistants, who are also master’s students in speech pathology, and a lab manager. I also mentor the thesis work of two doctoral students in Rehabilitation Sciences and two master’s students in speech pathology at MGH IHP. The thesis work of my previous two master’s students in speech pathology has been submitted for publication, with one manuscript published in *Journal of Speech, Language, and Hearing Sciences* and the other accepted to *Language, Speech, and Hearing Services in the Schools*. I frequently guest-lecture for colleagues’ courses (e.g., Emerson College, McGill University, Northeastern University, University of New Hampshire) and teach the Advanced Autism Elective for master’s students in speech pathology at MGH IHP. My teaching is not limited to students, however: I am just as enthusiastic about peer teaching and have done so at two national conferences (the American Speech-Language-Hearing Association and Apraxia-Kids) by presenting master classes on acoustic analyses for speech pathologists and on treating speech disorders in children who cannot produce very much speech, respectively.