

(Hannah) Aura Shoval

Curriculum Vitae

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🌐 drshoval.com



Employment

- 2022–present **Chief of Pediatric Physiatry**, *Atlantic Health System*, Morristown Medical Center
- 2022–present **Clinical Associate Professor**, *Rutgers New Jersey Medical School, Department of Physical Medicine Rehabilitation*
- 2018–2022 **Clinical Assistant Professor**, *Rutgers New Jersey Medical School, Department of Physical Medicine Rehabilitation*
- 2021–2022 **Pediatric Rehabilitation Associate Fellowship Director**, *Children's Specialized Hospital*
- 2017–2022 **Attending Pediatric Physiatrist**, *Children's Specialized Hospital*, Clifton, NJ

Certifications

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

Education

- June 2022 – present **Master of Business Administration**, *Rutgers Business School*, Newark, NJ
- 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
Clinical Sites: Hospital for Special Surgery Memorial Sloan-Kettering Cancer Center
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
- Sep 2000 – **Bachelor of Arts (BA)**, *Jewish Theological Seminary of America*, New York, NY
 May 2006 Major in Bible Studies

Honors and Awards

- 2022 **Faculty Quality Leadership Award**, *Rutgers New Jersey Medical School, Department of Physical Medicine Rehabilitation*
- 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 Mary 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

- Dec. 2023 – **Health Equity Medical Advisor**, *Rutgers Institute for Corporate Social Innovation*
 present
- 2023–present **Founder and Director of Prosthetic Clinic**, *Atlantic Health System*
- 2023–present **Co-director of MDA clinic**, *Atlantic Health System*
- 2023–present **Lead on PICU Early Mobilization Initiative**, *Atlantic Health System*
- 2022–present **Medical Director of the Spasticity and Gait Clinic**, *Atlantic Health System*
- 2021–2022 **Pediatric Rehabilitation Associate Fellowship Director**, *Children’s Specialized Hospital*
 Co-organized a national fellowship fair for all the pediatric rehabilitation programs in the country.
- 2021–2022 **Telemedicine Committee**, *Children’s Specialized Hospital*
- 2021–2022 **Medical Executive Committee**, *Children’s Specialized Hospital*
- 2020–present **Curriculum Committee for Kessler Residency Program**, *Kessler Institute 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>
- 2019–2022 **Medical Education Committee**, *Children’s Specialized Hospital*
- 2019–2022 **Steering Committee: Performance Improvement**, *Children’s Specialized Hospital*
- 2017–2022 **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
 - 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 Capitol 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

Leadership Training

- 2021–2022 **Medical Leadership Academy**, Children's Specialized Hospital
 - Selected to attend as a physician leader of the institution
 - Collaborated with team to achieve innovative way to achieve hospital strategic initiatives
- 2018 **Managers Training: Highly Reliable Organization**, RWJBarnabas Health, Clifton, NJ
Chosen as one of the leaders at Children's Specialized Hospital to attend a full day course in Highly Reliable Organization with an emphasis on its applications in a hospital setting, and how to promote that environment as a manager.
- June 1–5, 2015 **Leadership Retreat**, Columbia Medical Center, New York, NY
Chosen as one of 20 out of 1,800 residents (top 1%) for this intensive, week-long leadership retreat that covers topics on quality initiatives, health care economics, patient safety, teamwork and leadership.
- Oct 2, 2013 **Association Leadership Workshop**, National Harbor, MD
Chosen as a rising leader of psychiatry at the national level to attend a leadership course with other prominent leaders in PM&R.
 - Full day leadership course through AAPM&R
 - Facilitated by Glenn Tecker of Tecker International, Inc
- 2001–2004 **Resident Assistant training**, Barnard College, New York, NY
Full week intensive training, repeated each year. Included live simulated scenarios with professional feedback and performance evaluation.

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

- 2023 Treatment of Postprandial Hypotension with Acarbose in an Adult with Cervical Spinal Cord Injury: A Case Report. Accepted 10.12.2023. Pending Publication. H. A. Shoval, SS. Dieffenbach. Spinal Cord Series and Cases
- 2023 Safety and Effectiveness of Ethanol Neurolysis With and Without OnabotulinumtoxinA in Children with Cerebral Palsy. H. A. Shoval, J. Ace, M. Reddy, E. Grew, J. Cheng. PM&R. Nov, 2023

- 2022 Ultrasound-Guided OnabotulinumtoxinA Injections to Treat Oromandibular Dystonia in Cerebral Palsy. F. I. Reyes, H. A. Shoval, A. Tenaglia, H. Kim. *Toxins*. 2022; 14(3):158. <https://doi.org/10.3390/toxins14030158>
- 2022 Therapeutic Engagement Mediates the Effect of Sleep Fragmentation on Rehabilitation Progress after Pediatric Brain Injury. A. H. Lequerica, H. A. Shoval, J. Ace, T. Yip, SS. Dieffenbach, C. Marchetta, J. DeLuca. *Journal of Head Trauma Rehabilitation*. New York City, NY, USA. September 2022.
- 2022 Examining the Use of a Rest-Activity Ratio in a Pediatric Rehabilitation Setting. A. H. Lequerica, H. A. Shoval, K. Yalamanchi, J. Lengenfelder, C. Marchetta, J. Ace, J. DeLuca. (2022). *Archives of Physical Medicine and Rehabilitation*, 0(0). <https://doi.org/10.1016/J.APMR.2021.12.027>
- 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.
- 2020 Utility Of A Rest-activity Ratio In A Pediatric Brain Injury Rehabilitation Sample: A Pilot Study. A. H. Lequerica, J. Lengenfelder, H. Genova, J. DeLuca, C. Marchetta, H. A. Shoval, K. Yalamanchi. *Sleep* 43(Supplement 1):A374-A374 DOI:10.1093/sleep/zsaa056.981
- 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*.
- 2018 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.
- 2021 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.
- 2019 Pediatric Musculoskeletal Medicine. Heakyung Kim, MD, Hannah Aura Shoval, MD in *Principles of Rehabilitation Medicine*. R. Mitra (Ed.), (pp. 1047-1067). McGraw-Hill Education.

Abstracts

- 2023 Botulinum Neurotoxin Injections Improve Hip Rotation in Children With Cerebral Palsy. A. Kanchan, G.B. De Carvalho, C.A. Mazzola, J. Cheng, F. Edobor-Osula, H. A. Shoval, S. Pal. Abstract presented in American Society of Biomechanics 2023. August 2023

- 2022 Treatment of Postprandial Hypotension with Acarbose in an Adult with Cervical Spinal Cord Injury: A Case Report. SS. Dieffenbach, H. A. Shoval. Poster Presented at 2022 Annual Assembly of American Academy of Physical Medicine and Rehabilitation, Baltimore, MD, USA. October 2022.

Effects of Socio-Demographics on Access to Care in Children with Cerebral Palsy. H. A. Shoval, M. Reddy, J. Cheng. American Academy for Cerebral Palsy and Developmental Medicine. September 2022.

Assessing the Safety and Efficacy of Alcohol Nerve Block Injections with and Without Onabotulinumtoxin in the Management of Pediatric Spasticity. J. Ace, H. A. Shoval, M. Reddy, PCgrew, V. Dhruva, J. Cheng. American Academy for Cerebral Palsy and Developmental Medicine. Sept 2022

Therapeutic Engagement Mediates the Effect of Sleep Fragmentation on Rehabilitation Progress after Pediatric Brain Injury. A. H. Lequerica, H. A. Shoval, J. Ace, T. Yip, SS. Dieffenbach, C. Marchetta, J. DeLuca. Poster presented at 2022 Joint Conference on Brain Injury New York City, NY, USA. September 2022.
- 2021 Peach: a validated tool to assess physical therapists' proficiency in assessing "hips at risk" in children with cerebral palsy. J. Chan, J. Cheng, M. Armento, D. Scher, P. Selber, H. A. Shoval, K. Murphy, J. Jezequel, B. Assip, F. Edobor-Osula. Abstracts for the American Academy for Cerebral Palsy and Developmental Medicine 6–9 October 2021. <https://doi.org/10.1111/dmcn.15005>
- 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. Kathryn 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**
- 2023 Spacticity. H. A. Shoval, K. Heckert, E.H. Hatch. MedLink Neurology.
- 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>]
- 2014 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>]
- 2014 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

- 2024 **Editor**, *Frontiers in Bioengineering and Biotechnology Journals*
Special Edition on Technology-aided Personalized Motor Rehabilitation for Individuals with Neurological Diseases.
- 2018–2021 **Let's move!**, AACPDM
Organized and led movement and sports activities during the conference. <https://youtu.be/4ULRByKmK5g>

- 2020–present **Reviewer**, *PM&R Journal*
- 2020 **Reviewer**, *Association of Academic Physiatrists*
Conference abstract reviewer
- 2018–present **Reviewer**, *Journal of Pediatric Rehabilitation Medicine (JPRM)*
- 2018–present **Reviewer**, *American Journal of Physical Medicine & Rehabilitation (AJPMR)*
- 2018 **Reviewer**, *The Journal of Spinal Cord Medicine (JSCM)*
- 2016–2017 **Abstract Reviewer**, *AAPM&R*

Fundraising

- Aug 7, 2023 **Keynote Speaker**, *Timothy J Piazza foundation Annual Golf Fundraiser*
To help raise funds for children in need of prosthetics.
- May 3, 2023 **Presenter**, *Goryeb Philanthropic Council*
Presented Clinical Outcomes of the Pediatric Rehabilitation Medicine Department as well as vision for the future of the department.
- June 3, 2022 **Presenter**, *“Dinner with the Docs”*
Presented in front of donors and potential donors.
- Winter 2008 **Board Member/Fund Raiser**, *Multi-Cultural Performing Arts Group, Boston, MA*
○ Fundraised for the Colleen Romain Scholarship

In the Media

- Sep 2023 **Focus on Pediatrics**, <https://drshoval.com/assets/img/news/focus-on-pediatrics-09-2023.pdf#page=6>
- Apr 2022 **Examining the use of a rest-activity ratio in a pediatric rehabilitation setting**, <https://todayuknews.com/health/actigraphy-shows-promise-as-objective-noninvasive-measure-of-sleep-wake-regulation-in-children-with-brain-injury>
- Apr 2022 **What is a Physiatrist?**, <https://www.njfamily.com/ask-the-expert-what-is-a-physiatrist/>
- Oct 2021 **Researcher Highlight at CSH**, <https://drshoval.com/assets/img/news/CSH%20Research%20Newsletter%20-%2011.2021.pdf>
- Oct 2020 **With Love, You Can Do Anything: A patient story**, <https://web.archive.org/web/20201022054708/https://www.childrens-specialized.org/for-patients-and-families/our-families/meet-our-families/eduardo-patino>
- 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://thetute.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 Institute for Rehabilitation, Medical Student Fair*, West Orange, NJ
Hands on Workshop: Spasticity Management.
- Jan 16, 2020 **Instructor**, *Kessler Institute 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 **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.
- 2000–2001 **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

- 2023 **Mentor**, 3 medical students at Rutgers New Jersey Medical School and 2 PM&R residents at Rutgers New Jersey Medical School, Department of Physical Medicine Rehabilitation
Mentored in research.
- 2021 **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

- April 7–11, 2018 **Musculoskeletal Ultrasound: A Comprehensive Approach**, San Diego, CA
- 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 Training course for Chemodenervation Procedures**, AACPDM 2017, Montreal, Canada
- June 7–10, 2017 **Clinical Gait Analysis: A Focus on Interpretation**, Center for Motion Analysis, Farmington, 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
- 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
- Winter 2008 **The Ixchel Spanish School**, Antigua, Guatemala

Volunteer Activities

- 2023–present **Volunteer**, Rutgers Institute for Corporate Social Innovation

- Nov 2, 2023 **Adaptive Sports**
Atlantic Health System Community Outreach Educational Event.
 - Organized and led a discussion focused on families with children with disabilities to discuss solutions of benefits.
 - Encourage physical activity and discussing physical health, as well as mental and emotional benefits of adaptive sports participation.
- 2021–2022 **Volunteer, Community Food Bank of New Jersey, with Children’s Specialized Hospital**
Helped provide food for families with food insecurities
- 2020–2021 **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=wp6Le0IkUuQ>
- 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

- Dec 12, 2023 **Burn Out? Sustainability of Employees, Association of National Advertisers**, hosted at Rutgers Business School, Rutgers Institute for Corporate Social Innovation
Tapping Brand Potential for Social Good
- Sep 20, 2023 **Cerebral Palsy: Early Diagnosis and Current Therapies, CentraState Healthcare System**
Grand Rounds
- Sep 6, 2023 **Statistical Review of QI Outcome Measures, Kessler Institute for Rehabilitation, West Orange, NJ**
- Jun 21, 2023 **QI Final Presentations, Kessler Institute for Rehabilitation, West Orange, NJ**
- Mar, 2023 **Spinal Cord Injury Lecture (Resident Lecture), Atlantic Health System, Morristown Medical Center**

- Mar, 2023 **Kessler PM&R Board Review Course**, *Kessler Institute for Rehabilitation*
Topics in Pediatric Rehabilitation and Q & A session
- Mar 8, 2023 **Quality Improvement**, *Kessler Institute for Rehabilitation*, West Orange, NJ
- Jan 31, 2023 **Developmental Disabilities Faculty Panel**, *Rutgers New Jersey Medical School*
- Apr 13, 2022 **Physical Medicine and Rehabilitation Overview (Resident Lecture)**, *Atlantic Health System*, Morristown Medical Center
- May 19, 2022 **General Pediatric Symposium: CP for the GP**, *Atlantic Health System*, Morristown Medical Center
- Mar, 2022 **Kessler PM&R Board Review Course**, *Kessler Institute for Rehabilitation*
Topics in Pediatric Rehabilitation and Q & A session
- Jan 17, 2023 **Quality Improvement**, *Kessler Institute for Rehabilitation*, West Orange, NJ
- Oct 9, 2021 **Adaptive Sports and Recreational Panel**, AACPD
video [here](#)
- Apr 29, 2021 **Quality Improvement**, *Kessler Institute for Rehabilitation*, West Orange, NJ
- Sep 26, 2020 **Adaptive Sports and Recreational Panel**, AACPD
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 Institute for Rehabilitation*, West Orange, NJ
- Oct 2, 2020 **Creation of QI/PI projects**, *Kessler Institute for Rehabilitation*, West Orange, NJ
- Sep 23, 2020 **Methodology of QI/PI**, *Kessler Institute for Rehabilitation*, West Orange, NJ
- May 13, 2020 **Traumatic Brain Injuries**, *Kessler Institute 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**, *Blesman 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

2010–present **Gymnastics**

2015–2018 **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 Soccer Team**

Languages

- English: Fluent
- (Medical) Spanish: Intermediate
- Hebrew: Proficient

Professional Memberships

AAPM&R, AAP, AACPD, AMA, ACHE