T
dis past year saw a significant change in organized medicine in the state of South Carolina. Palmetto Health and Greenville Health System combined to form Prisma Health. The impetus for this merger originated from the poor health status of the citizens of South Carolina. South Carolina ranks poorly (within the bottom 10%) for most measures of health in the U.S. The leaders of Palmetto Health and Greenville Health System saw an opportunity in combining the efforts of these two health care organizations to improve the health of the citizens of South Carolina. This merger creates the largest health care organization in South Carolina. This creates an organization that can coordinate care among multiple physicians and health care providers to maximize care for our patients while also allowing for adaptations to the changing national health care landscape. We are rapidly moving to a value-based system to provide the highest value care to our patients.

As a collaboration of four diverse orthopedic groups spanning more than nine locations, including physicians, advanced practice practitioners, physical therapists, occupational therapists, imaging specialists, cast technicians, athletic trainers and an experienced medical staff, we are positioned to provide the highest quality care. As a department within the Palmetto Health-USC Medical Group, the Palmetto Health-USC Orthopedic Center is optimized to manage all aspects of our patients’ medical needs. Our passion and dedication enable us to offer our region the highest level of care and quality service.

As leaders in orthopedic care across South Carolina, we are also committed to improving care for our citizens through education and research. We are dedicated to creating a clinical learning environment that promotes life-long learning, scholarship and research that advances the quality of health care. This year we celebrated 75 years of educating orthopedic surgery residents in the Midlands. We are excited that for the first time in 75 years, the Prisma Health-Midlands/USC School of Medicine orthopedic surgery residency program was approved to increase the incoming class size from two to three new resident physicians a year. This growth will improve our residents’ clinical and surgical experiences to maximize their learning opportunities.

We invite you to share our excitement in clinical care, surgical care, education, research, community service and leadership through the following comprehensive look into the many achievements of our past year and the opportunities that lie ahead for advancing orthopedic care.

Sincerely,

Christopher G. Mazouz, MD
Associate Professor and Chair
Palmetto Health-USC Orthopedic Center

Bradley P. Presnal, MD
Senior Medical Director
Palmetto Health-USC Orthopedic Center

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Cover image: Marcus Lattimore, former Gamecock football player, returns to the team as director of player development.
Football standout-turned-coach Marcus Lattimore overcame physical, emotional setbacks with the help of Palmetto Health-USC orthopedic staff.

Marcus Lattimore was keenly aware of the presence of the Palmetto Health-USC Orthopedic Center physicians and team members during his early playing days with the University of South Carolina football team. “They were at practice. They were at games,” he recalls. “Someone was there caring for us.”

“Sometimes they would come by the facility and practice just to check in on us. They were very authentic, always transparent and always present, and that was very comforting.” But as one of the more promising stars in program history, Lattimore hoped his necessary interactions with the medical staff would remain minimal.

As the official team physicians for University of South Carolina athletic programs, Palmetto Health-USC Orthopedic Center physicians are on the front line of care when athletes experience injuries. “That was the goal, to never need them,” he said. “That was the reason I fumbled. I was not thinking about the play. I was thinking about my knee.”

Lattimore, like many before him, had a lot to learn about the practice and unpredictability of football. And while the decision to walk away from football was “one of the most difficult,” Lattimore said his earlier conquests – on and off the field – made it easier to embrace. “I honestly don’t think I would have found my passion and what I feel is my purpose to help develop student athletes if I hadn’t had that experience,” he said. “It’s what made the biggest difference, just knowing I was in good hands.”

Today, he says, the pain of the past fuels his passion for the present. “I honestly don’t think I would have found my passion and what I feel is my purpose to help develop student athletes if I hadn’t had that experience,” he said. “It’s what made the biggest difference, just knowing I was in good hands.”

Now he says he hopes to model the same compassion and encouragement he received from the Palmetto Health-USC Orthopedic Center team and notes his experiences with Dr. Jeffrey Guy largely influenced his decision to pursue studies in public health. “If you don’t have a rational mindset and you just react with default when everything goes your way, it will ruin into a habit that will follow you the rest of your life. But realizing it’s a marathon, not a sprint, you can use these times to become better in other areas of your life. That is the reason I feel I have been able to overcome a lot of things in life and have some success after football.”

Marcus Lattimore at Williams Brice Stadium.
The highest calling

Palmetto Health-USC Orthopedic Center physicians join medical outreach to Haiti

Since 2017, Palmetto Health-USC Orthopedic Center surgeons have partnered with others across the state to increase orthopedic training and provide skilled care for residents of Haiti. The Global Orthopedic Residency Initiative launched by The South Carolina Orthopedic Association has created an educational initiative between the orthopedic residency programs in Columbia, Greenville and Charleston to come alongside the Haitian orthopedic residency program at Hospital de la Paix in Port-au-Prince. Since the launch, surgeons from the three programs have made regular trips to Haiti, where they work with resident physicians while treating patients and performing surgeries during the one-week stays.

Christopher Hydorn, MD, a pediatric orthopedic surgeon and clinical assistant professor of orthopedic surgery at the University of South Carolina School of Medicine Columbia, has served on two previous trips and said his visits are both “inspiring and challenging.”

“It’s extremely rewarding to help take care of patients who would not normally have access to the level of care we are able to provide,” Dr. Hydorn said, noting the work often requires resourcefulness because the Haitian community does not have all the medical resources physicians in U.S. facilities may take for granted. “You’re having to operate more independently, having to make do with what you have,” Hydorn explained.

Hydorn said representatives from the South Carolina Orthopedic Association travel to Haiti roughly every six weeks and staff members from Palmetto Health-USC Orthopedic Center normally visit every six months, with trips in the spring and fall. “[It’s] a continuity of care because we’re frequently going down there,” he said.

Visits typically span from Saturday to Saturday, when the surgeons provide educational training for the Haitian resident physicians, round with them on patient visits and offer suggestions on cases. Throughout the week, the Palmetto Health-USC Orthopedic Center physicians also see and treat patients, often taking on some of the more complicated cases the Haitian physicians have reserved for them.

“Between clinic and operations, we’re usually working from about 7 o’clock in the morning to 5 o’clock at night,” said Hydorn, whose next trip is scheduled for September. Civil unrest in Haiti postponed a trip originally planned for March of this year.

Hydorn said while the patient care provided during the visits is crucial, equally important is the training offered to the Haitian resident physicians so they can take care of their own patients in the long-term. “It’s about training the Haitian doctors so that they become more self-sustainable,” Hydorn said. And he said those lessons run both ways.

“I think it’s an exciting and unique challenge to take care of some problems that we don’t normally see,” Hydorn said, noting the surgeons occasionally have encountered some limb deformities that in the U.S. are usually addressed earlier or otherwise prevented. “I think for me it’s an appreciation for an entirely different culture,” Hydorn said, “learning another view of the world.” He added, “By taking care of very difficult problems in an area where we don’t have the most advanced equipment, it helps me think outside the box and be a well-rounded physician.”

Prisma Health– Midlands/USC School of Medicine Columbia orthopedic surgery residents who have taken part in the outreach also have seen a mutually beneficial value to the work.

“The trip has given me perspective. It’s easy to forget the situations and opportunities afforded to us in U.S. medical care are very different here,” explained fifth year resident Kevin Williams, MD, who was part of a similar outreach to Ethiopia after medical school and has used his orthopedic training in Ecuador. “Being able to help those with less access to care reminds me to be grateful for the daily commodities that are sometimes taken for granted.”

Fifth year resident Kyle Mobley, MD, who was part of mission outreachs to Central America and Asia, made his first trip to Haiti as part of the program and said the combined experiences have solidified his passion for the work. “I have a heart for missions and plan to participate in short term missions for the rest of my career, both by going and by supporting medical missions from home,” Mobley explained.

Hydorn said serving in the program allows him and others to fulfill a physician’s highest calling. “It meets the goals of taking care of patients in need,” he said. “It also puts our hospital system out into the world. The doctors who go on the missions learn a lot of problem-solving techniques and medical skills they can bring back to their practices in Columbia.”

◆

Christopher Hydorn, MD, David Koon, MD, Kevin Williams, MD, and local Haitian medical staff.

Dr. Koon and Dr. Williams perform surgery on a Haitian patient.
Federally-funded study may lead to quicker stress fracture recovery for soldiers

Palmetto Health-USC Orthopedic surgeon J. Benjamin Jackson is a foot and ankle specialist and key player in a cutting-edge study that could significantly reduce the down time for soldiers who experience stress fractures. The potential advance in treatment also could save the military millions of dollars by reducing repeat fractures and training delays.

Dr. Jackson has received a $2.9 million federal grant from the U.S. Department of the Defense to study ways of improving the recovery time for soldiers returning to active duty following stress fractures. The Peer Reviewed Orthopaedic Research Program Clinical Trial Award covers a four-year period, beginning this fall, when Dr. Jackson and other orthopedic experts will work with soldiers undergoing basic training at Fort Jackson, the nation’s largest U.S. Army combat training center.

“There is no higher risk population for stress fractures than military trainees,” Jackson explained, noting estimates that the military spends about $100 million each year to manage and treat stress fractures. “These are the most common reasons of injury during both basic training and military service due to the extreme demands placed on our soldiers,” he said. “We felt like it would be a great study to help soldiers at Fort Jackson.”

The study – titled Fracture Recovery for Returning to duty (Teriparatide STRONG) – is a non-surgical, self-administered treatment that enables soldiers to stay with their units during rehabilitation and has the potential for a long-term protective effect. The treatment protocol uses the drug Forteo®, a synthetic hormone, that uses the body’s natural hormones and is commonly used to treat osteoporosis by actively building bone.

Jackson, part of the Palmetto Health-USC Orthopedic team that cares for injured University of South Carolina athletes, said he learned about the drug’s potential secondary benefits during his ongoing work with the USC athletes. “We see a fair number of stress fractures in athletes,” Jackson explained, noting other physicians have used Forteo as an off-label treatment for stress fractures with significant results.

The treatment now will be used on a wider, controlled scale with the Fort Jackson soldiers who have been diagnosed with severe stress fractures, and their recovery times will be documented. Enlisted members who sustain stress fractures of the tibia, also known as the shin bone, will be asked to participate in the study, and Jackson is confident this approach will help the stress fractures heal more quickly and get soldiers back into the field sooner.

“The standard treatment for a stress fracture is rest. For men and women training to defend our country, resting means their intense physical preparation is delayed,” Jackson explained. “In our limited experience, we have seen improvement.” In some cases, he added, the treatment may allow them to avoid a surgery that otherwise might have been needed.

While the study’s primary goal is to get soldiers back to basic training more quickly, it also is hoped to reduce the rate of repeat stress fractures among soldiers. About 250 soldiers are expected to be included in the study during the four-year period, beginning in October 2019. As part of the grant requirements, the results of the study must be presented at an upcoming military medical conference and could be included in a national medical journal.

Jackson said if the study proves the treatment to be successful, it could lead to a new indication for the use of the medicine with the Food and Drug Administration (FDA). Dr. Jackson is joined in this study by Paul Beattie, PhD, a clinical research physical therapist with the Department of Exercise Science in the Arnold School of Public Health and Kathryn Diemer, MD, a bone health endocrinologist and associate dean with Washington University in St. Louis.

“Our partnership with the soldiers at Fort Jackson, Moncrief Medical Center, The Arnold School of Public Health and the University of South Carolina School of Medicine uniquely positions us to perform a high-quality clinical research trial,” Jackson said. “The effects of this study could be broad, even effecting the way that stress fractures are managed in the military and for civilian patients with this novel, non-operative treatment. It’s just an amazing opportunity.”
Tamiya Blakely and her mother, Tonya, realized the growing teen’s severe back pain was a problem that needed expert care. They finally found the answers they needed when they met Mark Locke, MD, and the team at Palmetto Health-USC Orthopedic Center.

For the better part of her adolescent years, the Lancaster youth had enjoyed an active childhood that routinely kept her on the basketball and volleyball courts and included regular trips to a nearby amusement park. But those routine activities gradually became more and more unbearable.

“I was having a lot of back pain and a lot of cramping,” recalled the A.R. Rucker Middle School student. “When I would play basketball, afterwards my back would hurt. And I thought it was from playing, but it wasn’t. When I would go to Carowinds, some of the rides were so bumpy that when I got off my back would hurt, and the park was so big I would get out of breath. I was tired of the pain.”

Tonya Blakely had been mindful of her daughter’s discomfort, but a plea two years ago from then 12-year-old Tamiya made it clear these weren’t just growing pains. “She just kept complaining that her back was hurting,” Tonya said, remembering they both thought it was from her dedication in practicing basketball. One day, Tamiya went to her mother crying and said, “Momma, please take me to an orthopedic [doctor].” Tonya made an appointment right away.

Tamiya was diagnosed with scoliosis, which doctors said had developed over a major growth spurt since her previous pediatric check-up seven months earlier. Doctors told Tonya her daughter’s spine had a 45-degree S-curve and advised her to pursue surgery. Tonya initially hesitated because the nearest suggested surgical option offered was in Alabama, and she preferred someplace closer to home so family members could be with Tamiya. “I knew that she was going to have to stay in the hospital for a few days.”

In the meantime, Tamiya began researching scoliosis and learned about other options including a back brace or physical therapy. Initially, they tried a back brace which Tamiya wore for about a year to prevent the curve from worsening, but it provided no relief. Over time, Tamiya also developed patella knee syndrome, which added to her discomfort.

“She cried, complained,” Tonya said. “She started getting short of breath. Eventually, she came to me and said ’Momma, I’m ready to have the surgery so I can feel better.’”

Seeking a second surgical opinion, Tamiya was referred to Dr. Locke at Palmetto Health-USC Orthopedic Center. “I just started researching and reading his profiles and reading his reviews,” she said, adding she liked what she found.

“I made an appointment in Columbia, and there I was with my child,” Tonya said. “The first visit was like the best visit we’d ever had. He did not rush us. We were there for over an hour. He gave us every detail that we needed.”

Tamiya underwent spinal fusion surgery for scoliosis with Dr. Locke in September 2018 at Palmetto (now Prisma) Health Richland, and she spent five nights in the hospital. Tonya said the family’s confidence was quickly reinforced during her daughter’s hospital stay.

“When the doctors came to see you, they came as a team. They made us feel so welcome,” Tonya said. “They were not pushing her out the door, and I certainly appreciated that.”

Today, Tamiya continues her physical therapy once a week and is making gradual improvement. “It’s a whole lot different,” the 14-year-old said. “I don’t have as much pain in my back anymore, and I don’t get as tired.” And while she isn’t yet ready to return to sports play, Tamiya said she looks forward to getting back on the basketball court.

Tonya said the decision to pursue the surgery was one of the best she could have made for her daughter, and she largely credits the care provided by Dr. Locke and the Palmetto Health-USC Orthopedic Center team with her progress.

“She was treated very nicely there,” said Tonya. “After the surgery, she experienced a little pain, but not nearly as much. “I see her working to get her strength back with physical therapy. She does what Dr. Locke told her to do. I would highly recommend Dr. Locke to any other patient who has scoliosis.”

Tamiya said the experience has taught her patience, and she offers that same advice to others who may be facing the same diagnosis. “I would tell them to not rush things and not overdo it,” she said. Based on the progress of her treatment, she said, “If they do the surgery, it would be a great outcome for them and they will not regret it.” Meanwhile, Tamiya and her family believe the best basketball seasons still lay ahead for this talented young athlete.
“I’d say at least once a day we are discussing cases. About 98 percent of the time I’m with him. About 2 percent, I’ll say ‘I’m not so sure,’” added Earl, noting the two try to keep their “shop” talk to a minimum when visiting with the rest of the family.

And while it’s more often Luke seeking guidance, his father said he has learned a lot about some of the more recent surgical advancements and techniques from his son. “There are some significant [procedural] changes [Luke presented] that were substantially better than the way I was doing it,” Earl said. “That’s something he brought to us. It’s a constant [change].”

Luke McFadden says some of the greatest examples his father has modeled include a compassion for patients combined with a commitment to family. “He can relate to the things that I’m doing and offer insight and advice. He’s taught me the importance of giving time to your patients, but also to be home and to be a husband and a father and there for your family,” said Luke, who is married and has two young children. “It’s been pretty fruitful not only as a physician, but it’s also strengthened our personal relationship.”

That balanced lifestyle was one Luke observed long before entering the medical field. “It was like Dad was running a small clinic in the kitchen. People would call him, and he would say ‘I’m coming to help you out,’” which was pretty cool,” Luke said. “But I never felt like he wasn’t there. There is more to life than your job. I think I was called to do this, but you have to find a balance. I think Dad does a good job with that.”

Despite a strong legacy of medicine in his family with grandparents, aunts and uncles also in the same field, Luke McFadden said he never felt pressured to enter the profession. His three siblings chose careers as an attorney, architect and a U.S. Marine Corps officer. “For the longest time, I always wanted to be a doctor. I grew up watching what he did, and I really loved it,” said Luke, who initially pursued studies in finance before returning to what he now considers his true calling. “I don’t know if it was nature or nurture or what, but I was drawn to it. Maybe it was something that was just passed down by seeing what the people before you have done. I like the opportunity that medicine provides to step into people’s lives.”

Earl McFadden said he was always confident in his son’s abilities and is proud of the surgeon he has become. “I was paying attention to what he was doing during his medical training and fellowship,” he said. “I knew that he was a good surgeon coming in. He came in as a real workhorse. In the first three months, he had the same volume as our busiest hand surgeon.”

And while the two don’t routinely share patient cases, they recently collaborated on a patient’s care on Easter Sunday. “It’s pretty cool having your son back in town,” Earl said. “Someone you can pass the baton to.”

For the time being, they will continue to share that baton as they seek to maintain the compassion and care that attracted them to the profession. “We believe that you do the best that you can for people and God is going to take care of the rest,” Earl said.
Foot and Ankle

The Palmetto Health-USC Orthopedic Center Foot and Ankle specialists offer groundbreaking, patient-centered and comprehensive treatment options. They combine these state of the art treatments with continuous patient collaboration throughout treatment. We care for surgical and non-surgical conditions of the foot and ankle.

With decades of experience, we have the expertise to understand the needs and expectations of each patient and to perform the most advanced, effective treatments. Our foot and ankle team takes pride in training physicians and teaching around the world.

Locally, we serve high schools, colleges and professional athletic teams, as well as a general patient population. Our goal is to return our patients to a healthy, active lifestyle through treatments that decrease pain and increase function.

Areas of expertise
- Ankle pain
- Arthritis
- Bunions
- Deformity correction
- Diabetic foot ulcer
- Flatfoot correction
- Foot pain
- Flat Feet
- Fracture care
- Hammertoes
- Instability
- Ligament reconstruction
- Nerve decompression
- Sports related injuries
- Tendon transfers and problems
- Total ankle replacement

Hand and Upper Extremity

The Hand and Upper Extremity team delivers expert clinical care to patients with disorders ranging from the fingers to the shoulder.

The Palmetto Health-USC Orthopedic Center understands the intricacies of the hand and upper extremity and works closely with certified hand therapists to ensure both operative and non-operative treatments are successful. The team is diligent in providing optimal care through research, specialization and expansion of resources.

Areas of expertise
- Arthritis
- Arthroscopic rotator cuff repair
- Carpal Tunnel Syndrome
- Dupuytren’s Disease
- Fracture care
- Ganglion cysts
- Golfers elbow
- Hand, wrist, elbow and shoulder surgery
- Rotator cuff tear
- Shoulder arthroscopy
- Total shoulder replacement surgery
- Tendon and arthrosis reconstructive surgery
- Tendinitis
- Tennis elbow
- Trigger finger
Pediatric Orthopedics

The Palmetto Health-USC Orthopedic Center is home to the only specialized Pediatric Orthopedic Team in the Midlands. The group has four fellowship-trained surgeons with various backgrounds who bring diverse experiences to the team. The subspecialty team is determined to provide the most stress-free environment for our adolescent patients. One way our pediatric physicians enjoy sharing their knowledge throughout the year is collaborating with local community partners. They help educate parents and children on seat belt and car seat safety and helmet use for activities like baseball, biking and skateboarding. In addition to caring for patients in the Midlands, our surgeons travel to remote regions abroad to help children in need of specialized orthopedic healing. Medical missions are joyful for both the team and the patients who receive life-changing care.

Areas of expertise
- Pediatric orthopedic trauma
- Children’s fractures
- Spinal deformity
- Early onset scoliosis
- Scoliosis casting/growing rods
- Young adult hip disorders
- Hand and foot deformity
- Limb lengthening, external fixation
- Special clinics for club feet and Spina Bifida

Top procedures
- Fracture/Dislocation Treatment Surgeries: 1,595
- Hand Surgeries: 129
- Foot Surgeries: 81

At-a-glance
- Patient Visits: 21,471
- New Patient Visits: 2,059
- Surgeries: 2,422

Spine

The Palmetto Health-USC Orthopedic Spine team has proudly served the Midlands for more than 50 years. The team has achieved local, regional and national recognition with its contributions to education and leadership within the field. Patients are offered a wide range of treatments within the complex area of spinal care. The team seeks to improve the care of patients by utilizing the most recent advances in spinal care. Each physician, with the help of the rest of the Spine team, ensures the best quality treatment to provide patients comfortable and seamless spine care.

Areas of expertise
- Minimally invasive spine surgery
- Cervical spine surgery
- Lumbar spine surgery and microdiscectomy
- Adult scoliosis surgery
- Scoliosis
- Spinal stenosis
- Disc degeneration and herniation
- Spinal deformities
- Osteoporosis and osteoarthritis
- Slipped vertebrae
- Spondylolisthesis
- Myelopathy
- Testing and diagnosis of nerve function and disorders
- Neck pain and lower back pain
- Therapeutic injections
- Occipital nerve blocks and epidural injections

Top procedures
- Cervical Spine Fusions: 228
- Laminectomies: 199
- Lumbosacral Fusion: 301
- Epidural Steroid Injections: 3,842
- Conventional Disc Sternotomy: 49

At-a-glance
- Patient Visits: 24,443
- New Patient Visits: 4,549
- Surgeries: 1,244
Sports Medicine

The Sports Medicine team provides innovative care for the most active patients in the Midlands South Carolina, serving the patient at each interval in the medical continuum. Palmetto Health-USC Orthopedics Sports Medicine provides comprehensive care for the University of South Carolina Gamecock athletes, in addition to over 60 other schools and organizations in the state. We believe superb medical care begins at the community level. Because of this belief, the Palmetto Health-USC Orthopedic Center implements the largest athletic training program in the state where patients are cared for in athletic environments ranging from national competition venues to high school gymnasiums. The Sports Medicine team provides advanced treatment to patients with the latest and most efficient technology to ensure a timely recovery.

Areas of expertise
- Arthroscopic ACL reconstruction
- Knee meniscus repair/transplantation and cartilage repair/reconstruction
- Fracture care
- Arthritis arthroscopy
- Achilles tendon surgery
- Osteotomies for lower extremity malalignment
- Partial and total knee replacement
- Arthroscopic shoulder stabilization procedures
- Arthroscopic rotator cuff repair/reconstruction
- Shoulder replacement
- Hip arthroscopy for femoroacetabular impingement
- Hip labral and cartilage repair/reconstruction
- Elbow arthroscopy, ligament, UCL (Tommy John surgery) repair/reconstruction
- Sports Concussions
- Therapeutic injections (hyaluronic acid, platelet rich plasma, stem cells)

Top procedures
- Knee Procedures (903)
- Shoulder Procedures (215)

Sumter Orthopedic Specialists

The physicians at our Sumter orthopedic location operate the largest orthopedic clinic in the Sumter area. Our board-certified physicians have a combined 41 years’ experience and all have completed advanced fellowship training in sports medicine and trauma. The team provides more than 100 elective procedures a month, including total knee and hip replacements, knee and shoulder scopes, carpal tunnel and deQuervains release, anterior cruciate ligament (ACL) reconstruction, aromoclavicular (AC) joint reconstruction, open and closed fracture. Our goal is to offer the Sumter community high quality orthopedic care that both improves patient recovery and returns our patients to the things they enjoy most.

Areas of expertise
- Rotator cuff tear
- Shoulder instability
- Tennis elbow
- Cubital tunnel syndrome
- deQuervains syndrome
- Carpal tunnel syndrome
- Ganglion cysts
- Trigger finger
- Hip replacement
- Knee replacement
- Meniscus tears
- ACL reconstruction
- Quadriceps/patella tendon tears
- Arthroscopy
- Fracture care

All-at-a-glance Patient Visits: 41,920 | New Patient Visits: 7,678 | Surgeries: 3,290

All-at-a-glance Patient Visits: 13,164 | Surgeries: 1,244
Total Joint Reconstruction

The Palmetto Health-USC Orthopedic Center is home to a Total Joint Reconstruction team with a combined 100 years’ experience. The team has presented at the local, state, national and international levels to continue developing and advancing the practice of total joint reconstruction.

The Palmetto Health-USC Orthopedic Center joint surgeons use numerous surgical approaches including unicompartmental, primary and revision knee replacement, primary and revision hip replacement, and osteotomies. Our team provides exemplary treatment for total joint patients by implementing innovative discharge plans and comprehensive rehabilitation programs. We strive for impeccable holistic care by ensuring performance accountability for postoperative outcomes.

Areas of expertise
- Hip and knee arthroscopy
- Total hip replacement surgery
- Total knee replacement surgery
- Revision of total hip
- Revision of total knee

James Coffey, PA; Betsy Maharaj, PA; Karin Duffy, PA; Kim J. Chilcapp, MD; David E. Koon, MD; Bradley P. Present, MD; Frank R. Voos, MD; Andy T. McGown, MD; Jeffrey S. Hipps, MD

Trauma and Fracture Care

The Trauma and Fracture Service provides complete orthopedic trauma care for patients, guiding their care from injury through recovery.

Each surgeon is trained in orthopedic trauma, using this expertise in decision-making and management of orthopedic injury. Our physicians serve as faculty and mentors to the Prisma Health–Midlands/USC School of Medicine Columbia orthopedic surgery residents. Leading education and research, they are ensuring the expert level of care future generations of orthopedic surgeons will provide.

Physicians share innovative surgical techniques at the regional and national levels, potentially improving patient outcomes. Patients in our care receive the most advanced treatments making it possible to return to their pre-injury level of function and restore their quality of life.

Areas of expertise
- Fracture care
- Complex periarticular fractures
- Pelvis and acetabular fractures
- Post-fracture deformity correction
- Nonunion repair

Thomas M. Jones, MD; Michael C. Tucker, MD; Kevin A. Flatt, MD; Brittany Buchanan, NP; Patrick Todd, NP; Michael Richards, PA

Top procedures

Total Knee Revision
1,002
Total Knee Arthroplasty
580
Total Hip Arthroplasty
110
Total Hip Revision

Top procedures

Hand and Upper Extremity Fracture Treatment Surgeries
120
Hip/Pelvis/Femur Fracture Treatment Surgeries
580
Knee Fracture Treatment Surgeries
94
Foot Fracture Treatment Surgeries
34

At-a-glance

Patient Visits: 20,578 | New Patient Visits: 2,640 | Surgeries: 2,283

At-a-glance

Patient Visits: 4,964 | New Patient Visits: 893 | Surgeries: 1,158
Motion Analysis and Performance Laboratory

Our facilities specialize in evaluation for patients of all ages and lifestyles including pediatric/adolescent, adults and elite athletes. At Apex Athletic Performance, body and movement science drives our training model. The Motion Analysis and Performance (MAP) Laboratory at our Lexington location is the go-to center for human biomechanical evaluation and clinically relevant research in movement science, where our clinicians and community join to discover tailored solutions for better outcomes for both orthopedic health and optimal athletic performance.

Our team takes pride in their ability to evaluate sport-specific movements, to include running gait, a golf swing, overhead throwing, and movements requiring explosive power. The MAP Laboratory utilizes cutting-edge science and evidence-based methodologies to help both athletes and orthopedic patients achieve their best performance, unique to their bodies.

Serving Columbia, Lexington and the greater Midlands of South Carolina, the laboratory focuses on:

- Identifying and quantifying muscular function for improving athletic performance
- Developing treatment plans for patients with movement disorders or musculoskeletal diagnoses
- Evaluating metabolic function at rest and during exercise by conducting graded exercise testing
- Providing training, education and clinical evaluation for evidence-based research in the world of strength and conditioning and rehabilitation

At Apex MAP Laboratory, we use the same technologies often available only to collegiate programs and professional athletes. By taking advantage of these services, our athletes learn how and why their bodies move in order to safely enhance their performance and prevent injury.

Request an appointment at the MAP Laboratory

Typically, a physician will refer patients to the Motion Analysis and Performance Laboratory for a 3D gait analysis and other functional movement assessments. In many cases this will be an orthopedic specialist or physical therapist. Patients also are welcome to contact the MAP Laboratory directly via our patient referral line at 803-434-9421 to inquire about a visit or schedule an assessment.

What equipment does the MAP Laboratory utilize?

- VICON 16-Camera 3D Motion Capture System
- DARTFISH 2D Analysis Software
- NORAXON DTS Wireless EMG System
- OPTOGAIT Gait Analysis System
- AMTI Floor-embedded Force Plates
- GYMWARE Velocity Based Tracking
- KORR® CardioCoach Metabolic Cart
- XSENS Inertial Motion Unit (IMU) Monitors
- WATTBIKE Pro Indoor Cycle Ergometer
- FLIR® Thermal Imaging Camera
- TRUGOLDF Vista 10 Golf Simulator
- WOODWAY® 4Front Treadmill
- SORINEX® Fully functional weight training rack

Amber Gadow, PT, and Danny Sauceda, MS, analyze a pediatric patient’s gait.
The Apex Athletic Performance model is unique and different from competitors because of the science behind our training techniques. At Apex, doctorate-level functional movement specialists perform precise evaluations of the intricacies of human movement to educate athletes in how to apply the principles of biomechanics and physiology to improve agility and build strength in safe manner. Athletes who train at Apex Athletic Performance work with a team of highly qualified and experienced professionals who study the body’s efficiency in motion and then prescribe corrective movement techniques to maximize energy output and optimize mechanics. At Apex, we use the same innovative technologies used by professional athletes. By taking advantage of these tools, our athletes learn how and why their bodies move and can safely enhance their performance.

Clients are offered tailored programs that align with their personal goals. The Beginner-Intermediate group focuses on educating individuals on the foundations of training. Athletes looking to push themselves may join the Intermediate-Advanced group that encourages individuals to test their limits of physical change. We also believe movement is fueled by the energy our body stores. The nutrition education and sports dietary plans we prescribe through our Sports Nutrition services plan optimize those energy stores to produce efficient and long lasting performance results. All services are designed to give athletes a fully personalized and integrated program that allows them to maximize performance and help them achieve their athletic goals. The team strives to help athletes of all ages develop the ability to perform safely at the highest level to become stronger and healthier.

Athletic Trainers

Athletic trainers are health care professionals who collaborate with physicians in prevention, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and illnesses. Our athletic trainers’ unparalleled continuum of care ranges from athletes to individuals from a wide array of patient populations across the physical medicine and rehabilitation spectrum. Our athletic trainers work within schools, colleges, physician offices and hospitals throughout the Midlands, serving in vital care and support roles in over 60 institutions. In the last year, our athletic trainers were responsible for approximately 20,000 student athletes within the secondary school and collegiate athletic settings including the South Carolina High School League and the South Carolina Independent School Association. Additionally, services at the collegiate level have been provided to eight NCAA Division I, Division II, or NAIA institutions in the Midlands. This involvement has enabled the Prisma Health-Midlands athletic training service line to remain one of the most prolific and productive athletic training outreach systems in the Carolinas.

Palmetto Health USC Orthopedic Center offers a CAATE Certified Athletic Training Residency Program designed to help athletic trainers expand their knowledge and diagnostic skills in musculoskeletal evaluation. We aim for our residents to further their awareness in all aspects of sports medicine and to be able to work in a variety of clinical, surgical, research and educational settings. Athletic trainers serve our communities through education outreach and coverage of community athletic events. Our athletic training program’s collaboration with county and state recreation departments and associations is a highly successful model for educating parents, coaches and athletes throughout the region for injury prevention, injury awareness and appropriate care. These efforts continue to make a lasting impression and have earned the prolonged trust of our patients and their families.
Wellness

A new approach to your health care.

Sometimes, the road to good health begins with a little help. At Palmetto Health USC Orthopedic Center, we offer a comprehensive medical wellness program that can empower you to lose weight, reduce risk factors such as high blood pressure, improve conditions such as diabetes and improve your overall fitness, health and well-being.

Our programs include nutrition, supervised exercise and more comprehensive options that combine nutrition and exercise with behavior modification. Our team includes registered dietitian nutritionists, exercise physiologists, physical therapists and experts in biomechanics and functional anatomy. All of our programs are evidence based and include physician oversight.

Supervised exercise

Working out can be intimidating. Where do you start? What is effective? What is safe?

Our highly trained exercise physiologists can help. We provide a safe and effective supervised exercise program supporting:

• Weight management
• Chronic illness risk intervention
• Pre- and post-rehabilitation
• Improving fitness
• Overall health and well being

The first step is easy. Supervised exercise begins with a physical assessment at our office to provide a baseline for our exercise physiologist to design a personalized program and set SMART goals – Specific, Measurable, Attainable, Relevant and Time bound.

After your physical assessment, you can register for one of our supervised exercise packages to keep you on track.

Medical nutrition consultation

One of the most important steps on the road to overall wellness is proper nutrition. Working alongside your health care providers, our registered dietitian nutritionist will meet with you one on one to create a nutrition plan and teach you how to manage chronic conditions such as:

• Overweight/obesity
• Cardiovascular disease
• Elevated cholesterol
• High blood pressure (hypertension)
• Diabetes
• Arthritis

You’ll begin by completing a nutrition assessment with our registered dietitian nutritionist to review your medical history and current dietary and lifestyle habits. Together, you’ll identify areas of opportunity for improving your diet and maximizing your health and energy. Follow-up visits will help you stay on track with the recommended changes to your eating and lifestyle habits.

MedFit12

Palmetto Health USC Orthopedic Center offers a comprehensive medical wellness program empowering participants to lose weight, prevent and reverse morbidities like diabetes, while improving fitness, energy and overall health.

The three-month program, MedFit12, includes nutrition counseling, supervised exercise sessions and behavior modification. MedFit12 is evidenced based and meets the recommendations of the American College of Sports Medicine (ACSM), American Medical Association, and the National Institute of Health.

The wellness program was initially developed to assist orthopedic patients before surgery in reducing risks like obesity and diabetes in order to reduce the likelihood of post-surgical complications and improve outcomes through comprehensive lifestyle intervention.

The clinical application of MedFit12 has expanded to include all patients within the Palmetto Health USC Medical Group network with lifestyle-mediated risk factors including:

• Obesity
• Pre-diabetes and diabetes
• Cardiobesity
• Orthopedic issues improved by weight loss

MedFit12 protocol

1. Physical assessment including:
   – Review of complete medical history
   – Measurement of blood pressure, heart rate, oxygen saturation, BMI, body fat, waist circumference and body composition
   – Submaximal cardiovascular fitness test

2. Lifestyle and nutrition assessment

3. Cardiovascular prescription (per ACSM guidelines)

4. Corrective exercise prescription (per American Physical Therapy Association guidelines)

5. Supervised exercise sessions (per ACSM guidelines) with an exercise physiologist

6. Weekly nutrition consults, including behavior modification, recipes and menu planning with a registered dietitian nutritionist (per Academy of Nutrition and Dietetics guidelines)

7. Ending assessment, progress note, and lifestyle prescription

Expected clinical outcomes

• Weight and fat loss
• Improved cardiopulmonary fitness
• Improved musculoskeletal strength, balance, and mobility
• Improved blood pressure (systolic and diastolic)
• Improved lipid panel (reduced LDL, VLDL, and triglycerides; increased HDL)
• Improved glucose levels and reduced hemoglobin A1C
• Documented reversed coronary artery disease, type 2 diabetes and sleep apnea
• Improved orthopedic issues such as shoulder, back, hip and knee pathologies
• Improved energy and well being

Wellness patient Billy Norris enjoys the MedFit12 program.
Rehabilitation

The practice models of orthopedic surgery and rehabilitation have evolved similarly. Just as orthopedic surgeons have become more focused on certain joints or extremities, so have the physical and occupational therapists who also treat those patients. However, our practice model at Palmetto Health USC Orthopedic Center has evolved a little differently.

What sets our group apart is our ability to match therapists with their individual strengths and passions. While it is not unusual for an occupational therapist to specialize in hand and fine motor rehabilitation, it is less common for physical therapists to concentrate on specific joints. Until six to seven years ago, our physical therapists each could have patients with a rotator cuff repair, low back pain and an ACL reconstruction all in succession. Each patient needed to be treated very differently: with different skills, a different approach and at a different pace.

In the past several years, we have created a rehabilitation team with physical therapists who specialize in pediatrics, adolescent, spine, total joint, general orthopedic and high-performing athletic rehabilitation. This not only allows us to attract great clinicians but also provides patients with a level of care unmatched in the area. Our occupational therapists provide the same high level of care. With three dedicated hand center locations, we provide patients with a place to help them get back to normal activity. Our board-certified hand therapists are trained in complex, advanced rehabilitation methods including custom splint fabrication. Their entire caseload is made up of hand, wrist and elbow patients.

With this type of specialization, we have a great opportunity to collect data, document outcomes, as well as publish our research findings in notable medical journals. Our research team works closely with the rehabilitation team to come up with new treatment plans for certain diagnoses and identify what treatment is most effective. We are looking at reliable alternative ways to evaluate post-operative knee patients for return to competitive sports.

As we continue to grow and develop, our commitment to outstanding patient care and outcomes also will continue to grow. In the future, we plan to support rehabilitation for patients before and after formal therapy, which will help reduce cost, improve outcomes and the overall patient experience. We look forward to offering new wellness services for patients preparing for and recovering from total joint replacement as well as aquatic therapy and sports performance training for athletes recovering from athletic injuries and motivated to return to competition.

Our interventional medicine providers are experts in the non-surgical management of spinal disorders. Working with physical therapists, we will coordinate your therapy program and provide diagnostic support. We also can perform outpatient interventional procedures, such as epidural steroid injections, facet injections and medial branch blocks.

As the only back pain specialty center in the Midlands area, we are dedicated to providing care for any spine issue. Depending upon your needs, our advanced fellowship-trained neurosurgeons and orthopedic surgeons can provide outpatient and minimally invasive surgeries, fusion procedures, motion preserving spine surgery and complex revision procedures. We have an outstanding reputation for minimally invasive spine surgery. Using the latest technology, our physicians have made spine surgery safer and more effective, and we are the region’s referral center for complex spine issues and spinal cord tumors.

Abbay Sullivan, PT, works with a patient during aquatic therapy.

Treatment options

- Artificial disc replacement
- Complex restorative spine surgery
- Computer-assisted spine treatment
- Epidural steroid injections
- Interventional spine surgery and procedures
- Joint injections
- Medicine and rehabilitation
- Microdiscectomy
- Minimally invasive spine surgery
- Nerve root blocks
- Radio frequency ablations
- Spinal cord stimulators
- Spinal oncological surgery
- Ultrasound-guided peripheral nerve blocks

Conditions treated

- Cervical arthritis
- Cervical radiculopathy
- Degenerative disc
- Fracture (cervical, thoracic, lumbar)
- Herniated or bulging disc
- Kyphosis
- Lower back pain
- Sciatica nerve pain
- Sciatica trigger point
- Scoliosis
- Spinal stenosis
- Spondylolisthesis
- Spondylyolisthesis
Convenient Care

Convenient Care is an orthopedic walk-in clinic that offers access to orthopedic specialty care during the day, after normal business hours and on weekends. This service caters to the working professional who has sustained an injury or other orthopedic condition but may not be able to leave work. Convenient Care also offers access to athletes, children, and adolescents who sustain weekend injuries, without requiring them to go to a hospital Emergency Department or wait until Monday morning to be seen.

No appointment is required and most insurance plans are accepted without a referral. Common injuries seen at Convenient Care are fractures, dislocations, strains, sprains and lacerations.

Convenient Care is a full service walk-in clinic offering on-site x-ray, fluoroscopy services, casting and durable medical equipment fitting.

Our clinic is open Monday–Saturday, 8 a.m.–8 p.m., to meet the ever-growing needs of the community.

101 Business Park Blvd., 2nd Floor
Columbia, SC 29223
803-296-9290

We treat urgent orthopedic problems such as:
• Sprains
• Strains
• Fractures
• Lacerations

We also offer care for chronic conditions relating to:
• Knee
• Shoulder
• Elbow
• Ankle

Ancillary Services

Casting and more
Orthopedic technicians work in each clinic to provide orthopedic services that ensure patients have the equipment they need to recover from injury.

These services include:
• Wound care
• Club foot clinic
• Splinting
• Casting
• Bracing
• Adjustments of equipment

Technicians also are available to provide education on how to use and care for walkers, canes and crutches.

Orthopedic Wellness
The Palmetto Health Orthopedic Wellness team, led by Medical Director Dr. Jeffrey Hopkins, includes experts in the fields of nutrition, exercise physiology, biomechanics and functional anatomy, and physical therapy. With more than 50 years combined experience, Palmetto Health-USC Orthopedic Center offers South Carolina’s only fully integrated orthopedic wellness program, which treats the whole person over the entire cycle of care.

Imaging
Patients of Palmetto Health-USC Orthopedic Center have access to some of the most advanced imaging services available. Imaging is conveniently done on-site to help with diagnosis and treatment.

Types of imaging offered include:
• Digital radiography
• Magnetic resonance imaging (MRI)
• Extremity MRI
• Ultrasound
• Fluoroscopic interventional radiography

Physicians also utilize in-office fluoroscopic interventional radiography and ultrasound units to assist when performing procedures such as joint injections, epidural steroid injections, selective nerve root blocks, radiofrequency ablations, arthrograms and in the development of research.

The imaging technologists are licensed and registered through the American Registry of Radiologic Technologists and the South Carolina Radiation Quality Standards Association. Further, the facilities that offer imaging services are registered through the South Carolina Department of Health and Environmental Control, the American College of Radiology, and the Joint Review Committee on Education in Radiologic Technology.
Research

Publications
J. Benjamin Jackson, III, MD, Kevin Williams, MD, S. Christopher Chu, MD. Normal Ultrasonographic Parameters of the Posterior Tibial, Peroneal and Achilles Tendons. Foot & Ankle Surgery. September 2018.

Presentations

Accepted March 2019.

Residency Program

Prisma Health–Midlands and University of South Carolina School of Medicine annually offer a three fully accredited five-year orthopedic surgery residency program positions in Columbia, South Carolina. The residency program boasts technologically superior medical expertise along with a commitment to compassion and attention to detail.

Three applicants are accepted to the program each year from more than 650 applications received from across the Southeast and around the world. Orthopedic rotations include eight major subspecialties, each represented by no fewer than two faculty members. The rotations are based primarily at Prisma Health Richland Hospital and the Palmetto Health-USC Orthopedic Center. “We always focus on training doctors to become who we would want to take care of our families,” explains Gregory Grabowski, MD, residency program director, Palmetto Health-USC Orthopedic Center.

Grabowski, associate professor of the University of South Carolina School of Medicine, Department of Orthopedic Surgery, notes the program’s high faculty-to-student ratio allows early and individualized clinical exposure within the various subspecialties. “We have a small program, which allows us to have a very cohesive group,” Grabowski said. Additionally, he notes that having access to many of the primary physicians and faculty from the University of South Carolina sports medicine program offers residents unique exposure to high-level athletes.

Prisma Health–Midlands and Palmetto Health-USC Orthopedic Center offer a variety of training facilities and environments that expose residents to various treatment settings. Among those:
- A Level 1 trauma center
- Tertiary referral center
- Children’s Hospital
- Hospital-owned orthopedic surgical center
- Physician-owned orthopedic surgical center
- Small community hospital (Prisma Health Baptist Firleigh Hospital)

The orthopedic faculty has doubled the past two years and the current faculty-to-resident ratio allows for near one-on-one clinical and operative experiences promoting more rapid progression of responsibilities. The presence of multiple faculty within each subspecialty allows for diversity of approach and opinion.

The orthopedic surgery residency program embraces five core responsibilities. The presence of multiple faculty within each subspecialty allows for near one-on-one clinical and operative experiences promoting more rapid progression of responsibilities. The presence of multiple faculty within each subspecialty allows for diversity of approach and opinion.

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Practice locations

1. Irmo
   100 Palmetto Health Pkwy, Suite 120
   Columbia, SC 29012
   Physician offices
   803-296-7846
   300 Palmetto Health Pkwy, 2nd Floor
   Columbia, SC 29012
   Physician offices; adult and youth rehab
   803-296-7846

2. Lexington
   102 Saluda Pointe Dr.
   Lexington, SC 29072
   Adult and youth rehab
   803-296-9205
   Hand, pediatric and spine rehab
   803-296-9204
   104 Saluda Pointe Dr.
   Lexington, SC 29072
   Physician offices; MRI; occupational therapy; outpatient surgery
   803-296-7846

3. Downtown Columbia
   2 Medical Park Rd.
   Suite 104
   Columbia, SC 29003
   Physician offices
   803-296-7846
   14 Richland Medical Park Dr.
   Suite 201
   Columbia, SC 29003
   Physician offices
   803-296-7846

4. Forest Acres
   3605 Forest Dr.
   Suite 201
   Columbia, SC 29044
   Occupational therapy; rehab; wellness
   803-296-9207

5. Winnsboro
   80 U.S. Hwy. 321 Bypass N.
   Winnsboro, SC 29180
   Adult and youth rehab
   803-296-2530

6. Northeast Columbia
   101 Business Park Blvd., 2nd Floor
   Columbia, SC 29033
   Physician offices, Convenient Care, rehab
   803-296-7846

7. Chapin
   Adult and youth rehab
   121 Chapin Rd, Suite D
   Chapin, SC 29036
   Rehab
   803-296-9208

8. Sumter
   100 N. Sumter St.
   Suite 203
   Sumter, SC 29150
   Physician offices
   803-774-7621
   102 Saluda Pointe Dr.
   Lexington, SC 29072
   Physician offices
   803-296-7846

Map of South Carolina with locations marked for Irmo, Lexington, Downtown Columbia, Forest Acres, Winnsboro, Northeast Columbia, Chapin, and Sumter.
Refer a patient

The orthopedics department of Palmetto Health-USC Medical Group is growing in resources and providers. Every subspecialty and every physician work closely together to ensure patients receive quality orthopedic care. The teams operate as one practice.

For more information on providers and locations, visit www.PHUSCOrthoCenter.org. To make a referral to one of the orthopedic physicians, please reference the contact information listed below:

Call 803-29ORTHO (803-296-7846) for:

**Foot and Ankle**
J. Benjamin Jackson III, MD

**Hand and Upper Extremity**
John Gavet, MD
David B. Fulton, MD
Earl B. McFadden Jr., MD
James L. McFadden, MD
John J. Walsh, MD

**Joint Replacement**
Kim J. Chilag, MD
Jeffrey S. Hopkins, MD
David E. Koon Jr., MD
Andy T. McGown, MD
Bradley P. Presnal, MD
Frank R. Voss, MD

**Pediatric Orthopedics**
Michael P. Horan, MD, MS
Christopher R. Hyders, MD
Mark D. Locke, MD
Kristen M. Nathe, MD

**Spine**
P. Douglas deHoll, MD
William T. Fahey, MD
Gregory Grabowsk, MD
Kamran Z. Koranloo, MD
Pramita R. Naidu, MD
Michael W. Peelle, MD, MHA
James Viapiano, MD

**Sports Medicine**
Kyle E. Arthur, MD
Guillaume D. Dumont, MD
Jeffrey A. Guy, MD
S. Wendell Holmes Jr., MD
Christopher G. Mazoue, MD
Frank K. Noojin III, MD
Mickey F. Plymale, MD
Matthew B. Pollock, MD

**Trauma and Fracture Care**
Thomas H. Jones, MD
Kevin A. Hunt, MD
Michael C. Tucker, MD

Call 803-774-7621 for:

**Sumter Orthopedic Specialists**
Danny H. Ford, MD
Kurt T. Strobel, MD
Ryan C. Zinke, MD

Kristen Nathe, MD is assisted in surgery by Valerie Shaei, PA and Daniel Torgeson.