Physiatry POV

PHYSIATRY '24 & MATCH DAY HIGHLIGHTS
Spring has finally arrived, and with it comes a new season of growth and advancement in the field of physiatry. It was wonderful seeing all your bright faces in person in Orlando this past February at our most well-attended conference yet. Physiatry ’24 certainly sparked a renewed sense of passion, leadership, and camaraderie that has been evident in the weeks since, and we can’t wait to see what you accomplish through the rest of this year!

This year’s spring issue of Physiatry Forward focuses on research, editorials, and updates. Inside, you’ll find articles covering a wide array of topics including:

- The application of AI and other new technologies in clinical practice
- A growing need for physiatry on a global scale
- Gaps in care for rural patients
- The need for mental health support in stroke survivors
- And group updates from members and partners

Want to see your name in print? Send any ideas or written content at any time to get featured. Your stories, research, and hard work deserve to be heard!

Liz Raubach
AAP Communications Manager
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Physiatry Forward is published four times a year by the Association of Academic Physiatrists (AAP). With a circulation of 2,900, Physiatry Forward is sent to active members of the AAP. To view past issues, visit physiatry.org/PhysiatryForward.

Contribute to our Summer issue of Physiatry Forward! Submit your photos, content, ideas, and more to Liz Raubach at lraubach@physiatry.org.
Spring cleaning is underway in my house, and my garden is bursting with native plants. I hope everyone is energized in their work and still able to enjoy some time outdoors while the weather is most beautiful. If you were lucky enough to be in the path of totality, I hope you enjoyed the eclipse. Unfortunately, since I was at a meeting in Chicago, I only saw a partial eclipse this time, but I plan to stay healthy so I can see the next one in 20 years!

Spring has only just begun for many of you, but our community is already in full bloom — and what a fantastic year it has been so far!

This year’s Match Week was quite successful and speaks to the increasingly competitive nature of PM&R. We are currently planning graduation for our fabulous senior residents and anticipating the arrival of new residents.

This past February we celebrated the end of winter together at Physiatry ‘24 in Orlando with a record attendance of over 1,700 physiatry students and professionals from 17 countries. The wildly successful conference was overflowing with novel research and fresh session ideas, smiling faces, and plenty of margaritas.

The AAP’s first international Spasticity Symposium, Spasticity X, was announced to a buzz of excitement. If you are a physiatry student or expert interested in improving the lives of patients by X-ing out spasticity, you won’t want to miss this! Abstract applications are now open for this October conference in Houston, TX.

We also saw the successful launch of the Physiatry Foundation and the generosity of the community. The Foundation’s Advisory Bureau (FAB) is working hard to provide innovative educational funding and leadership initiatives to close key gaps in physiatry programs for members in the months and years ahead. To learn more or donate, visit page 9.

In addition to the new and exciting initiatives launched this year through the AAP, we must not forget that none of these amazing opportunities would be possible without the backbone of our association: our volunteers! With the spring season comes the opening of volunteer applications for the various councils, committees, and general leadership positions available to members. Volunteer applications open May 1st, so prepare to give back and make lasting connections!

Sincerely,

Karen Kowalske, MD
Professor of PM&R, UT Southwestern Medical Center
President of the Board, Association of Academic Physiatrists
Rural Rehabilitation Medicine: THE SEED UNSOWN

By: Kayleigh D. Crane, MS2; Andrew S. Nowak, JD, MS4; Gabrielle E. Kennelley, MS, MS4
Central Michigan University College of Medicine
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Spaulding Rehabilitation Hospital – Harvard Medical School PM&R Residency

I spent most of my childhood traveling across the United States to different horse and cattle shows held in small rural towns. My college classes were filled with other students who called these communities home and planned to return to lead operations that would help feed America, produce textiles, and rear the ground to be ranch and farmland. The people who live in these towns, including my friends and family, are kind, hard-working, and resilient. Their compassion for their work and those around them, willingness to lend a helping hand, and emphasis on service to others mirror many principles of medicine. Even with these similarities, those in rural towns lack resources for adequate healthcare, including access to physicians, internet for video appointments, to even nutritious foods. These difficulties extend beyond primary care and chronic conditions to include post-acute care and rehabilitation following acute life-altering health events, as well. As a hopeful future physiatrist, I believe it is important to recognize the gaps affecting rehabilitation medicine in rural communities and the adverse outcomes stemming from these gaps.

For instance, rural Americans have a higher overall mortality rate than urban-dwelling Americans. This is particularly true of cancer, heart disease, and lower respiratory disease.\(^1\) Even though the contrast is so great that it has been referred to as the “rural mortality penalty,” 15% of the American population still lives in a designated rural area.\(^2,3\) Healthcare in these communities is suffering. Since January 2005, an estimated 192 rural hospital closures and conversions have occurred.\(^4\) According to the National Rural Health Association, there are only 13 primary care physicians per 10,000 rural area residents, compared to more than double (31 doctors) per 10,000 in urban areas.\(^5\) Meanwhile, in specialized areas of medicine, there are only an estimated 30 specialists per 100,000 rural residents compared to 263 per 100,000 urban area residents.\(^5\) When considering physiatrist-to-patient numbers for rural vs urban populations, the District of Columbia reports a 1:16,207 ratio, while in Mississippi, where nearly 80% of counties are considered rural, the ratio is 1:158,874.\(^6,7\)

Physiatry is a limited resource in rural America. In 2019, a cross-sectional survey indicated that of approximately 9,000 practicing physiatrists across the US, only 5.6% reported practicing in a rural area.\(^8\) The same survey suggested that approximately 63.7% of patients who were seen by physiatrists were those with long-term disabilities in need of ongoing treatment and management.\(^8\) Furthermore, as of 2021, in rural America, an average of 15% of the population is considered to have a disability while the national average is 12.6%.\(^9,10\) These numbers demonstrate a clear need for physiatrists in rural communities. The current 5.6% of practicing rural physiatrists cannot extend care coverage to the nearly 500,000 beds in skilled nursing facilities in these areas.\(^11\) Not only are the physiatrists who deliver post-acute care missing from the rural areas that need them most, but other professions who closely collaborate with physiatrists, such as physical therapists, occupational therapists, and speech therapists are also in short supply in rural communities.\(^12\) For example, there are 27 counties in Nebraska without physical therapists, 34 without occupational therapists, and 20 without speech-language pathologists.\(^13\) With physiatrists and other important members of the physiatry team missing in rural areas, patient care suffers.

The Center for Medicare and Medicaid Services lists 13 different diagnoses that require intensive rehabilitative services. These include strokes, brain and/or spinal cord injuries, amputations, and neurological disorders, among others, all of which may result in significant functional impairment.\(^14\) Having a stroke or other brain injury in a rural area is a particular “rural mortality penalty,” as patients with these conditions are more likely to experience adverse outcomes compared to their urban counterparts.\(^2,15\) For traumatic brain injuries, mortality rates reach 13 deaths more per 100,000 for...
By working to improve access to physiatry in rural areas, perhaps we can even balance the discrepancy between rural and urban patient outcomes.

rural residents than for urban residents. These discrepancies may be due to a lack of healthcare resources at the post-acute care level in rural areas. There is currently a paucity of data separating morbidity in rural areas based on other co-morbid conditions, distance to acute care and regular care, or the types of post-acute care received to know which variables are playing the greatest role in these statistics. However, one study published in 2020 did find that while patients from rural and urban counties are equally likely to be discharged to formal post-acute care settings, the types and courses differed. Those from rural counties were more likely to be discharged to a skilled nursing facility, while those in urban settings to inpatient rehabilitation facilities or back to the community with home health. The same study found that there was an increased risk in overall mortality for rural patients, specifically those discharged to post-acute care settings.

More research into these disparities, which take a striking toll on patients’ lives and the care they receive, is needed, as are solutions to the lack of providers and other crucial healthcare resources in rural communities. In trying to address these issues, it is important to remember that each rural community is unique and offers its own set of challenges in addressing health disparities. A paper published in the Health Education Journal in 2014 claimed that “...the deterministic triad of culture, economy, and geographical location is [special to rural communities], and even if two rural communities experience the same health disparity, each community is likely to have a discretely different composition of cultural, economic, and geographic determinants.” There may be no “one size fits all” solution to the disparities faced by rural Americans, particularly in physiatry and rehabilitation medicine. However, as a future physiatrist planning to return home to a rural community to practice medicine, I believe expanding early teaching and career opportunities to these areas, as well as providing community outreach and even pipeline programs to young students in these areas, may help to bring more doctors to these areas to better improve patient care. By working to improve access to physiatry in rural areas, perhaps we can even balance the discrepancy between rural and urban patient outcomes. By working to improve access to physiatry in rural areas, perhaps we can close the gap between geographically driven discrepancies in patient outcomes.

References
Physiatry Foundation is Here

We are excited to announce AAP’s new philanthropic arm, the Physiatry Foundation! Our mission is to create a thriving future for physiatry through funding innovative education and leadership initiatives. Our values focus on Inclusivity, Altruism, and Academic Excellence.

HOW TO GET INVOLVED

LEARN MORE!
We invite you to meet our inaugural leadership team including Chair Dr. Gerard Francisco, learn more about our scholarships and funds, and discover ways to donate on the Physiatry Foundation website. physiatry.org/physiatryfoundation

STAY CONNECTED
Connect with us on Twitter [X] and Instagram and stay tuned for exciting announcements.

DONATE ONLINE NOW
Help us get started with a small or large donation today!

THANK YOU APEC
The creation of the Physiatry Foundation was made possible by the American Physiatric Education Council (APEC). The APEC Board of Directors, who are the editors and leading authors of textbooks in the specialty, chose to execute a change and become the Physiatry Foundation with the hope of impacting many more lives and together creating a future for physiatry that we all wish to see.

100K MATCH
AAP’s Commitment to Double YOUR Impact
We are excited to announce that AAP is matching every donation for a year so we can start impacting the future of physiatry quickly. Your donation to Physiatry Foundation provides much-needed support for education and career development initiatives in physiatry — whether you’re supporting one of our larger-scale leadership, wellness, or global outreach programs or scholarships impacting individual lives — you will be affecting positive change for the future of physiatry.

“Something that unites and empowers us all is the opportunity to give back and uplift the physiatrists of the future to overcome barriers and succeed! One of my favorite quotes is ‘We rise by lifting others.’ In that spirit, I’d like to take a moment to invite you all to scan the QR code and make a donation [small or large] to help us get started today. I can’t wait to see all the good we will accomplish together.”
— Gerard Francisco, MD
Chair, Physiatry Foundation

Our Goal is to Make Donating Fun and Meaningful
Plan ahead to participate in one of our upcoming campaigns!

THANK A RESIDENT/FELLOW
Show your gratitude and appreciation for graduating medical students, residents & fellows as they move forward in the next phase of their careers.

VIP EXPERIENCE
Experience AAP’s Physiatry ’25 meeting like a rock star. For each donation, your name is entered into a raffle for a prize pack including a free registration, hotel upgrade, swag bag, and more!

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In 2023, the Orland Bethel Family Musculoskeletal Research Center (BMRC) at the University of Pittsburgh School of Medicine was founded by a generous gift from Mr. Orland Bethel, the founder of Hillandale Farms. The BMRC, as a part of the Department of Orthopedics at the University of Pittsburgh Medical Center, will support early-career researchers and trainees to enable translation of their ideas to exciting preliminary data for application to larger grants and eventual breakthrough treatments for musculoskeletal ailments.

2024 marks the launch of an array of programs, including the BMRC Core Laboratories, Bethel Research Fellows, and the annual BMRC Research Symposium where scientists will share their work and discover new opportunities for collaboration.

“With his exceptional gift, matched by the University of Pittsburgh School of Medicine, Mr. Bethel and his family have begun a foundational and generational change in the way we support musculoskeletal research here at the University of Pittsburgh,” Dr. Joon Y. Lee, Executive Director of the BMRC said.

The BMRC will serve as a catalyst for positive change and is dedicated to a future where individuals can lead fuller, healthier lives free from the burdens of musculoskeletal disorders. To learn more about the BMRC or to apply for our Bethel Research Fellowship, visit www.Bethel.Pitt.edu.

How can we as a scientific community help these talented researchers and provide them the support they need?

It has been reported that about 50% of post-doctoral researchers leave academic careers within five years of completing their PhDs. This departure is due, in part, to the challenges of obtaining sufficient research funding supports by early to mid-career researchers and clinician scientists.
THE EQUITABLE

A Case for the Role of Rehabilitation in the Future of Global Health

By: Kaile Eison, DO
As Medical Director of Global Health for the New York-Presbyterian Department of Rehabilitation and Regenerative Medicine, I have had the privilege and opportunity to create and run the global health track within our PM&R residency program. The track consists of an eighteen-month curriculum with an emphasis on sustainable, ethical, and equitable practices in global health physiatry. Throughout the first year of the curriculum, trainees participate in monthly didactic sessions focused on topics in global and public health, examined through the lens of physiatry. The trainees choose a country to study, and, throughout the year, build a virtual selective. They focus on promoting the reduction of health disparities, global health ethics, advocacy, and effecting change in health and social policy. They strive to understand how overall health and function are impacted by societal, political, economic, and environmental factors.

In the second year of the curriculum, the trainees use the knowledge and skill sets they developed in the first year to create an actual selective in Tanzania. They hone a skill set for practicing physiatry in resource-limited environments, study Swahili, build relationships with individuals working at the hospital, and understand and demonstrate proficiency in the development of bilaterally beneficial and sustainable global health work. The curriculum then culminates in a six-week rotation in Mwanza, Tanzania, during which time the trainees continue to develop the relationships and projects they began before departure. In addition to running the curriculum, I continue to work on longitudinal projects in both Uganda and Tanzania, focused on education, advocacy, and the development of rehabilitation services. I am also a founding member of the BRIGHT curriculum (Building Rehabilitation Initiatives in Global Health Training), an AAP-endorsed national global health curriculum that will be available beginning in late summer 2024.

cont.
Global health work is my passion, but is not the primary focus of my job, nor is it the part of my job I get paid to do. As is often the case with global health work, it is done largely on my own time, outside of my clinical work. The development and continued evolution of the track has been a labor of love for me, something I continue to do not because I was told to or because it is easy to continue, but because it is something in which I unequivocally believe. To understand why I forge ahead, despite the challenges, it is essential to understand from whence global health developed, and the direction in which it is evolving.

The concept of the medical mission, the idea from which global health today grew, is the notion of the “Western world” going on a mission to help save the “poor, underprivileged people” of another country by showing them the “right way” to do things. It has deep roots in colonialism and religious missionary work. It necessitates the assumption that those traveling to distant lands are somehow inherently superior to those who have been existing in their own right for centuries. It is a dangerously toxic and outdated thought process, but one that still occurs with alarming frequency, and one for which there is a strong impetus to change, often referred to as the decolonization of global health. It is exemplified even in the language that is used to discuss these concepts.

Oft used phrases, such as “third world” or “developing country,” imply that there are places that are underdeveloped or in some way inferior. Much in the same way we have gravitated away from terms such as “wheelchair-bound” or “crippled”, we now instead use High Income Countries (HIC) versus Low to Middle Income Countries (LMIC), which is an important evolution in the verbiage, as it removes the burden from the country and the people themselves and places the onus instead on the system.

Mission trips are additionally problematic when considering that the ethical boundaries of medical mission trips are often virtually nonexistent. The importance of developing and maintaining guidelines and regulations, for the safety of patients and trainees, is essential. However, there are larger implications, too. In a scenario that often mirrors that of disability advocacy, questions of who has a voice and who has a seat at the proverbial table for decision-making, and what those voices are saying, are not being asked often enough, and this is true at the level of STEGH (short-term global health experiences) and governmental and nongovernmental policy-making levels.

Physiatrists are primed to be leaders in global health for other reasons, as well. Historically, global health was focused largely on the prevention and treatment of infectious diseases — HIV, tuberculosis, malaria, and diarrheal illnesses accounted for the majority of the global burden of disease. Since 1990, however, there has been a marked shift towards non-communicable diseases as a cause of disability. The global burden of disease (GBD) is an epidemiological concept used to quantify and qualify the morbidity and mortality of disease in a systemic, global way. It is calculated using a metric called DALYs, or Disability Adjusted Life Years. One DALY represents the loss of the equivalent of dying a year earlier...
than expected. In a landmark systematic review of the global burden of disease and DALYs published in the Lancet in 2020, ischemic heart disease and stroke were the top-ranked causes of DALYs in both the 50–74-year and 75-years-and-older age groups.² With improvements in clinical care and public health, people who would have otherwise died, now survive, often with disability. As people live longer, they are at higher risk for developing disabling conditions over time. The World Health Organization (WHO) has identified that one in three people, globally, could benefit from formalized rehabilitation.³ Many countries are not equipped to respond to existing rehabilitation needs, and according to the WHO, more than 50% of people in some LMICs do not receive the rehabilitation services they require. For example, on the African continent, it is estimated that about 2% of individuals who actually need a wheelchair have one.⁴ In Tanzania, where I do most of my global health work, there are about two thousand documented wheelchair users in the country, to the estimated thirty thousand who need wheelchairs and the roughly 3.3 million individuals with documented disabilities in the country. The world’s population is changing and with that, so are the health-related issues. We, as rehab professionals, are perhaps for the first time ever, on the forefront of that. As the global disease burden related to aging and disability continues to rise, the need for physiatry on the global stage increases, as does the need for physiatrists trained in equitable and sustainable global health practices. Our work in this capacity extends beyond traditional global health work. It has its basis in education — our greatest renewable resource. In physiatry, more than almost any other specialty, we have the opportunity to create relationships with our patients over long periods of time and share in reciprocal education. We are experts in partnerships. By using the skill sets we hone in the development of longitudinal relationships with patients with disabilities and in creating team-based approaches to complex problem solving, so too can we emphasize mutually created understanding and allow for shared governance while prioritizing bidirectional learning and equitable relationships in global health, advocating for policy reforms, resource allocation, and educational initiatives to address these systemic barriers and promote more inclusive and equitable healthcare systems.

BURKE HAS THE LOWEST REHABILITATION HOSPITAL READMISSION RATE IN THE NATION.

At Burke Rehabilitation, our whole-person approach to physical medicine and rehabilitation combined with best practices, new treatments, and innovative technologies maximizes the recovery of those we serve.

As a top rehabilitation hospital recognized by US News & World Report, Burke Rehabilitation is guided by its mission to provide the highest quality medical care and rehabilitation services to ensure that each patient achieves the maximum functional recovery from illness, injury or disability.

Among Medicare beneficiaries within 30 days of discharge; data from Centers for Medicare and Medicaid Services as of June 30, 2021.
PHYSIATRISTS PLAY A KEY ROLE IN APHASIA RECOVERY WORKING ALONGSIDE OTHER MEDICAL AND HEALTHCARE SPECIALISTS, ESPECIALLY SPEECH-LANGUAGE PATHOLOGISTS (SLPs) WHO PROMOTE LANGUAGE RECOVERY. FOLLOWING ACUTE AND SUB-ACUTE CARE, PATIENTS WITH RESIDUAL LANGUAGE DEFICITS ARE TYPICALLY REFERRED TO OUTPATIENT SPEECH THERAPY, USUALLY TWO TIMES PER WEEK. HOWEVER, THIS LEVEL OF INTENSITY IS NOT MAXIMALLY EFFECTIVE.

In a 2017 Lancet paper, Worrall and Foster echoed a growing consensus in the literature that a higher intensity dosage of speech therapy is preferential to the traditional therapeutic model. Rose et al. (2022) concurred that higher-intensity aphasia treatment appears to promote functional neural reorganization. It was in 2013 that a burgeoning aphasia service delivery model was observed that provided at least 3 hours of daily comprehensive therapy in both group and individual formats for weeks at a time. The results of this model appeared promising. The authors created criteria for an aphasia treatment model they coined the “Intensive Comprehensive Aphasia Program” or ICAP3. Since 2013, the number of ICAPs in the U.S. has grown from 8 to approximately 18 (Table 1), including the newest ICAP at Burke Rehabilitation in White Plains, NY.

### Table 1: Current U.S ICAPs (Source: National Aphasia Association)

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<thead>
<tr>
<th>STATE</th>
<th>ICAPs in U.S. (Total = 18)</th>
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<tbody>
<tr>
<td>FLORIDA</td>
<td>Brooks Rehabilitation&lt;br&gt;University of Central Florida, Aphasia House&lt;br&gt;The Aphasia Center, Intensive Treatment Program</td>
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<tr>
<td>IDAHO</td>
<td>Idaho State University Intensive Comprehensive Aphasia Program</td>
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<tr>
<td>ILLINOIS</td>
<td>Shirley Ryan AbilityLab Intensive Aphasia Therapy Program</td>
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<tr>
<td>MASSACHUSETTS</td>
<td>Spaulding Rehab Intensive Comprehensive Aphasia Program&lt;br&gt;TLC Speech Therapy Intensive Comprehensive Aphasia Program</td>
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<tr>
<td>MARYLAND</td>
<td>Loyola University Intensive Treatment for Aphasia Program (ITAP)</td>
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<tr>
<td>MICHIGAN</td>
<td>University of Michigan Aphasia Program</td>
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<tr>
<td>MONTANA</td>
<td>University of Montana Big Sky Aphasia Program</td>
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<td>NEBRASKA</td>
<td>InterACT Aphasia Program</td>
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<td>PENNSYLVANIA</td>
<td>VA Pittsburgh PIRATE Program</td>
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<tr>
<td>WISCONSIN</td>
<td>Marquette University Intensive Aphasia Program&lt;br&gt;Medical Collage of Wisconsin Intensive Program of Aphasia Therapy (IPAT)</td>
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<tr>
<td>CALIFORNIA</td>
<td>Instrumental Speech Therapy Intensive Comprehensive Aphasia Program</td>
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<tr>
<td>COLORADO</td>
<td>Craig Hospital Aphasia Therapy (CHAT)</td>
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<tr>
<td>NEW YORK</td>
<td>NYU/Rusk Rehabilitation Intensive Comprehensive Aphasia Program&lt;br&gt;Burke Rehabilitation Intensive Comprehensive Aphasia Program</td>
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cont.
The Intensive Comprehensive Aphasia Program (ICAP) at the Barbara and Steven Kessler Aphasia Center at Burke seeks to promote improvement in the underlying impairment in aphasia through intensive language exercises while also using techniques that address functional recovery. It does this in a group format, meeting 5 days per week, 4 hours per day, for 4 weeks. In addition to hours of daily speech therapy provided by a senior SLP, participants receive weekly neurologic music, occupational, and canine therapies with a focus on language at all times. Caregivers receive weekly counseling and education at Burke’s Marsal Caregiver Center. Individual treatment is provided daily via a partnership with Constant Therapy™, a leading neurocognitive app. Participants use Bluetooth noise-cancelling headphones during individual computerized treatment but remain in a group context. This allows participants to act as models for each other (Fig. 1). Each day of the ICAP focuses on a separate language goal, with several hours devoted to a singular language domain.

Burke’s ICAP enrolled its inaugural class in 2023 and has successfully completed two sessions, with preliminary data suggesting this model promotes gains in chronic aphasia (Table 2). All participants made clinical language improvements, with many achieving a statistically significant improvement or beyond as measured 1-week post-ICAP.

The Burke ICAP and the ICAP model provide a window into advancing the efficacy of aphasia rehabilitation and enhancing recovery in a population well-known to physiatrists. Advocacy to increase funding for intensive aphasia programs may yield improved recovery for patients with chronic aphasia.

Author Information
1. Susan Wortman-Jutt, MS, CCC-SLP is a senior speech-language pathologist in the Outpatient Speech Department at Burke Rehabilitation and is the creator and facilitator of the Burke Rehabilitation Intensive Comprehensive Aphasia Program.
2. Erika Trovato, DO, MS, is the Associate Chief Medical Officer and Program Director of the Brain Injury Medicine Fellowship at Burke Rehabilitation Hospital. Dr. Trovato is an Assistant Professor in the Department of Rehabilitation Medicine at the Albert Einstein College of Medicine.

References
Age of Artificial Intelligence: Role of AI in Clinical Practice

By: Sam S. H. Wu, MD MA MPH MBA is the Editor-in-Chief of Physiatry Forward and Chair of the Department of PM&R in the Lewis Katz School of Medicine at Temple University

J. Milo Sowards, MD is the Chair of the Department of Orthopaedic Surgery and Sports Medicine in the Lewis Katz School of Medicine at Temple University

Artificial Intelligence (AI) is all the rage currently in our collective consciousness as well as in the financial market. For example, Nvidia Corporation, a technology company that makes computer hardware for AI, has skyrocketed to over $2 trillion in its market value as of 3/26/2024, making it one of the most valuable companies in the world.

Many have compared the advent of AI with all its benefits as well as its pitfalls to the early days of the Industrial Revolution in the 1800s and the World Wide Web in the 1990s. Similarly in healthcare, we have seen just a few decades ago the rush to adopt the use of Electronic Medical Records (EMR) when the Bush administration set the requirement for using EMR to process medical billing. During that frantic period, numerous EMR startup companies enticed healthcare providers to quickly commit to costly systems, many of which did not withstand the test of time.

At Temple University Hospital, we are currently piloting the use of AI for EMR documentation to improve efficiency and accuracy. The Temple University Department of Orthopaedic and Sports Medicine is spearheading this initiative to streamline documentation during clinic visits in their busy clinics, where clinicians often see upwards of 60 patients per day. A proprietary AI app is being trialed to record the visit conversation after the patient provides consent for the recording. This AI app then, in real-time, populates a template for the clinic progress notes. Although the current iteration of this AI app is not yet reliably accurate and still requires some manual editing of the progress notes, clinicians have provided feedback that it does improve efficiency by decreasing the time to generate the progress note compared to not using the AI app. The goal of this trial is to refine the clinical integration process in a high-volume service such as Orthopedics and then roll it out to other Temple University clinical departments including Physical Medicine and Rehabilitation in the hopes of improving overall clinician satisfaction and reducing a contributor to burnout.

However, the use of AI chatbot apps is not without pitfalls. The information these AI tools provide lacks specific references because it aggregates information from many public sources, such as vetted and unvetted websites including news agencies with and without governmental connections. AI chatbot apps have also been known to be plagued by AI hallucinations, which are results that are biased and inaccurate. Because the datasets used to train AI chatbots are not necessarily transparent, there are no easy ways for programmers and consumers to mitigate these biases and inaccuracies. This weakness severely limits the use of public AI chatbot apps in medical practice and medical education where evidence-based information is essential.

While AI apps may assist with tasks that are time-consuming and repetitive for busy clinicians, it is paramount that clinicians remain actively engaged in diagnosing patients’ ailments and formulating the appropriate treatment plans even with future iterations of AI apps. While the practice of medicine is both an art and a science, clinical judgment in using scientific facts and medical experience remains critical in the delivery of quality health care to patients.
Mental Health Matters After Stroke:
A Call to Action for Rehabilitation Professionals

By: Alexandra Terrill, PhD
Clinical Psychologist
Associate Professor, University of Utah Department of Occupational & Recreational Therapies and Department of Physical Medicine & Rehabilitation
Mental health has been receiving more attention as an important area of concern after stroke, and for good reason. Emotional distress and mood disturbance are very common and can impact how a patient will adjust after stroke. Occurring in one-third to half of all stroke patients, post-stroke depression and anxiety are consistently associated with a higher risk of another stroke, disability, mortality, and poorer quality of life. Yet despite the common occurrence and well-documented negative consequences on recovery, rehabilitation, and community re-integration, mental health issues post-stroke remain vastly underrecognized and undertreated.

"Of course I’m depressed, I had a stroke!" Mental health conditions are the result of a complex interaction of psychological, biological, and social factors that are still not well understood. To further complicate matters, post-stroke mental health issues vary across the recovery trajectory and have different prognostic consequences. In the acute and early rehabilitation stage, pathophysiology consists of both biological (e.g., structural changes in the brain, inflammatory processes) and adjustment-related factors. Identifying mental health issues is critical at this stage as it may interfere with participation in rehabilitation therapies, and medication adherence, and, in turn, worsen long-term outcomes. During the more chronic phases of stroke, it becomes more challenging to identify and treat mental health issues. Unfortunately, there is a common assumption — by patients, families, and at times practitioners — that feeling depressed or anxious is to be expected after a stroke and that everything will be better once a person returns home and resumes “life as usual.” Unfortunately, life is more often “anything but usual” after a stroke when patients (and their families) realize the full extent of functional impairments and associated losses; for example, being unable to return to work or experiencing a significant change in family roles and relationships.

cont.
Early detection and proper management of mental health issues are critical to improve outcomes in stroke survivors. Integrating a simple, psychometrically-sound screening tool like the 2-item Patient Health Questionnaire (PHQ-2) into clinical care can make the identification of mental health issues easier; yet this is only half of the answer to this problem. Clinical guidelines for treating post-stroke mood problems include pharmacological and psychotherapeutic approaches. Pharmacotherapy is typically the first line of treatment but may be associated with side effects and risks, especially in those with multiple comorbidities and polypharmacy. Non-pharmacological interventions (such as psychotherapy) also offer promise, while combining pharmacological and psychotherapeutic approaches may be more effective than either treatment alone.

Despite the availability of various treatment options, most stroke survivors report that their mental health needs are not met or prioritized as part of their recovery and rehabilitation. Large-scale studies of nationally representative samples suggest that only one-third to one-half of those reporting anxiety or depression actually receive mental health treatment primarily in the form of antidepressant medication. Ethnically/racially, culturally, and linguistically diverse stroke patients, and those living in rural communities, are even less likely to receive mental health treatment, highlighting a critical health disparity.

Altogether, this underscores the importance of providing information to the patient, family, and health care providers about mental health post-stroke not only during early rehabilitation but at every stage of the recovery trajectory in order to improve symptom recognition and treatment, and ultimately promote a better quality of life for stroke survivors and their families. Although not all stroke survivors develop mental health issues or pathology, mental health should be a focus of practice for all stroke survivors.
In addition to the more traditional treatment methods, there are also other ways to support mental health in stroke survivors. For example, research shows benefits of physical activity on mental health that are equivalent to medication.

Providing opportunities and encouraging participation in adaptive recreation may be a way to improve mental health while also contributing to physical fitness and fostering social connections.

IN OUR STUDIES ON ADAPTIVE RECREATION AFTER STROKE, WE FOUND THAT:

- 52% of participants felt stronger
- 65% reported improved mood
- 76% felt more open to other new experiences

WHAT PARTICIPANTS SAY:

“Everyone thought I was too delicate to be out in the snow I guess. So, this helped me be strong and get the strength and courage to, that it’s still ok to [ski], you know?”

“I think this helps you accept it more. This is you, this is who you are. And you’re gonna go on. You know? This is a good life now.”

“Yeah, I choose not to be a victim. I really want to be a survivor, and I can share that with people, so that they won’t feel as scared as I was. And that’s really what it’s about.”

It is also critical to consider the stroke survivor’s support system. In fact, 30-50% of family caregivers report mental health issues, affecting their own as well as the stroke patient’s quality of life.

Recognizing that mental health and well-being are interrelated in a stroke survivor and their care partner, we developed an innovative remotely-delivered program to promote Resilience in Stroke survivor-care partner Dyads (ReStoreD), specifically designed to support couples coping with stroke. Over the course of eight weeks, couples learn and practice goal-setting, communication strategies, and strengths-based activities like expressing gratitude, finding meaning, and fostering connections. Currently being tested in a large, national sample, early findings show that ReStoreD reduces depressive symptoms, increases resilience and quality of life, and positively affects communication, meaningful activity engagement, and coping.

WHAT PARTICIPANTS SAY:

“He was more empathetic. So, the study has some real value… us thinking about it as a couple not just me in my bubble of stroke-dom... but as a couple.” — STROKE SURVIVOR

“It helped me realize I could enjoy spending time with [my spouse], not just someone I take care of... feels more like what couples would do as opposed to just feeling like I’m a caretaker, which is something I’ve struggled with.” — CARE PARTNER

References


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 Well-being Subcommittee.

TED-TALK / BOOK / PODCAST REVIEW

Brain Hack: 6 Secrets to Learning Faster, Backed by Neuroscience. Lila Landowski.

REVIEWER: STACEY ISIDRO, MD

It’s almost time for PM&R boards! We are yet again faced with another exam. Maybe we’re using Dr. D’Angelo’s PM&R Recap, Dr. Cuccurullo’s PM&R Board Review Book, Anki flashcards, or review questions to help us learn and retain the information. In this TED talk, Lila Landowski shares six ways to learn faster- attention, alertness, sleep, repetition, breaks, and mistakes. She goes into details about how to optimize each method. For example, her tip about making mistakes is relevant when we do practice questions and learn from the answer choices. Also taking breaks to exercise is a great way to help with memory. To all those taking boards soon, best of luck and congratulations for making it this far! Which of these tips to learn faster will you try?

Scan the QR code to watch this YouTube Video!
FEATURED RECIPE

Healthy-“ish” Buffalo Chicken Enchiladas

**CHEF:** TREY AGUIRRE, MD

**AUTHOR:** JINA LIBBY, DO

**INGREDIENTS**
- 1 lb boneless, skinless chicken breasts, cooked and shredded
- 8 low-carb tortillas
- 1 cup buffalo sauce (look for a low-sodium and low-sugar option)
- 1/2 cup reduced-fat cream cheese, softened
- 1 cup shredded reduced-fat cheddar cheese
- 1/2 cup chopped green onions
- 1/2 cup diced celery
- 1/4 cup chopped fresh cilantro
- 1 tablespoon olive oil
- Salt and pepper to taste

**INSTRUCTIONS**
1. Preheat oven to 375°F (190°C). Lightly grease a baking dish with olive oil or non-stick spray.
2. Prepare the filling: In a mixing bowl, combine the shredded chicken, buffalo sauce, softened cream cheese, chopped green onions, diced celery, and chopped cilantro. Mix well until everything is evenly combined and creamy. Season with salt and pepper to taste.
3. Assemble the enchiladas: Lay out a tortilla and spoon a portion of the buffalo chicken mixture onto the center of the tortilla. Roll the tortilla tightly around the filling and place it seam-side down in the prepared baking dish. Repeat with the remaining tortillas and filling.
4. Top with cheese: Once all the enchiladas are assembled in the baking dish, sprinkle the shredded cheddar cheese evenly over the top of the enchiladas.
5. Bake: Cover the baking dish with aluminum foil and bake in the preheated oven for 20-25 minutes, or until the enchiladas are heated through and the cheese is melted and bubbly.
6. Serve: Remove the foil from the baking dish and garnish the enchiladas with additional chopped cilantro and green onions, if desired. Serve hot and enjoy!

WELLNESS EVENT

PMR Residents gather for Networking and Fun at the 2024 AAP National Conference!

**AUTHOR:** JINA LIBBY, DO

Amidst the backdrop of the AAP National Conference, PMR residents and fellows converged at Top Golf for a resident and fellow networking event that seamlessly blended professional networking with recreational enjoyment. The Top Golf event provided a refreshing break from conference proceedings, allowing attendees to forge meaningful relationships outside traditional settings. During this event, the wellness subcommittee put on a successful icebreaker game of bingo where participants were able to win new AAP swag! Over refreshments, residents and fellows tried their hand at golfing and enjoyed newfound connections. Amidst shared laughter and conversation, a great time was had by all. The event epitomized the intersection of professional development and leisure, showcasing the importance of both in fostering a thriving healthcare community.
Rare full-body weight-bearing CT scanner to advance research

KU Medical Center has the first CT scanner in North America that can scan the whole body while a person is standing, enabling researchers to see the effect of weight on joints and other tissues.

If rock climbers learn how to do a better job of protecting their feet from injury, they might owe it to research conducted with an advanced new CT scanner at the University of Kansas Medical Center.

The scanner, a Planmed XFI, is the first CT (computed tomography) machine in the world that can scan the whole body vertically, while a person is standing up. When it arrived from Finland in October 2023 to be installed in the research lab led by Neil Segal, M.D., professor of physical and rehabilitation medicine at KU School of Medicine, it became the first full-body weight-bearing CT scanner in North America.
Rock climbers often wear too-tight climbing shoes to improve performance. Using the new scanner, researchers will look at how those shoes affect the feet during climbing.

CT scanners provide more detailed images than conventional X-rays, and they can provide images of soft tissue and blood vessels in addition to bone. A conventional CT scan typically involves lying flat on a table and moving through a donut-shaped device that produces cross-sectional images that can be used to detect injuries and disease.

But the fact that people are horizontal in these conventional CT scanners and with MRIs (magnetic resonance imaging) is an issue. "A lot of people have pain when they’re bearing weight, but not so much when they’re lying down or sitting," said Segal. "And whether we’re looking at the spine, the knees, the hips, or the foot and ankle, they appear differently when someone is standing. The cartilage and the menisci, which are specialized cartilage separators in the joint, look completely different if someone is standing up versus lying down."

Weight-bearing CT scanners that can image the lower extremities have existed for about a decade; these are considered limb scanners. Segal’s previous research using these earlier weight-bearing CT scanners found that they find meniscal tears better than an MRI, the current standard of care for such tears, and that they detect osteoarthritis of the knee better than X-rays or MRIs.

The new scanner, in addition to being able to scan the whole body vertically, not just limbs, also produces three-dimensional images with a higher resolution. Segal’s research team is currently using the new scanner to conduct a small study, funded by the Wilderness Medical Society, on rock climbers’ feet. Many climbers wear their shoes too small, with their toes curled up inside, because they believe that it helps them climb better. For this study, climbers will climb in their shoes within the scanner to see how these shoes affect the feet and if they are causing bunion deformities. What they learn could be used to help climbers take better care of their feet and inform the creation of a better designed climbing shoe.

After the new scanner was installed at KU Medical Center, Segal also oversaw the installation of the Planmed XFI scanner at two research sites in Iowa and Alabama that are participating in the National Institute on Aging-funded Multicenter Osteoarthritis Study (MOST), the largest study ever done that will use this kind of imaging. Segal, who was a principal investigator for prior cycle of MOST and was involved with designing the MOST protocols for the use of the scanner, is currently co-investigator for MOST’s imaging core and a member of the study’s executive committee.

MOST researchers will use the scanner to examine the foot and ankle, the knee and the hip and look for changes over time in these joints caused by aging, injury, obesity and other factors that might not be caught on X-ray or MRI. The three-dimensional images produced will form "the largest and most comprehensive imaging database on risk for new and worsening osteoarthritis ever assembled," Segal said.

The researchers at KU Medical Center also would like to use the scanner to study the kneecap, which is the portion of the knee where the most people experience pain. They also are looking ahead to studying the spine to research back pain and sciatica. "People get an MRI for that," said Segal. "And since they’re lying down, we may not see if the nerves are actually getting pinched. But if we image them while they’re standing up, we may see nerves being pinched or disc problems."

Segal noted that while his research is focused mainly on musculoskeletal health, the scanner can also be used to study the brain, liver, lungs or gastrointestinal system.

"We can use it to gain novel insights that really propel patient care forward," he said.
Thank you all who attended Physiatry ‘24 in Orlando in February! It was great to see everyone, and we missed those of you who could not make it. During the RFPD workshop, we received key updates from the ABPMR including the news that Quality Improvement (formerly “PIP”) requirements can now be met by completing a QI project during residency for the first 5-year cycle. Faculty can use projects worked on with residents or 3 years of clinical competency committee participation (signed off by PD) or Medical Directorship of a CARF-certified or equivalent rehab program. ACGME updates were provided and much more to come as they rewrite residency program requirements for PM&R with the release of comments expected in fall/winter 2024.
Drs. Jeffrey Jenkins, Nikola Dragojlovic, and Ashlee Bolger shared updates from the recruitment sub-council, including polling the audience about preference signal numbers for the next application season. The sub-council, with support from the RFPD Council, has submitted a new preference signal number of 8 to AAMC for the next cycle. There was also a discussion about continuing virtual interviews. Current best practices are available on the AAP website and published in a position paper by the sub-council in the AJPMR February 2024 Issue. The topic of in-person second looks is being discussed and updates will be provided when available.

Dr. Christopher Garrison shared the project ECHO PDPQ program and invited participation from PM&R program directors interested in quality improvement development.

Wednesday morning’s seminar, led by Drs. Saadia Akhtar and Daniel Steinberg focused on supporting residents in crisis. Three major concepts were covered related to Professionalism: well-being, accountability and communication, and substance abuse. Each topic had a case for small group discussion with many creative solutions for these challenging situations. Below are some additional resources from this presentation.

1. A directory of Physician Health Programs by state: [fsphp.org/state-programs](http://fsphp.org/state-programs)
2. Everything to know about the legality of marijuana, by state: [disa.com/marijuana-legality-by-state](http://disa.com/marijuana-legality-by-state)
5. American Foundation for Suicide Prevention afsp.org

One question we did not have time to answer in the small group discussion was the issue of curious residents asking about another resident’s unprofessional behavior. The key aspects of the presenters’ expertise are:

1. Acknowledge the concerns of other residents, and thank them for bringing them up to you, but do not “take a side” with the other residents “against” (or for) the resident in question. The program director has to project an impartial, concerned, professional, fair, and compassionate approach.
2. Remind other residents that individual performance issues are private matters and that the program doesn’t discuss a resident’s issues with their peers.
3. Emphasize that you are addressing the issue with the well-being of the resident, of patients, and other residents/the program overall in mind.
4. Remind other residents that there is a standardized process used to address issues of resident performance.
5. Avoid corresponding by email with other curious residents about an unprofessionalism issue; in-person meetings are better options. Such emails can be forwarded, misinterpreted, contribute to gossip, etc.

The overall idea is to take a position and an approach that the other curious residents would want you to take if they were in such a position; most residents will recognize that if it were them, they’d want you doing the above things.

RFPD leadership will continue to hold quarterly meetings to allow more frequent communication with program directors. Please share questions or topics for discussion between annual physiatry conferences.

We are already at work on planning the RFPD session for Physiatry ’25 in Phoenix! Certainly, let us know if you have ideas for future session topics. We are looking forward to continuing to engage with you all. We are stronger together, and we couldn’t imagine working with a more amazing group of program directors than those of PM&R!
As I reflect on my four-year tenure as the Chair of the Research Committee, I am filled with gratitude for the unwavering dedication and tireless efforts of the committee members. I am also grateful to the previous committee chairs for laying the groundwork, as their efforts established the foundation for our projects, and I would be remiss if I didn’t recognize the tremendous contributions of the AAP staff, and especially Amy Schnappinger, whose support made our committee run efficiently and enabled us to focus on our core objectives.

The AAP Research Committee took on various initiatives aimed at advancing research and supporting researchers in Physiatry in alignment with the strategic goals outlined by the AAP Board. From reviewing the status of Evidence-Based Medicine (EBM) education in PM&R residency programs in the US and Canada to publishing EBM papers / Cochrane Corners in the American Journal of PM&R and evaluating and relaunching the Physiatric Research Consulting Program post-pandemic, our endeavors have benefited tremendously from the enthusiasm, creativity, and hard from of a diverse committee. To continue to foster research excellence within our community and mentor the next generation of researchers, the committee spearheaded research-focused courses and offered a Research Booth at the AAP Annual Meetings and partnered with other AAP committees to expand the research content on the Virtual Campus.

One of the most rewarding aspects of my journey, both as a committee member and as chair, has been the opportunity to meet outstanding researchers and form new professional collaborations and personal friendships. I am deeply impressed by how the AAP provides opportunities for the entire membership to be involved. I encourage members to apply for positions on the various committees that support the work of the Board. These connections not only enrich our work but also contribute to the vibrant fabric of AAP.

I am excited to witness the continued growth and success of the AAP and the AAP’s Research Committee in the years to come and I know the Research Committee is already hard at work on many new initiatives. As we navigate the ever-changing landscape of research in Physiatry, I am confident that our collective efforts will continue to propel our field forward and make a lasting impact on patient care and outcomes.

Sabrina Paganoni, MD, PhD
Spaulding Rehabilitation Hospital
Past Chair, Research Committee

Want to help propel physiatry forward? Consider volunteering with the AAP Research Committee! Applications are now open for 2025. PHYSIATRY.ORG/COMMITTEE_VOLUNTEERS
Dr. Rydberg is a general physiatrist with a primary clinical interest in neuromuscular disorders and medically complex rehabilitation. She has a special interest in residency and medical student education and holds a role as assistant professor of PM&R and Medical Education at Northwestern University Feinberg School of Medicine. In addition to sitting on the AAP Board of Trustees as Education Committee Chair, she is also the Henry and Monika Betts Medical Student Education Chair and Assistant Residency Program Director at Shirley Ryan AbilityLab.

1. **Headphones** – I live in the Chicago suburbs and work downtown. I do my best to avoid city traffic! I commute to work via the Metro train system, and I spend my rides reading books and listening to classic 70’s rock music or 90’s alternative rock music.

2. **Work ID with Cubs Lanyard** – I show my Chicago Cubs pride on my work lanyard – Go Cubs Go!

3. **AbilityLab Chapstick** – I love attending the AAP annual meetings, checking out the booths, and grabbing some swag! This is the Shirley Ryan AbilityLab special orange lip balm that is a current staple in my work bag.

4. **Mystery Thriller Novel** – I have always loved reading, and while I oftentimes read e-books, I can’t resist a good mystery/thriller novel! And yes, I spend my commute time reading fun books even though I should be using the time to read the latest issue of AJPMR! [Don’t tell Dr. Frontera!]

5. **Clif Bar** – I always carry a snack with me to get me through the workday! My latest obsession is peanut butter cliff bars – give me anything with peanut butter and I’m happy!

6. **Umbrella** – Living in the Midwest means that I need to be prepared for any weather, any day! I carry my mini-umbrella with me at all times so that I don’t have to check the forecast every morning.

7. **Zipdrive/USB Drive** – I divide my work time between the Shirley Ryan AbilityLab for clinical care and the Northwestern University Feinberg School of Medicine for medical student education. I am always prepared with my lecture content on a USB drive to ensure that I don’t let technology issues get in the way of my ability to teach medical students.

8. **Rainbow Heart Pin** – I participated in the Safe Spaces training sessions to support LGBT+ people and I was charmed by this rainbow pin [which even matches my umbrella!]

9. **AAP Pen** – I enjoy using my Physiatry ’24 AAP pen to make notes [yes I still have paper-to-do lists!]. This pen helps me to remember the fun I had at the annual meeting and to remember the amazing staff who make the AAP so great!
CALL FOR ABSTRACTS
(NOW OPEN!)

Present your cutting-edge research & case reports.
Submit by June 20, 2024

PHYSIATRY.ORG/SPASTICITYX