

ADVANCING THE TREATMENT OF CONCUSSION

And Changing Lives



Hackensack
Meridian *Health*

REHABILITATION | 2022 YEAR IN REVIEW





I am so pleased to share our 2023 magazine. In this issue, we focus on the JFK Johnson Concussion Program and the work of our talented and committed physicians and therapists. Patients benefit from the range of rehabilitative medicine we provide — from physical and speech therapy to cognitive and vestibular therapy as well as audiology.

The clinical staff of our program includes therapists (physical, occupational, and cognitive) experienced in brain injury, specifically concussion, and many hold specialized certification in neurology. Our vestibular therapists train and certify other vestibular therapists in the region and teach vestibular therapy at academic facilities. They go beyond the standard of care.

We heard from so many patients with concussion who are grateful for the treatment we provide. Unfortunately, many concussion patients find their symptoms are often downplayed or dismissed, sometimes even from people in the medical community. Concussion is often called an “invisible injury.” In fact, about 20 percent of concussion patients do not respond to the typical standard of care and can struggle for years with longer-term effects of concussion. But Dr. Christine Greiss and Dr. Matthew D. Moore, both brain injury specialists, know how to determine what’s really going on with their patients and how to help them.

Also in this edition is an update on the research from the ongoing Stroke-HEART™ Trials. Our latest data from this groundbreaking research found that survivors of serious stroke can reduce their chances of dying within the year by 76 percent if they complete a modified cardiac rehabilitation program that includes medically supervised exercise, prescribed therapy, and physician follow-up. The article was published in the Journal of Stroke & Cerebrovascular Diseases. We are now expanding our research to multiple rehabilitation institutes around the nation.

Finally, we are thankful for our on-going relationship with Tracy Morgan, the comedian, actor, and producer whose remarkable recovery from serious brain injury at JFK Johnson has inspired so many other people with brain injuries. Tracy continues to give out the Tracy Morgan Award for Rehabilitation Nursing Excellence to one of our nurses each year, and to shine a light on this critical nursing specialty.

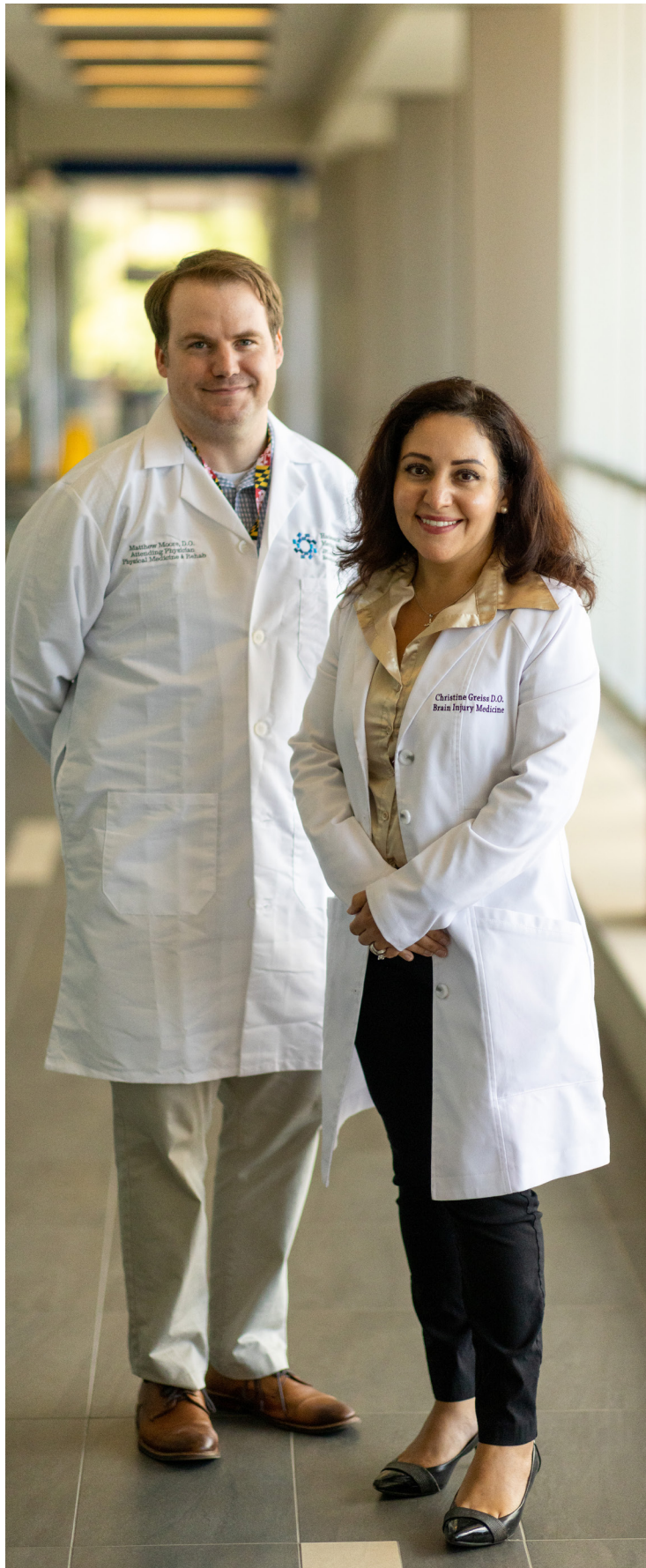
Yours in Good Health,

A handwritten signature in dark ink that reads "Sara Cuccurullo M.D.".

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Hackensack Meridian
JFK Johnson
Rehabilitation Institute



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GETTING HER LIFE BACK AFTER CONCUSSION

*Comprehensive Treatment Helps
College Student Graduate and Start Career*

“

Brain injury is a specific field unto itself. We understand how to recognize the deficits of brain injury, what to test for, and how to help our patients.”

— CHRISTINE GREISS, D.O., Board-Certified Brain Injury Specialist

After a ferocious storm in 2016, Michelle Colucci, a college junior at Penn State, stepped out of her apartment and slipped on black ice, smacking her head on concrete. She did not lose consciousness and assumed — hoped — an ice pack would heal her injury. But two days later, Colucci did not know where she was. At home in New Jersey? At college?

She went to a hospital emergency department, where she was told there was nothing wrong with her and she would be better in a week or so. But months later she was still experiencing constant headaches, fatigue, disorientation, and speech and vision problems.

Colucci was no longer the studious student who captained the college tennis team, helped organize fundraisers, and enjoyed social gatherings. Her grades suffered. She sought medical help but still did not improve. Eventually, she withdrew from college, simply unable to function, but returned after a neurologist — and others — told her she was fine.

“But I was still struggling. I had social anxiety, which was not like me. I could not get through the day without taking a ton of Advils, and nothing worked,” she recalls. “I felt like I was tripping over my words. I lost friends. People just didn’t understand.”

Often dizzy and fatigued, she required a nap nearly every day. Some days, she could not get out of bed at all.

In 2018, after two years of struggle, Colucci was working part time and finishing up her last credits. But she feared for her future. Would she be able to complete her last credits, begin a career, and live her life?

Adrift and distraught, she found her way to the Concussion Program at JFK Johnson Rehabilitation Institute, where physicians specializing in brain injury guide a comprehensive team that includes neuropsychologists and therapists with advanced certifications in brain injuries.

At JFK Johnson, Christine Greiss, D.O., Director of the Concussion Program, gave Colucci a thorough evaluation and — for the first time — a medical professional recognized the severity and complexity of her post-concussion syndrome. Dr. Greiss uncovered Colucci’s undiagnosed post-traumatic migraine and undiagnosed vision problems in addition to balance issues.

“Michelle was like so many of our patients,” Dr. Greiss says. “They come to us after being told they were fine, or even after receiving treatments that are not appropriate for concussion.”



“

Our patients are so grateful for our program. They often have been hearing the same things over and over. ‘You’ll get better. Just rest.’ They are so happy for the options and guidance we provide.”

— **MATTHEW D. MOORE, D.O.**
Board-Certified Brain Injury Specialist

“We work to uncover what’s really happening with our patients and we create a plan— all with the goal of getting them back to their lives.”

At last, Colucci began her journey toward recovery.

Comprehensive Evaluation

Concussion is a brain injury caused by a blow to the head; concussion can occur at any age and from many causes: sports injuries, car accidents, slips and falls, violence, and other causes of head trauma. Most people recover within two or three weeks. But for others, life-altering symptoms persist.

At JFK Johnson’s Concussion Program, the first step is a comprehensive concussion evaluation with a physician specializing in brain injury medicine. The physician will examine the patient’s speech fluidity, memory, and attention before moving on to a physical evaluation on reflexes and general health. The physician may conduct Vestibular Ocular Motor Screening, which looks at the systems involved with integrating balance, vision, and movement.

“When patients come to our Concussion Program, often what they are looking for is reassurance. Someone to say, ‘Yes, this is real,’” says Matthew D. Moore, D.O. “A lot of family members and even other doctors tend to miss what’s going on. That’s unfortunate. We tell our patients we know how to support them throughout their journey toward healing and recovery.”

The physicians may test select patients for neuroendocrine dysfunction involving hormones released by the pituitary gland, such as prolactin, growth hormones, or cortisol.

In years past, symptoms such as concentration deficits, depression, perhaps anxiety and fatigue were attributed vaguely to post-concussion syndrome. Recent research recognizes that neuroendocrine dysfunction, caused by the brain injury, can play a role in these symptoms.



“In female athletes, a return of menstruation is a sign of recovery. In males, we may see dopamine depleted. Because we work with so many concussion patients, we understand what happens to the brain chemically and we have the experience in our program to address the possibility of endocrine dysfunction in our patients,” Dr. Greiss says.

After the comprehensive evaluation, the patient and the physician create an individualized treatment plan together that may include medications and specialized rehabilitation therapies to help people cope with their symptoms and to stimulate and retrain the brain to speed the healing process. JFK Johnson offers all the different avenues of therapy.

Cognitive Therapy

Cognitive therapy begins with a comprehensive neuropsychological evaluation, which identifies each patient’s strengths and weaknesses. Treatment focuses on two main areas: strategy development and restoration of brain function. Monique J. Tremaine, Ph.D., MSCP, Director of Neuropsychology, says cognitive therapy is multi-faceted, case managed,



and integrated with other therapies that may be used for patients with post-concussion syndrome. The focus is restoration of basic cognitive skills, such as attention, as well as more complex executive skills such as problem solving. “We focus on how each person can improve how they function as they return to family, community, school, or work,” Dr. Tremaine says.

Physical Therapy

Physical therapy (PT) for concussion may start with therapy for the patient’s neck; trauma affecting the head may also affect the neck, resulting in muscle tightening and chronic neck pain, even headaches. Patients may use interactive training exercises with visual biofeedback to measure how well their eyes, inner ear, muscles, and joints are working together to maintain their balance. For some, closely monitored exercises increase blood flow to their brain.

“We have 25 therapists with extra competencies to treat brain injuries,” says Jennifer D. Lazaro, PT, DPT, a Board Certified Neurologic Clinical Specialist. “We analyze each patient, understand their priorities, and create a plan to move them to the next step.”

Vestibular Therapy

A critical part of PT is vestibular therapy. The vestibular system involves the inner ear and brain and controls balance and eye movements. A blow to the head can disrupt the system, leaving patients with dizziness, vertigo, disequilibrium, nausea, even vision problems.

In vestibular therapy, patients might stare at a fixed object while balancing on an adjustable, rubber half-moon ball, for instance. They may focus their eyes on a target while turning their head back and forth. Another example is using laser-guided tracks to enable patients to integrate their muscles and vision. At JFK Johnson, vestibular therapists train and certify other vestibular therapist in the region and teach vestibular therapy in other academic facilities.

Occupational Therapy

Occupational therapy (OT) focuses on getting patients back to their daily lives — whether that’s back to school and sports or to running a home or a business. “Some patients with concussion are overwhelmed with lights, or movement or sounds. Maybe it’s fatigue. I try to identify and then address their critical areas of impairment,” says Kathryn Tuazon, MS, OTR/L, CSRS, an occupational therapist and certified brain injury specialist.

Therapy works to enable the patient to become accustomed, or habituated, to the things that overwhelm them.

“We may start with exercises — maybe work on movement of the patients’ eyes or use different colors — perhaps having a therapist waving into the patient’s periphery vision or maybe flashing lights,” Tuazon says. “It’s very individualized, and we know when to push and when not to push.”

Audiology Hearing and Balance Evaluations

The inner ear has two main functions: hearing and balance. The three systems that control balance are the visual system, the vestibular (inner ear) system, and the proprioceptive (sensory nerves) system. Trauma to the vestibular system can cause balance issues, vertigo,

dizziness, vision impairments and/or auditory changes. Audiologists conduct balance function tests to determine what system is involved.

“If vestibular therapy is recommended following balance evaluation, audiologists work with the therapy team so the treatment is tailored to the cause of the problem,” says Virginia Gural-Toth AuD, CCC-A, Manager of Audiology, Tinnitus and Balance Programs. “If a hearing problem is identified, patients may be helped by amplification systems, or strategies to better cope when having difficulty understanding sounds, including spoken words in crowded places.”

A significant problem among patients with concussion is tinnitus, or noises in the ear or head. JFK Johnson has a tinnitus program that helps patients manage the day-to-day interruption of tinnitus in their lives.

“When someone comes in for a tinnitus evaluation, we do a case history. Often, we find they had a concussion and did not realize it. We may refer them to the Concussion Program for further evaluation,” says Gural-Toth.

Vision Therapy

After a concussion, some patients may find themselves bumping into objects. Concussion can cause the brain to go into a fight or flight or freeze response. The brain can “shut down.” Patients may lose their peripheral vision, an issue especially problematic for athletes, who are then susceptible for a second concussion if they can’t, for instance, see the ball coming.

“Vision therapy, often involving prism lenses and visual processing therapy, can actually enable the brain to increase peripheral vision, not just compensate for it,” says Dr. Moore. Vision therapy is equally important for nonathletes, he says, to prevent car accidents and falls, especially among the elderly.

“

If it wasn't for everyone at JFK Johnson, I don't know where I would be today. They truly gave me my life back.”

— MICHELLE COLUCCI

Finishing College, Beginning a New Life

For Colucci, her evaluation and treatment at JFK Johnson’s Concussion Center was the first step toward her recovery.

“I knew immediately Michelle had visual issues and balance issues,” Dr. Greiss recalls. She took her patient off some inappropriate medications and prescribed new medications and interventions for migraine. Michelle soon began speech therapy that helped her with “word finding” and vision therapy improved her vision. She went through cognitive therapy and vestibular therapy, each step bringing her closer to feeling more like herself.

Colucci graduated and today, five years later, works managing The Bistro at Red Bank, a complex position that requires her to use skills of memory, communication, and organization. She continues regular injections for migraine and wears prism glasses while reading or driving.

“If it wasn’t for everyone at JFK Johnson, I don’t know where I would be today. They truly gave me my life back,” she says. “I can’t even imagine what my life would be like now without this program.” Her injury affected her in another way: “If there’s ice outside, I stay in the house.”



The cognitive therapy team provides treatments individualized for each patient.

COLLEGE LACROSSE PLAYER PREPARES TO PLAY AGAIN

Brain Injury specialist Christine Greiss, D.O., examines Katie Neville, a college student injured playing lacrosse.



Katie Neville, a freshman starter on her college women's lacrosse team, remembers running toward the goal in a preseason practice when the dense, hard rubber ball, which can travel more than 70 mph, smacked into the right side of her face.

At first, the 19-year-old from Ridgewood carried on. Then she realized the impact. Within 30 minutes, the skin around her eye turned black and blue, and the team trainer instructed her to follow basic concussion protocol. She remained off the field.

She told everyone she was fine, "even though I felt something was not right," the college student recalls. As the weeks went on, she wore sunglasses indoors, experienced double vision, struggled to read, and experienced nausea and dizziness. She told her mother, Eileen Neville, that she could handle the situation and work with her coach and trainers to get better.

Her mother, Eileen Neville, recalls, "Katie said to me, 'Mom, I'm 18. I can deal with this.' You want your children to be advocates for themselves. So I supported her." Katie passed the concussion tests and was back on the field, where she soon got hit again. This time the impact was minor, yet still concerning.

Katie's symptoms plagued her throughout her freshman year: fatigue, insomnia, and brain fog. Finally, the student with solid As and Bs saw her grades plummet. Her mother then insisted she visit JFK Johnson's Concussion Program, where the director, Christine Greiss, D.O., took over her care.

Neville, in Dr. Greiss' office with Katie, describes how her daughter downplayed her symptoms. Dr. Griess nods her head. "That's a story we hear frequently, especially among athletes. They don't want to let the team and their coaches down," Dr. Greiss says.



At that first examination, Dr. Griess administered a lengthy physical examination and recognized that Katie Neville had peripheral double vision (perhaps a contributing factor to her second concussion) as well as muscle tension in her neck and forehead, a natural response to the microscopic brain damage of a concussion.

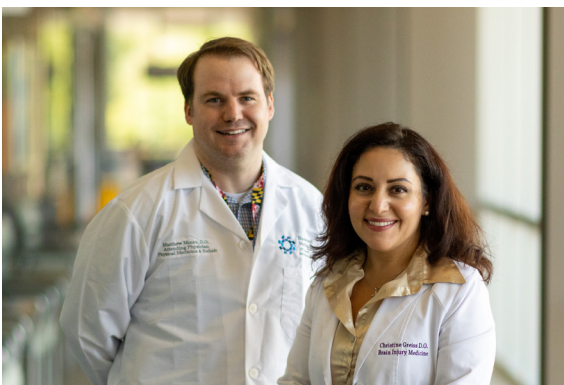
Balance tests showed her balance was off, striking for an elite athlete.

A neuro-endocrine work-up, meanwhile, showed that the levels of two important hormones produced by her adrenal gland were abnormal. Dr. Greiss provided a short course of neuro-endocrine medications and started Katie Neville on visual, physical, and occupational therapy to re-train her brain.

“Coming here was the first time anyone did this type of in-depth analysis,” Eileen Neville says. “The last doctor we saw said my daughter was fine. Dr. Greiss saw her symptoms right away. Clearly, my daughter was not fine.”

After medicine and several months of rehabilitation, such as vestibular and vision therapy, Katie Neville says she feels so much better. Her headaches are gone; she can read again.

“I feel like myself again. I’m definitely happy I got here,” the student says. She is eager to get back to school, and not just to return to her classes. “Our goal is for Katie to get back on the field,” Dr. Greiss says.



Matthew D. Moore, D.O., and Christine Greiss, D.O., are board-certified in Physical Medicine and Rehabilitation and completed a one-year Brain Injury Medicine Fellowship that is accredited by the Accreditation Council for Graduate Medical Education (ACGME).

NOW, AFTER SPECIALIZED TREATMENT, CONCUSSION PATIENT CAN PLAN HIS FUTURE

Bruce Broadbent is improving after years of suffering from post-concussion syndrome.



“

You say to each other, ‘Is there a light at the end of the tunnel?’ And then you help pull each other out of the tunnel.”

— **BRUCE BROADBENT**



Bruce Broadbent stopped at a red-light on Route 18 seconds before a truck rear-ended him, sending his car careening into the vehicle in front of him. He managed to step out of his car and told emergency workers he was fine. He declined treatment.

“I now know I was in shock,” the 54-year-old Freehold resident says. Not long after, he was vomiting, dizzy, sweating, and confused. A physician examining him for workers’ compensation a few days later diagnosed him with a concussion and told him to rest for three weeks and then return to work.

He continued his job in pharmaceuticals, visiting hospitals and other work in the field, but, at times, he was not sure where he was, or what he was doing. Colleagues would say, “Bruce, are you alright?” Physicians told him to rest. He kept working despite visual disturbances, difficulty remembering, and intermittent vomiting. He also coached his children’s baseball teams, and a fellow coach, concerned about his continued symptoms, reached out to Christine Greiss, D.O., Director of JFK Johnson’s Concussion Program, and said, “I have someone who needs to see you yesterday!”

Broadbent made an appointment. For Broadbent, finally seeing a physician who understood the seriousness of his injury and presented a road to recovery made all the

difference. “Dr. Greiss understood everything that I was experiencing. She basically said, ‘Your brain is on fire,’” he says.

Broadbent began vestibular therapy to improve his balance. Vision therapy expanded his peripheral vision. Occupational therapy provided him with skills to improve his mindfulness. Cognitive therapy increased his ability to focus.

Meanwhile, Dr. Greiss prescribed medications after a comprehensive evaluation and endocrine analysis. “This program — it’s just aces above everyone else,” Broadbent says. “It’s hard to describe how much this program is helping me.”

To Broadbent, meeting others with concussion has proven valuable. “You say to each other, ‘Is there a light at the end of the tunnel?’ And then you help pull each other out of the tunnel,” he says.

He has begun fishing again and enjoying the outdoors. Broadbent has been volunteering and has returned to some substitute teaching, his first career.

“I am so much better now,” he says. “It’s like I had all these file cabinets in my brain, but they were closed. Now, they are starting to open.”



Caroline Zemkoski, MSOTR/L, Occupational Therapist, works with Susan McLaughlan to improve eye-hand coordination as well as visual and motor reaction times.

WITHOUT JFK JOHNSON'S CONCUSSION PROGRAM, "I DON'T KNOW WHERE I WOULD BE."

Susan McLaughlan sits across from her speech pathologist and explains how the design in front of her can be recreated. "Draw a straight line about three millimeters," McLaughlan explains. "Then draw a dot. And then a straight line about three-quarters of a finger, to the left."

The exercise tests McLaughlan's ability to organize and then verbally express her thoughts. A graphic on the table reminds her to follow the Stop-Think-Plan-Do model. After the exercise, the therapist shows the patient a drawing that looks similar to the one McLaughlan just described.

"Two months ago, I could not have done this," McLaughlan says. The 58-year-old Berkeley Heights woman has post-concussion syndrome after a fast-moving basketball thrown in a school gymnasium struck her head. She was working as a school aide in special education.

A doctor, she says, told her to return to work full-time and that she could drive. But she had lost her peripheral vision and struggled to drive and walk across a street. She often lost her balance and could not focus. Overwhelmed by the stimulus of a crowded school, fluorescent lighting and all her classes utilizing Smartboards and laptops, she

found herself shutting down; often barely able to walk to her next class.

“My memory was gone,” she says. “I would say to someone, ‘Did I tell you such and such?’ They would say, ‘You told me that five minutes ago.’” She felt overwhelming fatigue and anxiety, trying to figure out how to get her life back. Worse, from the outside she looks perfectly fine. Some people, she says, seemed suspicious that her concussion caused serious symptoms that impacted her life.

Finally, after a lengthy struggle, she found her way to JFK Johnson’s Concussion Center.

“For the first time, I felt that I was being taken care of. The last doctor I saw said there was nothing wrong with me. Here, I feel protected, and they understand what I’m going through,” McLaughlan says.

She is undergoing a range of rehabilitation therapies, including speech, vision, vestibular as well as physical therapy.

“Susan is learning strategies to compensate for her deficits,” says speech pathologist Jessica Duncan. “We work to educate our clients on their injuries and provide them with the tools to function better in their daily activities.”

McLaughlan has been diagnosed with visual-vestibular integration dysfunction and binocular vision dysfunction after a neuro-optometry evaluation. In Occupational



Speech pathologist Jessica Duncan, left, works with Susan McLaughlan.

Therapy (OT) with Caroline Zemkoski, she is working on improving her peripheral and focal vision. The goals are to decrease visual discomfort and improve her ability to read, tolerate smartphone and computer screens, television, and busier community settings.

McLaughlan also is learning self-help techniques such as mindfulness meditation, yoga, and deep breathing for symptom prevention and management.

These techniques strengthen her ability to cope with the stress caused by her concussion and ease her headaches and eye strain.

“I am getting better all the time,” McLaughlan says. “I don’t know where I would be without JFK Johnson and this program. The beauty is that all the therapists and doctors work together for a successful outcome for me.”



The JFK Johnson Concussion Program includes physical, occupational, and speech therapists specialized in treating patients with brain injuries.

A photograph of actor and comedian Tracy Morgan and Pamela Ogarek, RN, BSN, smiling and holding a framed award. Tracy Morgan is on the right, wearing a white shirt with orange and blue accents and a chain necklace. Pamela Ogarek is on the left, wearing a floral patterned top. The award is a plaque with text about the Tracy Morgan Award for Excellence in Rehabilitation Nursing. The background is a blurred indoor setting with other people.

COMEDIAN TRACY MORGAN

Continues to Highlight Rehabilitation Nursing

Actor and comedian Tracy Morgan continues his support for Hackensack Meridian JFK Johnson Rehabilitation Institute and once again presented the annual “Tracy Morgan Award for Excellence in Rehabilitation Nursing” to a health care professional dedicated to patients with brain injuries.

Morgan presented the annual award to Pamela Ogarek, RN, who has worked in the Brain Trauma Unit at JFK Johnson Rehabilitation Institute since 1997.

“For me to be a part of presenting this award every year, it’s a blessing. It’s a blessing to me,” Morgan said after he presented the award to Ogarek. “I know the recipients of this award are people helping others. They are in service to others. That is the way to heaven.”

Addressing Ogarek, Morgan said, “I make people laugh. I make all these people laugh. But you are saving lives.”

Ogarek, who has spent most of her career working night shifts, said she is grateful for the recognition.

“This award is so meaningful to me,” Ogarek told Morgan. “When you work nights, you are not easily seen. I apply myself to excellence and am detail oriented. It is wonderful to be appreciated with this honor.”

Morgan presented the award after a Spring performance at the Hackensack Meridian Health Theater at the Count Basie Center for Performing Arts.

In 2014, Morgan was in a coma after a serious vehicle accident on the New Jersey Turnpike. He was treated at the JFK Johnson’s Center for Brain Injuries and

frequently shares his experiences to thank his caregivers and to inspire others with brain injuries.

Morgan starred for seven seasons on NBC's Emmy and Golden Globe Award-winning "30 Rock." He also was a cast member for seven seasons on Saturday Night Live.

"We are thankful to Tracy Morgan for continuing to shine a light on the skill, compassion, and specialized training of rehabilitation nurses," said Sara Cuccurullo, M.D., Medical Director and Vice President of JFK Johnson.

Morgan visited JFK Johnson last year and met with current and former patients with brain injuries. His story of recovery as he has returned to acting and a rigorous stand-up tour — as well as producing and starring in The Last O.G. — inspires other patients who have experienced brain injuries.

Ogarek began her career as a patient care technician at JFK Johnson Rehabilitation Institute in 1993. She continued working as she earned a Bachelor of Arts from Rutgers University in 1996 and her Bachelor of Science in Nursing from William Patterson College in 1997.

After completing her nursing degree, Ogarek wanted to return to the Brain Trauma Unit, part of the

JFK Johnson Center for Brain Injuries, where she had previously worked as a patient care technician.

She said found the process of helping brain injury patients recover their abilities extremely gratifying and fulfilling.

"You help someone learn to eat again, or to walk again. Maybe they suddenly start to remember events in their lives. You help them become themselves again. It requires patience and can take a long time. But seeing people improve is extraordinary," Ogarek said.

She said brain injury patients often do not sleep well so the nights can be very busy, and she has much interaction with patients. Patients and their families often ask about Morgan.

"Tracy's recovery means a lot to our patients," Ogarek said. "His amazing recovery gives hope to other patients."

Brian Greenwald, M.D., Medical Director of JFK Johnson's Center for Brain Injuries, directed Morgan's care and treatment.

"It's inspiring for all of us to see Tracy continuing to succeed in what he wants to do in life. That's what we want for all our patients," Dr. Greenwald said.



“

For me to be a part of presenting this award every year, it's a blessing. It's a blessing to me.”

— TRACY MORGAN

FOR STROKE SURVIVORS, MODIFIED CARDIAC REHABILITATION **CAN REDUCE THE CHANCES OF DEATH BY 76 PERCENT**

JFK Johnson Research Could Change Future of Stroke Care



Survivors of serious stroke can reduce their chances of dying within the year by 76 percent if they complete a modified cardiac rehabilitation program that includes medically supervised exercise, prescribed therapy, and physician follow-up, according to the latest research from the ongoing Stroke-HEART™ Trials at JFK Johnson Rehabilitation Institute.

The research, published in the *Journal of Stroke & Cerebrovascular Diseases*, has the potential to change the future of stroke care. The study shows that participants in JFK Johnson's Stroke Recovery Program also significantly improved exercise capacity, mobility, self-care, and cognition.

"After a stroke, sometimes family members are cautious. 'Don't get up, you might fall.' Many caregivers of stroke survivors discourage stroke patients from being active and mobile," says Sara J. Cuccurullo, M.D., Chairman and Medical Director of JFK Johnson and a Co-Principal Investigator of the study. "But we are showing that even survivors of serious stroke can exercise safely in a supervised program — and they can benefit enormously."

The JFK Johnson Stroke Recovery Program (SRP) provides 36 sessions of medically monitored interval cardiovascular training — as well as follow-up visits with a Physical Medicine and Rehabilitation physician along with psychological, nutritional, and educational support and risk factor (such as smoking, diet, and exercise) management. The research found that stroke patients, even those who may experience hemiplegia, can exercise safely with some modifications, such as the use of recumbent bicycles.

The research follows survivors with strokes serious enough to require inpatient hospital rehabilitation at JFK Johnson. The study so far has included more than 1,600 stroke survivors. Because stroke can vary greatly from one survivor to the next, the study created a subgroup of patients closely matched for gender, race, type of stroke, age, medical complexity, and functional scores at hospital discharge.

Of 449 patients in this subgroup, 246 completed the program. Among the patients who completed the program, four died within a year of their stroke. Among the non-participants, 14 patients died. This translates into a four-fold reduction in one-year all-cause mortality.

The researchers hope the ongoing research will persuade the Centers for Medicare & Medicaid Services (CMS) to cover comprehensive stroke rehabilitation the same way cardiac rehabilitation is covered in people who have cardiac events; both stroke and cardiac events involve the vascular system.

"Stroke survivors deserve the same benefits that patients with cardiac disease receive. As a nation, we need to do more to help patients with stroke improve their lives — to improve both their longevity and quality of life," says Talya Fleming, M.D.,



Dr. Cuccurullo, left, and Dr. Fleming.

Medical Director of JFK Johnson's Stroke Recovery and Aftercare Programs and Co-Principal Investigator of the study. "We should enable stroke survivors to function in the community at the highest level possible."

The study also found the Stroke Recovery Program participants improved in other ways. Participants saw a 78 percent increase in their cardiovascular capacity. (Many people with stroke also have cardiovascular disease.) The Stroke Recovery Program participants showed steady improvement in scores related to mobility, self-care, and communication/cognition. Research results show the matched pairs function similarly at the beginning of the study; over time, the study SRP participants perform better compared to the non-participants as they move forward with the Stroke Recovery Program.

"You see a real divergence," Dr. Cuccurullo adds. "What this means to patients is that instead of just walking around the house, maybe you can walk around the block. It means you can feed and take care of yourself at a much higher level of independence. We also see speech and cognition improve. Exercise has significant and multiple benefits associated with it, including promoting overall improvement in circulation, especially promoting enhanced circulation to the brain."

The research continues. Future phases of Stroke-HEART™ Trials will include other rehabilitation institutes as the research expands nationally.

JFK JOHNSON RESIDENCY PROGRAM RECEIVES FIVE STAR RATING

JFK Johnson Rehabilitation Institute has once again received Five Stars — the highest rating — for its Physical Medicine & Rehabilitation Residency Program.

The rating comes from Doximity's Residency Navigator, which provides information about residency programs to medical school graduates. Doximity is the leading professional network for American physicians.

JFK Johnson offers a Residency Program in Physical Medicine and Rehabilitation in the assessment and rehabilitation of adults with neurologic illness, including traumatic brain injury, stroke and cerebrovascular disease, amputation, trauma, spinal cord injury and many other general rehabilitation diagnoses. In addition, there are two ACGME (Accreditation Council for Graduate Medical Education) fellowships in both pain medicine and brain injury medicine.

The Physical Medicine and Rehabilitation Residency Program is a joint program with JFK Johnson and Rutgers Robert Wood Johnson Medical School. More than 200 residents and fellows have completed the program since it began more than 30 years ago.

The residency and fellowship program has vibrant and engaged alumni, including many who now work as medical directors, chairs, and residency directors in hospitals and rehabilitation institutes across the nation. The residency and fellowship program is fully accredited by ACGME.

The Physical Medicine and Rehabilitation Board Review Textbook (Demos Publishing), widely used by doctors taking their boards in the specialty, was created at JFK Johnson Rehabilitation Institute, and Sara Cuccurullo, M.D., Medical Director of JFK Johnson, is editor-in-chief, and many of the faculty at JFK Johnson are authors.

SCHOLARLY ACTIVITY 2022

CURRENT RESEARCH IN PROGRESS

1. **JFK Johnson Rehabilitation Institute Awarded Traumatic Brain Injury Model System (TBIMS)** Sponsored by the National Institute on Disability, Independent Living, and Rehabilitation Research, Administration for Community Living, U.S. Department of Health and Human Services, research to meet the needs of individuals with traumatic brain injury. September 2017 - 2023 (5 year grant plus 1).
2. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D., Greiss, Christine, D.O., Eckert Anne, Ph.D., Scarpatti, Rosann, RN, HMH-IRB, Stroke Recovery Program Clinical Outcomes Trial, Mortality, Incidence of New Strokes and Readmissions and Functional Outcomes trial.** JFK Johnson Rehabilitation Institute, Rutgers, Robert Wood Johnson Medical School. 2015 - Present
3. **Greiss, Christine, D.O., Cuccurullo, Sara, M.D., Fleming, Talya, M.D., HMH-IRB, Stroke Recovery Program - Changes in AMPAC Following SSRI Administration.** 2018 - Present
4. **Joki, Jaclyn, M.D., Cuccurullo, Sara, M.D., Fleming, Talya, M.D., Rutgers-IRB, Transcatheter Aortic Valve Replacement (TAVR) versus Minimally Invasive Aortic Valve Replacement (miniAVR) and their effects on cognition and function.** 2018 - Present
5. **Joki, Jaclyn, M.D., Cuccurullo, Sara, M.D., Fleming, Talya, M.D., Rutgers-IRB, Transitions of Care for Stroke Patients.** 2018 - Present
6. **Brown, David, D.O., Pediatric Guillain Barre EMG Series Study and Phrenic Nerve EMG Study Pre and Post EMG findings after Pacer Implant.** 2015 - Present
7. **Cuccurullo, Sara, M.D., Bagay, Leslie, M.D., NY/NJ COVID-19 Rehabilitation Consortium.** 2020
8. **Brown, David, D.O., Phrenic Nerve EMG Study Pre- and Post-EMG findings after Pacer Implant.** December 2019 - Present
9. **Rossi, Roger, D.O., Safety Monitor, MOH-NINDS-R15, Utilizing Gaming Mechanics to Optimize Tele-Rehabilitation Adherence in Persons with Stroke.** Ongoing - January/February 2020 - Present
10. **Parikh, Sagar, M.D., Cuccurullo, Sara, M.D., Petrosyan, Hayk, Ph.D., Leonardi, Christopher, M.D., "Physical Medicine and Rehabilitation Pain Physician as the Gate Keeper in the Comprehensive Management of Low Back Pain."** December 2021 - Ongoing
11. **AbbVie-Brain Injury Fellowship Grant, Therapeutic Area: Spasticity and Movement Disorder.** June 2022
12. **Medtronic Brain Injury Fellowship Grant, Therapeutic Area: Neurological - Intrathecal Baclofen Therapy for Severe Spasticity.** June 2022
13. **Cuccurullo, Sara, M.D., Maria, Montealegre, OTD, Hayk Petrosyan, Ph.D., "The efficacy of a frequency-tuned electromagnetic field treatment in facilitating the recovery of subacute ischemic stroke patients - a pivotal study: The EMAGINE study."** October 2022 - Present
14. **Tremaine, Monique, Ph.D., MSCP, Dart, Georgianna, Psy.D., Paradise, Susan, Sevinsky, Roseanne M.A., C.B.I.S., Carey, Kathleen, M.A., Bernard, Kate, LSW, CCM, C.B.I.S., Traumatic Brain Injury National Data and Statistical Center: Model Systems Database.** September 2022 - Present
15. **Goldin, Yelena, Ph.D., Tremaine, Monique, Ph.D., MSCP, Dart, Georgianna, PsyD, Petrosyan, Hayk, Ph.D., TBI Model Systems: Improving longitudinal assessment and tracking of activity limitations in individuals with traumatic brain injury.** September 2018 - Present
16. **Tremaine, Monique, Ph.D., MSCP, Bernard, Kate, LSW, CCM, C.B.I.S., Dart, Georgianna, PsyD., Comparative Effectiveness of Inpatient Rehabilitation Interventions for TBI (Care 4 TBI Collaborative).** National Institute for Neurological Disorders and Stroke. October 2021 - Present
17. **Greenwald, Brian, M.D., Tremaine, Monique, Ph.D., MSCP, Dart, Georgianna, PsyD., Long-term Trajectories of Cognition and Psychological Health in Civilians and Veterans: Understanding Risk to Inform Targeted Prevention and Personalized Interventions.** October 2022 - Present
18. **Juengst, Shannon, Ph.D., CRC, Wright, Brittany, Ph.D., Goldin Frazier, Yelena, Ph.D., ABPP-CN, Lengenfelder, Jean, Ph.D., Georgianna Dart, PsyD, Stephanie Calhoun, BS, Amie Muir, Ph.D., Simon Driver, Ph.D., Kathleen Bell, M.D., Feasibility study of Problem-Solving Training for care partners of adults with traumatic brain injury during inpatient rehabilitation.** January 2020

19. **Wedin, Maria, Ph.D., Tremaine, Monique, Ph.D., MSCP, Michaud, Sara, Ph.D., ABPP-CN, Ongoing research project; "Assessment and Treatment of Patients with Chronic COVID-19 at an Outpatient Brain Injury Rehabilitation Center."** March 2022 - Present

TEXT BOOKS

1. **Cuccurullo, Sara, M.D., Editor-in Chief, (2004) Physical Medicine and Rehabilitation (PM&R) Board Review, First Edition, 848 pages, Demos Publishing, N.Y., N.Y.**
2. **Cuccurullo, Sara, M.D., Editor-in Chief, (2010) PM&R Board Review, Second Edition, Textbook 938 pages, Demos Publishing, N.Y., N.Y.**
3. **Cuccurullo, Sara, M.D., Editor-in Chief, (2014) PM&R Board Review, Third Edition, 953 pages, Demos Publishing, N.Y., N.Y.**
4. **Cuccurullo, Sara, M.D., Editor-in Chief, (2019) PM&R Board Review, Fourth Edition, 1001 pages, Demos Publishing, N.Y., N.Y.**

PEER REVIEWED PUBLICATIONS

1. **Greenwald, Brian, M.D., Costello, K., "Update on Domestic Violence and Traumatic Brain Injury: A Narrative Review."** Brain Science 2022; 12(1):122
2. **Maley JH, Bartels MN, Fleming Talya K, Silver JK, Verduzco-Gutierrez M, Whiteson J, et al., Multi-disciplinary collaborative consensus guidance statement on the assessment and treatment of breathing discomfort and respiratory sequelae in patients with post-acute sequelae of SARS-CoV-2 infection (PASC).** PM R. 2022 Jan;14(1):77-95. doi: 10.1002/pmrj.12744. PMID: 34902224.
3. **Fine JS, Ambrose AF, Didehban N, Fleming Talya K, Silver JK, Terzic CM, Verduzco-Gutierrez M, et al., Multi-disciplinary collaborative consensus guidance statement on the assessment and treatment of cognitive symptoms in patients with post-acute sequelae of SARS-CoV-2 infection (PASC).** PM R. 2022 Jan;14(1):96-111. doi: 10.1002/pmrj.12745 2022 Jan 12. PMID: 34902226.
4. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D., Kostis JB, Greiss C, Eckert A, Ray AR, Scarpatti R, Zinonos S, Gizzi M, Cosgrove NM, Cabrera J, Oh-Park M, Kostis WJ., Impact of Modified Cardiac Rehabilitation Within a Stroke Recovery Program on All-Cause Hospital Readmissions.** Am J Phys Med Rehabil. 2022 Jan 1;101(1):40-47. doi: 10.1097/PHM.0000000000001738. PMID: 33657031.
5. **Cuccurullo, Sara, MD*, Fleming, Talya, MD*, Zinonos S, Cosgrove NM, Cabrera J, Kostis JB, Greiss C, Ray AR, Eckert A, Scarpatti R, Park MO, Gizzi M, Kostis WJ., Stroke Recovery Program with Modified Cardiac Rehabilitation Improves Mortality, Functional & Cardiovascular Performance.** J Stroke&Cerebrovasc Dis. 2022 Feb 28;31(5):106322. doi: 10.1016/j.jstrokecerebrovasdis.2022.106322. PMID: 35245825. *denotes co-first authors.
6. **Liu EA,DO, Salazar T, M.D., Chiu E, D.O., Fleming Talya K M.D., Bagay Leslie M.D., Brown David D.O., Cuccurullo Sara Jean M.D., Focal Peripheral Neuropathies Observed in Patients Diagnosed With COVID-19: A Case Series.** Am J Phys Med Rehabil. 2022 Feb 1;101(2):164-169. doi: 10.1097/PHM.0000000000001924. PMID: 35026778; PMCID: PMC8745887.
7. **Kakkanatt, Ashley, M.D., "Predictors of High School and College Graduation after Sustaining a Moderate-to-Severe Traumatic Brain Injury,"** Journal of Head Trauma. February 2022
8. **Burns SP, Fleming Talya, M.D., et.al., Stroke Recovery During the COVID-19 Pandemic: A Position Paper on Recommendations for Rehabilitation.** Arch Phys Med Rehabil. 2022 May 6;S0003-9993(22)00364-1. doi: 10.1016/j.apmr.2022.04.004. PMID: 35533736; PMCID: PMC9072806.
9. **Verduzco-Gutierrez M, Katz NB, Fleming Talya K, M.D., Silver EM, Escalon MX, Silver JK, et al., Author Diversity on Clinical Practice Guideline Committees.** Am J Phys Med Rehabil. 2022 May 1;101(5):493-503. doi: 10.1097/PHM.0000000000001932. 2021 Nov 15. PMID: 34775456.
10. **Arline Edmond, Andrea McKay, Natasha Mehta, Laurie Dabaghian M.D., Peter Yoncas, (2022): Spasticity Management and Resolution of Paroxysmal Sympathetic Hyperactivity in the Acute Care Setting: A Case Series, Brain Injury, DOI: 10.1080/02699052.2022.2077441**
11. **Escaldi, Steven, D.O., Bianchi, F, Bavikatte, et al., Module 1: Pathophysiology and Assessment of Spasticity; Goal Setting, Journal of the International Society of Physical Medicine and Rehabilitation Medicine, Volume 5, Supplement 1, June 2022**

12. **Whiteson J, Azola A, Bartels MN, Fleming Talya K, M.D., Silver JK, Terzic CM, Verduzco-Gutierrez M, et al., Multi-Disciplinary Collaborative Consensus Guidance Statement on the Assessment and Treatment of Cardiovascular Complications in Patients with Post-Acute Sequelae of SARS-CoV-2 Infection (PASC).** PMR. 2022 Jun 3. doi: 10.1002/pmrj.12859.. PMID: 35657351
13. **Silver JK, Booth GS, Fleming Talya K, M.D., Verduzco-Gutierrez M, Zafonte RD, et al., Organizations in science and medicine must hold each other accountable for discriminatory practices.** Cell. 2022 Aug 18;185(17):3073-3078. doi: 10.1016/j.cell.2022.06.043. PMID: 35985283
14. **Whiteson JH, Azola A, Barry JT, Bartels MN, Fleming Talya K, M.D., Silver JK, Terzic CM, Verduzco-Gutierrez M, et al., Multi-disciplinary collaborative consensus guidance statement on the assessment and treatment of cardiovascular complications in patients with post-acute sequelae of SARS-CoV-2 infection (PASC).** PM R. 2022 Jul;14(7):855-878. doi: 10.1002/pmrj.12859. 2022 Jul 13. PMID: 35657351; PMCID: PMC9347705.
15. **Blitshteyn S, Whiteson J, Abramoff B, Azola A, Bartels MN, Bhavaraju-Sanka R, Chung T, Fleming Talya K, M.D., Silver JK, Verduzco-Gutierrez M, et al., Multi-Disciplinary Collaborative Consensus Guidance Statement on the Assessment and Treatment of Autonomic Dysfunction in Patients with Post-Acute Sequelae of SARS-CoV-2 Infection (PASC).** PM R. 2022 Sep 28. doi: 10.1002/pmrj.12894. PMID: 36169154.
16. **Malone LA, Morrow A, Fleming Talya K, M.D., Giglia Silver JK, Verduzco Gutierrez M, et al., Multi-Disciplinary Collaborative Consensus Guidance Statement on the Assessment and Treatment of Post-Acute Sequelae of SARS-CoV-2 Infection (PASC) in Children and Adolescents.** PM R. 2022 Sep 28. doi: 10.1002/pmrj.12890. PMID: 36169159.
17. **Greenwald, Brian, M.D., Lee, M.J., Zhou, Y., Greenwald, B.D., "Update on Non-Pharmacological Interventions for Treatment of Post-Traumatic Headache,"** Brain Sci. 2022, 12, 1357. <https://doi.org/10.3390/brainsci12101357>; 6 October 2022

ABSTRACTS/POSTER PRESENTATIONS

Association of Academic Physiatrist (AAP) National Meeting, New Orleans, LA, May 2022

1. **Ace, Jessica, M.D., Chiu, Elisa, D.O., Babar, Kasim, D.O., Brown, David, D.O., Hon, Beverly, M.D., Cuccurullo, Sara, M.D., "Idiopathic Incomplete Paraplegia Following COVID-19 Infection: A Case Report."**
 2. **Ace, Jessica, M.D., Armento, Michael, M.D., Cuccurullo, Sara, M.D., "Fabrication of Below the Knee Waterproof Pediatric Prosthesis for Gait Training During Hydrotherapy: A Case Report."**
 3. **Wolbert, Jonathan, D.O., Lee, David, M.D., Brown, David, D.O., Cuccurullo, Sara, M.D., "Missing Breath: Phrenic Nerve Injury After Cardiac Surgery and Ablation."**
 4. **Lee, David, M.D., Wolbert Jonathan, D.O., Salazar, Tomas, M.D., Abissi, Gabrielle, M.D., Brown, David, D.O., Cuccurullo, Sara, M.D., "Phrenic Nerve Neuropathy After Coronary Artery Bypass Graft."**
 5. **Lee, David, M.D., Carson Malcolm, M.D., Salazar, Tomas, M.D., Wolbert, Jonathan, M.D., Abissi, Gabrielle, M.D., Brown, David, D.O., Cuccurullo, Sara, M.D., "A Rare Incidence of Peripheral Neuropathy After Fluoroquinolone Use"**
 6. **Lee, David, M.D., Wolbert, Jonathan, D.O., Abissi, Gabrielle, M.D., Urs, Krishna, M.D., Cuccurullo, Sara, M.D., "Metastatic Papillary Thyroid Cancer After Radiation Therapy for Acne Vulgaris: A Case Report."**
 7. **Carson, Malcolm, M.D., Jafri, Iqbal, M.D., "A 62 year old female with Akathisia Following Metoclopramide Treatment for Nausea."**
 8. **Chung, Michael, M.D., Zhou, Yi, M.D., Markos, Steven, M.D., "Parsonage-Turner Syndrome Following COVID-19 Infection: A Case Report."**
 9. **Zhou, Yi, M.D., Greiss, Christine, D.O., "Treatment of Persistent Hiccups in a Variant of Wallenberg Syndrome: Case Report."**
- American Academy of Physical Medicine and Rehabilitation (AAPM&R), Baltimore, Md., October 2022**
1. **Talya K. Fleming, M.D.*; Sara J. Cuccurullo, M.D.*; Hayk Petrosyan, Ph.D.; Nicole M. Vendola, Helen Xia, B.A., Kelly McManus, B.S., "Trajectory of Functional Recovery and Living Setting of Stroke Survivors: A Cohort Study Comparing Patients Who Participated in the Comprehensive Stroke Recovery Program with the Standard of Care." *Co-Principal Investigators**

2. **Yi Zhou, M.D., Lei, M.D.,** "Cardiac Rehabilitation Risk Management of Patient with Left Ventricular Assist Device after Bariatric Surgery: A Case Report."

3. **Yi Zhou, M.D.,** "Lower Extremity Compartment Syndrome Following Aortic Dissection Repair: A Case Report."

4. **Yi Zhou, M.D., Kathryn Altonji, M.D., Greenwald, Brian, M.D.,** "Improvement of Hemineglect with Bromocriptine Initiation: A Case Report."

5. **Michael Chung, M.D., Eric Heckelmann, M.D., Yi Zhou, M.D.,** "Cerebellar Degeneration After COVID-19 Infection: A Case Report."

6. **Jessica Ace, M.D., Gabrielle Abissi, M.D., David, Brown, Sara Cuccurullo, M.D.,** "COVID-Induced Severe Global Axonal Neuropathy and Association with Anti-Ganglioside Antibodies: A Case Report."

OTHER ABSTRACTS

1. **Krish C. Dewan, M.D., Marlena E. Sabatino, BA, Sara Cuccurullo, M.D., Jaclyn B. Joki, M.D., Talya K. Fleming, M.D., Marianne Boylston, APN, Suk-Ying Wang, RN, MSN, Joshua Chao, MD and Leonard Y. Lee, MD.,** Cognitive Function After Transcatheter And Mini-aortic Valve Replacement: A Multicenter Prospective Cohort Study. American College of Surgeons Clinical Congress Annual Meeting, San Diego, California, USA. October 17, 2022

2. **Fleming, Talya, M.D., Yi Zhou, M.D.,** Stroke in Patient With Controlled Pre-existing Hypercoagulability After COVID-19 Vaccine Booster: A Case Report, International Paediatric Brain Injury Society & North American Brain Injury Society 2022 Joint Conference on Brain Injury, NYC, NY, USA. Sept. 23, 2022

BOOK CHAPTERS

1. **Uustal, Heikki, M.D.,** "Amputee Care and Prosthetic Prescription," Physical Medicine and Rehabilitation Oral Board Review, Editor, R. Samuel Mayer, Second Edition, Publisher Demos Medical. Spring 2021

2. **Greenwald, BD, Greiss, C, Gayed, M,** "Initial Rehabilitation Interventions in the Acute Hospital Setting and Transitioning to the Next Level of Care," Zollman, FS, Editor. Manual of Traumatic Brain Injury : Assessment and Management, 3rd Edition, New York, NY Demos Medical Publishing: 2021 P. 231-238

3. **Greenwald, BD, Moore, M,** "Disorders of Consciousness, Zollman FS, Editor. Manual of Traumatic Brain Injury: Assessment and Management," 3rd Edition, New York, NY, Demos Medical Publishing: 2021 P. 239-249

4. **Greenwald, Brian, M.D., Goldin, Y, Anderson, JM,** "Functional Assessment in Traumatic Brain Injury." In: Zasler ND, Katz DI, Zafonte RD, editors; Brain Injury Medicine: Principles and Practice, 3rd Edition New York NY, Demos Medical Publishing, 2021, P, 299-316

5. **Greenwald, Brian, M.D., Ripley, DI,** "Posttraumatic Brain Injury Fatigue: Assessment and Treatment." In: Zasler ND, Katz, DI, Zafonte RD, Editors. Brain Injury Medicine: Principles and Practice. 3rd Edition NY, NY, Demos Medical Publishing: 2021, P. 613-24

NATIONAL PRESENTATIONS

1. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D.,** Hackensack University Medical Center, Dept. of Medicine Grand Rounds, Developing a Post-COVID Rehabilitation Program, March 10, 2022

2. **Greenwald, Brian, M.D.,** "Care of Patients with Disorders of Consciousness," Grand Rounds Presentation, Einstein/Montefiore. March 15, 2022

3. **Fleming, Talya, M.D.,** Hackensack Meridian Health Network Community Outreach webinar, "Stroke: How Do I Know If I Am At Risk: Special Risk Factors for Communities of Color." March 2022

4. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D.,** Functional Assessment: AM-PAC As A Concurrent Validity Measure of Traumatic Brain Injury Outcomes – Edison, New Jersey. Stroke Recovery Program: Implementation of AM-PAC Into Research Studies & Daily Operations. March 25, 2022

5. **Cuccurullo, Sara, M.D.,** North Shore University Medical Center, Comprehensive Outpatient Stroke Recovery Program Utilizing Cardiovascular Conditioning. March 2022

6. **Uustal, Heikki, M.D.,** Annual Review Course in PM&R, "Upper Limb Orthotics, Lower Limb Orthotics," "Upper Limb Orthotics, Lower Limb Prosthetics," "Pediatric Limb Deficiency and Prosthetics," "Norman Gait and Prosthetic Gait Deviations," Baylor College of Medicine, Houston TX. March 28, 2022

7. **Uustal, Heikki, M.D.,** Biomedical Engineering Program, Rutgers University Clinical Practicum Course, "Overview of Prosthetics and Orthotics," Edison NJ. March, 10, 2022

8. **Uustal, Heikki, M.D.,** Annual Review Course in PM&R, Kessler Institute of Rehabilitation, Livingston NJ, March 10, 2022

9. **Fleming, Talya, M.D., Vendola, Nicole, Cuccurullo, Sara, M.D., Xia, Helen, BA, Petrosyan, Hayk, Ph.D.,** "Early Clinical Implementation of Risk Factor Education and Physiatrist Follow-up in Stroke Survivors: A Feasibility Study," Kean University Research Day, Union NJ. April 27, 2022

10. **Cuccurullo, Sara, M.D.,** AAPM&R Early Career National Meeting, Navigating Early Career Decisions for Residents and New Graduates: Success in Physiatry, "Negotiating Your Contract – What You Need to Know." April 23, 2022

11. **Uustal, Heikki, M.D.,** Annual Prosthetics and Orthotics Course, University of MO. April 22-23, 2022

12. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D.,** Hackensack School of Medicine Inaugural Research Day, New Jersey, "Investigating and Analyzing the Effect of a Comprehensive Stroke Recovery Program on All-Cause Mortality, Cardiovascular Performance, Function&Readmissions." May 4, 2022

13. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D.,** Johns Hopkins National Stroke Conference, "Recovery after Stroke: State of the Science and Future Innovations; Keynote Lecture: The Stroke Recovery Program – Extending Cardiac Rehabilitation to Stroke." Baltimore, Maryland, USA. May 18, 2022

14. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D.,** "Leading the Way to Get Cardiac Rehabilitation Federally Funded for Stroke Survivors." AAP Annual Meeting, New Orleans, Louisiana. May 27, 2022

15. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D.,** "Women in Academic Physiatry: Overcoming Imposter Syndrome." AAP Annual Meeting, New Orleans, Louisiana. May 27, 2022

16. **Cuccurullo, Sara, M.D.,** Program for Academic Leadership (PAL), "Diversity and Inclusion." AAP Annual Meeting, New Orleans, LA. May 2022

17. **Cuccurullo, Sara, M.D.,** (National Chair Council President), Moderator Chair Council Session, AAP Annual Meeting, New Orleans, LA. May 2022

18. **Fleming, Talya, M.D.,** CDC Clinician Outreach and Communication Activity (COCA) Evaluating and Supporting Patients Presenting with Cognitive Symptoms Following COVID. May 5, 2022

19. **Fleming, Talya, M.D.,** Brain Injury Alliance of New Jersey (BIANJ), Cognitive Impairments in Persons with Long COVID, Edison, NJ, May 10, 2022

20. **Uustal, Heikki, M.D.,** Prosthetics and Orthotics Course for Physicians and Surgeons -NYU- Langone Medical Center, NY, NY. May 10-11, 2022

21. **Rossi, Roger, D.O.,** "Benefits Acute vs. Subacute Rehabilitation." St. Joseph's University Medical Center, Patterson, NJ. May 3, 2022

22. **Rossi, Roger, D.O., Markos, Steven, M.D.,** "Parkinson's Disease Wellness Program." Multidisciplinary Approach to Restoration of Function, JFK University Medical Center, CME Presentation. May 19, 2022

23. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D., JSUMC** 2022 Stroke Symposium, Demonstrating the Benefits of a Comprehensive Stroke Recovery Program on All-Cause Mortality, Cardiovascular Performance, Function&Readmissions. Neptune, NJ. June 1, 2022

24. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D.,** Stroke-HEART™ Trials 2022 Update: SRP-CROSS Trial, Edison, NJ. June 7, 2022

25. **Cuccurullo, Sara, M.D.,** University of Pittsburgh 18th Annual Rehab Institute Research Day- Brenes Lecture Award; "Investigating and Analyzing the Effect of a Comprehensive Stroke Recovery Program on All-Cause Mortality, Cardiovascular Performance, Function&Readmissions." Pittsburgh, PA. June 22, 2022

26. **Cuccurullo, Sara, M.D., Fleming, Talya, M.D.,** JFK University Medical Center 7th Annual NJ Collaborative Stroke Management – NJ. Advances in the Stroke Recovery Program. Sept. 23, 2022

27. **Talya K. Fleming, M.D.*; Sara J. Cuccurullo, M.D.*,** AAPM&R Annual Assembly, Baltimore, Maryland, USA. Spotlight presentation- Top research. Trajectory of Functional Recovery and Living Setting of Stroke Survivors: A Cohort Study Comparing Patients Who Participated in the Comprehensive Stroke Recovery Program with the Standard of Care. *Co-Principal Investigators

28. **Fleming, Talya, M.D.,** Post-acute Sequelae of COVID – the Realm of Physiatry: Health Care Disparities in COVID and PASC, AAPM&R, Baltimore, M.D. October 21, 2022

29. **Talya Fleming, M.D.,** AAPM&R Annual Assembly, Baltimore, Maryland, USA. Incorporating Exercise as Medicine in Your PM&R Practice- Exercise Endorsement-Through the Eyes of the World Health Organization. October 12, 2022

30. **Greenwald, Brian, M.D.,** "Understanding Brain Injury & Spinal Cord Injuries from Intimate Partner Violence." AAPM&R, October 13, 2022

31. **Fleming, Talya, M.D.,** National Center for Health Research (NCHR) : Long COVID, What is Known and Not Yet Known About Effective Treatments and Interventions for Long COVID?, The Challenges of Caregiving with Long COVID, Wash., DC. October 3, 2022

32. **Uustal, Heikki, M.D.,** Orthopedic Grand Rounds, "Update on Lower Limb Prosthetics." Rutgers, Robert Wood Johnson Medical School, New Brunswick, NJ. October 27, 2022

33. **Wedin, Maria, Ph.D.,** Cognitive and Emotional Sequelae of Post-Acute COVID-19 Syndrome. Brain Injury Alliance of New Jersey 40th Annual Brain Injury Conference, Edison, NJ, May 10th, 2022 and BIANJ Regional Training Seminar for Health and Human Service Professionals. April 12th, 2022

34. **Kaplan, Elissa, Ph.D.,** Psychosocial Fallout from COVID19: Patient PTSD and Similar Distress States. Tri-State Society for Cardiovascular&Pulmonary Rehabilitation Symposium. June 2021

35. **Tremaine, Monique, Ph.D.,** Neuropsychological Evaluation and Treatment of Concussion. JFK 3rd Interprofessional Conference On Post Concussion Syndrome. May 2022

36. **Danner, Gina, C., Ph.D.,** Coping and Psychosocial Functioning in Persons with Spinal Cord Injury/Dysfunction. Best Practice for Rehabilitation of Persons with Spinal Cord Injury/Dysfunction, Edison, NJ. October, 2022.

37. **Danner, Gina, C., Ph.D.,** Psychosocial Manifestations and Interventions in Parkinson's Disease. Interprofessional Medical Management of Parkinson's Disease, Edison, NJ. October 21-22, 2022

38. **Zhou Y, Jou S, Altonji K, Petrosyan H, Greenwald B, Malone R, Lin L,** Educating families of brain injury patients during acute rehabilitation: a quality improvement project. Oral presentation at Pediatric Brain Injury Society (IPBIS) & North American Brain Injury Society (NABIS) 2022 Joint Conference on Brain Injury; New York City, NY. September 23, 2022

INTERNATIONAL

1. **Rossi, Roger, D.O.,** "Rehabilitation of Parkinson's Disease and Other Movement Disorders" Presented at Chinese Pain and Neurological Diseases Symposium, Shen Dong Province, China. May 6, 2022

2. **Fleming, Talya, M.D.,** HCOR Research Institute (HCOR-RI) Scientific Meetings, São Paulo, Brazil. Rehab Clinical Care and Emerging Research in Post-Acute Sequelae of SARS-CoV-2. September 21, 2022

AWARDS

1. **Cuccurullo, Sara, M.D.,** University of Pittsburgh 18th Annual Rehab Institute Research Day- Brenes Lecture, Award, Pittsburgh, PA, June 22, 2022

2. **Ogarek, Pamela, RN-Tracy Morgan,** Excellence in Rehabilitation Nursing Award, Red Bank, NJ, April 2022

3. **Malone, Richard, D.O.** "Teacher of the Year Award" June 4, 2022

4. **Greiss, Christine, D.O.,** "Kathy Wong Award", June 4, 2022

5. **Delavaux, Laurent, M.D., Moore, Matthew, D.O., Van Dien, Craig, M.D.,** Rutgers, Robert Wood Johnson Volunteer Faculty Award, June 22, 2022

6. **Chen, Suann, M.D.,** Future Leaders Program, AAPM&R, October 2022

7. **Fleming, Talya, M.D., Cuccurullo, Sara, M.D.,** President's Citation Award for Best Research Presentation and Abstract, AAPM&R, 2022



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Edison, NJ 08820



ABOUT HACKENSACK MERIDIAN JFK JOHNSON REHABILITATION INSTITUTE:



Named one of the Top Rehabilitation Hospitals in the Country by *U.S. News and World Report*, JFK Johnson Rehabilitation Institute is a 94-bed facility in Edison, New Jersey, that offers the state's most comprehensive rehabilitation services to restore function and quality of life to those with physical impairments or disabilities. For nearly 50 years, JFK Johnson has served children and adults in the tri-state area — and has developed programs in specialties such as brain injury, stroke rehabilitation, orthopedics/musculoskeletal and sports injuries, cardiac rehabilitation, pediatrics, and prosthetics and orthotics.

JFK Johnson Rehabilitation Institute is part of Hackensack Meridian Johnson Rehabilitation Institute, which also includes Johnson Rehabilitation Institute at Ocean University Medical Center and Johnson Rehabilitation Institute at Riverview Medical Center. Each rehabilitation hospital brings together highly specialized physicians and professionals with the goal of “Advancing What’s Possible” for every patient. JFK Johnson Rehabilitation Institute also partners with the St. Joseph’s Health Acute Rehabilitation Unit at St. Joseph’s Wayne Medical Center in Wayne, New Jersey. JFK Johnson Rehabilitation Institute serves as the Physical Medicine and Rehabilitation Department of the Hackensack Meridian Medical School and Rutgers Robert Wood Johnson Medical School.

To learn more, visit [JFKJohnson.org](https://www.jfkjohnson.org).
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