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EDUCATION

- Postdoctoral Research Fellow** July 2020
NYU Langone Medical Center, School of Medicine, Voice Center
Department of Otolaryngology
Laboratory: Voice Research Lab, Drs. Aaron Johnson, M.M., Ph.D. CCC-SLP
and Ryan Branski, PhD, CCC-SLP
- Doctorate of Philosophy** December 2017
University of Pittsburgh, Communication Science and Disorders
Laboratory: Voice Physiology and Motor Learning
Advisor: Dr. Katherine Verdolini Abbott, PhD CCC-SLP
Secondary Advisor: Dr. Susan Shaiman, PhD CCC-SLP
Dissertation: Exercise-induced paradoxical vocal fold motion disorder: Clinical
features and mechanisms
- Masters of Arts** December 2008
University of Pittsburgh, Communication Science and Disorders
- Bachelor of Science** December 2005
The Pennsylvania State University, Communication Sciences and Disorders
Minors in Theater, Dance, and Music with a Voice Emphasis

PROFESSIONAL APPOINTMENTS & EMPLOYMENT

- 08/2020 – Communication Sciences and Disorders, School of Behavioral and Brain Sciences, UT Dallas Assistant Professor
Otolaryngology-Head and Neck, Voice Center, UT Southwestern
Voice Physiology and Biology Laboratory
- 01/2018 – 07/2020 NYU Langone Medical Center, School of Medicine Postdoctoral Research Fellow
Voice Research Laboratory
New York, NY
- 08/2018 – 07/2020 NYU Voice Center Speech-Language Pathologist
Department of Otolaryngology – Head & Neck Surgery, New York, NY
- 11/2016 – 10/2017 Ruth L. Kirschstein National Research Service Award Individual Predoctoral Fellowship (F31), NIDCD (*sponsors: Katherine Verdolini Abbott, PhD & Christopher Hartnick, MD*) Pre-doctoral Research Fellow

07/2016 – 12/2017	Massachusetts Eye and Ear Infirmary; Voice and Speech Laboratory, Department of Otolaryngology Boston, MA	Speech-Language Pathologist
09/2016 – 12/2017	Academic Speech, Language, and Hearing Center, Voice Disorders and Transgender Clinic, Boston University, Boston, MA	Speech-Language Pathologist; Clinical Supervisor
08/2014 – 05/2016	University of Pittsburgh	Teaching Assistant
01/2012 – 11/01/16	University of Pittsburgh	Graduate Res. Assistant
12/2010 – 05/2016	Contractor: Genesis Rehabilitation, Albuquerque, NM	Speech-Language Pathologist
08/2012 – 05/2013	University of Pittsburgh	Teaching Assistant
01/2009 – 01/2012	University of Pittsburgh Medical Center, UPMC Voice Center, Pittsburgh, PA	Speech-Language Pathologist
01/2010 – 09/2012 (PRN)	University of Pittsburgh Medical Center, Eye and Ear Institute, Pittsburgh, PA	Speech-Language Pathologist
01/2009 – 12/2009	University of Pittsburgh Medical Center, UPMC Voice Center, Pittsburgh, PA	Clinical Fellow

RESEARCH EXPERIENCE

12/2019 – Present	Principle Investigator	Shear wave elastography for vocal muscle structure and function. NYU School of Medicine / NYU Medical Center, New York, NY
11/2019 – Present	Collaborator	Mechanisms Underlying Tongue Muscle Dysfunction and Dysphagia Following Concurrent Chemoradiation Therapy. NYU School of Medicine, New York, NY (R21 DC018081)
01/2019 – Present	Co-Investigator	Systems biology approaches for the study of the laryngeal musculoskeletal system. NYU School of Medicine, New York, NY
03/2018 – Present	Research Assistant	Development of a visual database of vocal tract dynamics and vocal fold kinematics in professional vocal athletes across vocal styles. NYU Voice Center, New York, NY
02/2018 – Present	Co-Investigator	Clinical characteristics in upper airway dyspnea. NYU Voice Center (multi-site study), New York, NY
01/2018 – 12/2019	Research Assistant	Translational study of vocal exercise dose-response. NYU School of Medicine, New York, NY (K23 DC014517)
01/2018 – 10/2018	Research Assistant	High-intensity group vocal exercise to improve laryngeal function in patients with Parkinson’s Disease. NYU Clinical and Translational Science Institute, New York, NY.
03/2017 – 12/2017	Research Assistant	Effects of vocal therapy standard of care for children with vocal fold nodules, The Massachusetts Eye and Ear Infirmary, Boston, MA
02/2017 – 05/2017	Collaborator	Physiological mechanisms of vocal effort in hyperfunctional voice disorders STEPP Lab for Sensorimotor Rehabilitation Engineering, Boston University, Boston, MA

01/2017 – 05/2017	Collaborator	The study of relative fundamental frequency with high speed video laryngeal kinematics , STEPP Lab for Sensorimotor Rehabilitation Engineering, Boston University, Boston, MA
05/2016 – 12/2017	Principal Investigator	Exercise-induce paradoxical vocal fold motion disorder: Clinical features and potential mechanisms , F31 NIDCD NIH, The Massachusetts Eye and Ear Infirmary, Boston, MA, Visiting Research Scholar
08/2016 – 01/2017	Collaborator	Autonomic and acoustic measures during speech as a function of cognitive load in healthy older adults , STEPP Lab for Sensorimotor Rehabilitation Engineering, Boston University, Boston, MA
07/2014 – 04/2016	Collaborator	Diagnostic and outcome assessments for pediatric laryngeal breathing disorders , Principal Investigator: Dr. Christopher Hartnick, The Massachusetts Eye and Ear Infirmary
08/2014 – 05/2016	Study Coordinator	The effect of inhaled corticosteroids on vocal fold nodules in children: A pilot study , Principal Investigator: Dr. Joseph Dohar, Children’s Hospital of Pittsburgh
07/2014 – 08/2015	Sub-investigator	The use of questionnaires to screen for Vocal Cord Dysfunction (VCD) , Primary investigator: Dr. Fernando Holguin, The University of Pittsburgh Asthma Institute
08/2013 – 06/2015	Study Coordinator	Prospective study of voice therapy in children: A pilot study , Principal Investigator: Dr. Katherine Verdolini Abbott, PhD
05/2013 – 06/2014	Principal Investigator	Comparison of measurement methods for quantifying respiratory glottal configuration , University of Pittsburgh and University of Wisconsin-Madison
04/2012 – 08/2012	Research Assistant	Hybrid model of vocal fold inflammation and tissue mobilization , R01 NIDCD, Principal Investigator: Dr. Katherine Verdolini Abbott, Ph.D, University of Pittsburgh
09/2009 – 08/2015	Research Assistant	The Prospective study on the prevention and treatment of voice problems in Teachers , R01 NIDCD, Principal Investigator: Dr. Katherine Verdolini Abbott, Ph.D, University of Pittsburgh
01/2009 – 01/2012	Principal Investigator	Development and validation of the Cough Severity Index (CSI) , University of Pittsburgh Medical Center
01/2009 – 01/2012	Co-Investigator	Development and validation of the Dyspnea Index (DI) , University of Pittsburgh Medical Center
12/2008 – 03/2009	Research Assistant	Effectiveness of voice therapy in teachers , under the direction of Dr. Katherine Verdolini, PhD, CCC-SLP, University of Pittsburgh.
08/2007 – 01/2008	Research Assistant	Psychobiological effects of stress on laryngeal function and voice , Maria Dietrich, PhD candidate, M.A., CCC-SLP, University of Pittsburgh.
08/2006 – 08/2007	Research Assistant	The Efficacy of Voice Therapy for Phonotrauma in Teachers , under the direction of Dr. Katherine Verdolini, PhD, CCC-SLP, University of Pittsburgh.

PEER-REVIEWED PUBLICATIONS

- Gartner-Schmidt, J.L., **Shembel, A.C.**, Zullo, T.G., Rosen, C.A. (2014). Development and validation of the Dyspnea Index (DI): A severity index for upper-airway related dyspnea. *Journal of Voice*, 28(6), 775-782. DOI: <http://dx.doi.org/10.1016/j.jvoice.2013.12.017>
- Hartnick, C., Ballif, C., De Guzman, V., Sataloff, R., Campisi, P., Kerschner, J., **Shembel, A.C.**, Reda, D., Shi, H., Zacny, E., Bunting, G. (2017). Indirect vs Direct Voice Therapy for Children with Vocal Nodules: A Randomized Clinical Trial. *JAMA Otolaryngology–Head & Neck Surgery*, 144(2), 156-163.
- Lenell, C., **Shembel, A. C.**, Johnson, A. M. (2020). Preparation of the Rat Vocal Fold for Neuromuscular Analyses. *Journal of Visual Experiments*, e61327, In-press.
- McKenna, V. S., Diaz-Cadiz, M. E., **Shembel, A. C.**, Enos, N. M., & Stepp, C. E. (2019). The relationship between physiological mechanisms and the self-perception of vocal effort. *Journal of Speech, Language, and Hearing Research*, 62(4), 815-834.
- Shembel, A.C.**, (2016). Underlying mechanisms in episodic laryngeal breathing disorders. *Perspectives of the ASHA Special Interests Groups*. 1(SIG 3):83. DOI:10.1044/persp1.SIG3.83.
- Shembel, A.C.**, Hartnick, C., Bunting, G., Ballif, C., Shaiman, S., de Guzman, V., Verdolini Abbott, K. (2018). Perceptual clinical features in exercise-induced laryngeal obstruction (EILO): Towards improving diagnostic approaches. *Journal of Voice*. DOI: 10.1016/j.jvoice.2018.05.006.
- Shembel, A.C.**, Hartnick, C., Bunting, G., Ballif, C., Vanswearingen, J., Shaiman, S., Johnson, A., de Guzman, V., Verdolini Abbott, K. (2018). The study of laryngoscopic and autonomic patterns in exercise-induced laryngeal obstruction. *Annals of Otolaryngology, Rhinology, and Laryngology*. 127(11), 754-762. doi.org/10.1177/0003489418796524
- Shembel, A.C.**, Lenell, C., Chen, S., Johnson, A.M. (2020). Effects of vocal training on thyroarytenoid muscle neuromuscular junctions and myofibers in young and older rats, *The Journals of Gerontology: Series A*, glaa173, <https://doi.org/10.1093/gerona/glaa173>.
- Shembel, A. C.**, Rosen, C. A., Zullo, T. G., & Gartner-Schmidt, J. L. (2013). Development and validation of the cough severity index: A severity index for chronic cough related to the upper airway. *The Laryngoscope*, 123(8), 1931-1936. DOI: 10.1002/lary.23916
- Shembel A.C.**, Kolouri S., Xu H., Verdolini Abbott K. (2015). Quantification of respiratory laryngeal morphometry: comparison of laryngeal lumen angle estimate methods. *Journal of Voice*. DOI:10.1016/j.jvoice.2015.10.011.
- Shembel A.C.**, Sandage M.J., Verdolini Abbott K (2017). Episodic Laryngeal Breathing Disorders: Literature review and proposal of preliminary theoretical framework. *Journal of Voice*. 31(1), 125-e7. DOI:10.1016/j.jvoice.2015.11.027.
- Verdolini Abbott, K., Barton, F.B., Terhorst, L., **Shembel, A.C.** (2016). Retrospective studies: A fresh look. *American Journal of Speech-Language Pathology*, 25, 157-163. DOI:10.1044/2016_AJSLP-16-0025.

PUBLICATIONS IN SUBMISSION

- Abur, D., MacPherson, M.K., **Shembel, A.C.**, Stepp, C.E. (in submission). Acoustic measures of voice and physiologic measures of autonomic arousal during speech as a function of cognitive load in older adults.

BOOK CHAPTERS

Shembel, A.C., Milan, A., Kwak, P. (2019). Future Directions in Chronic Cough Management. Chronic Cough. Plural Publishing.

SKILLS & TECHNICAL EXPERIENCE

Flexible nasoendoscopy and rigid laryngoscopy	Clinical competencies: Boston University (met 11/21/17) Massachusetts Eye and Ear Infirmary (met 1/27/2017) Emory Voice Center Laryngeal Imaging and FEES Course (completed 2/1/2016)	11/2016 – present
Acoustic analysis with PRAAT and KayPENTAX Computerized Speech Lab (CSL) (model 4500)	Clinical competencies: UPMC University of Pittsburgh Voice Center School of Health and Rehabilitation Sciences, University of Pittsburgh Massachusetts Eye and Ear Infirmary Boston University STEPP Lab	8/2007 – present
Acoustic ultrasonic vocalization recording (Avisoft) and analysis (DeepSqueak)	NYU Medical Center Johnson Voice Research Lab	1/2018 – present
Aerodynamic Assessment with KayPENTAX Phonatory Aerodynamic System (PAS) (model 6600)	Clinical competencies: UPMC University of Pittsburgh Voice Center School of Health and Rehabilitation Sciences, University of Pittsburgh Massachusetts Eye and Ear Infirmary Boston University STEPP Lab	8/2007 – present
RNA Extraction and sequencing	NYU Medical Center Johnson Voice Research Lab	1/2018 – present
Cryosectioning, immunohistochemistry, confocal microscopy	NYU Medical Center Johnson Voice Research Lab	1/2018 – present

TEACHING & SUPERVISION EXPERIENCE

University of Texas at Dallas

08/2020 –	Voice Disorders Behavioral and Brain Science CSD (Masters of Arts)	Assistant Professor
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New York University

01/2018 – 01/2019	Voice Disorders Steinhardt CSD (Masters of Arts)	Adjunct Lecturer
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Boston University

06/2016 – 12/2017	Clinical supervisor and coordinator: BU Voice Disorders Clinic	Adjunct Professor
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08/2017 – 12/2017	Clinical director: Center for Transgender Voice and Speech Communication	Adjunct Professor
Rutgers University 01/2016 – 05/2016	Anatomy and Physiology of the Speech Mechanism (remote course)	Adjunct Professor
University of Pittsburgh Laboratory in Speech Science		Spring 2016 Spring 2015 Spring 2013
Laboratory in Anatomy & Physiology of Speech		Fall 2015 Fall 2014 Fall 2013

CONFERENCE PODIUM PRESENTATIONS

Effects of Age and Vocal Exercise on Laryngeal Muscle Structure and Function
2019 Fall Voice Conference, Dallas, TX, October 19, 2019

Debate the Doctors, Oxford Style! Management of Vocal Bumps, Bowing, & Chronic cough
2018 ASHA Convention, SIG 3 Short Course, Boston, MA, November 16, 2018

Treatment of Exertion-Induced Paradoxical Vocal Fold Motion using Buteyko Breathing Technique (BBT)
2018 ASHA Convention, Technical Research, Boston, MA, November 15, 2018

Irritable Larynx Syndrome: What does it really mean?
2018 Fall Voice Conference, Seattle, WA, October 24, 2018

Potential cognitive influences on treatment outcomes in pediatric voice therapy: A pilot study.
45th Annual Voice Foundation Symposium, Philadelphia, PA, June 4th 2016.

Exercise-Induced Laryngeal Obstruction: Features & Mechanisms
New Investigators Forum, Voice Foundation, June 4th 2016

Comparison of quantification methods in measurement of glottal configuration in respiration
43rd Annual Voice Foundation Symposium, Philadelphia, PA

Dyspnea Index (DI) and Cough Severity Index (CSI): Development and Validation
UCSF Fall Voice Conference 2011

Comparison of Quantification Methods in Measurement of Glottal Configuration During Respiration
Atlanta Fall Voice Conference (Poster presentation)
Multi-Institutional Voice Research Rounds (MIVRR) (Guest lecture)
University of Pittsburgh Research Rounds (Guest lecture)

Development and Validation of the Dyspnea Severity Index (DSI)
39th Annual Voice Foundation Symposium, Philadelphia, PA

PEER-REVIEWED POSTER PRESENTATIONS

McKenna, V.S., Diaz-Cadiz, M.E., **Shembel, A.C.**, Enos, N.M., & Stepp, C.E. (2018). "The Relationship Between Physiological Mechanisms and the Self-perception of Vocal Effort," 3rd Annual Boston University Data Science Day, Boston, MA.

(2nd place: Best Poster Award)

Autonomic and Acoustic Measures during Speech as a Function of Cognitive Load in Healthy Older Adults
Megan K. MacPherson, PhD, **Adrianna C. Shembel, MA**, CCC-SLP, Defne Abur, BS, Cara E. Stepp, PhD

46th Annual Voice Foundation Symposium: Care of the Professional Voice
May 31st – June 4th, 2017

Comparison of quantitative methods in measurement of glottal configuration during respiration
Adrianna Shembel, MA CCC-SLP
The Fall Voice Conference
October 17-19, 2013
Atlanta, Georgia

INVITED EDUCATIONAL SEMINARS

No Acoustics, No Aero, No Problem! Voice Diagnostics for the Community SLP
Proposal accepted at the Annual Convention of the American Speech-Language-Hearing Association, San Diego, CA (2020, November; Convention canceled).

INVITED LECTURES

Functional Laryngeal Muscle Disorders: From the Clinic to the Bench and Back
GBMC Laryngology Grand Rounds, September 13, 2019

Ohio State University Grand Rounds, March 30, 2020

Laryngeal Aerodigestive Disorders: Paradoxical Vocal Fold Motion Disorder & Chronic cough
Purdue University Voice Disorders Masters Class, March 26th, 2019; April 23rd, 2019

ASHA PhD Panel
2018 ASHA Convention, Boston, MA, November 17, 2018

Quantification of respiratory laryngeal morphology
UCSF Grand Rounds, June 28, 2018

Motor learning & Indirect Treatment Approaches for the Speech Language Pathologist
NYU Steinhardt, Department of Speech-Language Pathology, April 16, 2018

Voice & Communication Modification for the Transgender & Gender Nonconforming Client
MGH IHP, Department of Communication Sciences & Disorders, April 3, 2018

NYU Steinhardt, Department of Speech-Language Pathology, April 12, 2020

Vocometry and Instrumentation for the Voice Disorders Laboratory
NYU Steinhardt, Department of Speech-Language Pathology, April 2, 2018

Paradoxical Vocal Fold Motion Disorder / Chronic Cough for the Speech-Language Pathologist
University of Pittsburgh, Department of Communication Science and Disorders, March 29th, 2018

Paradoxical Vocal Fold Motion Disorder: Information for the ENT Resident
NYC Langone Health, Department of Otolaryngology, March 14, 2018

Anatomy & Physiology of the Larynx
NYU Steinhardt, Department of Speech-Language Pathology, February 20, 2018

Voice & Communication Modification for the Transgender & Gender Nonconforming Client
Boson Medical Center, Department of Speech-Language Pathology, December 21, 2017

Exercise-induced paradoxical vocal fold motion disorder: Clinical features and potential mechanisms
Massachusetts Eye and Ear Infirmary, Department of Otolaryngology Grand Rounds, December 21, 2016

Ethical Considerations in the Voice Disorder Outpatient Clinical Setting (teleconference)
Seton Hall, April 19, 2016

Measurements of Phonation: Speech Science (CSD 1026)

University of Pittsburgh, April 4th and 6th, 2016

Introduction to Voice Disorders (CSD1230)

University of Pittsburgh, March 23, 2016

Respiratory Physiology: Speech Science (CSD 1026)

University of Pittsburgh, February 22 & 24, 2016

Cranial Nerves: Anatomy & Physiology of Speech

University of Pittsburgh, November 17 & 19, 2015

Episodic Laryngeal Breathing Disorders in Adolescent Athletes: Dissertation Proposal Think Aloud

Research Round Table, University of Pittsburgh, October 7, 2015

Intrinsic Laryngeal Muscles: Anatomy & Physiology of Speech

University of Pittsburgh, September 24 & 29, 2015

Paradoxical Vocal Fold Motion Disorder (PVFMD) and Chronic Cough (CC): The SLP's Role

Graduate Voice Disorders Class Presentation at the University of Hawaii 2013

Graduate Voice Disorders Class Presentation at Duquesne University 2013-2015

Graduate Voice Disorders Class Presentation at the University of Pittsburgh 2012-2015

Have you talked to your larynx today? Voice Care and Medicine in the Older Citizen

Voice Outreach, Carnegie Mellon University; McConomy Auditorium, Pittsburgh, PA

Dyspnea Index (DI) and Cough Severity Index (CSI): Development and Validation

UPMC 4th Annual Voice Therapy Conference, Pittsburgh, PA

Paradoxical Vocal Fold Motion Disorder (PVFMD) and Chronic Cough (CC) Therapy

UPMC 4th Annual Voice Therapy Conference, Pittsburgh, PA

Periodic Occurrence of Laryngeal Obstruction (POLO)

Presentation at UPMC Voice Center Grand Rounds, Pittsburgh, PA

"What to Know Before the Curtain Goes Up" (Voice Outreach Presentation)

Bach Choir of Pittsburgh

Seneca Valley District Choir

Shaler Area School District

Behavioral Treatment for Paradoxical Vocal Fold Motion Disorder (PVFMD) & Chronic Cough (CC)

The American Osteopathic Colleges of Ophthalmology and Otolaryngology

96th Annual Clinical Assembly of the AOCOO-HNS Foundation, Palm Springs, CA, May 9-13, 2012

AWARDS AND HONORS

Voice Foundation New Investigator Research Forum awardee	2016
Sword of Honor – excellence and dedication in music from Sigma Alpha Iota fraternity	2005
National Society of Collegiate Scholars	2001

GRANTS AND SOURCE OF FUNDING

NIDCD NIH F31 Grant Fellowship 1F31DC015752-01A1	11/01/2016-
Exercise-induced paradoxical vocal fold motion disorder: Clinical feature characteristics and potential mechanisms	10/31/2017
ASHA Foundation Lessons for Success	2017

School of Health and Rehabilitation Sciences Research Development Fund	2016-2017
Audrey Holland Award recipient, University of Pittsburgh, Department of Communication Science and Disorders	2016

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS

Sigma Alpha Iota – professional music fraternity for women	2001 – Present
The Voice Foundation	2008 – Present
ASHA Special Interest Group 3 – Voice and Voice Disorders	2008 – Present
The American Speech-Language-Hearing Association (ASHA)	2010 – Present
Multi-Institution Voice Research Rounds (MIVRR) – President	2012 – 2018
Health and Human Development Honors Society	2004 – 2005

LICENSURE AND CERTIFICATIONS

Lessac-Madsen Resonant Voice Therapy (LMRVT)	2008 – Present
The American Speech-Language-Hearing Association (ASHA)	2010 – Present
New York State Licensure	2018 – Present
Massachusetts State Licensure	2016 – Present
Transgender Voice and Communication Training for Voice Clinicians	2017 – Present
Pennsylvania State Licensure	2010 – 2018

SERVICE TO PROFESSION AND LEADERSHIP

2020 ASHA Convention Committee for SIG 3 Voice and Upper Airway Disorders	10/2019 – Present
Reviewer for <i>Journal of Voice</i>	06/2016 – Present
Reviewer for <i>Laryngoscope</i>	04/2020 – Present
Postdoc Training Assertive and Inclusive Leaders (TRAIL) Leadership Curriculum Committee Member	01/2020 – 07/2020
TRAIL Fitness Committee Coordinator	01/2020 – 07/2020
Postdoc Writing Accountability Group (WAG) Director	02/2020 – 05/2020
Multi-Institution Voice Research Rounds (MIVRR): M.A. and Ph.D. Student mentor for students interested in voice disorder research	08/2012 – 01/2019
Laboratory Coordinator and undergraduate student mentor: Voice Disorders and Motor Learning Laboratory	01/2012 – 12/2017
Ph.D. Graduate Student Representative: CSD Faculty Meetings, faculty candidate search, research and education committees	03/2013 – 04/2016

COMMUNITY INVOLVEMENT & OUTREACH

Concord-Carlisle High School Voice and Speech Outreach	03/27/2017
UPMC Voice Center Educational and Vocal Outreach Coordinator	01/2010 – 01/012

MEDIA

[“You’ll say nothing”](#)

2016

A documentary video project on the relationship between trauma and voice

ISST Media Award 2017

Director: Elisa Monti

[“Have you talked to your larynx today?”](#)

2011

Carnegie Mellon Osher Lifelong Learning

TEACHING AREAS/COURSES

Voice Disorders

Anatomy and Physiology of Speech and Swallowing

Speech Science

Research Methods and Measurements

Human Physiology

Fundamentals of Evidence-Based Practice

Professional Issues in Speech-Language Pathology