(Hannah) Aura Shoval

Curriculum Vitae

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Current Position

2021-present Interim Chief of Physiatry, Children's Specialized Hospital, Union, NJ.

2017-present Attending Pediatric Physiatrist, Children's Specialized Hospital, Clifton, NJ.

2018–present Clinical Assistant Professor, Rutgers New Jersey Medical School, Department of Physical

Medicine Rehabilitation.

2021-present Pediatric Rehabilitation Associate Fellowship Director, Children's Specialized Hospital.

Certifications

- American Board of Physical Medicine and Rehabilitation (ABPMR) diplomate
- Board Certified in Pediatric Rehabilitation Medicine
- O Board Certified in Brain Injury Medicine
- Performing Arts Medicine Certification (by the American College of Sports Medicine (ACSM) and Performing Arts Medicine Association (PAMA))
- o New Jersey State Medical License

Education

Aug 2021 – Master of Business Administration, Forbes School of Business & Technology. present

July 2015 - Pediatric Rehabilitation Medicine Fellow, New York-Presbyterian Hospital, New York, NY.

July 2017 Clinical Sites: Columbia University Medical Center Blythedale Children's Hospital

July 2014 - Chief Resident in Physical Medicine & Rehabilitation, New York-Presbyterian Hospital,

June 2015 New York, NY.

July 2012 - Physical Medicine & Rehabilitation Resident, New York-Presbyterian Hospital, New York,

June 2015 NY.

Hospital for Special Surgery Memorial Sloan-Kettering Cancer Center

Clinical Sites: Columbia University Medical Center Blythedale Children's Hospital

Weill Cornell Medical Center Burke Rehabilitation Center

July 2011 - Preliminary Internal Medicine Resident, Winthrop University Hospital, Mineola, NY.

June 2012

Aug 2006 - Medical Doctor, Tufts University School of Medicine, Boston, MA.

June 2011

Sep 2000 – Bachelor of Arts (BA), Barnard College, New York, NY.

May 2005 Major in Neuroscience and Behavior; Major in Dance May 2005

- Sep 2000 Bachelor of Arts (BA), Jewish Theological Seminary of America, New York, NY.
- May 2006 Major in Bible Studies May 2006

Honors and Awards

- 2021 Listed in "Top Doctors" in Bergen County, Magazine/ USA Today Network.
- 2020 Listed in "Top Doctors" in Bergen County, Magazine/ USA Today Network.
- 2019 First author of manuscript chosen as one of the "Top 10 Research Articles in Pediatric Rehabilitation Medicine", AAPMR "Top 10 Pediatric Rehabilitation Medicine".
- 2013 Employee of the Month, New York-Presbyterian Hospital.
- 2006 Magna cum laude, Barnard College.
- 2006 Irving and Kremsdorf Award for Academic Achievement, Jewish Theological Seminary of America.
- 2000–2006 **The Fellows Program**, Jewish Theological Seminary of America. Full merit based scholarship

Leadership Positions

- 2021-present Pediatric Rehabilitation Associate Fellowship Director, Children's Specialized Hospital.
- 2021-present Member of Telemedicine Committee, Children's Specialized Hospital.
- 2021-present Member of Medical Executive Committee, Children's Specialized Hospital.
- 2020-present Curriculum Committee for Kessler Residency Program, Kessler Institue for Rehabilitation.
 - 2020–2021 Past Chair, Adapted Sports and Recreation Committee, AACPDM.
 - 2019–2020 Chair, Adapted Sports and Recreation Committee, AACPDM.
 - Presentation of the Duncan Wyeth Award on Sep 26, 2020: https://youtu.be/ZsBQ0eqD1cs
- 2019-present Medical Education Committee, Children's Specialized Hospital.
- 2019-present PI Committee, Children's Specialized Hospital.
- 2017-present Physiatry PI/QI Representative, Children's Specialized Hospital.
- 2017-present Adapted Sports and Recreation Committee, AACPDM.
 - 2015–2016 Pediatric Rehabilitation Quality Chair, New York-Presbyterian Hospital, New York, NY.
 - 2014–2015 Chief Resident in Physical Medicine and Rehabilitation, New York-Presbyterian Hospital, New York, NY.
 - 2014–2015 Quality Chief for Physical Medicine and Rehabilitation Residents, New York-Presbyterian Hospital, New York, NY.
 - 2014–2015 **Resident Mentor**, Columbia University Medical School PM&R Student Interest Group, Columbia Medical School, New York, NY.
 - 2013–2014 Vice Chair, House Staff Quality Council, New York-Presbyterian Hospital/Weill Cornell Medical Center, New York, NY.
 - Hand Off initiative
 - Good catch program to promote a culture of safety
 - Consult guide
 - O Deep Vein Thrombosis prophylaxis group
 - Electronic Medical Records Radiology selection
 - 2012–2016 Physical Medicine and Rehabilitation Representative, House Staff Quality Council, New York-Presbyterian Hospital/Weill Cornell Medical Center, New York, NY.
 - 2013–2014 Volunteer Events Committee, New York Society of PM&R, New York, NY.
- Oct 2, 2013 **Team Leader**, PM&R on Capital Hill, AAPM&R.
 - Political advocacy for AAPM&R

- 2012–2015 Residency workflow efficiency projects, New York-Presbyterian Hospital, New York, NY.
 - Epic templates
 - Eclipsys templates
 - Resident to resident guide for incoming PGY-2
 - PM&R Consult sheet
 - 2012 Quality Improvement Committee, Winthrop University Hospital, Mineola, NY.
- 2011–2012 EMR Quality Improvement Pilot Committee, Winthrop University Hospital, Mineola, NY.
- Winter 2008 **Board Member/Choreographer/Performer**, Multi-Cultural Performing Arts Group, Boston, MA.
 - Helped organize, choreographed and performed at a fundraiser for the Colleen Romain Scholarship
 - 2007 Case Manager and Board Member, Sharewood, Boston, MA.

Sharewood is Tufts' student run free Health Clinic

- 2006 Volunteer Coordinator, Jewish Home & Hospital, New York, NY.
 - Organized and led a weekly song & motion session

Research

2021-present Co-Investigator, New Jersey Institute of Technology Motion Capture Lab, Newark, NJ.

The effects of surgical and nonsurgical treatments for spasticity and contractures on gait lab analysis in children with Cerebral Palsy.

2020-present Principal Investigator, Children's Specialized Hospital, New Brunswick, NJ.

Investigation of Socio Demographics and Functional Level on Access to Care for Children with Cerebral Palsy.

2018-present Co-Principal Investigator, Children's Specialized Hospital, New Brunswick, NJ.

Investigation in Sleep Patterns in Inpatient Rehabilitation.

Awarded funding from Children's Specialized Hospital Foundation.

2017-present Co-investigator, Children's Specialized Hospital, Mountainside, NJ.

Treadwall Rock Climbing for Children with Hemiplegic Cerebral Palsy.

2017-present Co-investigator, Children's Specialized Hospital & Kessler Foundation.

Visual biofeedback gait training study.

A collaboration between Children's Specialized Hospital and the Center for Mobility and Rehabilitation Engineering Research, Kessler Foundation.

- 2015–2017 **Resident Research**, Pediatric Rehab Research, Columbia Medical Center, New York, NY. Under the supervision of Heakyung Kim, MD
 - Long Term Efficacy of Repeated Botulinum Toxin A Injections to Salivary Glands for the People with Neuromuscular Disorders
 - Single Event Multi-level Chemoneurolysis combined with Salivary gland injections Safety and Efficacy
 of Botox Injections to Salivary glands in patients with SMA
 - Improved Balance in patients with CP and Valgus foot deformity after Botox injections
- 2012–2016 **Resident Research**, Cardiopulmonary Rehab Research Group, Columbia Medical Center, New York, NY.

Under the supervision of Matthew Bartels, MD

- The therapeutic effect of cardiovascular exercise in Schizophrenia in terms of function as related to autonomic dysreflexia and other cardiovascular parameters
- 2005–2006 Research Assistant, Pediatric Neurology, Montefiore Medical Center, Bronx, NY.

Under the supervision of Kathryn McVicar, MD and Shlomo Shinnar, MD Ph.D.

- Helped plan and implement the study. Reviewed medical charts. Created/managed the database.
- Recruited and followed up on patients. Administered childhood autism rating scale.

2004–2005 Volunteer Research Assistant, Sergievsky Center for Neurological Disorders, Columbia University, New York, NY.

Under the supervision of Brady Butterfield, PhD and Yaakov Stern, PhD

- Reviewed and summarized literature for research on brain function using fMRI.
- Neuroscience Research Thesis "An fMRI Investigation of the neurobehavioral Impact of sleep deprivation and stimulus degradation on a working memory task"
- 2004–2005 Neuroscience Senior Thesis, Barnard College, New York, NY.

An fMRI Investigation of the Neurobehavioral Impact of Sleep Deprivation and Stimulus Degradation on a Working Memory Task

2004–2005 Dance Senior Thesis, Barnard College, New York, NY.

Treatment for Chronic and Recurring Lower Back Pain must be Informed by the Psychological Component

Publications

Peer Reviewed Manuscripts

- 2021 Feasibility of a real-time pattern-based kinematic feedback system for gait retraining in pediatric cerebral palsy. X. Liu, N. Oliveira, N. Ehrenberg, J. Cheng, K. Bentley, S. Blochlinger, H. A. Shoval, P. Barrance. Journal of Rehabilitation and Assistive Technologies Engineering. 2021.
- 2020 Cumulative Efficacy of Longitudinal Repeat Salivary Gland OnabotulinumtoxinA Injection: A Retrospective Study. Hannah Aura Shoval, MD, Kathleen Friel, PhD, Jared Levin, MD, Heakyung Kim, MD. Am J Phys Med Rehabilitation. Dec 29; Published Ahead of Print.
- 2019 Safety of combined salivary gland and multilevel intramuscular onabotulinum A injections with and without ethanol in pediatric patients with cerebral palsy: A retrospective study. Hannah Aura Shoval, MD, Jared Levin, MD, Kathleen Friel, PhD, Heakyung Kim, MD. Journal of Pediatric Rehabilitation Medicine. 01 Jan 2019, 12(2):189–196
- 2018 The Impact of Hypomania on Aerobic Capacity and Cardiopulmonary Functioning—A Case Report. Hannah Aura Shoval, MD, Hilary F. Armstrong, PhD, Julia Vakhrusheva, Jacob S. Ballon, MD MPH, Matthew Bartels, MD, David Kimhy, PhD.. Frontiers in Psychiatry.
 - Onabotulinumtoxin-A injections into the salivary glands for spinal muscle atrophy type I: A prospective case series of four patients. Hannah Aura Shoval, MD, Esther Antelis, Andrew Hillman, Xiaofang Wei, MD, Patricia Tan, MD, Ruth Alejandro, MD, Heakyung Kim, MD. American Journal of Physical Medicine and Rehabilitation.
- 2016 The Impact of Aerobic Exercise Training on Cardiopulmonary Functioning in Individuals with Schizophrenia. Hilary F. Armstrong, PhD, Matthew Bartels, MD, Orest Paslavski, Darnell Cain, Hannah Aura Shoval, MD, Jacob S. Ballon, MD MPH, Samira Khan, Richard P. Sloan, PhD, David Kimhy, PhD.. Schizophrenia Research.

Book Chapters

- 2021 Pediatric Neurological Disorders. Hannah Aura Shoval, MD. In R. Mitra (Ed.), Principles of Rehabilitation Medicine: Case-Based Board Review. Mcgraw-Hill Education.
 - Muscle and Joint pain in Pediatric Rehabilitation. Hannah Aura Shoval, MD. In R. Mitra (Ed.), Principles of Rehabilitation Medicine: Case-Based Board Review. Mcgraw-Hill Education.
- 2019 Pediatric Neurological Disorders. Heakyung Kim, MD, Hannah Aura Shoval, MD, Kim N in Principles of Rehabilitation Medicine. R. Mitra (Ed.), (pp. 1005-1028). Mcgraw-Hill Education. Pediatric Musculoskeletal Medicine. Heakyung Kim, MD, Hannah Aura Shoval, MDin Principles of Rehabilitation Medicine. R. Mitra (Ed.), (pp. 1047-1067). Mcgraw-Hill Education.

Abstracts

- 2020 Adaptation to multi-session real-time visual feedback training of knee joint pattern in pediatric cerebral palsy: a case report.. X. Liu, N. Oliveira, N. Ehrenberg, J. Cheng, K. Bentley, S. Blochlinger, H. A. Shoval, P. Barrance. 44th Meeting of the American Society of Biomechanics. Aug 5-7, 2020 (virtual conference)
 - Validation of IMU-derived knee flexion angle measurements for use in visual kinematic feedback.. X. Liu, N. Oliveira, N. Ehrenberg, J. Cheng, K. Bentley, S. Blochlinger, H. A. Shoval, P. Barrance. 44th Meeting of the American Society of Biomechanics. Aug 5-7, 2020 (virtual conference)
 - Use of the Climbing Treadwall in Physical Rehabilitation: A Pilot Study. Kathryne Bartolo, MD, Hannah Aura Shoval, MD, Jenfu Cheng MD, Ghaith Androwis, PhD. AAP, 2020.
- 2019 The short term effect of gait retraining using real-time visual kinematic feedback in a child with cerebral palsy. X. Liu, N. Oliveira, N. Ehrenberg, J. Cheng, K. Bentley, S. Blochlinger, H. A. Shoval, P. Barrance. International Society of Biomechanics, 2019.
- 2018 The Mysterious Tale of Wilson's Disease Spasticity Presenting as a Radial Nerve Palsy: A case Report. N. Rakesh, K. Eison, H. A. Shoval, P. Tan, R. Alejandro. AAP, 2018.
- 2017 Duration and Efficacy Of Repeat Salivary Gland Onabotulinum Toxin-A Injection: A Retrospective Cohort Study. H. A. Shoval, J. Levin, K. Friel, H. Kim. AACPDM, 2017.
 - Efficacy and Negative Outcome Profile Of Single Event Multilevel Onabotulinumtoxin A Injections For Sialorrhea And Spasticity in Pediatric Patients with Cerebral Palsy. H. A. Shoval, J. Levin, K. Friel, H. Kim. AACPDM, 2017.
 - Paraplegia Following Surgical Treatment of Idiopathic Scoliosis: A Case Report. M. Chi, H. A. Shoval, P. Tan. AAP, 2017.
- 2016 Peripheral Nerve Injury in the Setting of Concurrent Anoxic Brain Injury: A Case Report. J. Moody, J. Singh, H. A. Shoval, R. Alejandro, M. Wei. AAPM&R, October 2016.
 - Addressing Open Mouth Posture in Children with Cerebral Palsy through Chemodenervation of the Lateral Pterygoid Muscles: A Case Series of Pediatric Patients. F. I. Reyes, H. A. Shoval, H. Kim. AAPM&R, October 2016.
- 2015 Ultrasound-guided Interspinous Ligament Steroid Injection for Symptomatic Interspinous Ligament Edema in Two Young Athletes with Back Pain: A Case Series. Anish Mirchandani D.O., Hannah Aura Shoval, MD, Peter Moley, MD. AAPM&R, November 2015
 - Adrenoleukodystrophy Diagnosed in a Patient Admitted to a Pediatric Inpatient Rehabilitation Hospital for Hypoxic, Ischemic Encephalopathy: A Case Report. F. I. Reyes, H. A. Shoval, R. Alejandro, H. Kim. AAPM&R, November 2015.
- 2014 Radiation-induced Funicular Pain from Treatment of a Spinal Metastases. H. A. Shoval, M. Stubblefield. AAPM&R, November 2014.
 - The Role of Acute Rehab in Stiff Person Syndrome: A Case Series. H. A. Shoval, O. Hamer, U. Nanda, K. Chantasi. AAPM&R, November 2014.
 - Acute Worsening of Parkinson's Disease Symptoms Following Infection with Tick-Borne Illness: A Case Report. J. S. Chu, H. A. Shoval, J. Padro-Guzman, D. Cormier. AAPM&R, November 2014.
 - Spasticity and Pain in an Adaptive Water Skier. D. Sarno, H. A. Shoval, D. Cormier, K. Chantasi, American College of Sports Medicine, May 2014.
 - Case Report: Bilateral femoral neuropathy following a traumatic sacral fracture and bilateral iliopsoas hematomas. J. S. Chu, H. A. Shoval, J. Padro-Guzman. AAP, February 2014.
 - Case Report: Sensory Mediated Bowel, Bladder, and Sensory Dysfunction in Chemotherapy Induced Peripheral Neuropathy. H. A. Shoval, L. Ruppert. AAP, February 2014.
 - Case Report: Brown-Séquard-Plus syndrome after spinal stroke in the setting of thoracic aortic aneurysm repair. H. A. Shoval, J. S. Chu, J. Padro-Guzman. AAP, February 2014.

2013 Autonomic Dysregulation and Exercise Capacity in Individuals with Schizophrenia. M. N. Bartels, H. A. Shoval, J. Vakhrusheva, H. F. Armstrong, R. P. Sloan, J. I. Gomez, D. A. Kimhy. American Autonomic Society, October 2013.

Autonomic Dysregulation and Altered Affective Functioning in Schizophrenia. M. N. Bartels, H. A. Shoval, J. Vakhrusheva, H. F. Armstrong, R. P. Sloan, J. I. Gomez, D. A. Kimhy. American Autonomic Society, October 2013.

Recurrent Miller Fisher Variant of Guillain-Barré Syndrome: A Case Report. H. A. Shoval, A. Shrikhande. AAPM&R, October 2013.

Rapid Emergence from Akinetic Mutism with Methylphenidate in a Patient with an Old Stroke after VP Shunt Placement. H. A. Shoval, L. Sorkin. AAP, March 2013.

2007 Follow up of Children with Language Regression. K. A. McVicar, M. Valicenti-McDermott, I. Rapin, H. A. Shoval, R. Steinman, K. Ballaban-Gil, S. L. Moshe, S. Shinnar. Department of Neurology, Pediatric Academic Society Annual Meeting, May 2007.

Online

- 2016 Osteogenesis Imperfecta Refresh. H. Kim, H. A. Shoval. PM&R Knowledge NOW, 2016. [http://me.aapmr.org/kn/article.html?id=230]
- 2015 Congenital and Acquired Myotonia. H. Kim, H. A. Shoval, J. Dastgir. PM&R Knowledge NOW, 2015. [http://me.aapmr.org/kn/article.html?id=323]
- Virtual reality/robotic applications in rehabilitation. J. Stein, H. A. Shoval, E. Rand. PM&R Knowledge NOW, 2014. [http://me.aapmr.org/kn/article.html?id=260]

Biomechanics of gait and treatment of abnormal gait patterns. H. Kim, H. A. Shoval, T. Ploypetch. PM&R Knowledge NOW, 2014. [http://me.aapmr.org/kn/article.html?id=292]

Professional Service

- 2021 Let's move!, AACPDM.
 - Organized and led movement and sports activities during the conference
- 2020 Let's move!, AACPDM.
 - $Organized \ and \ led \ movement \ and \ sports \ activities \ during \ the \ conference. \ https://youtu.be/4ULRByKmK5g$
- 2020 ad-hoc Reviewer, Association of Academic Physiatrists.
- 2019 Let's move!, AACPDM.
 - Organized and led movement and sports activities during the conference
- 2018 Let's move!, AACPDM.
 - Organized and led movement and sports activities during the conference
- 2017-present ad hoc Reviewer, The Journal of Spinal Cord Medicine (JSCM).
- 2017-present ad hoc Reviewer, American Journal of Physical Medicine & Rehabilitation (AJPMR).
 - 2016–2017 Abstract Reviewer, AAPM&R.

In the Media

- Oct 2018 Pediatric physiatry offers medical treatments for brain, nerve, muscle and bone conditions, https://www.mycentraljersey.com/story/sponsor-story/rwj-barnabas/2018/10/25/pediatric-physiatry-offers-medical-treatments-brain-nerve-muscle-and-bone-conditions/1697073002/.
- March 2018 AED and StevensTHON invite CSH Pediatric Physiatrist Aura Shoval, https://thestute.com/2018/03/02/aed-and-stevensthon-invite-csh-pediatric-physiatrist-aura-shoval/.
 - Feb 2018 **AAP 2018**, https://www.eventscribe.com/2018/aap/ajaxcalls/PresentationInfo.asp?efp=WVhBR1BISEwONjIz&PresentationID=321775&rnd=0.3820107.

- Sep 2017 Burke-Blythedale Research Shines at the American Academy of Cerebral Palsy and Developmental Medicine Annual Meeting, http://burke.weill.cornell.edu/burke-blythedale-pediatric-neuroscience-research-collaboration/impact/presentations/burke-blythedale.
- June 2015 Advances in Rehabilitation Medicine, https://me.columbia.edu/files/seasdepts/mechanical-engineering/pdf-files/NYPAdvances_Rehabilitation_June22.pdf.
- Oct 2014 NewYork-Presbyterian/Columbia to Launch Pediatric Rehabilitation Medicine Fellowship in 2015, https://rehabmed.weill.cornell.edu/newyork-presbyteriancolumbia-launch-pediatric-rehabilitation-medicine-fellowship-2015.
- Sep 2014 Advances in Rehabilitation Medicine, http://med-e-mail.biz/nyp/rehab_sep2014.pdf.
- Nov 2012 Barnard Dances at Miller, http://www.worldcat.org/title/barnard-dances-at-miller-editholub-november-21-2002/oclc/191730550.

Prior Employment/Teaching

- Feb 24, 2021 Instructor, Kessler Institue for Rehabilitation, Medical Student Fair, West Orange, NJ. Hands on Workshop: Spasticity Management.
- Jan 16, 2020 Instructor, Kessler Institue for Rehabilitation, Medical Student Fair, West Orange, NJ. Botox Injections: Hands on Workshop.
- Dec 11, 2019 Instructor, University Hospital, Newark, NJ. Ultrasound Procedure Workshop
- Dec 21, 2018 Instructor, University Hospital, Newark, NJ. Ultrasound Procedure Workshop
- Nov 23, 2015 **Instructor**, Columbia Medical Center, New York, NY. Columbia Medical School Advanced Musculoskeletal Tutorial
- Mar 10, 2015 Instructor, Weill Cornell Medical Center, New York, NY. Weill Cornell Medical School Musculoskeletal Tutorial
- Dec 1, 2014 Instructor, Columbia Medical Center, New York, NY.

 Columbia Medical School Advanced Musculoskeletal Tutorial
- Oct 19, 2014 **Organizer and Instructor**, Columbia Medical Center, New York, NY. Columbia Medical Student Ultrasound Workshop on the Shoulder
- Dec 2, 2013 Instructor, Columbia Medical Center, New York, NY.

 Columbia Medical School Musculoskeletal Physical Exam Workshop
- Summer 2007 Stretch Trainer, Rye Personal Training, Rye, NY.
 - Created individualized stretching/exercise programs to prevent and rehabilitate injuries.
 - 2005–2006 Teacher, Westchester Jewish Center, Mamaroneck, NY.
 - Taught Hebrew, prayer and ethics.
 - Organized a community service fair.
 - Directed an end of year performance.
 - 2001–2005 Resident Assistant, Barnard College Office of Residential Life, New York, NY.
 - Served on-duty for 1000 undergraduates, responded to medical emergencies.
 - Provided peer counseling and mediation for 50 residents.
 - Managed annual programming budget of \$800.
 - Organized events that promoted diversity.
- $Summer\ 2002\quad \textbf{Teacher},\ Barnard\ College\ H.E.O.P\ (Higher\ Education\ Opportunity\ Program),\ New\ York,\ NY.$

• Taught calculus and computer science to economically disadvantaged first year students.

- 00–2001 **Teacher**, Greenburgh Hebrew Center, Dobbs Ferry, NY.
 - Taught a group of 15 students Hebrew, prayer and ethics. Individually evaluated their progress.

- 2001–2004 **Tutor**, Brainstorm Tutorial, New York, NY.
 - Tutored high school students in math and science. Prepared students for the NY Regents Exams.
- Summer 2001 Special Needs Counselor, JCC Inclusion Program, La Jolla, CA.
 - Organized activities for sixty kids. Integrated special needs children into these camp activities.
 - Worked intensely one-on-one with a severely autistic child teaching sensory and language skills.

Mentoring

- 2021-present Mentor, Pre-medical Student.
 - Mentored in research.
 - 2018–2020 Mentor, Incoming Resident.
 - Mentored in research.
 - 2018–2020 Mentor, Resident Research Project.
 - On Treadwall Training in CP
 - 2018–2019 Mentor, Resident Research Project.
 - On Sleep quality and rehabilitation outcome in patients with brain injuries.
 - 2018–2020 Mentor, Pre-Medical College Student.
 - 2018–2020 Mentor, Pre-Medical College Student.
 - 2016–2017 Mentor, Columbia Medical Center, New York, NY.
 - Mentored undergraduate in medical research
 - 2016–2020 Mentor, Columbia Medical Center, New York, NY.
 - Mentored resident in medical research

Additional Training

- 2021 Medical Leadership Academy, Children's Specialized Hospital.
- April 7–11, Musculoskeletal Ultrasound: A Comprehensive Approach, San Diego, CA. 2018
- Jan 17, 2018 Safety Culture Design Workshop: Safety Behaviors to Prevent Human Error, Monmouth Medical Center, Long Branch, NJ.
- Sept 13, 2017 Ultrasound Symposium: Neuromuscular Ultrasound: Hands on Ultrasound Trainig course for Chemodenervation Procedures, AACPDM 2017, Montreal, Canada.
 - June 7–10, Clinical Gait Analysis: A Focus on Interpretation, Center for Motion Analysis, Farmington, 2017 CT.
 - Oct 1, 2015 Ultrasound Guidance For Chemodenervation Procedures, Hands On Workshop: Lower Limb Muscles, AAPM&R, Boston, MA.
 - Oct 2, 2015 Ultrasound Guidance For Chemodenervation Procedures, Hands On Workshop: Head And Neck, AAPM&R, Boston, MA.
 - Oct 2, 2015 Ultrasound Intensive: The Ankle in Musculoskeletal Medicine, AAPM&R, Boston, MA.
- June 1–5,2015 **NYPH/ P&S QUEST for Success**, Columbia Medical Center, New York, NY.

 An intensive, week-long leadership retreat that covers topics on quality initiatives, health care economics, patient safety, teamwork and leadership.
- April 19, 2015 Orthotics Workshop, NYU School of Medicine, New York, NY.
- Mar 29, 2015 Prosthetics and orthotics course with Heikki Uustal, Livingston, NJ.
- May 8, 2014 US Workshop: Knee and Shoulder, American Osteopathic College of Physical Medicine and Rehabilitation, New York, NY.

Oct 2, 2013	MD.
	 Full day leadership course through AAPM&R Facilitated by Glenn Tecker of Tecker International, Inc
Winter 2008	The Ixchel Spanish School, Antigua, Guatemala.
	Volunteer Activities
2020-present	Accessible Dance Director, Seeds Arts. Co-organizing wheelchair dance classes for all ages
Sep 18, 2016	Volunteer , Olympic Field Day, New York, NY. For children with all abilities. Partnered with Achilles International and IamMore Foundation
Feb 28, 2015	Presenter, Dancer Wellness Workshop, New York, NY. Prepared and presented information on female athlete triad
August 2015	Medical Volunteer, Battery Dance Festival, New York, NY.
October 2014	Ballet Class with New York City Ballet / Weinberg Family Cerebral Palsy Center New York City Ballet, New York, NY. https://www.youtube.com/watch?v=wp6LeOIkUuQ
May 4, 2014	Multiple Sclerosis Walk, New York, NY. To fundraise for support programs, research initiative and promote awareness
Nov 3, 2013	Medical Volunteer, New York City Marathon, New York, NY.
2013	Challenged Athlete Foundation. July 14, 2013 Aquaphor New York City Triathlon, New York City, New York June 2013 Annual Gala and Fundraiser "A Celebration of Heroes, Heart and Hope", New York City, New York
June 2, 2013	Special Olympics Metro Tournament, Queens, New York. video available at http://www.youtube.com/watch?v=gPye82t6iDU
May 7, 2013	Pre-participation Physicals, Saint Peter's College, Jersey City, New Jersey.
April 28, 2013	Multiple Sclerosis Walk, New York, NY. To fundraise for support programs, research initiative and promote awareness
2006–2007	 Sharewood, Boston, MA. Sharewood is Tufts' student run free Health Clinic Case Manager Board Member
Fall 2006	 Dance Instructor and Homework tutor, YMCA after school program, Boston, MA. Started a dance program, taught dance, and tutored children aged 8–15
	Academic Presentations
Oct 9, 2021	Adaptive Sports and Recreational Panel, AACPDM. video here
Sep 26, 2020	Adaptive Sports and Recreational Panel, AACPDM. Organized and moderated an International Panel for the American Academy of Cerebral Palsy and Developmental Medicine. https://www.youtube.com/watch?v=AuBd1zoOIvU
Jan 13, 2021	Neuromuscular Disorders, Kessler Institue for Rehabilitation, West Orange, NJ.
Oct 2, 2020	Creation of QI/PI projects, Kessler Institue for Rehabilitation, West Orange, NJ.
$\mathrm{Sep}\ 23,\ 2020$	Methodology of QI/PI, Kessler Institue for Rehabilitation, West Orange, NJ.
May $13, 2020$	Traumatic Brain Injuries, Kessler Institue for Rehabilitation, West Orange, NJ.
Feb 11, 2020	Schwartz Rounds Panelist, Children's Specialized Hospital, Newark, NJ.

- Oct 23, 2019 Quality and Outcome Measures, Kessler Institute for Rehabilitation, West Orange, NJ.
- Oct 30, 2018 Quality Improvement, Kessler Institute for Rehabilitation, West Orange, NJ.
- Aug 30, 2018 Cerebral Palsy, New York-Presbyterian Hospital, New York, NY.
- May 18, 2018 Updates in Cerebral Palsy, New Jersey Medical School, Newark, NJ.
- Mar 2, 2018 Overview of Pediatric Physiatry, Riverside Pediatrics, Edgewater, NJ.
- Feb 28, 2018 Overview of Pediatric Physiatry, Stevens institute of technology, Hoboken, NJ.
- Feb 22, 2018 **Botox Injections for Sialorrhea**, Invited International Speaker: Mexican Academy of Cerebral Palsy and Neurodevelopmental Disorders, Querétaro, Mexico.
- Feb 22, 2018 An Overview and Practical Applications for Adaptive Sports, Invited International Speaker: Mexican Academy of Cerebral Palsy and Neurodevelopmental Disorders, Querétaro, Mexico.
- Feb 15, 2018 Standardizing Screening and Management for Neurogenic Bladder in Children with Neurological Disorders, AAP '18, Atlanta, GA.
- Jan 29, 2018 Botox Injections for Sialorrhea, Bleshman School, Paramus, New Jersey.
- Jan 25, 2018 Overview of Pediatric Physiatry, Children's Specialized Hospital, Bayonne, NJ.
- Jan 18, 2018 Diagnosis and Treatment of Cerebral Palsy, JFK Medical Center, Edison, New Jersey.
- Jan 10, 2018 Physiatry Management of Cerebral Palsy and other Neurological disorders, Dinner Talk, Hackensack, New Jersey.
- Jan 10, 2018 Botox Injections for Sialorrhea, Clinical Grand Rounds, Mountainside, New Jersey.
- Dec 14, 2017 Overview of Pediatric Physiatry, Children's Specialized Hospital, Clifton, NJ.
- Sep 7, 2017 Treatment of Sialorrhea, Grand Rounds, Columbia Medical Center.
- June 29, 2017 Neurogenic Bladder: Pathophysiology, Medical Management, and Quality Improvement Initiative, *Grand Rounds*, Blythedale Children's Hospital.
- June 22, 2017 Cerebral Palsy: Pathophysiology and Medical Management, Resident Lecture, Columbia Medical Center.
- June 22, 2017 Botox Injections: Hands on workshop, Resident Lecture, Columbia Medical Center.
 - June 2017 **Neurogenic Bladder in Cerebral Palsy**, *Pediatric Journal Club with Dr. Kim*, Columbia Medical Center.
 - May 2017 Constraint Induced Therapy vs. Bimanual Therapy, Pediatric Journal Club with Dr. Kim, Columbia Medical Center.
 - April 2017 Pain Management in Pediatric Medicine, Pediatric Journal Club with Dr. Kim, Columbia Medical Center.
- Mar 21, 2017 **Pathophysiology and Rehabilitation of Traumatic Brain Injuries**, Occupational Therapy Lecture, Columbia Medical Center.
 - Feb 2017 **Botox Injections to Salivary Glands**, *Pediatric Journal Club with Dr. Kim*, Blythedale Children's Hospital.
 - Dec 2016 Electrical Stimulation for Neuromuscular recovery, Pediatric Journal Club with Dr. Kim, Blythedale Children's Hospital.
- Nov 3, 2016 **Growth Attenuation Therapy**, *Pediatric Journal Club with Dr. Kim*, Blythedale Children's Hospital.
- Oct 13, 2016 Anterior Distal Femoral Hemi-epiphysiodesis for fixed knee flexion contracture, Pediatric Journal Club with Dr. Kim, Blythedale Children's Hospital.
- Sep 21, 2016 Neurosurgical Management Of Childhood Spasticity: Case Presentation and Discussion: What is Best?, AACPDM 70th Annual Meeting Pre-Conference, Hollywood, Florida.

- July 22, 2016 Children's Orientation and Amnesia Test, Pediatric Journal Club with Dr. Kim, Columbia Medical Center.
- July 10, 2016 Moderator, Plenary II: Dance Medicine, Performing Arts Medicine Association Annual Symposium 2016, New York, NY.
- June 16, 2016 Diagnosis, Treatment, and Prevention of Cerebral Palsy in NearTerm/Term Infants, Pediatric Journal Club with Dr. Kim, Columbia Medical Center.
- June 2, 2016 Surviving the PM&R Boards, with Ethan Rand, MD, Columbia Medical Center.
- May 12, 2016 Workshop Botulinum Toxin Injections to Upper Extremity, Functional Anatomy of the Elbow, Columbia Medical Center.
- Mar 10, 2016 The Evidence for Amantadine in Brain Injury, Pediatric Journal Club with Dr. Kim, Blythedale Children's Hospital.
- Feb 26, 2016 Botox in Distraction Osteogenesis in Children, Pediatric Journal Club with Dr. Kim, Columbia Medical Center.
- Feb 23, 2016 Instructor, Blythedale Children's Hospital, Valhalla, NY. Introduction to Pediatric Rehabilitation
- Jan 8, 2016 Predictors of Success in Selective Dorsal Rhizotomy, Pediatric Journal Club with Dr. Kim, Columbia Medical Center.
- Jan 7, 2016 Resident Board Review: Pediatrics, Columbia Medical Center.
- Dec 29, 2015 Amantadine in Children, Pediatric Journal Club with Dr. Kim, Columbia Medical Center.
- Oct 30, 2015 Neurological Injury in the Surgical Treatment of Idiopathic Scoliosis, Journal Club, Columbia Medical Center.
- Sep 17, 2015 **Pediatric Use of Tylenol v Motrin**, *Pediatric Journal Club with Dr. Kim*, Blythedale Children's Hospital.
- June 25, 2015 Hand Offs: Research and Clinical Application, Columbia Medical Center.
- April 28, 2015 Neuromuscular Disorders, Columbia University Programs in Occupational Therapy.
 - Dec 2014 Matrix-Induced Autologous Chondrocyte Transplantation, Journal Club with Dr. Moley, Hospital for Special Surgery.
 - Nov 2014 Moderator, Optimizing Musculoskeletal Performance in the Aging Athlete, AAPM&R, San Diego CA.
 - Sep 2014 Muscular Dystrophy, Blythedale Children's Hospital.
- Sep 12, 2014 Hip pathology, diagnosis and treatment, Columbia Medical Center.
- May 8, 2014 House Staff Quality Yearly Review, Medical Board, New York-Presbyterian Hospital.
 - Feb 2014 Infection Control Update, Board of Trustees, New York-Presbyterian Hospital.
- March 2014 Stiff Person Syndrome, Memorial Sloan-Kettering Cancer Center.
- Mar 20, 2014 House Staff Quality Council Update, Graduate Medical Education Committee, Weill Cornell Medical Center.
- August 2013 Pathophysiology of the Lumbar Spine, Anatomy Series, Columbia Medical Center.
- July 23, 2013 Motor recovery after stroke, Journal Club with Dr. Padro-Guzman, Columbia Medical Center.
- Sep 20, 2013 Hamstring tear, Journal club with Drs. Visco and Smith, Columbia Medical Center.
- Aug 23, 2013 Steroid injections for herniated discs, Journal club with Drs. Visco and Smith, Columbia Medical Center.
- April 26, 2013 The Elbow and Forearm, Anatomy Series, Columbia Medical Center.
- Oct 31, 2012 Syringomyelia, Memorial Sloan-Kettering Cancer Center.
- Aug 27, 2012 Wheelchairs: From everyday use to wheels of the future, Blythedale Children's Hospital.
- July 27, 2012 When there is a Death on the Rehab Unit, Columbia Medical Center.

Extracurricular Activities

Gymnastics.

2015-present Columbia Ballroom Dance Team.

2011–2012 **Gymnastics Team**, East Rockaway, NY.

2004–2009 Columbia, Harvard, MIT Ballroom Dance Teams.

2001–2002 Columbia University Dance Team, placing 11th at Nationals.

Summer 1998 Selected for Israeli National Women's Football Team.

Languages

o English: Fluent

o (Medical) Spanish: Intermediate

• Hebrew: Proficient

Professional Memberships

AAPM&R, AAP, AACPDM, NYSPMR, NASS, AMA, MSSNY