Sports Medicine Rehabilitation: MedStar NRH Network is Center Stage in Regional Service Line

The comprehensive, rapidly-expanding MedStar Health Sports Medicine service line is comprised of a multidisciplinary team of experts—with MedStar NRH Rehabilitation Network sports rehabilitation specialists leading the way.

Working in conjunction with other MedStar Health providers, MedStar NRH has built a range of services including therapists on the sidelines; on-site intervention; screening, diagnosis, treatment and therapy; athletic training; performance enhancement; and injury prevention services.

“We think it is important to look at sports medicine in a broad context,” says John Brickley, PT, vice president of ambulatory operations and network development. “It’s not simply a service for elite athletes, but a specialty that can benefit any active person.”

The MedStar NRH team of more than 75 clinicians includes sports medicine rehabilitation physicians, primary care sports medicine physicians, sports physical therapists, and certified athletic trainers working closely with orthopaedic surgeons and neurosurgeons to provide one-stop shopping for all athletes and active individuals.

The physiatry piece of this network of specialists is unique within sports medicine, explains Jason De Luigi, DO, director of sports medicine for MedStar NRH. “We’re the experts in musculoskeletal rehabilitation and our goal is to help patients reach their optimal functional abilities. For athletes, that means returning them to the sport, and improving their overall performance.”

The program is multi-faceted, with components that provide services to a diverse group of athletes, and includes training programs for the next generation of sports medicine rehab professionals.

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Collegiate Sports
With the recent addition of Towson, Loyola, and Georgetown Universities, MedStar NRH is now providing sports medicine rehabilitation services to 16 area colleges and 31 high schools.

At Loyola University, two therapists are providing services on campus, five-days-a-week, explains Al Anglada, PT, clinic director, MedStar NRH Outpatient at Good Samaritan Hospital. Morning and afternoon hours allow students to come in before, in between or after classes. “We provide seamless sports medicine care, working closely with the coaches, providing immediate therapy services—and when needed—treatment from the team docs, who are our MedStar Health colleagues serving the Baltimore area.”

Down the road at Towson University, Steve Frantz, PT, clinic director for MedStar NRH Lutherville Sports Medicine, is working with athletic trainers and providing physical therapy to team and club athletes. “Physical therapy is provided right in the training room, which is a great convenience for students, who may have difficulty getting to a center off-site.”

Scott Epsley, PT, MedStar NRH director of professional, collegiate clinical sports therapy, is now providing providing onsite services at Georgetown University, including sports performance enhancement, injury treatment, and post-operative therapy services. “I perform triage for the Hoyas athletic trainers and provide all the therapy services for players.”

Caring for the Pros
MedStar Sports Medicine experts serve as the official medical partner for six professional sports teams in the region—with MedStar NRH sports medicine physiatrists providing the critical rehabilitation part of the program for the Washington Wizards, Capitals, Mystics, and Spirit Women’s Pro Soccer team.

“Our ability to provide thorough multisystem assessments of injuries is pivotal to development of the right therapies to promote recovery,” Dr. De Luigi explains. “We are on hand at the point of injury and throughout the rehab process. Our emphasis is on healing injury and on developing strategies to prevent a recurrence of injury.”

Expanding Role of Athletic Trainers
Thirty full-time MedStar NRH certified athletic trainers are also an important part of the sports rehab care continuum, providing services to athletes throughout the Washington, D.C., and Baltimore region. Roles vary from site to site, explains Kimberly Bosley, LATC, CCS, MedStar Sports Medicine’s director of athletic training services. “Sometimes we work side-by-side with physical therapists and also serve as sports medicine physician extenders. We are licensed to take medical histories and trained to order tests and make diagnoses. We are in the community, on-site at races, in high schools, on college campuses, on the sidelines of club sports, or working with professional teams.”

Training Sports Physical Therapists
A newly accredited residency program in sports physical therapy at MedStar NRH is providing advanced clinical training to licensed physical therapists. “The 18-month program offers an unparalleled diversity of experiences,” says Michele Vita, DPT, OCS, director of the residency program.

“Residents receive substantial patient interaction, conduct research, and are mentored by experienced sports physical therapists,” she says. “They spend six months in three different locations with multiple mentoring opportunities and exposure to a varied patient population.”

Seven candidates have completed the program and earned their Sports Specialist Certification. One resident is currently training and three PTs will be selected for the next residency cycle.

Keeping Runners on the Move
At a dozen outpatient locations around the region, MedStar NRH sports therapists are helping runners recover from injury, and get back to the road or on the track.

“Our Running Injury Clinics are staffed by specially trained physical therapists who are runners themselves,” says Josh Billings, PT, MedStar NRH Network regional director. “They understand the complex biomechanics involved in running and the treatment of running injuries, everything from common knee pain to stress fractures.”

Sophisticated video motion analysis allows therapists to review the runner’s head-to-toe biomechanics—critical information about posture, strength and flexibility that can leave runners open to re-injury. “We also incorporate cross training and use the AlterG® Anti-Gravity treadmill to decrease the force of impact, which is then increased over time as the injury heals,” he adds.

Therapists are also on-site at races, working with runners at area schools, and offering running clinics to the public.

For outpatient locations offering MedStar NRH Sports Medicine services, visit MedStarNRH.org/our-services.

Sports Medicine Rehabilitation: MedStar NRH Network is Center Stage in Regional Service Line
Expanded Olney, Md., Outpatient Center Meets Growing Demand

The newly expanded NRH Rehabilitation Network at Olney outpatient center is now one of the Network’s largest and most comprehensive. Housed in the MedStar Montgomery Medical Center’s adjacent Physicians’ Office Building, the outpatient center now occupies 8,000 square feet of the building’s first floor.

“We have been very, very busy treating patients and space was the only limitation to the programmatic growth that this community requires,” says Chris Parker, PT, CSCS, assistant vice president, outpatient rehabilitation. “With this much-needed, recently-completed expansion, we now have three therapy gyms, five physician offices and additional administrative space,” he adds.

Convenient, First Class Care

“We’re responding to and providing what the community and referring physicians want,” says Parker. “They not only expect top-quality acute care services in their neighborhood, but they also want rehabilitation services that are close to home. We’re convenient, have close relationships with primary care and specialist physicians, and provide extended hours in the evenings and weekends for our patients.”

“We also pride ourselves on seeing patients within 48 hours of referral,” adds Clinic Director Danielle Scogland, PT, COMT. “That’s a standard we want to maintain. This is especially important for post-operative patients for whom immediate therapy results in improved outcomes. We are also planning a further expansion to the third floor of the office building, near the orthopaedists and neurosurgeons whose patients we care for routinely,” she adds.

“This is a very active practice with MedStar Georgetown Orthopaedic Institute specialists, and MedStar Georgetown neurologists who focus on spine, movement disorders, general orthopaedics and sports medicine,” explains John Brickley, PT, vice president of ambulatory operations and network development. “Co-locating these specialists with MedStar NRH physiatrists and therapists provides patients with all the services they need under one roof.”

A Full Range of Services

The family-oriented center cares for patients of all ages from adolescents to seniors. Head-to-toe services are provided by a clinical staff of 18, and include everything from chronic back and neck pain, stroke, arthritis, brain and spinal cord injury—to post-operative therapy.

“In addition to physical, occupational and speech therapists, the center features the expertise of a rehabilitation neuropsychologist, and a team of fellowship-trained physical medicine and rehabilitation physicians specializing in interventional spine, musculoskeletal issues, pain management and sports medicine,” says Curtis Whitehair, MD, associate medical director, regional physiatry.

It also boasts special programs, including a Running Injury Clinic staffed by Sports Medicine physicians and therapists, and supported by video analysis and the AlterG® anti-gravity treadmill.

“We’re treating everyone from amateur runners who overdo it on the weekend to ultra-marathoners, helping them recover from injury, prevent future injury—and enhance their performance,” Parker adds.

Highly specialized therapeutic services at the center also include certified hand therapy, a TMJ and facial palsy therapy program, laser-guided vestibular therapy to treat vertigo and balance disorders, and a lymphedema therapy team for both primary and cancer-related lymphedema. It is also a LSVT BIG & LOUD program site—unique speech and physical therapy for patients with Parkinson’s.

“Our cancer rehabilitation services are expanding in conjunction with MedStar Montgomery Medical Center’s growing oncology program,” says Scogland. “We will soon be providing the full scope of pre-and post-treatment therapies.”

“We are also looking at the feasibility of including the expertise of cancer rehabilitation physiatrists with the Olney team who will work collaboratively with our therapists, and MedStar Montgomery cancer specialists,” Dr. Whitehair adds.

“The Olney center’s expansion is helping prepare us to serve the rapidly growing community of Montgomery County, as well as reach communities further north into Howard County,” Brickley adds.
The Bone & Joint

The bottom line? “Progressive neuropathy should trigger a heavy metal screening before symptoms are severe. Bullet fragments that have not caused toxicity for many years may still become toxic, especially when in fluids of a pseudocyst or joint. For unexplained neuropathy, a history of gunshot wound may be relevant,” Dr. Nally says.

In other metal news, cobalt toxicity continues to garner attention. In 2014, Dr. Bunning was one of the first to publish an article noting a case study of a patient with cobalt poisoning as the result of corrosion of a metal on polyethylene hip replacement. Since that time, the issue has drawn much attention—and additional case reports have been published.

Metal continues to make media— and medical—news. While lead contamination in Flint, Michigan’s, drinking water was causing great concern and consternation, lead contamination of another sort had presented itself to Robert Bunning, MD, clinical director of the Orthopaedic Program at MedStar NRH.

A 31-year-old former coast guard police officer had been ill for months, suffering weight loss, vomiting, and progressive weakness that eventually resulted in paralyzing neuropathy. Multiple hospitalizations had led to no diagnosis until a neurologist ordered a heavy metal screening. The result: The patient had 800 times the normal level of lead in his blood, the result of a 2007 shooting.

“They had left the bullet in his thigh, which is fairly common,” explains Dr. Bunning. “He had no problems until the bullet moved and came into contact with fluid from a cyst allowing the lead to be absorbed,” he says.

Following surgery to remove the remaining bullet fragments and oral chelation therapy, he came to MedStar NRH for rehabilitation to regain use of his arms and legs.

The case was featured in a poster authored by Dr. Bunning and Physiatry Resident Emma Nally, MD, and presented at the Association of Academic Physiatrists 2016 annual meeting.

The publication of these articles in a prestigious journal reinforces the need for clinicians to take some precautionary steps,” Dr. Bunning says. “Screening patients for heavy metal allergies is becoming more common prior to hip replacement. While rare, physicians should also be aware of the presenting symptoms of cobalt toxicity such as rashes, neurologic symptoms, thyroid disease, or heart failure.”

Research Briefs: More on Metal

Fariba Shah, MD, is now serving as a physical medicine and rehabilitation and sports medicine physician at NRH Rehabilitation Network/Onley, Md., on the campus of MedStar Montgomery Medical Center. Dr. Shah is a 2008 graduate of Howard University College of Medicine. She completed a Sports Medicine Physical Medicine and Rehabilitation Fellowship Program at McGaw Medical Center of Northwestern University, where she also completed her internship and residency.

Mathew Maxwell, MD, is now serving as a physical medicine & rehabilitation and sports medicine physician at MedStar NRH Outpatient Physicians Clinic at Irving Street in D.C., and at MedStar NRH Rehabilitation Network, McLean, Va., center. Dr. Maxwell received his MD from the Chicago Medical School and completed his internship and residency at the University of Pittsburgh Medical Center. He received his fellowship training at Allegheny University Hospitals/Medical College of Pennsylvania, and specializes in sports medicine, and Botox joint and soft tissue injections.

Deena Hassaballa, DO, is a physical medicine and rehabilitation medicine physician with the inpatient Brain Injury Program. Dr. Hassaballa completed her residency at Loyola University of Chicago and last year completed a fellowship at MedStar Georgetown University Hospital in brain injury medicine. Dr. Hassaballa is a graduate of the Chicago College of Osteopathic Medicine.

Richard Zorowitz, MD, is a physical medicine and rehabilitation physician specializing in brain injury, neurology and spinal cord injury at the MedStar NRH Outpatient Physicians Clinic at Irving Street in D.C. Dr. Zorowitz is a graduate of Tulane University School of Medicine and he completed his internship program at Long Island Jewish Medical Center and his residency at the Rehabilitation Institute of Chicago.
Curtis Whitehair, MD’s Leadership Lauded by ACGME

Curtis Whitehair, MD, FAAPMR, program director for the Physical Medicine & Rehabilitation residency program at MedStar National Rehabilitation Hospital/Georgetown University Hospital is one of just 10 recipients of the 2016 Parker J. Palmer Courage to Teach Award from the Accreditation Council for Graduate Medical Education (ACGME). He was chosen for this prestigious honor from among more than 9,800 residency program directors representing all specialties.

The award honors residency program leaders who find creative ways to teach residents and fellows, while providing quality health care. It recognizes those leaders who have fostered innovation and improvement in their residency programs and serve as exemplary role models for residents.

“We are very proud of Curtis—not simply for this recent recognition—but for his day-to-day inspiring approach to resident education,” says Michael Yochelson, MD, MBA, MedStar NRH vice president for medical affairs and chief medical officer. “He has brought real innovation to our program and helped propel it into one of the most sought after physiatry residencies in the country.”

“Being a program director is very much like being the conductor of an orchestra. In order to succeed you need the support of all the players,” says Dr. Whitehair. “I’ve been fortunate that the leadership at MedStar NRH has supported my efforts. They have made education a critical mission of this institution. I’m grateful for their support—and very grateful to ACGME for this honor.”

MedStar NRH NICHE Accredited

MedStar National Rehabilitation Hospital was recently awarded designation as a NICHE accredited facility. The year-long designation recognizes the hospital as a senior-friendly-level facility.

WebPT Improves Outpatient Care Integration

In June, all MedStar NRH outpatient centers will be connected through a specially-designed software system called WebPT. This state-of-the-art product will improve the patient experience by allowing therapists to access and customize patient notes quickly and easily giving therapists more time to spend with patients.

Through the new system, electronic medical records are available to therapists on their Microsoft Surface Pros, where patient charts can be updated and future appointments made with lightning speed. Records are integrated throughout the network and available to every therapist, even when patients receive services at more than one outpatient center.

“WebPT also connects to the MedStar Health physician electronic medical records system for improved communication. It gives therapists access to critical information about diagnosis and treatment, and to physicians’ orders,” says John Brickley, PT, MA, MedStar NRH Rehabilitation Network vice president for ambulatory operations and network development. “The software also has a billing function to improve accuracy and speed invoicing.”

Researchers hope that the study will give caregivers valuable information that will improve care and outcomes for these patients, who are increasingly becoming a large majority of MedStar NRH admissions.
Update from the Christoph Ruesch Research Center at MedStar NRH

Making Gains on Stroke Rehabilitation Research

For decades, rehabilitation research was stuck in its infancy—struggling to get a foothold in mainstream biomedical research endeavors. “We’re now making good progress, but until recently, rehabilitation research was where cancer research was in the 1940s,” says Alexander Dromerick, MD, vice president for research at MedStar NRH. “We had been operating in isolation, as had cancer investigators in the early years. It wasn’t until large cancer clinical trials were initiated that progress could be made—but it took decades to reach that tipping point,” he explains.

Rehabilitation researchers like Dr. Dromerick say that four decades is far too long to wait. They are drawing inspiration from the HIV-AIDS model. “This research grew exponentially over just two decades—and the result has been dramatic,” he adds. “This is what we are hoping to duplicate in rehabilitation research—and I think we are well on our way.”

ICARE: Landmark Research published in JAMA

The ICARE investigation, begun in 2009 and closed in 2014, is a landmark study that has helped jump-start this new era in rehab research. “It’s one of the largest multi-center stroke rehabilitation clinical trials,” says Dr. Dromerick, who served as principal investigator for the MedStar NRH arm of the study—one of three U.S. sites.

The study compared an evidence-based arm therapy called Accelerated Skill Acquisition Program (ASAP) with two standard types of outpatient therapy in patients who suffered from arm paresis following stroke. “While the actual study lasted six years, getting it off the ground began in 2002,” he notes. “It took years to plan and to collect preliminary data before we received NICNDS funding in 2008—14-years of hard work by dozens of people to produce meaningful data.”

Now, results of the historic research have been published in the February 2016 issue of JAMA—which is history-making in itself. “The publication of a rehabilitation research study in a major medical journal is a once in a decade event,” Dr. Dromerick says. “But this article’s publication is an encouraging indication of a shift in attitudes about the value of this important research,” he adds.

The study results proved a bit surprising to investigators. “We expected that the new regimen of more intensive therapy would be superior—and that more therapy would also produce better outcomes,” he explains.

Instead, researchers found no differences in upper extremity motor performance between those patients who received structured, task-oriented motor therapy for an average of 27 hours compared to those who received an average of 11 hours of a standard occupational therapy regimen. “This is just step one in understanding the best outpatient therapeutic approach for these patients,” Dr. Dromerick adds. “At MedStar NRH, our next step is to conduct research to clarify optimal therapy dosages for stroke patients during inpatient acute rehabilitation.”
Stephen Mitroff, PhD, MedStar NRH neuroscience researcher, recently received support from the Watson Brain Trust to continue his pioneering study to test the use of stroboscopic training in patients recovering from stroke who have visual impairments.

The Watson Brain Trust is a non-profit brain injury research and awareness foundation dedicated to improving quality of life for those affected by acquired brain injury (ABI), while fostering understanding of ABI through research and education.

This project is investigating the use of stroboscopic therapy as an intervention for patients with visual deficits following neurological injury, such as those caused by brain injury or stroke.

During occupational therapy, patients wear strobe eyewear that creates temporary disruptions of vision in which users see only glimpses of the environment around them. The user has to adjust their visual perception in order to perform tasks normally.

"The strobe training forces people to compensate since they are trying to perform in sub-optimal conditions, which may lead to improvements," says Dr. Mitroff.

Dr. Mitroff’s study is the first time the technique has been evaluated in a neuro-rehabilitation setting. It will help to clarify whether this might be a valuable tool for future neuro-rehabilitation and could inform theories about the nature of cognitive plasticity.

Identifying Stroke Biomarkers

Neurologist Matthew Edwardson, MD, researcher at the Center for Brain Plasticity & Recovery, has just launched a first-of-its-kind study aimed at identifying the molecular changes that occur after stroke—critical biomarkers that may lead to more effective and targeted interventions.

“Previous research in rodents has shown both genetic and metabolic changes in the brain during neural repair following stroke,” Dr. Edwardson explains. “A sequence of neural outgrowth, new synapse formation, and synaptic pruning occurs, triggered by waves of gene expression in the surviving neurons,” he says.

“But the pattern of neural repair isn’t clearly defined in humans, and genetic changes have never before been studied during stroke recovery,” he adds. “It’s possible that gene upregulation similar to those that occur in rodents takes place in humans, as well. But it’s also possible that a different, previously undiscovered pattern of gene changes may exist.”

In this study, 24 stroke patients with muscle weakness in their arms will be compared to an age-related, healthy control group. Blood will be drawn at several time intervals within the first month following stroke. Both metabolic analysis and gene expression analysis of the blood will be conducted.

“We hope that the study will help clarify the physiology of stroke recovery—and identify biomarkers that may ultimately lead to the design of more effective treatments,” Dr. Edwardson says.

Visualizing Visual Recovery

Less-often studied than their left hemispheric (LH) counterparts, strokes that result in right hemisphere (RH) damage are the focus of research underway by Visual Neuroscientist Anna Greenwald, PhD—a researcher at the Center for Brain Plasticity & Recovery. A recent recipient of a KL2 Scholar Career Development grant, she is hoping to better understand how the brain reorganizes following a RH stroke.

While language is intact, RH stroke can cause difficult to deal with impairment including problems with visual processing and spatial cognition, Dr. Greenwald explains. “The cognitive impairments following RH strokes are more complex and less-well understood, and can cause more long-term disability,” she says.

“In order to develop effective rehabilitation interventions, we need to clarify the neural processes that occur following a RH stroke—and how these impact functioning.”

Using functional MRI, Dr. Greenwald will study both adults and children who have suffered right hemispheric stroke—and a control group—while they complete a series of visual spatial tasks.

“Previous research has shown that following early LH stroke, children reorganize the RH to accommodate language and they do very well. The question is whether early RH lesions lead to analogous reorganization in the LH, and to what extent such reorganization is possible—and functionally adaptive—in adulthood,” says Dr. Greenwald.

A better understanding of how RH stroke affects the brain and which pattern of functional reorganization produces the best results may lead to more targeted assessment tools, and improved rehab interventions.
With the snow behind us, it’s time to start thinking about getting outside and being active. Sports injuries are a common problem, not just for professional and student athletes, but also for the weekend warrior who has been sedentary all winter. No doubt some of these people will be showing up in your offices looking for help.

The MedStar NRH Rehabilitation Network has many physicians and therapists who are specially trained in Sports Medicine and provide this specialized care in locations throughout the region. They are part of the broad MedStar Health Sports Medicine network that provides soup to nuts care for sports injuries. You can read more about the program on page 1 of this newsletter.

Our outpatient site in Olney on the campus of MedStar Montgomery Medical Center has a busy sports medicine program. The site is growing quickly, and now includes the expertise of Neuropsychologist Anna Agranovitch, PhD, and Fariba Shah, MD, specializing in Sports Medicine and Interventional Spine procedures.

On our main campus, the hospital recently received NICHE certification. NICHE is a nurse-driven program designed to improve the care of older adults. Kudos to our nursing team for their hard work.

Congratulations also go to Curtis Whitehair, MD, who was named one of the best residency program directors in the nation by the ACGME. In a very short time, Dr. Whitehair has grown our program from 12 to 18 residents, added three new fellowships, and created a learning experience that has truly increased the clinical abilities of our graduates.

In the research arena, MedStar NRH has been making headlines. As you will read inside, Robert Bunning, MD, has continued to lecture and publish on musculoskeletal issues related to cobalt in joint prosthetics, and on lead toxicity. Alexander Dromerick, MD, has just published the findings of the stroke study ICARE in JAMA—a landmark investigation and unprecedented recognition for rehab research. It’s just one of several stroke studies highlighted in this newsletter. Enjoy!