

Physiatry

F O R W A R D

WINTER 2025 | AAP'S MEMBER MAGAZINE



Association of Academic Physiatrists



Learn more about our
cover photo on page 4.

P6

A New Era of Cellular
and Gene Therapies:
A Physiatrist's Role

P8

They Say it
Takes a Village

P16

Addressing Gender
Disparities in Physical
Medicine and Rehabilitation:

P18

Spasticity X
Recap



Emory, CPR Training



Mount Sinai, Adaptive Swimming



Mary Free Bed, Grand Rapids Rise Visit



Kessler Foundation, Adaptive Ski Equipment



Interns at UT Health Houston

PHYSIATRY POV



UPenn, MSK Ultrasound Course



UTHealth, 89th Legislative Session



University of Washington, Seattle Marathon



University of Utah, Robotic Luke Arm



MedStar Georgetown SCI Research Team



University of Louisville - Didactics



Yale, Medical Device Design Students



University of Kentucky

HAPPY NEW YEAR FROM AAP!



Craig H Neilsen Presidential Interns



University of Utah



University of Louisville, Training to Treat SCI



Mount Sinai, Adaptive Rock Climbing



Physiatri Forward, AAP's member magazine

We've rounded the corner to another year!

Despite the shroud of uncertainty as we move forward into 2025, we know that the physiatry community will remain strong and focused. Whether you're battling the cold or fighting for the importance of healthcare research – we are here to support your journey.

This issue will explore a little bit of everything from themes related to the importance of DEI, including gender disparity and overcoming disability, to new research in gene therapy, to personal stories of powerful connection with patients. You'll also find a recap of our inaugural spasticity symposium, Spasticity X, and some familiar reoccurring columns and updates from our councils and partner institutions.

And as always, if you have something to share, we'd love to hear it! Submit anytime on our website, and we'll see you in-person at Physiatri '25 in Phoenix!

physiatry.org/PhysiatriForward



Until next time,

Liz Raubach

AAP Communications
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contents

WINTER 2025: INSIDE THIS ISSUE

FEATURES

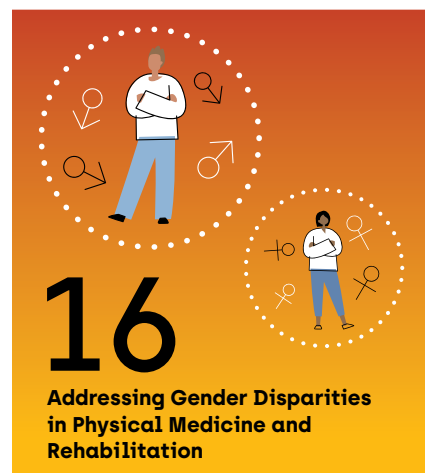
- 6-7** A New Era of Cellular and Gene Therapies: A Physiatrist's Role
- 8-11** They Say it Takes a Village
- 15** Physiatri '26 Save the Date
- 16-17** Addressing Gender Disparities in Physical Medicine and Rehabilitation: Insights from a National Survey
- 18-21** Spasticity X Recap
- 22-23** Rehabilitation Medicine Scientist Training Program
- 30** More Than Disability

REGULAR COLUMNS

- 5** Message from the President
- 12-14** Cross Country with our Academic Partners
- 24-25** Words of Wellness
- 26-29** Spotlight: International Physiatri
- 31** A Sense of Belongings

ON THE COVER

Craig H. Neilsen Rehabilitation Hospital and the University of Utah Health push the sport of adaptive skiing forward with TRAILS, their global adaptive program, and the TetraSki.



Contribute to our Spring issue of *Physiatri Forward*! Submit your photos, content, ideas, and more by visiting physiatry.org/PhysiatriForward and filling out a submission form.



FROM THE PRESIDENT

Welcome to the first issue of 2025!

I hope you all had a wonderful holiday break filled with family, friends, and a little fun and relaxation. While that time of year is needed and much deserved for all of us, I'm excited to dive back in and see how this year will unfold.

Spring is around the corner, and with it is the fervor of Match Day and resident graduation. I love seeing all the new and eager faces of physiatry every year, poised and ready to take on the next phase of their education, along with our fourth year residents transitioning into the next phase of their career.

Physiatry '25 is almost underway, and we hope to see you all in Phoenix in-person to connect, collaborate, and learn from each other. We have some new and exciting things in store as well as the sessions, networking events, and hands-on opportunities that you've come to expect.

This will be my last *Physiatry Forward* update as I transition out of my Current President's role and hand the gavel to the new incoming President at the annual meeting. It has been an honor to serve the AAP on the board for the last two years, and I look forward to continuing to serve as Past President in the years ahead.

Sincerely,



Karen Kowalske, MD

Professor of PM&R, UT Southwestern Medical Center

President of the Board, Association of Academic Physiatrists



Karen Kowalske, MD

A New Era of Cellular and Gene Therapies: A PHYSIATRIST'S ROLE

By: Shannon Strader, DO; Monica Klein, MD; Timothy Wiltshire, PhD; Eapen Jacob, MD; Margaret DiGuardo, MD

Division of Transfusion Medicine, Department of Laboratory Medicine and Pathology, and Immune Progenitor and Cell Therapeutics (IMPACT) Lab, Center for Regenerative Biotherapeutics, Mayo Clinic, Rochester, MN

Cellular and gene therapies (CGTs) are rapidly advancing.¹⁻³ CGTs can include immunotherapy [CAR T, dendritic cells, natural killer cells], induced pluripotent stem cells (iPSCs), extracellular vesicles (EVs), mesenchymal stromal cells (MSCs), adeno-associated viral gene therapies (AAV), nucleotide-based therapies, and tissue engineering.⁴ There are currently 39 CGTs FDA approved products.⁵ More importantly, there are more than 4,000 gene, cell, and RNA therapies in development.⁶ Even though most clinical discussions involving CGTs have been related to neoplastic and oncology uses, 46% of the products in development are intended for non-oncologic use of which most include neurologic or musculoskeletal disorders.⁶ In PM&R, gene therapies have already revolutionized treatments for disorders that once had high mortality rates, such as Spinal Muscular Atrophy and Duchenne Muscular Dystrophy.⁷⁻⁸ Due to both the promise and high-quality data for life-saving CGTs for disorders that do not otherwise have other treatment options, the U.S. Food and Drug Administration (FDA) have made multiple statements on accelerating development of CGTs due to unmet need.^{2,9-10} By 2025, the FDA predicts that it will approve 10 to 20 cell and gene products each year.¹⁰ However, CGTs do not come without risk and can cause severe complications. The complexity of CGTs have steadily increased with the improvements in gene edited cells, introduction of CRISPR, use of next-

generation sequencing, high-throughput sequencing, and manufacturing techniques with scalable goals.¹¹⁻¹⁴ Therefore with the complexity of CGTs, safety and clarity on cellular and gene editing risks should be the priority of education.¹⁴⁻¹⁶ Education is also vital for streamlining development of viable and effective novel CGTs. Academic medical centers, both nationally and internationally, are in desperate need of not only well-trained, experienced leaders capable of directing the labs which both oversee and produce these therapeutic agents but also clinicians who understand the process, benefits, and risks of CGTs.¹⁷⁻²³

Unlike other drug therapies and interventional procedures, cellular and gene-based therapies require basic understanding of current good manufacturing practices (cGMP), quality control, regulatory oversight, clinical trial processing, investigational drug submission, and standard operating procedures. The scientific challenges that arise include expense, safety and efficacy concerns, and infectious toxicity.^{14, 24-27} In addition, creating a product and leading clinical trials for industry require a certain expertise in both advocacy and knowledge of the requirements for regulatory bodies

along with standardized processing. Without exposure to the basics of CGTs in clinical training, it may be challenging to translate CGTs for certain disorders contributing to a delay in treatments for certain patient populations.

As CGTs continue to grow, the question becomes which clinical specialties should be trained in the administration and care of individuals prior to, during, and after such treatments and procedures. As past CGTs have been housed under a hematology/oncology department, psychiatry and neurology should take ownership of CGTs for neurological and musculoskeletal disorders. Psychiatrists and neurologists understand the clinical and research needs in this patient population, so they have ability to direct treatment advancements. Thus, there is a need for psychiatrists to be informed about CGT processes and potential complications along with standardization of rehabilitation prior and after such therapies. While these products are very complex, psychiatrists should become stakeholders and advocate for these therapies for their patient populations. The CGT workforce will not only require knowledge from scientists or resources

THERE IS A NEED FOR PHYSIATRISTS TO BE INFORMED ABOUT CGT PROCESSES AND POTENTIAL COMPLICATIONS ALONG WITH STANDARDIZATION OF REHABILITATION PRIOR AND AFTER SUCH THERAPIES. WHILE THESE PRODUCTS ARE VERY COMPLEX, PHYSIATRISTS SHOULD BECOME STAKEHOLDERS AND ADVOCATE FOR THESE THERAPIES FOR THEIR PATIENT POPULATIONS.





from industry, but active participation from clinicians is also important for the progress and safety of the field.

Clinicians, scientists, and clinical laboratory personnel are all necessary to streamline the development of safe and effective new therapies. As CGTs continue to increase, physiatrists will play a key role in advocacy for development of these products, provide patient access, understand the risks and benefits of these unique therapeutics, and provide rehabilitation for patients who have undergone CGT. The next step, for both physiatrists and physiatrists-in-training, is access to evidence-based education in this exciting field.

SHANNON STRADER, DO: I am completing a two-year fellowship in Cellular Therapy at Mayo Clinic. This fellowship includes training on mesenchymal stromal cells, dendritic cells, hematopoietic progenitor cells, chimeric antigen receptor T cells, acellular products, and novel cell therapeutics. There is training and emphasis on understanding of quality systems, regulatory competency, cGMP, cGTP, discovery and process development, investigational new drug submissions, and standard operating procedures for manufacturing facilities along with ethical oversight. I have to continue advocate for novel therapeutic advancements within the PM&R patient population.

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They Say it Takes a Village



By: Aura Weltman, OTR/L, SCLV, ATP

This is the story of determination in the face of enormous challenge, a recovery fraught with complications but made possible—and ultimately greatly enhanced—through collective efforts in the rehabilitation of brain, body, mind, speech, and spirit.

Nadine was a young woman in her twenties seeking a better life. Immigrating from a war-torn, poverty-stricken home country only to encounter a reality even more frightening—a cavernous malformation in her brain.

Nadine presented to the emergency department with a headache and right-sided twitching that quickly deteriorated into right hemiplegia. A head CT revealed a pontine intracranial hemorrhage. She was medically optimized and then transferred to acute rehabilitation nearby.

After two weeks on the rehabilitation unit, her symptoms returned with a vengeance and a head CT revealed an increased size of the brainstem IPH with an increased mass effect on the 4th ventricle. She was readmitted to acute care.

Just a few days later, she declined yet again. The worsened exam necessitated an MRI of her brain which showed signs of re-hemorrhage. Nadine underwent a suboccipital craniectomy for the resection of a cavernous malformation. The cavernoma was successfully removed and a cranioplasty was performed. At this point, she was transferred to our hospital's traumatic brain injury unit for advanced care.

I entered her shared room rolling the mobile interpreting tablet along with a Haitian-Creole interpreter. We found Nadine lying listlessly in bed—the head of bed elevated, the left side of her face drooping, and food spilling from the corner of her mouth. Her right arm rested lifelessly at her side, and her gaze seemed focused on an area well beyond the wall she stared at. Her left eye rolled upward, exposing a slit of white where her eyelid could no longer reach when she blinked.

She held the broken half of a small cosmetic compact mirror in her hand and obsessively peered into the small silver-coated glass to inspect her face. Damage to her facial nerve resulted in disfigured facial expressions, difficulty with feeding, incomplete closure of her eye, and difficulty with moderating sound. She required significant assistance to turn in bed and maximal assistance to transfer from her bed to the wheelchair. Most striking to me was that Nadine did not make eye contact. She spoke in short, semi-audible phrases.

I soon learned from the neuropsychologist on our team that Nadine could only communicate infrequently and unpredictably with her family back in Haiti. Not only because her phone was lost in the process of transporting her to the hospital, but because of cell phone connectivity limitations in her home country. Poor reception necessitated that family members race to the top of a hill—as close as possible to a cell tower—when weather permitted access to the network. Team members acquired a tablet for Nadine, and the social worker invested effort in contacting her family in the US to arrange for family observation and training sessions. This involved working around the schedule of a family member who could arrive only once a week, as she juggled several jobs to make ends meet.

When our physical therapist began to walk with Nadine, her ataxia and diminished sensation resulted in an erratically antalgic gait. Weights were strapped to the sides of her walker and a hand grip attachment was added to ensure that her right arm did not slip from the handle grip. At times, the ceiling mounted track system was used instead because her balance was so poor.

Her medical team—the attending, residents, and medical students arrived reliably each morning—relaying information, providing oversight, and assessing and encouraging progress.



She began
to give it
her all.

During the first week of her acute rehabilitation course, I entered her room to find her seated lopsided in her wheelchair, surrounded by three PCAs working assiduously to comb out each section of her hair. A fourth arrived to assure them that she would purchase special hair product the next day so that they could wash and re-braid it.

The significance of these small kindnesses—contributed by so many—a pack of gum, a pencil, graham crackers, the crinkled eyes and wide grin of an elderly male remote interpreter, breaking protocol to exclaim joyously in his deep, slow, reassuring voice—"I know her—and I just can't believe how much better she is getting!" impacted all of us.

Like the recurring revolutions of the weekly wash cycle completed during occupational therapy sessions, life on the unit began to develop a certain rhythm, a certain predictability.

Her medical team—the attending, residents, and medical students arrived reliably each morning—relaying information, providing oversight, and assessing and encouraging progress.

Her physical therapist, Dom, was a blaze of perpetual positivity and energy. He carefully titrated the level of challenge, allowing Nadine to develop the self-confidence necessary to succeed. I can clearly see her in my mind's eye, sweating from exertion as she pushed a power wheelchair through the white sterile hallways of the unit. I see her climbing the stairs again and again, wobbling as she stumbles over obstacles set out in the gym.

Nadine found that she could rely on us—and we on her. She began to give it her all, and her effort was remarkable to witness.

The members of an unsung troop of supporters—a veritable army—appeared daily on the bright interpreter screen. Their presence, connection, and personal investment promoted her recovery.

Her extended length of stay—due to the severity of deficits combined with severely diminished social and financial support—afforded many benefits. Some expected, and some surprising. One unexpected benefit was that the long stay made it possible for her to see many interpreters again and again, ultimately developing a relationship with the remote interpreters. It was striking to see how invested they became in her.

Everyone was rooting for her. The gym PCA asking 'where's my girl?' when she had not yet seen her that day. So much support. Such desire to see her experience success.

The recreational therapists arrived almost daily to invite her to after-hours events, to offer an escape through painting or cooking, playing board games or by simply extending their companionship.

In addition to activities of daily living, IADLs, and functional transfers, in occupational therapy Nadine worked on stretching, weight-bearing, forced use of her right hand, and manual guidance to smooth the ataxic jerking movements. She learned to use vision to help compensate for limited sensation in her hand. We developed creative and motivating means of incorporating her hand and mind in functional tasks such as map reading and money management. When ambulating, we worked on head turns to locate common items and identify them in English, laughing as her vocabulary expanded as the days passed.

Aside from speech production, clarity, and swallow, Carly provided cognitive challenges to test and improve scheduling and medication management.

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Time allowed Nadine to trust the process and to see the fruits of her labor. She evolved from someone remote, disconnected, and faraway to someone truly engaged in the rehab process. Eventually the hand grip attachment was removed and then the walker was abandoned entirely in favor of a gait belt...and then no device at all.

We witnessed and felt the magic borne of the grit and determination and hopelessness and hopefulness that evolves into the smooth, coordinated patterns so desperately sought.

As Nadine's recovery progressed, we were able to expand our horizons, moving beyond our gym and unit to other locations on and then beyond the hospital grounds. Before leaving the unit for community reentry tasks we informed her nurse, Joe. Joe took a keen interest in her recovery and made a particular effort to lighten the mood and lighten her spirit. Weeks before, he had shifted PCA assignments to ensure that a Haitian-Creole speaking PCA would be present during a particularly challenging time.

We arrived in the atrium as the music therapy team was packing up, but when the man, casually dressed in a T-shirt and tan shorts, and the woman who accompanied him noticed us, they sat back down for one more song. The woman pulled up a chair beside the gleaming black grand piano and we had front row seats to a private concert.

The gift shop owner dismissed any thanks with a wave of his hand when he graciously offered Nadine a selection of small candies and treats from the rotating rack just outside the gift shop. As her right hand fumbled clumsily through bins of Tootsie Rolls, Now And Laters, Lemonheads, and Jolly Ranchers, she found that her hand was slowly becoming effective once again. When we returned to unit, she reached into the paper bag to retrieve a taffy and handed it to Joe.

The members of our hospital system, a man with a hospital ID dangling from his shirt pocket, stopped to offer encouragement as we performed a shopping task walking up and down the busy aisles of the local Duane Reade. Another found us later in the atrium, glancing up from her phone and fixing her gaze upon us she said—"I saw you outside earlier and you are doing so well!"

The small kindnesses that together—and even individually—amounted to so much.

I stayed longer on the day of discharge to stop by to say goodbye. Turning the interpreting tablet to face me, I saw a team member who—though geographically distant—had become a close-knit member of the team. Overcome with emotion when relaying the enormity of Nadine's accomplishments and conveying my good wishes before she set out, Nonese alternated between wringing and shaking her hands before covering her face. When she looked up, her eyes were watery, and her smile shone. She was speechless, but we all understood—there was no longer a need for interpretation.

They say it takes a village. I say it takes a multidisciplinary team.

Aura Weltman, OTR/L, SCLV, ATP is an occupational therapist with an advanced clinical specialty in neurorehabilitation. She works in the Department of Rehabilitation and Human Performance at Mount Sinai Medical Center in New York City. Aura is board certified in low vision and holds a specialty in assistive technology through RESNA. She serves as an adjunct professor at LIU.

The author wishes to extend her thanks to the phenomenal rehabilitation team on KCC3. Special thanks to ATL, AHH, Dr. Sabrina Breed, and Dr. Avniel Klein.

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CROSS COUNTRY

with our Academic Partners

Here's the latest news on faculty, facilities and feats from some of our AAP Academic Partners!

Burke Rehabilitation

Burke Rehabilitation is proud to care for Spinal Cord Injury (SCI) patients by offering inpatient and outpatient services to optimize recovery at every stage. In the fall of 2024, Burke Rehabilitation partnered with a local restaurant to host a Chopped Cooking Challenge (right) for SCI Awareness Month. Designed to promote independence and confidence, trained chefs living with SCI competed alongside fellow SCI community members who cooked together using adaptive equipment from their wheelchairs. One participant was excited to share that he went home and felt empowered to cook for his family for the first time.



Jefferson Moss-Magee Rehabilitation

MossRehab, ranked #8 in the nation by U.S. News & World Report and Magee Rehabilitation Hospital have come together under the umbrella of Jefferson Health and are now known as Jefferson Moss-Magee Rehabilitation.

With six inpatient and 35+ outpatient locations, a Model System of Care for Traumatic Brain Injury and a nationally recognized spinal cord injury program, we are the largest provider of rehabilitation services in the Philadelphia region including our stroke program that offers the latest advances in neurological rehab, an extensive creative arts program an advanced robotics. Access to clinical research through Jefferson Moss Rehabilitation Research Institute is an important component. We also offer a highly

Learn more about our Academic Partnership and its growing benefits at physiatry.org/AcademicPartners.

regarded residency and fellowship training programs.

Mary Free Bed Rehabilitation Hospital

Mary Free Bed Rehabilitation Hospital has recently broken ground on the new Joan Secchia Children's Rehabilitation Hospital, representing a joint venture between Mary Free Bed and Corewell Health Helen DeVos Children's Hospital. When completed, the 3-story, 67,000 square foot facility will house 24 private inpatient pediatric rehabilitation rooms, outpatient and inpatient therapy gyms, out outpatient pediatric rehabilitation clinic, and more. When completed in 2026, it will be among a select few freestanding pediatric rehabilitation hospitals in the nation. Learn more about our new hospital and other ongoing projects at maryfreebed.com.

Montefiore Einstein Rehabilitation

Montefiore Einstein Rehabilitation continues to be a center of excellence providing excellent care for our Bronx community, opening a new outpatient Pediatric Rehabilitation floor in the Children's Hospital at Montefiore and obtaining CARF accreditation for our Wakefield Acute Inpatient Rehabilitation unit. We continue to expand our faculty and services with Dr. Jasal Patel who returned to Montefiore as a new Oncologic Rehabilitation attending this fall after completing his cancer rehabilitation fellowship. Finally, we want to congratulate our Albert Einstein College of Medicine PM&R Student Interest Group on earning the AAP's Outstanding SIG Award—we are so proud of you all!

Penn State University

Penn State PM&R has had several recent research, education & community outreach events. The dept hosted a Scientific Day featuring several research presentations. Thanks to the generosity of a donor, a custom adaptive bike was presented to a former pediatric patient to enhance her independence and mobility (top photo). The dept. remains active in publishing and conference presentations including at the recent AAPM&R Annual Assembly where we had several presentations. Faculty growth has led to a current total of 24 PM&R clinical and research faculty. Our SCI



Penn State PM&R

Fellowship program was pleased to match with our PGY-4 & chief resident, Joshua Lam, MD, for AY '25-'26.

Providence St Luke's Rehabilitation Medical Center

Providence St Luke's PM&R residency [Spokane, WA] graduated our first class in 2024. All six graduates secured great jobs or fellowships and passed part one of the boards. We are now expanding to a full categorical program, adding internship positions. Two new Associate Program Directors, Drs. Alicia Fuhrman and Ben Carpenter now support us. Current PGY3 resident Dr. Anand Patil, was accepted into the prestigious AAP Rehabilitation Medicine Science Training Program. Dr. Joel Delisa has established an endowed lectureship here through Washington State University, his alma mater, which we are truly honored to host here at Providence St Lukes Rehabilitation Medical Center!



Spaulding Rehabilitation

Jonathan F. Bean, MD, MPH, HMS professor of PM&R at Spaulding Rehabilitation, has been elected to the National Academy of Medicine [NAM] for transformative work in rehabilitation precision medicine principles for geriatric and veteran populations. Spaulding Rehabilitation hosted leading experts in the field of traumatic brain injury [TBI] to address crucial barriers to post-acute care for people with severe TBI at the 2024 Spaulding-Harvard TBI Model System Summit. Adam Tenforde, MD, Hye Chang Rhim, MD, MPH and sports medicine colleagues were featured in the British Journal of Sports Medicine with for their systematic review of Electroshock Wave Therapy [ESWT].

University of Alabama at Birmingham

At the end of 2024, we welcomed two new faculty members—Sarah Lopes, DO and Emma Lucas, PhD. As the longest running Spinal Cord Injury [SCI] Model System in the country, our research team celebrated two SCI Model Systems participants who have been with the program for 50 years. Our residency program director Dale Colorado, DO was honored with AAPM&R's 2024 Early Career Award and ACGME's Parker J. Palmer Courage to Teach Award. In May 2025, we are slated to open the doors of our new 11-story state-of-the-art inpatient rehabilitation facility. UAB's facility, featuring 78 rehabilitation beds and 56 acute care beds, will be a tertiary-referral neurotrauma center with a focus on neurorehabilitation



for patients following traumatic brain injury, spinal cord injury, and stroke with a dedicated floor serving patients in each. The hospital will also provide dedicated, specialized rehabilitative services for patients who have experienced amputation, cancer, transplantation, and multi-trauma. The facility will offer sub-specialty oriented interdisciplinary teams, led by the Dept. of PM&R, including specialists in rehabilitation nursing, rehabilitation case management, therapeutic recreation, psychology services, physical therapy, occupational therapy, and speech therapy.

University of Kansas

As the University of Kansas department of PM&R looks ahead to 2025, we are excited to continue our growth. In the fall of 2024, we welcomed four new faculty. Dr. Khulan Sarmiento joined our Inpatient/Consult team and does Prosthetics/Orthotics, Electrodiagnostic Medicine, and Spasticity. Dr. Evelyn Qin is our new Director of Oncology Rehabilitation. Dr. Jyotsna Koduri, who completed our Interventional Spine and Musculoskeletal Medicine fellowship in 2024, joined our Spine Center practice. Dr. Adam Howerton, a general PM&R physician with interest in Musculoskeletal, Spasticity, and Electrodiagnostic Medicine, joined KU PM&R from the Kansas City VA Hospital.

University of Michigan

The University of Michigan PM&R Residency has launched a Neurosciences Research Track, under leadership of Dr. James T. Eckner, Director of Resident Research. This new track will Match up to 1 physician-scientist annually to provide

career development mentorship and six months of 80% protected research time during residency. Matched residents will apply for the RMSTP as well as U-M's National Institute of Neurological Disorders and Stroke (NINDS) R25 Clinical Neuroscientist Training Program, which supports two additional years of post-residency research fellowship to facilitate future career development awards and independent funding. Visit pmr.med.umich.edu/residency for more.

University of North Carolina

At the end of 2024, UNC PM&R celebrated our department's 30th Anniversary and welcomed Dr. Janet Bettger, our new Vice Chair for Research. Researchers in our Program on Integrative Medicine received an R34 grant for a 5-year multisite randomized controlled trial testing the efficacy of a mechanism-based dietary approach for chronic low back pain. Congratulations to Senior residents Taylor Baker (Spine @ Wake Forest University), Hagar Elgendy (Sports Medicine @ UNC) Sierra McLean (Pain Medicine @ the Mayo Clinic), and Raveen Sugantharaj (Spine @ Emory University) on their fellowship matches. We're hiring! Pediatric Neuropsychologist X: @UNC_PMR IG: @uncpmr

University of Pittsburgh Medical Center

Wendy Helkowski, MD, was accepted as a member of the Academy of Distinguished Medical Educators for excellence in teaching, education leadership, and cultivating a thriving culture of inquiry. Lynn Worobey, PhD, received R01 funding for determining the relationship between experiences of ableism and health outcomes for people with mobility disabilities. Corina Bondi, PhD, received the Landis Award for Outstanding Mentorship from the National Institute of Neurological Disorders and Stroke. Angie Garcia, MD, Ryan Nussbaum, DO, and Chris Standaert, MD, received excellence in patient experience awards, among a select few of UPMC's more than 5,000 physicians to receive the award.

University of Utah

The University of Utah Department of Physical Medicine & Rehabilitation and the Craig H. Neilsen Rehabilitation Hospital are excited for a year of growth

and celebration. We're expanding our faculty, including recruiting for a Vice Chair of Research and adding to our pediatric rehabilitation team. In May, we'll celebrate the 5-year anniversary of the Neilsen Rehabilitation Hospital, marking a significant milestone in patient care and innovation. We're excited to launch our new ACGME accredited TBI fellowship to join our fellowships in SCI, Sports Medicine, and Interventional Spine and Musculoskeletal Medicine. It's a year of progress, collaboration, and transformative impact.

University of Washington

2024 was a productive year for the University of Washington Department of Rehabilitation Medicine. We secured major grants for studies on ableism in healthcare, AI's impact on people with disabilities, radio frequency ablation for low back pain, cognitive recovery after TBI, and more. Our researchers made groundbreaking progress in non-invasive spinal cord stimulation, offering new hope for improving hand function in people with spinal cord injuries. As we look ahead to 2025, we're excited to kick off the year with the inaugural Sports & Musculoskeletal Medicine Symposium this April in Seattle.

UT Southwestern

The PM&R Department at UT Southwestern continues to evolve with changes in leadership positions including Dr. Amy Mathews as Medical Director at Texas Health Resources Dallas Presbyterian, Dr. Rajashree Srinivasan as Pediatric Rehabilitation Division Chief at Children's Health, and Dr. Merrine Klakeel as the outpatient clinic medical director at Parkland Health and Hospital System. Our Sports/MSK doctors are providing team coverage for the new Dallas Trinity FC. The beginning of 2025 will have us congratulating Dr. Karen Kowalske completing her presidency at AAP and celebrate the research from our department during our 2025 Scientific Day.

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Association of Academic Physiatrists

Addressing Gender Disparities in Physical Medicine and Rehabilitation: Insights from a National Survey



By: Rhoda Hijazi; Sean Nguyen;
Raysha Farah, MD; Adedeji Adeniyi, MD

Despite progress in medicine, women remain underrepresented in Physical Medicine and Rehabilitation (PM&R), where they account for only 36%–39% of residents, compared to 47%–48% in other specialties. So why aren't more women choosing the field? A PM&R-led national survey of over 1,000 pre-medical students sheds some light—and reveals how we can change the story.

Survey Insights: The Missing Link

Despite its potential appeal, PM&R is still flying under the radar for many students. Only 31% of respondents had prior exposure to PM&R, yet 76% expressed interest in attending workshops, revealing a gap between awareness and interest.

When asked what would make PM&R more accessible, female respondents had clear preferences. Over half (52%) emphasized the need for mentorship, while 58% were enthusiastic about women-focused PM&R workshops.

It's clear: early exposure could be the key to bringing more women into PM&R.

Barriers Holding Women Back

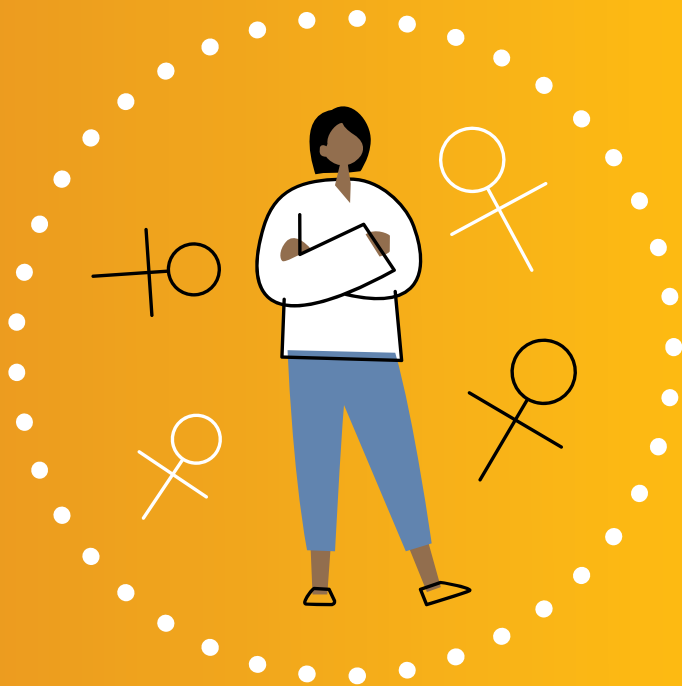
Despite the interest, barriers loom large. Financial constraints were the biggest issue, cited by 68.5% of female respondents. Medical school is not cheap, and for many women, this reality can discourage them from even applying. Add to that the complexity of the application process—41% of women reported feeling overwhelmed—and it's no wonder the path feels daunting.

But financial issues are not the only obstacles. Cultural expectations play a huge role, with 30% of women expressing concern about balancing family life with a medical career. The pressure is even greater for those who are trailblazers in their families: 55% of respondents were the first in their family to pursue medicine, amplifying personal and social expectations.

The Struggle for Leadership and Recognition

It's not just about getting into the field—it's about thriving in it. Even as more women enter PM&R, many hit a wall when it comes to leadership and recognition. Take the case of pain medicine. A 10-year study showed an alarming ratio of men to women fellowship program directors, ranging from 5:1 to 3.7:1.

Professional recognition tells a similar story. Over the last 48 years, only 15.9% of awards from the American Academy of Physical Medicine and Rehabilitation (AAPM&R) went to female



For women of color, the challenges multiply. Pay equity, promotions, and academic visibility remain major hurdles—creating a compounded effect of inequity that stifles career advancement.

physicians. Even today, that number has only crept up to 26.8%, signaling that gender disparity still persists.

For women of color, the challenges multiply. Pay equity, promotions, and academic visibility remain major hurdles—creating a compounded effect of inequity that stifles career advancement.

Pathways to Progress: Building a More Inclusive PM&R

So how do we close the gender gap? Addressing gender disparities in PM&R requires a multifaceted approach:

- 1. EARLY EXPOSURE:** Expanding initiatives like the Columbia PM&R Series, which offers workshops and shadowing, can help more women discover the field early in their medical education as early as high school.
- 2. MENTORSHIP:** Developing structured mentorship programs to pair female students with PM&R professionals can address financial and work-life balance challenges.
- 3. FINANCIAL SUPPORT:** Scholarships and grants aimed at women in PM&R, in partnership with universities and organizations like the American Medical Women's Association, can reduce financial burdens.
- 4. ADDRESSING GENDER BIAS:** Supporting initiatives like Be Ethical helps challenge systemic inequities, especially those faced by women of color, and paves the way for a more inclusive future in PM&R.

The Road Ahead

Closing the gender gap in PM&R will not happen overnight, but with targeted initiatives, it's possible. Early exposure, mentorship, and financial support can encourage more women to enter the field. At the same time, tackling structural barriers, such as underrepresentation in leadership roles and professional recognition, will help create a more equitable future—especially for women from underrepresented backgrounds.

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SPASTICITY

BY THE NUMBERS

- Spasticity X brought together **300+** leaders in spasticity management from over **35** countries.
- An all-star line-up of **60** faculty presented **6** keynote presentations and over **50** breakout workshops, panels, and educational sessions.
- **62** scientific posters showcased interesting case studies and research in spasticity.
- The Spasticity Redefinition Workshop brought together **35** of the top thought leaders from across the globe.
- A heartfelt thank you to **10** industry partners for their generous support of Spasticity X.

IN THEIR WORDS - hear from our attendees

"Best spasticity meeting I have attended in at least a decade."

"The most extraordinary meeting of minds and souls. Grateful to colleagues, friends, and patients all united in reducing disability and pain from spasticity."

"Honored to present and teach at Spasticity X while also gaining new insights from fellow experts and innovators in the field."

"Incredible time learning from spasticity experts around the world! I presented research and learned Texas line dances too."

"Fantastic, high-caliber content. Excellent science."

"Enjoyed the short, engaging sessions and world-class speakers."

"Loved the patient who came to talk about real-life experiences."

"International faculty of key thought leaders across multiple disciplines."

"Novel and emerging practice and research ideas were presented. Even seasoned spasticity experts learned something new."

"Fantastic symposium!"

"Exceeded all expectations!"

"Looking forward to applying these learnings to better serve our patients and improve outcomes!"



Outcomes

New spasticity definition and proceedings of Spasticity X published in eBook format (stay tuned!)

100% of participants reported that they intend to change their clinical practice or academic behavior based on what they learned.

100% of participants would recommend Spasticity X to their colleagues.



The first Spasticity X cohort hailed from 35 countries—everywhere from Australia to Brazil, from Cameroon to Italy, from Myanmar to the Philippines—and many places in between.

Spasticity X Wrapped Overview

Spasticity X was spearheaded by renowned spasticity expert and leader, Dr. Gerard Francisco, Chairman and Professor in the Department of Physical Medicine and Rehabilitation (PM&R) at McGovern Medical School at the University of Texas Health Science Center at Houston (UTHealth). Led by the Association of Academic Physiatrists [AAP] and endorsed by the International Society of Physical & Rehabilitation Medicine [ISPRM] and local hosts UTHealth and TIRR Memorial Hermann, Spasticity X was held in Dr. Francisco's beloved hometown, Houston, Texas, October 24 – 26, 2024. This first-ever international, multidisciplinary symposium laser-focused on spasticity was a huge success and a groundbreaking milestone for the field.

"Spasticity X" was coined based on a vision to bring together physicians, residents, researchers, industry executives, patients, and others from across the globe grounded in a common interest to 'X-out' spasticity to improve the lives of millions.

Over 300 leading minds and up-and-coming stars in spasticity came together for three jam-packed days of learning, collaborating, networking, brainstorming, and fun [yeehaw!]. The first Spasticity X cohort hailed from 35 countries—everywhere from Australia to Brazil, from Cameroon to Italy, from Myanmar to the Philippines—and many places in between. Overarching themes of innovation and diversity emphasized that the spasticity community is stronger together and everyone was encouraged and empowered to bring unique perspectives and experiences to share openly with colleagues and friends.

SPECIAL THANKS

Thank you to the Spasticity X Steering Committee and Scientific Advisory Committee for selflessly lending their time, energy, and expertise to develop this truly unique & remarkable program:

Scientific Steering Committee

- Prof. Alberto Esquenazi [USA]
- Prof. Gerard Francisco [USA], Chair
- Prof. Sheng Li [USA]
- Prof. Areerat Suputtitada [Thailand]
- Prof. Jörg Wissel [Germany]

Scientific Advisory Committee

- Dr. Abdulla Alrahoomi [United Arab Emirates]
- Prof. Marta Banach [Poland]
- Prof. Ryuji Kaji [Japan]
- Dr. Patricia Khan [Brazil]
- Dr. Maud Pradines [France]
- Prof. Rajiv Reebye [Canada]
- Prof. Raymond Rosales [Philippines]
- Dr. Fabienne Schillebeeckx [Belgium]
- Prof. Lynne Turner-Stokes [United Kingdom]
- Dr. Michael Temgoua [Cameroon]

SPASTICITY

Highlights

SHAPING THE FUTURE

A highlight of Spasticity X was the pre-conference **Spasticity Redefinition Workshop**—a consensus group tasked with the lofty goal of reaching a redefinition of spasticity (or endorsing an existing one). Members of this workgroup participated in pre-meeting preparation using a modified Delphi approach, evaluated live presentations from each of the four living authors of the current definition, and engaged in guided discussion and lively discourse.

Dr. Gerard Francisco shared the outcomes of this workgroup during Saturday's keynote '*Spasticity 2030*.' The working group continues to meet to refine the new definition and develop new strategies as we look to the future of spasticity management.

There are also plans for a new International Spasticity Society — a multidisciplinary community inclusive of anyone interested in spasticity, from clinicians and academics to industry, or patients.



Stronger Together

Over 50% of the speakers at Spasticity X came from outside of the United States and attendees represented over 35 different countries creating an incredibly diverse and dynamic experience.

Dr. Monica Verduzco-Gutierrez, Professor and Chair of the Department of Rehabilitation Medicine at UT Health San Antonio, Chair of AAP's Diversity & Community Engagement Committee and internationally recognized spasticity expert and DEI champion, led a panel and facilitated discussion asking the question—"*How can we Support More Women in Spasticity Management?*" Dr. Verduzco-Gutierrez also demonstrated a live patient case & toxin injection, shining a light on patient-physician trust, compassion, and humanity in spasticity management.

Another highlight was an all-female panel (perhaps one of the first at a spasticity conference!) addressing inequities and bridging gaps in spasticity care. The lively and interactive panel engaged with the audience sharing insights on current disparities in spasticity care, their experiences on how these disparities impact affected communities, and strategies to overcome these barriers to care.

There was also a '*Spotlight on Emerging Experts*,' Journal Club Discussions, and Poster Gallery receptions. These events were designed to support and empower the future generation of spasticity experts.

Keynotes + Featured Sessions

The rest of the meeting embraced the broader attendance with a carefully crafted program covering every area of spasticity that you could imagine: Imaging (Gao, USA); Neuroimaging Biomarkers (Picelli, Italy); Toxins (Munin, USA); Neuro-orthopedics (Genet, France); Cryoneurolysis (Winston, Canada); Pain (Wissel, Germany); Upper Motor Neuron Syndrome (Politikow, Switzerland); Lived Experience (Ivanhoe, USA); Pathophysiology (Gracies, France); Early Intervention (Rosales, Philippines); Novel Techniques (Francisco, USA), Technology Applications (Suk Bang, South Korea); Muscle Extracellular Matrix (Raghavan, USA); and much more.

Attendees chose breakout sessions organized in twelve (12) parallel themes based on individual learning needs and interests and joined together as a whole for 6 keynote presentations highlighting the hottest and most innovative topics in spasticity management.

The Spasticity X App helped attendees navigate the conference, design personal itineraries, and access various meeting materials.

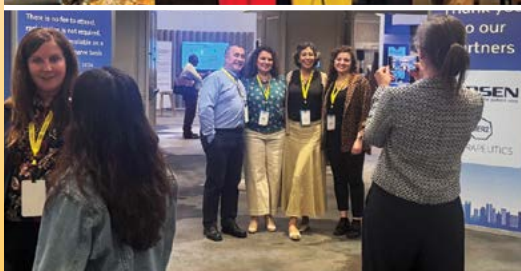


The Fun Stuff

Following a full day of sessions, Spasticity X kicked off on Thursday with a *Welcome & Poster Gallery Reception*. Attendees and exhibitors were invited to come together to celebrate Spasticity X science, engage in Q&A with the authors, and mingle with friends and colleagues across the world (over hors d'oeuvres, beer/ wine, and cocktails/ mocktails!)

Friday's social & networking event—the highly anticipated **Texas Hoedown**, supported by TIRR Memorial Herman—was a festive party complete with honky-tonk music, watering holes (drinks), Texas BBQ, and country line-dancing led by an expert cowgirl instructor.

In between Spasticity X sessions and networking events, international guests and Houstonians blended seamlessly shopping and dining at the adjacent Galleria, one of the largest malls in America, and taking in other Houston attractions such as the Space Center, Theater District, and 19th-century architecture and upscale restaurants.



INDUSTRY + ACADEMIC COLLABORATION

Spasticity X highlighted the important role that partnerships with industry can play in accelerating discovery and improving education and clinical care for the benefit of spasticity patients.

Industry partners offered attendees enhancements to the overall educational and networking experience including breakfast symposiums, lunch & learns, and hands-on demonstration pods. The Expo Hall provided an informal environment for meet & greets, questions & answers, hands-on practice, and discussion among attendees and exhibitors alike.

Industry representatives were also warmly welcome to attend all workshops and sessions as important members of the spasticity community.

Perhaps the most meaningful industry-academic collaboration was a breakfast engagement "Bagels, Bacon & Brainstorming," hosted by Dr. Gerard Francisco. This session involved clinicians, academics, and pharma, and led to a morning of creative thinking and crispy bacon, focusing on the benefits of interactions and partnership while maintaining ethical boundaries.

The small group discussions focused on the following topics:

- ✓ What are the barriers in establishing or sustaining collaboration between industry and academia?
- ✓ What factors can promote effective and respectful collaboration between industry and academia?
- ✓ Should the pharma industry have access to medical schools and residency training programs, and why/ why not?
- ✓ What is (are) missing in the current state of relationships between industry, clinical practice, and academia?

Bagels, Bacon & Brainstorming surely left participants fueled for a productive final day of the conference.

What's Next?

The consensus is unanimous—**Spasticity X will live on!** Our sights are set on 2027 for the second iteration of this international, multidisciplinary spasticity symposium. The bar is set high, but we are confident Spasticity X 2027 will be even bigger and better. We can't wait to see you there!



Rehabilitation Medicine Scientist Training Program:

AN ENDURING AND EVOLVING LEGACY TO FOSTER THE NEXT GENERATION OF PHYSICIAN-SCIENTISTS

By: W. David Arnold, Gustaf Van Acker, and John Whyte

The Rehabilitation Medicine Scientist Training Program (RMSTP) recently received renewed funding support under an R25 mechanism from NIH. The RMSTP has a long and distinguished history of developing physician-scientists in rehabilitation medicine. Initially funded in 1995 by the National Institutes of Health (NIH) through the K12 grant mechanism, the program has supported the development of numerous clinician-scientists over two decades.^{1,2} However, changes in NIH funding priorities necessitated a transition to a new framework, leading to the RMSTP's reestablishment under an R25 mechanism in 2019. This article reviews the evolution of the RMSTP, highlights its continued impact, and outlines the program's exciting future under renewed funding.

A LOOK BACK: THE K12 ERA (1995–2016)

The RMSTP was first funded by the NIH National Center for Medical Rehabilitation Research (NCMRR) under the K12 mechanism. Designed to support institutional career development, the K12-funded RMSTP facilitated the transition of early-stage investigators to independent research careers. In the initial cycle, led by James Lieberman, applicants competed for research career development grants from the program, however there was no specific infrastructure to prepare applicants for productive fellowships or support them during funding. When the grant was renewed with John Whyte as Primary Investigator, its structure included three distinct phases designed to ensure that candidates with research potential had guidance in the selection of research mentors and topic areas, and support for productivity and career transitions over time: 1) Pre-Application Phase: Provided resources and mentorship to help residents and junior faculty define their research domain, identify mentors, and craft competitive grant applications, 2) Phase I (Funded Fellowship): Supported junior faculty with three years of research funding, guaranteeing 75% of protected research time to foster productivity, and 3) Phase II (Post-Fellowship Mentorship): Continued mentorship and networking opportunities for

participants transitioning to independent physician-scientist careers. The program's hallmark components included an annual Research Career Development (RCD) Workshop, quarterly small-group mentorship calls, and networking opportunities that fostered a community of rehabilitation researchers at all stages of development.

TRANSITION TO R25 (2019–PRESENT)

In 2016, the NIH phased out K12 funding for the RMSTP due to altered priorities, requiring young physicians to apply to the NIH or other agencies for individual research career development fellowships. Recognizing the critical need for structured physician-scientist training in rehabilitation, the RMSTP leadership reimaged the program under the R25 grant mechanism, first awarded in 2019. The R25-funded RMSTP retains the core mission of supporting early-career investigators while introducing an updated, structure divided into four phases: 1) Pre-Applicant Phase: Educating early investigators to refine their research interests and identify mentors, 2) Applicant Phase: Guiding participants in developing competitive career development funding applications for independent K awards and other funding mechanisms, 3) Funded Fellow Phase: Providing ongoing support to maximize productivity during training



including peer review of grant applications, and 4) Graduate Phase: Offering transitional support for independent research careers. Central to the program are the annual RCD Workshops and quarterly small-group video conferences. These sessions deliver tailored guidance on grant writing, research design, and career development, ensuring participants are well-prepared for independent research careers.

LEADERSHIP EVOLUTION OF THE RMSTP

The RMSTP has undergone a dynamic evolution in leadership across its funding cycles. During the first funding cycle, Jim Lieberman, MD, served as Principal Investigator (PI). In the second cycle, leadership transitioned to John Whyte, MD, PhD, as PI, with Mike Boninger, MD, serving on the advisory board. Subsequently, Dr. Whyte and Dr. Boninger assumed complementary leadership roles, with Dr. Whyte as PI and Dr. Boninger as Associate Director. This structure was later reversed, with Dr. Boninger taking on the PI role and Dr. Whyte as Associate Director, a configuration that continued through the first R25 funded cycle. Under the current funding, Dr. Boninger (Principal Investigator, University of Pittsburgh) will serve as Director. W. David Arnold, MD (University of Missouri), will serve as Associate Director and Janna Friedly, MD, MPH (University of Washington), and Stacy Suskauer, MD (Johns Hopkins University), as Assistant Directors. The program is supported by a multidisciplinary advisory board that includes Kristen Dams-O'Connor, Ph.D. (Icahn School of Medicine), Edelle Field-Fote, PT, PhD, FASIA, FAPTA (Shepherd Center, Emory University), Roy Hamilton, MD, MS (University of Pennsylvania), Gregory Hicks, PT, PhD, FAPTA, FGSA (University of Delaware), C. Benjamin Ma, MD (UCSF), David Morgenroth, MD (University of Washington), Leslie Morse, DO (University of Miami), Mary Jane Mulcahey, PhD, MSOT (Thomas Jefferson University), Carmen Terzic, MD, PhD (Mayo Medical School), Lewis Wheaton, PhD (Georgia Tech), and John Whyte, MD, PhD (Moss Rehabilitation Research Institute).

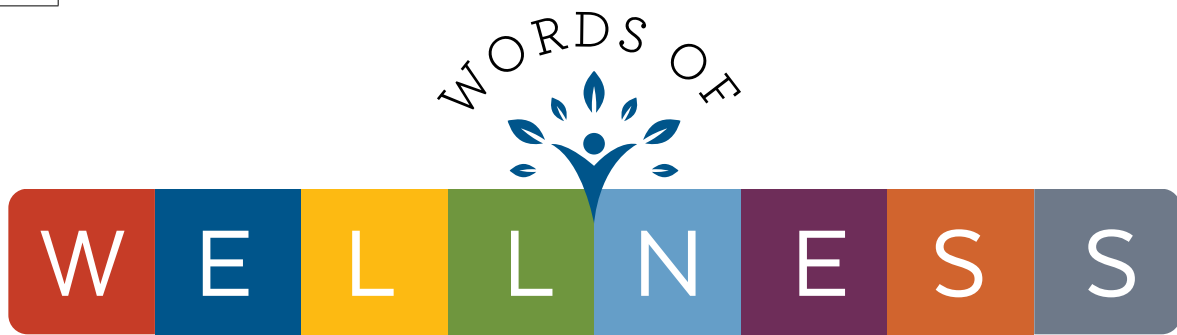
The program's hallmark components included an annual Research Career Development (RCD) Workshop, quarterly small-group mentorship calls, and networking opportunities that fostered a community of rehabilitation researchers at all stages of development.

LOOKING AHEAD

Physician-scientists are the critical bridge between clinical practice and scientific discovery, uniquely positioned to identify gaps in care, develop innovative solutions, and translate research into improved patient outcomes. Despite their importance, there are insufficient physician-scientists in rehabilitation medicine. The RMSTP addresses this critical need by providing a robust, adaptive framework that equips early-career investigators with the tools, mentorship, and resources necessary for success in an increasingly competitive research landscape. With its renewed funding under the R25 mechanism, the program is poised to expand its impact, fostering a new generation of leaders who will redefine rehabilitation science. For more information about the RMSTP, visit the Association of Academic Physiatrists' website at physiatry.org.

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Welcome to your quarterly Words of Wellness, a column dedicated to giving you resources and inspiration to intentionally practice wellness and encourage your peers. These features are brought to you by the AAP's Resident/ Fellow Council (RFC) Well-being Subcommittee.

WELLNESS EVENT



Wellness Event with JFK-Johnson

AUTHOR: AIMEE ABBOTT, DO

Flashback to brisk fall weather! The JFK-Johnson PM&R program recently had the opportunity to take part in a beautiful autumn wellness hike in New Jersey, and it was an experience to remember. The crisp air and vibrant fall foliage set the perfect backdrop for connecting with colleagues in a relaxed, outdoor setting. As we made our way through the trails, it was a refreshing break from our usual routines and a chance to recharge both mentally and physically.



The hike was followed by delicious food and even better company, which made the day all the more enjoyable. Sharing laughter and conversations outside of work helped strengthen our team bonds and reminded us of the importance of balancing hard work with moments of relaxation and connection. Events like this not only promote physical well-being but also foster a sense of community that we can carry with us back to our professional lives. Overall, it was a rewarding and revitalizing experience that left us feeling recharged and grateful!

FEATURED RECIPE



Chicken Caprese

CHEF: BRENT FOGEL, DO

INGREDIENTS

- 2 skinless, boneless chicken breasts (1/2 pound each)
- 1 beefsteak tomato
- 1/2 pound mozzarella cheese ball
- Small fresh basil leaves [gotta be fresh]
- 4 tablespoons of extra-virgin olive oil
- Sea salt, cracked black pepper, red pepper flakes [optional]
- 2 teaspoons of minced garlic
- Balsamic vinegar

INSTRUCTIONS

1. Preheat a frying pan on medium heat.
2. Coat the chicken breast with 2 tablespoons of olive oil and add a few pinches of salt and pepper. Add the red pepper flakes for an extra kick.
3. Add 2 tablespoons of olive oil to the pan and spread evenly. Place the chicken breasts in the pan and cook for about 4-6 minutes on each side. Add minced garlic on and around the chicken while cooking.
4. Cut thick slices of the mozzarella and tomato. Add a slice of mozzarella and then a slice of tomato on top of the chicken. Place 2-4 fresh basil leaves on top and drizzle balsamic vinegar over.



REFLECTION

Self-Talk

AUTHOR: CATHERINE KINGRY, MD

I recently watched the movie *Inside Out 2* with my nephew. The movie's portrayal of emotions and how they contribute to our thoughts and belief systems piqued my interest in self-talk. Self-talk is the act of having a dialogue with oneself, either silently or vocally. Self-talk can be positive or negative in its content. In the movie, the protagonist, Riley, uses negative self-talk and says, "I'm not good enough", which ultimately causes the character Anxiety to start a panic attack. Positive and negative self-talk have been studied and implemented in a number of ways, including treating anxiety and depression and enhancing sports and academic performances.

I encourage you to take some time to think about how you speak to yourself. What does your inner dialogue sound like? Do you use strategic self-talk in performance situations, like when Ted Lasso says 'barbeque sauce' right before he throws a game-winning bullseye dart to the board? Do you psych yourself up and tell yourself "I'm going to give my best effort today"? Are the contents of that dialogue serving you in a positive way? Or are you criticizing yourself and making it more difficult for you to function? Does your self-talk sound similar to how you would counsel a friend?

If you want to minimize negative self-talk, try to change your negative thought to a more realistic one. Instead of telling yourself, "I'm so stupid and lazy, and I'm not going to pass my boards", reframe it to, "I did not do as well as I had hoped on the SAE. But, I have come a long way, and I work hard to take great care of my patients every day. I can revisit my strategy to prepare for the boards." This can take time to get used to this change, but with practice, your self-talk can stop inhibiting you and become a tool to motivate you!

Wishing you well,
Catherine

Source: Alexander L. *How To Stop Negative Self-Talk*. Cleveland Clinic Health Essentials. September 26, 2022. Accessed January 6, 2025. <https://health.clevelandclinic.org/what-is-negative-self-talk-and-how-to-change-it>.



FEATURED WORKOUT

Yoga for Better Posture

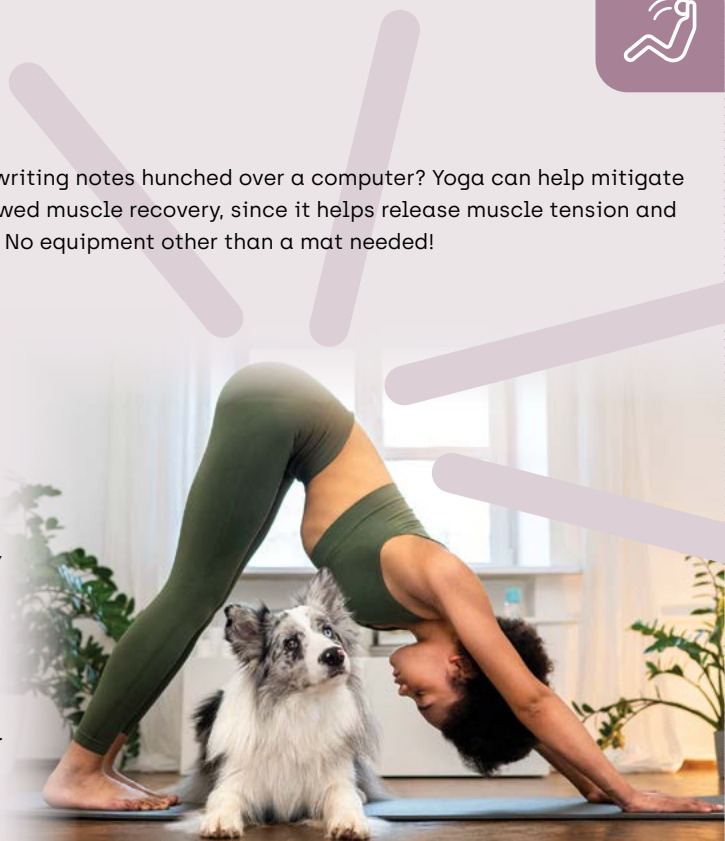
AUTHOR: RAISA MASOOD, MD

Do you feel discomfort when you stand up from a long day of writing notes hunched over a computer? Yoga can help mitigate the effects of poor posture, such as chronic back pain and slowed muscle recovery, since it helps release muscle tension and improve alignment. Yoga can also help improve overall mood. No equipment other than a mat needed!

HERE ARE SOME YOGA POSES YOU CAN TRY:

1. **Downward-facing dog:** stretches your neck and back, strengthens your upper body
2. **Boat pose:** strengthens your core
3. **Child's pose:** relaxes your back, shoulders, and neck
4. **Pigeon pose:** relieves tight hips
5. **Sphinx pose:** stretches your back, shoulders, and neck

Sources: <https://www.onepeloton.com/blog/yoga-for-posture/>
<https://www.bu.edu/wellness/six-reasons-to-practice-downward-dog/#:~:text=In%20downward%20dog%2C%20your%20head,blood%20flow%20through%20your%20body.&text=Downward%20dog%20stretches%20and%20helps,mental%20fogginess%2C%20and%20mild%20depression.>
<https://www.issaonline.com/blog/post/how-to-use-yoga-to-combat-sitting-all-day-for-work>





SPOTLIGHT: INTERNATIONAL PHYSIATRY

COLOMBIA

Curious about how the field of Physiatry is practiced around different parts of the world? Join us for the second edition of the AAP Junior Faculty Council's—International Physiatry Column—where we interview Physiatrists who have had experiences practicing around the globe. In this edition we speak with Dr. Mario Alfonso Giraldo Prieto, MD—Dr. Giraldo is a professor of Physical Medicine & Rehabilitation at Universidad de Antioquia in Medellin, Colombia.



Written By: Faheem Mahomed, MD - Assistant Professor, Pediatric Rehabilitation, Dell Children's Medical Center, University of Texas (UT) - Austin

Q: Hi Dr. Giraldo! Thanks so much for joining us for this discussion!

A: My Pleasure! I am happy to share my experience working in Colombia!

Q: Can you tell us a little background about your education/training/work history?

A: My professional life has been traced by the search for personalized care, rather than standard treatments. By the last half of the PM&R residency, two mentors invited me to join the Neuroscience Research Group of the University of Antioquia, in Medellin, Colombia: Francisco Lopera, Neurologist, and Rodrigo Castro, Physiatrist: cognition and language in children was the goal that led me, over five years, some basis to understand differences among several learning, language, and behavioral problems. Once graduated, a quaternary Hospital opened an opportunity for me to work by setting up rehabilitation programs for patients with advanced disabilities, such as polytrauma, burns, ICU, and transplanted patients, on either acute or long-term rehabilitation. Initially, I supported an interdisciplinary clinic for surgery and rehabilitative procedures for kids with gait problems and I set up a program with an early screening of deficiencies in pre-term newborns. This decade of my life was rounded up with the setting up of 7 specialties-interdisciplinary programs for children with spina bifida. In the meantime, I followed some statistical courses to understand what I read in the scientific journals, but it just enlightened my seek for a better understanding of how individual differences determine different



grades of disability and require more personalized treatments. From 2013 to 2016, Dr. Andrea Furlan and John Flannery at the University of Toronto, embraced me to learn how to research by doing systematic reviews and meta-analysis, while I completed fellowships in MSK rehabilitation and Spasticity.

I came back to the University of Antioquia to join as an assistant professor and to the Health Rehabilitation Research Group, led by Dr Luz H Lugo, who promoted numerous Clinical Practice Guidelines for disabling conditions, which supported the Ministry of Health for better evidence-based care. The University allowed me to complete a Master in Science of Clinical Epidemiology and to step aboard the PhD in clinical medicine to get better skills in research methods. Over the last 14 years, I have collaborated with the Board of Trustees of the Colombian Association of PM&R, where I was the President in the

2016-2018 term, and lately as a member at large of the Association of Academic Physiatrists.

Q: How did you come across the opportunity to work in rehabilitation in Colombia?

A: As in many countries, education is expensive in Colombia. Nevertheless, I had the opportunity to study at one of the largest public universities that offer several opportunities of higher-quality education. The specialty was founded in Colombia a few years after Dr. Napoleon Rojas and other physicians were trained in Physical Medicine and Rehabilitation—PM&R—at the New York University College of Medicine in 1954 with Dr. Howard Rusk. Decades later, the physiatrists did a magnificent job of promoting rehabilitation and PM&R contributions to the care of patients from other several specialties. Professor Fabio Salinas, of the University of Antioquia,

among others, heightened the academic level in such a way that it positioned the specialty with respect and need from other specialties to provide rehabilitation to their patients. Two strategies helped with that positioning of the specialty: the residents from different specialties started doing rotations in PM&R since the late 90s', and the leaders promoted several updating courses of disability and rehabilitation to other specialties and GPs. When I graduated as a Psychiatrist in 2003, there were already several working opportunities for this specialty.

I explored the opportunity to work as a PM&R specialist in Canada in 2015, with the special support of Dr John Flannery, but family ties and the clear opportunity to be professor, researcher and a national leader from my hometown brought me back to Colombia.

Q: Are there opportunities for US or other foreign trained physicians to work in Psychiatry in Colombia? Can you give us any insight on how medical licensing over there works?

A: Yes, they are. Some psychiatrists who were trained in other countries followed a process of validation of the curriculum they followed at their university of origin. Such validation takes several months of sending several documents to the Ministry of Education, which ensures that there were matching subjects and sometimes it requires a process of designated experts' opinions. I am not aware of language requirements, as it is not usual for physicians with other languages than Spanish to come to Colombia.

Q: Can you tell us about your clinical practice set up in Colombia?

A: There are two modalities of working in Colombia. One, with a complete full-time contract with all benefits. In this case, the physicians follow a regular schedule and constant working time, which usually is 46 to 50 hours a week. This is usually offered by the largest Hospitals and Clinics and the time per patient is of 20 minutes or 30 minutes for more complex diagnoses, such as SCI. The other modality is the payment of services in which the physicians offer their available schedules. Here the physicians and clinics agreed on the billing codes, and each procedure or the number of patients is the input for the payment. In this modality,

the physicians have to pay for their insurance plans, either for general health and working-related diseases, as well as for their pension plans. In the modality of the service payment, the amount of hours is up to each physicians' needs and the schedule they offer, besides it allows freedom to dedicate time to own affairs.

Q: Can you tell us a bit about your patient population over there?

A: Currently, I am attending patients with chronic pain, MSK problems and peripheral nerve pathologies, so clinical treatments, prescription of therapeutic exercise, ultrasound-guided injections and electrodiagnostic studies are the working activities I do the half of my working time. There are two main populations: those from the regular health system, who are mostly workers having numerous MSK pathologies and others from private insurance plans, who have mild diseases, but request the highest googledriven level of care. The other half time is dedicated to academic activities at the University of Antioquia with residents, under graduated students and research. A few international patients come for appointments to my clinic.

Q: What are the family's/patient's views of PM&R over there?

A: Many families have a positive concept about PM&R. As in many places around the globe, many others do not know what this specialty does. They have been understanding that we care for people with pain and disabilities and know that we may lead the rehabilitation plans. However, many others who seek care at a pain clinic and try out several trials of care before coming up to the PM&R clinic, most of the time, without a clear diagnosis and unaware of what their pathologies are and mean from a functional perspective. Once they realize that PM&R specialists have a deep understanding of disability, human movement, MSK and neural problems, anatomy and biomechanics, and more specific diagnosis-oriented care, they keep on follow-ups until they reach the top functional level according to their disease or disability and solutions to their painful conditions.

Q: What are your fellow physicians/colleagues views of PM&R as a specialty over there?

A: PM&R is viewed as the specialty that may support disabling and painful conditions, although it is not rare when patients are not aware of the support we may provide. Other specialties have been increasingly referring more patients to PM&R. It also depends on the psychiatrists' feedback, and the empowerment and willingness to assume the comprehensive care of patients and demonstration of skillful and deep understanding of patients' issues.

Q: Do you feel like there is a big need or demand for PM&R in Colombia?

A: Yes, there is. I've seen a big increase in referrals over time and there has been increasing requests from our clinics/institutions for PM&R services.

Q: What are some of the big differences between the Colombian health system and other places you have worked in?

A: I have practiced psychiatry in Canada and have been aware of some Health Systems around the globe, such as those from Latin America, USA, and some European countries depicted in the ISPRM congresses. From my perspective, it depends not only on the Medical Schools but also on the Managers' perspectives of each region. This means that the drivers of service delivery and working conditions for psychiatrists are not only regulated by the scientific approaches we follow, but administrative trends that are not necessarily supported by the evolution of human health or disability, nor professional well-being, or their determinant factors. Those more academic leaderships lead to a prompt referral from other specialties to PM&R, which may lead to secondary or tertiary prevention when considered by the rehabilitation plan, while there are some still lagging with the idea that PM&R is the last step in clinical care when there is not much left to do with patients, who could only receive a kind of palliative care, for their disabilities full of complications.

Over the last decade, an enriched academic leadership has been promoted throughout the Colombian Association of PM&R and universities creating a gap between evidence-based rehabilitation and the administrative system that controls payment for care deliverers,

so insurance companies are lagging far behind the science. The result is a traditional anchored plan of payment that authorizes rehabilitation treatments that do not modify disability and drain the economic health system, with patients still asking for repeated appointments and even in the worst cases with unnecessary adverse effects. I am afraid this is not exclusive to my country and could be a similarity, except for some regions around the globe.

Regarding the differences, the vast majority of medical clinics have a model of 20 minutes for all appointments in Colombia, which is far more difficult when having the patients' first appointment as compared to the model in Canada of one hour or more for the initial appointment and the 30 minutes appointment for the follow-ups. The result lays on patients' well-being completely, because several quality items could be threatened: a lack of deep knowledge of their health status, the scarce opportunities to be well informed, the lack of time to review a full list of exams when numerous, and the risk of navigating through a syndromic labeling of the patients' diseases instead of personalized attention to specific diseases and their individual manifestations due to their genetic polymorphisms, their mental/psychologic status, and their environment. Another significant difference is the lack of Clinics dedicated to inpatient Rehabilitation, so patients with disabilities only have access to ambulatory plans. The closest support is provided in acute hospitalization, where the rehabilitation teams visit the patients

the very few days they are in-hospitalized. Then, patients learn how to become independent while staying at home and facing everyday challenges.

Q: What factors went into your decision to work in Colombia?

A: The opportunities to reach accreditation as a medical specialist in many countries when being a visitor is a large barrier in most countries. However, there were some opportunities when I visited Canada, particularly with the wonderful support from Dr. John Flannery at the Toronto Rehabilitation Institute; nevertheless, my homeland university opened a path for me to keep growing as a professor and researcher, so it had a strong weight on my decision. Besides, Colombia has a tradition of keeping families closer, so mine and my wife's tilted the scale.

Q: What were the some of the positive/negative aspects of working there?

A: The positive aspects of working as a physiatrist in Colombia could be different from place to place, but I perceive that the Health System has some advantages: Health is a constitutional right of every citizen, no matter their race, status, economic profile, age, or sex. It leads to a comprehensive set of legislation that, at least in the written law, protects patients. There is a general law that regulates the economic contribution of all workers to the General Fund that then, the resources spread out to all citizens, and it covers a comprehensive accepted set of rehabilitative treatments in Rehabilitation, from diagnostic tests to diagnostic or therapeutic procedures. However, the administrative procedures

do not necessarily facilitate prompt access to rehabilitation services, or the best evidence-based rehabilitation programs. The physiatrists may practice in almost all rehabilitation areas, depending on population and clinics' needs. Some universities, open the 7 am academic lectures of the PM&R programs to their alumni and even many times to physiatrists from all over the country if solicited, so every physiatrist could have the chance to keep on learning for their continuous medical education. The affiliation to the Colombian Association of PM&R is another opportunity to have easier access to congresses or several academic activities led by national or even international experts.

Among the difficulties, there was a shift from a right-sided presidency to a left-sided one, so there are significant changes to the payment system that still are not well established and it has already caused some uncertainty and delays of payments to the clinics and physicians across the country.

Q: What advice would you give to someone who is interested in working abroad and in Colombia specifically? What are some things you think people should know prior to considering working in Colombia?

A: Physiatrists who consider working in Colombia should be in touch with several colleagues in the country to be aware of contract models and payment bills to be in accordance when receiving working offers. Otherwise, they could be exploited to work for long hours a day with low payments. A regular modality of contract under legal terms with conventional payments, either full-time or service provision, would be easier by recommendation of a physiatrist. Physiatrists are more likely to be accepted when they become members of the Colombian Association of PM&R and participate actively in academic activities.

Q: Do you feel well compensated in regard to salary/vacation/benefits?

A: The payment for medical specialists is reasonably well compensated. There is a range of incomes depending on the type of practice and the institutions.



Some Large institutions offer a full-time contract of 46 hours per week with well-paid salaries, including benefits, vacation time, and payment of Health Plans and Pension. On the other hand, physiatrists working independently under the service payment modality may be well compensated if they organized well their schedules and must demonstrate the payment of their own Health and Pension plans. In all cases, the taxes in the country are high, so they reduce the net income.

Q: What were your expectations of how working in Colombia was going to be like and how have those expectations compared to what you have actually experienced?

A: My expectations were to be joined to a large clinic and to be leading rehabilitation programs. I had that experience for a decade and enjoyed it too much. However, the larger the Hospital, the more costly the bill for the insurance companies, so patients were under our care for few visits and then the insurance companies moved them out to other non-expensive clinics. It was frustrating because patients were out of comprehensive care and follow-ups. Besides, the implementation of rehabilitation programs depended on several intermediate stages, either of several non-physiatrist medical directors and administrators, which became a barrier to make it real. Life opened to me the experience of becoming a professor and being trained in research, so I foresee a different perspective nowadays. I work as an independent physiatrist in an outpatient clinic where I can do the follow-ups for most patients, and it is rewarding because it allows for better care.

Q: Can you give us any insight into how difficult citizenship/permanent residency/visa process is to maneuver for foreigners interested in working there? How are things such as finding housing, schools for your kids, day-to-day activities, etc?

A: There are some physiatrists who got trained in other countries and they completed a process of accreditation before the Ministry of Education. They are working under similar working conditions to other physiatrists. I am aware that

THE POSITIVE ASPECTS OF WORKING AS A PHYSIATRIST IN COLOMBIA COULD BE DIFFERENT FROM PLACE TO PLACE, BUT I PERCEIVE THAT THE HEALTH SYSTEM HAS SOME ADVANTAGES: HEALTH IS A CONSTITUTIONAL RIGHT OF EVERY CITIZEN, NO MATTER THEIR RACE, STATUS, ECONOMIC PROFILE, AGE, OR SEX. IT LEADS TO A COMPREHENSIVE SET OF LEGISLATION THAT, AT LEAST IN THE WRITTEN LAW, PROTECTS PATIENTS.

it took a long time. Housing became expensive over the last 5 years, but is more accessible in cities different than the four largest cities: Bogota, Medellin, Cali, and Barranquilla. Cost of living is reasonable, but more expensive in these larger cities. However, these main cities are those having some bilingual schools that help children to adapt smoother to the language if coming from non-Spanish speaking countries.

Q: If someone is interested in working in Physiatry in Colombia what steps do you recommend they take to help them secure a position there - i.e., what should they be doing in medical school, residency/fellowship, etc, are there any groups they can get involved with or persons they can stay in touch with, etc?

A: The first step would be to consider training at a Colombian University. Currently, there are no fellowship programs, so any other Master in Science or PhD would facilitate a smoother transition. Nevertheless, this is costly, so requesting a position for an observer ship in PM&R would be easier, although there are some barriers to being easily accepted in a workplace. The more active the participation in academic activities, the better the acceptance and opportunities.

Becoming a resident in PM&R is a different process either public or private university. The former offers a public process of entrance, by sending the curriculum vitae that should include experience in research and academic production, besides an exam of medical knowledge in several areas of general medicine. The latter, requires an interview and the curriculum vitae, and the financial capabilities to pay for the registration and each semester fees.

Q: What are your favorite things about living in Colombia? Do you envision yourself being there long term or do you think you may venture out and explore opportunities elsewhere in the future?

A: I love the weather which is far from the extremes that are experienced in North America and Europe. People are warm and supportive. There is a democratic rule of law that allows people to be free and seek their willingness. There are many beautiful places to visit in Colombia, with several options to travel on vacations and enjoy the diversity of cultures, landscapes, and food. After visiting several places around the globe and living for three years in Canada, I feel I am happy staying in my country, but also, more open to living in other countries. My kids are searching for their future, and they could be traveling for University opportunities overseas. Thus, I would be considering working close to them if the accreditation process is feasible, and research opportunities are a clear possibility to develop what I have learned from the MSc and PhD in clinical epidemiology. The lack of funding for research is one of the challenges I have to deal with in my homeland.

Q: Thank you so much for your time and sharing your experiences in Colombia, this was some great information that I'm sure many people interested in working abroad will appreciate!

A: No problem! Thanks so much for having me!

If you or anyone you know is interested in sharing their experience practicing Physiatry abroad and would like to be featured in the next edition of our International Physiatry column please reach out to Faheem Mahomed, MD, via email at: faheem2892@gmail.com

More Than Disability

By: Rushil Balkundi



A former college literature professor passionate about the New Jersey Devils. A mother of 4 young children who looks forward to watching Patrick Mahomes on her TV every Sunday. And a kindergarten teacher who brightens every room she walks into. These three people come from different backgrounds, but they are all affected with the same disability: stroke. However, despite their literal inability to speak, there is a common language these three stroke patients can speak: humanity.

Strokes are debilitating and causes loss of what once was. This didn't seem to affect Josh, the literature professor. Josh is a man of many interests; an avid reader of many genres, a fan of different sports, and a well-traveled individual of many life experiences. In this regard, I didn't see Josh as only a stroke patient. He was a lot more. Josh was caring, always taking time to ask how we were doing. He was passionate, always looking forward to talk about who his favorite athletes are and his favorite books. He was calm, approaching every problem with patience that inspired the rest of the team. And he was a friend, to not only his loved ones, but also his fellow stroke patients. Josh was a stroke patient, but that's not all he is, and he never let that define his identity.

Christine also never let her stroke get in the way of being the matriarch of four young children. Her physical and speech disabilities weren't her only struggles. There were a lot of difficulties beyond her disabilities, but she never let any of those stop her from being a role model to her children and instilling respect, honesty, integrity. Despite all the cards being stacked against her, she always exuded strength, making strides to get better every day, treating everyone with respect, and raising her children with good values. Stroke wasn't the only part of her identity, but neither were her difficulties beyond the disability; amidst all of these difficulties, there was courage beyond measure, resilience that knew no limits, and an ability to make those around her feel at ease.

Patients really are the best teachers, not just in terms of what we can do for them, but sometimes, what we can do for ourselves. Sylvia was one of the true embodiments of guiding light in times

These patients were always more than their stroke. They are human beings with their own unique qualities and talents.

of darkness. Her enthusiasm to have company stoked my own passion and energy. Her optimism and big smile on her face was a ray of sunshine during times of personal turmoil. And her excitement for progress reminded me that the smallest victories are always worth celebrating. Sylvia was someone who knew how to not only stay in the moment, but enjoy the moment as well. It may have come naturally to her being a kindergarten teacher, but she taught me how to cultivate hope, find the positive spin, deflate inner tension, and overall, how to be a better person.

These patients were always more than their stroke. They are human beings with their own unique qualities and talents. Their strokes may have diminished their physical strength, but their mental strength more than makes up for it. With these three patients, there is a stroke, but there's also passion, tranquility, loyalty, zeal, tenacity, and positivity.

Rushil Balkundi is a current medical student at Texas Tech University Health Sciences Center School of Medicine. He is from Dallas, Texas, and graduated from the University of Texas with a Bachelor of Science in biochemistry. He has a passion for working with stroke patients and stroke rehabilitation.

A Sense of Belongings: Roshawn Brown, MD



A behind-the-scenes look at the treasured belongings of one featured member

Dr. Brown is a 4th year resident at the University of Pittsburgh Medical Center. He has a clinical interest in sports medicine, for which he is currently applying for a fellowship position. His research interests are primarily in the realm of musculoskeletal disease and regenerative medicine. He has a fostering different initiatives in the realm of Diversity, Equity and Inclusion and community engagement and maintains his role as the DEI representative on the Resident fellow Council in the AAP.

- 1. Soccer Shin Guards:** I am an avid player of recreational soccer or 'Football'. If there is a pickup game going on I will likely be joining soon. It's a great way to stay fit and get to know the community around you.
- 2. Reggae Music:** I listen to reggae music almost every day. Whether its in the car or the clinic, its a good way to clear my mind and put me in a place of peace and positivity. It's also a fantastic road rage preventive.
- 3. Afro Pick:** For when I decide to grow my hair out, I always keep this pick in my bag.
- 4. Reflex Hammer:** The reflex hammer has slowly but surely grown to be my favorite tool in my medical bag. It is a crucial part of the physical exam and can be the difference maker when making a tough diagnosis. So, I always keep the hammer on me.
- 5. Sports Medicine Board review book:** This book was recommended by my peers as on of the best study tools when it comes to board prep for sports medicine. As this is my field of interest, I do take some time to look at specific topics when there is a break in the action.
- 6. Camera lens:** I have recently taken up some interest in photography and videography. I have found that it is a good way to be expressive and creative.
- 7. ID badge:** This badge has been absolutely essential throughout my time in the hospital. It is very difficult to practice "Life Changing Medicine" [UPMC's slogan] without access to the building. It's also great way to help patient's and other staff members know who you are and your role in the hospital system.





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